

PRICES EFFECTIVE JULY 1, 2017
(REPLACES CATALOG DATED, APRIL 30, 2012)



ROMAC **INDUSTRIES, INC.**

REPAIR CLAMPS • COUPLINGS • SERVICE SADDLES
SEWER PRODUCTS • TAPPING SLEEVES
RESTRAINT SYSTEMS • HDPE PIPE PRODUCTS
DRILLING & TAPPING EQUIPMENT • VALVE INSERTION

ROMAC INDUSTRIES, INC., 21919 20TH AVENUE, BOTHELL, WASHINGTON 98021
QUOTES/ORDERS: 800.426-9341 PHONE: 425.951.6200 FAX: 425.951.6201
WWW.ROMAC.COM

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PIPE SIZE	STEEL & PLASTIC		CAST IRON			ASBESTOS - CEMENT				SOMPLEX -A/C			COPPER
	TYPE	TYPE	CURRENT D.I. PIPE SIZE	AWWA 1908	O.D.	TYPE	M.E. O.D.	R.B. O.D. MIN. MAX.		TYPE	M.E. O.D.	R.B. O.D.	O.D.
1/2"	STD.	.840											.625
5/8"													.750
3/4"	STD.	1.05											.875
1"	STD.	1.315											1.125
1 1/4"	STD.	1.66											1.375
1 1/2"	STD.	1.90											1.625
2"	STD.	2.375			2.50								2.125
2 1/2"	STD.	2.875											2.625
3"	O.D.	3.00	3.96	A B, C, D	3.80	cl 100	3.74	4.00		cl 100	3.70	3.95	3.125
	STD.	3.50			3.96	cl 150	3.84	4.10	cl 150	3.88	4.13		
						cl 200	3.84	4.29	cl 200	4.20	4.45		
3 1/2"	STD.	4.00											3.625
4"	O.D.	4.00	4.80	A B, C, D	4.80	cl 100	4.64	4.79	5.14	cl 100	4.70	4.95	4.125
	STD.	4.50			5.00	cl 150	4.81	4.97	5.27	cl 150	4.85	5.10	
						cl 200	4.81	5.22	5.57	cl 200	5.20	5.45	
4 1/2"	STD.	5.00											
5"	STD.	5.563											5.125
6"	O.D.	6.00	6.90	A B, C, D	6.90	cl 100	6.91	7.05	7.40	cl 100	6.76	7.01	6.125
	RIV.	6.25			7.10	cl 150	6.91	7.07	7.37	cl 150	6.95	7.20	
	STD.	6.625			7.22	cl 200	6.91	7.26	7.56	cl 200	7.50	7.75	
					7.38								
7"	RIV.	7.25											
	STD.	7.625											
8"	O.D.	8.00	9.05	A, B C, D	9.05	cl 100	9.11	9.22	9.57	cl 100	8.88	9.13	
	RIV.	8.25			9.30	cl 150	9.11	9.27	9.57	cl 150	9.15	9.40	
	STD.	8.625			9.42	cl 200	9.11	9.39	9.74	cl 200	9.76	10.01	
					9.60								
9"	STD.	9.625											
10"	O.D.	10.00	11.10	A, B C, D	11.10	cl 100	11.24	11.42	11.77	cl 100	11.18	11.43	
	RIV.	10.25			11.40	cl 150	11.66	11.82	12.12	cl 150	11.70	11.95	
	STD.	10.75			11.60	cl 200	11.66	11.77	12.12	cl 200	12.20	12.45	
					11.84								
12"	O.D.	12.00	13.20	A, B C, D	13.20	cl 100	13.44	13.69	14.04	cl 100	13.36	13.61	
	RIV.	12.25			13.50	cl 150	13.92	14.08	14.38	cl 150	13.96	14.21	
	STD.	12.75			13.76	cl 200	13.92	14.03	14.38	cl 200	14.46	14.72	
					14.08								
14"	STD.	14.00	15.30	A, B C, D	15.30	cl 100	15.07	15.40	15.80	cl 100	15.56	15.94	
					15.65	cl 150	16.22	16.38	16.73	cl 150	16.26	16.64	
					15.98	cl 200	16.22	16.48	16.88	cl 200	16.88	17.26	
					16.32								
16"	STD.	16.00	17.40	A, B C, D	17.40	cl 100	17.15	17.54	17.94	cl 100	17.76	18.14	
					17.80	cl 150	18.46	18.62	18.97	cl 150	18.50	18.88	
					18.16	cl 200	18.46	18.79	19.19	cl 200	19.30	19.68	
					18.54								
18"	STD.	18.00	19.50	A, B C, D	19.50	cl 100	19.90	20.44					
					19.92	cl 150	20.94	21.20					
20"	STD.	20.00	21.60	A, B C, D	21.60	cl 100	22.12	22.50					
					22.06	cl 150	23.28	23.54					
					23.02								
22"	STD.	22.00											
24"	STD.	24.00	25.80	A, B C, D	25.80	cl 100	26.48	27.17					
					26.32	cl 150	27.96	28.22					

NOTE: Due to variation in outside diameters and specifications, dimensions listed above are approximate. For this reason, the O.D. of pipe being used should be determined before ordering Romac products.



Call: 1-800-426-9341 • Fax: 425-951-6201

DEPARTMENT HOURS

CUSTOMER SERVICE DEPARTMENT

5:30 AM – 5:00 PM Monday through Friday PST.

QUOTATIONS DEPARTMENT

6:00 AM – 4:30 PM Monday through Friday PST.

ENGINEERING DEPARTMENT

7:00 AM – 4:30 PM Monday through Friday PST.

ACCOUNTS RECEIVABLE

7:00 AM – 3:30 PM Monday through Friday PST.

RETURNS & SALES SPECIALISTS

6:00 AM – 2:30 PM Monday through Friday PST.

EMERGENCY SOS SERVICE

425-417-4755

In the event of an emergency, after our regular business hours, we have someone available and ready to help you, 24 hours a day, seven days a week.

Certain restrictions apply. Please contact your Romac Sales Representative for details.

TERMS & CONDITIONS



21919 20TH AVENUE SE, SUITE 100, BOTHELL, WA 98021 • 1 800 426 9341 • 425 951 6200 • FAX: 425 951 6201

ACCEPTANCE OF ORDERS: All orders are subject to the acceptance of Romac Industries, Inc. at the general office, 21919 20th Avenue SE, Suite 100, Bothell, WA 98021. **Additions to orders must be added within two days of the original order, provided the original order has not shipped. Approximate ship date of the original order will be extended appropriate to the addition.**

CONDITIONS OF SALE: Changes in the price of items sold by Romac Industries, Inc. may be executed without notice. The minimum amount of any sale will be \$50.00 (fifty) list billing.

TERMS OF PAYMENT: Net 30 days. A service charge of 1 1/2% per month will be charged on all past due accounts (equivalent to 18% annually). Purchaser is liable for all legal costs if the account is placed for collection.

FREIGHT ALLOWANCE: All sales are F.O.B. manufacturer's point of shipment. Full freight will be prepaid and allowed on all sales shipments of **\$2,500 net price** with the freight carrier to be determined by Romac Industries. For shipments to Alaska and Hawaii, and Canadian shipments to Newfoundland and Labrador, full freight allowance will be **\$3,000 net price**. Freight allowance does not apply to air freight. Freight on all shipments under FFA will be billed directly to the distributor by the freight company. Freight on material that is pulled for rush shipment from a freight allowed order will be the responsibility of the distributor. The balance of the order remains full freight allowed.

CARRIERS: Romac reserves the right to determine freight carriers for all shipments.

DAMAGED MERCHANDISE: The responsibility for items lost or damaged in transit is that of the buyer. These claims should be filed with the transportation company.

SHORTAGES: Shortages on shipments must be reported to Romac within 30 (thirty) calendar days after shipment of material. Failure to report shortages within the 30 calendar days will result in denial of credit.

SPECIAL ORDER ITEMS: Products not inventoried, and/or specifically manufactured at customer's request are not subject to any change after work has been started in factory. Confirmation (in the form of an order acknowledgment) will be sent by Romac and constitute the acceptance of the parameters of the product requested. Special order items may not be cancelled or returned.

CANCELLATIONS: Material may be cancelled only with the express consent of Romac Industries, Inc. and could be subject to a cancellation fee. This charge will be determined by how far production has progressed and if the material can be utilized by Romac Industries.

RETURNS: No returns will be accepted without the written consent of the factory. No returns will be accepted on material returned after one year from date of purchase. **UNAUTHORIZED RETURNS WILL BE REFUSED AND RETURNED TO THE SHIPPER AT THEIR EXPENSE.** Authorized returns are subject to a 25% restocking charge and must be returned freight prepaid. Approved items may be returned within a period of 60 days after the issuance of an RMA. Material must be received in the same condition as originally manufactured in order for a credit to be issued. Return approval for any catalog item will be based upon age of material, on-hand inventory and demand for those items at the time of request. Material must be free of rust and/or any other imperfections which would prevent immediate return to inventory. Any returned material requiring reconditioning will be subject to the following additional charges:

Bolts: If bolts are rusty and require rework/replacement, an additional 10% charge will be incurred.

Gaskets: If replacement is required, an additional 10% charge will be incurred.

Finish: If the finish is damaged and requires sandblasting and recoating, an additional 15% charge will be incurred.

Merchandise returned because of defects in material or workmanship will be at the seller's expense.

Romac Industries reserves the right to decline any return request.

Terms and Conditions continued on next page



TERMS & CONDITIONS

(CONT'D)

OBsolescence: No returns will be accepted because of design changes or new products in the company line. Romac Industries, Inc. retains the right to change design without prior notice. Material will be deemed obsolete after one year from date of purchase.

Specifications: Specifications, as set forth in all printed matter, are subject to change without notice.

Suitability: Since conditions and applications vary to such a large extent throughout the world, the purchaser must determine the suitability of Romac products for each application.

ANY DRAWINGS SUPPLIED FOR SUBMITTAL CONTAIN CONFIDENTIAL PROPRIETARY INFORMATION AND ARE THE PROPERTY OF ROMAC INDUSTRIES, INC. A DRAWING IS TO BE USED ONLY FOR THE PURPOSE FOR WHICH IT IS SUBMITTED AND SHALL NOT HAVE ITS INFORMATION DISCLOSED OR REPRODUCED IN WHOLE OR PART FOR ANY PURPOSE WITHOUT PRIOR WRITTEN PERMISSION OF ROMAC INDUSTRIES, INC.

SPECIAL TESTING: The purchaser shall pay the cost of any special inspection or testing, over and above the standard factory procedure.

HIGH DENSITY POLYETHYLENE PIPE (HDPE): HDPE pipe expands and contracts from changes in temperature and/or pressure much more than other piping materials. If you have an application not covered in the HDPE section of this catalog, please contact the Romac engineering department.

WARRANTY AND LIMITATION OF LIABILITY: All products manufactured by Romac are warranted to be free from defects in materials and workmanship for a period of two years, unless otherwise noted, provided such products are installed in accordance with the best practices accepted in the trade.

Transmate, Valve Insertion and Alpha products are warranted to be free from defects in materials and workmanship for a period of one year, provided such products are installed, and operated in accordance with the best practices accepted in the trade.

Romac shall not be liable for any loss, damage or injury, direct or consequential, as a result of any of the following: inappropriate product use, pipeline defects or installation not in accordance with the product's installation instructions.

Romac's warranty extends only to parts and products manufactured by Romac; it does not extend to products or parts manufactured by others and incorporated in Romac products except where otherwise noted.

In the event of any breach of Romac's warranty, Romac's only obligations shall be to deliver to the purchaser, without charge, a suitable replacement product, or part, or substitute therefore, or at Romac's option, to issue a credit for the full price of the defective product.

Romac shall not be responsible for any labor charges or any loss, injury or damage whatsoever, including incidental or consequential damages and costs related to removal or installation.

IN NO EVENT SHALL THE PURCHASER HAVE ANY OTHER REMEDY FOR BREACH OF WARRANTY OR FOR BREACH OF ANY OTHER TERM OR CONDITION OF SALE, TORT OR OTHERWISE. NOR SHALL ROMAC BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL OR OTHER DAMAGE, INCURRED BY THE BUYER, ITS CUSTOMERS OR OTHERS AS A RESULT OF THE PURCHASE, RESALE, OR USE OF ANY PRODUCT MANUFACTURED OR SOLD BY ROMAC.

All claims for breach of warranty must be made in writing immediately upon discovery, and sent by registered mail to Romac Industries, Inc. at its home office in Bothell, Washington. Any defective products must be held for Romac's inspection, and returned to Romac promptly upon request.

Any suit on Romac's warranty must be commenced within one (1) year after the cause of the action arises.

ROMAC DOES NOT MAKE ANY WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR PRODUCTS AND/OR PARTS MANUFACTURED OR SOLD BY IT, NOR ANY OTHER WARRANTIES OF ANY KIND, OTHER THAN THE EXPRESSED WARRANTY SET FORTH ABOVE. ANY REFERENCES BY ROMAC TO BUYER'S SPECIFICATIONS OR REQUIREMENTS ARE FOR IDENTIFICATION PURPOSES ONLY AND ARE NOT TO BE CONSTRUED AS A WARRANTY, EXPRESSED OR IMPLIED, OR ANY OTHER UNDERTAKING ON ROMAC'S BEHALF EXCEPT TO THE EXTENT SPECIFICALLY STATED AND IDENTIFIED BY ROMAC AS SUCH IN WRITING.




TORQUE RECOMMENDATIONS



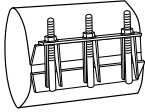
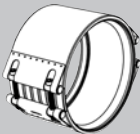
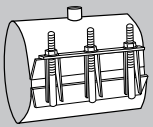
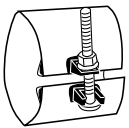
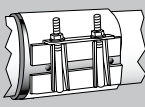
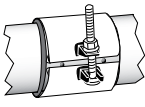
	PRODUCT	DESCRIPTION	TORQUE (FT-LBS.)
REPAIR CLAMPS	SS1, SS2, SS3 & Cast Lugs	1/2" bolts - 2" to 5" Nominal Pipe (SS1 & SS2 only) . . . . .	.30-35
		5/8" bolts - 4" Cast Lug . . . . .	.35-45
		6" Nominal Pipe & Above . . . . .	.75-85
	416 Bell Joint Leak Clamp	With 5/8" Bolts . . . . .	.60
	516 Bell Joint Leak Clamp	4", 6" & 8" . . . . .	.40-50
10" to 14" . . . . .		.75	
517 Bell Joint Leak Clamp	5" Long Adjusting Bolts . . . . .	.35-40	
	4" - 8" . . . . .	.30-45	
COUPLINGS	400	With 5/8" Bolts . . . . .	.60-70
		With 3/4" Bolts . . . . .	.85-95
	501	2" to 12" Nominal Pipe . . . . .	.40-50
		14" Nominal Pipe & Above . . . . .	.60-70
	XR501	4" to 12" Nominal Pipe . . . . .	.75-90
MACRO	4" to 12" Nominal Pipe . . . . .	.65	
511	1/2" to 8" Nominal Pipe . . . . .	.35-45	
	10" and 12" Nominal Pipe . . . . .	.50-60	
SERVICE SADDLES	Ductile Iron (101, 101N, 101S, 101NSSU, 202, 202N, 202S, 202NSSU)	Hard Pipe (Steel, CI, AC) 1 1/2" - 8" . . . . .	.40-50
		10" - 30" . . . . .	.60-75
		PVC Pipe 1 1/2" - 22"	30-40
	Brass (101B, 101BS, 202B, 202BS)	Hard Pipe (Steel, CI, AC) - with SS strap . . . . .	.35-45
		PVC Pipe . . . . .	.30-35
		Bronze Strap . . . . .	.35 max.
	Stainless (304 & 306) 305	1/2" bolts - 2" to 5" Nominal Pipe . . . . .	.30-40
5/8" bolts - 6" Nominal Pipe & Above . . . . .		.50-60	
CB Sewer Saddle	All . . . . .	.75	
	6" to 12" Nominal Pipe . . . . .	.15-20	
TAPPING SLEEVES	FTS 419, STS 419	PVC Pipe 4" . . . . .	.25-30
		6" - 24" . . . . .	.45-50
		Hard Pipe 4" - 24" . . . . .	.45-50
	FTS 420	All . . . . .	.90-100
	SST	4" - with 1/2" Bolts . . . . .	.60
RESTRAINT SYSTEMS	GripRing	4", 6" & 8" . . . . .	.75-90
		10" & 12" . . . . .	.90-110
	600 Series	4" & 6" . . . . .	.90
		8"	150
		10" & 12"	190
	Field Flange	All 5/8" Set Screws . . . . .	.85
	RomaGrip T-Bolts	3" . . . . .	.45-65
4-24" . . . . .		.75-90	
30-36"		100-120	
42-48"		120-150	
PVC RomaGrip T-Bolts	See Installation Instructions		
470	14- 24" Clamping Bolts	150	
	MJ-Bolts . . . . .	.75-90	

NOTE: 75 ft-lbs. is approximately a 65 lb. pull on a 16" wrench.

For more details, see product installation instructions, or contact Romac Industries, Inc.

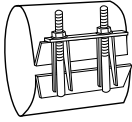
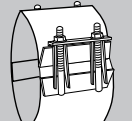
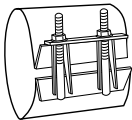
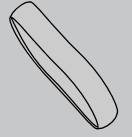

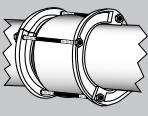
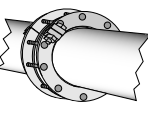
PRODUCT	APPLICATION	TYPE OF PIPE	FOR PIPE SIZES	WORKING PRESSURE
 <p>ALPHA RESTRAINED JOINT (pg. 1-4)</p>	Join and restrain two plain pipe ends within the same nominal size.	Ductile Iron, Cast Iron PVC, HDPE	4" to 12"	Up to 350 psi
 <p>ALPHA EC RESTRAINED JOINT (pg. 1-6)</p>	End cap with built-in restraint.	Ductile Iron, Cast Iron PVC, HDPE	4" to 12"	Up to 350 psi
 <p>ALPHA FC RESTRAINED JOINT (pg. 1-8)</p>	Provides a restrained flanged to plain-end connection.	Ductile Iron, Cast Iron PVC, HDPE	4" to 12"	Up to 350 psi

REPAIR CLAMPS

 <p>STYLE SS1, SS2 & SS3 STAINLESS STEEL REPAIR CLAMPS (pgs. 2-4 through 2-6)</p>	Full circumferential repair of splits and holes	Steel, cast iron, asbestos cement, plastic, other	2" to 24" larger sizes available	Up to 150 psi
 <p>ARMOR SEAL FLEXIBLE STAINLESS STEEL REPAIR CLAMP (pg. 2-7)</p>	Full circumferential repair clamp that can also be used as a coupling	Steel, cast iron, asbestos cement, concrete, PVC and HDPE	4" to 24"	Up to 250 psi
 <p>STYLE CL1, CL2 & CL3 STAINLESS STEEL REPAIR CLAMPS WITH CAST IRON LUGS (pgs. 2-11 through 2-13)</p>	Full circumferential repair of splits and holes	Steel, cast iron, asbestos cement, plastic, other	2" to 24" larger sizes available	Up to 150 psi
 <p>TAPPED OUTLETS REPAIR CLAMP TAPS (pg. 2-14)</p>	Full circumferential repair with outlet sizes 1/2" through 3"	Steel, cast iron, asbestos cement, plastic, other	2" and larger	Up to 150 psi
 <p>STYLE SC STAINLESS STEEL REPAIR CLAMP (pg. 2-15)</p>	Repair of splits and holes	Steel, cast iron, asbestos cement, plastic, other	1/2" to 8"	Up to 150 psi
 <p>STYLE SCS STAINLESS STEEL REPAIR CLAMP W/STAINLESS STEEL LUGS (pg. 2-16)</p>	Full circumferential repair of splits and holes	Steel, and copper, plastic and other.	1/2" to 2"	Up to 150 psi
 <p>STYLE SCC STAINLESS STEEL REPAIR CLAMP W/CAST IRON LUGS (pg. 2-16)</p>	Full circumferential repair of splits, holes and breaks	Steel, and copper, plastic and other.	1/2" to 2"	Up to 150 psi

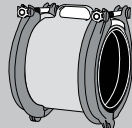
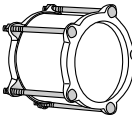
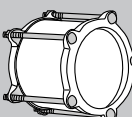
Repair Clamps continued on next page

 **REPAIR CLAMPS ARE NOT TO BE USED FOR JOINING PLAIN PIPE ENDS.**

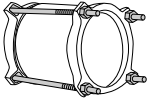
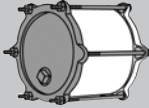
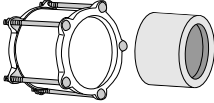
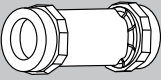
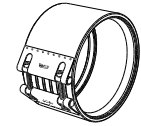
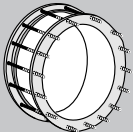

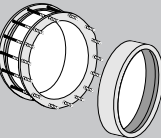

PRODUCT	APPLICATION	TYPE OF PIPE	FOR PIPE SIZES	WORKING PRESSURE
 <p>STYLE C STAINLESS STEEL REPAIR CLAMP (pg. 2-17)</p>	Repair of splits and holes.	Steel, cast iron and asbestos cement, plastic and other.	1/2" to 12"	Up to 150 psi
 <p>STYLE CC STAINLESS STEEL REPAIR CLAMP (pg. 2-18)</p>	Repair of splits and holes	Steel, cast iron, asbestos cement, plastic, other	10" to 30"	Up to 50 psi
 <p>STYLE CLC STAINLESS STEEL COLLAR LEAK CLAMP (pg. 2-19)</p>	Repair of leaking solvent welds	Plastic	2" to 4"	Up to 150 psi
 <p>A/CME BAND RUBBER REPAIR STRAP (pg. 2-20)</p>	Used with repair clamps to repair broken or leaking A/C couplings	Asbestos cement	4" to 16"	Up to 100 psi
 <p>STYLE 516 BELL JOINT LEAK CLAMP (pg. 2-21)</p>	Repair or prevention of leaks in bells, caulked or rubber ring joints	Cast iron, ductile iron, C-900 PVC	4" to 14"	Up to 150 psi
 <p>STYLE 517 BELL JOINT LEAK CLAMP (pg. 2-22)</p>	Repair or prevention of leaks in bells or rubber ring joints	IPS PVC, SDR 35	4" to 12"	Up to 150 psi
 <p>STYLE 416 & 418 BELL JOINT LEAK CLAMPS (pg. 2-23)</p>	Repair or prevention of leaks in caulked or rubber gasketed joints	416: Ductile iron 418: Cast iron	12" to 48"	Up to 150 psi

 **REPAIR CLAMPS ARE NOT TO BE USED FOR JOINING PLAIN PIPE ENDS.**

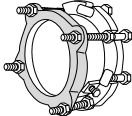
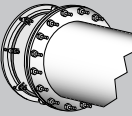
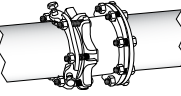
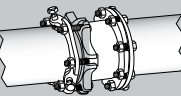
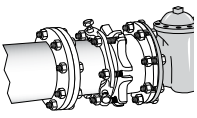
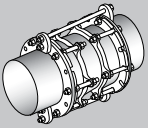
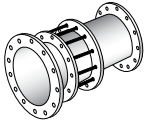
COUPLINGS

 <p>MACRO™ TWO-BOLT EXTENDED RANGE COUPLING (pg. 3-6 to 3-8)</p>	Flexibly couple two pipes of same or different diameters	Steel, cast iron, asbestos cement, plastic, other	4" to 12"	Up to 305 psi
 <p>STYLE 501 & RC501 STRAIGHT, TRANSITION AND REDUCING COUPLINGS (pg. 3-2 & 3-11)</p>	Flexibly couple pipe of same or different diameters	Steel, cast iron, asbestos cement, plastic, other	2" to 24"	Up to 260 psi
 <p>STYLE XR501 EXTENDED RANGE COUPLINGS (pg. 3-9)</p>	Flexibly couple pipe of same or different diameters	Steel, cast iron, asbestos cement, plastic, other	4" to 12"	Up to 260 psi

Couplings continued on next page


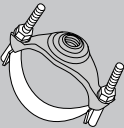
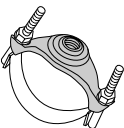
PRODUCT	APPLICATION	TYPE OF PIPE	FOR PIPE SIZES	WORKING PRESSURE
 <p>STYLE 511 PIPE COUPLING (pg. 3-10)</p>	Flexibly couple pipe of same or different diameters	Steel, copper and PVC	1/2" to 12"	Up to 200 psi
 <p>STYLE EC501 END CAP COUPLING (pg. 3-15)</p>	Testing or capping of pipeline	Steel, cast iron, asbestos cement, plastic, other	4" to 16"	Up to 260 psi
 <p>STYLE IC501 COUPLING WITH INSULATING BOOT (pg. 3-16)</p>	Stop electrolytic action by isolating one pipe from the other with insulating boot	Cast iron, steel or other types of pipe.	4" to 14"	Up to 260 psi
 <p>STYLE 702 COMPRESSION COUPLING (pg. 3-16)</p>	Flexibly couple pipe of same diameters	Steel or plastic	1/2" to 2"	Up to 150 psi
 <p>ARMOR LINK™ STAINLESS STEEL COUPLING (pg. 3-17)</p>	Couple two pipes of same nominal diameters	Steel, cast iron, asbestos cement, concrete, PVC & HDPE	4" to 24"	See pg 2-17
 <p>STYLE 400 & RC400 FABRICATED STEEL COUPLINGS (pg. 2-18 through 3-22)</p>	Flexibly couple pipe of same diameters or different nominal diameters	Steel, cast iron, asbestos cement, plastic, other	12" to 96"	Up to 500 psi
 <p>STYLE TC400 FABRICATED STEEL TRANSITION COUPLING (pg. 3-23)</p>	Connect pipes of different known outside diameters in same nominal size	Steel, cast iron, asbestos cement, plastic, other	12" to 96"	Up to 300 psi
 <p>STYLE IC400 FABRICATED STEEL INSULATING COUPLING (pg. 3-24)</p>	Stop electrolytic action by isolating one pipe from the other with insulating boot	Cast iron, steel or other types of pipe.	12" to 96"	Up to 300 psi
 <p>ALPHA RESTRAINED JOINT (pg. 1-1)</p>	see Alpha product section, pg. 1-1			

 **FLEXIBLE COUPLINGS DO NOT PROVIDE PROTECTION AGAINST POSSIBLE PULLOUT OF PIPE ENDS IN UNRESTRAINED CONDITIONS.**


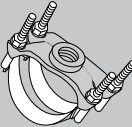
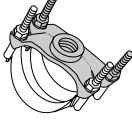

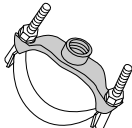
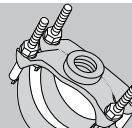
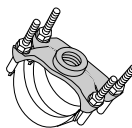
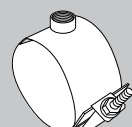
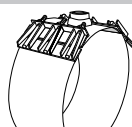
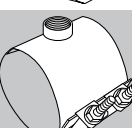
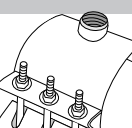
PRODUCT	APPLICATION	TYPE OF PIPE	FOR PIPE SIZES	WORKING PRESSURE
 <p>STYLE FCA501 FLANGED COUPLING ADAPTER (pg. 4-2)</p>	Provide flexible flanged-to-plain-end connection	Steel, cast iron, asbestos cement, plastic, other	3" to 16"	Up to 260 psi
 <p>STYLE FC400 FABRICATED STEEL FLANGED COUPLING ADAPTER (pg.4-5)</p>	Flexibly couple plain end pipe to flange	Steel, ductile iron, cast iron, asbestos cement, plastic, other	12" to 96"	See flange rating
 <p>STYLE RFCA RESTRAINED FLANGED COUPLING ADAPTER (pg. 4-6)</p>	Provide a restrained flexible flanged-to-plain-end connection	Steel and ductile iron	3" to 24"	Up to 250 psi
 <p>STYLE RFCA FOR PVC RESTRAINED FLANGED COUPLING ADAPTER (PG. 4-7)</p>	Provide a restrained flexible flanged-to-plain-end connection	PVC (see catalog page for additional information)	4" to 24"	Up to the pressure rating of the pipe
 <p>STYLE DJ400 & DJ405 DISMANTLING JOINTS (pg. 4-8 & 4-9)</p>	Adjustable flanged fittings for maintenance & removal of valves and other fittings.	Flanged pipe	DJ400: 3" to 72" DJ405: 3" to 24"	See flange rating
 <p>STYLE ECF400 EQUIPMENT CONNECTION FITTING (pg. 4-11)</p>	For restraint of misaligned flanged fittings on field connections and other equipment	Flanged pipe	3" to 72"	See flange rating
 <p>STYLE EJ401 & EJ403 EXPANSION JOINTS (pg. 4-13)</p>	For use in pipelines where longitudinal movements are concentrated	Flanged, beveled for welding or grooved pipe.	3" to 150"	Up to 500 psi
ALPHA see Alpha product section, pg. 1-1				

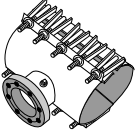
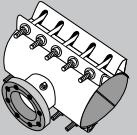
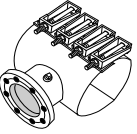
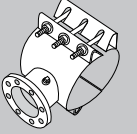
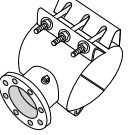
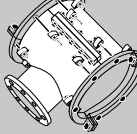
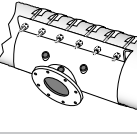
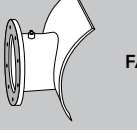
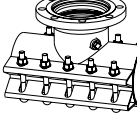
! FLEXIBLE COUPLINGS DO NOT PROVIDE PROTECTION AGAINST POSSIBLE PULLOUT OF PIPE ENDS IN UNRESTRAINED CONDITIONS.

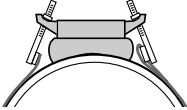
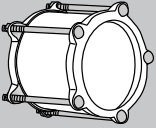
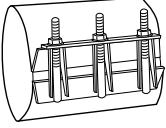
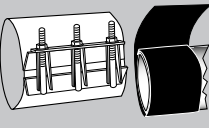
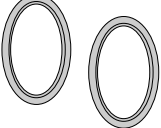
SERVICE SADDLES

 <p>STYLE 101U, 101NU & 101NSSU SADDLE WITH SINGLE U-BOLT (pg. 5-3)</p>	Outlet sizes 1/2" through 2 1/2"	Steel and cast iron	1 1/2" to 12"	Up to 350 psi
 <p>STYLE 101S PAINTED SADDLE WITH SINGLE STAINLESS STEEL STRAP (pg. 5-5)</p>	Outlet sizes 1/2" through 2 1/2"	Steel, cast iron, asbestos cement, plastic, other	1 1/2" to 12"	Up to 350 psi
 <p>STYLE 101NS NYLON SADDLE WITH SINGLE STAINLESS STEEL STRAP (pg. 5-5)</p>	Outlet sizes 1/2" through 2 1/2"	Steel, cast iron, asbestos cement, plastic, other	1 1/2" to 12"	Up to 350 psi

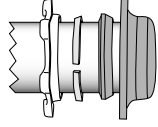
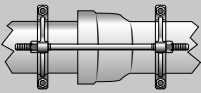
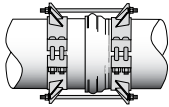

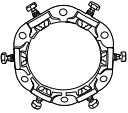
Service Saddles continued on next page

PRODUCT	APPLICATION	TYPE OF PIPE	FOR PIPE SIZES	WORKING PRESSURE
 <p>STYLE 202U, 202NU, & 202NSSU SADDLE WITH DOUBLE U-BOLTS (pg. 5-4 & 5-6)</p>	Outlet sizes 1/2" through 2 1/2"	Steel and cast iron	1 1/2" to 12"	Up to 350 psi
 <p>STYLE 202S PAINTED SADDLE WITH DOUBLE STAINLESS STEEL STRAPS (pg. 5-6)</p>	Outlet sizes 1/2" through 2 1/2"	Steel, cast iron, asbestos cement, plastic, other	2" to 24"	Up to 350 psi
			26" to 30"	Up to 150 psi
 <p>STYLE 202NS NYLON SADDLE WITH DOUBLE STAINLESS STEEL STRAPS (pg. 5-6)</p>	Outlet sizes 1/2" through 2 1/2"	Steel, cast iron, asbestos cement, plastic, other	2" to 24"	Up to 350 psi
			26" to 30"	Up to 150 psi
 <p>STYLE 101B BRONZE SADDLE WITH SINGLE BRONZE STRAP (pg. 5-7)</p>	Outlet sizes 1/2" through 1"	Steel, cast iron, asbestos cement, C900, other	4" to 12"	Up to 200 psi
 <p>STYLE 101BS BRONZE SADDLE WITH SINGLE STAINLESS STEEL STRAP (pg. 5-7)</p>	Outlet sizes 1/2" through 1"	Steel, cast iron, asbestos cement, plastic, other	4" to 12"	Up to 200 psi
 <p>STYLE 202B BRONZE SADDLE WITH DOUBLE BRONZE STRAPS (pg. 5-7)</p>	Outlet sizes 1/2" through 2"	Steel, cast iron, asbestos cement, C900, other	4" to 16"	Up to 200 psi
 <p>STYLE 202BS BRONZE SADDLE WITH DOUBLE STAINLESS STEEL STRAPS (pg. 5-7)</p>	Outlet sizes 1/2" through 2"	Steel, cast iron, asbestos cement, plastic, other	4" to 16"	Up to 200 psi
 <p>STYLE 304 SINGLE BOLT STAINLESS STEEL SERVICE SADDLE (pg. 5-8)</p>	Outlet sizes 1/2" through 1"	Steel, cast iron, plastic, other	2" to 8"	Up to 200 psi
 <p>STYLE 305 STAINLESS STEEL SERVICE SADDLE (pg. 5-10)</p>	Outlet sizes 3/4" through 3"	Steel, cast iron, asbestos cement, plastic, other	10" to 24"	Up to 150 psi
 <p>STYLE 306 DOUBLE BOLT STAINLESS STEEL SERVICE SADDLE (pg. 5-9)</p>	Outlet sizes 1/2" through 2"	Steel, cast iron, plastic, other	2" to 8"	Up to 200 psi
			10" to 12"	Up to 150 psi
 <p>STYLE FTS420T FABRICATED STEEL SERVICE SADDLE (pg. 5-11 & 5-12)</p>	Outlet sizes 3/4" through 4"	Steel, cast iron, asbestos cement, plastic, other	6" to 24"	250 psi
			28"	200 psi
			30" to 42"	150 psi
			Larger than 42"	100 psi

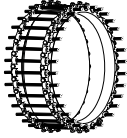
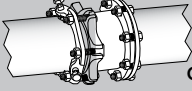
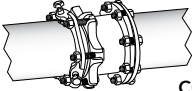
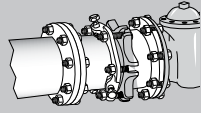
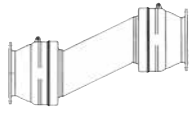
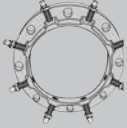

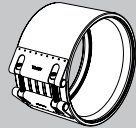

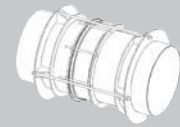

PRODUCT	APPLICATION	TYPE OF PIPE	FOR PIPE SIZES	WORKING PRESSURE
 <p>STYLE SST STAINLESS STEEL TAPPING SLEEVE WITH SIDE LIFTER BARS (pg. 6-4)</p>	Make branch outlet using full circumferential seal	Steel, cast iron, asbestos cement, plastic, other	4" to 8"	250 psi
			10" to 24"	200 psi
 <p>STYLE SST III STAINLESS STEEL TAPPING SLEEVE WITH TRIANGULAR SIDE BARS (pg. 6-6)</p>	Make branch outlet using full circumferential seal	Steel, cast iron, asbestos cement, plastic, other	4" to 8"	250 psi
			10" - 24"	200 psi
			26" - 30"	150 psi
 <p>STYLE FTS419 FABRICATED STEEL TAPPING SLEEVE WITH DROP-IN BOLTS (pg. 6-8)</p>	Make a branch outlet from main supply line	Steel, ductile iron, copper, plastic	4" to 24"	See flange rating
 <p>STYLE FTS420 FABRICATED STEEL TAPPING SLEEVE WITH TRIANGULAR SIDE BARS (pg. 6-10)</p>	Make a branch outlet from main supply line	Steel, cast iron, other	6" to 96"	See flange rating
 <p>STYLE STS420 STAINLESS STEEL TAPPING SLEEVE WITH TRIANGULAR SIDE BARS (pg. 6-13)</p>	Make a branch outlet from main supply line	Steel, cast iron, other	6" to 96"	See flange rating
 <p>STYLE FTS425 FABRICATED STEEL TAPPING SLEEVE (pg. 6-16)</p>	Make a branch outlet from main supply line with extra protection for lines subject to excessive beam loads	Steel, cast iron, plastic, other	12" to 96"	See flange rating
 <p>STYLE FTS435 FABRICATED STEEL TAPPING SLEEVE (pg. 6-18)</p>	Make a branch outlet from concrete steel cylinder pipe with effective seal prior to tapping	Concrete steel cylinder	6" to 96"	See flange rating
 <p>STYLE FTS445 FABRICATED STEEL TAPPING SLEEVE FOR WELD-ON OUTLETS (pg. 6-19)</p>	Weld a branch outlet onto steel main supply line	Steel	6" to 96"	See flange rating
 <p>SST-X LINE STOP SLEEVE (pg. 6-20)</p>	Sleeve used with line stopping equipment		4" to 12"	4"-8": 250 PSI 10"-12": 200 PSI

PRODUCT	APPLICATION	TYPE OF PIPE	FOR PIPE SIZES	WORKING PRESSURE
 <p>STYLE CB SEWER SADDLE (pg. 7-3)</p>	Outlet sizes 4" and 6"	Steel, cast iron, asbestos cement, plastic, others	6" to 54"	Up to 7 psi
 <p>STYLE 501 STRAIGHT AND TRANSITION COUPLINGS FOR SEWER (pg. 7-6)</p>	Flexibly couple two pipes of the same or different diameters	Steel, cast iron, asbestos cement, plastic, others	4" to 12"	Up to 25 psi
 <p>STYLE LSS1, LSS2 & LSS3 STAINLESS STEEL CLAMP FOR SEWER (pg. 7-7 & 7-8)</p>	Repair of splits and holes	Steel, cast iron, asbestos cement, plastic, others	4" to 24"	Up to 25 psi
 <p>STYLE SS1, SS2 & SS3 TRANSITION CLAMP COUPLINGS WITH BUSHING (pg. 7-8)</p>	Joining sewer pipe of different O.D.s	Steel, cast iron, asbestos cement, plastic, others	4" to 20"	Up to 10 psi
 <p>SEWER GASKETS (pg. 7-9 and 7-10)</p>	Transition gaskets for A/C x PVC and MJ x SDR35; also manhole adapter gaskets	Plastic and others	4" to 27"	Up to 10 psi

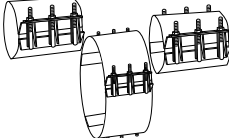
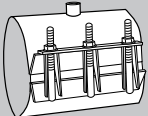
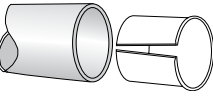
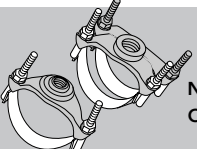
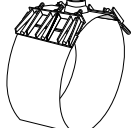
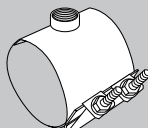
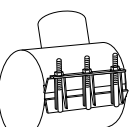
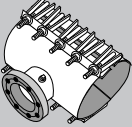
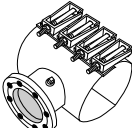
RESTRAINT SYSTEMS

 <p>GRIPRING™ PIPE RESTRAINER (pg. 8-2)</p>	Full circumferential restraint of mechanical joints	Ductile iron, C-900 and IPS size PVC (see pg. 7-2 for additional information)	4" to 12"	Up to 350 psi
 <p>600 SERIES PIPE RESTRAINING SYSTEM (pg. 8-4)</p>	Restraint for bell & spigot joints, transitions, couplings and mechanical joints	Ductile iron, C-900 and IPS size PVC	4" to 36"	PVC up to 200 psi DI up to 150 psi
 <p>470 PIPE RESTRAINING SYSTEM (pg. 8-20)</p>	Restraint of mechanical joint fittings, bell & spigot joints and bolted sleeve type couplings	AWWA C905	14" to 30"	Up to the pressure rating of the pipe
 <p>ROMAGRIP™ PIPE RESTRAINER (pg. 8-6)</p>	Restraint of mechanical joints	Ductile iron and Steel (3" - 12")	4" to 48"	Up to 350 psi
 <p>PVC-ROMAGRIP™ PIPE RESTRAINER (pg. 8-7)</p>	Restraint of mechanical joints	PVC (see catalog for additional information)	4" to 24"	Up to the pressure rating of the pipe
ALPHA		see Alpha product section, pg. 1-1		

Restraint Systems continued on next page

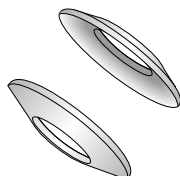
PRODUCT	APPLICATION	TYPE OF PIPE	FOR PIPE SIZES	WORKING PRESSURE
 <p>400RG RESTRAINED COUPLING (pg. 8-9)</p>	Restrained Pipe Coupling	Ductile iron & PVC	12" to 48"	Up to 350 psi
 <p>STYLE RFCA RESTRAINED FLANGED COUPLING ADAPTER (pg. 8-10)</p>	Provide a restrained flexible flanged-to-plain-end connection	Steel and ductile iron	3" to 24"	Up to 250 psi
 <p>STYLE RFCA FOR PVC RESTRAINED FLANGED COUPLING ADAPTER (PG. 8-11)</p>	Provide a restrained flexible flanged-to-plain-end connection	PVC (see catalog page for additional information)	4" to 24"	Up to the pressure rating of the pipe
 <p>STYLE DJ400 & DJ405 DISMANTLING JOINTS (pg. 8-12 & 8-13)</p>	Adjustable flanged fittings for maintenance & removal of valves and other fittings.	Flanged pipe	DJ400: 3" to 72" DJ405: 3" to 24"	See flange rating
 <p>FJ RESTRAINT FLEXIBLE EXPANSION JOINT (pg. 8-14 – 8-16)</p>	Accommodates expansion, contraction, rotation, bending and settlement	Flanged and MJ Pipe	3" - 24"	Up to 350 psi
 <p>FIELD FLANGE PIPE RESTRAINER (pg. 8-17)</p>	Join plain end pipe to flanged fittings with no threading or welding	Steel, ductile iron	4" to 12"	Up to 300 psi
 <p>PIRANHA RESTRAINT GASKET (pg. 8-18)</p>	Dual function gasket seals and provides restraint.	Tyton® ductile iron bell and spigot push-on joints	4" to 24"	Up to 350 psi
 <p>ARMOR LOCK STAINLESS STEEL RESTRAINT COUPLING (pg. 8-19)</p>	Couples pipe and provides restraint	HDPE, PVC, DI and steel pipe	4" to 12" larger sizes available	Up to 230 psi
 <p>DUCTILE LUG & 90° EYE BOLT PIPE RESTRAINER (pg. 8-21)</p>	Restraint of mechanical joints to prevent pull-out for 3/4" rod	Steel, cast iron, plastic, other	—	—
 <p>A.W.W.A. M-11 Hareness Restraint (pg. 8-22)</p>	Provides restraint for mechanical couplings on steel pipelines.	Steel	6" to 96"	—
 <p>HARNESS LUGS PIPE RESTRAINER (pg. 8-23 – 8-29)</p>	Attaches to flange to prevent pull-out of pipe joint	Steel, cast iron, other	3" to 72"	Up to 300 psi

*TYTON® and TYTON JOINT® are registered trademarks of the United States Pipe and Foundry, LLC which has no affiliation with Romac Industries, Inc. United States Pipe and Foundry Company, LLC does not manufacture, or endorse the Piranha Gasket.

PRODUCT	APPLICATION	TYPE OF PIPE	FOR PIPE SIZES	WORKING PRESSURE
 <p>STYLE SS1-H, SS2-H & SS3-H STAINLESS STEEL REPAIR CLAMPS (pg. 9-3)</p>	Full circumferential repair of splits and holes	HDPE pipe with a minimum pipe thickness of SDR 26	2" to 12"	Pressure rating of pipe or 150 psi, whichever is less
 <p>TAPPED STYLE SS1-H, SS2-H & SS3-H STAINLESS STEEL REPAIR CLAMPS (pg. 9-4)</p>	Outlet sizes 1/2" through 2"	HDPE pipe with a minimum pipe thickness of SDR 26	2" to 12"	Pressure rating of pipe or 150 psi, whichever is less
 <p>PIPE STIFFENING INSERTS (pg. 9-5 to 9-8)</p>	For use with Romac 501 couplings and flanged coupling adapters.	HDPE pipe with a minimum pipe thickness of SDR 32.5	4" to 36"	Pressure rating of pipe or 150 psi, whichever is less
 <p>STYLE 101N-H & 202N-H NYLON SADDLE WITH SINGLE OR DOUBLE STAINLESS STEEL STRAP (pg. 9-9)</p>	Outlet sizes 1/2" through 2 1/2"	HDPE pipe with a minimum pipe thickness of SDR 26	2" to 12"	Pressure rating of pipe or 150 psi, whichever is less
 <p>STYLE 305-H STAINLESS STEEL SERVICE SADDLE (pg. 9-10)</p>	Outlet sizes 3/4" through 3"	HDPE pipe with a minimum pipe thickness of SDR 26	10" & 12"	Pressure rating of pipe or 150 psi, whichever is less
 <p>STYLE 306-H STAINLESS STEEL SERVICE SADDLE (pg. 9-10)</p>	Outlet sizes 1/2" through 2"	HDPE pipe with a minimum pipe thickness of SDR 26	2" to 8"	Pressure rating of pipe or 150 psi, whichever is less
 <p>STYLE BP STAINLESS STEEL SEWER SADDLE (pg. 9-11)</p>	Outlet sizes 4" and 6"	HDPE pipe with a minimum pipe thickness of SDR 32.5	6" to 12"	10 psi
 <p>STYLE SST-H STAINLESS STEEL TAPPING SLEEVE (pg. 9-12)</p>	Make branch outlet using full circumferential seal	HDPE pipe with a minimum pipe thickness of SDR 17	4" to 12"	Pressure rating of pipe or 150 psi, whichever is less
 <p>STYLE FTS423-H FABRICATED STEEL TAPPING SLEEVE (pg. 9-13)</p>	Make branch outlet from main supply line	HDPE pipe with a minimum pipe thickness of SDR 17	4" to 12"	Pressure rating of pipe or 150 psi, whichever is less

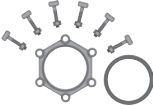

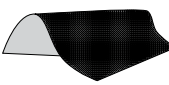
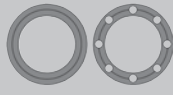
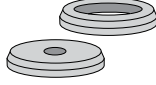
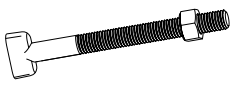


- **ONLY PRODUCTS LISTED IN THE "HDPE PRODUCTS" SECTION ARE SUITABLE FOR USE WITH HDPE PIPE.**
- **PIPELINE MUST BE PRESSURIZED WHEN TESTING HDPE PRODUCTS.**

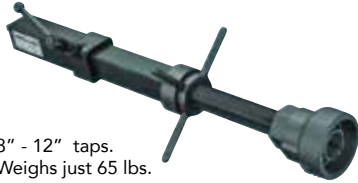


Romac products for high density polyethylene (HDPE) applications use spring washers to help counteract the problem of pipe contraction during temperature and pressure changes. They are made of a special "spring" grade of stainless steel.

For important technical information on HDPE pipe, refer to Page 9-1 and Page 9-2 in the Romac Catalog, or contact Romac's Engineering Department at 1-800-426-9341.

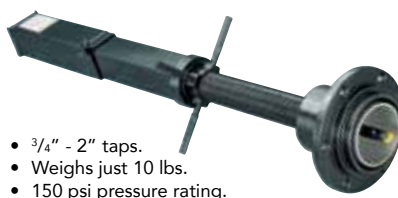
PRODUCT	APPLICATION	TYPE OF PIPE	FOR PIPE SIZES	WORKING PRESSURE
 <p>MECHANICAL JOINT ACCESSORY PACK (pg. 10-2)</p>	Sealing mechanical joints	Ductile iron or plastic	3" to 12"	Up to 350 psi
 <p>A/C TRANSITION GASKETS (pg. 10-5)</p>	Transition to DI or IPS size pipe	Ductile iron, PVC or steel	4" to 12"	MJ x CI: 350psi MJ x IPS: 275psi AC x CI: 150psi AC x IPS: 150psi
 <p>RUBBER GASKET MAT (pg. 10-6)</p>	—	—	6" x 24" to 37" x 30"	—
 <p>FLANGE GASKETS (pg. 10-7)</p>	Sealing flanged joints	—	3" to 16"	3": 350 psi 4-16": 275 psi
 <p>FIRE HYDRANT VALVE GASKETS (pg. 10-8)</p>	Sealing hydrant main valves	—	5"	Up to 150 psi
 <p>METER COMPANION FLANGE & FLANGE GASKET (pg. 10-10)</p>	1 1/2" and 2" water meters or pipe	—	1 1/2" to 2"	Up to 300 psi
 <p>R-BLUE T-Bolts & Nuts (pg. 10-3)</p>	Xylan Coated T-Bolts & Nuts	—	—	—

TAPMATE™ PAGE: TM-2



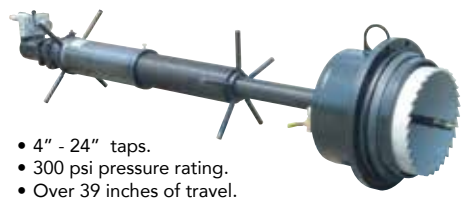
- 3" - 12" taps.
- Weighs just 65 lbs.
- 150 psi pressure rating.
- More than 27 inches of boring bar travel.
- Simple construction allows in-house maintenance and repair.
- For use on PVC, A/C, Ductile Iron, Cast Iron, Steel and HDPE pipe.

TAPMATE™ TOO PAGE: TM-4



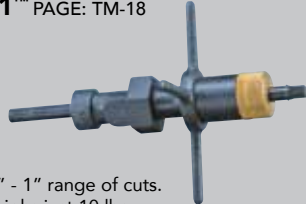
- 3/4" - 2" taps.
- Weighs just 10 lbs.
- 150 psi pressure rating.
- More than 12 inches of boring bar travel.
- Simple construction allows in-house maintenance and repair.
- For use on PVC, A/C, Ductile Iron, Cast Iron, Steel and HDPE pipe.

TAPMATE XL424™ PAGE: TM-8



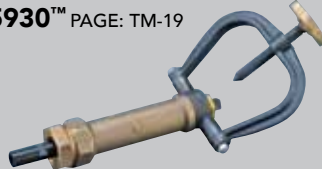
- 4" - 24" taps.
- 300 psi pressure rating.
- Over 39 inches of travel.
- Simple construction allows in-house maintenance and repair.
- Can be used with existing TapMate and Quik Valve equipment.
- For use on PVC, A/C, Ductile Iron, Cast Iron, Steel and HDPE pipe.

M-1™ PAGE: TM-18



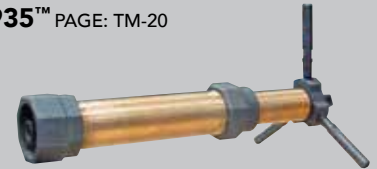
- 3/4" - 1" range of cuts.
- Weighs just 10 lbs.
- Good for wet and dry cuts.
- Uses TapMate Too adapters, arbor and ratchet.
- For use on PVC, A/C, Ductile Iron, Cast Iron, Steel and HDPE pipe.

5930™ PAGE: TM-19



- 3/4" - 1" range of cuts.
- Good for wet and dry cuts.
- Easy to set-up and use.
- For use on PVC, A/C, Ductile Iron, Cast Iron, Steel and HDPE pipe.

5935™ PAGE: TM-20



- 3/4" - 2" range of cuts.
- Weighs approximately 40 lbs.
- Easy to set-up and use.
- For use on PVC, A/C, Ductile Iron, Cast Iron and Steel pipe.

B-1™ PAGE: TM-10



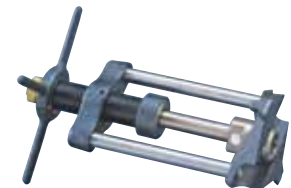
- Inserts any 3/4" - 1" corporation stop under pressure.
- Fast - no disassembly and assembly during installation.
- Simple and easy to operate manually or under power.
- For use on PVC, Ductile Iron and Cast Iron pipe.

B-TOO™ PAGE: TM-14



- Inserts any 3/4" - 1" corporation stop under pressure, up to 250 psi.
- Provides greater stability when cutting with the drill-tap and easier alignment when inserting the corporation stop.
- Uses common saddles, drill-taps and screw plugs.
- For use on PVC, Ductile Iron and Cast Iron pipe.

TAPMATE DRY TAP™ PAGE: TM-21



- 3/4" - 1" dry taps.
- Drilling shaft is supported at two points.
- Conforms to pipe sizes 3" - 48".
- For use on PVC, Ductile Iron and Cast Iron pipe.



THE EXERCISER™ PAGE: TM-25

- Valve exerciser for municipal use.
- Weighs just 40 lbs.
- Easily handled by one person.
- Up to 250 ft.-lbs. of torque.
- Motorcycle grip forward and reverse control handle.

DE-CHLORINATOR™ PAGE: TM-22



- Quickly dechlorinates and flushes highly concentrated chlorinated water in new construction situations.
- Allows water utilities to meet regulations for residual chlorine concentration in released water.
- Helps meet EPA, CWA, and SDWA legislation for released water entering receiving streams.

SEWER PIPE TAPPING MACHINE PAGE: TM-24



- 3 1/2" - 8 3/4" taps.
- Powered by an air motor.
- Weighs just 39 lbs.
- For use on PVC, Vitrified Clay, Concrete and HDPE pipe.

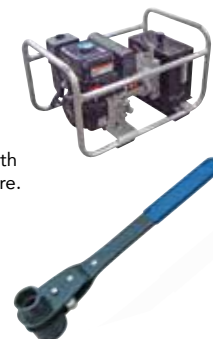
QuikValve™ PAGE: QV-2

- Inserts a valve in an operating line without loss of pressure.
- 4" - 8" installations.
- Completion time is less than two hours.
- Can be used in water lines with up to 150 psi ambient pressure.
- For use on Ductile Iron, Cast Iron, A/C and some classes of PVC pipe.



InsertaValve™ PAGE: QV-7

- Inserts a valve in an operating line without loss of pressure.
- 10" - 12" installations.
- Can be used in water lines with up to 150 psi ambient pressure.
- Completion time is less than two hours.
- For use on Ductile Iron, Cast Iron, A/C and some classes of PVC pipe.



PAGE: TM-26 - TM-29
Hydraulic, electric, and pneumatic drives to power your tapping and drilling machines.

PAGE: TM-30 - TM-31
Tools and accessories designed specifically for use on tapping sleeves, valves & other fittings.

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	Restrained Flange Coupling Adapter for PVC	8-11	RFCA-PVC	920	—	—	—	—
	Dismantling Joint (with tie-rods)	8-12	DJ400	971	—	—	—	—
	Dismantling Joint (with RomaGrip)	8-13	DJ405	975	—	—	—	—
	FJ Restraint	8-14 to 8-16	FJ Restraint	—	—	—	—	Flex-tend
	Field Flange-All Ductile	8-17	FF	—	—	—	200	1000
	Restraint Gasket	8-18	Piranha	—	—	—	—	—
Stainless Steel Restraint Coupling	8-19	Armor Lock	E2	—	—	—	—	
90° Eyebolt & Ductile Lug	8-21	—	—	—	—	—	—	
Harness Lugs	8-23 to 8-29	—	907	—	—	—	—	
HDPE PIPE PRODUCTS	Restrained Joint	1-1 to 1-9	ALPHA	—	—	—	—	—
	STAINLESS-SEAL™ Repair Clamps for HDPE	9-3	SS1-H to SS3-H	—	—	—	—	—
	Service Saddles for HDPE	9-9	101N-H, 202N-H	—	—	—	—	—
	All Stainless Steel Service Saddles for HDPE	9-10	305-H, 306-H	—	—	—	—	—
	All Stainless Steel Sewer Saddle for HDPE	9-11	BP	—	—	—	—	—
	HDPE Stiffeners	9-5, to 9-8	Stiffening Insert	—	—	230	—	—
	Stainless Steel Tapping Sleeve for HDPE	9-12	SST-H	—	—	—	—	—
	Fabricated Steel Tapping Sleeve for HDPE	9-13	FTS423-H	—	—	—	—	—
MISCELLANEOUS	Mechanical Joint Accessory Pack	10-2	MJAP	—	—	—	—	—
	MJ x CI Gasket	10-4	MJ x CI	—	—	—	—	—
	MJ X IPS Transition Gasket	10-4	MJ x IPS	—	—	—	—	—
	A/C X CI Transition Gasket	10-5	A/C x CI	—	—	—	—	—
	A/C X IPS Transition Gasket	10-5	A/C x IPS	—	—	—	—	—
	Rubber Gasket Mat	10-6	RM	—	—	—	—	—
	OD Tape Measure	10-11	OD Tape	—	—	—	—	—
	Threaded Flange Gasket	10-7	Gasket	—	—	—	—	—
	Tapping Flange Gasket	10-7	Gasket	—	—	—	—	—
	Fire Hydrant Main Valve Gasket	10-8, 10-9	Gasket	—	—	—	—	—
	Meter/Companion Flange and Gasket	10-10	Gasket	—	—	—	—	—
TRANSMATE Drilling and Tapping Tools		TM-1 to TM-32						
VALVE INSERTION		QV-1 to QV-12						

SPECIFICATION / CERTIFICATION REFERENCES



SPECIFICATION / CERTIFICATIONS REFERENCED IN THE ROMAC CATALOG

ANSI • ASTM • AWWA • MSS • NSF

ANSI / AWWA C111/A21.11

Rubber-gasket joints for ductile iron pressure pipe and fittings (nut and bolt composition specification)

ANSI / AWWA C115/A21.15

Flanged ductile-iron pipe with threaded flanges

ANSI / AWWA C116

Protective fusion bonded epoxy coatings for the interior and exterior surfaces of ductile iron and gray iron fittings for water service

ANSI / AWWA C207

Steel pipe flanges for waterworks service - sizes 4 in. through 144 in.

ANSI / AWWA C210

Liquid-epoxy coating systems for the interior and exterior of steel water pipelines

ANSI / AWWA C213

Fusion-bonded epoxy coating systems for the interior and exterior of steel water pipelines

ANSI / AWWA C219

Bolted, sleeve-type couplings for plain-end pipe

ANSI / AWWA C221

Mechanical Expansion Joints

ANSI / AWWA C223

Fabricated steel and stainless steel tapping sleeves

ANSI / AWWA C227

Stainless steel pipe flanges for water service, sizes 2" - 72"

ANSI / AWWA C228

Bolted, split sleeve restrained and nonrestrained couplings for plain end pipe

ANSI / AWWA C230

Stainless Steel Full-Encirclement Repair and Service Connection Clamps

ANSI / AWWA C800

Underground service line valves and fittings

ASTM A 36

Standard specification for structural steel

ASTM A 47

Standard specification for malleable iron castings

ASTM A 240

Standard specification for heat-resisting chromium and chromium-nickel stainless steel plate, sheet, and strip for pressure vessels

ASTM A 536

Standard specification for ductile iron castings

ASTM D 2000

Standard classification system for rubber products

MSS SP-60

Standard classification system for connecting flange joints between tapping sleeve and tapping valve

MSS SP-124

Fabricated Tapping Sleeves

NSF/ANSI 61 & 372

Certification that contains requirements that restrict lead levels in water contact materials. Only products bearing the NSF mark on the product, packaging and / or documentation shipped with the product are Certified.



ALPHA™ RESTRAINED JOINT

Features
PAGE 1-2



Wide Range Restrained Coupling

ORIGINALLY RELEASED IN THE SUMMER OF 2013, THE ALPHA COUPLING INSTALLS IN ABOUT THREE MINUTES, AND ACCOMMODATES UP TO 8 DEGREES OF DEFLECTION (4 DEGREES ON EACH END).

PAGE 1-4



Wide Range Restrained End Cap

THE ALPHA EC CAPS PLAIN-END PIPE FOR TESTING, BLOW-OFF OR LINE FLUSHING. THE ALPHA END CAP CAN ALSO BE USED AS A RELIABLE PIPE END SEAL FOR PERMANENT INSTALLATION.

PAGE 1-6



Wide Range Restrained Flanged Coupling

THE ALPHA FLANGED COUPLING QUICKLY ADAPTS PLAIN-END PIPE TO FLANGED FITTINGS. THE ALPHA FLANGED COUPLING ALSO ACCOMMODATES FLANGED SPOOL PIECES FOR CONNECTING TO VALVES AND OTHER FITTINGS.

PAGE 1-8

ALPHA™

WIDE RANGE RESTRAINED JOINT

ROMAC
INDUSTRIES, INC.

ALPHA™

WIDE RANGE RESTRAINED JOINT

ALPHA ADVANTAGES

- Standard Alpha covers IPS PVC through Ductile Iron pipe diameters.
- Alpha XL accommodates Ductile Iron through Oversize Cast Iron pipe sizes.
- Alpha can be configured to transition from IPS PVC up to Oversize Cast Iron pipe diameters.
- One piece, stab-fit installation.
- Cast components are high strength ductile iron.
- Working pressure: up to 350 PSI.
- Manufactured in the U.S.A.
- US Patent: 8,894,100
- Alpha products are approved for use on:
 - Ductile iron
 - Cast iron (Classes A, B, C & D)
 - PVC IPS size (Sch 40, Sch 80 & SDR 21)
 - PVC C900 and C909
 - HDPE: SDR 9, 11, 13.5 & 17, no pipe stiffeners required.







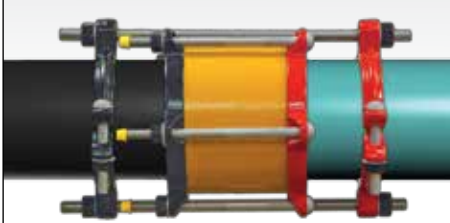

For other pipe materials, contact Romac.

NOTE: The original Alpha (with black grippers) is not compatible with HDPE pipe.



Certified to
NSF/ANSI 61 & 372

INSTALLATION TIME IS A FRACTION OF OTHER RESTRAINT METHODS

6" SLEEVE AND TWO MJ RESTRAINERS	6" COUPLING PLUS RESTRAINT SYSTEM	ALPHA
		
		
30 MINUTES TO INSTALL 29 TOTAL PARTS TO ASSEMBLE 12 T-BOLTS TO TORQUE 9 RADIAL BOLTS TO TORQUE 2 GASKETS TO SEAT	35 MINUTES TO INSTALL 33 TOTAL PARTS TO ASSEMBLE 5 COUPLING BOLTS TO TORQUE 4 CLAMPING BOLTS TO TORQUE 2 GASKETS TO SEAT	3 MINUTES TO INSTALL 2 NUTS TO TORQUE 1 PIECE (STAB-FIT) 0 GUESS-WORK

KEY ALPHA COMPONENTS



ROTATING END RINGS

- During installation, the end rings rotate and slide the draw hooks, gasket and grippers outward, against the pipe surface.

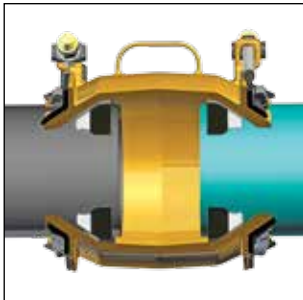
DRAW HOOK FASTENERS

- Stainless steel draw hooks are integrated into the gasket.

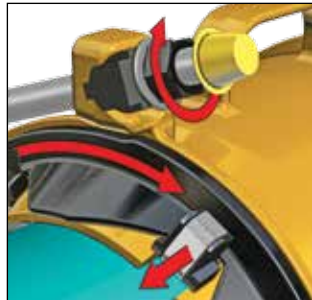
INDIVIDUAL GRIPPERS

- Individual ductile iron grippers compensate for angular deflection and out-of-round pipe.
- The grippers distribute the load evenly around the pipe circumference.

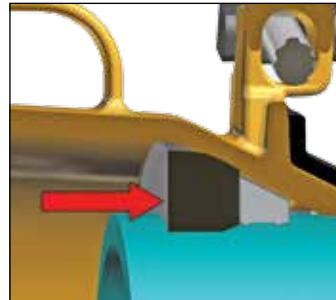
HOW ALPHA WORKS



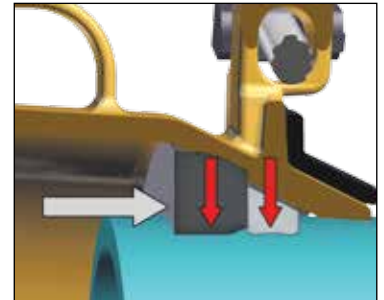
1 • Alpha is positioned over the pipe gap.



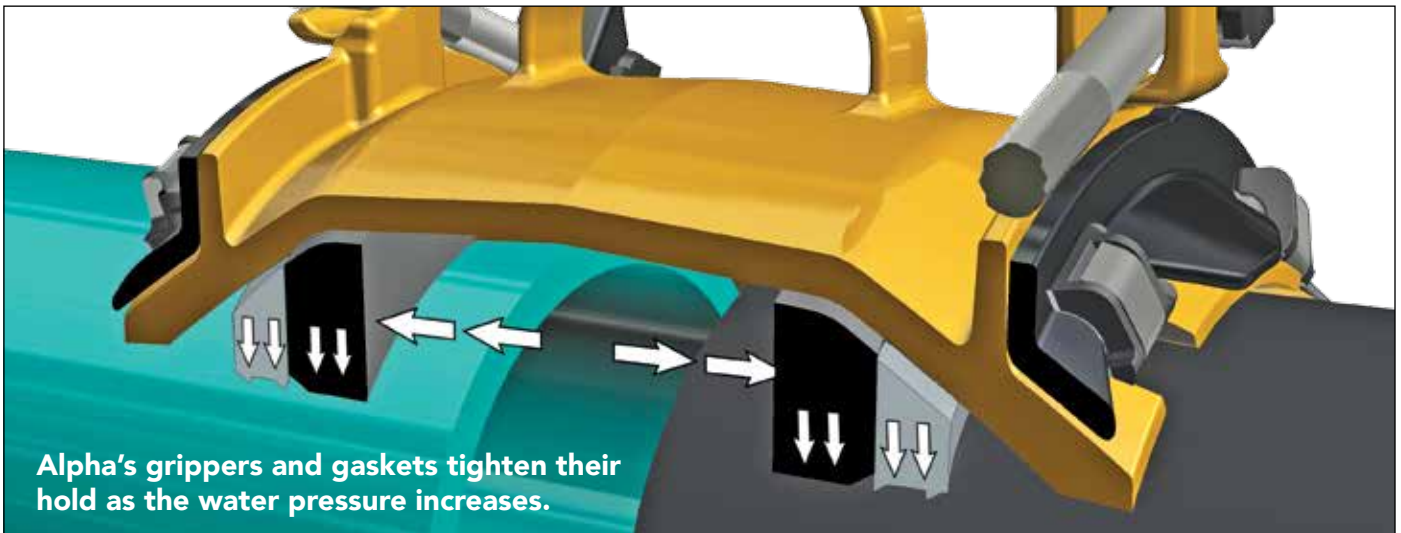
2 • Nuts are tightened, rotating the end ring.



3 • Draw hooks pull gasket and grippers outward and against the pipe.



4 • Gaskets compress and seal against the pipe surface. Gripper teeth are set.



Alpha's grippers and gaskets tighten their hold as the water pressure increases.

ALPHA™ WIDE RANGE RESTRAINT COUPLING

ROMAC
INDUSTRIES, INC.

MATERIAL SPECIFICATIONS

CASTINGS: All cast components (end rings, center ring and bolt guides) are ductile iron, meeting or exceeding the requirements of ASTM A 536, grade 65-45-12.

GRIPPERS: Ductile (nodular) iron, meeting or exceeding ASTM A 536, grade 65-45-12. Machine sharpened and heat treated. Xylan 1424 coated for corrosion protection.

GASKET: SBR compounded for water and sewer service in accordance with ASTM D2000. NBR available upon request. NSF/ANSI 61 & 372 Certified.

DRAW-HOOK FASTENERS: 304L stainless steel.

RAMP RUNNERS: Reinforced nylon.

BOLTS & NUTS: 304 stainless steel, 5/8-11 bolts with heavy hex e-coated nuts. Fasteners provided with anti-galling protection.

COATINGS: Center ring fusion bonded epoxy Romacoat, NSF 61 certified. End rings are Romabond polyester.

WORKING PRESSURE: up to 350 PSI.



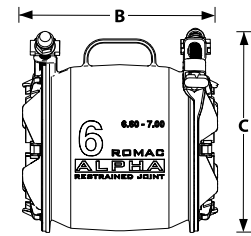
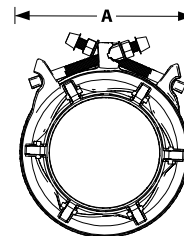
STANDARD ALPHA
FITS IPS PVC THROUGH
DUCTILE IRON PIPE OD'S.



Certified to
NSF/ANSI 61 & 372



ALPHA™
RESTRAINED JOINT



NOM. PIPE SIZE	O.D. RANGE (inches)	CATALOG NUMBER	DIMENSIONS			LIST PRICE	APPROX. WEIGHT (lbs)
			A O.D.	B LENGTH	C HEIGHT		
4"	4.50 - 4.90	ALPHA-A - 4.90	9.18	11.85	10.53	\$395.90	40
6"	6.60 - 7.00	ALPHA-A - 7.00	10.33	11.98	12.77	513.60	50
8"	8.60 - 9.10	ALPHA-A - 9.10	13.45	13.19	15.67	583.15	75
10"	10.75 - 11.20	ALPHA-A - 11.20	15.54	12.74	17.61	754.35	95
12"	12.75 - 13.30	ALPHA-A - 13.30	17.59	13.30	19.73	888.10	100

TO ORDER: Determine the O.D. of the pipes to be coupled, and select coupling size which covers the pipe diameters of both pipe ends. Specify Alpha Catalog Number [in table above]. Example: To couple 8" DI and 8" IPS PVC Pipe order **ALPHA-A-9.10**



ALPHA™ XL WIDE RANGE RESTRAINT COUPLING

MATERIAL SPECIFICATIONS

CASTINGS: All cast components (end rings, center ring and bolt guides) are ductile iron, meeting or exceeding the requirements of ASTM A 536, grade 65-45-12.

GRIPPERS: Ductile (nodular) iron, meeting or exceeding ASTM A 536, grade 65-45-12. Machine sharpened and heat treated. Xylan 1424 coating for corrosion protection.

GASKETS: NBR compounded for water and sewer service in accordance with ASTM D2000. NSF/ANSI 61 & 372 Certified.

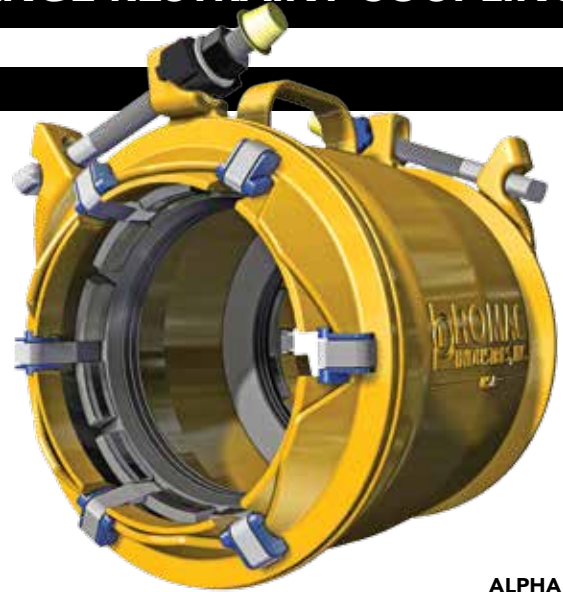
DRAW-HOOK FASTENERS: 304L stainless steel.

RAMP RUNNERS: Reinforced nylon.

BOLTS & NUTS: 304 stainless steel, 5/8-11 bolts with heavy hex e-coated nuts. Fasteners provided with anti-galling protection.

COATINGS: Center ring fusion bonded epoxy Romacoat, NSF 61 certified. End rings are Romabond polyester.

WORKING PRESSURE: up to 350 PSI.



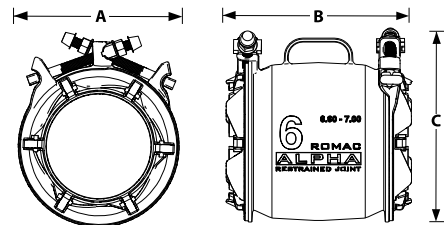
ALPHA XL
FITS DUCTILE IRON THROUGH
OVERSIZE CAST IRON PIPE OD'S.



Certified to
NSF/ANSI 61 & 372



ALPHA XL™ RESTRAINED JOINT



NOM. PIPE SIZE	O.D. RANGE (inches)	CATALOG NUMBER	DIMENSIONS			LIST PRICE	APPROX. WEIGHT (lbs)
			A O.D.	B LENGTH	C HEIGHT		
4"	4.80 - 5.10	ALPHA XL - 5.10	9.18	11.85	10.53	\$412.49	40
6"	6.90 - 7.20	ALPHA XL - 7.20	10.33	11.98	12.77	534.47	50
8"	9.05 - 9.40	ALPHA XL - 9.40	13.45	13.19	15.67	607.23	75
10"	11.10 - 11.45	ALPHA XL - 11.45	15.54	12.74	17.61	784.85	95
12"	13.20 - 13.60	ALPHA XL - 13.60	17.59	13.30	19.73	923.95	100

TO ORDER: Determine the O.D. of the pipes to be coupled, and select coupling size which covers the pipe diameters of both pipe ends. Example: To couple 8" Oversize Cast Iron Pipe and 8" C900 PVC pipe, order **ALPHA-XL- 9.40**.

ALPHA™ END CAP RESTRAINED END CAP



MATERIAL SPECIFICATIONS

CASTINGS: All cast components (end rings, center ring and bolt guides) are ductile iron, meeting or exceeding the requirements of ASTM A 536, grade 65-45-12.

GRIPPERS: Ductile (nodular) iron, meeting or exceeding ASTM A 536, grade 65-45-12. Machine sharpened and heat treated. Xylan 1424 coated for corrosion protection.

GASKET: SBR compounded for water and sewer service in accordance with ASTM D2000. NBR available upon request. NSF/ANSI 61 & 372 Certified.

DRAW-HOOK FASTENERS: 304L stainless steel.

RAMP RUNNERS: Reinforced nylon.

BOLT & NUT: R-Blue. HSLA. Xylan coated to reduce friction and provide corrosion resistance. For details, see catalog page 10-3.

WASHER: 304 Stainless steel.

COATINGS: End cap fusion bonded epoxy Romacoat, NSF 61 certified. End rings are Romabond polyester.

WORKING PRESSURE: up to 350 PSI.



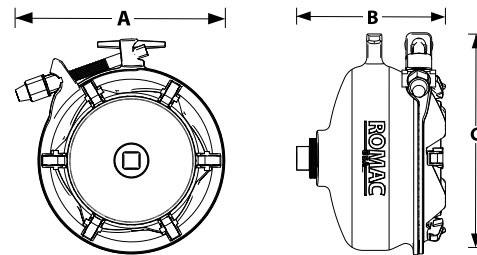
ALPHA™

RESTRAINED END CAP



Certified to
NSF/ANSI 61 & 372

STANDARD ALPHA END CAP
FITS IPS PVC THROUGH
DUCTILE IRON PIPE OD'S.



NOM. PIPE SIZE	O.D. RANGE (inches)	CATALOG NUMBER	DIMENSIONS			LIST PRICE	APPROX. WEIGHT (lbs)
			A O.D.	B LENGTH	C HEIGHT		
4"	4.50 - 4.90	ALPHA-EC - 4.90	10.20	7.15	9.70	\$241.82	21
6"	6.60 - 7.00	ALPHA-EC - 7.00	11.35	7.75	11.90	310.30	30
8"	8.60 - 9.10	ALPHA-EC - 9.10	13.40	9.45	15.00	425.86	52
10"	10.75 - 11.20	ALPHA-EC - 11.20	15.45	9.75	17.10	678.38	63
12"	12.75 - 13.30	ALPHA-EC - 13.30	17.50	10.10	19.15	758.63	78

TO ORDER: Determine the O.D. of the pipe to be capped, and select end cap size which covers the pipe diameter. Specify Catalog Number. **EXAMPLE:** To cap an 8" DI or 8" IPS PVC pipe, order **ALPHA-EC -9.10**



ALPHA™ XL END CAP RESTRAINED END CAP

MATERIAL SPECIFICATIONS

CASTINGS: All cast components (end rings, center ring and bolt guides) are ductile iron, meeting or exceeding the requirements of ASTM A 536, grade 65-45-12.

GRIPPERS: Ductile (nodular) iron, meeting or exceeding ASTM A 536, grade 65-45-12. Machine sharpened and heat treated. Xylan 1424 coated for corrosion protection.

GASKETS: NBR compounded for water and sewer service in accordance with ASTM D2000. NSF/ANSI 61 & 372 Certified.

DRAW-HOOK FASTENERS: 304L stainless steel.

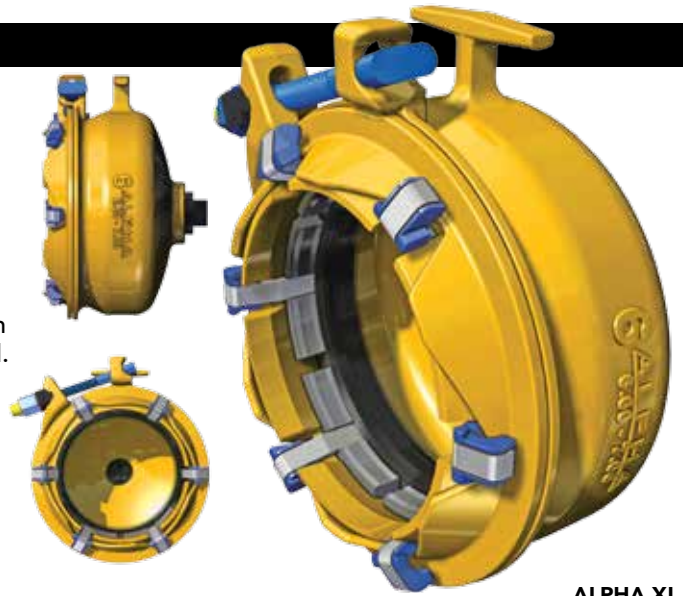
RAMP RUNNERS: Reinforced nylon.

BOLT & NUT: R-Blue. HSLA. Xylan coated to reduce friction and provide corrosion resistance. For details, see catalog page 10-3.

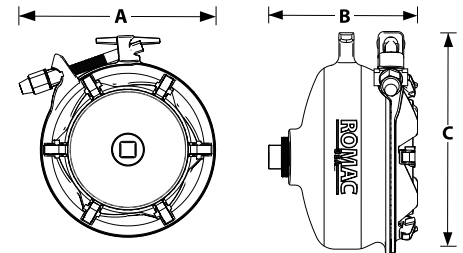
WASHER: 304 Stainless steel.

COATINGS: End cap fusion bonded epoxy Romacoat, NSF 61 certified. End rings are Romabond polyester.

WORKING PRESSURE: up to 350 PSI.



ALPHA XL
FITS DUCTILE IRON THROUGH
OVERSIZE CAST IRON PIPE OD'S.



ALPHA XL™ RESTRAINED END CAP

NOM. PIPE SIZE	O.D. RANGE (inches)	CATALOG NUMBER	DIMENSIONS			LIST PRICE	APPROX. WEIGHT (lbs)
			A O.D.	B LENGTH	C HEIGHT		
4"	4.80 - 5.10	ALPHA EC XL - 5.10	10.20	7.15	9.70	\$251.99	21
6"	6.90 - 7.20	ALPHA EC XL- 7.20	11.35	7.75	11.90	323.68	30
8"	9.05 - 9.40	ALPHA EC XL - 9.40	13.40	9.45	15.00	443.52	52
10"	11.10 - 11.45	ALPHA EC XL - 11.45	15.45	9.75	17.10	705.67	63
12"	13.20 - 13.60	ALPHA EC XL - 13.60	17.50	10.10	19.15	789.13	78

TO ORDER: Determine the O.D. of the pipe to be capped, and select end cap size which covers the pipe diameter. Specify Catalog Number. **EXAMPLE:** To cap an 8" DI or 8" Cast Iron pipe, order **ALPHA-EC-XL -9.40**

ALPHA™ FC RESTRAINED FLANGED COUPLING



MATERIAL SPECIFICATIONS

CASTINGS: All cast components (end rings, center ring and bolt guides) are ductile iron, meeting or exceeding the requirements of ASTM A 536, grade 65-45-12.

FLANGE: Compatible with flat face flanges with ANSI Class 125 and 150 bolt circles.

GRIPPERS: Ductile (nodular) iron, meeting or exceeding ASTM A 536, grade 65-45-12. Machine sharpened and heat treated. Xylan 1424 coated for corrosion protection.

GASKET: SBR compounded for water and sewer service in accordance with ASTM D2000. NBR available upon request. NSF/ANSI 61 & 372 Certified.

DRAW-HOOK FASTENERS: 304L stainless steel.

RAMP RUNNERS: Reinforced nylon.

BOLT & NUT: 304 stainless steel, 5/8-11 bolts with heavy hex e-coated nuts. Fasteners provided with anti-galling protection.

WASHER: 304 Stainless steel.

COATINGS: Flanged coupling body fusion bonded epoxy Romacoat, NSF 61 certified. End rings are Romabond polyester.

WORKING PRESSURE: up to 350 PSI.



**STANDARD ALPHA FC
FITS IPS PVC THROUGH
DUCTILE IRON PIPE OD'S.**

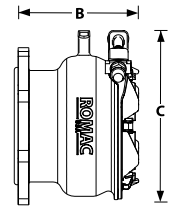
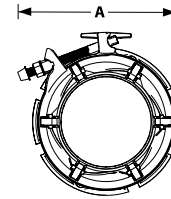


Certified to
NSF/ANSI 61 & 372



ALPHA™ FC

RESTRAINED FLANGED COUPLING



NOM. PIPE SIZE	O.D. RANGE (inches)	CATALOG NUMBER	DIMENSIONS			LIST PRICE	APPROX. WEIGHT (lbs)
			A O.D.	B LENGTH	C HEIGHT		
4"	4.50 - 4.90	ALPHA-FC - 4.90	11.20	8.15	10.25	\$269.64	29
6"	6.60 - 7.00	ALPHA-FC - 7.00	11.35	8.24	12.45	344.54	40
8"	8.60 - 9.10	ALPHA-FC - 9.10	13.40	9.96	15.55	462.24	57
10"	10.75 - 11.20	ALPHA-FC - 11.20	15.45	10.18	17.65	746.86	82
12"	12.75 - 13.30	ALPHA-FC - 13.30	17.50	10.28	19.70	836.74	105

TO ORDER: Determine the O.D. of the pipes to be coupled. Specify Catalog Number.

EXAMPLE: To couple an 8" DI or 8" IPS PVC pipe, order **ALPHA-FC -9.10**



ALPHA™ XL FC RESTRAINED FLANGED COUPLING

MATERIAL SPECIFICATIONS

CASTINGS: All cast components (end rings, center ring and bolt guides) are ductile iron, meeting or exceeding the requirements of ASTM A 536, grade 65-45-12.

FLANGE: Compatible with flat face flanges with ANSI Class 125 and 150 bolt circles.

GRIPPERS: Ductile (nodular) iron, meeting or exceeding ASTM A 536, grade 65-45-12. Machine sharpened and heat treated. Xylan 1424 coated for corrosion protection.

GASKETS: NBR compounded for water and sewer service in accordance with ASTM D2000. NSF/ANSI 61 & 372 Certified.

DRAW-HOOK FASTENERS: 304L stainless steel.

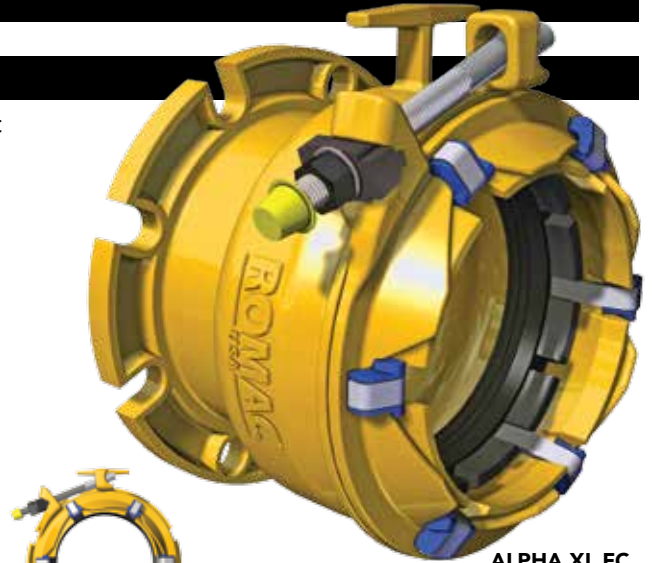
RAMP RUNNERS: Reinforced nylon.

BOLT & NUT: 304 stainless steel, 5/8-11 bolts with heavy hex e-coated nuts. Fasteners provided with anti-galling protection.

WASHER: 304 Stainless steel.

COATINGS: Flanged coupling body fusion bonded epoxy Romacoat, NSF 61 certified. End rings are Romabond polyester.

WORKING PRESSURE: up to 350 PSI.

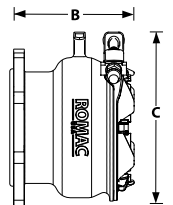
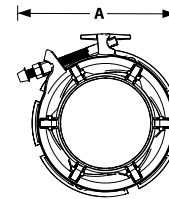


ALPHA XL FC
FITS DUCTILE IRON THROUGH
OVERSIZE CAST IRON PIPE OD'S.



ALPHA™ FC

RESTRAINED FLANGED COUPLING



NOM. PIPE SIZE	O.D. RANGE (inches)	CATALOG NUMBER	DIMENSIONS			LIST PRICE	APPROX. WEIGHT (lbs)
			A O.D.	B LENGTH	C HEIGHT		
4"	4.80 - 5.10	ALPHA FC XL - 5.10	11.20	8.15	10.25	\$280.88	29
6"	6.90 - 7.20	ALPHA FC XL - 7.20	11.35	8.24	12.45	358.99	40
8"	9.05 - 9.40	ALPHA FC XL - 9.40	13.40	9.96	15.55	480.97	57
10"	11.10 - 11.45	ALPHA FC XL - 11.45	15.45	10.18	17.65	777.36	82
12"	13.20 - 13.60	ALPHA FC XL - 13.60	17.50	10.28	19.70	870.45	105

TO ORDER: Determine the O.D. of the pipes to be coupled. Specify Alpha Catalog Number.

EXAMPLE: To couple an 8" DI or 8" cast iron pipe, order **ALPHA-FC-XL-9.40**



REPAIR CLAMPS

REPAIR CLAMPS



SS1
ONE SECTION
STAINLESS STEEL
REPAIR CLAMP

PAGE 2-4



SS2
TWO SECTION STAINLESS
STEEL REPAIR CLAMP

PAGE 2-5



SS3
THREE SECTION
STAINLESS STEEL
REPAIR CLAMP

PAGE 2-6



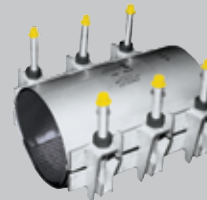
ARMOR SEAL™
STAINLESS STEEL
REPAIR CLAMP

PAGE 2-7



SL1
STAINLESS STEEL
REPAIR CLAMP
W/REMOVABLE
BOLTS

PAGE 2-8



SL2
STAINLESS STEEL
REPAIR CLAMP
W/REMOVABLE BOLTS

PAGE 2-9



CL1
STAINLESS STEEL
REPAIR CLAMP
W/CAST LUGS

PAGE 2-11



CL2
STAINLESS STEEL
REPAIR CLAMP
W/CAST LUGS

PAGE 2-12



CL3
STAINLESS STEEL
REPAIR CLAMP
W/CAST LUGS

PAGE 2-13



Clamp Taps
TAPS FOR SS1, SS2,
SS3, CL1, CL2 & CL3

PAGE 2-14



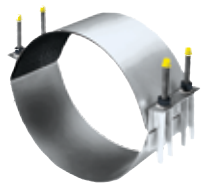
SC, SCC & SCS
STAINLESS STEEL
REPAIR CLAMPS

PAGE 2-15 & 2-16



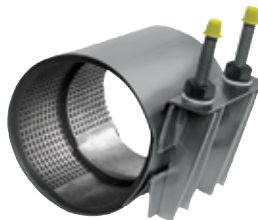
C
STAINLESS STEEL
REPAIR CLAMP

PAGE 2-17



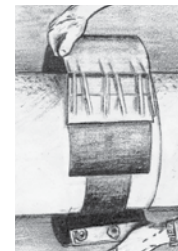
CC
STAINLESS STEEL
REPAIR CLAMP

PAGE 2-18



CLC
STAINLESS STEEL
COLLAR LEAK CLAMP

PAGE 2-19



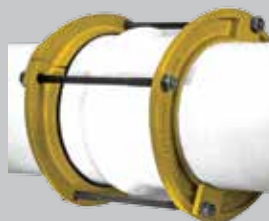
A/CME BAND
RUBBER REPAIR
STRAP

PAGE 2-20



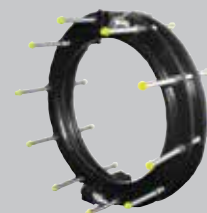
516
BELL JOINT
LEAK CLAMP

PAGE 2-21



517
BELL JOINT
LEAK CLAMP

PAGE 2-22



416
BELL JOINT
LEAK CLAMP

PAGE 2-23

DETAIL SPECIFICATIONS FOR STAINLESS-SEAL™ REPAIR CLAMPS

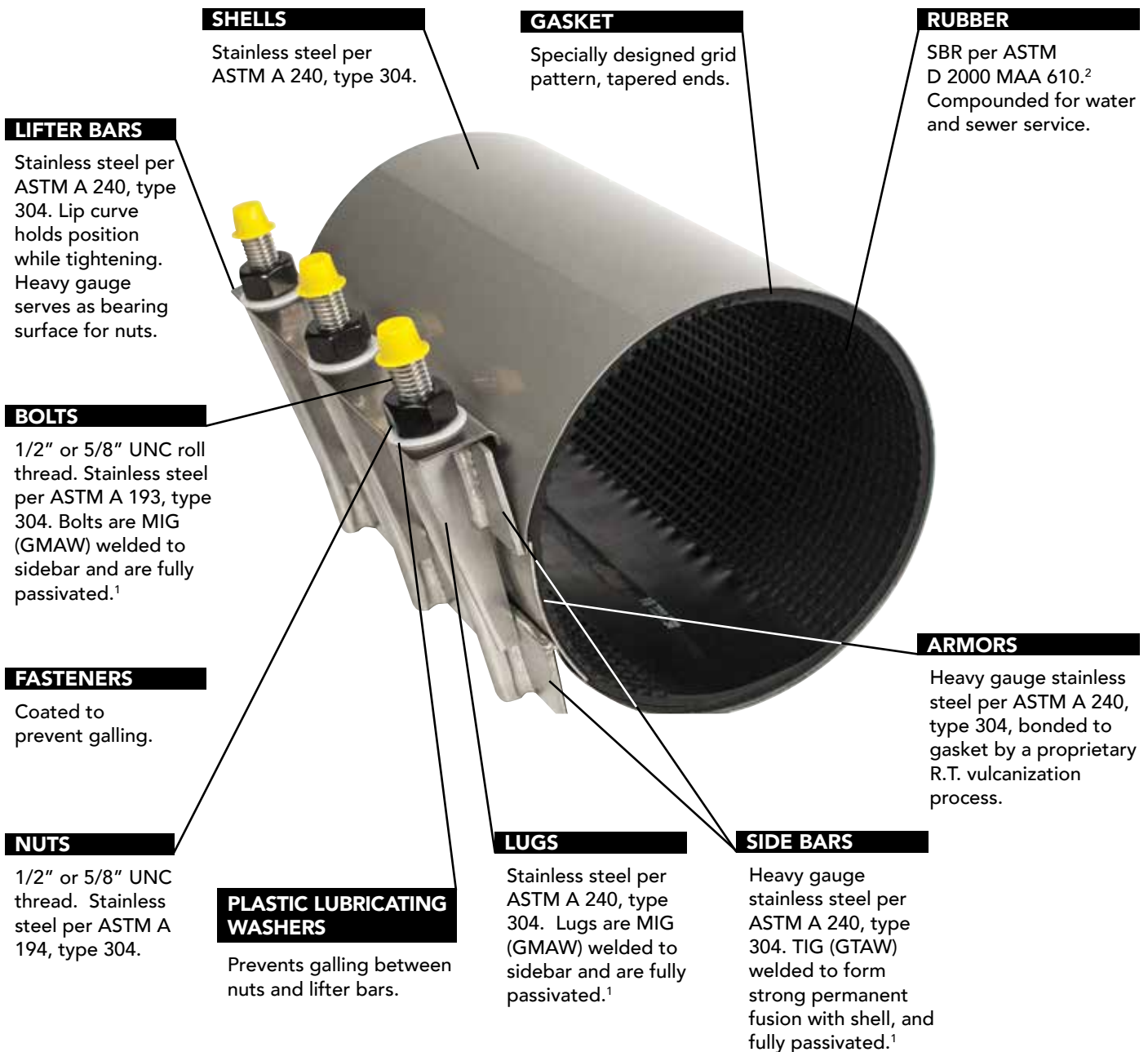


A ROMAC ORIGINAL

1969 - The First All Stainless Steel Repair Clamp

Extended life, easy to install

U.S. PAT. NO. 3,189,970.



¹ **Passivated:** Chemically treated after welding to produce a highly corrosion-resistant coating.

² Standard gaskets are specially formulated with antioxidant/antiozonant agents to increase shelf life. Elastomers compounded for special service, including NBR and EPDM, are available on request.



ANOTHER ADVANTAGE OF STAINLESS-SEAL™ REPAIR CLAMPS

PASSIVE VS. ACTIVE 304 STAINLESS STEEL (18-8)

GALVANIC SERIES IN SEA WATER

CORRODED END • LEAST NOBLE

- Magnesium
- Magnesium Alloys
- Zinc
- Aluminum 1100
- Cadmium
- Aluminum 2024
- Steel or Iron
- Grey Cast Iron
- Ductile Cast Iron
- Chromium-Iron (active)
- Ni-Resist

304 STAINLESS STEEL (18-8) (ACTIVE)

- Lead-Tin Solders
- Lead
- Tin
- Nickel (active)
- Inconel (active)
- Brasses
- Copper
- Bronzes
- Copper-Nickel Alloys
- Monel
- Silver Solder
- Nickel (passive)
- Chromium-Iron (passive)

304 STAINLESS STEEL (18-8) (PASSIVE)

- Silver
- Graphite
- Gold
- Platinum

PROTECTED END • MOST NOBLE

SOURCE: LAQUE AND COX, PROC. AMER. SOC. FOR TESTING AND MATERIALS, 40, 17, (40).

The galvanic chart at the left shows the high corrosion-resistant quality of fully passivated 304 stainless steel (18-8).

DISSIMILAR METALS

Corrosion created by two or more dissimilar metals (less noble) is eliminated by the use of one hundred per cent (100%) stainless steel.

ENVIRONMENTAL (SOIL) CORROSION

Stainless steel's natural resistance to corrosion is due to the chromium and nickel oxides that form on the surface of the metal.

WELDING

Carbon residue from the welding process prevents oxygen from contacting the surface and thus prevents the formation of the passive oxide film. The metal without the benefit of a fresh oxide film in the heated area becomes active, as shown on the chart. All Romac stainless steel products are constructed from 304 stainless steel (18-8), and are fully passivated. Chemical treatment breaks down the carbon residue which is then removed with an extremely high-pressure water-jet. This action cleans the burned area and allows a fresh new oxide film to form and protect your investment.

INVESTMENT

Corrosion resistance is one of the best reasons for investing in stainless steel clamps. Romac Stainless-Seal™ Repair Clamps assure you of the highest degree of corrosion resistance.

STYLE SS1 (ONE SECTION) NORMAL RANGE .40"



MATERIAL SPECIFICATIONS

SHELLS AND LUGS: Stainless steel per ASTM A 240, type 304.

BOLTS: UNC rolled thread, stainless steel per ASTM A 193, type 304.

NUTS: Stainless steel per ASTM A 194, type 304.

WASHERS: Stainless steel per ASTM A 240, type 304 and plastic lubricating washers.

GASKETS: SBR per ASTM D 2000 MAA 610. Compounded for water and sewer service. Other compounds available on request.



SS1-7.00 X 10" REPAIR CLAMP



NSF61 certified upon request.

**MEETS
AWWA C230**

Certified to
NSF/ANSI 61 & 372

NOM. PIPE SIZE	O.D. SIZE RANGE	CATALOG NUMBER	LENGTH / WEIGHT							
			6"	8"	10"	12"	16"	20"	24"	30"
2" - 2 1/4"	2.35 - 2.63	SS1 - 2.63 x length ¹	\$91.11	\$124.22	\$172.85	\$206.65	\$222.51	\$251.22	N/A	N/A
	2.62 - 2.87	SS1 - 2.87 x length ¹	4#	4#	5#	5#	8#	11#		
2 1/2"	2.75 - 3.00	SS1 - 3.00 x length ¹	94.70	129.13	179.10	211.48	229.13	277.45	N/A	N/A
	2.87 - 3.12	SS1 - 3.12 x length ¹	4#	4#	5#	6#	8#	11#		
3"	3.45 - 3.70	SS1 - 3.70 x length ¹	109.66	135.53	187.30	219.49	247.81	317.95	N/A	N/A
	3.75 - 4.00	SS1 - 4.00 x length ¹	4#	5#	5#	6#	9#	12#		
3 1/2"	3.95 - 4.20	SS1 - 4.20 x length ¹	115.20	135.53	187.30	230.71	258.22	335.94	421.91	N/A
			5#	5#	6#	7#	9#	13#	15#	
4"	4.45 - 4.85	SS1 - 4.85 x length	122.50	152.86	208.28	242.81	269.98	409.45	549.27	670.07
	4.74 - 5.14	SS1 - 5.14 x length								
	4.95 - 5.35	SS1 - 5.35 x length								
	5.20 - 5.60	SS1 - 5.60 x length								
6"	5.95 - 6.35	SS1 - 6.35 x length	152.48	182.92	247.81	292.07	322.13	485.91	611.47	796.11
	6.60 - 7.00	SS1 - 7.00 x length								
	6.84 - 7.24	SS1 - 7.24 x length								
	7.06 - 7.46	SS1 - 7.46 x length								
	7.40 - 7.80	SS1 - 7.80 x length								
8"	7.95 - 8.35	SS1 - 8.35 x length	179.13	214.34	283.91	343.99	393.09	556.88	693.35	914.11
	8.60 - 9.00	SS1 - 9.00 x length								
	9.00 - 9.40	SS1 - 9.40 x length								
	9.30 - 9.70	SS1 - 9.70 x length								
10"	9.95 - 10.35	SS1-10.35 x length	234.98	285.61	375.74	448.13	514.90	687.53	854.45	1,168.93
	10.70 - 11.10	SS1-11.10 x length								
	11.04 - 11.44	SS1-11.44 x length								
	11.40 - 11.80	SS1-11.80 x length								
	11.60 - 12.00	SS1-12.00 x length								
11.85 - 12.25	SS1-12.25 x length									
12"	12.10 - 12.50	SS1-12.50 x length	274.28	324.27	430.03	519.35	587.27	815.56	968.60	1,382.51
	12.70 - 13.10	SS1-13.10 x length								
	13.15 - 13.55	SS1-13.55 x length								
	13.60 - 14.00	SS1-14.00 x length								
	14.10 - 14.50	SS1-14.50 x length								

¹1.25" range

FOR TAPPED SS1 SEE PAGE 2-14.

FOR SEWER O.D.S SEE PAGE 7-7.

NUMBER OF BOLTS PER CLAMP LENGTH

OD RANGE	6"	8"	10"	12"	16"	20"	24"	30"
2.35 - 9.99	2	2	3	3	4	5	6	8
10.00 - 14.50	2	3	3	4	5	7	8	10

For higher working pressures, clamp length should equal or exceed diameter of pipe. Some sizes and lengths not listed are available on request. Clamps are not to be used for joining plain end pipe.

TO ORDER: Specify catalog number x length of clamp desired.

EXAMPLE: For a one-section clamp for pipe with an O.D. between 6.60 and 7.00 and clamp length of 10", order **SS1 - 7.00 x 10"**



STYLE SS2 (TWO SECTION) WIDER RANGE .80"

MATERIAL SPECIFICATIONS

- SHELLS AND LUGS:** Stainless steel per ASTM A 240, type 304.
- BOLTS:** UNC rolled thread, stainless steel per ASTM A 193, type 304.
- NUTS:** Stainless steel per ASTM A 194, type 304.
- WASHERS:** Stainless steel per ASTM A 240, type 304 and plastic lubricating washers.
- GASKETS:** SBR per ASTM D 2000 MAA 610. Compounded for water and sewer service. Other compounds available on request.



SS2-7.64 X 10" REPAIR CLAMP



NSF61 certified upon request.

**MEETS
AWWA C230**

REPAIR CLAMPS

NOM. PIPE SIZE	O.D. SIZE RANGE	CATALOG NUMBER	LENGTH / WEIGHT						
			8"	10"	12"	16"	20"	24"	30"
4"	4.47 - 5.27 4.77 - 5.57 5.20 - 6.00	SS2 - 5.27 x length SS2 - 5.57 x length SS2 - 6.00 x length ¹	\$241.19 9#	\$316.79 12#	\$375.14 13#	\$448.49 17#	\$600.60 25#	\$768.14 30#	N/A
6"	6.57 - 7.37 6.84 - 7.64 7.20 - 8.00	SS2 - 7.37 x length SS2 - 7.64 x length SS2 - 8.00 x length ¹	277.26 11#	356.70 15#	406.29 17#	524.57 22#	716.04 28#	941.44 34#	1013.47 43#
8"	8.59 - 9.39 8.99 - 9.79 9.20 - 10.00	SS2 - 9.39 x length SS2 - 9.79 x length SS2-10.00 x length ¹	317.35 12#	396.04 17#	461.58 19#	600.60 24#	813.07 30#	1,075.28 36#	1,143.12 47#
10"	10.70 - 11.50 11.04 - 11.84 11.40 - 12.20	SS2-11.50 x length SS2-11.84 x length SS2-12.20 x length	320.84 15#	519.32 18#	712.79 23#	747.47 32#	996.65 41#	1,324.96 47#	1,493.40 59#
12"	12.70 - 13.50 13.15 - 13.95 13.50 - 14.30 13.71 - 14.51	SS2-13.50 x length SS2-13.95 x length SS2-14.30 x length SS2-14.51 x length	411.20 16#	595.37 19#	809.26 25#	855.02 33#	1,154.02 41#	1,471.91 50#	1,681.79 61#
14"	15.00 - 15.80 15.95 - 16.75	SS2-15.80 x length SS2-16.75 x length	589.53 18#	796.11 21#	1028.49 27#	1,146.40 33#	1,552.31 43#	1,836.35 50#	1,933.44 64#

¹ Recommended for use on CL200 ACRB

NUMBER OF BOLTS PER CLAMP LENGTH							
OD RANGE	8"	10"	12"	16"	20"	24"	30"
4.47 - 9.99	4	6	6	8	10	12	16
10.00 - 16.75	6	6	8	10	14	16	20

**FOR TAPPED SS2 SEE PAGE 2-14.
FOR SEWER O.D.S SEE PAGE 7-8.**

For higher working pressures, clamp length should equal or exceed diameter of pipe. Some sizes and lengths not listed are available on request. Clamps are not to be used for joining plain end pipe.

TO ORDER: Specify catalog number x length of clamp desired.

EXAMPLE: For a two-section clamp for pipe with an O.D. between 6.84 and 7.64 and clamp length of 10", order **SS2 - 7.64 x 10"**

STYLE SS3 (THREE SECTION)

WIDEST RANGE 1.20"



MATERIAL SPECIFICATIONS

SHELLS AND LUGS: Stainless steel per ASTM A 240, type 304.

BOLTS: UNC rolled thread, stainless steel per ASTM A 193, type 304.

NUTS: Stainless steel per ASTM A 194, type 304.

WASHERS: Stainless steel per ASTM A 240, type 304 and plastic lubricating washers.

GASKETS: SBR per ASTM D 2000 MAA 610. Compounded for water and sewer service. Other compounds available on request.



SS3-14.65 X 12" REPAIR CLAMP



NSF61 certified upon request.

**MEETS
AWWA C230**

Certified to
NSF/ANSI 61 & 372

O.D. SIZE RANGE	CATALOG NUMBER	LENGTH / WEIGHT							
		8"	10"	12"	16"	20"	24"	30"	36"
11.04-12.24 12.40-13.60	SS3-12.24 x length SS3-13.60 x length	\$490.73 22#	\$657.06 27#	\$824.62 31#	\$1,111.93 41#	\$1,597.67 53#	\$1,624.60 61#	\$1,864.75 80#	\$2,709.78 94#
13.14-14.34 13.45-14.65	SS3-14.34 x length SS3-14.65 x length	562.24 24#	729.99 29#	936.16 33#	1,187.47 43#	1,643.57 56#	1,802.97 65#	2,099.81 85#	2,831.03 99#
15.30-16.50 17.10-18.30	SS3-16.50 x length SS3-18.30 x length	742.69 25#	1,118.84 30#	1,152.78 35#	1,495.14 45#	1,986.34 59#	2,078.91 72#	3,057.45 89#	3,481.41 103#
18.00-19.20 19.50-20.70	SS3-19.20 x length SS3-20.70 x length	838.54 26#	1,145.38 32#	1,217.57 36#	1,524.78 49#	2,067.25 63#	2,555.88 76#	3,237.14 95#	3,592.30 112#
21.60-22.80	SS3-22.80 x length	928.22 30#	1,240.68 35#	1,347.15 40#	1,727.26 53#	2,293.98 67#	2,613.65 80#	3,507.69 102#	4,021.45 120#
23.25-24.45	SS3-24.45 x length	1,232.11 33#	1,367.56 38#	1,519.62 43#	2,213.16 56#	2,982.30 71#	3,420.21 84#	4,318.50 109#	5,195.48 129#
25.80-27.00	SS3-27.00 x length	1,535.82 35#	1,626.87 40#	1,697.03 45#	2,698.83 60#	3,670.35 75#	4,226.32 88#	4,777.20 115#	6,369.55 135#

NUMBER OF BOLTS PER CLAMP LENGTH

OD RANGE	8"	10"	12"	16"	20"	24"	30"	36"
All Ranges	9	9	12	15	21	24	30	36

FOR TAPPED SS3 SEE PAGE 2-14.

FOR SEWER O.D.S SEE PAGE 7-8.

For higher working pressures, clamp length should equal or exceed diameter of pipe. Some sizes and lengths not listed are available on request. Clamps are not to be used for joining plain end pipe.

TO ORDER: Specify catalog number x length of clamp desired.

EXAMPLE: For a 3-section clamp for pipe with an O.D. between 13.45 and 14.65 and clamp length of 12", order **SS3 - 14.65 x 12"**

REPAIR CLAMPS



ARMOR SEAL™ FLEXIBLE REPAIR CLAMP

REPAIR CLAMPS

MATERIAL SPECIFICATIONS

SHELL AND ARMORS: 304 Stainless Steel, other materials available upon request.

GASKET: Ethylene Propylene Diene Monomer (EPDM) compounded for water and sewer service. Other compounds available on request.

BOLTS AND NUTS: 304 stainless steel, metric socket head cap screws. Other materials available upon request.

USE: For the repair of pipe cracks, holes and splits. Can also be used as a coupling.

COMPATIBLE PIPE MATERIALS: Steel, Cast Iron, Ductile Iron, Asbestos Cement, Concrete, PVC & HDPE (PE 4710 & PE 3408).



INSTALLING AN ARMOR SEAL™ ON A 24 INCH PVC PIPE.

- ALL STAINLESS STEEL.
- CAN BE USED AS A COUPLING.
- COMPATIBLE WITH STEEL, DI, HDPE, PVC, A/C AND CONCRETE PIPE.
- ACCOMODATES ANGULAR DEFLECTION AND MISALIGNED PIPES.



For Metric Hex Bit Sockets, see page 10-10

NOM. PIPE SIZE	O.D. (inches)	RANGE (inches)	CATALOG NUMBER	NOM. LENGTH	MAX. CRACK WIDTH	ALLOWABLE DEFLECTION	WORKING PRESSURE†	HEX BIT SIZE	LIST PRICE	APPROX. WEIGHT (lbs.)
4"	4.50	4.33 - 4.57	ASEAL - 4.50	4"	1.38"	4°	435	6 mm	\$352.75	4.2
	4.80	4.65 - 4.92	ASEAL - 4.80	4"	1.38"	4°	290	6 mm	352.75	4.3
6"	6.63	6.54 - 7.01	ASEAL - 6.90	8"	3.94"	2°	330	10 mm	578.41	16.9
	6.90									
8"	8.63	8.27 - 8.74	ASEAL - 8.63	8"	3.94"	2°	260	10 mm	614.04	18.4
	9.05		8.82 - 9.29								ASEAL - 9.05
10"	10.75	10.43 - 10.91	ASEAL - 10.75	8"	3.94"	2°	215	10 mm	661.55	20.0
	11.10		10.67 - 11.14								ASEAL - 11.10
12"	12.75	12.60 - 13.07	ASEAL - 12.75	8"	3.94"	2°	230	10 mm	875.33	29.1
	13.20		12.95 - 13.43								ASEAL - 13.20
16"	17.40	17.05 - 17.52	ASEAL - 17.40	8"	3.94"	2°	230	10 mm	1,896.76	31.3
24"	25.80	25.35 - 25.98	ASEAL - 25.80	8"	3.94"	2°	245	10 mm	2,846.92	61.1

† Not to exceed pipe pressure rating.



ARMOR SEAL™ DOES NOT PROVIDE PROTECTION AGAINST POSSIBLE PULLOUT OF PIPE ENDS IN UNRESTRAINED CONDITIONS. PIPE STIFFENERS ARE REQUIRED WHEN COUPLING HDPE PIPE.

TO ORDER: Specify catalog number.

Other sizes, lengths and tapped outlets available upon request. For other compatible pipe materials, steam or air supply pipeline applications, contact Romac Engineering, 1.800.426.9341.

STYLE SL1 (ONE SECTION) NORMAL RANGE .40" w/ REMOVABLE BOLTS



MATERIAL SPECIFICATIONS

SHELLS AND LUGS: Stainless steel per ASTM A 240, type 304.

BOLTS: UNC rolled thread trackhead, stainless steel per ASTM A 193, type 304.

NUTS: Stainless steel per ASTM A 194, type 304.

GASKETS: SBR per ASTM D 2000 MAA 610. Compounded for water and sewer service. Other compounds available on request.



SL1-7.24 X 10" REPAIR CLAMP



NSF61 certified upon request.

**MEETS
AWWA C230**

Certified to
NSF61/ANSI 61 & 372

NOM. PIPE SIZE	O.D. SIZE RANGE	CATALOG NUMBER	LENGTH					
			6"	8"	10"	12"	16"	20"
4"	4.45 - 4.85	SL1 - 4.85 x length	\$218.56	\$238.21	\$331.65	\$347.77	\$462.43	\$582.98
	4.74 - 5.14	SL1 - 5.14 x length						
	4.95 - 5.35	SL1 - 5.35 x length						
	5.20 - 5.60	SL1 - 5.60 x length						
6"	5.95 - 6.35	SL1 - 6.35 x length	228.20	250.54	346.27	364.77	483.28	614.67
	6.60 - 7.00	SL1 - 7.00 x length						
	6.84 - 7.24	SL1 - 7.24 x length						
	7.06 - 7.46	SL1 - 7.46 x length						
7.40 - 7.80	SL1 - 7.80 x length							
8"	7.95 - 8.35	SL1 - 8.35 x length	237.83	262.86	360.91	381.75	504.11	646.35
	8.60 - 9.00	SL1 - 9.00 x length						
	9.00 - 9.40	SL1 - 9.40 x length						
	9.30 - 9.70	SL1 - 9.70 x length						
10"	9.95 - 10.35	SL1-10.35 x length	262.61	NA	404.53	497.05	633.38	735.90
	10.70 - 11.10	SL1-11.10 x length						
	11.04 - 11.44	SL1-11.44 x length						
	11.40 - 11.80	SL1-11.80 x length						
	11.60 - 12.00	SL1-12.00 x length						
	11.85 - 12.25	SL1-12.25 x length						
12"	12.10 - 12.50	SL1-12.50 x length	284.27	NA	428.12	522.82	667.23	781.61
	12.70 - 13.10	SL1-13.10 x length						
	13.15 - 13.55	SL1-13.55 x length						
	13.60 - 14.00	SL1-14.00 x length						
	14.10 - 14.50	SL1-14.50 x length						

FOR TAPPED SL1 SEE PAGE 2-14.

OF BOLTS PER CLAMP LENGTH

OD RANGE	6"	8"	10"	12"	16"	20"
4.45 - 9.99	2	2	3	3	4	5
10.00 - 14.50	2	-	3	4	5	7

For higher working pressures, clamp length should equal or exceed diameter of pipe. Some sizes and lengths not listed are available on request. Clamps are not to be used for joining plain end pipe.

TO ORDER: Specify catalog number x length of clamp desired.

EXAMPLE: For a one-section clamp for pipe with an O.D. between 6.60 and 7.00 and clamp length of 10", order **SL1 - 7.00 x 10"**



STYLE SL2 (TWO SECTION) WIDER RANGE .80" w/ REMOVABLE BOLTS

MATERIAL SPECIFICATIONS

- SHELLS AND LUGS:** Stainless steel per ASTM A 240, type 304.
- BOLTS:** UNC rolled thread trackhead, stainless steel per ASTM A 193, type 304.
- NUTS:** Stainless steel per ASTM A 194, type 304.
- GASKETS:** SBR per ASTM D 2000 MAA 610. Compounded for water and sewer service. Other compounds available on request.



SL2-7.64 X 12" REPAIR CLAMP



NSF61 certified upon request.

MEETS
AWWA C230

REPAIR CLAMPS

NOM. PIPE SIZE	O.D. SIZE RANGE	CATALOG NUMBER	LENGTH				
			8"	10"	12"	16"	20"
4"	4.77 - 5.57 5.20 - 6.00	SL2 - 5.57 x length SL2 - 6.00 x length ¹	\$442.70	\$624.44	\$655.98	\$870.72	\$1,103.83
6"	6.57 - 7.37 6.84 - 7.64 7.20 - 8.00	SL2 - 7.37 x length SL2 - 7.64 x length SL2 - 8.00 x length ¹	468.60	652.42	687.11	910.81	1,161.11
8"	8.59 - 9.39 8.99 - 9.79 9.20 - 10.00	SL2 - 9.39 x length SL2 - 9.79 x length SL2-10.00 x length ¹	504.52	671.00	845.69	963.90	1,232.01
10"	10.70 - 11.50 11.04 - 11.84 11.40 - 12.20	SL2-11.50 x length SL2-11.84 x length SL2-12.20 x length	N/A	717.37	895.93	1,144.76	1,313.25
12"	12.70 - 13.50 13.15 - 13.95 13.50 - 14.30 13.71 - 14.51	SL2-13.50 x length SL2-13.95 x length SL2-14.30 x length SL2-14.51 x length	N/A	744.33	926.90	1,185.56	1,365.76

¹ Recommended for use on CL200 ACRB

FOR TAPPED SL2 SEE PAGE 2-14.

# OF BOLTS PER CLAMP LENGTH						
OD RANGE	8"	10"	12"	16"	20"	
4.47 - 10.00	4	6	6	8	10	
10.01 - 16.75	-	6	8	10	14	

For higher working pressures, clamp length should equal or exceed diameter of pipe. Some sizes and lengths not listed are available on request. Clamps are not to be used for joining plain end pipe.

TO ORDER: Specify catalog number x length of clamp desired.

EXAMPLE: For a two-section clamp for pipe with an O.D. between 6.84 and 7.64 and clamp length of 12" order **SL2 - 7.64 x 12"**

THE "CL" REPAIR CLAMP

ROMAC
INDUSTRIES, INC.

REPAIR CLAMPS

BOLTS

High strength, low alloy steel trackhead bolt, 5/8" national coarse roll thread. Black finish. Steel meets AWWA C111 composition specifications. Designed to allow installation of clamp without removing bolts. 304 stainless steel available on request.

NUTS

High strength, low alloy steel. 5/8" national coarse thread. Black finish. Steel meets AWWA C111 composition specifications. 304 stainless steel available on request.

SHELL

ASTM A 240 stainless steel, type 304.

ARMORS

Heavy gauge ASTM A 240 stainless steel, type 304, bonded to gasket by a proprietary R.T. vulcanization process.

LUG & SHELL JOINT

Precision casting pocket and hemmed shell assure a strong joint. Coined to prevent sliding.

LUG

Ductile iron ASTM A 536, Grade 65-45-12. Boat-nose fingers designed for ease of installation. Lugs are removable for installations in tight areas. E-Coat epoxy coated for improved corrosion resistance.

GASKET

Specially designed grid pattern, tapered ends.

RUBBER

SBR compounded for water and sewer service. Meets ASTM D 2000 MAA 610 ¹.



¹ Standard gaskets are specially formulated with antioxidant/antiozonant agents to increase shelf life. Elastomers compounded for special service, including NBR and EPDM, are available on request.



STYLE CL1 (ONE SECTION) NORMAL RANGE .40" w/ REMOVABLE LUGS

MATERIAL SPECIFICATIONS

SHELLS: Stainless steel per ASTM A 240, type 304.

LUGS: Ductile iron per ASTM A 536, Grade 65-45-12. Boat-nose fingers designed for ease of installation. Lugs are removable. E-Coat epoxy coated for improved corrosion resistance.

BOLTS AND NUTS: Trackhead, 5/8" UNC rolled thread, high strength, low alloy, corrosion resistant steel per AWWA 111. Stainless steel nuts and bolts available on request.

GASKETS: SBR per ASTM D 2000 MAA 610, compounded for water and sewer service. Other compounds available on request.



NSF61 certified upon request.

MEETS
AWWA C230



CL1-9.40 X 12" REPAIR CLAMP

NOM. PIPE SIZE	O.D. SIZE RANGE	CATALOG NUMBER	LENGTH / WEIGHT						
			7½"	10"	12"	15"	20"	25"	30"
2" - 2¼"	2.35 - 2.63 2.62 - 2.87	CL1 - 2.63 x length CL1 - 2.87 x length ¹	\$102.41 10#	\$152.68 14#	\$171.93 17#	\$207.52 20#	N/A	N/A	N/A
2½"	2.75 - 3.00 2.87 - 3.12	CL1 - 3.00 x length ¹ CL1 - 3.12 x length ¹	111.10 10#	164.39 14#	191.16 18#	223.66 21#	N/A	N/A	N/A
3"	3.45 - 3.70 3.75 - 4.00	CL1 - 3.70 x length ¹ CL1 - 4.00 x length ¹	124.43 11#	177.88 15#	207.40 18#	247.07 21#	N/A	N/A	N/A
3½"	3.95 - 4.20	CL1 - 4.20 x length ¹	128.86 11#	183.73 14#	218.99 18#	254.87 22#	N/A	N/A	N/A
4"	4.45 - 4.85 4.74 - 5.14 4.95 - 5.35 5.20 - 5.60	CL1 - 4.85 x length CL1 - 5.14 x length CL1 - 5.35 x length CL1 - 5.60 x length	134.18 11#	185.31 15#	226.23 19#	265.25 22#	356.28 29#	447.34 37#	538.37 44#
6"	5.95 - 6.35 6.60 - 7.00 6.84 - 7.24 7.05 - 7.46 7.40 - 7.80	CL1 - 6.35 x length CL1 - 7.00 x length CL1 - 7.24 x length CL1 - 7.46 x length CL1 - 7.80 x length	158.40 12#	214.79 16#	253.31 20#	301.61 24#	426.51 32#	520.19 40#	621.38 48#
8"	7.95 - 8.35 8.60 - 9.00 9.00 - 9.40 9.30 - 9.70	CL1 - 8.35 x length CL1 - 9.00 x length CL1 - 9.40 x length CL1 - 9.70 x length	185.93 13#	246.06 18#	297.77 22#	361.36 26#	491.47 35#	587.76 43#	691.76 52#
10"	9.95 - 10.35 10.70 - 11.10 11.04 - 11.44 11.40 - 11.80 11.60 - 12.00 11.85 - 12.25	CL1-10.35 x length CL1-11.10 x length CL1-11.44 x length CL1-11.80 x length CL1-12.00 x length CL1-12.25 x length	244.46 14#	330.29 19#	379.70 23#	478.50 28#	639.73 37#	717.86 46#	972.66 56#
12"	12.10 - 12.50 12.70 - 13.10 13.15 - 13.55 13.60 - 14.00 14.10 - 14.50	CL1-12.50 x length CL1-13.10 x length CL1-13.55 x length CL1-14.00 x length CL1-14.50 x length	275.66 15#	366.70 20#	442.13 25#	551.34 30#	728.18 40#	850.50 50#	1,102.66 60#
Add on for 304 stainless steel bolts & nuts			32.50	45.63	58.44	68.49	91.31	114.09	136.93

NUMBER OF BOLTS PER CLAMP LENGTH

OD RANGE	7½"	10"	12"	15"	20"	25"	30"
All Ranges	3	4	5	6	8	10	12

¹.25" range

FOR TAPPED CL1 SEE PAGE 2-14.

For higher working pressures, clamp length should equal or exceed diameter of pipe. Some sizes and lengths not listed are available on request. Clamps are not to be used for joining plain end pipe.

TO ORDER: Specify catalog number x length of clamp desired.

EXAMPLE: For a one-section clamp for pipe with an O.D. between 9.00 and 9.40 and clamp length of 12" order **CL1 - 9.40 x 12"**

STYLE CL2 (TWO SECTION) WIDER RANGE .80" w/ REMOVABLE LUGS



MATERIAL SPECIFICATIONS

SHELLS: Stainless steel per ASTM A 240, type 304.

LUGS: Ductile iron per ASTM A 536, Grade 65-45-12. Boat-nose fingers designed for ease of installation. Lugs are removable. E-Coat epoxy coated for improved corrosion resistance.

BOLTS AND NUTS: Trackhead, 5/8" UNC rolled thread, high strength, low alloy, corrosion-resistant steel per AWWA 111. Stainless steel nuts and bolts available on request.

GASKETS: SBR per ASTM D 2000 MAA 610, compounded for water and sewer service. Other compounds available on request.



CL2-9.39 X 12" REPAIR CLAMP



NSF61 certified upon request.

MEETS
AWWA C230

Certified to NSF/ANSI 61 & 372

NOM. PIPE SIZE	O.D. SIZE RANGE	CATALOG NUMBER	LENGTH / WEIGHT						
			7½"	10"	12"	15"	20"	25"	30"
4"	4.47 - 5.27	CL2 - 5.27 x length	\$186.59 21#	\$246.62 28#	\$291.15 34#	\$371.03 41#	\$553.99 55#	N/A	N/A
	4.77 - 5.57	CL2 - 5.57 x length							
	5.20 - 6.00	CL2 - 6.00 x length ¹							
6"	6.57 - 7.37	CL2 - 7.37 x length	216.44 22#	278.26 29#	324.72 37#	432.89 44#	577.19 58#	720.26 73#	863.18 88#
	6.84 - 7.64	CL2 - 7.64 x length							
	7.20 - 8.00	CL2 - 8.00 x length ¹							
8"	8.59 - 9.39	CL2 - 9.39 x length	244.79 23#	309.20 31#	360.75 39#	492.17 46#	639.00 62#	812.99 77#	986.86 93#
	8.99 - 9.79	CL2 - 9.79 x length							
	9.20 - 10.00	CL2-10.00 x length ¹							
10"	10.70 - 11.50	CL2-11.50 x length	256.77 24#	412.27 33#	570.44 41#	620.97 49#	824.55 65#	1,030.73 80#	1,236.83 98#
	11.04 - 11.84	CL2-11.84 x length							
	11.40 - 12.20	CL2-12.20 x length							
12"	12.70 - 13.50	CL2-13.50 x length	329.05 26#	458.62 34#	647.62 43#	680.23 52#	909.58 69#	1,135.12 86#	1,360.50 103#
	13.15 - 13.95	CL2-13.95 x length							
	13.50 - 14.30	CL2-14.30 x length							
	13.71 - 14.51	CL2-14.51 x length							
14"	15.00 - 15.80	CL2-15.80 x length	481.22 28#	767.89 36#	823.06 45#	1,105.41 54#	1,494.48 72#	1,878.54 90#	2,262.36 108#
	15.95 - 16.75	CL2-16.75 x length							
Add on for 304 stainless steel bolts & nuts			65.00	91.27	116.89	136.98	182.64	228.20	273.86

¹ Recommended for use on CL200 ACRB.

FOR TAPPED CL2 SEE PAGE 2-14.

NUMBER OF BOLTS PER CLAMP LENGTH

OD RANGE	7½"	10"	12"	15"	20"	25"	30"
All Ranges	6	8	10	12	16	20	24

For higher working pressures, clamp length should equal or exceed diameter of pipe. Some sizes and lengths not listed are available on request. Clamps are not to be used for joining plain end pipe.

TO ORDER: Specify catalog number x length of clamp desired.

EXAMPLE: For a two-section clamp for pipe with an O.D. between 8.59 and 9.39 and clamp length of 12" order **CL2 - 9.39 x 12"**



STYLE CL3 (THREE SECTION) WIDEST RANGE 1.20" w/ REMOVABLE LUGS

MATERIAL SPECIFICATIONS

- SHELLS:** Stainless steel per ASTM A 240, type 304.
- LUGS:** Ductile iron per ASTM A 536, Grade 65-45-12. Boat-nose fingers designed for ease of installation. Lugs are removable. E-Coat epoxy coated for improved corrosion resistance.
- BOLTS AND NUTS:** Trackhead, 5/8" UNC rolled thread, high strength, low alloy, corrosion-resistant steel per AWWA 111. Stainless steel nuts and bolts available on request.
- GASKETS:** SBR per ASTM D 2000 MAA 610, compounded for water and sewer service. Other compounds available on request.



NSF61 certified upon request.

MEETS
AWWA C230



CL3-18.30 X 12" REPAIR CLAMP

O.D. SIZE RANGE	CATALOG NUMBER	LENGTH / WEIGHT						
		7½"	10"	12"	15"	20"	25"	30"
11.04 - 12.24 12.40 - 13.60	CL3-12.24 x length CL3-13.60 x length	\$377.88 30#	\$442.12 39#	\$550.69 48#	\$659.20 58#	\$873.61 77#	\$1,096.03 96#	\$1,318.50 115#
13.14 - 14.34 13.45 - 14.65	CL3-14.34 x length CL3-14.65 x length	433.02 34#	479.69 45#	596.24 56#	712.83 68#	948.62 90#	1,184.51 112#	1,420.29 130#
15.30 - 16.50 17.10 - 18.30	CL3-16.50 x length CL3-18.30 x length	629.24 36#	861.65 48#	887.79 60#	1,053.10 72#	1,425.95 96#	1,890.28 120#	2,354.53 144#
18.00 - 19.20 19.50 - 20.70	CL3-19.20 x length CL3-20.70 x length	645.79 37#	871.08 50#	937.68 62#	1,135.56 75#	1,537.65 99#	2,015.38 124#	2,492.10 149#
21.60 - 22.80	CL3-22.80 x length	714.85 38#	955.46 51#	1037.47 64#	1,175.53 77#	1,591.71 102#	2,146.60 128#	2,701.17 153#
23.25 - 24.45	CL3-24.45 x length	948.89 40#	1,237.54 52#	1,296.30 66#	2,045.36 79#	2,770.92 105#	3,481.39 132#	4,191.82 158#
25.80 - 27.00	CL3-27.00 x length	1,182.84 41#	1,519.41 54#	1,555.05 68#	2,186.70 81#	2,966.48 108#	3,727.79 136#	4,485.85 162#
Add on for 304 stainless steel bolts & nuts		97.49	136.91	175.33	205.46	273.96	342.30	410.79

FOR TAPPED CL3 SEE PAGE 2-14.

NUMBER OF BOLTS PER CLAMP LENGTH							
OD RANGE	7½"	10"	12"	15"	20"	25"	30"
All Ranges	9	12	15	18	24	30	36

For higher working pressures, clamp length should equal or exceed diameter of pipe. Some sizes and lengths not listed are available on request. Clamps are not to be used for joining plain end pipe.

TO ORDER: Specify catalog number x length of clamp desired.

EXAMPLE: For a 3-section clamp for pipe with an O.D. between 17.10 and 18.30 and clamp length of 12" order **CL3 - 18.30 x 12"**

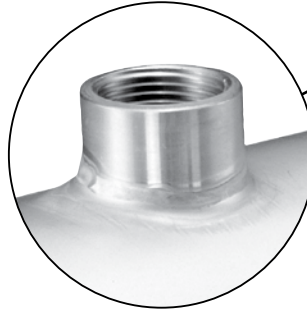
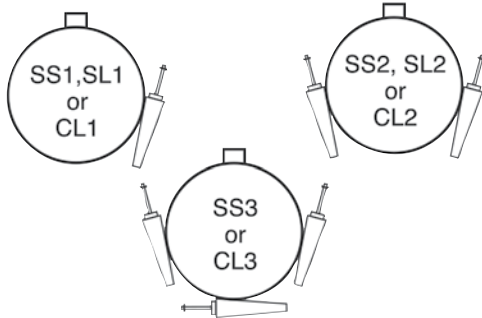
TAPS FOR REPAIR CLAMPS

SS1, SS2, SS3, SL1, SL2, CL1, CL2, AND CL3



AVAILABLE IN ALL STYLES

The same design, construction, and installation features as Styles 1, 2, and 3. Tapped outlet is 304 stainless steel, permanently "fused" by GTAW, and fully passivated¹.



SS1-7.00 X 12 X 3/4" IP TAPPED REPAIR CLAMP



NSF61 certified upon request.

MEETS
AWWA C800

TO ORDER:

1. Select size, length, and style of clamp.
2. Select size and type of tapped thread desired from the table below.
3. Add list price for tap to the list price of clamp selected from separate price sheet.
4. **Tapped outlet products are NO CANCEL/NO RETURN items, please be specific when ordering.**

EXAMPLE: SS1-7.00 x 12 x 3/4" IP would be a one-section clamp for pipe with an O.D. between 6.60 and 7.00, a length of 12" and 3/4" iron pipe tap size.

ADD-ON LIST PRICES FOR TAPPED CLAMPS

TAP SIZE	TYPE OF THREAD	MINIMUM PIPE O.D.	MINIMUM CLAMP LENGTH	ADD ON LIST PRICE
1/2" ⁴	IP	2.38"	6" for 2.38" through 14.65" pipe O.D. 8" for 14.66" through 19.50" pipe O.D.	\$63.15
3/4" or 1"	CC or IP	2.38"	6" for 2.38" through 14.65" pipe O.D. 8" for 14.66" through 19.50" pipe O.D.	63.15
1 1/4"	CC	3.50"	8" for 3.50" through 8.00" pipe O.D. 10" for 8.01" through 14.65" pipe O.D. 12" for 14.66" through 19.50" pipe O.D.	63.15
1 1/4"	IP	2.88"	8" for 2.88" through 8.00" pipe O.D. 10" for 8.01" through 14.65" pipe O.D. 12" for 14.66" through 19.50" pipe O.D.	98.98
1 1/2"	CC or IP	3.50"	8" for 3.50" through 8.00" pipe O.D. 10" for 8.01" through 14.65" pipe O.D. 12" for 14.66" through 19.50" pipe O.D.	98.98
2"	IP	3.50"	8" for 3.50" through 8.00" pipe O.D. 10" for 8.01" through 14.65" pipe O.D. 12" for 14.66" through 19.50" pipe O.D.	98.98
2"	CC	4.50"	8" for 4.50" through 8.00" pipe O.D. 10" for 8.01" through 14.65" pipe O.D. 12" for 14.66" through 19.50" pipe O.D.	121.19
2 1/2" ²	IP or MIP	6.63"	12" for 6.63" through 14.65" pipe O.D. 16" for 14.66" through 19.50" pipe O.D.	279.91
3" ^{2,3}	IP or MIP	6.63"	12" for 6.63" through 14.65" pipe O.D. 16" for 14.66" through 19.50" pipe O.D.	279.91

¹ Passivated: Chemically treated after welding to produce a highly corrosion-resistant coating.

² Requires SS2 or SS3

³ 6.63 - 9.99 Taps must be MIP

⁴ Not available with CL clamps.

Tapped CL1 clamps are available in sizes 3.70 and larger. Contact Romac's Engineering Department for larger sizes.



STYLE SC REPAIR CLAMPS

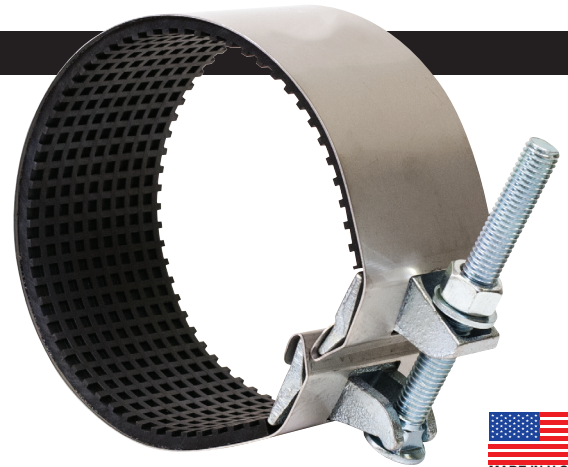
MATERIAL SPECIFICATIONS

SHELLS: Stainless steel per ASTM 240, type 304.

LUGS: Ductile iron per ASTM A 536, Grade 65-45-12, coated with Xylan 1212 for enhanced corrosion protection.

BOLTS, WASHERS AND NUTS: UNC rolled thread, mild steel electrogalvanized with dichromate seal.

GASKETS: NBR (Buna-N) gasket compounded for water and gas services.



SC 60 X 3" REPAIR CLAMP



NSF61 certified upon request.

MEETS
AWWA C230

REPAIR CLAMPS

NOMINAL PIPE SIZE	CATALOG NUMBER	3"			6"		
		PRICE	QTY/CTN	WT/CTN	PRICE	QTY/CTN	WT/CTN
1/2" Std. Stl.	SC- 8 x length	\$16.17	24	16#	\$29.44	12	16#
3/4" Std. Stl.	SC-12 x length	16.71	24	16#	31.50	12	16#
1" Std. Stl.	SC-13 x length	17.66	24	17#	32.37	12	17#
1 1/4" Std. Stl.	SC-17 x length	18.63	24	17#	34.26	12	17#
1 1/2" Std. Stl.	SC-19 x length	19.52	24	18#	38.32	12	18#
2" Std. Stl.	SC-24 x length	21.36	16	20#	38.78	8	20#
2 1/2" Std. Stl.	SC-29 x length	22.92	16	20#	44.12	8	20#
3" Std. Stl.	SC-35 x length	25.19	6	8#	46.52	4	11#
3 1/2" Std. Stl.	SC-40 x length	26.50	6	10#	49.80	4	13#
4" O.D. Stl.	SC-40 x length	26.50	6	10#	49.80	4	13#
4" Std. Stl.	SC-45 x length	26.50	4	7#	54.09	4	13#
6" O.D. Stl.	SC-60 x length	36.26	14	9#	66.80	2	9#
6" Std. Stl.	SC-66 x length	36.26	4	9#	66.80	2	9#
8" O.D. Stl.	SC-80 x length	43.08	1	4#	79.83	2	10

NUMBER OF BOLTS PER CLAMP LENGTH

OD RANGE	3"	6"
All Ranges	1	2

TO ORDER: Specify catalog number x length of clamp desired.

EXAMPLE: For an "SC" style clamp for 2" Std. Stl. pipe with clamp length of 3", order **SC-24 x 3"**

STYLE SCC AND SCS REPAIR CLAMPS



MATERIAL SPECIFICATIONS

SHELLS AND ARMORS: Stainless steel per ASTM 240, type 304.

SCC LUGS: Ductile iron per ASTM A536, coated with Xylan 1212 for enhanced corrosion protection.

SCS LUGS: Stainless steel per ASTM 240, type 304.

BOLTS, WASHERS AND NUTS: SCC - UNC rolled thread, Carbon Steel ElectroGalvanized with Dichromate Finish; SCS - stainless steel.

GASKETS: NBR (Buna-N) gasket compounded for water and gas services.



SCC-238 X 6"
IRON LUG REPAIR CLAMP

FULL CIRCUMFERENTIAL
REPAIR CLAMPS

SCS-088 X 3" ALL STAINLESS
STEEL REPAIR CLAMP



NSF61 certified upon request.

MEETS
AWWA C230

STYLE "SCC" CLAMP WITH CAST IRON LUGS

NOMINAL PIPE SIZE	CATALOG NUMBER	3"			6"		
		PRICE	QTY/CTN	WT/CTN	PRICE	QTY/CTN	WT/CTN
1/2" Copper 1/2" I.P.	SCC-063 x length	\$47.49	24	17#	\$101.78	12	16#
	SCC-084 x length	47.81	24	17#	101.86	12	16#
3/4" Copper 3/4" I.P.	SCC-088 x length	47.81	18	14#	102.16	9	14#
	SCC-105 x length	48.34	18	13#	102.37	9	13#
1" Copper 1" I.P.	SCC-113 x length	50.38	18	14#	102.79	9	14#
	SCC-132 x length	51.40	18	13#	103.20	9	13#
1 1/4" Copper 1 1/4" I.P.	SCC-138 x length	52.44	16	14#	104.00	8	14#
	SCC-166 x length	52.97	16	13#	105.06	8	12#
1 1/2" Copper 1 1/2" I.P.	SCC-163 x length	53.44	16	14#	105.67	8	14#
	SCC-190 x length	53.87	16	13#	106.41	8	12#
2" Copper 2" I.P.	SCC-213 x length	58.50	12	13#	108.23	6	13.2#
	SCC-238 x length	59.12	12	12#	109.36	6	11#

STYLE "SCS " ALL STAINLESS STEEL CLAMP

NOMINAL PIPE SIZE	CATALOG NUMBER	3"			6"		
		PRICE	QTY/CTN	WT/CTN	PRICE	QTY/CTN	WT/CTN
1/2" Copper 1/2" I.P.	SCS-063 x length	\$58.87	24	16#	\$81.36	12	22#
	SCS-084 x length		24	16#		12	20#
3/4" Copper 3/4" I.P.	SCS-088 x length	60.02	18	14#	82.44	9	17#
	SCS-105 x length		18	13#		9	16#
1" Copper 1" I.P.	SCS-113 x length	60.22	18	14#	82.64	9	17#
	SCS-132 x length		18	13#		9	16#
1 1/4" Copper 1 1/4" I.P.	SCS-138 x length	62.15	16	14#	86.81	8	17#
	SCS-166 x length		16	12#		8	15#
1 1/2" Copper 1 1/2" I.P.	SCS-163 x length	65.10	16	14#	90.33	8	18#
	SCS-190 x length		16	12#		8	16#
2" Copper 2" I.P.	SCS-213 x length	66.18	12	13#	101.21	6	16#
	SCS-238 x length		12	11#		6	14#

NUMBER OF BOLTS PER CLAMP LENGTH

OD RANGE	3"	6"
All Ranges	1	2

TO ORDER: Specify catalog number x length of clamp desired.

EXAMPLE: For an "SCC" style clamp for 2" Copper pipe with clamp length of 3", order **SCC - 213 x 3"**

REPAIR CLAMPS



STYLE C REPAIR CLAMPS

MATERIAL SPECIFICATIONS

ALL STAINLESS STEEL • FOR STEEL, CAST IRON, COPPER OR ASBESTOS CEMENT PIPE

SHELLS AND LUGS: Stainless steel per ASTM A 240, type 304.

BOLTS: UNC rolled thread, stainless steel per ASTM A 193, type 304.

NUTS: Stainless steel per ASTM A 194, type 304.

WASHERS: Stainless steel per ASTM A 240, type 304 and plastic lubricating washers.

GASKETS: NBR (Buna-N) per ASTM D 2000 MBK 610, compounded for water and sewer services. Other compounds available on request.



C 35 X 4" REPAIR CLAMP



NSF61 certified upon request.

**MEETS
AWWA C230**

PIPE SIZE	CATALOG NUMBER	LIST PRICE / WEIGHT		
		4"	8"	12"
1/2" Std. Stl., 3/4" Copper 3/4" Std. Stl., 1" Copper 1" Std. Stl., 1 1/4" Copper	C- 8 x length C-12 x length C-13 x length	\$41.73 1#	\$72.60 2.3#	\$105.11 3.5#
1 1/4" Std. Stl., 1 1/2" Copper 1 1/2" Std. Stl., 2" Copper 2" Std. Stl.	C-17 x length C-19 x length C-24 x length	44.33 1.2#	78.11 2.5#	116.78 4#
2 1/2" Copper 2 1/2" Std. Stl. 3" O.D. Stl., 3" Copper 3" Std. Stl., 3 1/2" Copper	C-26 x length C-29 x length C-30 x length C-35 x length	47.03 1.3#	93.60 3#	140.13 4.5#
3" C.I. 3" A.C. Cl. 100 3" A.C. Cl. 150, 4" Copper	C-38 x length C-39 x length C-41 x length	48.74 1.7#	94.78 3.6#	142.96 5.5#
3 1/2" Std. Stl. 4" O.D. Stl. 4" Std. Stl.	C-40 x length C-40 x length C-45 x length	48.74 1.7#	94.78 3.8#	142.96 5.7#
4" C.I. 4" A.C. Cl. 100 4" A.C. Cl. 150	C-48 x length C-50 x length C-51 x length	53.98 2.4#	100.10 5#	149.74 7.4#
5" Std. Stl. 6" O.D. Stl. 6" Std. Stl.	C-56 x length C-60 x length C-66 x length	58.30 2.8#	108.07 6#	162.89 8.6#
6" Copper 6" C.I. 6" A.C. Cl. 100 6" A.C. Cl. 150	C-61 x length C-69 x length C-72 x length C-72 x length	60.79 2.9#	110.88 6#	166.91 9#
8" O.D. Stl. 8" Std. Stl. 8" Cl.	C-80 x length C-86 x length C-90 x length	70.38 3.5#	124.59 7.1#	177.62 10.4#
8" A.C. Cl. 100 8" A.C. Cl. 150	C-94 x length C-94 x length	70.74 3.5#	125.39 7.2#	178.93 10.5#
10" O.D. Stl. 10" Std. Stl.	C-100 x length C-107 x length	76.71 4.2#	137.32 8.6#	261.29 12.3#
12" O.D. Stl. 12" Std. Stl.	C-120 x length C-127 x length	81.29 4.6#	146.44 9.3#	266.46 13.4#

NUMBER OF BOLTS PER CLAMP LENGTH			
OD RANGE	4"	8"	12"
All Ranges	1	2	3

TO ORDER: Specify catalog number x length of clamp.

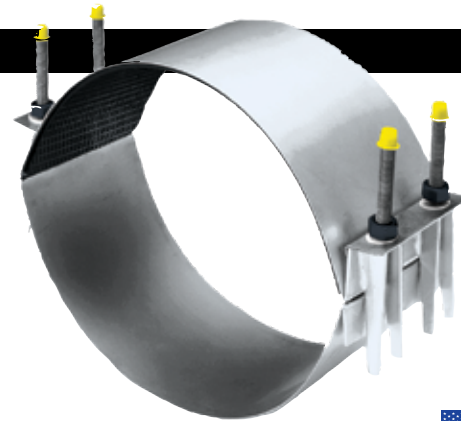
EXAMPLE: For a "C" style clamp for 3" Std. Stl. pipe with clamp length of 4", order **C-35 x 4"**

STYLE CC DOUBLE SECTION REPAIR CLAMPS



MATERIAL SPECIFICATIONS

- SHELLS AND LUGS:** Stainless steel per ASTM A 240, type 304.
- BOLTS:** UNC rolled thread, stainless steel per ASTM A 193, type 304.
- NUTS:** Stainless steel per ASTM A 194, type 304.
- WASHERS:** Stainless steel per ASTM A 240, type 304 and plastic lubricating washers.
- GASKETS:** NBR (Buna-N) per ASTM D 2000 MBK 610, compounded for water and sewer services. Other compounds available on request.



REPAIR CLAMPS



NSF61 certified upon request.

**MEETS
AWWA C230**



CC-1275 X 6" REPAIR CLAMP

NOM. PIPE SIZE	PIPE O.D. (INCHES)	CATALOG NUMBER	LIST PRICE / APPROX. WEIGHT (lbs.)	
			6"	12"
10"	10.00	CC-1000 x length	\$232.08 8.3#	\$473.68 14.0#
10"	10.75	CC-1075 x length	239.23 8.5#	488.01 14.4#
12"	12.00	CC-1200 x length	244.01 8.8#	508.77 15.0#
12"	12.75	CC-1275 x length	255.89 9.0#	517.70 15.4#
14"	14.00	CC-1400 x length	267.79 9.3#	535.55 16.0#
16"	16.00	CC-1600 x length	288.64 9.8#	577.27 17.0#
18"	18.00	CC-1800 x length	303.47 10.3#	606.98 18.0#
20"	20.00	CC-2000 x length	321.32 10.9#	642.71 19.3#
22"	22.00	CC-2200 x length	342.19 11.4#	684.34 20.3#
24"	24.00	CC-2400 x length	357.03 11.9#	714.11 21.3#
30"	30.00	CC-3000 x length	419.50 13.5#	839.09 24.3#

NUMBER OF BOLTS PER CLAMP LENGTH		
OD RANGE	6"	12"
All Ranges	4	6

TO ORDER: Specify catalog number x length of clamp desired.

EXAMPLE: For a "CC" style clamp for 12" Std. Stl. pipe with clamp length of 6", order **CC-1275 x 6"**



STYLE CLC COLLAR LEAK CLAMPS

MATERIAL SPECIFICATIONS

SHELLS AND LUGS: Stainless steel per ASTM A 240, type 304.

BOLTS: UNC rolled thread, stainless steel per ASTM A 193, type 304.

NUTS: Stainless steel per ASTM A 194, type 304.

WASHERS: Stainless steel per ASTM A 240, type 304 and plastic lubricating washers.

GASKETS: SBR per ASTM D 2000 MAA 610, compounded for water and sewer service. Other compounds available on request.



CLC-2.88 COLLAR LEAK CLAMP



NSF61 certified upon request.

**MEETS
AWWA C230**

Certified to
NSF/ANSI 61 & 372

REPAIR CLAMPS

For quick, simple repairs of leaking solvent welds on PVC pipe joints

NOM. PIPE SIZE	PIPE O.D. (INCHES)	CATALOG NUMBER	PRICE EACH	APPROX. WEIGHT (lbs.)	OVERALL LENGTH
2"	2.375	CLC-2.38	\$144.61	4 #	6"
2½"	2.875	CLC-2.88	158.55	4 #	6"
3"	3.50	CLC-3.50	168.97	4 #	6"
4"	4.50	CLC-4.50	204.40	5 #	6"

Standard clamp designed for Class 160 and SDR 26 PVC solvent weld bells.

TO ORDER: Specify catalog number. Provide O.D. of bell & spigot when ordering.

THE ROMAC A/CME BAND



FOR REPAIRING BROKEN OR LEAKING A/C COUPLINGS

The Romac A/CME Band is a sturdy, ribbed rubber strap, 4" wide and 1/4" thick (adding 1/2" to the diameter of the machined end of the pipe). It is made of SBR rubber, compounded for water service.

With a stock Stainless-Seal™ Repair Clamp and the A/CME Band, a leaking or broken A/C coupling can be replaced, with the repair good for pressures up to and including 150 psi.

The Stainless-Seal™ Repair Clamp is 100% stainless steel. **You've made no compromise of quality in the asbestos cement coupling replacement.**



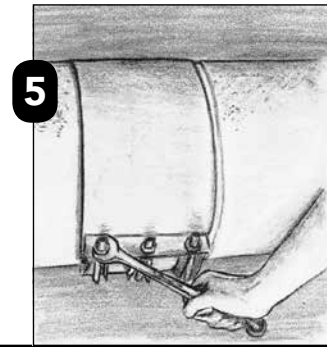
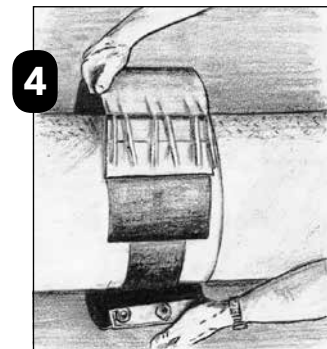
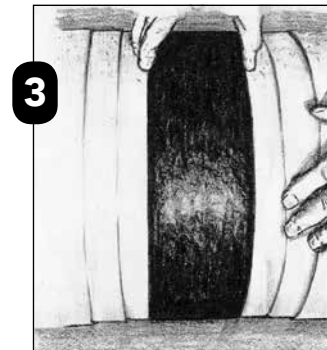
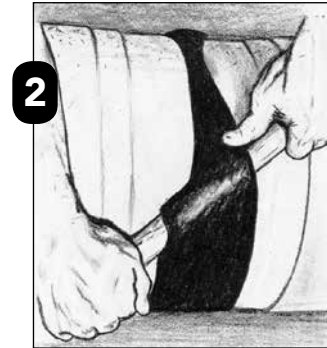
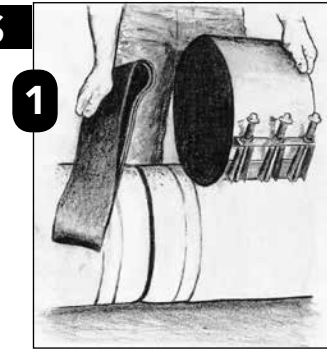
NSF61 certified upon request.

MEETS
AWWA C230



PIPE SIZE	PIPE M.E.O.D.	1ST CHOICE CLAMP	2ND CHOICE CLAMP	BAND CAT. NO.	LIST PRICES BAND ONLY ¹	APPROX. WEIGHT (lbs.)
4"	4.64 4.81	SS1 - 5.14 x 8 SS1 - 5.35 x 8	— SS2-5.57 x 8	A/CME - 4.64 A/CME - 4.81	\$28.12	.50 #
6"	6.91	SS1 - 7.46 x 8	SS2-7.64 x 8	A/CME - 6.91	40.42	.75 #
8"	9.11	SS1 - 9.70 x 8	SS2-9.79 x 8	A/CME - 9.11	53.30	1.00 #
10"	11.24 11.66	SS1-11.80 x 8 SS1-12.25 x 8	SS2-11.84 x 8 SS2-12.20 x 8	A/CME-11.24 A/CME-11.66	68.22	1.25 #
12"	13.44 13.92	SS1-14.00 x 8 SS1-14.50 x 8	SS2-13.95 x 8 SS2-14.51 x 8	A/CME-13.44 A/CME-13.92	81.28	1.50 #
14"	15.07 16.22	SS2-15.80 x 8 SS2-16.75 x 8	— —	A/CME-15.07 A/CME-16.22	94.88	1.70 #
16"	17.15 18.46	SS3-18.30 x 8 SS3-19.20 x 8	— —	A/CME-17.15 A/CME-18.46	107.92	2.00 #

¹ See page 2-4, 2-5 or 2-6 for Repair Clamp prices.



TO ORDER: Select the catalog number from the chart above based on the size of pipe and O.D. of machined end. Check your stock for the correct size of clamp required.

The 1st and 2nd choices are listed for convenience in determining which clamps work best with each Romac A/CME Band size.

REPAIR CLAMPS



STYLE 516 BELL JOINT LEAK CLAMPS

(FOR USE ON CAST IRON, DUCTILE IRON & AWWA C-900 PVC PIPE)

MATERIAL SPECIFICATIONS

BELL AND SPIGOT RING: Ductile iron per ASTM A 536, Grade 65-45-12.

GASKET: SBR per ASTM D 2000 MBA 710, compounded for water and sewer service. Other compounds available on request.

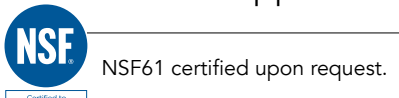
BOLTS: Trackhead, UNC rolled thread, high strength, low alloy steel per AWWA C111.

NUTS: UNC rolled thread, heavy hex, high strength, low alloy steel per AWWA C111.

USE: Romac's 516 Bell Joint Leak Clamps provide a fast, economical means of repairing or preventing leaks in cast iron bells, caulked or rubber ring joints. Our unique gasket and ring design enables a single clamp to fit both caulked and rubber ring joints for most classes of cast iron and ductile iron pipe within a nominal size. They also can be used on AWWA C900 PVC pipe.



6" BELL JOINT LEAK CLAMP
DUCTILE IRON POURED IN U.S.A.



NOMINAL PIPE SIZE	O.D. SIZES (inches)	CATALOG NUMBER	BOLTS		APPROX. WEIGHT (lbs.)	LIST PRICE
			NUMBER	DIA. x LENGTH		
4"	4.80 - 5.00	516 - 5.00	4	5/8" x 10 1/2"	18 #	\$264.30
6"	6.90 & 7.10	516 - 7.10	4	5/8" x 10 1/2"	22 #	302.78
8"	9.05 & 9.30	516 - 9.30	6	5/8" x 10 1/2"	43 #	418.38
10"	11.10 & 11.40	516 - 11.40 ¹	8	5/8" x 15"	58 #	525.65
12"	13.20, 13.50 & 13.65	516 - 13.65 ¹	8	5/8" x 17"	86 #	568.59
14"	15.30 & 15.65	516 - 15.65 ¹	8	5/8" x 17"	110 #	1,606.04

¹ The 10", 12" and 14" sizes have stainless steel armors molded into the gasket to bridge the gap between castings.

NOTE: BJLC can be provided with double gasket and spigot halves for repairs on in-line couplings. Please provide coupling O.D. and length. All prices on application.

NOTE: Special length bolts are available for D.I. sized PVC pipe with extended bells. Please provide bell length when ordering. Larger sizes of fabricated steel BJLC available P.O.A.



TO ORDER: Specify catalog number.

STYLE 517 BELL JOINT LEAK CLAMPS



MATERIAL SPECIFICATIONS

BELL AND SPIGOT RING: Ductile iron per ASTM A 536, Grade 65-45-12.

GASKET: SBR per ASTM D 2000 MBA 710, compounded for water and sewer service.

BOLTS: 1/2", mild steel all thread rod, zinc plated.

NUTS: Zinc plated, mild steel

USE: Romac's 517 Bell Joint Leak Clamps provide a fast, economical means of repairing or preventing leaks on Iron Pipe Size (IPS) PVC, and SDR35 Sewer Pipe.



NSF61 certified upon request.

Certified to
NSF/ANSI 61 & 372



8" BELL JOINT LEAK CLAMP
DUCTILE IRON POURED IN U.S.A.

NOMINAL PIPE SIZE	O.D. SIZES (inches)	CATALOG NUMBER	BOLTS		APPROX. WEIGHT (lbs.)	LIST PRICE
			NUMBER	DIA. x LENGTH		
4"	4.22	517 - 4.22	4	1/2" x 12"	13 #	\$262.11
	4.50	517 - 4.50	4	1/2" x 12"	13 #	262.11
6"	6.28	517 - 6.28	4	1/2" x 12"	15 #	288.66
	6.63	517 - 6.63	4	1/2" x 12"	15 #	288.66
8"	8.40	517 - 8.40	4	1/2" x 14"	20 #	399.38
	8.63	517 - 8.63	4	1/2" x 14"	20 #	399.38
10"	10.50	517 - 10.50	6	1/2" x 14"	28 #	500.62
	10.75	517 - 10.75	6	1/2" x 14"	28 #	500.62
10" SDR 21 & thicker	10.75 ¹	517 - 10.75 - 2	6	1/2" x 14"	28 #	500.62
12"	12.50	517 - 12.50	6	1/2" x 14"	31 #	542.99
	12.75	517 - 12.75	6	1/2" x 14"	31 #	542.99
12" SDR 21 & thicker	12.75 ¹	517 - 12.75 - 2	6	1/2" x 18"	31 #	542.99

¹ NBR gaskets are standard. For Class 200 (SDR21) or thicker wall pipe, longer bolts may be required.

NOTE: BJLC can be provided with double gasket and spigot halves for repairs on in-line couplings. Please provide coupling O.D. and length. All prices on application.



TO ORDER: Specify catalog number. Please provide bell OD and length.



STYLE 416 BELL JOINT LEAK CLAMPS

REPAIR CLAMPS

MATERIAL SPECIFICATIONS

BELL AND SPIGOT RING: Mild steel per ASTM A 36 or equal.

GASKET: Compounded for water and sewer service. Meets the requirements of AWWA C219 and ASTM D2000. Other compounds available on request.

BOLTS AND NUTS: Trackhead bolts, heavy hex nuts, UNC 5/8" rolled thread, high strength low alloy, corrosion resistant steel per AWWA C111. Other materials or special coatings available upon request.

COATINGS: Shop coat applied to cast parts for corrosion protection in transit. Other coatings available upon request.

USES: Romac's 416 Bell Joint Leak Clamps provide fast, economical means of repairing or preventing leaks in ductile iron and/or rubber gasketed joints. For use on ductile iron and cast iron pipe.

PRESSURE RATING: 150 psi.



416 BELL JOINT LEAK CLAMP



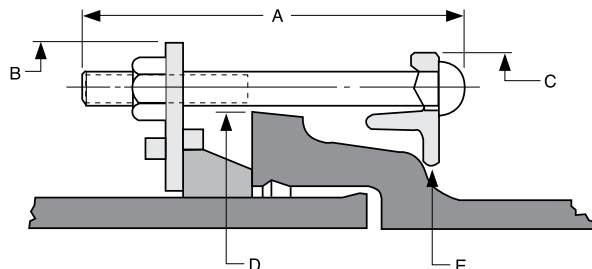
NSF61 certified upon request.

BELL JOINT CLAMP (for use on Ductile Iron Pipe)

PIPE O.D.	CATALOG NUMBER	BOLTS NO: DIA. x LGTH A	SPIGOT RING O.D. B	BELL RING O.D. C	MAX. RING O.D. D	BELL RING I.D. E	LIST PRICE	APPROX. WEIGHT (lbs.)
13.20	416 - 13.20	6: 5/8" x 11.5"	18.94	18.68	16.43	14.46	\$2,938.66	89 #
15.30	416 - 15.30	8: 5/8" x 11.5"	21.04	20.78	18.53	16.56	3,124.05	104 #
17.40	416 - 17.40	8: 5/8" x 11.5"	23.16	22.90	20.65	18.68	3,191.25	114 #
19.50	416 - 19.50	10: 5/8" x 11.5"	25.42	25.54	22.91	20.80	3,320.07	127 #
21.60	416 - 21.60	10: 5/8" x 11.5"	27.65	27.77	25.14	23.03	3,647.50	145 #
25.80	416 - 25.80	12: 5/8" x 11.5"	32.03	32.15	29.52	27.41	3,853.41	170 #

BELL JOINT CLAMP (for use on Cast Iron Pipe)

13.50	416 - 13.50	6: 5/8" x 11.5"	20.29	20.03	17.78	15.81	\$2,972.39	93 #
15.65	416 - 15.65	8: 5/8" x 11.5"	22.64	22.38	20.13	18.16	3,148.56	109 #
17.80	416 - 17.80	8: 5/8" x 11.5"	25.33	25.45	22.82	20.71	3,232.85	120 #
19.92	416 - 19.92	10: 5/8" x 11.5"	27.85	27.97	25.34	23.23	3,353.25	135 #
22.06	416 - 22.06	10: 5/8" x 11.5"	30.39	30.51	27.88	25.77	3,726.29	158 #
26.32	416 - 26.32	12: 5/8" x 11.5"	35.05	35.17	32.54	30.43	3,941.31	185 #



TO ORDER: Specify catalog number. For sizes not shown above, indicate Style 418 and specify Pipe OD, Bell OD, Bell Length, the gap between the Pipe OD and Bell ID, and maximum pressure rating. POA.



COUPLINGS



501
STRAIGHT, TRANSITION &
LONG BARREL COUPLING
PAGE 3-2



MACRO HP™
TWO-BOLT EXTENDED
RANGE COUPLING
PAGE 3-7



XR501
EXTENDED RANGE COUPLING
PAGE 3-9



511
PIPE COUPLING
PAGE 3-10



RC501
REDUCING COUPLING
PAGE 3-11 TO 3-14



EC501
END CAP COUPLING
PAGE 3-15



IC501
COUPLING WITH INSULATING BOOT
PAGE 3-16



702
COMPRESSION COUPLING
PAGE 3-16



ARMOR LINK™
STAINLESS STEEL
COUPLING
PAGE 3-17



400
FABRICATED STEEL
COUPLING
PAGE 3-18 THROUGH 3-21



RC400
FABRICATED STEEL
REDUCING COUPLING
PAGE 3-22



TC400
FABRICATED STEEL
TRANSITION COUPLING
PAGE 3-23



IC400
FABRICATED STEEL
INSULATING COUPLING
PAGE 3-24



ALPHA
WIDE RANGE
RESTRAINED COUPLING
PAGE 1-4



ALPHA EC
WIDE RANGE
RESTRAINED END CAP
PAGE 1-6

STYLE 501 STRAIGHT, TRANSITION AND LONG BARREL COUPLINGS



MATERIAL SPECIFICATIONS

CENTER RINGS: Ductile iron per ASTM A 536, Grade 65-45-12. Yellow shopcoat. Epoxy and special coatings available on request.

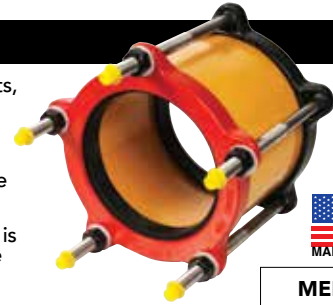
END RINGS: Ductile iron per ASTM A 536, Grade 65-45-12. Color coded RED for O.D. and Std. Stl., BLACK for cast iron and YELLOW for A/C.

GASKETS: SBR per ASTM D 2000 MBA 710, compounded for water and sewer service. Other compounds available on request.

BOLTS AND NUTS: Trackhead bolts, heavy hex nuts, UNC 5/8" rolled thread, high strength, low alloy, corrosion resistant steel per AWWA C111. Other materials or special coatings available on request.

OPTIONS: For other options and specifications, see Page 3-25.

PRESSURE: When properly installed on a pipe that is within the correct OD range, the Romac 501 can be used at working pressures up to 260 psi.



MEETS AWWA C219



NSF61 certified upon request.

Certified to NSF-ANSI 61 & 372



WARNING: Flexible couplings do not provide protection against possible pullout of pipe ends in unrestrained conditions. See Page 8-4 for appropriate restraint system.

CAUTION: Couplings with a step in the center ring have the potential for migrating along the pipe, therefore some form of restraint should be used.

COUPLINGS

NOM. PIPE SIZE	ONE END			BY	OTHER END			BY	CR LGTH	LIST PRICE					
	COLOR CODE	GASKET RANGE	APPROX. USE		COLOR CODE	GASKET RANGE	APPROX. USE			SHOPCOAT			FUSION EPOXY		
										w/STD B&N	w/304 SS B&N	w/316 SS B&N	w/STD B&N	w/304 SS B&N	w/316 SS B&N
2"	RED	2.00 - 2.14	O.D. Stl., Copper	X	RED	2.00 - 2.14	O.D. Stl., Copper	X	5" ¹	\$74.28	\$96.87	\$137.90	\$91.43	\$114.02	\$155.06
		2.12 - 2.38	Std. Stl., Copper, PVC			2.12 - 2.38	Std. Stl., Copper, PVC								
		2.35 - 2.65	Std. Stl., Copper, PVC			2.35 - 2.65	Std. Stl., Copper, PVC								
		2.50 - 3.00	C.I., Copper, PVC			2.50 - 3.00	C.I., Copper, PVC								
3"	RED	3.00 - 3.29	Copper, OD Steel	X	RED	3.00 - 3.29	Copper, OD Steel	X	5" ¹	118.30	170.75	245.55	146.19	198.64	273.45
		3.30 - 3.51	Std. Stl. & PVC			3.30 - 3.51	Std. Steel & PVC								
		3.50 - 4.00	Std. Stl., CI/DI & PVC			3.50 - 4.00	Std. Stl., CI/DI & PVC								
4"	RED	3.80 - 4.05	O.D. Stl., 3" D.I.	X	RED	3.80 - 4.05	O.D. Stl.	X	5" ¹	140.25	185.46	267.51	173.30	218.51	300.56
		4.06 - 4.31	Riv. Stl.			4.06 - 4.31	Riv. Stl.								
		4.21 - 4.49	A/C			4.21 - 4.49	A/C								
		4.50 - 4.70	Std. Stl., PVC			4.50 - 4.70	Std. Stl., PVC								
	BLACK	4.50 - 4.81	Std. Stl., D.I. & PVC	X	BLACK	4.50 - 4.81	Std. Stl., D.I. & PVC	X	10"	201.46	265.90	376.10	248.92	313.36	423.57
		4.80 - 5.00	Cast Iron & PVC			4.80 - 5.00	Cast Iron & PVC								
	YELLOW	4.74 - 5.10	C.I. & A/CME	X	YELLOW	4.74 - 5.10	C.I. & A/CME	X	12"	319.47	383.90	494.11	394.74	459.19	569.38
		5.11 - 5.30	A/C R.B.			5.11 - 5.30	A/C R.B.								
		5.11 - 5.40	A/C R.B. CL. 200			5.11 - 5.40	A/C R.B. CL. 200								
6"	RED	5.40 - 5.60 ²	Std. Stl. & PVC	X	RED	5.40 - 5.60 ²	Std. Stl. & PVC	X	5" ¹	190.89	247.40	323.76	235.88	292.38	394.96
		5.60 - 5.79 ²	Std. Stl. & PVC			5.60 - 5.79 ²	Std. Stl. & PVC								
		5.80 - 5.98 ²	Std. Stl. & PVC			5.80 - 5.98 ²	Std. Stl. & PVC								
		5.80 - 6.10	O.D. Stl.			5.80 - 6.10	O.D. Stl.								
	BLACK	6.05 - 6.30	Riv. Stl.	X	BLACK	6.05 - 6.30	Riv. Stl.	X	7"	226.78	292.35	411.68	280.23	345.78	465.14
		6.18 - 6.46	PVC Sewer & Clay			6.18 - 6.46	PVC Sewer & Clay								
	YELLOW	6.55 - 6.76	Std. Stl. & PVC	X	YELLOW	6.55 - 6.76	Std. Stl. & PVC	X	10"	301.73	382.29	520.03	372.87	453.40	591.17
		6.60 - 6.91	Std. Stl., D.I. & PVC			6.60 - 6.91	Std. Stl., D.I. & PVC								
		6.90 - 7.10	Cast Iron & PVC			6.90 - 7.10	Cast Iron & PVC								
		6.86 - 7.20	C.I. & A/CME			6.86 - 7.20	C.I. & A/CME								
YELLOW	7.15 - 7.35	A/C R.B.	X	YELLOW	7.15 - 7.35	A/C R.B.	X	12"	393.58	474.13	611.89	486.31	566.87	704.61	
	7.26 - 7.60	A/C R.B. CL. 200			7.26 - 7.60	A/C R.B. CL. 200									
8"	RED	7.80 - 8.10	O.D. Stl.	X	RED	7.80 - 8.10	O.D. Stl.	X	5" ¹	241.84	309.66	432.72	298.83	366.65	489.71
		8.05 - 8.30	Riv. Stl.			8.05 - 8.30	Riv. Stl.								
		8.30 - 8.55	C.I.-Soil, PVC Sewer			8.30 - 8.55	C.I.-Soil, PVC Sewer								
		8.55 - 8.75	Std. Stl., PVC			8.55 - 8.75	Std. Stl. & PVC								
	BLACK	8.60 - 9.06	Std. Stl., D.I. & PVC	X	BLACK	8.60 - 9.06	Std. Stl., D.I. & PVC	X	10"	370.01	466.66	631.98	457.21	553.85	719.19
		9.05 - 9.30	Cast Iron & PVC			9.05 - 9.30	Cast Iron & PVC								
	YELLOW	8.99 - 9.40	C.I. & A/CME	X	YELLOW	8.99 - 9.40	C.I. & A/CME	X	12"	503.17	599.82	765.14	621.72	718.38	883.70
		9.31 - 9.50	A/C R.B.			9.31 - 9.50	A/C R.B.								
		9.39 - 9.79	A/C R.B. CL. 200			9.39 - 9.79	A/C R.B. CL. 200								

TO ORDER: Determine O.D. of pipes to be coupled. Select proper gasket range for each pipe from above table. Insert high range of each gasket into catalog number as follows: 501 - one end x other end.

EXAMPLE: To couple 4" A/C rough barrel and 4" O.D. steel with 5" Center Ring, order **501-5.30 x 4.05 X 5**

¹ Standard Center Ring length.
² Requires special 5" end ring.



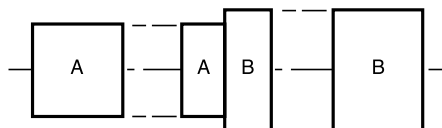
STYLE 501 STRAIGHT, TRANSITION AND LONG BARREL COUPLINGS

NOM. PIPE SIZE	ONE END			BY	OTHER END			BY	LIST PRICE						
	COLOR CODE	GASKET RANGE	APPROX. USE		COLOR CODE	GASKET RANGE	APPROX. USE		CR LGTH	SHOPCOAT		FUSION EPOXY			
									w/STD B&N	w/304 SS B&N	w/316 SS B&N	w/STD B&N	w/304 SS B&N	w/316 SS B&N	
10"	RED	9.80-10.10A 10.20-10.55A 10.70-11.00A	O.D. Stl. CI Soil, PVC Sewer Std. Stl. & PVC	×	RED	9.80-10.10A 10.20-10.55A 10.70-11.00A	O.D. Stl. CI Soil, PVC Sewer Riv. Stl.	×	6" ^{1,2} A & B, AB	\$333.68	\$425.45	\$592.54	\$412.30	\$504.08	\$671.16
	BLACK	10.70-10.80B 10.89-11.40B	Std. Stl. & PVC Cast Iron & PVC		BLACK	10.70-10.80B 10.89-11.40B	Std. Stl. & PVC Cast Iron & PVC		7" ² B ONLY	444.79	536.58	703.65	549.62	641.39	808.47
	YELLOW	11.55-11.75B 11.76-12.12B	A/CME A/C R.B.		YELLOW	11.55-11.75B 11.76-12.12B	A/CME A/C R.B.		12" ² A & B, AB	694.44	829.80	1,177.86	858.08	993.46	1,340.81
										14" ² B ONLY	798.32	941.58	1,318.45	986.44	1,129.71
12"	RED	11.81 - 12.10A 11.95 - 12.25A 12.24 - 12.50A 12.65 - 12.95A	O.D. Stl. PVC SDR 41 CI Soil, PVC Sewer Std. Stl. & PVC	×	RED	11.81 - 12.10A 11.95 - 12.25A 12.24 - 12.50A 12.65 - 12.95A	O.D. Stl. PVC SDR 41 CI Soil, PVC Sewer Std. Stl. & PVC	×	6" ^{1,2} A & B, AB	401.31	506.21	697.15	495.87	600.77	791.72
	BLACK	12.70 - 12.80B 13.15 - 13.55B	Std. Stl. & PVC Cast Iron & PVC		BLACK	12.70 - 12.80B 13.15 - 13.55B	Std. Stl. & PVC Cast Iron & PVC		7" ² B ONLY	498.24	603.11	794.06	615.65	720.53	911.47
	YELLOW	13.85 - 14.10B 14.03 - 14.40B	A/CME A/C R.B.		YELLOW	13.85 - 14.10B 14.03 - 14.40B	A/CME A/C R.B.		12" ² A & B, AB	815.70	970.42	1,368.18	1,007.92	1,162.63	1,560.39
										14" ² B ONLY	884.59	1,048.30	1,479.03	1,093.04	1,256.76
14"	14.00 O.D. (please refer to 12" nominal pipe size)			×	14.00 O.D. (please refer to 12" nominal pipe size)			×	7" ^{1,3}						
	BLACK	14.60 - 15.00 15.30 - 15.70	DI, CI & Simplex AC D.I, A/C R.B. & PVC		BLACK	14.60 - 15.00 15.30 - 15.70	DI, CI & Simplex AC D.I, A/C R.B. & PVC		14"	695.34	817.58	1,058.34	856.09	978.33	1,219.08
	RED	16.00 - 16.40	O.D. Stl.		RED	16.00 - 16.40	O.D. Stl.			1,155.02	1,339.21	1,823.76	1,422.02	1,606.21	2,090.76
	YELLOW	16.40 - 16.88	A/CME & R.B.		YELLOW	16.40 - 16.88	A/CME & R.B.								
16"	16.00 O.D. (please refer to 14" nominal pipe size)			×	16.00 O.D. (please refer to 14" nominal pipe size)			×	7" ^{1,3}						
	BLACK	17.05 - 17.40 17.40 - 17.80	D.I., Cast Iron & PVC D.I. and A/C R.B, PVC		BLACK	17.05 - 17.40 17.40 - 17.80	D.I., Cast Iron & PVC D.I. and A/C R.B, PVC		14"	837.71	975.19	1,241.06	1,031.36	1,168.83	1,434.70
	RED	17.80 - 18.10 18.10 - 18.40	Cast Iron, O.D. Stl & PVC Cast Iron & A/C		RED	17.80 - 18.10 18.10 - 18.40	Cast Iron, O.D. Stl & PVC Cast Iron & A/C			1,390.14	1,594.78	2,133.18	1,711.46	1,916.12	2,454.51
	YELLOW	18.45 - 18.97	A/CME & R.B.		YELLOW	18.45 - 18.97	A/CME & R.B.								
18"	18.00 O.D. (please refer to 16" nominal pipe size)			×	18.00 O.D. (please refer to 16" nominal pipe size)			×	7" ^{1,3}						
	RED	18.70 - 19.10			RED	18.70 - 19.10			14"	1,220.71	1,385.67	1,704.73	1,508.39	1,673.33	1,992.38
	BLACK	19.10 - 19.70			BLACK	19.10 - 19.70				1,864.47	2,110.06	2,756.13	2,303.84	2,549.41	3,195.50
	YELLOW	19.70 - 20.25			YELLOW	19.70 - 20.25									
20"	20.00 O.D. (please refer to 18" nominal pipe size)			×	20.00 O.D. (please refer to 18" nominal pipe size)			×	7" ^{1,3}						
	RED	20.80 - 21.35			RED	20.80 - 21.35			14"	1,464.00	1,628.97	1,948.01	1,808.99	1,973.94	2,292.99
	BLACK	21.35 - 21.75			BLACK	21.35 - 21.75				2,117.22	2,362.78	3,008.87	2,616.14	2,861.70	3,507.79
22"	22.00 O.D. (please refer to 18" nominal pipe size)			×	22.00 O.D. (please refer to 18" nominal pipe size)			×	7" ^{1,3}						
	RED	22.95 - 23.35			RED	22.95 - 23.35			14"	1,589.20	1,767.91	2,113.53	1,963.67	2,142.38	2,488.01
	BLACK	23.45 - 23.85			BLACK	23.45 - 23.85				2,402.34	2,668.37	3,368.30	2,968.43	3,234.48	3,934.40
24"	24.00 O.D. (please refer to 22" nominal pipe size)			×	24.00 O.D. (please refer to 22" nominal pipe size)			×	10" ¹						
	RED	24.75 - 25.30			RED	24.75 - 25.30			20"	2,490.25	2,715.79	3,101.51	3,077.08	3,302.62	3,688.34
	BLACK	25.30 - 25.80			BLACK	25.30 - 25.80				3,849.59	4,224.21	5,197.90	4,756.73	5,131.37	6,113.04
	YELLOW	26.10 - 26.32		YELLOW	26.10 - 26.32										

¹ Standard Center Ring length

² To accommodate the wider range of pipe sizes within the 10" and 12" categories, it is necessary that the center rings be made in three sizes: A, AB, and B (see drawing below).

³ For longer center ring length, see the Style "400" on Page 3-18.



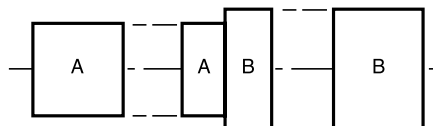
- For "501" parts list, see Page 3-4.
- For Steel Couplings 12" - 96", see Page 3-18.
- For Sewer O.D.s, see Page 7-6.

501 PARTS LIST



NOM. PIPE SIZE	APPROX. COMPLETE COUPLING WEIGHT (lbs.)	CENTER RING LENGTH	CENTER RING	END RING	GASKET	5/8" BOLTS		TRACKHEAD BOLT w/ NUT		
						NUMBER	LENGTH	CORTEN	304 S.S.	316 S.S.
2"	9 #	5"	\$25.87	\$10.14	\$4.40	2:	5/8" x 8"	\$9.66	\$21.75	\$43.04
3"	13 #	5"	35.73	12.98	5.73	4:	5/8" X 10 1/2"	11.29	25.34	50.10
	17 #	10"	49.73			4:	5/8" X 13"	14.00	31.25	59.84
4"	16 #	5"	49.99	18.27	7.54	4:	5/8" x 8"	9.66	21.75	43.04
	22 #	7"	82.12			4:	5/8" x 10 1/2"	11.29	25.34	50.10
	27 #	10"	93.86			4:	5/8" x 13"	14.00	31.25	59.84
	28 #	12"	211.87			4:	5/8" x 15"	14.00	31.25	59.84
	36 #	14"	251.27			4:	5/8" x 17"	14.56	35.19	86.78
6"	26 #	5"	58.00	31.57	10.72	5:	5/8" x 8"	9.66	21.75	43.04
	34 #	7"	85.75			5:	5/8" x 10 1/2"	11.29	25.34	50.10
	39 #	10"	147.16			5:	5/8" x 13"	14.00	31.25	59.84
	47 #	12"	239.01			5:	5/8" x 15"	14.00	31.25	59.84
	55 #	14"	271.14			5:	5/8" x 17"	14.56	35.19	86.78
8"	32 #	5"	74.30	38.77	16.02	6:	5/8" x 8"	9.66	21.75	43.04
	41 #	7"	107.35			6:	5/8" x 10 1/2"	11.29	25.34	50.10
	55 #	10"	176.45			6:	5/8" x 13"	14.00	31.25	59.84
	58 #	12"	309.61			6:	5/8" x 15"	14.00	31.25	59.84
	68 #	14"	341.04			6:	5/8" x 17"	14.56	35.19	86.78
10"	49 # (A)	6"	98.85	44.65	33.26	7:	5/8" x 10 1/2"	11.29	25.34	50.10
	55 # (B)	6"	98.85			7:	5/8" x 10 1/2"	11.29	25.34	50.10
	57 # (AB)	6"	98.85			7:	5/8" x 10 1/2"	11.29	25.34	50.10
	64 # (B only)	7"	209.96			7:	5/8" x 10 1/2"	11.29	25.34	50.10
	78 # (A)	12"	436.67			7:	5/8" x 17"	14.56	35.19	86.78
	83 # (B)	12"	436.67			7:	5/8" x 17"	14.56	35.19	86.78
100 # (B only)	14"	534.38	7:	5/8" x 18"	15.45	37.26	93.15			
12"	65 # (A)	6"	118.67	53.64	42.53	8:	5/8" x 10 1/2"	11.29	25.34	50.10
	68 # (B)	6"	118.67			8:	5/8" x 10 1/2"	11.29	25.34	50.10
	73 # (AB)	6"	118.67			8:	5/8" x 10 1/2"	11.29	25.34	50.10
	72 # (B only)	7"	215.60			8:	5/8" x 10 1/2"	11.29	25.34	50.10
	102 # (A)	12"	506.86			8:	5/8" x 17"	14.56	35.19	86.78
	108 # (B)	12"	506.86			8:	5/8" x 17"	14.56	35.19	86.78
115 # (B only)	14"	568.69	8:	5/8" x 18"	15.45	37.26	93.15			
14"	92 #	7"	304.72	86.04	56.45	9:	5/8" x 11 1/2"	11.74	26.46	54.04
	136 #	14"	731.04			9:	5/8" x 18"	15.45	37.26	93.15
16"	102 #	7"	372.69	115.08	58.74	10:	5/8" x 11 1/2"	11.74	26.46	54.04
	153 #	14"	888.05			10:	5/8" x 18"	15.45	37.26	93.15
18"	123 #	7"	459.54	241.32	68.83	12:	5/8" x 11 1/2"	11.74	26.46	54.04
	194 #	14"	1,058.83			12:	5/8" x 18"	15.45	37.26	93.15
20"	125 #	7"	532.44	324.32	71.02	12:	5/8" x 11 1/2"	11.74	26.46	54.04
	200 #	14"	1,141.18			12:	5/8" x 18"	15.45	37.26	93.15
22"	154 #	7"	605.03	343.02	72.75	13:	5/8" x 11 1/2"	11.74	26.46	54.04
	222 #	14"	1,369.34			13:	5/8" x 18"	15.45	37.26	93.15
24"	214 #	10"	1,059.94	521.08	96.10	14:	5/8" x 15"	14.00	31.25	59.84
	363 #	20"	2,313.15			14:	5/8" x 24"	21.58	50.17	122.35

To accommodate the wider range of pipe sizes within the 10" and 12" categories, it is necessary that the center rings be made in three sizes: A, AB, and B (see drawing right).



WARNING: Flexible couplings do not provide protection against possible pullout of pipe ends in unrestrained conditions. See Page 8-4 for appropriate restraint system.

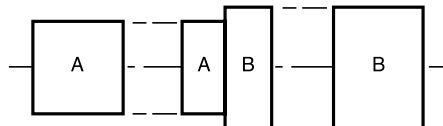
COUPLINGS



FUSION EPOXY 501 PARTS LIST

NOM. PIPE SIZE	APPROX. CENTER RING WEIGHT (lbs.)	CENTER RING LENGTH	CENTER RING	END RING	GASKET N: NBR E: EPDM	5/8" BOLTS		TRACKHEAD BOLT w/ NUT		
						NUMBER	LENGTH	CORTEN	304 S.S.	316 S.S.
2"	4 #	5"	\$34.19	\$14.56	N \$25.02 E 25.89	2:	5/8" x 8"	\$9.66	\$21.75	\$43.04
3"	6 #	5"	49.28	20.15	N 26.09 E 26.51	4:	5/8" x 10 1/2"	11.29	25.34	50.10
	13.5 #	10"	69.10			4:	5/8" x 13"	14.00	31.25	59.84
4"	8 #	5"	65.99	26.80	N 26.49 E 27.20	4:	5/8" x 8"	9.66	21.75	43.04
	13 #	7"	107.23			4:	5/8" x 10 1/2"	11.29	25.34	50.10
	17 #	10"	124.27			4:	5/8" x 13"	14.00	31.25	59.84
	19 #	12"	270.08			4:	5/8" x 15"	14.00	31.25	59.84
	25 #	14"	319.31			4:	5/8" x 17"	14.56	35.19	86.78
6"	12 #	5"	79.87	43.13	N 31.23 E 32.67	5:	5/8" x 8"	9.66	21.75	43.04
	19 #	7"	116.09			5:	5/8" x 10 1/2"	11.29	25.34	50.10
	23 #	10"	195.17			5:	5/8" x 13"	14.00	31.25	59.84
	30 #	12"	308.62			5:	5/8" x 15"	14.00	31.25	59.84
	31 #	14"	349.00			5:	5/8" x 17"	14.56	35.19	86.78
8"	15 #	5"	101.96	53.43	N 37.61 E 42.27	6:	5/8" x 8"	9.66	21.75	43.04
	24 #	7"	145.08			6:	5/8" x 10 1/2"	11.29	25.34	50.10
	36 #	10"	234.32			6:	5/8" x 13"	14.00	31.25	59.84
	39 #	12"	398.82			6:	5/8" x 15"	14.00	31.25	59.84
	48 #	14"	438.48			6:	5/8" x 17"	14.56	35.19	86.78
10"	25 # (A)	6"	136.90	64.93	N 52.51 E 61.15	7:	5/8" x 10 1/2"	11.29	25.34	50.10
	28 # (B)	6"	136.90			7:	5/8" x 10 1/2"	11.29	25.34	50.10
	31 # (AB)	6"	136.90			7:	5/8" x 10 1/2"	11.29	25.34	50.10
	37 # (B only)	7"	274.22			7:	5/8" x 10 1/2"	11.29	25.34	50.10
	51 # (A)	12"	559.74			7:	5/8" x 17"	14.56	35.19	86.78
	56 # (B)	12"	559.74			7:	5/8" x 17"	14.56	35.19	86.78
	74 # (B only)	14"	681.93			7:	5/8" x 18"	15.45	37.26	93.15
12"	34 # (A)	6"	171.02	74.75	N 65.61 E 76.15	8:	5/8" x 10 1/2"	11.29	25.34	50.10
	36 # (B)	6"	171.02			8:	5/8" x 10 1/2"	11.29	25.34	50.10
	42 # (AB)	6"	171.02			8:	5/8" x 10 1/2"	11.29	25.34	50.10
	40 # (B only)	7"	290.80			8:	5/8" x 10 1/2"	11.29	25.34	50.10
	68 # (A)	12"	656.86			8:	5/8" x 17"	14.56	35.19	86.78
	72 # (B)	12"	656.86			8:	5/8" x 17"	14.56	35.19	86.78
	80 # (B only)	14"	734.93			8:	5/8" x 18"	15.45	37.26	93.15
14"	49 #	7"	420.99	108.28	N 93.84 E 111.72	9:	5/8" x 11 1/2"	11.74	26.46	54.04
	98 #	14"	953.56			9:	5/8" x 18"	15.45	37.26	93.15
16"	55 #	7"	503.61	146.44	N 103.83 E 125.02	10:	5/8" x 11 1/2"	11.74	26.46	54.04
	110 #	14"	1,146.64			10:	5/8" x 18"	15.45	37.26	93.15
18"	71 #	7"	637.20	296.33	N 136.19 E 168.17	12:	5/8" x 11 1/2"	11.74	26.46	54.04
	142 #	14"	1,388.17			12:	5/8" x 18"	15.45	37.26	93.15
20"	67 #	7"	774.01	376.04	N 151.24 E 189.61	12:	5/8" x 11 1/2"	11.74	26.46	54.04
	134 #	14"	1,536.68			12:	5/8" x 18"	15.45	37.26	93.15
22"	76 #	7"	853.19	406.18	N 159.60 E 201.25	13:	5/8" x 11 1/2"	11.74	26.46	54.04
	152 #	14"	1,809.77			13:	5/8" x 18"	15.45	37.26	93.15
24"	133 #	10"	1,344.56	672.19	N 231.33 E 296.58	14:	5/8" x 15"	14.00	31.25	59.84
	266 #	20"	2,918.08			14:	5/8" x 24"	21.58	50.17	122.35

To accommodate the wider range of pipe sizes within the 10" and 12" categories, it is necessary that the center rings be made in three sizes: A, AB, and B (see drawing right).



WARNING: Flexible couplings do not provide protection against possible pullout of pipe ends in unrestrained conditions. See Page 8-4 for appropriate restraint system.

MACRO HP™

TWO-BOLT WIDE RANGE DUCTILE IRON COUPLING

ROMAC
INDUSTRIES, INC.

MACRO HP™

TWO-BOLT EXTENDED RANGE COUPLING

- New Sizes - Macro HP is now available for pipe sizes 2" through 12"
- High Performance One-Piece Gasket
- Up To 25% Higher Working Pressure (up to 305 PSI)
- Up To 25% More Deflection (up to 10°)
- Stainless Steel Armors Are Bonded To Gaskets
- Patent Number: 8448993

MEETS
AWWA C219



A ROMAC ORIGINAL
2009 - MACRO™



MACRO HP ADVANTAGES

- **DUCTILE IRON**
Long-life ductile iron end-rings and center-ring.
- **WIDE RANGE**
Macro HP fits a wide variety of pipe materials and diameters.
- **SIMPLE INSTALLATION**
Macro HP is a fast stab-fit installation with only two bolts to tighten. The built-in handle makes the Macro HP simple to carry and maneuver.
- **EASY TO REMOVE**
In the event that the coupling needs to be removed, Macro HP can be quickly removed simply by loosening two bolts.
- **CATHODIC PROTECTION**
The Macro HP can be ordered with an adapter/connection for cathodic protection if desired.
- **ALLOWS DEFLECTION**
When properly installed the Macro HP can accommodate pipe deflection of up to 10 degrees (5 degrees on each end).
- **MANUFACTURED IN THE U.S.A. BY ROMAC INDUSTRIES, INC.**
Patent Number: 8448993



Flexible couplings do not provide protection against possible pullout of pipe ends in unrestrained conditions.

MATERIAL SPECIFICATIONS

CASTINGS: All cast components (end rings, center ring, and bolt guides) are ductile iron, meeting or exceeding the requirements of ASTM A 536, grade 65-45-12. End rings are segmented and joined with a hinge.

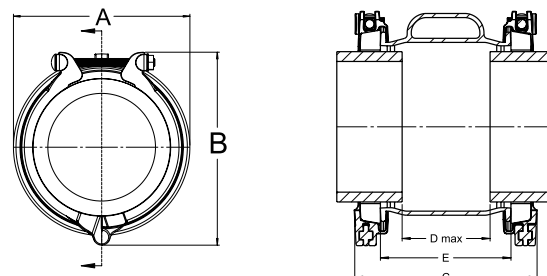
GASKETS: Gaskets formed from virgin Nitrile Butadiene Rubber (NBR) compounded for water and sewer service in accordance with ASTM D2000. NSF61 Certified.

BOLTS & NUTS: 304 stainless steel, UNC carriage head bolts with heavy hex nuts. Sizes 2" & 3": 1/2-13. Sizes 4" - 12": 5/8-11. 316 stainless steel available upon request. Fasteners provided with anti-galling protection.

ARMOR: Heavy gauge 304 stainless steel bonded to gaskets.

COATINGS: Center ring fusion bonded epoxy. End rings are E-Coated epoxy.

PRESSURE: When properly installed, the Romac MACRO HP coupling can be used at working pressures up to 305 psi. Contact Romac Engineering for details.



See following page for dimensions.



MACRO HP™ TWO-BOLT WIDE RANGE DUCTILE IRON COUPLING



**NEW SIZES
FOR APPLICATIONS ON
2" AND 3" PIPE**

The 2 and 3 inch Macro HP Couplings are designed to fit most common pipe materials.

For other ranges and gasket configurations not shown in the table below, contact Romac Industries, Inc.

NOM. PIPE SIZE	COUPLING RANGE	DIMENSIONS					LIST PRICE	APPROX. WEIGHT (lbs.)
		DIM. A WIDTH	DIM. B HEIGHT	DIM. C LENGTH	DIM. D GAP BTWN PIPE ENDS	DIM. E CTR RING LENGTH		
2"	2.12 - 2.55	5.80	6.75	6.38	2.00	4.00	\$192.26	9
2" XL	2.50 - 2.90							
3"	3.13 - 3.63	7.20	8.36	8.38	4.00	6.00	252.26	12
3" XL	3.63 - 4.13							

WIDE RANGE GASKETS

MACRO HP Sizes 4 - 12 inch, are pre-assembled with standard wide range gaskets that accommodate IPS through cast iron pipe. XL sizes cover DI through Oversize Cast Iron pipe diameters.



A/C GASKET INCLUDED

For larger pipe diameters such as some asbestos cement, a separate A/C gasket is included.

NOM. PIPE SIZE	OVERALL COUPLING RANGE		DIMENSIONS					LIST PRICE	APPROX. WEIGHT (lbs.)
	FACTORY PREASSEMBLED	INCLUDED REQUIRES GASKET CHANGE	DIM. A WIDTH	DIM. B HEIGHT	DIM. C LENGTH	DIM. D GAP BTWN PIPE ENDS	DIM. E CTR RING LENGTH		
4"	4.40 - 5.05 WIDE RANGE GASKET	4.40 - 5.60 A/C GASKET RANGE 4.95 - 5.60	8.96	10.18	11.19	6.00	8.00	\$324.82	28
6"	6.60 - 7.15 WIDE RANGE GASKET	6.60 - 7.60 A/C GASKET RANGE 7.10 - 7.60	10.96	12.18	11.19	6.00	8.00	428.66	34
8"	8.60 - 9.30 WIDE RANGE GASKET	8.60 - 9.75 A/C GASKET RANGE 9.10 - 9.75	13.11	14.33	11.19	6.00	8.00	485.42	36
10"	10.70 - 11.30 WIDE RANGE GASKET	10.70 - 11.90 A/C GASKET RANGE 11.25 - 11.90	15.26	16.48	11.19	6.00	8.00	627.90	57
10"XL	11.00 - 11.65 WIDE RANGE GASKET	11.00 - 12.20 A/C GASKET RANGE 11.55 - 12.20	15.56	16.78	11.19	6.00	8.00	671.37	59
12"	12.70 - 13.30 WIDE RANGE GASKET	12.70 - 13.80 A/C GASKET RANGE 13.15 - 13.80	17.16	18.38	11.19	6.00	8.00	738.99	62
12"XL	13.15 - 13.80 WIDE RANGE GASKET	13.15 - 14.40 A/C GASKET RANGE 13.75 - 14.40	17.76	18.98	11.19	6.00	8.00	883.89	64

TO ORDER MACRO HP COUPLING: Determine the O.D. of the pipes to be coupled, and select coupling size which covers the pipe diameters of both pipe ends. Use the high range [in table above] of the overall coupling range to identify which coupling you're ordering.

EXAMPLE: To couple 8" DI and 8" std. steel, order MACRO HP 9.75.

MACRO HP™ OPTIONAL ADD-ONS



MACRO LR (Low-Range) GASKET

The MACRO LR gasket is for smaller pipe diameters such as OD Steel. Max. working pressure for MACRO HP with LR gasket is 200 psi. LR Gaskets are not compatible with 10" XL or 12" XL SIZES. List prices do not include coupling.

PIPE SIZE	RANGE	CATALOG NUMBER	APPROX. WEIGHT (lbs.)	LIST PRICE EACH
4"	3.50 - 4.30	8R26104LR	1.75	\$47.70
6"	6.00 - 6.30	8R26106LR	2.25	51.32
8"	8.00 - 8.40	8R26108LR	3.00	59.78
10"	10.00 - 10.50	8R26110LR	3.50	67.02
12"	12.00 - 12.50	8R26112LR	3.80	70.64

TO ORDER LR GASKET: Specify which sized LR gasket by indicating the corresponding Catalog Number.



INSULATING BOOT

COMPATIBLE WITH MACRO HP AND 501 COUPLINGS

Romac Insulating boot effectively stop electrolytic action by isolating one pipe from the other. Insulating boots are Ethylene Propylene Diene Methylene (EPDM) compounded for water and sewer service.

PIPE SIZE	O.D. (inches)	LENGTH (inches)	LIST PRICE	APPROX. WEIGHT (lbs.)
4"	4.50	12.00	\$41.94	.75 #
	4.80	12.00		
6"	6.625	12.00	50.71	1.10 #
	6.90	12.00		
8"	8.625	12.00	60.84	1.20 #
	9.05	12.00		
10"	10.75 ¹	12.00	92.06	1.75 #
	11.10	12.00		
12"	12.75 ¹	12.00	102.57	2.10 #
	13.20	12.00		

¹ Special, not common stock gaskets.

NOTE: Insulating Boots are not for use with 10" XL, 12" XL or Macro LR Gaskets. Insulating Boots limit working pressure of coupling to 200 psi.

TO ORDER INSULATING BOOTS: Specify pipe OD.

ADAPTED CATHODIC PROTECTION

Mechanical Connection for adding cathodic protection such as an anode (Romac does not supply anode). List price does not include coupling.



ADD-ON LIST PRICE

\$187.16

TO ORDER "ADAPTED FOR CATHODIC PROTECTION" ADD-ON:

Add the designation "C" to the end of the coupling order.

EXAMPLE: To order an 8" MACRO Adapted for Cathodic Protection, Order: **MACRO HP 9.75 - C.**



STYLE XR501 EXTENDED RANGE COUPLING

MATERIAL SPECIFICATIONS

CENTER RINGS: The center rings are cast from ductile (nodular) iron meeting or exceeding ASTM A 536, Grade 65-45-12.

END RINGS: The end rings are cast from ductile (nodular) iron meeting or exceeding ASTM A 536, Grade 65-45-12.

GASKETS: Gaskets are made from Styrene Butadiene Rubber (SBR) compounded for water and sewer service in accordance with ASTM D2000 MBA 810. Other compounds available for petroleum, chemical, or high temperature service.

COATINGS: Shop coat applied to cast parts for corrosion protection in transit.

BOLTS AND NUTS: 5/8 inch, High strength low alloy steel trackhead bolts. National coarse rolled thread and heavy hex nuts. Steel meets AWWA C111 composition specifications. Stainless steel bolts and nuts available on request.

OPTIONS: Fusion bonded epoxy. Liquid epoxy and other coatings available on request. Stainless steel bolts and nuts available on request.

PRESSURE: When properly installed on standard steel pipe and larger, the Romac XR501 can be used at working pressures up to 260 psi.



ALSO AVAILABLE WITH REMOVEABLE END-CAP



NSF61 certified upon request.

**MEETS
AWWA C219**

NOM. PIPE SIZE	ONE END			BY	OTHER END			BY	LIST PRICE					
	GASKET RANGE	APPROX. USE	X		GASKET RANGE	APPROX. USE	X		CR LGTH	SHOPCOAT			FUSION EPOXY			APPROX WT. (lbs)
4"	4.215 ¹ - 5.00 ²	SDR 35, Std. Stl, DI & CI	X	4.215 ¹ - 5.00 ²	SDR 35, Std. Stl, DI & CI	X	7"	\$190.54	\$246.67	\$350.35	\$232.30	\$288.44	\$392.11	27#
	4.215 ¹ - 5.60	SDR 35, Std. Stl, DI, CI & AC		4.215 ¹ - 5.60	SDR 35, Std. Stl, DI, CI & AC			12"	286.26	359.25	546.99	314.37	387.37	574.98	40#
6"	6.275 ¹ - 7.20 ²	SDR 35, Std. Stl, DI & CI	X	6.275 ¹ - 7.20 ²	SDR 35, Std. Stl, DI & CI	X	7"	270.93	341.13	470.68	323.86	394.04	523.64	34#
	6.275 ¹ - 7.60	SDR 35, Std. Stl, DI, CI & AC		6.275 ¹ - 7.60	SDR 35, Std. Stl, DI, CI & AC			12"	376.43	467.67	702.19	404.99	496.22	730.75	47#
8"	8.40 ¹ - 9.30 ²	SDR 35, Std. Stl, DI & CI	X	8.40 ¹ - 9.30 ²	SDR 35, Std. Stl, DI & CI	X	7"	318.12	402.34	557.84	384.57	468.78	624.57	50#
	8.40 ¹ - 9.75	SDR 35, Std. Stl, DI, CI & AC		8.40 ¹ - 9.75	SDR 35, Std. Stl, DI, CI & AC			12"	441.45	550.94	832.36	469.77	579.25	860.67	64#
10"	10.50 ¹ - 11.41 ²	SDR 35, Std. Stl, DI & CI	X	10.50 ¹ - 11.41 ²	SDR 35, Std. Stl, DI & CI	X	8"	403.57	501.82	663.08	507.40	605.65	673.71	72#
	10.50 ¹ - 12.15	SDR 35, Std. Stl, DI, CI & AC		10.50 ¹ - 12.15	SDR 35, Std. Stl, DI, CI & AC			12"	534.22	643.69	925.12	583.72	693.20	967.09	79#
12"	12.50 ¹ - 13.56 ²	SDR 35, Std. Stl, DI & CI	X	12.50 ¹ - 13.56 ²	SDR 35, Std. Stl, DI & CI	X	8"	477.67	589.95	823.67	593.97	706.25	830.89	87#
	12.50 ¹ - 14.41	SDR 35, Std. Stl, DI, CI & AC		12.50 ¹ - 14.41	SDR 35, Std. Stl, DI, CI & AC			13"	622.23	776.64	1,183.01	683.81	838.23	1,244.60

¹ Pipe ODs smaller than Standard Steel Size, NOT TO EXCEED 20 PSI.

² Optional Gasket for SDR 35 through CI D Cast Iron Pipe

TO ORDER: Determine O.D. of pipes to be coupled. Select proper gasket range for each pipe from above table. Insert high range of each gasket into catalog number as follows: XR501 - one end x other end.

EXAMPLE: To couple 8" DI and 8" std. steel, order **XR501-9.75 x 9.75 X 7**

!
Flexible couplings do not provide protection against possible pullout of pipe ends in unrestrained conditions.

XR501 PARTS LIST

NOM PIPE SIZE	CENTER RING		EXTRA-LONG CENTER RING		END RING		GASKET	TRACKHEAD BOLT w/NUT PRICE EACH			
	SHOPCOAT	EPOXY	SHOPCOAT	EPOXY	SHOPCOAT	EPOXY		NUMBER:LENGTH	CORTEN	304 S.S.	316 S.S.
4"	\$83.07	\$127.98	\$167.49	\$229.41	\$17.69	\$23.52	\$12.57	Std. Length: 4: 5/8 x 11 ^{1/2}	\$11.74	\$26.46	\$54.04
								Extra Long: 4: 5/8 x 17	14.56	35.19	86.78
6"	95.10	143.68	186.47	255.98	31.62	42.53	26.95	Std. Length: 5: 5/8 x 11 ^{1/2}	11.74	26.46	54.04
								Extra Long: 5: 5/8 x 17	14.56	35.19	86.78
8"	110.85	160.59	217.23	292.20	37.24	54.72	31.17	Std. Length: 6: 5/8 x 11 ^{1/2}	11.74	26.46	54.04
								Extra Long: 6: 5/8 x 17	14.56	35.19	86.78
10"	133.76	182.94	261.01	321.18	47.17	71.86	45.75	Std. Length: 6: 5/8 x 13	14.00	31.25	59.84
								Extra Long: 6: 5/8 x 17	14.56	35.19	86.78
12"	143.60	207.68	276.57	382.77	55.78	80.36	55.27	Std. Length: 8: 5/8 x 13	14.00	31.25	59.84
								Extra Long: 8: 5/8 x 18	15.45	37.26	93.15

XR501 End-Caps are also available. Contact your Romac representative for more information.

STYLE 511 COUPLING FOR STEEL, COPPER, & PVC PIPE



MATERIAL SPECIFICATIONS

CENTER RINGS: Steel per ASTM A 120; or ductile iron per ASTM A 536, Grade 65-45-12 (see separate charts for steel and ductile iron below). Yellow shopcoat.

END RINGS: Ductile iron per ASTM A 536, Grade 65-45-12. Color coded RED for O.D. and Std. Stl.

GASKETS: SBR per ASTM D 2000 MBA 710, compounded for water and sewer service. Other compounds available on request.

BOLTS AND NUTS: UNC rolled thread, mild steel, zinc plated (1/2" thru 8" sizes). 5/8" high strength, low alloy steel per AWWA C111 (10" & 12" sizes).



**MEETS
AWWA C219**



NSF61 certified upon request.

STYLE 511 COUPLING WITH STEEL CENTER RINGS

NOM. PIPE SIZE	ONE END		BY	OTHER END		BY	CTR LGTH	CARRIAGE BOLT NUMBER : SIZE	QTY. PER CTN	APPROX. WT. (lbs)	LIST PRICE
	O.D. (inches)	APPROX. USE		O.D. (inches)	APPROX. USE						
1/2"	.84 - .88	Std. Stl.	x	.84 - .88	Std. Stl.	x	5"	2: 1/2" x 6 1/2"	12	2 #	\$45.82
3/4"	1.05-1.13	Std. Stl.	x	1.05-1.13	Std. Stl.	x	5"	2: 1/2" x 6 1/2"	12	3 #	52.35
1"	1.32-1.38	Std. Stl.	x	1.32-1.38	Std. Stl.	x	5"	2: 1/2" x 6 1/2"	12	3 #	54.20
1 1/4"	1.66	Std. Stl.	x	1.66	Std. Stl.	x	5"	2: 1/2" x 6 1/2"	6	4 #	56.64
1 1/2"	1.90	Std. Stl.	x	1.90	Std. Stl.	x	5"	2: 1/2" x 6 1/2"	6	4 #	67.71
1 1/2" x 1 1/4"	1.90	Std. Stl.	x	1.66	Std. Stl.	x	5"	2: 1/2" x 6 1/2"	6	4 #	67.71
2"	2.00	O.D. Stl.	x	2.00	O.D. Stl.	x	5"	2: 1/2" x 6 1/2"	6	5 #	82.62
	2.13 2.38	Copper Std. Stl.		2.13 2.38	Copper Std. Stl.		7"	2: 1/2" x 9"	6	5 #	110.69
2 1/2"	2.88	Std. Stl.	x	2.88	Std. Stl.	x	5"	3: 1/2" x 6 1/2"	4	6 #	112.04
							7"	3: 1/2" x 9"	4	8 #	134.56

STYLE 511 COUPLING WITH DUCTILE IRON CENTER RINGS

NOM. PIPE SIZE	ONE END		BY	OTHER END		BY	CTR LGTH	CARRIAGE BOLT NUMBER : SIZE	APPROX. WEIGHT (lbs)	LIST PRICE
	O.D. (inches)	APPROX. USE		O.D. (inches)	APPROX. USE					
3"	3.00	O.D. Stl.	x	3.00	O.D. Stl.	x	4"	4: 1/2" x 6"	8 #	\$124.32
	3.13	Copper		3.13	Copper		7"	4: 1/2" x 9"	12 #	156.89
	3.50	Std. Stl.		3.50	Std. Stl.					
4"	4.00	O.D. Stl.	x	4.00	O.D. Stl.	x	4"	4: 1/2" x 6"	9 #	131.31
	4.50	Std. Stl.		4.50	Std. Stl.		7"	4: 1/2" x 9"	14 #	176.09
5"	5.56	Std. Stl.	x	5.56	Std. Stl.	x	4"	4: 1/2" x 6 1/2"	11 #	207.27
6"	6.00	O.D. Stl.	x	6.00	O.D. Stl.	x	4"	4: 1/2" x 6"	12 #	182.63
	6.63	Std. Stl.		6.63	Std. Stl.		7"	4: 1/2" x 9"	20 #	226.02
8"	8.00	O.D. Stl.	x	8.00	O.D. Stl.	x	5"	5: 1/2" x 7"	20 #	249.88
	8.63	Std. Stl.		8.63	Std. Stl.		7"	5: 1/2" x 9"	28 #	269.75
10"	10.00	O.D. Stl.	x	10.00	O.D. Stl.	x	5"	6: 5/8" x 8" ¹	27 #	306.64
	10.75	Std. Stl.		10.75	Std. Stl.		7"	6: 5/8" x 10 1/2" ¹	35 #	354.97
12"	12.00	O.D. Stl.	x	12.00	O.D. Stl.	x	5"	8: 5/8" x 8" ¹	33 #	363.45
	12.75	Std. Stl.		12.75	Std. Stl.		7"	8: 5/8" x 10 1/2" ¹	41 #	386.15

¹ Trackhead Bolts **Options Available:** Center rings of other lengths may be ordered - P.O.A.

TO ORDER: Determine O.D. of pipe to couple and length of center ring.
EXAMPLE: For a 6" coupling to fit 6.625 O.D. with a 4" long center ring, order **511-6.63 x 6.63 x 4**



Flexible couplings do not provide protection against possible pullout of pipe ends in unrestrained conditions. See Page 8-4 for appropriate restraint system for larger sized 511s.

COUPLINGS



STYLE RC501 REDUCING COUPLINGS

MATERIAL SPECIFICATIONS

CENTER RINGS: Ductile iron per ASTM A 536, Grade 65-45-12. Yellow shopcoat. Epoxy and special coatings available on request.

END RINGS: Ductile iron per ASTM A 536, Grade 65-45-12. Color coded RED for O.D. and Std. Stl., BLACK for cast iron and YELLOW for A/C.

GASKETS: SBR per ASTM D 2000 MBA 710, compounded for water and sewer service. Other compounds available on request.

BOLTS AND NUTS: Trackhead bolts, heavy hex nuts, UNC 5/8" rolled thread, high strength, low alloy, corrosion-resistant steel per AWWA C111. Other materials or special coatings available on request.

OPTIONS: For other options and specifications, see Page 3-25 and 3-26.



MEETS
AWWA C219



NSF61 certified upon request.

Certified to NSF 29/30/31 & 372

NOM. PIPE SIZE	LIST PRICE							SHOPCOAT			FUSION EPOXY									
	ONE END		BY	OTHER END		APPROX. USE	GASKET RANGE	COLOR CODE	APPROX. USE	GASKET RANGE	COLOR CODE	APPROX. USE	GASKET RANGE	COLOR CODE						
	COLOR CODE	GASKET RANGE		COLOR CODE	GASKET RANGE										w/STD B&N	w/304 SS B&N	w/316 SS B&N	w/STD B&N	w/304 SS B&N	w/316 SS B&N
4" x 3"	RED	3.80 - 4.05 4.06 - 4.31 4.21 - 4.49 4.50 - 4.70 4.50 - 4.81	x	RED	3.00 - 3.13 3.50	x	RED	O.D. Stl., Copper Std. Stl.	3.80 - 4.05 4.06 - 4.31 4.21 - 4.49 4.50 - 4.70 4.50 - 4.81	O.D. Stl. Riv. Stl. A/C Std. Stl. & PVC Std. Stl., D.I. & PVC	x	RED	3.80 - 4.05 4.06 - 4.31 4.21 - 4.49 4.50 - 4.70 4.50 - 4.81	O.D. Stl. Riv. Stl. A/C Std. Stl. & PVC Std. Stl., D.I. & PVC						
	BLACK	4.80 - 5.00 4.74 - 5.10 5.11 - 5.30		BLACK	4.80 - 5.00 4.74 - 5.10 5.11 - 5.30										BLACK	Cast Iron & PVC C.I. & A/CME A/C R.B.	BLACK	4.80 - 5.00 4.74 - 5.10 5.11 - 5.30	BLACK	Cast Iron & PVC C.I. & A/CME A/C R.B.
	YELLOW	5.11 - 5.40		YELLOW	5.11 - 5.40										YELLOW	A/C R.B. CL. 200	YELLOW	5.11 - 5.40	YELLOW	A/C R.B. CL. 200
6" x 4"	RED	5.40 - 5.60 ² 5.60 - 5.79 ² 5.80 - 5.98 ² 5.80 - 6.10 6.05 - 6.30 6.18 - 6.46 6.55 - 6.76 6.60 - 6.91	x	RED	3.80 - 4.05 4.06 - 4.31 4.21 - 4.49 4.50 - 4.70 4.50 - 4.81	x	RED	O.D. Stl. Riv. Stl. A/C Std. Stl. & PVC Std. Stl., D.I. & PVC	3.80 - 4.05 4.06 - 4.31 4.21 - 4.49 4.50 - 4.70 4.50 - 4.81	O.D. Stl. Riv. Stl. A/C Std. Stl. & PVC Std. Stl., D.I. & PVC	x	RED	3.80 - 4.05 4.06 - 4.31 4.21 - 4.49 4.50 - 4.70 4.50 - 4.81	O.D. Stl. Riv. Stl. A/C Std. Stl. & PVC Std. Stl., D.I. & PVC						
	BLACK	6.90 - 7.10 6.86 - 7.20 7.15 - 7.35		BLACK	4.80 - 5.00 4.74 - 5.10 5.11 - 5.30										BLACK	4.80 - 5.00 4.74 - 5.10 5.11 - 5.30	BLACK	4.80 - 5.00 4.74 - 5.10 5.11 - 5.30	BLACK	Cast Iron & PVC C.I. & A/CME A/C R.B.
	YELLOW	7.26 - 7.60		YELLOW	5.11 - 5.40										YELLOW	A/C R.B. CL. 200	YELLOW	5.11 - 5.40	YELLOW	A/C R.B. CL. 200
8" x 6"	RED	7.80 - 8.10 8.05 - 8.30 8.30 - 8.55 8.55 - 8.75 8.60 - 9.06	x	RED	5.80 - 6.10 6.05 - 6.30 6.18 - 6.46 6.55 - 6.76 6.60 - 6.91	x	RED	O.D. Stl. Riv. Stl. PVC Sewer & Clay Std. Stl. & PVC Std. Stl., D.I. & PVC	5.80 - 6.10 6.05 - 6.30 6.18 - 6.46 6.55 - 6.76 6.60 - 6.91	O.D. Stl. Riv. Stl. PVC Sewer & Clay Std. Stl. & PVC Std. Stl., D.I. & PVC	x	RED	5.80 - 6.10 6.05 - 6.30 6.18 - 6.46 6.55 - 6.76 6.60 - 6.91	O.D. Stl. Riv. Stl. PVC Sewer & Clay Std. Stl. & PVC Std. Stl., D.I. & PVC						
	BLACK	9.05 - 9.30 8.99 - 9.40 9.31 - 9.50		BLACK	6.90 - 7.10 6.86 - 7.20 7.15 - 7.35										BLACK	6.90 - 7.10 6.86 - 7.20 7.15 - 7.35	BLACK	6.90 - 7.10 6.86 - 7.20 7.15 - 7.35	BLACK	Cast Iron & PVC C.I. & A/CME A/C R.B.
	YELLOW	9.39 - 9.79		YELLOW	7.26 - 7.60										YELLOW	A/C R.B. CL. 200	YELLOW	7.26 - 7.60	YELLOW	A/C R.B. CL. 200
10" x 8"	RED	9.80 - 10.10A ¹ 10.20 - 10.55A ¹ 10.70 - 11.00A ¹	x	RED	7.80 - 8.10 8.05 - 8.30 8.30 - 8.55 8.55 - 8.75 8.60 - 9.06	x	RED	O.D. Stl. Riv. Stl. CI Soil, PVC Sewer Std. Stl. & PVC Std. Stl., D.I. & PVC	7.80 - 8.10 8.05 - 8.30 8.30 - 8.55 8.55 - 8.75 8.60 - 9.06	O.D. Stl. Riv. Stl. CI Soil, PVC Sewer Std. Stl. & PVC Std. Stl., D.I. & PVC	x	RED	7.80 - 8.10 8.05 - 8.30 8.30 - 8.55 8.55 - 8.75 8.60 - 9.06	O.D. Stl. Riv. Stl. CI Soil, PVC Sewer Std. Stl. & PVC Std. Stl., D.I. & PVC						
	BLACK	10.70 - 10.80B ¹ 10.89 - 11.40B ¹		BLACK	9.05 - 9.30 8.99 - 9.40 9.31 - 9.50										BLACK	9.05 - 9.30 8.99 - 9.40 9.31 - 9.50	BLACK	9.05 - 9.30 8.99 - 9.40 9.31 - 9.50	BLACK	Cast Iron & PVC C.I. & A/CME A/C R.B.
	YELLOW	11.55 - 11.75B ¹ 11.76 - 12.12B ¹		YELLOW	9.39 - 9.79										YELLOW	A/C R.B. CL. 200	YELLOW	9.39 - 9.79	YELLOW	A/C R.B. CL. 200

¹ See Footnote 1 on next page. ² Requires special 5" end ring.

STYLE RC501 REDUCING COUPLINGS



NOM. PIPE SIZE	ONE END			BY	OTHER END			LIST PRICE					
	COLOR CODE	GASKET RANGE	APPROX. USE		COLOR CODE	GASKET RANGE	APPROX. USE	SHOPCOAT			FUSION EPOXY		
								w/STD B&N	w/304 SS B&N	w/316 SS B&N	w/STD B&N	w/304 SS B&N	w/316 SS B&N
12" x 10"	RED	11.81 - 12.10A ¹ 11.95 - 12.25 12.24 - 12.50A 12.65 - 12.95A ¹	O.D. Stl O.D. Stl. & PIP Cl Soil, PVC Sewer Std. Stl. & PVC	×	RED	9.80 - 10.10A ¹ 10.20 - 10.55A ¹ 10.70 - 11.00A ¹	O.D. Stl. C.I. - Soil, PVC Sewer Std. Stl. & PVC	\$789.64	\$899.69	\$1,085.49	\$1,028.07	\$1,138.12	\$1,323.89
	BLACK	12.70 - 12.80B ¹ 13.15 - 13.55B ¹	Std. Stl. & PVC Cast Iron & PVC	×	BLACK	10.70 - 10.80B ¹ 10.89 - 11.40B ¹	Cast Iron & PVC C.I. & A/CME						
	YELLOW	13.85 - 14.10B ¹ 14.03 - 14.40B ¹	A/CME A/CME	×	YELLOW	11.55 - 11.75B ¹ 11.76 - 12.12B ¹	A/CME A/C R.B.						
14" x 12"	BLACK	14.00 (please refer to 12") 14.60 - 15.00 15.30 - 15.70	- Cast Iron & PVC	×	RED	11.81 - 12.10A ¹ 11.95 - 12.25 12.24 - 12.50A ¹ 12.65 - 12.95A ¹	OD Stl O.D. Stl. & PIP Cl Soil PVC Sewer Std. Stl. & PVC	1,119.22	1,255.45	1,482.22	1,393.75	1,523.47	1,756.76
	RED	16.00 - 16.40	A/CME & O.D. Stl.	×	BLACK	12.70 - 12.80B ¹ 13.15 - 13.55B ¹	Std. Stl. & PVC Cast Iron & PVC						
	YELLOW	16.40 - 16.88	A/C R.B.	×	YELLOW	13.85 - 14.10B ¹ 14.03 - 14.40B ¹	A/CME A/CME						
16" x 14"	BLACK	16.00 (please refer to 14") 17.05 - 17.40 17.40 - 17.80	D.I. & PVC D.I., A/C R.B. & PVC	×	BLACK	14.60 - 15.00 15.30 - 15.70	- Cast Iron & PVC	2,032.28	2,176.38	2,435.61	2,405.77	2,549.86	2,809.12
	RED	17.80 - 18.10 18.10 - 18.40	Cast Iron, O.D. Stl. & PVC Cast Iron & A/C	×	RED	16.00 - 16.40	A/CME & O.D. Stl.						
	YELLOW	18.45 - 18.97	A/CME & R.B.	×	YELLOW	16.40 - 16.88	A/C R.B.						
18" x 16"	RED	18.70 - 19.10		×	BLACK	17.05 - 17.40 17.40 - 17.80		2,094.39	2,267.34	2,578.41	2,467.90	2,521.03	2,951.89
	BLACK	19.10 - 19.70		×	RED	17.80 - 18.10 18.10 - 18.40							
	YELLOW	19.70 - 20.25		×	YELLOW	18.45 - 18.97							
20" x 18"	RED	20.80 - 21.35		×	RED	18.70 - 19.10		2,163.11	2,336.03	2,647.11	2,562.18	2,735.11	3,046.19
	BLACK	21.35 - 21.75		×	BLACK	19.10 - 19.70							
	YELLOW	21.75 - 22.25		×	YELLOW	19.70 - 20.25							
22" x 20"	RED	22.95 - 23.35		×	RED	20.80 - 21.35		2,226.47	2,413.81	2,750.81	2,625.56	2,812.91	3,149.90
	BLACK	23.45 - 23.85		×	BLACK	21.35 - 21.75							
	YELLOW	23.75 - 24.25		×	YELLOW	21.75 - 22.25							
24" x 22"	RED	24.75 - 25.30		×	RED	22.95 - 23.35		3,481.98	3,718.76	4,093.25	4,013.49	4,250.28	4,624.76
	BLACK	25.30 - 25.80		×	BLACK	23.45 - 23.85							
	YELLOW	26.10 - 26.32		×	YELLOW	23.75 - 24.25							

¹ To accommodate the wider range of pipe sizes within the 10" and 12" categories, it is necessary that the center rings be made in different sizes: A x A, A x B, B x A and B x B. For example, 12" riveted steel x 10" ductile iron requires a 12A x 10B center ring.

For "RC501" parts list, see page 3-13 & 3-14.

WARNING: Flexible couplings do not provide protection against possible pullout of pipe ends in unrestrained conditions.
CAUTION: Couplings with a step in the center ring have the potential for migrating along the pipe. therefore some sort of restraint should be used.

TO ORDER: Determine O.D. of pipes to be coupled. Select proper gasket range for each pipe from above table. Insert top range from each gasket, into the catalog number as follows: RC501 (one end x other end)

EXAMPLE: To couple 6" O.D. steel and 4" A/C rough barrel, order **RC501-6.10 x 5.30**

COUPLINGS



RC501 PARTS LIST

NOM. PIPE SIZE	APPROX. WEIGHT (lbs.)	CENTER RING LENGTH	REDUCING CTR. RINGS RING ONLY	END RINGS		GASKETS		BOLTS & NUTS			BOLTS NO : SIZE
				(STD) LG. END	(RC) SM. END	LARGE END	SMALL END	CORTEN	304.S.S.	316 S.S.	
4" ¹ x 3"	17 #	5"	\$49.99	\$18.27	\$56.54	\$7.54	\$16.55	\$9.66	\$21.75	\$43.04	4: 5/8" x 8"
6" x 4"	24 #	5"	170.16	31.57	53.87	10.72	7.54	9.66	21.75	43.04	5: 5/8" x 8"
8" x 6"	35 #	5"	215.32	38.77	72.61	16.02	10.72	9.66	21.75	43.04	6: 5/8" x 8"
10" x 8"	58 #	6"	324.84	44.65	82.28	33.26	16.02	11.29	25.34	50.10	7: 5/8" x 10 1/2"
12" x 10"	84 #	7"	454.00	53.64	115.89	42.53	33.26	11.29	25.34	50.10	8: 5/8" x 10 1/2"
14" x 12"	95 #	7"	696.59	86.04	131.95	56.45	42.53	11.74	26.46	54.04	9: 5/8" x 11 1/2"
16" x 14"	111 #	7"	1,160.80	115.08	523.81	58.74	56.45	11.74	26.46	54.04	10: 5/8" x 11 1/2"
18" x 16"	128 #	7"	1,102.22	241.32	482.40	68.83	58.74	11.74	26.46	54.04	12: 5/8" x 11 1/2"
20" x 18"	164 #	7"	1,045.13	324.32	512.93	71.02	68.83	11.74	26.46	54.04	12: 5/8" x 11 1/2"
22" x 20"	166 #	7"	1,057.79	343.02	529.36	72.75	71.02	11.74	26.46	54.04	13: 5/8" x 11 1/2"
24" x 22"	212 #	8 1/2"	1,771.35	521.08	824.70	96.10	72.75	14.00	31.25	59.84	14: 5/8" x 15"

¹ Uses 4" 501 Center Ring.

To accommodate the wider range of pipe sizes within the 10" and 12" categories, it is necessary that the center rings be made in different sizes: A x A, A x B, B x A and B x B. For example, 12" riveted steel x 10" ductile iron requires a 12A x 10B center ring.

WARNING: Flexible couplings do not provide protection against possible pullout of pipe ends in unrestrained conditions.

COUPLINGS

FUSION EPOXY RC501 PARTS LIST



NOM. PIPE SIZE	APPROX. WEIGHT (lbs.)	CENTER RING LENGTH	REDUCING CTR. RINGS RING ONLY	END RINGS		GASKETS ²		BOLTS & NUTS			BOLTS NO : SIZE
				(STD) LG. END	(RC) SM. END	LARGE END	SMALL END	CORTEN	304.S.S.	316 S.S.	
4" x 3"	17 #	5"	\$65.99	\$26.80	\$89.69	N \$26.49	N \$18.18	\$9.66	\$21.75	\$43.04	4: 5/8" x 8"
						E 27.20	E 19.02				
6" x 4"	24 #	5"	242.77	43.13	95.49	N 31.23	N 26.49	9.66	21.75	43.04	5: 5/8" x 8"
						E 32.67	E 27.20				
8" x 6"	35 #	5"	306.84	53.43	128.48	N 37.61	N 31.23	9.66	21.75	43.04	6: 5/8" x 8"
						E 42.27	E 32.67				
10" x 8"	58 #	6"	435.92	64.93	151.59	N 52.51	N 37.61	11.29	25.34	50.10	7: 5/8" x 10 1/2"
						E 61.15	E 42.27				
12" x 10"	84 #	7"	588.84	74.75	198.37	N 65.61	N 52.51	11.29	25.34	50.10	8: 5/8" x 10 1/2"
						E 76.15	E 61.15				
14" x 12"	95 #	7"	852.96	108.28	227.87	N 93.84	N 65.61	11.74	26.46	54.04	9: 5/8" x 11 1/2"
						E 111.72	E 76.15				
16" x 14"	111 #	7"	1,374.27	146.44	652.47	N 103.83	N 93.84	11.74	26.46	54.04	10: 5/8" x 11 1/2"
						E 125.02	E 111.72				
18" x 16"	128 #	7"	1,293.41	296.33	609.71	N 136.19	N 103.83	11.74	26.46	54.04	12: 5/8" x 11 1/2"
						E 168.17	E 125.02				
20" x 18"	164 #	7"	1,284.33	376.04	621.08	N 151.24	N 136.19	11.74	26.46	54.04	12: 5/8" x 11 1/2"
						E 189.61	E 168.17				
22" x 20"	166 #	7"	1,291.65	406.18	631.34	N 159.60	N 151.24	11.74	26.46	54.04	13: 5/8" x 11 1/2"
						E 201.25	E 189.61				
24" x 22"	212 #	8 1/2"	2,015.68	672.19	960.77	N 231.33	N 159.60	14.00	31.25	59.84	14: 5/8" x 15"
						E 296.58	E 201.25				

¹ Uses 4" 501 Center Ring.

² "N" denotes NBR gasket. "E" denotes EPDM gasket.

To accommodate the wider range of pipe sizes within the 10" and 12" categories, it is necessary that the center rings be made in different sizes: A x A, A x B, B x A and B x B. For example, 12" riveted steel x 10" ductile iron requires a 12A x 10B center ring.



WARNING: Flexible couplings do not provide protection against possible pullout of pipe ends in unrestrained conditions.

COUPLINGS



STYLE EC501 END CAP COUPLING

MATERIAL SPECIFICATIONS

CENTER RING: Ductile iron per ASTM A 536, Grade 65-45-12. Yellow shopcoat. Epoxy and special coatings available on request.

END RINGS: Ductile iron per ASTM A 536, Grade 65-45-12. Color coded RED for O.D. and Std. Stl., BLACK for cast iron and YELLOW for A/C. End cap end requires BLACK end ring on 4" - 8" sizes.

END CAP: Ductile iron per ASTM A536, Grade 65-45-12. Color coded BLACK to be used with cast iron size 501 gasket. The end caps are furnished with 2" IPT female threads with plug. End caps on sizes 4" - 8" are two pieces (end ring and cap). Sizes 10" and above have one-piece end caps.

GASKETS: SBR per ASTM D 2000 MBA 710, compounded for water and sewer service. Other compounds available on request.

BOLTS AND NUTS: Trackhead bolts, heavy hex nuts, UNC 5/8" rolled thread, high strength, low alloy steel per AWWA C111. Threads protected with plastic caps on each bolt end. Other materials or special coatings available on request.



EC501 COMPLETE

MEETS
AWWA C219

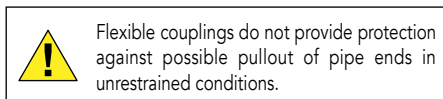


NSF61 certified upon request.

Certified to NSF/ANSI 61 & 372

NOM. PIPE SIZE	COLOR CODE	COLOR CODE	APPROXIMATE USE	END CAP COUPLING COMPLETE			END CAP & GASKET ONLY ³		
				CATALOG NUMBER	WEIGHT (lbs.)	LIST PRICE	CATALOG NUMBER	WEIGHT (lbs.)	LIST PRICE
4"	RED	3.80 - 4.05	O.D.	EC501 - 4.05 EC501 - 4.31 EC501 - 4.49 EC501 - 4.70 EC501 - 4.81	21 #	\$197.15	4" EC501 ³	3 #	\$82.72
		4.06 - 4.31	Riv. Stl.						
		4.21 - 4.49	A/C						
4"	BLACK	4.50 - 4.70	Std. Stl. & PVC	EC501 - 5.00 EC501 - 5.10 EC501 - 5.30	30 #	259.62	6" EC501 ³	5 #	111.03
		4.74 - 5.10	Std. Stl., D.I. & PVC						
		5.11 - 5.30	Cast Iron & PVC						
4"	YELLOW	5.11 - 5.40	C.I. & A/C M.E.	EC501 - 5.40	39 #	351.49	8" EC501 ³	7 #	164.44
		5.80 - 6.10	A/C R.B.						
		6.18 - 6.46	A/C R.B. CL. 200						
6"	RED	6.05 - 6.30	O.D.	EC501 - 6.10 EC501 - 6.46 EC501 - 6.30 EC501 - 6.76 EC501 - 6.91	AB-79 #	643.48	10" EC501 ³	20 #	387.73
		6.55 - 6.76	PVC Sewer						
		6.60 - 6.91	Riv. Stl.						
6"	BLACK	6.90 - 7.10 ¹	Std. Stl. & PVC	EC501 - 7.10 EC501 - 7.20 EC501 - 7.35	B-68 #	819.96	12" EC501 ³	32 #	514.79
		6.86 - 7.20	Std. Stl., D.I. & PVC						
		7.15 - 7.35	Cast Iron & PVC						
6"	YELLOW	7.26 - 7.60	C.I. & A/C M.E.	EC501 - 7.60	157 #	1,651.55	16" EC501 ³	67 #	1,109.22
		7.80 - 8.10	A/C R.B. CL. 200						
		8.05 - 8.30	A/C R.B. CL. 200						
8"	RED	8.55 - 8.75	O.D.	EC501 - 8.10 EC501 - 8.30 EC501 - 8.75 EC501 - 9.06	AB-102 #	819.96	12" EC501 ³	32 #	514.79
		8.60 - 9.06	Riv. Stl.						
		9.05 - 9.30 ¹	Std. Stl. & PVC						
8"	BLACK	8.99 - 9.40	Std. Stl., D.I. & PVC	EC501 - 9.30 EC501 - 9.40 EC501 - 9.50	B-93 #	1,651.55	16" EC501 ³	67 #	1,109.22
		9.31 - 9.50	Cast Iron & PVC						
		9.39 - 9.79	C.I. & A/C M.E.						
8"	YELLOW	9.80 - 10.10 AB ²	A/C R.B.	EC501 - 9.79	157 #	1,651.55	16" EC501 ³	67 #	1,109.22
		10.20 - 10.55	A/C R.B. CL. 200						
		10.70 - 11.00 AB ²	A/C R.B. CL. 200						
10"	RED	10.70 - 10.80 B ²	O.D. Stl.	EC501 - 10.10 EC501 - 10.55 EC501 - 11.00	AB-79 #	643.48	10" EC501 ³	20 #	387.73
		10.89 - 11.40 B ^{1,2}	PIP & PVC Sewer						
		11.55 - 11.75 B ²	Std. Stl. & PVC						
10"	BLACK	11.76 - 12.12 B ²	Std. Stl. & PVC	EC501 - 10.80 EC501 - 11.40	B-68 #	819.96	12" EC501 ³	32 #	514.79
		11.81 - 12.10 AB ²	Cast Iron & PVC						
		11.95 - 12.25	Cast Iron & PVC						
10"	YELLOW	12.24 - 12.50	A/C M.E.	EC501 - 11.75 EC501 - 12.12	157 #	1,651.55	16" EC501 ³	67 #	1,109.22
		12.65 - 12.95 AB ²	A/C R.B.						
		12.70 - 12.80 B ²	A/C R.B.						
12"	RED	13.15 - 13.55 B ^{1,2}	O.D. Stl.	EC501 - 12.10 EC501 - 12.25 EC501 - 12.50 EC501 - 12.95	AB-102 #	819.96	12" EC501 ³	32 #	514.79
		13.85 - 14.10 B ²	O.D. Stl. & PIP						
		14.03 - 14.40 B ²	PIP, PVC Sewer & Clay						
12"	BLACK	14.03 - 14.40 B ²	Std. Stl. & PVC	EC501 - 12.80 EC501 - 13.55	B-93 #	1,651.55	16" EC501 ³	67 #	1,109.22
		17.05 - 17.40	Std. Stl. & PVC						
		17.40 - 17.80	Cast Iron & PVC						
12"	YELLOW	17.80 - 18.10	A/C M.E.	EC501 - 14.10 EC501 - 14.40	157 #	1,651.55	16" EC501 ³	67 #	1,109.22
		18.10 - 18.40	A/C R.B.						
		18.45 - 18.97	A/C R.B.						
16"	BLACK	17.05 - 17.40	D.I. & Cast Iron & PVC	EC501 - 17.40 EC501 - 17.80	157 #	1,651.55	16" EC501 ³	67 #	1,109.22
		17.40 - 17.80	D.I. & A/C R.B.						
		17.80 - 18.10	D.I. & A/C R.B.						
16"	RED	18.10 - 18.40	Cast Iron, OD Stl & PVC	EC501 - 18.10 EC501 - 18.40	157 #	1,651.55	16" EC501 ³	67 #	1,109.22
		18.10 - 18.40	Cast Iron & A/C						
		18.45 - 18.97	A/C M.E. & R.B.						

¹ "End Cap and Gasket Only" comes with this gasket.
² Refer to Page 3-3 for 10" & 12" center rings.
³ End Caps are designed to be used with 501 cast iron size gaskets.
 "End Cap and Gasket Only" price does include gasket.



TO ORDER: Specify catalog number.
OPTIONAL FEATURES: 14" and larger nominal pipe size fabricated steel available. Contact factory for prices and availability.

IC501 INSULATING COUPLING



MATERIAL SPECIFICATIONS

CENTER RINGS: Ductile iron per ASTM A 536, Grade 65-45-12. Yellow shopcoat. Epoxy and special coatings available on request.

END RINGS: Ductile iron per ASTM A 536, Grade 65-45-12. Color coded RED for O.D. Stl. and Std. Stl., BLACK for cast iron and YELLOW for A/C.

GASKETS: SBR per ASTM D 2000 MBA 710, compounded for water and sewer service. Other compounds available on request.

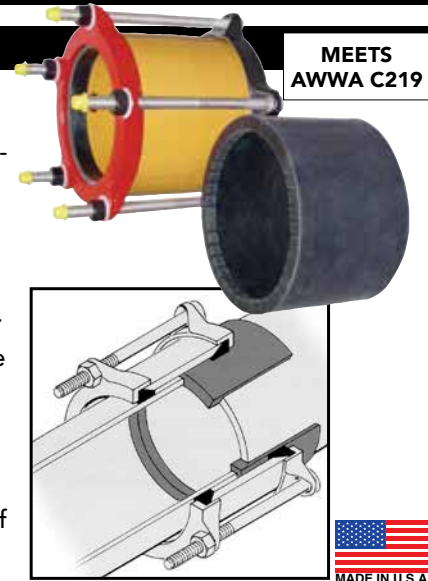
BOLTS AND NUTS: 5/8" high strength, low alloy steel trackhead bolts. N.C. roll thread and heavy hex nuts, corrosion-

resistant steel. Steel meets AWWA C-111-80 composition specifications. Other materials or special coatings available on request.

INSULATING BOOT: Ethylene Propylene Diene Methylene (EPDM) compounded for water and sewer service and insulating properties. Length: 5 1/2".

OPTIONS: For 14" and larger, see Page 3-24. For other options and specifications, see Page 3-25.

USE: Romac insulating couplings effectively stop electrolytic action by isolating one pipe from the other by means of an insulating boot.



NOM. PIPE SIZE	O.D. (inches)	GASKET TO USE FOR IRON PIPE SIZE	GASKET TO USE FOR DUCTILE PIPE SIZE	BOOT ONLY		COMPLETE	
				LIST PRICE	APPROX. WT.	LIST PRICE	APPROX. WT.
4"	4.50 4.80	4.80 - 5.00 —	— 4.74 - 5.10	\$31.94	.75 #	\$172.19	17.75 #
6"	6.625 6.90	6.90 - 7.10 —	— 7.15 - 7.35	40.71	1.10 #	231.60	26.10 #
8"	8.625 9.05	8.60 - 9.06 —	— 8.99 - 9.40	51.84	1.20 #	293.67	33.20 #
10"	10.75 11.10	Special ¹ —	— 10.89 - 11.40	82.06	1.75 #	415.75	63.75 #
12"	12.75 13.20	Special ¹ —	— 13.15 - 13.55	92.57	2.10 #	493.88	73.10 #
14"	14.00	14.03 - 14.40	—	101.68	2.25 #	797.02	100.25 #

¹ Special, not common stock gaskets. Price on application.

Note: Romac recommends 7 inch long center ring when booting both pipe ends, contact Romac for price and availability. Contact Romac for other available sizes and applications.

IMPORTANT: Insulating boots add .3" to the O.D. of the pipe, and must be considered when ordering IC501 couplings.

EXAMPLE: For an insulating coupling to fit 6" D.I., order **IC501-7.35 x 7.10**, with boot to fit 6.90. If ordering insulating boot only, specify O.D.

Flexible couplings do not provide protection against possible pullout of pipe ends in unrestrained conditions.

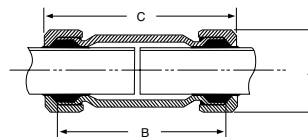
STYLE 702 COMPRESSION COUPLING

MATERIAL SPECIFICATIONS

CASTINGS: End Rings and Center body are cast from ductile (nodular) iron, meeting or exceeding ASTM A 536.

GASKET: NBR (nitrile butadiene rubber) compounded for water and sewer service, also good for hydrocarbons and other oils.

FINISH: Galvanized



Flexible couplings do not provide protection against possible pullout of pipe ends in unrestrained conditions.

NOM. PIPE SIZE	O.D. (inches)	CATALOG NUMBER	LIST PRICE	CARTON QTY.	APPROX. WT. (lbs.)	OVERALL DIMENSIONS		
						A	B	C
1/2"	0.84	702 - 084	\$31.65	12	.95 #	1.72"	3.50"	4.44"
3/4"	1.05	702 - 105	33.88	12	1.05 #	1.97"	3.72"	4.50"
1"	1.32	702 - 132	39.06	12	1.45 #	2.31"	4.00"	4.75"
1 1/4"	1.66	702 - 166	47.93	12	1.85 #	2.59"	4.25"	5.00"
1 1/2"	1.90	702 - 190	54.40	12	2.10 #	2.81"	4.41"	5.25"
2"	2.38	702 - 238	68.65	12	3.00 #	3.41"	4.56"	5.38"

TO ORDER: Specify catalog number.

COUPLINGS



ARMOR LINK™ STAINLESS STEEL COUPLING

MATERIAL SPECIFICATIONS

SHELL AND ARMORS: 304 Stainless Steel, other materials available upon request.

GASKET: Ethylene Propylene Diene Monomer (EPDM) compounded for water and sewer service. Other compounds available on request.

BOLTS AND NUTS: 304 stainless steel, metric socket head cap screws. Other materials available upon request.

USE: For connection of pipe ends.

COMPATIBLE PIPE MATERIALS: Steel, Cast Iron, Ductile Iron, Asbestos Cement, Concrete, PVC & HDPE (PE 4710 & PE 3408).



A 48 INCH ARMOR LINK™ CONNECTING TO A VALVE.

- ALL STAINLESS STEEL.
- FAST STAB-FIT INSTALLATION.
- COMPATIBLE WITH STEEL, DI, HDPE, PVC, A/C AND CONCRETE PIPE.
- ACCOMODATES ANGULAR DEFLECTION AND MISALIGNED PIPES.



For Metric Hex Bit Sockets, see page 10-10

NOM. PIPE SIZE	O.D. (inches)	RANGE (inches)	CATALOG NUMBER	NOM. LENGTH	ALLOWABLE DEFLECTION	WORKING PRESSURE †	HEX BIT SIZE	LIST PRICE	APPROX. WT. (lbs)
4"	4.50	4.41 - 4.61	ALINK - 4.50	4"	2°	435	6 mm	\$294.55	3.1
	4.80		ALINK - 4.80	4"	2°	290	6 mm	294.55	3.3
6"	6.63	6.54 - 6.73	ALINK - 6.63	8"	2°	330	10 mm	508.34	11.6
	6.90		ALINK - 6.90	8"	2°	330	10 mm	508.34	11.6
8"	8.63	8.54 - 8.78	ALINK - 8.63	8"	2°	260	10 mm	532.09	13.1
	9.05		ALINK - 9.05	8"	2°	260	10 mm	543.97	13.1
10"	10.75	10.63 - 10.87	ALINK - 10.75	8"	2°	215	10 mm	615.23	14.7
	11.10		ALINK - 11.10	8"	2°	215	10 mm	686.49	14.7
12"	12.75	12.60 - 12.83	ALINK - 12.75	8"	2°	230	10 mm	722.12	21.0
	13.20		ALINK - 13.20	8"	2°	230	10 mm	947.78	21.0
16"	17.40	17.32 - 17.56	ALINK - 17.40	8"	2°	230	10 mm	1,304.09	25.2
24"	25.80	25.59 - 25.91	ALINK - 25.80	8"	2°	230	14 mm	2,919.37	53.6

† Not to exceed pipe pressure rating.

Other sizes, lengths and tapped outlets available upon request.

For other compatible pipe materials, steam or air supply pipeline applications, contact Romac Engineering, 1.800.426.9341.



ARMOR LINK™ does not provide protection against possible pullout of pipe ends in unrestrained conditions.

Pipe stiffeners are required on HDPE pipe.

TO ORDER: Specify catalog number.

STYLE 400 STEEL COUPLING (FOR 12" AND LARGER PIPE)



MATERIAL SPECIFICATIONS

CENTER RINGS: Beveled, flared or formed carbon steel with minimum yield of 30,000 PSI.

END RINGS: Contoured rolled mill section carbon steel. End-ring thickness determined by pipe O.D. and pressure rating.

GASKETS: Compounded for water and sewer service. Meets the requirements of AWWA C219 and ASTM D2000. Other compounds available on request.

BOLTS AND NUTS: Trackhead bolts, heavy hex nuts, 5/8" UNC rolled thread, high strength, low alloy corrosion-resistant steel per AWWA C111. Threads protected with plastic caps on each bolt end.

PAINT: Romac shopcoat for corrosion protection in transit.

SPECIALS: Center ring length and thickness not shown, special linings and coatings desired, diameters and pressure ratings not shown. Prices and availability on request.

OPTIONS: Available for pipe sizes 12" - 200". For other options and specifications, see page 3-25 & 3-26.

USE: To flexibly couple pipe of the same diameters. See Style TC400 on Page 3-23 for limited range if O.D. is not known.

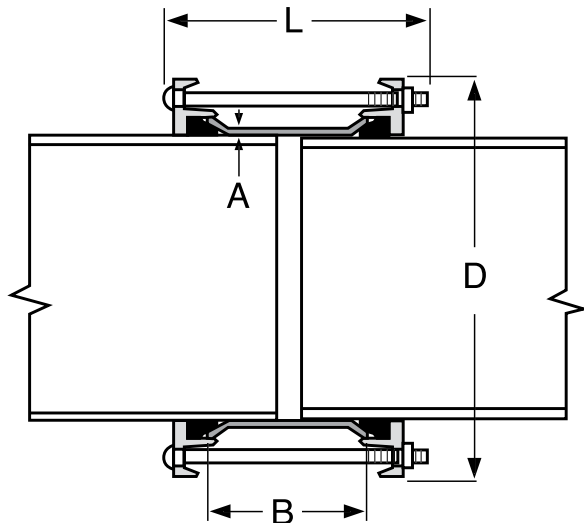
Style 400 Couplings comply with the requirement of AWWA C219.



NSF61 certified upon request.

**MEETS
AWWA C219**

For restrained "400" steel couplings, see page 8-10



DIMENSIONS

Reference charts on following pages

- A** Center ring thickness
- B** Center ring length
- D** Overall coupling diameter
- L** Overall coupling length.



WARNING: Flexible couplings do not provide protection against possible pullout of pipe ends in unrestrained conditions.

TO ORDER: Determine pipe size, center ring thickness and length. Any special gaskets, linings and coatings, or nuts and bolts should be described in full.

EXAMPLE: To couple 16" O.D. steel pipe with a coupling wall thickness of .250 and 7" long, order **400-16.00-1**





STYLE 400 STEEL COUPLING (FOR 12" AND LARGER PIPE)

STYLE 400 STEEL COUPLINGS FOR JOINING PLAIN-END PIPE TO PLAIN-END PIPE

NOM. PIPE SIZE	OUTSIDE DIAMETER O.D.	CENTER RING (A) x (B)	CATALOG NUMBER	LIST PRICE						BOLT NO : SIZE	OVERALL LENGTH (L)
				SHOPCOAT			FUSION EPOXY				
				w/STD B&N	w/304 SS B&N	w/316 SS B&N	w/STD B&N	w/304 SS B&N	w/316 SS B&N		
12"	13.20	1/4" x 7"	400-13.20-1	\$600.86	\$721.20	\$935.71	\$865.54	\$985.89	\$1200.38	8:5/8" x 11 1/2"	12"
	13.20	1/4" x 10"	400-13.20-1A	905.80	1,051.46	1,268.28	1,196.70	1,342.33	1,559.18	8:5/8" x 15"	15 1/2"
	13.20	3/8" x 7"	400-13.20-2	786.67	907.02	1,121.52	1,051.35	1,171.70	1,386.19	8:5/8" x 11 1/2"	12"
	13.20	3/8" x 10"	400-13.20-3	1,024.43	1,170.07	1,386.91	1,315.86	1,460.93	1,677.80	8:5/8" x 15"	15 1/2"
14"	14.00	1/4" x 7"	400-14.00-1	600.86	721.20	935.71	865.54	985.89	1,200.38	8:5/8" x 11 1/2"	12"
	14.00	1/4" x 10"	400-14.00-1A	935.32	1,080.95	1,297.80	1,226.75	1,371.85	1,588.68	8:5/8" x 15"	15 1/2"
	14.00	3/8" x 7"	400-14.00-2	786.67	907.02	1,121.52	1,051.35	1,171.70	1,386.19	8:5/8" x 11 1/2"	12"
	14.00	3/8" x 10"	400-14.00-3	1,037.55	1,183.17	1,400.01	1,328.97	1,474.04	1,691.46	8:5/8" x 15"	15 1/2"
	15.30	1/4" x 7"	400-15.30-1	733.98	884.44	1,152.53	1,044.17	1,194.62	1,462.73	10:5/8" x 11 1/2"	12"
	15.30	1/4" x 10"	400-15.30-1A	1,025.75	1,215.01	1,478.84	1,380.25	1,569.51	1,833.35	10:5/8" x 15"	15 1/2"
	15.30	3/8" x 7"	400-15.30-2	840.97	991.41	1,259.52	1,151.15	1,301.59	1,569.70	10:5/8" x 11 1/2"	12"
	15.30	3/8" x 10"	400-15.30-3	1,144.66	1,333.94	1,597.75	1,499.17	1,688.43	1,952.27	10:5/8" x 15"	15 1/2"
16"	16.00	1/4" x 7"	400-16.00-1	733.98	884.44	1,152.53	1,044.17	1,194.62	1,462.73	10:5/8" x 11 1/2"	12"
	16.00	1/4" x 10"	400-16.00-1A	1,025.75	1,215.01	1,478.84	1,380.25	1,569.51	1,833.35	10:5/8" x 15"	15 1/2"
	16.00	3/8" x 7"	400-16.00-2	840.97	991.41	1,259.52	1,151.15	1,301.59	1,569.70	10:5/8" x 11 1/2"	12"
	16.00	3/8" x 10"	400-16.00-3	1,144.66	1,333.94	1,597.75	1,499.17	1,688.43	1,952.27	10:5/8" x 15"	15 1/2"
	17.40	1/4" x 7"	400-17.40-1	765.01	915.45	1,183.57	1,113.61	1,264.57	1,532.16	10:5/8" x 11 1/2"	12"
	17.40	1/4" x 10"	400-17.40-1A	1,058.97	1,248.24	1,512.06	1,457.38	1,646.64	1,910.48	10:5/8" x 15"	15 1/2"
	17.40	3/8" x 7"	400-17.40-2	926.06	1,076.50	1,344.61	1,425.08	1,576.05	1,693.21	10:5/8" x 11 1/2"	12"
	17.40	3/8" x 10"	400-17.40-3	1,158.29	1,347.55	1,611.38	1,556.70	1,745.96	2,009.79	10:5/8" x 15"	15 1/2"
18"	18.00	1/4" x 7"	400-18.00-1	765.01	915.45	1,183.57	1,113.61	1,264.04	1,532.16	10:5/8" x 11 1/2"	12"
	18.00	1/4" x 10"	400-18.00-1A	1,092.62	1,281.88	1,545.71	1,490.91	1,680.29	1,944.13	10:5/8" x 15"	15 1/2"
	18.00	3/8" x 7"	400-18.00-2	944.64	1,095.10	1,363.19	1,293.23	1,443.68	1,711.78	10:5/8" x 11 1/2"	12"
	18.00	3/8" x 10"	400-18.00-3	1,212.25	1,401.51	1,665.33	1,610.53	1,799.92	2,063.75	10:5/8" x 15"	15 1/2"
	19.50	1/4" x 7"	400-19.50-1	932.25	1,112.85	1,434.52	1,308.42	1,489.01	1,810.67	12:5/8" x 11 1/2"	12"
	19.50	1/4" x 10"	400-19.50-1A	1,144.96	1,372.13	1,688.67	1,574.84	1,802.01	2,118.56	12:5/8" x 15"	15 1/2"
	19.50	3/8" x 7"	400-19.50-2	1,014.38	1,194.99	1,516.65	1,751.75	1,571.14	1,892.81	12:5/8" x 11 1/2"	12"
	19.50	3/8" x 10"	400-19.50-3	1,272.88	1,500.05	1,816.59	1,702.79	1,929.93	2,246.50	12:5/8" x 15"	15 1/2"
20"	20.00	1/4" x 7"	400-20.00-1	932.25	1,112.85	1,434.52	1,308.42	1,489.01	1,810.67	12:5/8" x 11 1/2"	12"
	20.00	1/4" x 10"	400-20.00-1A	1,178.65	1,405.83	1,722.36	1,608.56	1,835.72	2,152.24	12:5/8" x 15"	15 1/2"
	20.00	3/8" x 7"	400-20.00-2	1,037.55	1,218.13	1,539.81	1,413.69	1,594.28	1,915.97	12:5/8" x 11 1/2"	12"
	20.00	3/8" x 10"	400-20.00-3	1,298.78	1,525.94	1,842.49	1,728.66	1,955.84	2,272.37	12:5/8" x 15"	15 1/2"
	21.60	1/4" x 7"	400-21.60-1	1,000.36	1,180.95	1,502.62	1,396.14	1,576.73	1,898.42	12:5/8" x 11 1/2"	12"
	21.60	1/4" x 10"	400-21.60-1A	1,207.23	1,434.41	1,750.94	1,659.58	1,886.75	2,203.29	12:5/8" x 15"	15 1/2"
	21.60	3/8" x 7"	400-21.60-2	1,371.99	1,552.60	1,709.49	1,767.79	1,948.40	2,105.29	12:5/8" x 11 1/2"	12"
	21.60	3/8" x 10"	400-21.60-3	1,715.77	1,942.94	2,259.48	2,168.11	2,395.29	2,711.82	12:5/8" x 15"	15 1/2"
22"	22.00	1/4" x 7"	400-22.00-1	1,000.36	1,180.95	1,502.62	1,396.14	1,576.73	1,898.42	12:5/8" x 11 1/2"	12"
	22.00	1/4" x 10"	400-22.00-1A	1,207.23	1,434.41	1,750.94	1,659.58	1,886.75	2,203.29	12:5/8" x 15"	15 1/2"
	22.00	3/8" x 7"	400-22.00-2	1,371.99	1,552.60	1,709.49	1,767.79	1,948.40	2,105.29	12:5/8" x 11 1/2"	12"
	22.00	3/8" x 10"	400-22.00-3	1,715.77	1,942.94	2,259.48	2,168.11	2,395.29	2,711.82	12:5/8" x 15"	15 1/2"
24"	24.00	1/4" x 7"	400-24.00-1	1,164.49	1,375.16	1,750.48	1,587.35	1,808.35	2,173.33	14:5/8" x 11 1/2"	12"
	24.00	1/4" x 10"	400-24.00-1A	1,314.19	1,579.19	1,948.52	1,797.42	2,062.42	2,431.76	14:5/8" x 15"	15 1/2"
	24.00	3/8" x 7"	400-24.00-2	1,477.31	1,687.99	2,063.28	1,900.15	2,110.82	2,486.15	14:5/8" x 11 1/2"	12"
	24.00	3/8" x 10"	400-24.00-3	1,718.66	1,983.66	2,353.00	2,201.90	2,466.89	2,836.23	14:5/8" x 15"	15 1/2"

Other sizes available. Price on application.

 Large Size Style 400 Couplings are No Cancel, No Return Items.

 WARNING: Flexible couplings do not provide protection against possible pullout of pipe ends in unrestrained conditions.

STYLE 400 STEEL COUPLING (FOR 12" AND LARGER PIPE)



NOM. PIPE SIZE	OUTSIDE DIAMETER O.D.	CENTER RING (A) x (B)	CATALOG NUMBER	LIST PRICE						BOLT NO : SIZE	OVERALL LENGTH (L)
				SHOPCOAT			FUSION EPOXY				
				w/STD B&N	w/304 SS B&N	w/316 SS B&N	w/STD B&N	w/304 SS B&N	w/316 SS B&N		
24"	25.80	1/4" x 7"	400-25.80-1	\$1,214.44	\$1,425.10	\$1,800.44	\$1,777.67	\$1,988.33	\$2,363.66	14: 5/8" x 11 1/2"	12"
	25.80	1/4" x 10"	400-25.80-1A	1,342.91	1,607.93	1,977.24	1,986.58	2,251.59	2,620.91	14: 5/8" x 15"	15 1/2"
	25.80	3/8" x 7"	400-25.80-2	1,588.82	1,799.49	2,174.79	2,152.04	2,362.72	2,738.02	14: 5/8" x 11 1/2"	12"
	25.80	3/8" x 10"	400-25.80-3	1,988.33	2,253.33	2,622.67	2,631.97	2,897.00	3,266.32	14: 5/8" x 15"	15 1/2"
26"	26.00	1/4" x 7"	400-26.00-1	1,264.60	1,475.27	1,850.59	1,827.83	2,038.50	2,413.81	14: 5/8" x 11 1/2"	12"
	26.00	1/4" x 10"	400-26.00-1A	1,370.76	1,635.77	2,005.10	2,014.43	2,279.42	2,648.76	14: 5/8" x 15"	15 1/2"
	26.00	3/8" x 7"	400-26.00-2	1,591.64	1,802.31	2,177.62	2,154.87	2,365.52	2,740.85	14: 5/8" x 11 1/2"	12"
	26.00	3/8" x 10"	400-26.00-3	1,988.33	2,253.33	2,622.67	2,631.97	2,897.00	3,266.32	14: 5/8" x 15"	15 1/2"
28"	28.00	1/4" x 7"	400-28.00-1	1,302.99	1,543.77	1,972.68	1,874.69	2,115.47	2,544.38	16: 5/8" x 11 1/2"	12"
	28.00	1/4" x 10"	400-28.00-1A	1,448.19	1,751.09	2,173.14	2,101.48	2,404.37	2,826.43	16: 5/8" x 15"	15 1/2"
	28.00	3/8" x 7"	400-28.00-2	1,594.54	1,835.32	2,264.23	2,166.26	2,407.03	2,835.95	16: 5/8" x 11 1/2"	12"
	28.00	3/8" x 10"	400-28.00-3	1,991.24	2,294.13	2,716.18	2,644.52	2,947.42	3,369.48	16: 5/8" x 15"	15 1/2"
30"	30.00	1/4" x 7"	400-30.00-1	1,360.30	1,601.07	2,029.99	1,940.56	2,181.33	2,610.26	16: 5/8" x 11 1/2"	12"
	30.00	1/4" x 10"	400-30.00-1A	1,518.83	1,821.73	2,243.78	2,181.96	2,484.86	2,977.66	16: 5/8" x 15"	15 1/2"
	30.00	3/8" x 7"	400-30.00-2	1,597.39	1,838.16	2,267.09	2,177.64	2,418.41	2,847.34	16: 5/8" x 11 1/2"	12"
	30.00	3/8" x 10"	400-30.00-3	1,994.04	2,296.94	2,719.00	2,657.19	2,960.07	3,382.13	16: 5/8" x 15"	15 1/2"
	32.00	1/4" x 7"	400-32.00-1	1,407.06	1,647.85	2,076.75	1,995.20	2,235.98	2,664.89	16: 5/8" x 11 1/2"	12"
	32.00	1/4" x 10"	400-32.00-1A	1,571.28	1,874.18	2,296.23	2,252.71	2,555.61	2,977.67	16: 5/8" x 15"	15 1/2"
	32.00	3/8" x 7"	400-32.00-2	1,600.24	1,841.02	2,269.93	2,188.37	2,429.15	2,858.07	16: 5/8" x 11 1/2"	12"
	32.00	3/8" x 10"	400-32.00-3	1,996.93	2,299.82	2,721.87	2,678.36	2,981.25	3,403.30	16: 5/8" x 15"	15 1/2"
34"	34.00	1/4" x 7"	400-34.00-1	1,471.45	1,742.29	2,224.86	2,069.22	2,340.06	2,822.63	18: 5/8" x 11 1/2"	12"
	34.00	1/4" x 10"	400-34.00-1A	1,643.55	1,984.31	2,459.12	2,326.71	2,667.49	3,142.28	18: 5/8" x 15"	15 1/2"
	34.00	3/8" x 7"	400-34.00-2	1,619.75	1,890.59	2,373.16	2,217.54	2,488.38	2,970.94	18: 5/8" x 11 1/2"	12"
	34.00	3/8" x 10"	400-34.00-3	1,999.75	2,340.51	2,815.30	2,682.92	3,023.67	3,498.47	18: 5/8" x 15"	15 1/2"
36"	36.00	1/4" x 7"	400-36.00-1	1,518.25	1,789.08	2,271.65	2,124.98	2,395.82	2,877.97	18: 5/8" x 11 1/2"	12"
	36.00	1/4" x 10"	400-36.00-1A	1,697.92	2,038.68	2,513.50	2,391.32	2,732.08	3,206.89	18: 5/8" x 15"	15 1/2"
	36.00	3/8" x 7"	400-36.00-2	1,676.04	1,946.88	2,429.44	2,282.76	2,553.61	3,036.17	18: 5/8" x 11 1/2"	12"
	36.00	3/8" x 10"	400-36.00-3	2,002.64	2,343.41	2,818.21	2,696.03	3,036.80	3,511.60	18: 5/8" x 15"	15 1/2"
	38.30	1/4" x 7"	400-38.30-1	1,565.46	1,836.28	2,318.86	2,181.29	2,452.12	2,934.70	18: 5/8" x 11 1/2"	12"
	38.30	1/4" x 10"	400-38.30-1A	1,754.17	2,094.95	2,569.74	2,457.99	2,798.75	3,273.55	18: 5/8" x 15"	15 1/2"
	38.30	3/8" x 7"	400-38.30-2	1,731.95	2,002.77	2,485.35	2,347.80	2,618.65	3,101.19	18: 5/8" x 11 1/2"	12"
	38.30	3/8" x 10"	400-38.30-3	2,005.54	2,346.30	2,821.11	2,709.36	3,050.11	3,524.92	18: 5/8" x 15"	15 1/2"
42"	42.00	1/4" x 7"	400-42.00-1	2,014.75	2,344.30	2,851.87	2,639.78	2,969.35	3,476.91	20: 5/8" x 11 1/2"	12"
	42.00	1/4" x 10"	400-42.00-1A	2,250.42	2,635.82	3,156.59	2,964.73	3,350.12	3,870.92	20: 5/8" x 15"	15 1/2"
	42.00	3/8" x 7"	400-42.00-2	2,193.98	2,523.53	3,031.10	2,819.53	3,148.57	3,656.65	20: 5/8" x 11 1/2"	12"
	42.00	3/8" x 10"	400-42.00-3	2,490.29	2,875.68	3,396.48	3,204.60	3,589.98	4,110.79	20: 5/8" x 15"	15 1/2"
	44.50	3/8" x 7"	400-44.50-2	2,265.18	2,594.74	3,102.29	2,899.67	3,229.23	3,736.78	20: 5/8" x 11 1/2"	12"
	44.50	3/8" x 10"	400-44.50-3	2,573.17	2,958.55	3,479.36	3,298.19	3,683.60	4,204.38	20: 5/8" x 15"	15 1/2"
48"	48.00	3/8" x 7"	400-48.00-2	2,425.93	2,788.44	3,346.76	3,069.89	3,432.42	3,990.71	22: 5/8" x 11 1/2"	12"
	48.00	3/8" x 10"	400-48.00-3	2,762.10	3,185.99	3,758.90	3,497.97	3,921.87	4,494.78	22: 5/8" x 15"	15 1/2"
	50.80	3/8" x 7"	400-50.80-2	3,091.63	3,454.14	4,012.46	3,745.20	4,107.73	4,666.03	22: 5/8" x 11 1/2"	12"
	50.80	3/8" x 10"	400-50.80-3	3,479.40	3,903.28	4,476.20	4,226.38	4,650.26	5,223.17	22: 5/8" x 15"	15 1/2"

Other sizes available. Price on application.

Large Size Style 400 Couplings are No Cancel, No Return Items.

WARNING: Flexible couplings do not provide protection against possible pullout of pipe ends in unrestrained conditions.



GENERAL INFORMATION FOR 400 SERIES COUPLINGS

Engineering data, such as end ring design and gasket size, may differ according to specific need and pressures. The table below is for general submittal information only for the diameters listed and the working pressures indicated. Requirements not shown in the following table will be engineered specifically for your needs upon request.

NOM. PIPE SIZE	OUTSIDE DIAMETER O.D.	CENTER RING (A) x (B)	MAX PSI WORK PRESS.	OVERALL DIAMETER (D)	LENGTH OVERALL (L)	APPROX. WEIGHT (lbs.)
12"	13.20	1/4" x 7"	390	17.5	12"	65 #
	13.20	1/4" x 10"	390		15 1/2"	77 #
	13.20	3/8" x 7"	390		12"	76 #
	13.20	3/8" x 10"	390		15 1/2"	92 #
14"	14.00	1/4" x 7"	368	18.3	12"	68 #
	14.00	1/4" x 10"	368		15 1/2"	80 #
	14.00	3/8" x 7"	368		12"	79 #
	14.00	3/8" x 10"	368		15 1/2"	96 #
	15.30	1/4" x 7"	423		19.6	12"	75 #
15.30	1/4" x 10"	423	15 1/2"	88 #		
15.30	3/8" x 7"	423	12"	87 #		
15.30	3/8" x 10"	423	15 1/2"	106 #		
16"	16.00	1/4" x 7"	405	20.3	12"	77 #
	16.00	1/4" x 10"	405		15 1/2"	91 #
	16.00	3/8" x 7"	405		12"	90 #
	16.00	3/8" x 10"	405		15 1/2"	110 #
	17.40	1/4" x 7"	374	21.7	12"	82 #
	17.40	1/4" x 10"	374		15 1/2"	97 #
	17.40	3/8" x 7"	374		12"	96 #
17.40	3/8" x 10"	374	15 1/2"	117 #		
18"	18.00	1/4" x 7"	362	22.3	12"	84 #
	18.00	1/4" x 10"	362		15 1/2"	100 #
	18.00	3/8" x 7"	362		12"	99 #
	18.00	3/8" x 10"	362	15 1/2"	121 #	
	19.50	1/4" x 7"	402	23.8	12"	92 #
	19.50	1/4" x 10"	402		15 1/2"	109 #
19.50	3/8" x 7"	402	12"		108 #	
19.50	3/8" x 10"	402	15 1/2"		131 #	
20"	20.00	1/4" x 7"	392	24.3	12"	94 #
	20.00	1/4" x 10"	392		15 1/2"	111 #
	20.00	3/8" x 7"	392		12"	110 #
	20.00	3/8" x 10"	392		15 1/2"	134 #
	21.60	1/4" x 7"	364	25.9	12"	99 #
	21.60	1/4" x 10"	364		15 1/2"	118 #
	21.60	3/8" x 7"	364		12"	117 #
21.60	3/8" x 10"	364	15 1/2"		143 #	
22"	22.00	1/4" x 7"	357	26.3	12"	101 #
	22.00	1/4" x 10"	357		15 1/2"	120 #
	22.00	3/8" x 7"	357		12"	118 #
	22.00	3/8" x 10"	357		15 1/2"	145 #
	24.00	1/4" x 7"	333		28.3	12"	110 #
24.00	1/4" x 10"	333	15 1/2"	131 #		
24.00	3/8" x 7"	386	12"	129 #		
24.00	3/8" x 10"	386	15 1/2"	158 #		
24"	25.80	1/4" x 7"	310	30.1	12"	117 #
	25.80	1/4" x 10"	310		15 1/2"	138 #
	25.80	3/8" x 7"	360		12"	137 #
	25.80	3/8" x 10"	360		15 1/2"	168 #

Note: See page 3-25 for options and application data.

NOM. PIPE SIZE	OUTSIDE DIAMETER O.D.	CENTER RING (A) x (B)	MAX PSI WORK PRESS.	OVERALL DIAMETER (D)	LENGTH OVERALL (L)	APPROX. WEIGHT (lbs.)
26"	26.00	1/4" x 7"	307	30.40	12"	117 #
	26.00	1/4" x 10"	307		15 1/2"	139 #
	26.00	3/8" x 7"	357		12"	138 #
	26.00	3/8" x 10"	357		15 1/2"	169 #
28"	28.00	1/4" x 7"	285	32.40	12"	127 #
	28.00	1/4" x 10"	285		15 1/2"	151 #
	28.00	3/8" x 7"	380		12"	149 #
	28.00	3/8" x 10"	380		15 1/2"	182 #
30"	30.00	1/4" x 7"	266	34.40	12"	134 #
	30.00	1/4" x 10"	266		15 1/2"	159 #
	30.00	3/8" x 7"	354		12"	158 #
	30.00	3/8" x 10"	354		15 1/2"	193 #
	32.00	1/4" x 7"	250	36.40	12"	141 #
	32.00	1/4" x 10"	250		15 1/2"	168 #
32.00	3/8" x 7"	333	12"		166 #	
32.00	3/8" x 10"	333	15 1/2"		204 #	
34"	34.00	1/4" x 7"	235	38.40	12"	148 #
	34.00	1/4" x 10"	235		15 1/2"	176 #
	34.00	3/8" x 7"	311		12"	175 #
	34.00	3/8" x 10"	311		15 1/2"	215 #
36"	36.00	1/4" x 7"	222	40.40	12"	158 #
	36.00	1/4" x 10"	222		15 1/2"	187 #
	36.00	3/8" x 7"	333		12"	186 #
	36.00	3/8" x 10"	333		15 1/2"	228 #
	38.30	1/4" x 7"	208	42.70	12"	166 #
	38.30	1/4" x 10"	208		15 1/2"	197 #
38.30	3/8" x 7"	313	12"		196 #	
38.30	3/8" x 10"	313	15 1/2"		240 #	
42"	42.00	1/4" x 7"	190	46.90	12"	223 #
	42.00	1/4" x 10"	190		15 1/2"	257 #
	42.00	3/8" x 7"	288		12"	256 #
	42.00	3/8" x 10"	288		15 1/2"	305 #
	44.50	3/8" x 7"	269	49.40	12"	269 #
	44.50	3/8" x 10"	269		15 1/2"	320 #
48"	48.00	3/8" x 7"	250	52.90	12"	290 #
	48.00	3/8" x 10"	250		15 1/2"	345 #
	50.80	3/8" x 7"	236	55.70	12"	304 #
	50.80	3/8" x 10"	236		15 1/2"	362 #
54"	54.00	3/8" x 10"	222	58.90	15 1/2"	385 #
54"	54.00	1/2" x 10"	270		15 1/2"	446 #
60"	60.00	3/8" x 10"	200	64.90	15 1/2"	428 #
	60.00	1/2" x 10"	266		15 1/2"	495 #
66"	66.00	3/8" x 10"	181	70.90	15 1/2"	468 #
	66.00	1/2" x 10"	242		15 1/2"	542 #
72"	72.00	3/8" x 10"	167	77.0	15 1/2"	508 #
	72.00	1/2" x 10"	222		15 1/2"	588 #
96"	96.00	1/2" x 10"	166	101.0	15 1/2"	954 #

Other sizes available. Price on application.

STYLE RC400 STEEL REDUCING COUPLING



MATERIAL SPECIFICATIONS

CENTER RINGS: Beveled, flared or formed carbon steel with minimum yield of 30,000 PSI.

END RINGS: Contoured rolled mill section carbon steel. End ring thickness determined by pipe O.D. and pressure rating.

PAINT: Romac shopcoat for corrosion protection in transit.

GASKETS: Compounded for water and sewer service. Meets the requirements for AWWA C219 and ASTM D2000. Other compounds available on request.

BOLTS AND NUTS: Trackhead bolts, heavy hex nuts, 5/8" UNC rolled thread, high strength, low alloy corrosion-resistant steel per AWWA C111. Threads protected with plastic caps on each bolt end.

SPECIALS: For lengths, thicknesses, linings, coatings, diameters and pressure ratings not shown, prices and availability on request (exact O.D.needed).

OPTIONS: For other options and specifications, see page 3-25 & 3-26.

USE: To flexibly couple two pipes of different nominal size. When the specific O.D.s are not known, limited ranges can be accommodated; contact factory for assistance.



**MEETS
AWWA C219**



NSF61 certified upon request.

Certified to NSF/ANSI 61 & 372

Note: The RC400 steel reducing coupling is available in a wide variety of sizes. The sample sizes shown below are for steel x cast iron ODs and designed for 150 psi. Contact Romac Industries for sizes not shown. Please provide the pipe OD, pressure rating, and any other requirements.

NOM. PIPE SIZE	OUTSIDE DIAMETER O.D.	CENTER RING (A) x (B)	CATALOG NUMBER	LIST PRICE						APPROX. WEIGHT (lbs)
				SHOPCOAT			FUSION EPOXY			
				w/STD B&N	w/304 SS B&N	w/316 SS B&N	w/STD B&N	w/304 SS B&N	w/316 SS B&N	
14"	15.30 x 14.00	1/4" x 10"	RC400-15.30 x 14.00	\$1,621.22	\$1,821.42	\$2,074.32	\$1,975.74	\$2,175.93	\$2,428.84	80 #
	15.65 x 14.00	1/4" x 12"	RC400-15.65 x 14.00	1,899.07	2,148.51	2,354.85	2,253.58	2,503.04	2,336.38	88 #
16"	17.40 x 16.00	1/4" x 10"	RC400-17.40 x 16.00	1,675.58	1,868.28	2,128.67	2,073.99	2,266.69	2,527.08	89 #
	17.80 x 16.00	1/4" x 12"	RC400-17.80 x 16.00	2,071.14	2,348.14	2,577.55	2,469.57	2,746.73	2,975.98	97 #
18"x16"	18.00 x 17.40	1/4" x 10"	RC400-18.00 x 17.40	1,701.76	1,894.46	1,954.96	2,100.19	2,292.89	2,553.29	91 #
18"	19.50 x 18.00	1/4" x 10"	RC400-19.50 x 18.00	2,262.61	2,493.86	2,806.32	2,692.49	2,923.75	3,236.21	107 #
	19.92 x 18.00	1/4" x 12"	RC400-19.92 x 18.00	2,296.09	2,600.96	2,853.13	2,725.97	3,030.84	3,283.01	110 #
20"x18"	20.00 x 19.50	1/4" x 10"	RC400-20.00 x 19.50	1,790.55	2,021.81	2,334.27	2,220.45	2,451.69	2,764.15	102 #
20"	21.60 x 20.00	1/4" x 12"	RC400-21.60 x 20.00	2,480.90	2,813.45	3,088.60	2,933.23	3,265.80	3,540.93	118 #
	22.06 x 20.00	1/4" x 12"	RC400-22.06 x 20.00	2,510.36	2,842.93	3,118.06	2,962.70	3,295.27	3,570.41	121 #
24"	25.80 x 24.00	1/4" x 12"	RC400-25.80 x 24.00	2,893.14	3,281.17	3,602.12	3,536.78	3,924.81	4,245.78	140 #
	26.32 x 24.00	1/4" x 12"	RC400-26.32 x 24.00	2,934.50	3,322.54	3,643.49	3,578.16	3,966.19	4,287.13	147 #
30"	32.00 x 30.00	1/4" x 12"	RC400-32.00 x 30.00	3,497.55	3,940.99	4,307.81	4,178.95	4,622.38	4,989.22	174 #
36"	38.30 x 36.00	1/4" x 12"	RC400-38.30 x 36.00	4,076.65	4,575.53	4,988.18	4,783.22	5,282.11	5,694.76	211 #
42"	44.50 x 42.00	1/4" x 12"	RC400-44.50 x 42.00	4,972.85	5,527.15	5,985.67	5,730.62	6,284.92	6,743.44	288 #
48"	50.80 x 48.00	3/8" x 12"	RC400-50.80 x 48.00	5,721.08	6,330.82	6,784.54	6,586.11	7,195.84	7,649.59	354 #

Other sizes available. Price on application.

No Cancel, No Return Item.

CAUTION: Couplings with a step in the center ring have the potential for migrating along the pipe, therefore some sort of restraint should be used.

WARNING: Flexible couplings do not provide protection against possible pullout of pipe ends in unrestrained conditions.

COUPLINGS



STYLE TC400 STEEL TRANSITION COUPLING

MATERIAL SPECIFICATIONS

CENTER RINGS: Beveled, flared or formed carbon steel with minimum yield of 30,000 PSI.

END RINGS: Contoured rolled mill section carbon steel. End ring thickness determined by pipe O.D. and pressure rating.

GASKETS: Compounded for water and sewer service. Meets the requirements of AWWA C219 and ASTM D2000. Other compounds available on request.

COATING: Romac shopcoat for corrosion protection in transit.

BOLTS AND NUTS: Trackhead bolts, heavy hex nuts, 5/8" UNC rolled thread, high strength, low alloy corrosion-resistant steel per AWWA C111. Threads protected with plastic caps on bolt ends.

SPECIALS: Additional center ring lengths and thicknesses, linings, coatings, and diameters available. Prices and availability on request.

OPTION: For other options and specifications, see page 3-25 & 3-26.

USE: To connect pipes of different known outside diameters within the same nominal size. When the specific O.D.s are not known, limited ranges can be accommodated. The maximum pipe O.D. difference is 1.00".



Romac offers three transition gaskets. Each gasket will accommodate a specific range below the maximum pipe diameter for which the coupling was designed. Each gasket is marked with its portion of the range. You measure the pipe and use the gasket that has the pipe OD within its range and discard the other TC gaskets. Note: TC gaskets can be used in most Romac's 400 series couplings.

EXAMPLE:
14" AC x 14" DIP - TC400 (15.30 - 16.30) x (15.30 - 15.69)

GASKET STYLE	PIPE O.D. RANGE	GASKET RANGE
TC I	0.00" - 0.22"	0.22"
TC II	0.23" - 0.60"	0.37"
TC III	0.61" - 1.00"	0.39"



NSF61 certified upon request.

**MEETS
AWWA C219**

STYLE TC400 STEEL TRANSITION COUPLINGS FOR COMMON APPLICATIONS

TC400 COUPLINGS CAN BE MANUFACTURED WITH RANGES ON BOTH ENDS.
FOR SIZES AND RANGES NOT SHOWN, CONTACT ROMAC CUSTOMER SERVICE.

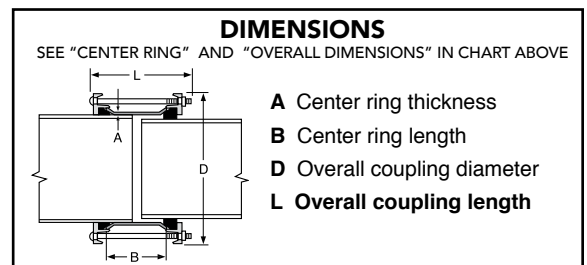
NOM. PIPE SIZE	PIPE SIZES (in.)			CENTER RING (A) x (B)	OVERALL DIMENSIONS (D) x (L)	BOLTS NO : SIZE	LIST PRICE	APPROX. WEIGHT (lbs.)
	ONE END	BY	OTHER END (RANGE)					
12"	TC400 - 13.20	x	12.60 - 12.97	1/4" x 7" ¹	17.60" x 12"	8: 5/8" x 11 1/2"	POA	67 #
	TC400 - 13.50	x	13.06 - 13.50	1/4" x 7" ¹	17.90" x 12"	8: 5/8" x 11 1/2"		67 #
14"	TC400 - 15.65	x	15.05 - 15.42	1/4" x 7" ¹	20.05" x 12"	10: 5/8" x 11 1/2"		77 #
16"	TC400 - 17.80	x	17.20 - 17.57	1/4" x 7" ¹	22.20" x 12"	10: 5/8" x 11 1/2"		84 #
	TC400 - 18.50	x	17.90 - 18.27	1/4" x 7" ¹	22.90" x 12"	10: 5/8" x 11 1/2"		92 #
18"	TC400 - 19.92	x	19.32 - 19.69	1/4" x 7" ¹	24.32" x 12"	12: 5/8" x 11 1/2"		100 #
	TC400 - 22.05	x	21.45 - 21.82	1/4" x 7" ¹	26.46" x 12"	12: 5/8" x 11 1/2"		104 #
20"	TC400 - 26.32	x	25.72 - 26.09	1/4" x 7" ¹	30.72" x 12"	14: 5/8" x 11 1/2"		122 #

¹ 10" center ring also available.

Other sizes available. Price on application.

For pipes smaller than 12", please refer to Romac Style "501" straight and transition couplings, page 3-2 in the catalog. For sizes larger than 24", consult your Romac representative.

WARNING: Flexible couplings do not provide protection against possible pullout of pipe ends in unrestrained conditions.
NO CANCEL, NO RETURN ITEM.



TO ORDER: Sizes shown above are for common connections only. Give exact pipe O.D.s when ordering.

EXAMPLE: One end: 17.80 O.D. Other end: 17.40 O.D. Order **TC400 - 17.80 x 17.40**

NOTE: Example is for specific pipe O.D.s. Where a range is required, contact your Romac representative for assistance.

STYLE IC400

STEEL INSULATING COUPLING



MATERIAL SPECIFICATIONS

CENTER RINGS: Beveled, flared or formed carbon steel with minimum yield of 30,000 PSI.

END RINGS: Contoured rolled mill section carbon steel. End ring thickness determined by pipe O.D. and pressure rating.

GASKETS: Compounded for water and sewer service. Meets the requirements for AWWA C219 and ASTM D2000. Other compounds available on request.

INSULATING BOOT: Ethylene Propylene Diene Methylen (EPDM) compounded for water and sewer service and insulating properties. One boot provided as standard.

PAINT: Romac shopcoat for corrosion protection in transit.

BOLTS AND NUTS: Trackhead bolts, heavy hex nuts, 5/8" UNC rolled thread, high strength, low alloy corrosion re-

sistant steel per AWWA C111. Threads protected with plastic caps on each bolt end.

SPECIALS: Center ring lengths, thicknesses not shown, linings and coatings desired, diameters and pressure ratings not shown. Prices and availability on request.

OPTIONS: For other options and specifications, see page 3-25 & 3-26.

USE: Romac insulating couplings effectively stop electrolytic action by isolating one pipe from the other by means of an insulating boot.



MEETS AWWA C219

NOM. PIPE SIZE	O.D.	CATALOG NUMBER	CTR. RING THICKNESS & LENGTH	5 1/2" BOOT ONLY LIST PRICE	LIST PRICE						APPROX. WEIGHT (lbs.)
					SHOPCOAT			FUSION EPOXY			
					w/STD B&N	w/304 SS B&N	w/316 SS B&N	w/STD B&N	w/304 SS B&N	w/316 SS B&N	
14"	14.00	IC400-14.00-1	1/4" x 7" ¹	\$175.11 ²	\$775.97	\$896.31	\$1,110.82	\$1,040.64	\$1,161.03	\$1,375.35	75 #
		IC400-14.00-2	3/8" x 7" ¹	175.11 ²	961.79	1,082.13	1,296.62	1,226.46	1,346.80	1,561.30	87 #
	15.30	IC400-15.30-1	1/4" x 7" ¹	179.71 ²	913.69	1,064.14	1,332.24	1,223.88	1,374.32	1,642.44	83 #
		IC400-15.30-2	3/8" x 7" ¹	179.71 ²	1,020.67	1,171.12	1,439.22	1,330.85	1,481.30	1,749.41	95 #
16"	16.00	IC400-16.00-1	1/4" x 7" ¹	187.95 ²	921.93	1,072.39	1,371.52	1,232.12	1,382.57	1,650.68	85 #
		IC400-16.00-2	3/8" x 7" ¹	187.95 ²	1,028.92	1,179.36	1,683.00	1,339.10	1,489.54	1,757.65	98 #
	17.40	IC400-17.40-1	1/4" x 7" ¹	194.10 ²	959.11	1,109.56	1,377.67	1,307.71	1,458.67	1,726.26	92 #
		IC400-17.40-2	3/8" x 7" ¹	194.10 ²	1,120.16	1,270.61	1,557.30	1,619.18	1,770.15	2,037.74	107 #
18"	18.00	IC400-18.00-1	1/4" x 7" ¹	200.81 ²	965.82	1,116.27	1,635.33	1,314.42	1,464.86	1,732.97	96 #
		IC400-18.00-2	3/8" x 7" ¹	200.81 ²	1,145.46	1,295.91	1,898.07	1,494.05	1,644.49	1,912.60	111 #
	19.50	IC400-19.50-1	1/4" x 7" ¹	208.33 ²	1,140.58	1,321.18	1,642.85	1,516.75	1,697.34	2,019.00	105 #
		IC400-19.50-2	3/8" x 7" ¹	208.33 ²	1,222.71	1,403.33	1,905.59	1,960.08	1,779.47	2,281.61	122 #
20"	20.00	IC400-20.00-1	1/4" x 7" ¹	213.65 ²	1,145.91	1,326.51	1,648.17	1,522.07	1,702.66	2,024.33	110 #
		IC400-20.00-2	3/8" x 7" ¹	213.65 ²	1,251.20	1,431.78	1,753.47	1,627.34	1,807.93	2,129.62	127 #
	21.60	IC400-21.60-1	1/4" x 7" ¹	260.39 ²	1,260.75	1,441.34	1,763.01	1,656.53	1,837.11	2,158.81	118 #
		IC400-21.60-2	3/8" x 7" ¹	260.39 ²	1,632.38	1,812.99	2,134.66	2,028.18	2,208.79	2,530.46	135 #
24"	24.00	IC400-24.00-1	1/4" x 7" ¹	289.29 ²	1,453.78	1,664.45	2,039.76	1,876.62	2,097.64	2,462.62	130 #
		IC400-24.00-2	3/8" x 7" ¹	289.29 ²	1,766.59	1,977.28	2,352.57	2,189.44	2,400.10	2,775.43	149 #
	25.80	IC400-25.80-1	1/4" x 7" ¹	310.96 ²	1,525.40	1,736.06	2,111.39	2,088.63	2,299.29	2,674.61	140 #
		IC400-25.80-2	3/8" x 7" ¹	310.96 ²	1,899.78	2,110.45	2,485.75	2,463.00	2,673.68	3,048.97	160 #

¹ Style "IC400" also available with 10" long center rings – POA.

² IC Boots can only be used with IC Couplings. IC Couplings have been sized to accommodate IC Boot.

Other sizes available. Price on application.

Note: For insulating requirements in O.D.s not shown above, please refer to Romac's IC501 (see Page 3-16) or contact factory.

TO ORDER: Determine pipe O.D. to be coupled.

EXAMPLE: To couple 24" O.D. steel pipe with center ring dimensions of 1/4" x 7" and insulating boot, order **IC400 - 24.00 - 1**

10" CENTER RING = 12" INSULATING BOOT



No Cancel, No Return Item.



WARNING: Flexible couplings do not provide protection against possible pullout of pipe ends in unrestrained conditions.

COUPLINGS



OPTIONS FOR ROMAC STYLE 400 FABRICATED STEEL AND 501 PRODUCTS

Note the applicable options as they might apply to the desired coupling(s) when required.

FASTENERS

Standard: High strength low alloy steel.
All nuts are heavy hex.

OPTIONAL:

- Zinc plated steel
- Type 316 stainless steel ²
- Hot dip galvanized steel ¹
- Type 304 stainless steel

MISCELLANEOUS OPTIONS

- Insulating Boots (please specify if one or two boots are required) EPDM only.

Note: Material to which any lining or coating is applied will be prepared per the manufacturer's instructions, as specified by the engineer, or per the applicable AWWA Standard.

¹ Hot dip galvanizing is not recommended because of thread interference.

² Threaded rod and nuts may be supplied for this item.

COATINGS AND LININGS ³

Standard: Romac shopcoat will be applied to entire product unless specified.

OPTIONAL: Unless specified, entire product will be lined and coated with optional coating. Please note if lining and coating materials will be different.

- ROMACOTE Fusion Bonded Epoxy
- Fusion Bonded Epoxy per AWWA C213
- Liquid Epoxy per AWWA C210
- Other (Please supply all required specifications, such as material type and dry film thickness)

³ Coatings are applied to O.D. of product, linings are applied to parts of product that will be in contact with line content.

SPECIAL EPOXY AND FUSION BONDED EPOXY INFORMATION: AWWA STANDARDS FOR . . .

LININGS/COATINGS: ROMACOTE Fusion Bonded Epoxy may be applied to most products Romac manufactures. The epoxy powder used will be compatible with potable water use and applied following the powder manufacturer's instructions. Unless otherwise specified, the thickness will be approximately 8-12 mils.

FUSION BONDED PROCESS: Fusion bonded epoxy coatings are heat activated, chemically cured coating systems. The application method may be Fluidized Bed, Electrostatic Spray or Air Spray to preheated metal surfaces. The coating may be applied to non-heated metal using the Electrostatic Spray method, and post-cured or heated to achieve the fusion bonded coating.

AWWA-C213-15: This standard covers the specification and application of Fusion Bonded Epoxy systems to mechanical couplings, as well as steel water pipe (includes holiday testing). Sec. 4 of this standard applies to mechanical couplings. Minimum thickness is 12 mils on the exterior and 12 mils on the interior. Maximum thickness is per manufacturer's recommendations. Not a high build coating. Romac Customer Service must be informed if your specification is for adherence to this standard.

AWWA-C210-15: This standard covers the specifications and application of cold applied Liquid Epoxy linings and coatings. Minimum thickness is 16 mils, maximum is per manufacturer's recommendations. Special primers are required in most instances. Romac Customer Service must be informed if your specification is for adherence to this standard.

INDENTS FOR COATINGS: 8" to 10" indent for each pipe end covers most diameters. Special circumstances may require allowing for more "hold back" on the coatings.

Note: Romac reserves the right to refuse to apply a lining or coating that may be inconsistent with our product or good environmental practices. Extraordinary field conditions may arise where the above restrictions are not realistic.

Contact your Romac representative to obtain an engineering evaluation of the specific condition.

OPTIONS FOR ROMAC STYLE 400 FABRICATED STEEL AND 501 PRODUCTS



RECOMMENDED LAYING/ANGULAR DEFLECTION WHEN USING FLEXIBLE COUPLINGS (IN DEGREES)

NOMINAL PIPE SIZE	SLEEVE LENGTH			
	5"	7"	10"	12", 14" & 16"***
>2" TO ≤12"	4	4	4	4
>12" TO ≤18"	2.5	4	4	4
>18" TO ≤24"	*	4	4	4
>24" TO ≤36"	*	3	3	3
>36" TO ≤48"	*	2	2.5	2.5
>48" TO ≤72"	*	1.5	2	2
>72" TO ≤120"	*	*	1	1

* Pipe size/sleeve length combinations not listed in this table should not be used except by special agreement between the manufacturer and purchaser.

** 501 couplings require a min of 3.25" pipe insertion to achieve stated deflection. 400 couplings require a min of 4.0" pipe insertion to achieve stated deflection. TC400 couplings require a min of 4.25" pipe insertion to achieve stated deflection. Pipe insertion is measured from the plain end of the pipe to the backside of the end ring.

The maximum allowable deflection should only be used when the pipes will not move in service.

Deflection (in degrees) is PER COUPLING. Use one half of these values for Flanged Coupling Adapters.

Caution should be exercised when designing any deflection greater than this table shows.

EXPANSION AND CONTRACTION: 400 & 501 couplings will safely accommodate 3/8" in longitudinal movement. Flanged Coupling Adapters will safely accommodate 3/16" in longitudinal movement.

RECOMMENDED GAP BETWEEN PIPE ENDS

CENTER RING LENGTH	STRAIGHT-RUN PIPE*	DEFLECTED JOINTS**	MAX. PERMISSIBLE IN-SERVICE CENTERLINE GAP*
5"	0.5"	1"	2"
7"	1"	1.5"	3"
10"	1"	2.25"	4.5"

* Recommended gap between pipe ends that is not expected or able to deflect greater than 25% of stated deflection values.

** Recommended gap between pipe ends to achieve maximum deflection. The maximum allowable deflection should only be used when the pipes will not move in service.

PIPE END TOLERANCE SPECIFICATIONS

NOMINAL PIPE SIZE	OD TOLERANCE		ROUNDNESS MIN/MAX ¹
	+	-	
>1/2" TO ≤16"	0.06"	0.06"	1/8"
>16" TO ≤24"	0.08"	0.08"	1/8"
>24" TO ≤42"	0.10"	0.10"	1/8"
>42" TO ≤120"	0.12"	0.06"	1/8"

¹ Out-of-roundness conditions are required to be correctable so that the difference between the minimum and maximum diameters is not greater than this dimension.



WARNING: Flexible couplings do not provide protection against possible pullout of pipe ends in unrestrained conditions.



FLANGED COUPLINGS



FCA501
FLANGE COUPLING ADAPTER
PAGE 4-2 TO PAGE 4-4



FC400
FABRICATED STEEL
FLANGE COUPLING ADAPTER
PAGE 4-5



RFCA
RESTRAINED FLANGE COUPLING
ADAPTER FOR STEEL AND DI PIPE
PAGE 4-6



RFCA - PVC
RESTRAINED FLANGE COUPLING
ADAPTER FOR PVC PIPE
PAGE 4-7



DJ400
DISMANTLING JOINT WITH TIE-RODS
PAGE 4-8



DJ405
DISMANTLING JOINT WITH ROMAGRIP
PAGE 4-9



FCG
FLANGE COUPLING ADAPTER
PAGE 4-10



ECF400
EQUIPMENT CONNECTION FITTING
PAGE 4-11



EJ400
EXPANSION JOINT
PAGE 4-13 TO PAGE 4-15



ALPHA FC
WIDE RANGE RESTRAINED
FLANGED COUPLING
PAGE 1-8

STYLE FCA501 FLANGED COUPLING ADAPTER



MATERIAL SPECIFICATIONS

FLANGED BODY: Ductile iron per ASTM A 536, Grade 65-45-12. Flange meets the dimensional requirements of ANSI Class 125 and 150 bolt circles. Yellow shopcoat. Other flange coatings available on request.

END RING: Ductile iron per ASTM A 536, Grade 65-45-12. Color coded RED for O.D. and Std. Stl., BLACK for cast iron and YELLOW for A/C.

GASKETS: SBR per ASTM D 2000 MBA 710, compounded for water and sewer service. Flange O-ring gasket is NBR rubber. Other compounds available on request.

BOLTS AND NUTS: Trackhead bolts, heavy hex nuts, UNC high strength, low alloy, corrosion-resistant steel per AWWA C111. The 10" and 12" flange bolts and nuts are mild steel, electro-galvanized with a hex head. Other materials or special coatings available on request.

ANCHOR PINS: AISI 12L14 low carbon steel, minimum of 60,000 psi yield strength. Rated for 175 psi. Stainless steel pins (316 only) are available on request. Stainless steel pins require double the quantity. Anchor pins are for use on cast iron, ductile iron and steel pipe only.

OPTIONS: For other options and specifications, see page 3-25 & 3-26. For 14" and above, see FC400 on Page 4-5.

FCA501 SHOWN WITHOUT FLANGE BOLTS



MEETS AWWA C219



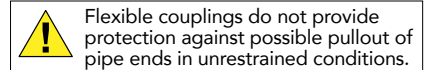
NSF61 certified upon request.



NOM. PIPE SIZE	COLOR CODE	GASKET RANGE	APPROXIMATE USE	CATALOG NUMBER	LIST PRICE			ADD-ON APPROX.			
					COMPLETE	COMPLETE W/ ANCHOR PINS ^③	COMPLETE W/ 304 SS BOLTS & NUTS	COMPLETE W/ 316 SS BOLTS & NUTS	EPOXY L&C	WEIGHT (lbs.)	
3"	RED	3.00 - 3.29	Copper, OD Steel	FCA501 - 3.29	\$212.97	\$288.83	\$243.78	\$286.19	\$33.72	16 #	
		3.30 - 3.51	Std. Stl & PVC	FCA501 - 3.51							
		3.50 - 4.00	Std. Stl, CI/DI & PVC	FCA501 - 4.00							
4" x 3" FLANGE	RED	3.80 - 4.05	O.D. Stl. C.I. & O.D. Stl.	FCA501 - 4.05-3	265.40	NA	345.48	369.15	42.16	19 #	
		4.06 - 4.31	Riv. Stl.	FCA501 - 4.31-3							
		4.50 - 4.70	Std. Stl. & PVC	FCA501 - 4.70-3							
	4.50 - 4.81	Std. Stl., D.I. & PVC	FCA501 - 4.81-3								
	BLACK	4.80 - 5.00	Cast Iron & PVC	FCA501 - 5.00-3							
		4.74 - 5.10	C.I. & A/C M.E.	FCA501 - 5.10-3							
5.11 - 5.30		A/C R.B.	FCA501 - 5.30-3								
4"	RED	3.80 - 4.05	O.D.	FCA501 - 4.05	280.61	359.84	353.09	405.70	42.16	18 #	
		4.06 - 4.31	Riv. Stl.	FCA501 - 4.31							
		4.21 - 4.49	A/C	FCA501 - 4.49							
	4.50 - 4.70	Std. Stl. & PVC	FCA501 - 4.70								
	4.50 - 4.81	Std. Stl., D.I. & PVC	FCA501 - 4.81								
	BLACK	4.80 - 5.00	Cast Iron & PVC	FCA501 - 5.00							
4.74 - 5.10		C.I. & A/C M.E.	FCA501 - 5.10								
5.11 - 5.30		A/C R.B.	FCA501 - 5.30								
YELLOW	5.11 - 5.40	A/C R.B. CL. 200	FCA501 - 5.40								
	6"	RED	5.80 - 6.10	O.D.	FCA501 - 6.10	357.96	445.79	471.31	527.34	57.08	28 #
			6.05 - 6.30	Riv. Stl.	FCA501 - 6.30						
6.18 - 6.46			PVC Sewer	FCA501 - 6.46							
6.55 - 6.76		Std. Stl. & PVC	FCA501 - 6.76								
6.60 - 6.91		Std. Stl., D.I. & PVC	FCA501 - 6.91								
BLACK		6.90 - 7.10	Cast Iron & PVC	FCA501 - 7.10							
	6.86 - 7.20	C.I. & A/C M.E.	FCA501 - 7.20								
	7.15 - 7.35	A/C R.B.	FCA501 - 7.35								
YELLOW	7.15 - 7.45	A/C R.B. CL. 200	FCA501 - 7.45								
	8"	RED	7.80 - 8.10	O.D.	FCA501 - 8.10	492.02	572.02	605.38	661.41	69.06	34 #
			8.10 - 8.30	Riv. Stl.	FCA501 - 8.30						
8.30 - 8.55			C.I. Soil, PVC Sewer	FCA501 - 8.55							
8.55 - 8.75		Std. Stl. & PVC	FCA501 - 8.75								
8.60 - 9.06		Std. Stl., D.I. & PVC	FCA501 - 9.06								
BLACK		9.05 - 9.30	Cast Iron & PVC	FCA501 - 9.30							
	8.99 - 9.40	C.I. & A/C M.E.	FCA501 - 9.40								
	9.31 - 9.50	A/C R.B.	FCA501 - 9.50								
YELLOW	9.51 - 9.70	A/C R.B. CL. 200	FCA501 - 9.70								
	10"	RED	9.80 - 10.10 A	O.D.	FCA501 - 10.10	890.81	996.22	1,219.48	1,446.03	150.60	58 #
			10.20 - 10.55 A	C.I. Soil, PVC Sewer	FCA501 - 10.55						
10.70 - 11.00 A			Std. Stl. & PVC	FCA501 - 11.00							
10.70 - 10.80 B ^①		Std. Stl. & PVC	FCA501 - 10.80								
10.89 - 11.40 B ^①		Cast Iron & PVC	FCA501 - 11.40								
YELLOW		11.55 - 11.75 B ^①	A/C M.E.	FCA501 - 11.75							
	11.76 - 12.12 B ^①	A/C R.B.	FCA501 - 12.12								
	12"	RED	11.81 - 12.10 A	O.D. Stl.	FCA501 - 12.10	985.51	1,149.37	1,715.95	1,905.62	184.93	70 #
11.95 - 12.25 A			O.D. Stl. & PIP	FCA501 - 12.25							
12.24 - 12.50 A			PIP, PVC Sewer & Clay	FCA501 - 12.50							
12.65 - 12.95 A		Std. Stl. & PVC	FCA501 - 12.95								
BLACK		12.70 - 12.80 B	Std. Stl. & PVC	FCA501 - 12.80							
		13.15 - 13.55 B	Cast Iron & PVC	FCA501 - 13.55							
	13.85 - 14.10 B	A/C M.E.	FCA501 - 14.10								
YELLOW	14.05 - 14.40 B	A/C R.B.	FCA501 - 14.40								
	16"	RED	16.00	O.D. Stl.	FCA501 - 16.00	1,386.80	NA	1,555.32	1,852.52	316.35	137 #
			17.40	Ductile Iron & PVC	FCA501 - 17.40						

*NOTE: Harness Lugs used with Romac FCA501s require longer flange and through bolts than what are provided as standard with 3" - 12" FCA501s. 10" FCA501s require special considerations. Contact Romac Engineering for more information.

- ① CANNOT be used with mating flanges that have threaded bolt holes.
- ② Less flange bolts/nuts.
- ③ See Page 4-3 for Details on Anchor Pins.



TO ORDER: Add the letter "P" to end of catalog number for FCA501 with anchor pins and "X" for less flange bolts.

EXAMPLE: FCA501- 5.00 P or FCA501- 5.00 X

FLANGED COUPLING



STYLE FCA501 PARTS LIST

NOM. PIPE SIZE	FLANGED BODY (w/ O-ring)	END RING	COUPLING GASKET	O-RING GASKET	FLANGE BOLTS WITH NUTS			THROUGH BOLTS WITH NUTS				
					NO: SIZE	PRICE EACH		NO: SIZE	PRICE EACH			
						STD.	304 SS		316 SS	STD.	304 SS	316 SS
3"	\$102.33	\$12.98 ¹	\$5.73 ¹	\$9.41	NA	NA	NA	NA	4:5/8" x 7 1/2"	\$22.97	\$30.68	\$41.29
4"x 3"	203.39	18.27 ¹	7.54 ¹	9.41	4:5/8" x 3" ²	4.53	20.35	20.55	4:5/8" x 3" ²	4.53	14.13	17.49
4"	144.81	18.27 ¹	7.54 ¹	10.15	4:5/8" x 3" ²	4.53	20.35	20.55	4:5/8" x 7 1/2"	22.97	30.68	41.29
6"	147.58	38.67	10.72 ¹	10.77	4:3/4" x 3 1/2" ²	5.95	21.38	22.93	4:3/4" x 8"	34.29	44.34	59.66
8"	267.53	47.48	16.02 ¹	12.17	4:3/4" x 3 1/2" ²	5.95	21.38	22.93	4:3/4" x 8"	34.29	44.34	59.66
10"A	513.83	61.35	33.27 ¹	13.62	6:7/8" x 4"	10.70	52.72	62.88	6:5/8" x 7/8 x 9 1/2"	36.36	49.11	76.70
10"B	513.83	61.35	33.27 ¹	13.62	6:7/8" x 4"	10.70	52.72	62.88	6:5/8" x 7/8 x 9 1/2"	36.36	49.11	76.70
12"A	549.00	72.38	42.53 ¹	15.30	6:7/8" x 4"	10.70	52.72	62.88	6:7/8" x 9"	42.90	122.62	144.07
12"B	549.00	72.38	42.53 ¹	15.30	6:7/8" x 4"	10.70	52.72	62.88	6:7/8" x 9"	42.90	122.62	144.07
16"	978.53	209.22	104.38	17.78	NA	NA	NA	NA	12:5/8" x 10 1/2" ³	11.29	25.34	50.10

¹ Parts are interchangeable with 501 couplings.

² T-head bolts.

³ Trackhead bolt for end ring only

Refer to page 3-3 for information on 10" and 12" center rings.

Stainless steel anchor pins available upon request.

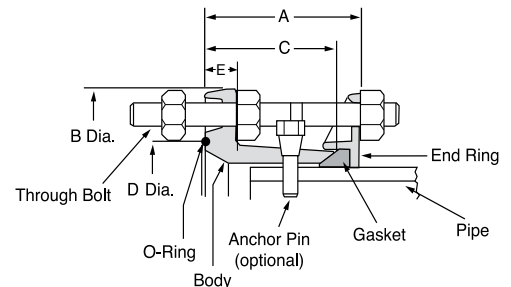
FCA501 ANCHOR PIN DETAILS

NOM. PIPE SIZE	PIPE O.D.	TOP OF GASKET RANGE	WORKING PRESSURE	TEST PRESSURE	ANCHOR PIN QTY	ANCHOR PIN SIZE (in)
3	3.00	3.29	175	260	2	1/2
	3.50	3.51	175	260	2	1/2
	4.00	4.00	175	260	2	1/2
4	4.00	4.05	175	260	4	1/2
	4.50	4.70	175	260	4	1/2
	4.80	4.81	175	260	4	1/2
6	6.00	6.10	175	260	4	5/8
	6.63	6.76	175	260	4	5/8
	6.90	6.91	175	260	4	5/8
8	8.00	8.10	175	260	4	7/8
	8.63	8.75	175	260	4	7/8
	9.05	9.06	175	260	2	7/8
10A	10.00	10.10	175	260	4	7/8
	10.75	11.00	175	260	3	7/8
10B	11.10	11.40	175	260	4	7/8
12A	12.00	12.10	175	260	4	7/8
	12.75	12.95	175	260	2	7/8
12B	13.20	13.55	175	260	4	7/8

NOTES:

- Pin quantities are for 12L14 steel pins. Contact Engineering for 316 S.S. pins.
- Contact Engineering for higher pressures.
- Anchor pins for use on cast iron, ductile iron and steel pipe only.
- Other sizes and configurations available. Contact Romac for more information.

FCA501 DIMENSIONS



NOM. PIPE SIZE	DIMENSIONS				
	A	B DIA.	C	D DIA.	E
3"	4 1/2"	7 1/2"	3 3/8"	4.66	0.63
4"x 3"	4 5/8"	7 1/2"	4 1/8"	4.30	0.75
4"	4"	9"	3 1/2"	6.00	0.94
6"	4 1/8"	11"	3 5/8"	7.90	1.06
8"	4 1/4"	13 1/2"	3 1/2"	10.00	1.14
10"A	5 1/4"	16"	4 1/4"	12.40	1.24
10"B	5 1/2"	16"	4 1/2"	12.40	1.23
12"A	5 1/4"	19"	4 1/2"	13.68	1.25
12"B	5 1/2"	19"	4 1/2"	15.20	1.27
16"	8"	23 1/2"	7"	18.88	1.50



Flexible couplings do not provide protection against possible pullout of pipe ends in unrestrained conditions.

FUSION EPOXY STYLE FCA501 PARTS LIST



NOM. PIPE SIZE	FLANGED BODY (w/ O-ring)	END RING	COUPLING GASKET	O-RING GASKET	FLANGE BOLTS WITH NUTS			THROUGH BOLTS WITH NUTS				
					NO: SIZE	PRICE EACH		NO: SIZE	PRICE EACH			
						STD.	304 SS		316 SS	STD.	304 SS	316 SS
3"	\$128.88	\$23.17 ¹	N 26.09 ¹ E 26.51 ¹	N 9.41 E 9.28	N/A	N/A	N/A	N/A	4: 5/8" x 7 1/2"	\$22.97	\$30.68	\$41.29
4"x 3"	237.00	30.82 ¹	N 26.49 ¹ E 27.20 ¹	N 9.41 E 9.28	4: 5/8" x 3" ²	\$4.53	\$20.35	\$20.55	4: 5/8" x 3" ²	4.53	14.13	17.49
4"	178.40	30.82 ¹	N 26.49 ¹ E 27.20 ¹	N 10.15 E 10.02	4: 5/8" x 3" ²	4.53	20.35	20.55	4: 5/8" x 7 1/2"	22.97	30.68	41.29
6"	189.58	49.60	N 31.23 ¹ E 32.67 ¹	N 10.77 E 10.59	4: 3/4" x 3 1/2" ²	5.95	21.38	22.93	4: 3/4" x 8"	34.29	44.34	59.66
8"	309.57	61.45	N 37.61 ¹ E 42.27 ¹	N 12.17 E 12.00	4: 3/4" x 3 1/2" ²	5.95	21.38	22.93	4: 3/4" x 8"	34.29	44.34	59.66
10"A	592.61	74.68	N 52.51 ¹ E 61.15 ¹	N 13.62 E 13.43	6: 7/8" x 4"	10.70	52.72	62.88	6: 5/8" x 7/8 x 9 1/2"	36.36	49.11	76.70
10"B	592.61	74.68	N 52.51 ¹ E 61.15 ¹	N 13.62 E 13.43	6: 7/8" x 4"	10.70	52.72	62.88	6: 5/8" x 7/8 x 9 1/2"	36.36	49.11	76.70
12"A	646.57	85.96	N 65.61 ¹ E 76.15 ¹	N 15.30 E 14.42	6: 7/8" x 4"	10.70	52.72	62.88	6: 7/8" x 9"	42.90	122.62	144.07
12"B	646.57	85.96	N 65.61 ¹ E 76.15 ¹	N 15.30 E 14.42	6: 7/8" x 4"	10.70	52.72	62.88	6: 7/8" x 9"	42.90	122.62	144.07
16"	1,154.46	168.41	N 153.06 E 184.03	N 17.78 E 17.50	N/A	N/A	N/A	N/A	12: 5/8" x 10 1/2" ³	11.29	25.34	50.10

¹ Parts are interchangeable with 501 couplings.

² T-head bolts.

³ Trackhead bolt for end ring only

⁴ "N" indicates an NBR gasket, "E" indicates an EPDM gasket

Refer to page 3-3 for information on 10" and 12" center rings.

Stainless steel anchor pins available upon request.

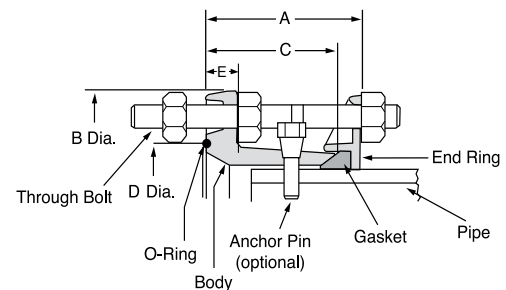
FCA501 ANCHOR PIN DETAILS

NOM. PIPE SIZE	PIPE O.D.	TOP OF GASKET RANGE	WORKING PRESSURE	TEST PRESSURE	ANCHOR PIN QTY	ANCHOR PIN SIZE (in)
3	3.00	3.29	175	260	2	1/2
	3.50	3.51	175	260	2	1/2
	4.00	4.00	175	260	2	1/2
4	4.00	4.05	175	260	4	1/2
	4.50	4.70	175	260	4	1/2
6	4.80	4.81	175	260	4	1/2
	6.00	6.10	175	260	4	5/8
8	6.63	6.76	175	260	4	5/8
	6.90	6.91	175	260	4	5/8
10A	8.00	8.10	175	260	4	7/8
	8.63	8.75	175	260	4	7/8
10B	9.05	9.06	175	260	2	7/8
	10.00	10.10	175	260	4	7/8
12A	10.75	11.00	175	260	3	7/8
	11.10	11.40	175	260	4	7/8
12B	12.00	12.10	175	260	4	7/8
	12.75	12.95	175	260	2	7/8
16"	13.20	13.55	175	260	4	7/8

NOTES:

1. Pin quantities are for 12L14 steel pins. Contact Engineering for 316 S.S. pins.
2. Contact Engineering for higher pressures.
3. Anchor pins for use on cast iron, ductile iron and steel pipe only.
4. Other sizes and configurations available. Contact Romac for more information.

FCA501 DIMENSIONS



NOM. PIPE SIZE	DIMENSIONS				
	A	B DIA.	C	D DIA.	E
3"	4 1/2"	7 1/2"	3 3/8"	4.66	0.63
4"x 3"	4 5/8"	7 1/2"	4 1/8"	4.30	0.75
4"	4"	9"	3 1/2"	6.00	0.94
6"	4 1/8"	11"	3 5/8"	7.90	1.06
8"	4 1/4"	13 1/2"	3 1/2"	10.00	1.14
10"A	5 1/4"	16"	4 1/4"	12.40	1.24
10"B	5 1/2"	16"	4 1/2"	12.40	1.23
12"A	5 1/4"	19"	4 1/2"	13.68	1.25
12"B	5 1/2"	19"	4 1/2"	15.20	1.27
16"	8"	23 1/2"	7"	18.88	1.50



Flexible couplings do not provide protection against possible pullout of pipe ends in unrestrained conditions.



STYLE FC400 STEEL FLANGED COUPLING ADAPTER



MATERIAL SPECIFICATIONS

FLANGES: AWWA C207 Class D, meets the dimensional requirements of ANSI Class 125 and 150 bolt circles. Higher pressure ratings available. Bolts, nuts and gaskets for flange end not supplied. Other flanges are available.

FLANGED BODY: Beveled, flared or formed carbon steel with minimum yield of 30,000 PSI.

END RINGS: Contoured rolled mill section carbon steel. End ring thickness determined by pipe O.D. and pressure rating.

GASKETS: Compounded for water and sewer service. Meets the requirements of AWWA C219 and ASTM D2000. Other compounds available on request.

PAINT: Romac shopcoat for corrosion protection in transit.

BOLTS & NUTS: Trackhead bolts, heavy hex nuts, 5/8" UNC rolled thread, high strength, low alloy corrosion-resistant steel per AWWA C111. Threads protected with plastic caps on each bolt end.

ANCHOR PINS: Used for pipe restraint. For use on 12" and larger steel, cast iron and ductile iron pipe with a minimum pipe wall thickness of 1/4".

SPECIALS: Larger sizes, special lay lengths, special linings and coatings, available on request.

OPTION: For other options and specifications, see page 3-25 & 3-26.

USE: To provide a flexible flanged end in connecting pipe; installing valves on fittings. When the specific O.D.s are not known, limited ranges can be accommodated; contact factory for assistance.



Flexible couplings do not provide protection against possible pullout of pipe ends in unrestrained conditions.



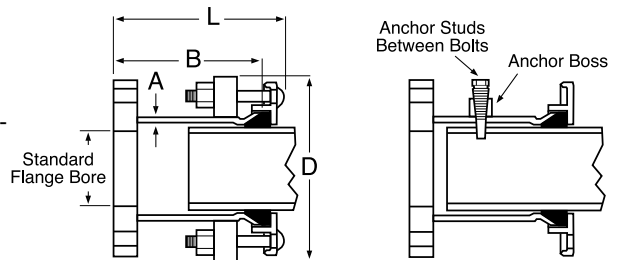
NSF61 certified upon request.

**MEETS
AWWA C219**

NOM. PIPE SIZE	PIPE O.D.	DIMENSION (inches)						APPROX. WT. (lbs.)	CATALOG NUMBER	LIST PRICE					
		A ¹	B	D	L	SHOPCOAT				FUSION EPOXY					
						w/STD B&N	w/304 SS B&N			w/316 SS B&N	w/STD B&N	w/304 SS B&N	w/316 SS B&N		
12"	13.20	1/4	10 13/16	18 7/16	12 3/16	88 #	FC400-13.20-12	\$1,262.38	\$1,371.54	\$1,464.94	\$1,503.20	\$1,614.08	\$1,705.77		
14"	14.00	1/4	10 15/16	19 1/4	12 1/4	105 #	FC400-14.00-14	1,427.72	1,538.59	1,630.28	1,670.27	1,781.13	1,872.83		
14"	15.30	1/4	10 15/16	20 9/16	12 1/4	111 #	FC400-15.30-14	1,483.55	1,622.12	1,736.76	1,726.11	1,864.67	1,979.32		
14"	15.65	1/4	10 15/16	20 15/16	12 1/4	112 #	FC400-15.65-14	1,514.64	1,653.21	1,767.85	1,757.21	1,895.76	2,010.41		
16"	16.00	1/4	11	21 1/4	12 3/8	127 #	FC400-16.00-16	1,598.10	1,736.68	1,851.32	1,883.12	2,021.67	2,136.33		
16"	17.40	1/4	11	22 11/16	12 3/8	132 #	FC400-17.40-16	1,796.35	1,934.90	2,049.55	2,081.35	2,219.92	2,334.56		
16"	17.80	1/4	11	23 1/16	12 3/8	133 #	FC400-17.80-16	1,842.79	1,981.34	2,095.99	2,127.78	2,266.37	2,519.57		
18"	18.00	1/4	11 1/16	23 1/4	12 1/2	138 #	FC400-18.00-18	1,898.51	2,037.07	2,151.71	2,223.60	2,362.16	2,615.37		
18"	19.50	1/4	11 1/16	24 3/4	12 1/2	144 #	FC400-19.50-18	2,158.71	2,324.98	2,490.19	2,483.81	2,655.24	2,959.08		
20"	20.00	1/4	11 1/8	25 1/4	12 5/8	163 #	FC400-20.00-20	2,273.41	2,439.66	2,577.26	2,640.10	2,806.38	3,110.22		
20"	21.60	1/4	11 1/8	26 7/8	12 5/8	168 #	FC400-21.60-20	2,592.27	2,758.54	2,896.12	2,958.96	3,125.24	3,429.08		
24"	24.00	1/4	11 1/4	29 1/4	12 3/4	212 #	FC400-24.00-24	2,793.60	2,987.65	3,148.10	3,288.05	3,482.09	3,836.60		
24"	25.80	1/4	11 1/4	31 1/16	12 3/4	218 #	FC400-25.80-24	2,991.81	3,185.86	3,346.30	3,486.27	3,680.30	4,034.79		
30"	30.00	1/4	11 3/8	35 5/16	12 3/4	290 #	FC400-30.00-30	3,517.09	3,786.14	3,922.20	4,300.88	4,569.96	4,975.08		
30"	32.00	1/4	11 3/8	37 5/16	12 15/16	297 #	FC400-32.00-30	3,553.45	3,822.53	3,958.58	4,337.26	4,606.32	5,011.46		
36"	36.00	1/4	11 5/8	41 5/16	13 5/32	420 #	FC400-36.00-36	4,415.71	4,738.55	4,871.48	5,303.17	5,626.04	6,081.80		
36"	38.30	1/4	11 5/8	43 9/16	13 5/32	428 #	FC400-38.30-36	4,509.72	4,832.58	4,965.49	5,397.19	5,720.05	6,175.82		

¹ For use with anchor pins, "A" dimension will be 3/8".
Prices and availability on request.

For pipes smaller than 12", please refer to Romac Style "FCA501" on Page 4-2. For sizes larger than 36", consult your representative. Reducing FC's available on request.



TO ORDER: Determine pipe OD and flange size.

EXAMPLE: The pipe end to be coupled is 16" D.I. with an O.D. of 17.40 and a flange of 16" class "D", order **FC400-17.40-16**

RFCA (RESTRAINED FLANGED COUPLING ADAPTER)



MATERIAL SPECIFICATIONS

FLANGE BODY: Ductile (nodular) iron, meeting or exceeding ASTM A 536, Grade 65-45-12. Flange meets the dimensional requirements of ANSI Class 125 and 150 bolt circles.

GASKETS: Compounded for water and sewer service in accordance with ASTM D 2000 (Flange gasket is o-ring style, NBR standard). Other compounds available for petroleum, chemical, or high temperature service.

GLAND: Romac RomaGrip™. See page 8-6.

RESTRAINING BOLTS: 7/8 –9 roll thread, Ductile (nodular) iron, meeting or exceeding ASTM A 536.

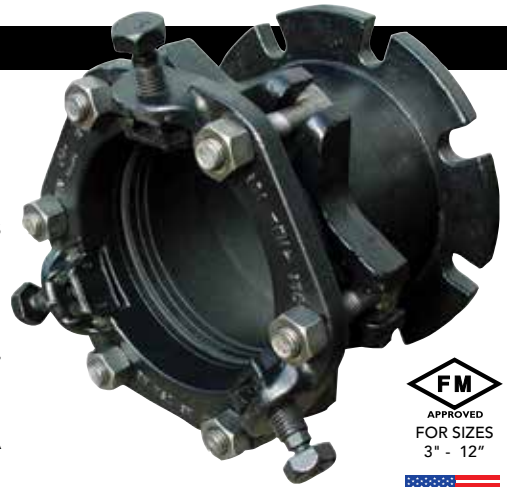
RESTRAINING LUGS: Ductile (nodular) iron, meeting or exceeding ASTM A 536. Heat treated using a proprietary process.

LUG LOCATORS: Polyurethane, a thermal plastic.

T-BOLTS AND NUTS: High strength low alloy steel T-head bolt. National coarse rolled thread and heavy hex nut. Steel meets AWWA C111 composition specifications. Stainless steel bolts and nuts available on request.

COATINGS: Shop coat applied to cast parts for corrosion protection in transit. Fusion bonded epoxy and Romabond Polyester available on request.

USE: Ductile Iron Pipe 3 - 24", cast iron pipe 3" - 24" (same OD's as ductile iron) and IPS size steel pipe 3 - 12" a minimum thickness per ASTM A53 std. weight class pipe.



NSF61 certified upon request.

**MEETS
AWWA C219**

FLANGED COUPLING

NOM. PIPE SIZE	GASKET RANGE	LENGTH	GLAND BOLTS QTY: SIZE	CATALOG NUMBER	LIST PRICE				WEIGHT (lbs.)
					SHOPCOAT w/STD. B&N	SHOPCOAT w/304 SS B&N	FUSION EPOXY w/STD. B&N	FUSION EPOXY w/304 SS B&N	
3"	3.50-3.96	8.00"	4: 5/8" x 3"	RFCA - 3.96	\$175.63	\$190.25	\$199.36	\$213.97	21
4"	4.50-4.80	9.00"	4: 3/4" x 3 1/2"	RFCA - 4.80	221.36	252.88	251.01	282.54	29
6"	6.63-6.90	9.25"	6: 3/4" x 3 1/2"	RFCA - 6.90	282.38	329.66	322.53	369.81	40
8"	8.63-9.05	9.25"	6: 3/4" x 3 1/2"	RFCA - 9.05	381.08	428.36	429.65	476.94	53
10"	10.75-11.10	10.25"	8: 3/4" x 3 1/2"	RFCA - 11.10	702.71	765.77	808.65	871.71	83
12"	12.75-13.20	10.25"	8: 3/4" x 3 1/2"	RFCA - 13.20	763.30	826.34	893.38	956.42	110
14"	15.30	11.70"	10: 3/4" x 4 1/2"	RFCA - 15.30	1,065.97	1,143.95	1,232.30	1,310.28	170
16"	17.40	11.70"	12: 3/4" x 4 1/2"	RFCA - 17.40	1,480.31	1,573.27	1,702.85	1,795.80	200
18"	19.50	11.80"	12: 3/4" x 4 1/2"	RFCA - 19.50	1,626.05	1,719.00	1,866.95	1,959.90	217
20"	21.60	11.80"	14: 3/4" x 4 1/2"	RFCA - 21.60	1,836.84	1,946.42	2,140.82	2,250.40	256
24"	25.80	12.00"	16: 3/4" x 5"	RFCA - 25.80	2,228.30	2,366.23	2,572.44	2,710.37	305

! Some initial axial movement may occur in lug style restraints as the lugs seat. Movement is directly related to the size of the piping system and the system pressure. In general terms movement of approximately 0.25" can be expected in restraints under 16". For larger sizes, movement of approximately 0.4" may be seen. If this is critical to your application please contact Romac Engineering for additional information.

TO ORDER: Specify catalog number.
EXAMPLE: For a 12" RFCA Order: **RFCA - 13.20**
NOTE: 3" - 12" special Romac gasket works on both steel and D.I. ODs.

! Not for use on PVC, HDPE pipe or plain-end mechanical joint fittings.
 For applications on PVC pipe, see page 4-7.



RFCA FOR PVC PIPE

MATERIAL SPECIFICATIONS

FLANGE BODY: Ductile (nodular) iron, meeting or exceeding ASTM A 536, Grade 65-45-12. Flange meets the dimensional requirements of ANSI Class 125 and 150 bolt circles.

GASKETS: Compounded for water and sewer service in accordance with ASTM D 2000 (Flange gasket is o-ring style, NBR standard). Other compounds available for petroleum, chemical, or high temperature service.

GLAND: Romac RomaGrip™ for PVC (see page 8-7).

RESTRAINING BOLTS: 7/8 –9 roll thread, Ductile (nodular) iron, meeting or exceeding ASTM A 536.

RESTRAINING LUGS: Ductile (nodular) iron, meeting or exceeding ASTM A 536. Heat treated using a proprietary process.

T-BOLTS AND NUTS: High strength low alloy steel T-head bolt. National coarse rolled thread and heavy hex nut. Steel meets AWWA C111 composition specifications. Stainless steel bolts and nuts available on request.

COATINGS: Shop coat applied to cast parts for corrosion protection in transit. Fusion bonded epoxy and Romabond Polyester available on request.

USE: C900 Class 235 and Class 305 4"-12", C905 14"-24", IPS 3"-12" Class 160 and greater and Sch. 40 & 80. For thin wall pipe such as IPS PVC (less than Class 160) C909 and Class 165 C900 (see installation instructions).



NSF61 certified upon request.

**MEETS
AWWA C219**

NOM. PIPE SIZE	GASKET RANGE	LENGTH	GLAND BOLTS QTY: SIZE	CATALOG NUMBER	LIST PRICE				WEIGHT (lbs.)
					SHOPCOAT w/STD. B&N	SHOPCOAT w/304 SS B&N	FUSION EPOXY w/STD. B&N	FUSION EPOXY w/304 SS B&N	
3"	3.50	8"	4: 5/8" x 3"	RFCA-PVC-3.50	\$181.93	\$196.55	\$205.66	\$220.27	25
4"	4.50-4.80	9"	4: 3/4" x 3 1/2"	RFCA-PVC-4.80	228.56	260.09	258.23	289.74	31
6"	6.63-6.90	9.25"	6: 3/4" x 3 1/2"	RFCA-PVC-6.90	292.05	339.33	332.20	379.48	41
8"	8.63-9.05	9.25"	6: 3/4" x 3 1/2"	RFCA-PVC-9.05	393.07	440.35	441.64	488.93	53
10"	10.75-11.10	10.25"	8: 3/4" x 3 1/2"	RFCA-PVC-1.10	751.07	814.12	857.01	920.05	83
12"	12.75-13.20	10.25"	8: 3/4" x 3 1/2"	RFCA-PVC-13.20	778.12	841.18	908.21	971.04	110
14"	15.30	11.7"	10: 3/4" x 4 1/2"	RFCA-PVC-15.30	1,122.59	1,200.57	1,288.92	1,366.90	170
16"	17.40	11.7"	12: 3/4" x 4 1/2"	RFCA-PVC-17.40	1,543.33	1,636.29	1,765.87	1,858.83	200
18"	19.50	11.8"	12: 3/4" x 4 1/2"	RFCA-PVC-19.50	1,662.68	1,755.63	1,903.58	1,996.53	217
20"	21.60	11.8"	14: 3/4" x 4 1/2"	RFCA-PVC-21.60	1,884.41	1,994.00	2,188.40	2,298.00	256
24"	25.80	12"	16: 3/4" x 5"	RFCA-PVC-25.80	2,246.03	2,383.98	2,590.17	2,728.12	305

TO ORDER: Specify catalog number.

EXAMPLE: For a 12" RFCA Order: **RFCA-PCV - 13.20**

NOTE: 4" - 12" special Romac gasket works on both IPS and C-900 ODs.



Not for use on metal or HDPE pipe. For applications on steel or ductile iron, please contact your Romac representative.

STYLE DJ400 DISMANTLING JOINT



MATERIAL SPECIFICATIONS

FLANGE SPOOL: AWWA Class D Ring Flange, compatible with ANSI Class 125 and 150 bolt circles. For 3" - 12" sizes, pipe is Sch 40 ASTM A53. For 14" - 72" sizes, ASTM A36 Carbon Steel. Other flange classes available. Bolts, nuts and gaskets for flange end not supplied. For more information contact Romac Industries.

END RING & BODY: For 3" - 12" sizes, body and end ring are ASTM A536 ductile (nodular) iron meeting or exceeding Grade 65-45-12. For 14" - 72" ASTM A36 Carbon Steel with AWWA C207 Class D flanges. 3" - 72" meet the dimensional requirements of ANSI C Class 125 and 150 bolt circles.

GASKETS: Compounded for water and sewer service in accordance with ASTM D 2000 (ductile iron flange bodies, 3" - 12" have flange o-ring gaskets). Other compounds available for petroleum, chemical or high temperature services.

BOLTS & NUTS: High strength low alloy steel bolts and nuts. Steel meets ASTM A588. Type 304 and 316 Stainless Steel bolt material available.

COATING: Fusion bonded epoxy.

TIE-RODS: High strength steel per ASTM A193 B7. Optional stainless steel per ASTM A193 gr B8 or B8M.

Other lengths, materials, flange types and higher pressures can be accommodated. For more information, contact your Romac representative.



NSF61 certified upon request.

Certified to NSF/ANSI 61 & 372

**MEETS
AWWA C219**

NOM. PIPE SIZE	LENGTH			CATALOG NUMBER	QTY	ER BOLTS SIZE	TIE-RODS		LIST PRICE			APPROX. WEIGHT (lbs.)		
	NOM.	MIN.	MAX.				SIZE (UNC)	LENGTH	ALLOY STEEL	S.S	w/STD B&N		w/304 SS B&N	w/316 SS B&N
3"	8.00	7.00	9.00	DJ400-03	2	5/8 - 11 x 7 1/2	5/8 - 11	13.50	2	2	\$594.67	\$652.10	\$718.98	31
4"	8.00	7.00	9.00	DJ400-04	4	5/8 - 11 x 7 1/2	5/8 - 11	13.50	2	2	611.21	668.81	739.84	36
6"	8.38	7.38	9.38	DJ400-06	4	3/4 - 10 x 8	3/4 - 10	15.00	2	2	726.83	836.02	902.92	55
8"	8.38	7.38	9.38	DJ400-08	4	3/4 - 10 x 8	3/4 - 10	15.00	2	2	892.03	1,003.24	1,070.11	72
10"	10.50	9.50	11.50	DJ400-10	6	5/8-11 x 7/8 - 9x9 1/2	7/8 - 9	17.75	2	2	1,271.96	1,437.95	1,504.85	108
12"	10.50	9.50	11.50	DJ400-12	6	7/8 - 9 x 9	7/8 - 9	17.75	2	2	1,635.38	1,805.80	1,872.70	134
14"	13.50	12.00	15.00	DJ400-14	8	5/8 - 11 x 5	1 - 8	22.00	2	2	2,246.59	2,474.64	2,608.39	175
16"	13.50	12.00	15.00	DJ400-16	10	5/8 - 11 x 5	1 - 8	22.00	2	2	2,527.40	2,775.61	2,942.80	210
18"	13.75	12.25	15.25	DJ400-18	10	5/8 - 11 x 5	1 1/8 - 7	23.25	2	4	2,758.68	3,461.16	3,728.69	230
20"	13.75	12.25	15.25	DJ400-20	12	5/8 - 11 x 5	1 1/8 - 7	23.25	2	4	3,122.11	3,979.49	4,263.74	270
24"	14.25	12.75	15.75	DJ400-24	14	5/8 - 11 x 5	1 1/4 - 7	25.50	2	4	4,014.13	4,932.55	5,233.52	365
30"	14.75	13.25	16.25	DJ400-30	16	5/8 - 11 x 5	1 1/4 - 7	25.50	4	6	5,170.45	6,403.95	6,805.24	585
36"	15.75	14.25	17.25	DJ400-36	18	5/8 - 11 x 5	1 1/2 - 6	27.50	4	6	7,004.08	9,079.25	9,497.25	855
42"	16.50	15.00	18.00	DJ400-42	20	5/8 - 11 x 6	1 1/2 - 6	29.25	4	6	9,184.61	11,303.07	11,787.96	1,120
48"	16.75	15.25	18.25	DJ400-48	22	5/8 - 11 x 6	1 1/2 - 6	29.25	6	8	12,752.71	15,433.05	16,018.28	1,400
54"	17.75	16.25	19.25	DJ400-54	24	5/8 - 11 x 6	1 3/4 - 5	31.75	6	8	17,179.83	21,385.55	22,522.53	1,825
60"	18.00	16.50	19.50	DJ400-60	28	5/8 - 11 x 6	1 3/4 - 5	31.75	6	10	31,154.95	36,935.62	38,340.14	2,175
72"	18.75	17.25	20.25	DJ400-72	32	5/8 - 11 x 6	1 3/4 - 5	33.50	10	14	39,183.22	46,967.94	48,907.51	3,300

TO ORDER: Specify catalog number.

EXAMPLE: For a 12" DJ400 Order: **DJ400-12**



STYLE DJ405 DISMANTLING JOINT

MATERIAL SPECIFICATIONS

FLANGE SPOOL: AWWA C207 Class D, meets the dimensional requirements of ANSI Class 125 and 150 bolt circles. For 3" - 12" sizes, pipe is Sch 40 ASTM A53. For 14" - 24" pipe material is ASTM A36. Bolts, nuts and gaskets for flange end not supplied.

FLANGE BODY: ASTM A536 ductile (nodular) iron meeting or exceeding Grade 65-45-12. Flange meets the dimensional requirements of ANSI Class 125 and 150 bolt circles.

GASKETS: Compounded for water and sewer service in accordance with ASTM D 2000 (RFCA gasket is o-ring style, NBR standard). Other compounds available for petroleum, chemical, or high temperature service.

GLAND: Romac RomaGrip™. See page 8-6.

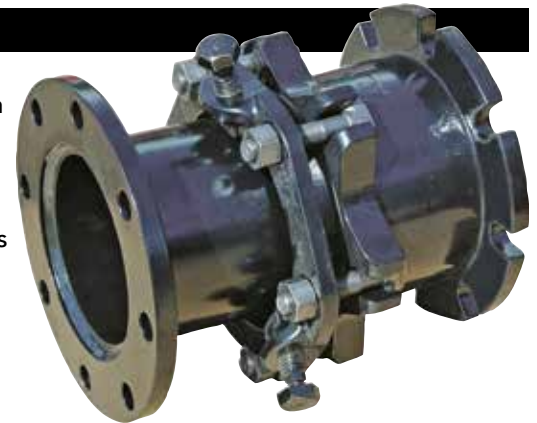
RESTRAINING BOLTS: 7/8 -9 roll thread, Ductile (nodular) iron, meeting or exceeding ASTM A 536.

RESTRAINING LUGS: Ductile (nodular) iron, meeting or exceeding ASTM A 536. Heat treated using a proprietary process.

LUG LOCATORS: Polyurethane, a thermal plastic.

T-BOLTS AND NUTS: High strength low alloy steel T-head bolt. National coarse rolled thread and heavy hex nut. Steel meets AWWA C111 composition specifications. Stainless steel bolts and nuts available on request.

COATINGS: Body and spool fusion bonded epoxy. RomaGrip is Romabond polyester.



NSF61 certified upon request.

**MEETS
AWWA C219**

NOM. PIPE SIZE	LENGTH			CATALOG NUMBER	QTY	T - BOLTS		ALLOWABLE DEFLECTION (degrees)	LIST PRICE		APPROX. WEIGHT (lbs.)
	NOM.	MIN.	MAX.			SIZE	LENGTH		w/STD B&N	w/304 SS B&N	
3"	11.50	10.00	13.00	DJ405-03	4	5/8"	3.75	2.0	\$743.35	\$760.81	33
4"	12.75	11.00	14.50	DJ405-04	4	3/4"	4.25	3.5	764.02	801.73	46
6"	13.50	11.50	15.50	DJ405-06	6	3/4"	4.25	3.5	908.54	965.07	68
8"	13.50	11.50	15.50	DJ405-08	6	3/4"	4.25	3.3	1,115.04	1,171.55	94
10"	14.75	12.50	17.00	DJ405-10	8	3/4"	4.25	3.0	1,589.96	1,665.31	143
12"	14.75	12.50	17.00	DJ405-12	8	3/4"	4.25	3.0	2,044.28	2,123.76	193
14"	19.25	16.75	21.75	DJ405-14	10	3/4"	4.50	2.0	2,808.26	2,901.47	297
16"	19.25	16.75	21.75	DJ405-16	12	3/4"	4.50	2.0	3,285.63	3,396.72	352
18"	20.25	17.75	22.75	DJ405-18	12	3/4"	4.50	1.5	3,724.27	3,835.32	390
20"	20.25	17.75	22.75	DJ405-20	14	3/4"	4.50	1.5	4,214.84	4,345.81	457
24"	21.25	18.75	23.75	DJ405-24	16	3/4"	5.00	1.5	5,419.08	5,583.95	569



Some initial axial movement may occur in lug style restraints as the lugs seat. Movement is directly related to the size of the piping system and the system pressure. In general terms movement of approximately 0.25" can be expected in restraints under 16". For larger sizes, movement of approximately 0.4" may be seen. If this is critical to your application please contact Romac Engineering for additional information.

TO ORDER: Specify catalog number.

EXAMPLE: For a 12" DJ405 Order: **DJ405-12**

FCG FLANGED COUPLING ADAPTER w/MJ GLAND



MATERIAL SPECIFICATIONS

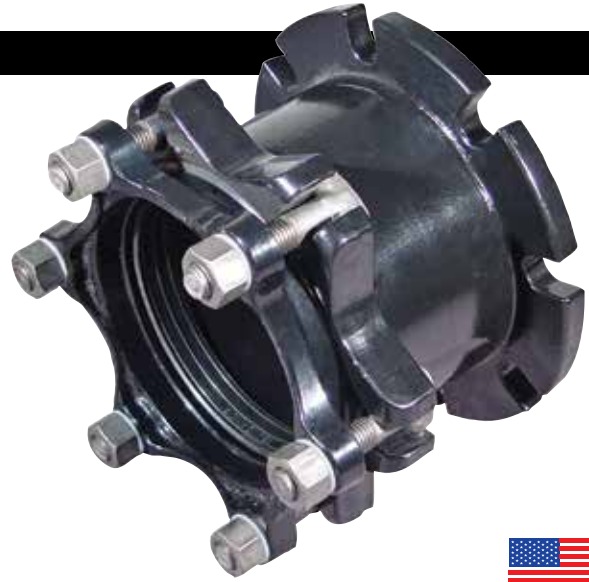
FLANGE BODY: Ductile (nodular) iron, meeting or exceeding ASTM A 536, Grade 65-45-12. Flange meets the dimensional requirements of ANSI Class 125 and 150 bolt circles.

GASKETS: Gaskets are made from virgin Styrene Butadiene Rubber (SBR) compounded for water and sewer service in accordance with ASTM D 2000 MBA 710. Flange gasket is an "O" ring style made of Nitrile Butadiene Rubber (NBR) in accordance with ASTM D 2000 MBK. Other compounds available for petroleum, chemical, or high temperature service.

GLAND: Ductile iron per ASTM A 536, Grade 65-45-12.

T-BOLTS AND NUTS: High strength low alloy steel T-head bolt. National coarse rolled thread and heavy hex nut. Steel meets AWWA C111 composition specifications. Stainless steel bolts and nuts available on request.

COATINGS: Shop coat applied to cast parts for corrosion protection in transit. Fusion bonded epoxy available on request.



NSF61 certified upon request.

**MEETS
AWWA C219**

NOM. PIPE SIZE	GASKET RANGE	LENGTH	GLAND BOLTS QTY: SIZE	CATALOG NUMBER	LIST PRICE				WEIGHT (lbs.)
					SHOPCOAT w/STD. B&N	SHOPCOAT w/304 SS B&N	FUSION EPOXY w/STD. B&N	FUSION EPOXY w/304 SS B&N	
3"	3.50-3.96	7.30	4: 5/8" x 3"	FCG - 3.96	\$160.28	\$175.77	\$185.42	\$199.20	17.2
4"	4.50-4.80	8.20	4: 3/4" x 3 1/2"	FCG - 4.80	206.17	239.59	237.61	271.02	25.5
6"	6.63-6.90	9.20	6: 3/4" x 4"	FCG - 6.90	268.77	318.89	311.33	361.45	33.8
8"	8.63-9.05	9.20	6: 3/4" x 4"	FCG - 9.05	348.16	398.28	399.65	449.76	43.4
10"	10.75-11.10	9.90	8: 3/4" x 4"	FCG - 11.10	659.53	726.34	771.79	838.62	70.0
12"	12.75-13.20	10.00	8: 3/4" x 4"	FCG - 13.20	674.32	741.15	812.19	878.99	91.2



Flexible couplings do not provide protection against possible pullout of pipe ends in unrestrained conditions. If restraint is required on ductile iron and standard steel pipe, the RomaGrip™ may be used with the FCG. If restraint is required on PVC pipe, the PVC RomaGrip™ may be used with the FCG. The GripRing™ may not be used with the FCG.

TO ORDER: Specify catalog number.

EXAMPLE: For a 12" FCG Order: **FCG - 13.20**

NOTE: Special Romac gasket works on both steel and D.I. ODs.



STYLE ECF400 EQUIPMENT CONNECTION FITTING

MATERIAL SPECIFICATIONS

PIPE: ASTM A53 SCH 40 pipe for 3-12" sizes and ASTM A36 steel for 14" & larger sizes. A pipe stop is available.

FLANGE BODIES AND END RINGS: For 3"- 12" sizes, body and end ring are ASTM A536 ductile (nodular) iron meeting or exceeding Grade 65-45-12. For 14"- 72" ASTM A36 Carbon Steel with AWWA C207 Class D flanges. 3"- 72" meet the dimensional requirements of ANSI Class 125 and 150 bolt circles.

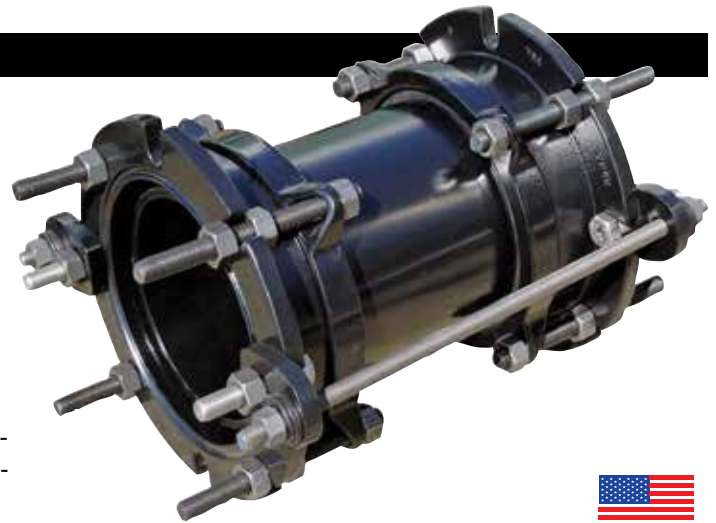
GASKETS: Compounded for water and sewer service in accordance with ASTM D 2000 (ductile iron flange bodies, 3"- 12" have flange o-ring gaskets). Other compounds available for petroleum, chemical or high temperature services.

BOLTS, NUTS, SPHERICAL WASHERS: High Strength Low Alloy Steel. Type 304 Stainless Steel or Type 316 Stainless Steel is available.

TIE RODS: High Strength Steel per ASTM A193 B7. Type 304 (A193 B8) and 316 (A193 B8M) Stainless steel is available.

HARNESS LUGS: ASTM A36 steel. Coated with Fusion Bonded Epoxy.

COATING: All steel and ductile iron parts are coated at Romac with Fusion Bonded Epoxy.

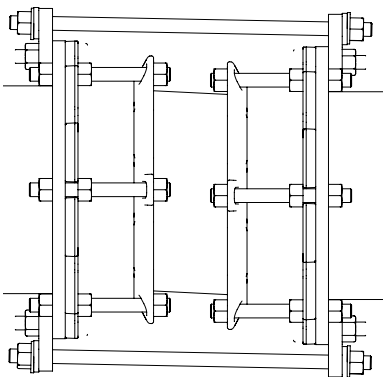


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Certified to NSF/ANSI 61 & 372

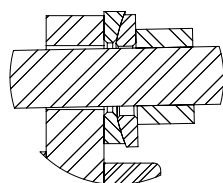
**MEETS
AWWA C219**

RESTRAINT FOR MISALIGNED FLANGED FITTINGS ON FIELD CONNECTIONS AND EQUIPMENT

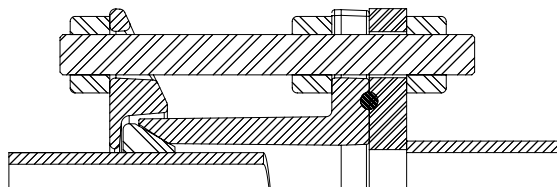


- The ECF400 combines two flanged couplings with a plain spool piece and thrust restraint rods in one complete and easy-to-use assembly.
- The ECF400's flexibility and adjustability simplifies systems that are otherwise difficult to work with.
- Provided in standard lengths for ease of piping system design. Available in custom lengths if required.

- Spherical washer and harness lug assemblies are engineered to keep the tie-rods in position, and prevent bending.



SPHERICAL WASHER
DETAIL



BOLTING DETAIL

OFFSET & DEFLECTION

If your system has misaligned or offset flanges that need to be connected, the ECF400 will accommodate a minimum of 1/4" offset and 2° deflection. Once installed, the fitting is a solid connection that will not allow your system to move.

ADJUSTABLE LAYING LENGTH

Just like our DJ400 and DJ405, the ECF400 has an adjustable laying length, allowing room for access, valve installation, or an extra pipe length that may be required.

CONNECTION

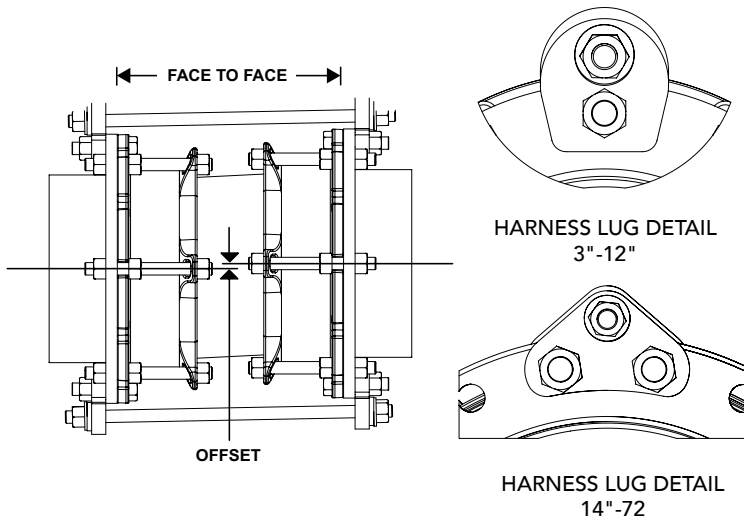
The Romac Equipment Connection Fitting accommodates a flanged system with ANSI CLS 125 and 150 bolt circles. We also can provide other configurations on request.

RESTRAINT

Tie-rods and harness lugs provide the means of restraint. Since the tie-rods only pass through the harness lugs and not the flanges, the rods are easily installed or removed.

For sizes, pricing and other information, see page 4-12.

STYLE ECF400 EQUIPMENT CONNECTION FITTING



NOM. PIPE SIZE	HARNES LUG THICKNESS	ALLOWABLE OFFSET	
		AT MIN. LENGTH	AT MAX. LENGTH
3"	0.50	0.25	0.32
4"	0.50	0.25	0.32
6"	0.75	0.25	0.32
8"	0.75	0.25	0.32
10"	1.00	0.32	0.39
12"	1.00	0.33	0.40
14"	1.00	0.25	0.37
16"	1.00	0.25	0.36
18"	1.00	0.25	0.35
20"	1.00	0.25	0.35
24"	1.00	0.25	0.35
30"	1.25	0.25	0.34
36"	1.25	0.25	0.34
42"	1.25	0.25	0.33
48"	1.75	0.25	0.32
54"	1.75	0.25	0.32
60"	1.75	0.25	0.32
66"	2.00	0.25	0.30
72"	2.00	0.25	0.30

NOM. PIPE SIZE	LENGTH FACE-TO-FACE			CATALOG NUMBER	LIST PRICE			BOLTS ¹ QTY: SIZE	TIE-RODS			SPOOL		APPROX. WEIGHT (lbs.)
	NOM.	MIN.	MAX.		w/STD B&N	w/304 SS B&N	w/316 SS B&N		SIZE	LENGTH	QTY	OD	THK	
3"	16.50	15.50	17.50	ECF400-03	\$1,308.29	\$1,434.64	\$1,581.75	4: 5/8 - 11	5/8	23.38	2	3.50	0.22	49
4"	16.50	15.50	17.50	ECF400-04	1,344.64	1,471.39	1,627.62	8: 5/8 - 11	5/8	23.75	2	4.50	0.24	58
6"	16.63	15.63	17.63	ECF400-06	1,599.02	1,839.25	1,986.42	8: 3/4 - 10	5/8	24.88	2	6.63	0.28	92
8"	16.63	15.63	17.63	ECF400-08	1,962.46	2,207.10	2,354.24	8: 3/4 - 10	5/8	25.25	2	8.63	0.32	122
10"	19.25	18.25	20.25	ECF400-10	2,798.32	3,163.50	3,310.66	12: 5/8-11 x 7/8-9	3/4	28.75	2	10.75	0.37	204
12"	19.50	18.50	20.50	ECF400-12	3,597.85	3,972.78	4,119.94	12: 7/8 - 9	7/8	29.63	2	12.75	0.38	268
14"	23.75	22.25	25.25	ECF400-14	4,918.33	5,517.37	6,088.10	16: 5/8 - 11	1	35.00	2	14.00	0.25	274
16"	24.75	23.25	26.25	ECF400-16	5,814.74	6,730.50	7,563.83	20: 5/8 - 11	1	36.25	2	16.00	0.25	322
18"	24.75	23.25	26.25	ECF400-18	6,114.77	7,572.94	8,707.49	20: 5/8 - 11	1	36.50	3	18.00	0.25	367
20"	24.88	23.38	26.38	ECF400-20	6,898.67	8,755.82	10,377.83	24: 5/8 - 11	1	37.13	4	20.00	0.25	438
24"	25.13	23.63	26.63	ECF400-24	8,726.14	11,555.75	13,772.21	28: 5/8 - 11	1	37.88	5	24.00	0.25	576
30"	26.38	24.88	27.88	ECF400-30	POA			32: 5/8 - 11	1 1/4	40.63	5	30.00	0.38	908
36"	26.88	25.38	28.38	ECF400-36				36: 5/8 - 11	1 1/4	41.63	7	36.00	0.38	1,272
42"	28.63	27.13	30.13	ECF400-42				40: 5/8 - 11	1 1/4	43.88	9	42.00	0.38	1,673
48"	30.75	29.25	32.25	ECF400-48				44: 5/8 - 11	1 1/2	47.75	8	48.00	0.38	2,098
54"	31.25	29.75	32.75	ECF400-54				48: 5/8 - 11	1 1/2	49.13	10	54.00	0.38	2,670
60"	31.50	30.00	33.00	ECF400-60				56: 5/8 - 11	1 1/2	49.63	13	60.00	0.38	3,245
66"	34.88	33.38	36.38	ECF400-66				60: 5/8 - 11	1 3/4	54.75	11	66.00	0.38	4,052
72"	35.13	33.63	36.63	ECF400-72				64: 5/8 - 11	1 3/4	55.25	13	72.00	0.38	4,659

¹ 3" - 12" Use Through-Bolts

TO ORDER: Specify catalog number.

EXAMPLE: For a 12" ECF400 Order: **ECF400-12**

No Cancel, No Return Item.

FLANGED COUPLING



EJ400 EXPANSION JOINTS

MATERIAL SPECIFICATIONS

ALL STAINLESS STEEL EXPANSION JOINTS AVAILABLE ON REQUEST

BODY: A36 steel.

SLIP PIPE: Type 304 stainless steel.

BOLTS AND NUTS: Trackhead bolts, heavy hex nuts, 5/8" UNC rolled thread, high strength, low alloy, corrosion resistant steel per AWWA C111. Stainless steel available on request.

PACKING: Alternating combination of rubber and wax impregnated flax packing compounded for water service. Other packing material available upon request.

END PREPARATION: Flanged, beveled for welding, grooved plain end, MJ with RomaGrips™ or customer specified.

COATING: Customer specified.

USE: In pipelines where larger than usual longitudinal movements are concentrated. Not recommended for buried applications.



EJ401 WITH FLANGED ENDS

ROMAC EXPANSION JOINTS ARE AVAILABLE IN TWO MODELS

EJ401: No Limit Rods, Single End

EJ403: Limit Rods, Single End. For use when more than one expansion joint is used in series.

Romac Expansion Joints are factory designed and set for 10 inches of movement (total travel), unless otherwise specified. Romac Expansion Joints meet the requirements of AWWA C221.

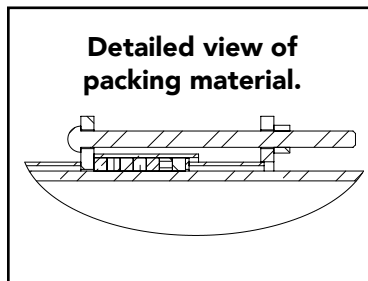
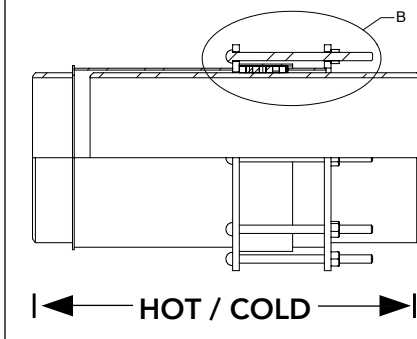


NSF61 certified upon request.

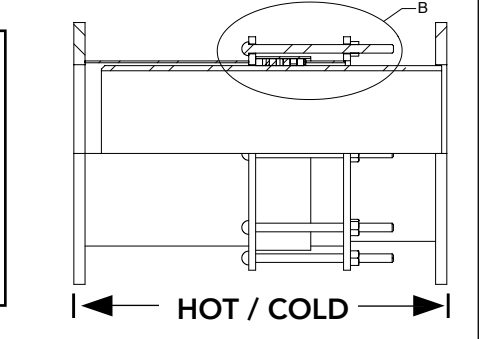
MEETS AWWA C221

EJ401 (NO LIMIT RODS)

BEVELED ENDS



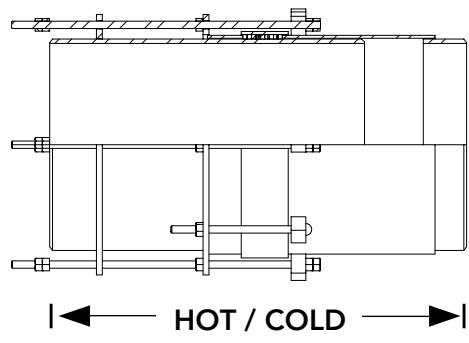
FLANGED ENDS



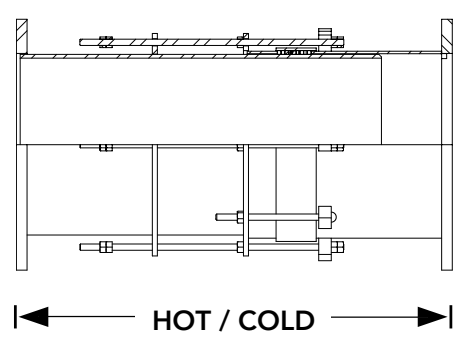
FLANGED COUPLING

EJ403 (WITH LIMIT RODS)

BEVELED ENDS



FLANGED ENDS



EJ401 EXPANSION JOINTS



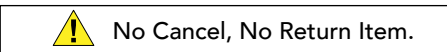
EJ401 (SINGLE END, NO LIMIT RODS) BEVELED ENDS

NOM. PIPE SIZE	PIPE O.D.	CATALOG NUMBER	OVERALL DIMENSIONS			BOLTS 5/8-11 x 11"	LIMIT ROD LENGTH	APPROX. WEIGHT	LIST PRICE
			HOT	COLD	DIAMETER				
3"	3.50	EJ401-03-B	26.19	36.19	7.69	4	NA	36	POA
4"	4.50	EJ401-04-B	26.19	36.19	8.69	4		44	
5"	5.56	EJ401-05-B	26.38	36.38	9.75	4		54	
6"	6.63	EJ401-06-B	26.38	36.38	10.81	5		63	
8"	8.63	EJ401-08-B	26.38	36.38	12.81	6		115	
10"	10.75	EJ401-10-B	26.38	36.38	14.94	7		151	
12"	12.75	EJ401-12-B	26.38	36.38	16.94	8		181	
14"	14.00	EJ401-14-B	28.13	38.13	19.38	8		249	
16"	16.00	EJ401-16-B	28.13	38.13	21.38	8		283	
18"	18.00	EJ401-18-B	28.13	38.13	23.38	8		316	
20"	20.00	EJ401-20-B	28.13	38.13	25.38	10		353	
24"	24.00	EJ401-24-B	28.13	38.13	29.38	12		423	
30"	30.00	EJ401-30-B	28.13	38.13	35.38	14		527	
36"	36.00	EJ401-36-B	28.13	38.13	41.38	16		631	
42"	42.00	EJ401-42-B	28.13	38.13	47.38	20		738	
48"	48.00	EJ401-48-B	28.13	38.13	53.38	22		842	
54"	54.00	EJ401-54-B	28.25	38.25	59.38	24		1132	
60"	60.00	EJ401-60-B	28.25	38.25	65.38	28		1260	
72"	72.00	EJ401-72-B	28.25	38.25	77.38	32		1509	

EJ401 (SINGLE END, NO LIMIT RODS) FLANGED ENDS (AWWA C207 CLASS D)*

NOM. PIPE SIZE	PIPE O.D.	CATALOG NUMBER	OVERALL DIMENSIONS			BOLTS 5/8-11 x 11"	LIMIT ROD LENGTH	APPROX. WEIGHT	LIST PRICE
			HOT	COLD	DIAMETER				
3"	3.50	EJ401-03-F	25.13	35.13	8.25	4	NA	51	POA
4"	4.50	EJ401-04-F	25.13	35.13	9.00	4		62	
5"	5.56	EJ401-05-F	25.25	35.25	10.00	4		74	
6"	6.63	EJ401-06-F	25.44	35.44	11.00	5		77	
8"	8.63	EJ401-08-F	25.44	35.44	13.50	6		138	
10"	10.75	EJ401-10-F	25.56	35.56	16.00	7		182	
12"	12.75	EJ401-12-F	25.94	35.94	19.00	8		238	
14"	14.00	EJ401-14-F	26.13	36.13	21.00	8		326	
16"	16.00	EJ401-16-F	26.13	36.13	23.50	8		379	
18"	18.00	EJ401-18-F	26.38	36.38	25.00	8		418	
20"	20.00	EJ401-20-F	26.50	36.50	27.50	10		484	
24"	24.00	EJ401-24-F	26.88	36.88	32.00	12		614	
30"	30.00	EJ401-30-F	27.13	37.13	38.75	14		815	
36"	36.00	EJ401-36-F	27.88	37.88	46.00	16		1109	
42"	42.00	EJ401-42-F	28.13	38.13	53.00	20		1415	
48"	48.00	EJ401-48-F	28.38	38.38	59.50	22		1706	
54"	54.00	EJ401-54-F	29.25	39.25	66.25	24		2324	
60"	60.00	EJ401-60-F	29.50	39.50	73.00	28		2749	
72"	72.00	EJ401-72-F	30.25	40.25	86.50	32		3882	

* Other Class flanges available on request.
Configurations may change depending on application.



FLANGED COUPLING



EJ403 EXPANSION JOINTS

EJ403 (SINGLE END, WITH LIMIT RODS) BEVELED ENDS

NOM. PIPE SIZE	PIPE O.D.	CATALOG NUMBER	OVERALL DIMENSIONS			BOLTS 5/8-11 x 11"	LIMIT ROD LENGTH	APPROX. WEIGHT	LIST PRICE
			HOT	COLD	DIAMETER				
3"	3.50	EJ403-03-B	30.19	40.19	7.69	4	26.00	47	POA
4"	4.50	EJ403-04-B	30.19	40.19	8.69	4	26.00	56	
5"	5.56	EJ403-05-B	30.38	40.38	9.75	4	25.88	66	
6"	6.63	EJ403-06-B	30.38	40.38	10.81	6	26.00	82	
8"	8.63	EJ403-08-B	30.38	40.38	12.81	6	25.88	139	
10"	10.75	EJ403-10-B	30.38	40.38	14.94	8	26.00	187	
12"	12.75	EJ403-12-B	30.38	40.38	16.94	8	25.88	217	
14"	14.00	EJ403-14-B	32.13	42.13	19.38	8	26.50	285	
16"	16.00	EJ403-16-B	32.13	42.13	21.38	8	26.50	322	
18"	18.00	EJ403-18-B	32.13	42.13	23.38	8	26.50	359	
20"	20.00	EJ403-20-B	32.13	42.13	25.38	10	26.50	401	
24"	24.00	EJ403-24-B	32.13	42.13	29.38	12	26.50	481	
30"	30.00	EJ403-30-B	32.13	42.13	35.38	14	26.50	597	
36"	36.00	EJ403-36-B	32.13	42.13	41.38	16	26.50	714	
42"	42.00	EJ403-42-B	32.13	42.13	47.38	20	26.50	835	
48"	48.00	EJ403-48-B	32.13	42.13	53.38	22	26.50	952	
54"	54.00	EJ403-54-B	32.25	42.25	59.38	24	26.75	1259	
60"	60.00	EJ403-60-B	32.25	42.25	65.38	28	26.75	1401	
72"	72.00	EJ403-72-B	32.25	42.25	77.38	32	26.75	1677	

EJ403 (SINGLE END, WITH LIMIT RODS) FLANGED ENDS

NOM. PIPE SIZE	PIPE O.D.	CATALOG NUMBER	OVERALL DIMENSIONS			BOLTS 5/8-11 x 11"	LIMIT ROD LENGTH	APPROX. WEIGHT	LIST PRICE
			HOT	COLD	DIAMETER				
3"	3.50	EJ403-03-F	40.25	50.25	8.25	4	26.63	59	POA
4"	4.50	EJ403-04-F	40.25	50.25	9.00	4	26.63	72	
5"	5.56	EJ403-05-F	40.56	50.56	10.00	4	26.63	87	
6"	6.63	EJ403-06-F	40.75	50.75	11.00	6	26.75	95	
8"	8.63	EJ403-08-F	40.75	50.75	13.50	6	26.63	180	
10"	10.75	EJ403-10-F	40.88	50.88	16.00	8	26.88	243	
12"	12.75	EJ403-12-F	41.25	51.25	19.00	8	26.75	309	
14"	14.00	EJ403-14-F	41.25	51.25	21.00	8	27.50	363	
16"	16.00	EJ403-16-F	41.38	51.38	23.50	8	27.50	425	
18"	18.00	EJ403-18-F	41.63	51.63	25.00	8	27.75	467	
20"	20.00	EJ403-20-F	41.75	51.75	27.50	10	27.75	539	
24"	24.00	EJ403-24-F	42.13	52.13	32.00	12	27.75	680	
30"	30.00	EJ403-30-F	42.38	52.38	38.75	14	27.75	895	
36"	36.00	EJ403-36-F	43.13	53.13	46.00	16	28.00	1207	
42"	42.00	EJ403-42-F	43.38	53.38	53.00	20	28.00	1534	
48"	48.00	EJ403-48-F	43.63	53.63	59.50	22	28.00	1842	
54"	54.00	EJ403-54-F	44.63	54.63	66.25	24	28.50	2477	
60"	60.00	EJ403-60-F	44.88	54.88	73.00	28	28.50	2924	
72"	72.00	EJ403-72-F	45.63	55.63	86.50	32	28.50	4106	

* Other Class flanges available on request.
Configurations may change depending on application.

No Cancel, No Return Item.

FLANGED COUPLING



SERVICE SADDLES



101U, 101NU & 101SSN
SINGLE U-BOLT SERVICE SADDLES

PAGE 5-3



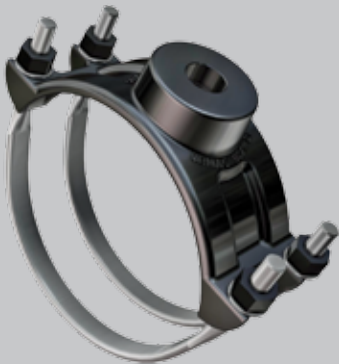
101S & 101NS
SINGLE STRAP SERVICE SADDLES

PAGE 5-5



101B & 101BS
SINGLE STRAP BRONZE SERVICE SADDLES

PAGE 5-7



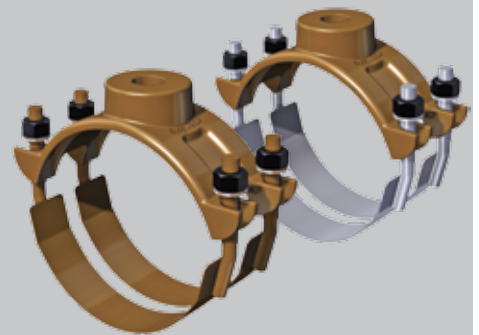
202U, 202NU & 202SSN
DOUBLE U-BOLT SERVICE SADDLES

PAGE 5-4



202S & 202NS
DOUBLE STRAP SERVICE SADDLES

PAGE 5-6



202B & 202BS
DOUBLE STRAP BRONZE SERVICE SADDLES

PAGE 5-7



304 & 306
STAINLESS STEEL SERVICE SADDLES

PAGE 5-8 & 5-9



305
STAINLESS STEEL SERVICE SADDLE

PAGE 5-10



FTS420T
FABRICATED STEEL SERVICE SADDLE

PAGE 5-11

SINGLE U-BOLT & STRAP SERVICE SADDLES



ROMAC INDUSTRIES, INC.

PAINTED SADDLE with U-BOLT

Not recommended for PVC pipe.

MATERIAL SPECIFICATIONS

SADDLE CASTINGS: Ductile iron per ASTM A 536, grade 65-45-12, protected with corrosion-resistant paint.

U-BOLT, AND NUTS: Sizes 1-1/2" through 3", use 1/2" U bolt with heavy hex nuts and 1/2" flat washers, 4" and above use 5/8" U bolt with heavy hex nut and 5/8" flat washers. All sizes are national coarse roll threaded. Steel meets AISI C1018 and is electro-galvanized, optional 316 stainless steel also available.

GASKETS: NBR per ASTM MBC 610, compounded for water and sewer service. NSF61 Certified. Other compounds available on request.



101U

PAINTED SADDLE w/ STAINLESS STEEL STRAP

Recommended for PVC, asbestos-cement, cast iron and steel pipe.

MATERIAL SPECIFICATIONS

SADDLE CASTINGS: Ductile iron per ASTM A-536, grade 65-45-12, protected with corrosion-resistant paint.

STRAP: Type 304 (18-8) heavy gauge Stainless Steel per ASTM A 240. Straps are two inches wide to spread out clamping forces on the pipe. GMAW and GTAW welds. Passivated for corrosion resistance.

BOLTS: For sizes 1-1/2" through 3", 1/2" UNC roll thread Type 304 (18-8) Stainless Steel bolts with heavy hex nuts. 4" and above use 5/8" UNC roll thread Type 304 (18-8) Stainless Steel bolts with heavy hex nuts. Rod for bolts are per ASTM A 240 and nuts are per ASTM A 194. All welds fully passivated for enhanced corrosion resistance. Nuts coated to prevent galling.

WASHERS: Stainless steel per ASTM A 240, type 304.

GASKETS: NBR per ASTM MBC 610, compounded for water and sewer service. NSF61 Certified. Other compounds available on request.



101S

NYLON COATED SADDLE w/ STAINLESS STEEL STRAP

Recommended for asbestos-cement, cast iron or PVC pipe in hot or corrosive soils.

MATERIAL SPECIFICATIONS

SADDLE CASTINGS: Ductile iron per ASTM A-536, grade 65-45-12, covered by black nylon fused coat, approx. 10-12 mil thick, with approximate dielectric strength of 1,000 v/mil. Nylon coating is NSF 61 Certified.

STRAP: Type 304 (18-8) heavy gauge Stainless Steel per ASTM A 240. Straps are two inches wide to spread out clamping forces on the pipe. GMAW and GTAW welds. Passivated for corrosion resistance.

BOLTS: For sizes 1-1/2" through 3", 1/2" UNC roll thread Type 304 (18-8) Stainless Steel bolts with heavy hex nuts. 4" and above use 5/8" UNC roll thread Type 304 (18-8) Stainless Steel bolts with heavy hex nuts. Rod for bolts are per ASTM A 240 and nuts are per ASTM A 194. All welds fully passivated for enhanced corrosion resistance. Nuts coated to prevent galling.

WASHERS: Stainless steel per ASTM A 240, type 304.

GASKETS: NBR per ASTM MBC 610, compounded for water and sewer service. NSF61 Certified. Other compounds available on request.



101NS

NYLON COATED SADDLE w/ U-BOLT

Not recommended for PVC pipe.

MATERIAL SPECIFICATIONS

SADDLE CASTINGS: Ductile iron per ASTM A-536, grade 65-45-12, covered by black nylon fused coat, approx. 10-12 mil thick, with approximate dielectric strength of 1,000 v/mil. Nylon coating is NSF 61 Certified.

U-BOLT, AND NUTS: Sizes 1-1/2" through 3", use 1/2" U bolt with heavy hex nuts and 1/2" flat washers, 4" and above use 5/8" U bolt with heavy hex nut and 5/8" flat washers. All sizes are national coarse roll threaded. Steel meets AISI C1018 and is electro-galvanized, optional 316 stainless steel also available.

GASKETS: NBR per ASTM MBC 610, compounded for water and sewer service. NSF61 Certified. Other compounds available on request.



101NU

BRONZE SADDLE WITH BRONZE STRAP

Recommended for asbestos-cement, cast iron or PVC pipe in hot or corrosive soils.

MATERIAL SPECIFICATIONS

SADDLE CASTINGS: Water works bronze 85-5-5-5.

BRONZE STRAP: Silicon bronze 5/8" national coarse roll thread bolts with 2" wide band for "spreading out" clamping force on pipe. Nuts and washers are silicon bronze.

GASKETS: NBR per ASTM MBC 610, compounded for water and sewer service. NSF61 Certified. Other compounds available on request. Other compounds available on request.

Also available with double strap.



101B



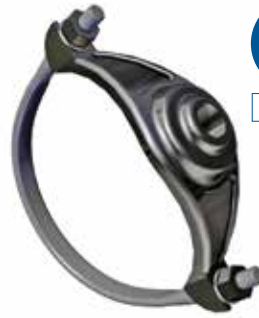
SINGLE U-BOLT SERVICE SADDLES



STYLE 101U
PAINTED SADDLE
WITH STEEL U-BOLT



STYLE 101SSU
NYLON COATED SADDLE
WITH 316 S.S. U-BOLT



STYLE 101NU
NYLON COATED SADDLE
WITH STEEL U-BOLT



STYLE 101NSSU
NYLON COATED SADDLE
WITH 316 S.S. U-BOLT



NOM. PIPE SIZE	O.D. SIZE RANGE	1/2" I.P., 3/4" & 1" I.P. OR C.C. TAP					1 1/4" - 1 1/2" - 2" I.P., OR C.C. TAP (2 1/2" I.P. ONLY)					
		101U	101SSU	101NU	101NSSU	CTN QTY	101U	101SSU	101NU	101NSSU	CTN QTY	APPROX. WEIGHT EA. (lbs.)
1 1/2"	1.90 - 2.13	\$28.01	NA	\$41.61	NA	15	\$51.89 ¹	NA	\$58.25 ¹	NA	15	1.7 #
2"	2.38 - 2.50	30.16	NA	43.92	NA	15	NA	NA	NA	NA	NA	1.7 #
2 1/2"	2.88	32.03	NA	44.80	NA	15	NA	NA	NA	NA	NA	1.7 #
3"	3.50	33.72	NA	47.12	NA	12	NA	NA	NA	NA	NA	2.5 #
	3.45 - 4.05	33.72	NA	47.12	NA	12	NA	NA	NA	NA	NA	2.5 #
4"	4.00 - 4.50	38.31	60.38	52.35	74.29	10	51.89	75.86	69.00	92.93	7	4.3 #
	4.50 - 4.80	38.31	60.38	52.35	74.29	10	51.89	75.86	69.00	92.93	7	4.0 #
6"	4.50 - 5.40	39.86	60.64	54.56	75.34	10	54.29	76.39	71.48	93.45	7	4.0 #
	6.00 - 6.63	43.31	70.88	58.35	85.84	5	60.35	82.16	79.04	100.54	5	5.1 #
6"	6.63 - 6.90	43.31	70.88	58.35	85.84	6	60.35	82.16	79.04	100.54	5	4.8 #
	6.63 - 7.60	46.29	79.28	61.32	87.41	6	65.15	82.69	84.41	102.11	5	4.8 #
8"	8.00 - 8.63	52.42	83.48	70.51	101.59	4	71.23	98.96	93.45	121.01	4	5.5 #
	8.63 - 9.05	52.42	83.48	70.51	101.59	5	71.23	98.96	93.45	121.01	4	5.0 #
8"	8.63 - 9.80	55.53	84.53	74.41	100.59	5	82.28	100.28	104.46	122.33	4	5.0 #
	10.00 - 11.10	64.70	102.61	75.35	112.61	6	99.39	128.36	108.30	137.29	6	7.5 #
10"	11.10 - 12.12	64.70	102.11	75.35	112.61	6	99.39	128.36	108.30	137.29	6	7.5 #
	12.00 - 13.20	69.57	105.53	94.16	130.20	5	101.21	157.24	125.82	159.34	5	9.0 #
12"	13.20 - 14.38	69.57	105.53	94.16	130.20	5	101.21	157.24	125.82	160.39	5	9.0 #

Prices and weights shown are per saddle.

¹ 1 1/4" IP tap only.

Manufacturer Recommendations:

Service saddles with U-Bolts are not recommended for use on PVC pipe.

FOR COPPER PIPE Romac recommends single strap saddles which should be preformed at the factory, or see 304/306 stainless steel saddles.

TO ORDER: Add tap size to the upper range of the saddle.

	STYLE	UPPER RANGE	TAP SIZE	TYPE THREAD
EXAMPLE: Painted Saddle with Steel U-Bolt:	101U	- 7.60	x 3/4"	IP
Painted Saddle with Stainless Steel U-Bolt:	101SSU	- 7.60	x 3/4"	IP
Nylon Saddle—add designation "NSSU":	101NSSU	- 7.60	x 3/4"	IP

DOUBLE U-BOLT SERVICE SADDLES



STYLE 202U
PAINTED SADDLE
WITH U-BOLTS

STYLE 202SSU
PAINTED SADDLE
WITH 316 S.S. U-BOLTS

STYLE 202NU
NYLON COATED SADDLE
WITH U-BOLTS

STYLE 202NSSU
NYLON COATED SADDLE
WITH 316 S.S. U-BOLTS

NOM. PIPE SIZE	O.D. SIZE RANGE	1/2" I.P., 3/4" & 1" I.P. OR C.C. TAP					1 1/4" - 1 1/2" - 2" I.P., OR C.C. TAP (2 1/2" I.P. ONLY)					
		202U	202SSU	202NU	202NSSU	CTN QTY	202U	202SSU	202NU	202NSSU	CTN QTY	APPROX. WEIGHT EA. (lbs.)
2"	2.38 - 2.50 ¹	\$41.18	NA	\$64.05	NA	10	\$43.22 ¹	NA	\$69.47 ¹	NA	10	3.5 #
	3.50 ²	48.99	NA	72.74	NA	8	63.50	NA	83.33	NA	8	5.0 #
3"	3.45 - 4.05 ²	51.21	NA	74.95	NA	8	65.68	NA	85.49	NA	8	5.0 #
	4.00 - 4.50	57.75	102.90	77.65	126.00	5	73.42	117.60	88.44	137.03	5	7.5 #
4"	4.50 - 4.80	57.75	102.90	77.65	126.00	5	73.42	117.60	88.44	137.03	5	7.5 #
	4.50 - 5.40	57.75	103.95	79.92	126.00	5	73.42	117.60	91.91	137.03	5	7.5 #
	6.00 - 6.63	65.86	115.76	89.42	144.38	6	80.96	130.20	102.06	156.71	6	9.0 #
6"	6.63 - 6.90	65.86	115.76	89.42	144.38	6	80.96	130.20	102.06	156.71	6	9.0 #
	6.63 - 7.60	65.86	115.76	100.03	144.38	6	80.96	130.20	113.28	156.71	6	9.0 #
	8.00 - 8.63	77.67	139.91	101.04	167.74	4	96.90	160.91	111.78	178.76	4	10.0 #
8"	8.63 - 9.05	77.67	139.91	101.04	167.74	4	96.90	160.91	111.78	178.76	4	10.0 #
	8.63 - 9.80	77.67	144.64	103.35	167.74	4	96.90	160.91	120.46	178.76	4	10.0 #
	10.00 - 11.10	100.40	169.58	133.06	202.13	4	127.82	160.91	151.96	217.88	4	11.5 #
10"	11.10 - 12.12	100.40	169.58	133.06	202.13	4	127.82	160.91	151.96	217.88	4	11.5 #
	12.00 - 13.20	120.44	196.35	159.17	235.20	4	150.38	224.18	177.92	251.74	4	12.5 #
12"	13.20 - 14.38	120.44	196.35	159.17	235.20	3	150.38	227.33	177.92	251.74	3	12.5 #
14"	15.30 - 16.80	POA					POA					15.3 #
16"	17.40 - 18.90											16.0 #
18"	19.50 - 21.10											18.0 #
20"	21.10 - 22.70											20.0 #
22"	22.70 - 24.30											21.0 #
24"	24.30 - 25.90											23.0 #
26"	25.70 - 27.30											24.0 #
28"	27.30 - 28.90											24.5 #
30"	28.90 - 30.50											25.0 #
	30.50 - 32.10											26.0 #

Prices and weights shown are per saddle.

¹ 202 - 2.50 can accommodate up to 1 1/2" I.P. and 1 1/4" C.C.

² 202 for 3" nominal size can accommodate up to 2" I.P. and 1 1/2" C.C.

TO ORDER: Add tap size to the upper range of the saddle.

EXAMPLE: Painted Saddle with Steel U-Bolt: **202U - 7.60 x 3/4" IP**

Stainless Steel U-Bolt - add letters "SS": **202SSU - 7.60 x 3/4" IP**

Nylon Saddle - add designation "NU": **202NU - 7.60 x 3/4" IP**

Nylon Saddle with Stainless Steel U-Bolt: **202NSSU - 7.60 x 3/4" IP**

Manufacturer Recommendations:

Service saddles with U-Bolts are not recommended for use on PVC pipe.

FOR COPPER PIPE Romac recommends single strap saddles which should be preformed at the factory, or see 304/306 stainless steel saddles.

SERVICE SADDLES



SINGLE STRAP SERVICE SADDLES



Certified to NSF/ANSI 61 & 372



STYLE 101S
PAINTED SADDLE
WITH STAINLESS STEEL STRAP



STYLE 101NS
NYLON COATED SADDLE
WITH STAINLESS STEEL STRAP

NOM. PIPE SIZE	O.D. SIZE RANGE	1/2" I.P., 3/4" & 1" I.P. OR C.C. TAP			1 1/4" - 1 1/2" - 2" I.P., OR C.C. TAP (2 1/2" I.P. ONLY)			APPROX. WEIGHT EA. (lbs.)
		101S	101NS	CTN QTY	101S	101NS	CTN QTY	
1 1/2"	1.90 - 2.13	\$52.64	\$66.23	15	\$68.03 ¹	\$84.56 ¹	15	1.7 #
2"	2.38 - 2.50	53.31	67.06	15	NA	NA	NA	1.7 #
2 1/2"	2.88	54.31	67.06	15	NA	NA	NA	1.7 #
3"	3.50	55.30	68.73	12	NA	NA	NA	2.5 #
	3.45 - 4.05 ²	55.30	68.73	12	NA	NA	NA	2.5 #
4"	4.00 - 4.50	58.65	72.71	10	74.05	91.14	7	4.3 #
	4.50 - 4.80	58.65	72.71	10	74.05	91.14	7	4.0 #
	4.50 - 5.40 ³	58.83	73.52	10	74.59	91.79	7	4.0 #
6"	6.00 - 6.63	69.21	84.23	5	80.26	98.94	5	5.1 #
	6.63 - 6.90	69.21	84.23	6	80.26	98.94	5	4.8 #
	6.63 - 7.60 ³	77.52	85.59	6	81.03	100.29	5	4.8 #
8"	8.00 - 8.63	81.85	99.91	4	97.14	119.36	4	5.5 #
	8.63 - 9.05	81.85	99.91	5	97.14	119.36	4	5.0 #
	8.63 - 9.80 ³	82.70	101.60	5	98.52	120.69	4	5.0 #
10"	10.00 - 11.10	100.33	110.97	6	126.67	135.59	6	7.5 #
	11.10 - 12.12 ³	100.33	110.97	6	126.67	135.59	6	7.5 #
12"	12.00 - 13.20	103.78	128.38	5	155.58	157.61	5	9.0 #
	13.20 - 14.38 ³	103.78	128.38	5	155.58	157.61	5	9.0 #

Prices and weights shown are per saddle.

¹ 1 1/4" IP tap only.

² Not recommended for iron pipe size PVC

³ Not recommended for PVC pipe.

Manufacturer Recommendations:

For PVC applications select the saddle with the top of range number that is closest to the diameter of the pipe.

FOR COPPER PIPE Romac recommends single strap saddles which should be preformed at the factory, or see 304/306 stainless steel saddles.

TO ORDER: Add tap size to the upper range of the saddle.

EXAMPLE:

Painted Saddle with Stainless Steel Strap:

STYLE UPPER RANGE TAP SIZE TYPE
101S - 7.60 x 3/4" IP

Nylon Saddle—add designation "NS":

101NS - 7.60 x 3/4" IP

DOUBLE STRAP SERVICE SADDLES



Certified to NSF/ANSI 61 & 372



STYLE 202S
PAINTED SADDLE WITH STAINLESS STEEL STRAPS



STYLE 202NS
NYLON COATED SADDLE WITH STAINLESS STEEL STRAPS

NOM. PIPE SIZE	O.D. SIZE RANGE	1/2" I.P., 3/4" & 1" I.P. OR C.C. TAP			1 1/4" - 1 1/2" - 2" I.P., OR C.C. TAP (2 1/2" I.P. ONLY)			APPROX. WEIGHT EA. (lbs.)
		202S	202NS	CTN QTY	202S	202NS	CTN QTY	
2"	2.38 - 2.50 ¹	\$100.37	\$123.22	10	\$108.85 ¹	\$135.09 ¹	10	3.5 #
3"	3.50 ²	100.56	124.30	8	115.53	135.35	8	5.0 #
	3.45 - 4.05 ^{2,3}	100.56	124.30	8	115.53	135.35	8	5.0 #
4"	4.00 - 4.50	101.22	124.30	5	115.53	135.35	5	7.5 #
	4.50 - 4.80	101.22	124.30	5	115.53	135.35	5	7.5 #
	4.50 - 5.40 ⁴	102.17	124.30	5	115.53	135.35	5	7.5 #
6"	6.00 - 6.63	113.94	142.80	6	128.38	155.11	6	9.0 #
	6.63 - 6.90	113.94	142.80	6	128.38	155.11	6	9.0 #
	6.63 - 7.60 ⁴	113.94	142.80	6	128.38	155.11	6	9.0 #
8"	8.00 - 8.63	138.22	166.09	4	159.09	177.03	4	10.0 #
	8.63 - 9.05	138.22	166.09	4	159.09	177.03	4	10.0 #
	8.63 - 9.80 ⁴	143.06	166.09	4	159.09	177.03	4	10.0 #
10"	10.00 - 11.10	167.92	200.55	4	192.05	216.16	4	11.5 #
	11.10 - 12.12 ⁴	167.92	200.55	4	192.05	216.16	4	11.5 #
12"	12.00 - 13.20	194.68	233.45	4	222.48	250.02	4	12.5 #
	13.20 - 14.38 ⁴	194.68	233.45	3	222.48	250.02	3	12.5 #
14"	15.30 - 16.80	232.97	272.06	4	235.69	289.80	4	15.3 #
16"	17.40 - 18.90	237.36	319.90	3	266.47	341.94	3	16.0 #
18"	19.50 - 21.10	364.98	445.76	3	386.87	468.01	3	18.0 #
20"	21.10 - 22.70	408.69	499.00	3	433.31	524.15	3	20.0 #
22"	22.70 - 24.30	429.16	524.24	3	454.89	550.37	3	21.0 #
24"	24.30 - 25.90	480.71	587.16	3	509.50	616.39	3	23.0 #
26"	25.70 - 27.30	485.51	591.97	3	514.31	621.22	3	24.0 #
28"	27.30 - 28.90	490.33	596.77	3	519.12	626.03	3	24.5 #
30"	28.90 - 30.50	495.14	601.59	3	523.92	630.83	3	25.0 #
	30.50 - 32.10	499.94	606.40	3	528.74	635.65	3	26.0 #

Prices and weights shown are per saddle.

¹ 202 - 2.50 can accommodate up to 1 1/2" I.P. and 1 1/4" C.C.

² 202 for 3" nominal size can accommodate up to 2" I.P. and 1 1/2" C.C.

³ Not recommended for iron pipe size PVC

⁴ Not recommended for PVC pipe.

Manufacturer Recommendations:

For PVC applications select the saddle with the top of range number that is closest to the diameter of the pipe.

FOR COPPER PIPE Romac recommends single strap saddles which should be preformed at the factory, or see 304/306 stainless steel saddles.

TO ORDER: Add tap size to the upper range of the saddle.

STYLE	UPPER RANGE	TAP SIZE	TYPE THREAD
EXAMPLE: Painted Saddle with Stainless Strap:	202S	7.60	x 3/4" IP
Nylon Saddle with Stainless Steel strap:	202NS	7.60	x 3/4" IP

SERVICE SADDLES



BRONZE SINGLE/DOUBLE STRAP SERVICE SADDLES



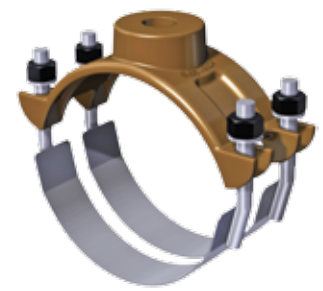
STYLE 101B
BRONZE SADDLE
WITH BRONZE STRAP



STYLE 101BS
BRONZE SADDLE
WITH STAINLESS STRAP



STYLE 202B
BRONZE SADDLE
WITH BRONZE STRAPS



STYLE 202BS
BRONZE SADDLE
WITH STAINLESS STRAPS

NOM. PIPE SIZE	BRONZE SINGLE STRAP SERVICE SADDLES				BRONZE DOUBLE STRAP SERVICE SADDLES				
	O.D. SIZE RANGE	1/2" I.P., 3/4" & 1" I.P. or C.C.		APPROX. WEIGHT EA. (lbs.)	1/2" I.P., 3/4" & 1" I.P. or C.C.		1 1/4", 1 1/2", 2" I.P. or C.C.		APPROX. WEIGHT EA. (lbs.)
		101B	101BS		202B	202BS	202B	202BS	
4"	4.50 - 4.80	N/A			\$198.05	\$174.51	\$245.23	\$203.57	8.0 #
	4.50 - 5.40	\$118.30	\$96.25	4.0 #	N/A				
	4.80 - 5.40	N/A			198.05	174.51	245.23	203.57	8.0 #
6"	6.00 - 6.63	140.97	117.06	4.75 #	N/A				
	6.63 - 7.50 ¹	140.97	117.06	4.75 #	246.11	205.60	250.29	235.03	9.0 #
8"	8.00 - 8.63	147.98	149.22	5.0 #	N/A				
	8.63 - 9.62 ¹	147.98	149.22	5.0 #	281.72	254.44	285.90	267.88	11.5 #
10"	10.00 - 10.75	193.57	195.20	7.5 #	329.84	315.25	334.05	346.29	11.0 #
	11.10 - 12.12	193.57	195.20	7.5 #	329.84	315.25	334.05	346.29	11.0 #
12"	12.00 - 12.75	206.15	207.86	9.0 #	347.41	350.50	369.81	395.39	12.0 #
	13.20 - 14.38	206.15	207.86	9.0 #	347.41	350.50	369.81	395.39	12.0 #
14"	14.40 - 16.00	N/A			382.15	389.33	408.08	441.67	13.0 #
16"	16.00 - 17.40	N/A			438.66	464.57	477.23	521.15	15.0 #
	17.32 - 17.45	N/A			438.66	464.57	477.23	521.15	15.0 #

¹ For PVC pipe, choose the saddle that has the OD closest to the top of the saddle's OD range.

Saddles for ductile iron size PVC (C-900), and iron pipe size PVC should be preformed at factory.

When ordering for PVC pipe, specify O.D. (D.I. or IPS).

TO ORDER: Add tap size to the upper range of the saddle.

EXAMPLE:

	STYLE	UPPER RANGE	TAP SIZE	TYPE THREAD
Bronze Saddle w/ Bronze strap ("B"):	202B	7.50	x 3/4"	IP
Bronze Saddle w/ Stainless Steel strap ("BS"):	202BS	7.50	x 3/4"	IP

STYLE 304

ALL STAINLESS STEEL SERVICE SADDLES



MATERIAL SPECIFICATIONS

SHELLS: Stainless steel per ASTM A 240, type 304, fully passivated ¹.

BOLTS: UNC rolled thread, stainless steel per ASTM A 193, type 304. Fasteners coated to prevent galling.

NUTS: Stainless steel per ASTM A 194, type 304.

WASHERS: Stainless steel per ASTM A 240, type 304 and plastic lubricating washers.

GASKET: NBR per ASTM D 2000 MBC 610, compounded for water and sewer service. Other compounds available on request.

TAPPED OUTLET: Stainless steel per ASTM A 240, type 304.



MEETS
AWWA C800

NOM. PIPE SIZE	O.D. PIPE RANGE	LENGTH	BOLT SIZE	304 SINGLE BOLT (not recommended for A/C pipe)		APPROX. WEIGHT (lbs.)
				TAP		
				I.P. 1/2" - 1"	C.C. 3/4" OR 1"	
2"	2.13 2.38	4"	1/2"	\$84.63	\$84.63	2 #
2 1/2"	2.63 - 2.88	4"	1/2"	86.92	86.92	2 #
3"	3.00 - 3.25	4"	1/2"	88.62	88.62	2 #
	3.25 - 3.50					
	3.50 - 3.75					
	3.75 - 4.00					
4"	4.00 - 4.30	4"	1/2"	103.70	103.70	3 #
	4.50 - 4.80					
	4.80 - 5.20					
5"	5.20 - 5.60	4"	1/2"	105.00	105.00	3 #
	5.60 - 6.00					
6"	6.00 - 6.40	4"	5/8"	142.85	142.85	4 #
	6.50 - 6.90					
	6.90 - 7.30					
8"	8.00 - 8.40	4"	5/8"	144.68	144.68	5 #
	8.63 - 9.05					
	9.05 - 9.45					

¹ Passivated: Chemically treated after welding to produce a highly corrosion-resistant coating.

For easiest installation, choose the saddle with your pipe OD closest to the bottom of the range.

Other ODs available P.O.A.

TO ORDER: Use upper range when ordering. Add tap size. Be specific when ordering.

Tapped outlet products are NO CANCEL/NO RETURN items.

EXAMPLE: 304 - 4.80 x 3/4" I.P.



STYLE 306

ALL STAINLESS STEEL SERVICE SADDLES

MATERIAL SPECIFICATIONS

- SHELLS:** Stainless steel per ASTM A 240, type 304, fully passivated ¹.
- BOLTS:** UNC rolled thread, stainless steel per ASTM A 193, type 304. Fasteners coated to prevent galling.
- NUTS:** Stainless steel per ASTM A 194, type 304.
- WASHERS:** Stainless steel per ASTM A 240, type 304 and plastic lubricating washers.
- GASKET:** NBR per ASTM D 2000 MBC 610, compounded for water and sewer service. Other compounds available on request.
- TAPPED OUTLET:** Stainless steel per ASTM A 240, type 304.



**MEETS
AWWA C230**

NOM. PIPE SIZE	O.D. PIPE RANGE	306 DOUBLE BOLT (can be used with A/C pipe)				APPROX. WEIGHT (lbs.)
		TAP				
		I.P.		C.C.		
		1/2" - 1"	1 1/4" - 2"	3/4" - 1"	1 1/4" - 2"	
2"	2.13 - 2.38	\$87.83	N/A	\$87.83	N/A	2 #
2 1/2"	2.63 - 2.88	89.81	195.70 ⁴	89.81	N/A	2 #
3"	3.00 - 3.25 ² 3.25 - 3.50 ² 3.50 - 3.75 ³ 3.75 - 4.00 ³	91.91	199.01	91.91	199.01	3 #
4"	4.00 - 4.30 4.50 - 4.80 4.80 - 5.20	105.39	204.08	105.39	204.08	4 #
5"	5.20 - 5.60 5.60 - 6.00	107.73	206.08	107.73	206.08	4 #
6"	6.00 - 6.40 6.50 - 6.90 6.90 - 7.30	150.71	212.09	150.71	212.09	4 #
8"	8.00 - 8.40 8.63 - 9.05 9.05 - 9.45	152.93	221.08	152.93	221.08	6 #
10"	10.00 - 10.40 10.70 - 11.10 11.10 - 11.50	186.32	233.13	186.32	233.13	8 1/2 #
12"	12.00 - 12.40 12.75 - 13.20 13.20 - 13.60	190.58	246.21	190.58	246.21	9 #

¹ Passivated: Chemically treated after welding to produce a highly corrosion-resistant coating.

² Not available with 2" Tap.

³ 2" CC Not Available.

⁴ Only available with 1 1/4" IP Tap.

For easiest installation, choose the saddle with your pipe OD closest to the bottom of the range.

Other ODs available P.O.A.

306 LENGTH & BOLT SIZE	
(A)	2" through 5" nominal sizes with small (3/4" or 1") taps are 6" long with two 1/2" bolts.
(B)	3" through 5" sizes with large (1 1/4", 1 1/2", or 2") taps are 8" long with two 5/8" bolts.
(C)	6" through 12" sizes with small (3/4" or 1") taps are 6" long with two 5/8" bolts.
(D)	6" through 12" sizes with large (1 1/4", 1 1/2", or 2") taps are 8" long with two 5/8" bolts.

TO ORDER: Use upper range when ordering. Add tap size. Be specific when ordering.

Tapped outlet products are NO CANCEL/NO RETURN items.

EXAMPLE: 306 - 4.80 x 3/4" I.P.

STYLE 305

ALL STAINLESS STEEL SERVICE SADDLES



MATERIAL SPECIFICATIONS

SHELLS: Stainless steel per ASTM A 240, type 304, fully passivated¹.

BOLTS: UNC rolled thread, stainless steel per ASTM A 193, type 304. Fasteners coated to prevent galling.

NUTS: Stainless steel per ASTM A 194, type 304.

Washers: Stainless steel per ASTM A 240, type 304 and plastic lubricating washers.

GASKET: Pad with O-ring gasket. NBR per ASTM D 2000 MBC 610, compounded for water and sewer service. Other compounds available on request.

TAPPED OUTLET: Stainless steel per ASTM A 240, type 304.

Not recommended for concrete cylinder pipe.



**MEETS
AWWA C800**

305 MULTI BOLT (can be used on A/C pipe)						
NOMINAL PIPE SIZE	O.D. PIPE RANGE	8" WIDE			10" WIDE	APPROX. WEIGHT (lbs.)
		I.P. 1/2"	I.P. or C.C. 3/4", 1"	I.P. or C.C. 1 1/4", 1 1/2", 2"	FIP or MIP 2 1/2", 3"	
10" - 12"	10.00 - 10.80	\$260.63 (4 bolts)	\$260.63 (4 bolts)	\$297.44 (4 bolts)	\$676.62 (6 bolts)	14 #
	10.80 - 11.60					
	12.00 - 12.80					
	12.80 - 13.60					
	13.70 - 14.50					
14" - 16"	15.00 - 15.80	331.02 (4 bolts)	331.02 (4 bolts)	380.73 (4 bolts)	759.83 (6 bolts)	16 #
	15.90 - 16.70					
	16.70 - 17.50					
16" - 18"	17.30 - 18.10	385.11 (4 bolts)	385.11 (4 bolts)	440.50 (6 bolts)	819.68 (6 bolts)	17 #
	18.15 - 18.95					
	19.00 - 19.80					
18" - 20"	19.30 - 20.10	432.34 (4 bolts)	432.34 (4 bolts)	576.60 (6 bolts)	955.78 (6 bolts)	18 #
	20.00 - 20.80					
	21.10 - 21.90					
22" - 24"	22.00 - 22.80	456.54 (6 bolts)	456.54 (6 bolts)	600.56 (6 bolts)	962.89 (6 bolts)	19 #
	23.20 - 24.00					
	24.60 - 25.40					
	25.70 - 26.50					

¹ Passivated: Chemically treated after welding to produce a highly corrosion-resistant coating.

Other ODs available P.O.A.

TO ORDER: Use upper range when ordering. Add tap size. Be specific when ordering.

Tapped outlet products are NO CANCEL/NO RETURN items.

EXAMPLE: 305 - 10.80 x 3/4" I.P.



FTS420T FABRICATED STEEL TAPPING SADDLE

MATERIAL SPECIFICATIONS

BODY: Carbon steel, A-36 or equal.

OUTLET: NPT (IP) or AWWA (CC) Female Threads

BOLTS AND NUTS: Trackhead bolts, heavy hex nuts, 3/4" UNC rolled thread, high strength, low alloy, steel per AWWA C111. Optional stainless steel, type 304.

GASKETS: SBR per ASTM D 2000 MBA 710, compounded for water and sewer service use. Other compounds available on request.

COATING: Romac shopcoat for corrosion protection in transit. Optional fusion epoxy 8-12 mil. lined and coated. Other coatings available. Romac packages sleeves to protect any special coatings.

(Contact Factory for IPS size PVC pipe)



NSF61 certified upon request.



MEETS AWWA C230

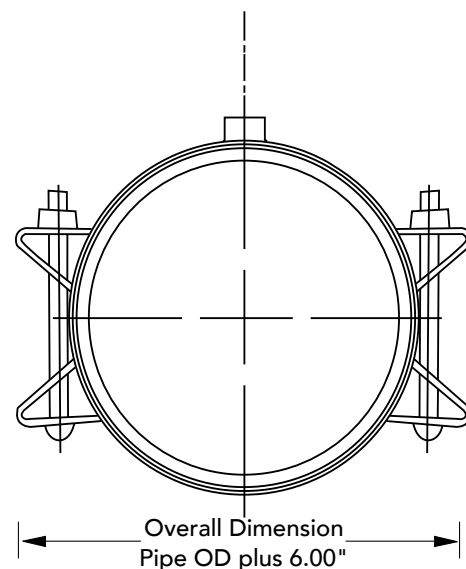
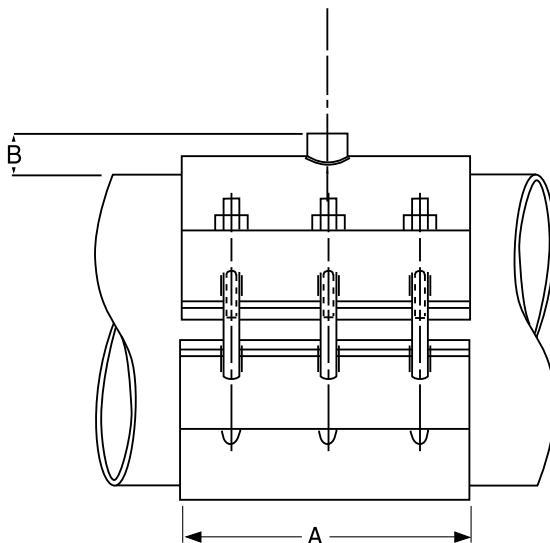
USE

The FTS420T Fabricated Tapping Saddle is used to make a branch outlet from a main supply line on most types of pipe except reinforced concrete cylinder pipe.

Romac's unique sealing gasket is reinforced with a stainless steel ring, molded into the gasket in our own rubber facility. This eliminates the need for a groove in the sleeve, making the shell "full strength."

MAIN SIZE	OUTLET SIZE	A	B	BOLTS QTY: SIZE
6" - 32"	1/2" - 2 1/2"	8"	1.7	4: 3/4" x 9" ¹
6" - 20"	3"	8"	2.0	4: 3/4" x 9" ¹
24" - 32"	3"	12"	2.0	6: 3/4" x 9"
6" - 32"	4"	12"	2.2	6: 3/4" x 9" ¹

¹Bolts are 8" long up through 12".

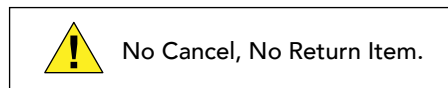


FTS420T FABRICATED STEEL TAPPING SADDLE



NOM. PIPE SIZE	SLEEVE O.D. RANGE	SLEEVE #	BY	OUTLET SIZE	LIST PRICE EACH				APPROX. WEIGHT (lbs.)
					SHOPCOAT		FUSION EPOXY		
					w/STD B&N	w/304 SS B&N	w/STD B&N	w/304 SS B&N	
6"	6.83 - 7.16	FTS420T - 7.16	X	1/2" IP	\$436.77	\$520.26	\$523.48	\$606.96	29#
	7.05 - 7.40	FTS420T - 7.40		3/4", 1", 1 1/4", 1 1/2", 2" 2 1/2" IP, CC	436.77	520.26	523.48	606.96	29#
	7.40 - 7.73	FTS420T - 7.73		3" FIP	540.29	623.79	626.99	710.48	33#
				4" FIP	617.90	743.10	747.95	873.15	50#
8"	7.74 - 8.35	FTS420T - 8.35	X	1/2" IP	453.72	537.21	547.70	631.17	34#
	8.36 - 8.75	FTS420T - 8.75		3/4", 1", 1 1/4", 1 1/2", 2" 2 1/2" IP, CC	453.72	537.21	547.70	631.17	34#
	8.98 - 9.37	FTS420T - 9.37		3" FIP	557.23	640.74	651.19	734.69	38#
	9.27 - 9.69	FTS420T - 9.69		4" FIP	633.96	759.15	774.87	900.06	59#
10"	9.83 - 10.25	FTS420T - 10.25	X	1/2" IP	584.70	668.19	686.75	770.22	39#
	10.64 - 10.86	FTS420T - 10.86		3/4", 1", 1 1/4", 1 1/2", 2" 2 1/2" IP, CC	584.70	668.19	686.75	770.22	39#
	10.87 - 11.02	FTS420T - 11.02		3" FIP	688.20	771.68	790.24	873.72	43#
	11.03 - 11.47	FTS420T - 11.47		4" FIP	750.03	875.23	903.13	1,028.33	66#
12"	12.25 - 12.61	FTS420T - 12.61	X	1/2" IP	607.10	690.56	719.92	803.41	44#
	12.62 - 12.88	FTS420T - 12.88		3/4", 1", 1 1/4", 1 1/2", 2" 2 1/2" IP, CC	607.10	690.56	719.92	803.41	44#
	13.13 - 13.60	FTS420T - 13.60		3" FIP	710.59	794.08	823.44	906.94	48#
	13.60 - 14.09	FTS420T - 14.09		4" FIP	769.70	894.91	938.98	1,064.17	74#
14"	14.59 - 15.08	FTS420T - 15.08	X	1/2" IP	628.53	711.99	751.72	835.19	47#
	15.23 - 15.80	FTS420T - 15.80		3/4", 1", 1 1/4", 1 1/2", 2" 2 1/2" IP, CC	628.53	711.99	751.72	835.19	47#
	15.73 - 16.22	FTS420T - 16.22		3" FIP	732.00	815.48	855.19	938.66	51#
	16.30 - 16.73	FTS420T - 16.73		4" FIP	789.13	914.32	973.81	1,099.00	78#
16"	16.74 - 17.26	FTS420T - 17.26	X	1/2" IP	650.44	733.93	794.30	877.77	54#
	17.33 - 17.87	FTS420T - 17.87		3/4", 1", 1 1/4", 1 1/2", 2" 2 1/2" IP, CC	650.44	733.93	794.30	877.77	54#
	17.88 - 18.43	FTS420T - 18.43		3" FIP	753.94	837.42	897.78	981.28	58#
	18.44 - 18.61	FTS420T - 18.61		4" FIP	808.52	933.74	1,024.36	1,149.57	88#
18"	18.87 - 19.45	FTS420T - 19.45	X	1/2" IP	677.53	761.03	826.38	909.89	63#
	19.41 - 20.01	FTS420T - 20.01		3/4", 1", 1 1/4", 1 1/2", 2" 2 1/2" IP, CC	677.53	761.03	826.38	909.89	63#
	20.00 - 20.60	FTS420T - 20.60		3" FIP	781.05	864.53	929.92	1,013.39	78#
	20.29 - 20.94	FTS420T - 20.94		4" FIP	854.84	980.05	1,078.23	1,203.44	96#
20"	21.51 - 22.15	FTS420T - 22.15	X	1/2" IP	713.03	796.51	866.89	950.37	65#
	22.16 - 22.81	FTS420T - 22.81		3/4", 1", 1 1/4", 1 1/2", 2" 2 1/2" IP, CC	713.03	796.51	866.89	950.37	65#
	22.78 - 23.45	FTS420T - 23.45		3" FIP	816.51	900.01	970.38	1,053.86	69#
	23.46 - 24.16	FTS420T - 24.16		4" FIP	864.54	989.75	1,095.46	1,220.66	106#
24"	24.82 - 25.52	FTS420T - 25.52	X	1/2" IP	742.61	826.09	914.12	992.53	111#
	25.71 - 26.41	FTS420T - 26.41		3/4", 1", 1 1/4", 1 1/2", 2" 2 1/2" IP, CC	742.61	826.09	914.12	992.53	111#
	26.55 - 27.25	FTS420T - 27.25		3" FIP	890.54	974.00	1,140.25	1,223.74	115#
	27.26 - 27.96	FTS420T - 27.96		4" FIP	890.54	1,015.72	1,140.25	1,265.45	119#
30"	27.96 - 28.13	FTS420T - 28.13	X	1/2" IP	807.42	890.90	986.63	1,070.11	131#
	28.14 - 28.84	FTS420T - 28.84		3/4", 1", 1 1/4", 1 1/2", 2" 2 1/2" IP, CC	807.42	890.90	986.63	1,070.11	131#
	29.78 - 30.48	FTS420T - 30.48		3" FIP	963.01	1,046.49	1,231.78	1,315.25	135#
	30.48 - 31.18	FTS420T - 31.18		4" FIP	963.01	1,088.22	1,231.78	1,357.00	139#
	31.52 - 32.22	FTS420T - 32.22							

Other sizes, ranges and outlets available. Price on application.



TO ORDER: Specify catalog number by the desired O.D. range and outlet size. Add S.S. for optional 304 stainless steel bolts & nuts, and F.E. for optional 8 to 12 mils of fusion bonded epoxy.

EXAMPLE: FTS420T - 17.87 x 21/2" IP - SSFE

SERVICE SADDLES



TAPPING SLEEVES



SST
STAINLESS STEEL TAPPING SLEEVE WITH FULL CIRCUMFERENTIAL SEAL.

PAGE 6-4



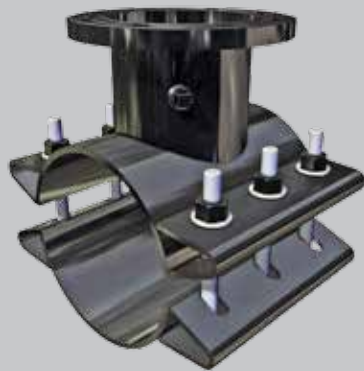
SST III
STAINLESS STEEL TAPPING SLEEVE WITH TRIANGULAR SIDEBARS AND FULL CIRCUMFERENTIAL SEAL

PAGE 6-6



FTS 419
FABRICATED STEEL TAPPING SLEEVE

PAGE 6-8



FTS 420
FABRICATED STEEL TAPPING SLEEVE WITH TRIANGULAR SIDEBARS

PAGE 6-10



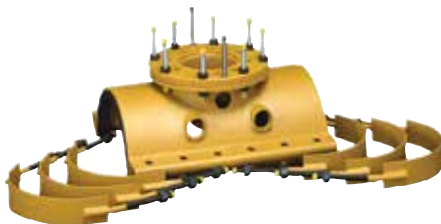
STS 420
STAINLESS STEEL TAPPING SLEEVE WITH TRIANGULAR SIDEBARS

PAGE 6-13



FTS 425
FABRICATED STEEL TAPPING SLEEVE

PAGE 6-16



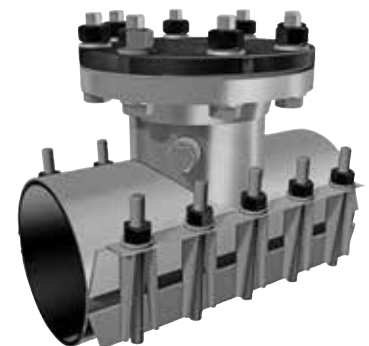
FTS 435
FABRICATED STEEL TAPPING SLEEVE FOR CONCRETE STEEL CYLINDER PIPE

PAGE 6-18



FTS 445
FABRICATED STEEL TAPPING SLEEVE FOR WELD-ON OUTLETS

PAGE 6-19



SST-X
STAINLESS STEEL LINE STOPPING SLEEVE

PAGE 6-20

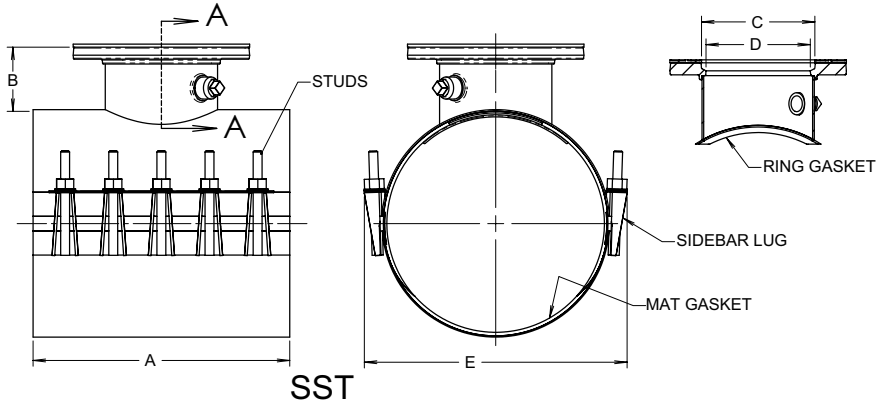
SST & SSTIII DIMENSIONS



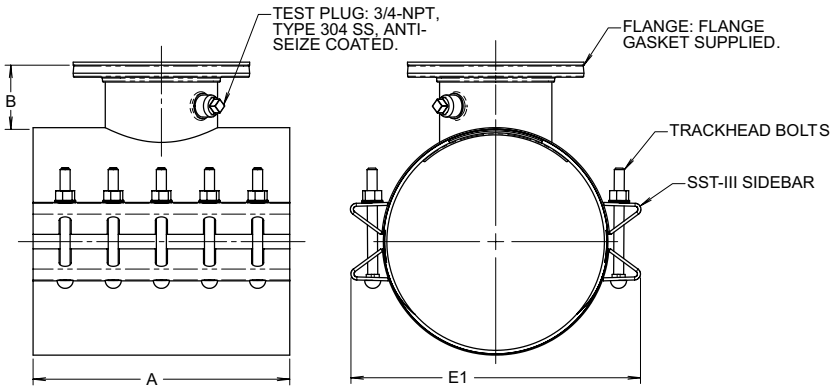
A ROMAC ORIGINAL

1980 - Stainless Steel Tapping Sleeve

Corrosion resistant, provides full circumferential seal.



SST



SSTIII

DIMENSIONS								
FLANGE SIZE	CATALOG NUMBER	# OF BOLTS	A	B	C	D	E	E1
3"	4.60 - 5.30	8	12.0	4.00	4.03	3 1/2	PIPE OD + 3.0	PIPE OD + 4.6
	5.60 - 19.30	10	16.0					
	19.70 - 26.50	14	20.0					
	27.80 - 32.00 ¹	21	20.0					
4"	4.60 - 5.30	8	12.0	4.00	5.03	4 1/2	PIPE OD + 3.0	PIPE OD + 4.6
	5.60 - 19.30	10	16.0					
	19.70 - 26.50	14	20.0					
6"	6.25 - 17.95	10	16.0	4.5	7.03	6 1/2	PIPE OD + 3.0	PIPE OD + 4.6
	18.25 - 26.50	14	20.0					
	27.80 - 32.00 ¹	21	20.0					
8"	8.30 - 26.50	14	20.0	5	9.03	8 1/2	PIPE OD + 3.0	PIPE OD + 4.6
	27.80 - 32.00 ¹	21	20.0					
10"	10.73 - 26.50	16	24.0	5.5	11.03	10 1/2	PIPE OD + 3.0	PIPE OD + 4.6
	27.80 - 32.00 ¹	24	24.0					
12"	12.75 - 16.78	20	30.0	5.75	13.03	12 1/2	PIPE OD + 3.0	PIPE OD + 4.6
	17.55 - 26.50	20	30.0					
	27.80 - 32.00 ¹	30	30.0					

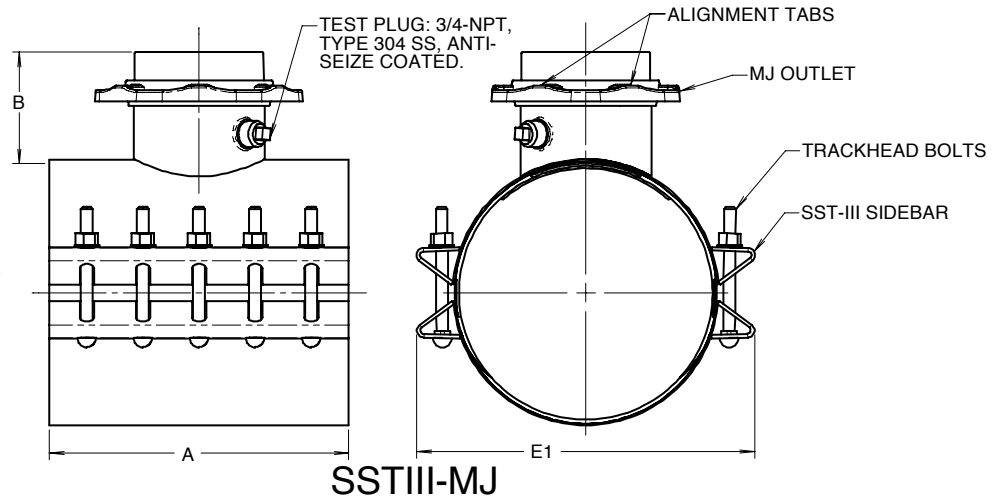
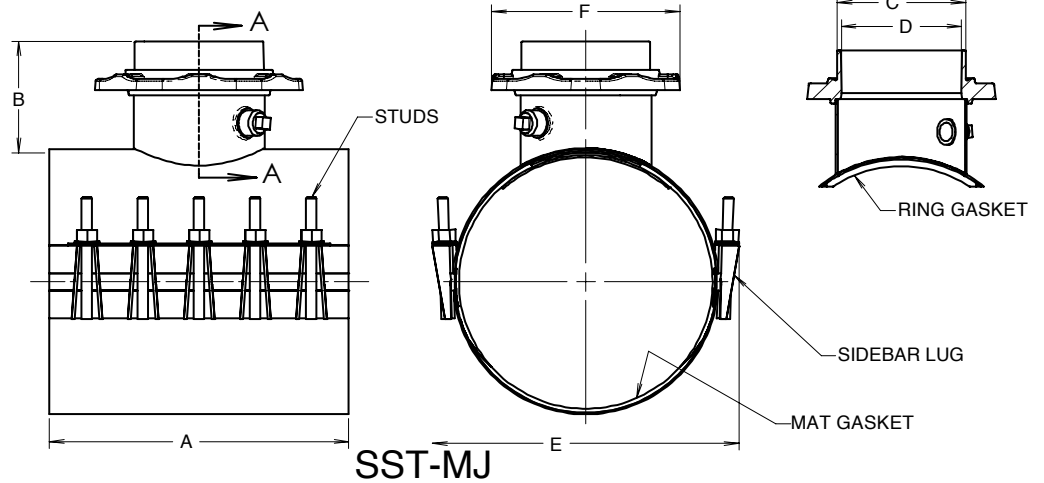
¹ SSTIII Only

- 6.25 & 6.60 sizes not available with 6" branch.
- 8.30 size not available with 8" branch.

- 10.73 size not available with 10" branch
- 12.75 - 12.90 sizes: 1/2" undersize cutter recommended.



SST-MJ & SSTIII-MJ DIMENSIONS



DIMENSIONS									
FLANGE SIZE	CATALOG NUMBER	# OF BOLTS	A	B	C	D	E	E1	F
4"	4.60 - 5.30	8	12.0	5.88	4.80	4.33	PIPE OD + 3.0	PIPE OD + 4.6	9.12
	5.60 - 19.30	10	16.0						
	19.70 - 26.50	14	20.0						
	27.80 - 32.00 ¹	21	20.0						
6"	7.00 - 17.95	10	16.0	6.88	6.90	6.43	PIPE OD + 3.0	PIPE OD + 4.6	11.12
	18.25 - 26.50	14	20.0						
	27.80 - 32.00 ¹	21	20.0						
8"	8.63 - 26.50	14	20.0	7.00	9.05	8.52	PIPE OD + 3.0	PIPE OD + 4.6	13.40
	27.80 - 32.00 ¹	21	20.0						
10"	10.73 - 26.50	16	24.0	7.50	11.10	10.51	PIPE OD + 3.0	PIPE OD + 4.6	15.70
	27.80 - 32.00 ¹	24	24.0						
12"	13.30 - 16.78	20	30.0	7.63	13.20	12.54	PIPE OD + 3.0	PIPE OD + 4.6	18.10
	17.55 - 26.50	20	30.0						
	27.80 - 32.00 ¹	30	30.0						

¹ SSTIII Only

- 6.25 & 6.60 sizes not available with 6" branch.
- 8.30 size not available with 8" branch.
- 10.73 size not available with 10" branch
- 12.75 - 12.90 sizes: 1/2" undersize cutter recommended.

SST STAINLESS STEEL TAPPING SLEEVE



MATERIAL SPECIFICATIONS

SHELL & LUGS: Stainless steel per ASTM A240, type 304 and type 304L.

TEST PLUG: 3/4" NPT type 304 Stainless Steel. Plug threads coated to prevent galling.

BOLTS: 5/8" UNC rolled thread, stainless steel per ASTM A193, type 304. 4" nominal pipe size has 1/2" bolts.

NUTS: Heavy hex, stainless steel per ASTM A194, type 304, coated to prevent galling

WASHERS: Stainless steel per ASTM A240, type 304 and plastic lubricating washer.

GASKETS: SBR per ASTM D 2000 MAA 610, compounded for water and sewer service. Other compounds available on request.

MJ BOLTS & NUTS: 3/4" UNC T-Bolts, heavy hex nuts, high strength low alloy steel per AWWA C111.

OUTLET OPTIONS

1. Ductile Iron Flange per ASTM A536, Grade 65-45-12. Will accommodate tapping flanges per MSS SP-60.
2. Stainless Steel Flange per ASTM A 240, type 304. Will accommodate tapping flanges per MSS SP-60.
3. Ductile Iron Mechanical Joint Outlet MJ style in accordance with AWWA standard C111. Cast from ductile (nodular) iron, meeting or exceeding ASTM A536, Grade 65-45-12.
4. Stainless Steel Mechanical Joint Outlet MJ style in accordance with AWWA standard C111. Stainless steel per ASTM A351 CF3 (Type 304L).



MEETS REQUIREMENTS OF MSS SP-124 AND AWWA C223



NSF61 certified upon request.

MEETS AWWA C223

SST SLEEVES WITH MJ OUTLETS



MJ Gasket and HSLA T-bolts & Nuts are included with SST-MJ and SST-SS-MJ

NOMINAL PIPE SIZE	SLEEVE O.D. RANGE (inches)	CATALOG NUMBER			D.I. FLANGE	LIST PRICE EACH			APPROX. WEIGHT (lbs.)
		SLEEVE #	BY	BRANCH SIZE		304 S.S. FLANGE	D.I. MJ OUTLET	304 S.S. MJ OUTLET	
4"	4.40 - 4.60	SST - 4.60	X	3" 4" ¹	NA \$874.61	\$1,152.60 1,152.60	NA \$918.28	\$1,196.27 1,196.27	28# 30#
	4.50 - 4.80	SST - 4.80							
	4.70 - 5.00	SST - 5.00							
	5.00 - 5.30	SST - 5.30							
	5.30 - 5.60	SST - 5.60							
	5.60 - 5.90	SST - 5.90							
6"	5.90 - 6.25 ²	SST - 6.25	X	3" 4" 6"	NA 908.66 1,034.67	1,201.21 1,201.21 1,369.86	NA 952.31 1,084.18	1,244.86 1,244.86 1,419.37	36# 38# 45#
	6.25 - 6.60 ²	SST - 6.60							
	6.60 - 7.00	SST - 7.00							
	6.82 - 7.12	SST - 7.12							
	6.90 - 7.30	SST - 7.30							
	7.10 - 7.50	SST - 7.50							
8"	7.90 - 8.30 ³	SST - 8.30	X	3" 4" 6" 8"	NA 922.15 980.62 1,313.51	1,243.74 1,243.74 1,383.25 1,718.54	NA 965.82 1,030.10 1,382.78	1,287.41 1,287.41 1,432.74 1,787.80	42# 44# 48# 66#
	8.30 - 8.63	SST - 8.63							
	8.62 - 9.06	SST - 9.06							
	8.97 - 9.37	SST - 9.37							
	9.04 - 9.45	SST - 9.45							
	9.20 - 9.60	SST - 9.60							
	9.55 - 9.95	SST - 9.95							
	9.90 - 10.30	SST - 10.30							

¹ For 4" flanged outlets, the recommended cutter size is 3 1/2"

² Not Available with 6" branch.

³ Not Available with 8" branch.

TO ORDER: Specify Sleeve Number x Branch Size x Outlet Type.

EXAMPLE: SST - 9.45 x 6" D.I. FLG Other sizes are available on request - P.O.A



SST STAINLESS STEEL TAPPING SLEEVE

NOMINAL PIPE SIZE	SLEEVE O.D. RANGE (inches)	CATALOG NUMBER			LIST PRICE EACH				APPROX. WEIGHT (lbs.)
		SLEEVE #	BY	BRANCH SIZE	D.I. FLANGE	304 S.S. FLANGE	D.I. MJ OUTLET	304 S.S. MJ OUTLET	
10"	10.33 - 10.73 ⁴	SST - 10.73	X	3"	NA	\$1,350.65	NA	\$1,394.30	45#
	10.73 - 11.13	SST - 11.13		4"	\$1,016.57	1,350.65	\$1,060.22	1,394.30	48#
	11.02 - 11.42	SST - 11.42		6"	1,093.10	1,466.98	1,142.59	1,516.46	55#
	11.06 - 11.45	SST - 11.45		8"	1,326.96	1,860.12	1,396.25	1,929.41	70#
	11.45 - 11.85	SST - 11.85		10"	2,267.43	3,082.35	2,354.57	3,169.49	80#
	11.79 - 12.19	SST - 12.19							
	12.10 - 12.50	SST - 12.50							
12"	12.35 - 12.75 ^{5,6}	SST - 12.75	X	3"	NA	1,598.03	NA	1,641.69	50#
	12.45 - 12.85 ^{5,6}	SST - 12.85		4"	1,133.57	1,598.03	1,177.23	1,641.69	52#
	12.70 - 12.90 ^{5,6}	SST - 12.90		6"	1,216.95	1,758.19	1,266.45	1,807.69	60#
	12.90 - 13.30	SST - 13.30		8"	1,425.90	2,125.83	1,495.21	2,195.14	81#
	13.12 - 13.52	SST - 13.52		10"	2,366.21	3,348.15	2,453.35	3,435.29	96#
	13.16 - 13.56	SST - 13.56		12"	2,575.39	3,988.71	2,702.75	4,116.07	143#
	13.40 - 13.80	SST - 13.80							
	13.70 - 14.10	SST - 14.10							
	13.98 - 14.38	SST - 14.38							
	14.38 - 14.80	SST - 14.80							
14"	14.80 - 15.20	SST - 15.20	X	3"	NA	2,213.69	NA	2,294.66	62#
	15.20 - 15.60	SST - 15.60		4"	1,787.05	2,213.69	1,868.01	2,294.66	64#
	15.60 - 16.00	SST - 16.00		6"	1,852.96	2,427.13	1,902.45	2,476.62	74#
	15.80 - 16.20	SST - 16.20		8"	2,418.08	3,189.97	2,487.37	3,259.26	81#
	16.00 - 16.40	SST - 16.40		10"	3,252.30	4,317.81	3,339.46	4,404.97	95#
	16.38 - 16.78	SST - 16.78		12"	3,575.71	5,114.27	3,703.06	5,241.61	154#
16"	16.78 - 17.20	SST - 17.20	X	3"	NA	2,556.70	NA	2,600.37	78#
	17.15 - 17.55	SST - 17.55		4"	2,109.53	2,556.70	2,153.20	2,600.37	80#
	17.40 - 17.80	SST - 17.80		6"	2,175.51	2,770.07	2,225.01	2,819.58	85#
	17.55 - 17.95	SST - 17.95		8"	2,520.15	3,299.38	2,589.44	3,368.67	100#
	17.85 - 18.25	SST - 18.25		10"	3,500.97	4,581.48	3,588.13	4,668.64	115#
	18.20 - 18.60	SST - 18.60		12"	3,706.48	5,253.10	3,833.82	5,380.44	172#
	18.58 - 18.98	SST - 18.98							
	18.90 - 19.30	SST - 19.30							
18"	19.30 - 19.70	SST - 19.70	X	3"	NA	2,609.86	NA	2,653.52	81#
	19.70 - 20.10	SST - 20.10		4"	2,160.06	2,609.86	2,203.72	2,653.52	85#
	19.80 - 20.20	SST - 20.20		6"	2,226.13	2,823.77	2,275.63	2,873.27	89#
	20.20 - 20.60	SST - 20.60		8"	2,610.84	3,395.25	2,680.14	3,464.55	115#
	20.60 - 21.00	SST - 21.00		10"	3,604.84	4,691.77	3,691.99	4,778.92	139#
	21.00 - 21.40	SST - 21.40		12"	3,810.00	5,363.42	3,937.33	5,490.75	191#
20"	21.40 - 21.80	SST - 21.80	X	3"	NA	2,994.00	NA	3,037.66	81#
	21.70 - 22.10	SST - 22.10		4"	2,520.07	2,994.00	2,563.73	3,037.66	85#
	21.90 - 22.30	SST - 22.30		6"	2,586.87	3,207.51	2,636.36	3,257.00	89#
	22.30 - 22.70	SST - 22.70		8"	3,104.37	3,919.88	3,173.66	3,989.17	115#
	22.70 - 23.10	SST - 23.10		10"	4,182.85	5,306.53	4,270.01	5,393.69	140#
	23.00 - 23.40	SST - 23.40		12"	4,388.29	5,978.10	4,515.62	6,105.44	205#
24"	23.30 - 23.70	SST - 23.70	X	3"	NA	3,137.91	NA	3,181.57	85#
	23.60 - 24.00	SST - 24.00		4"	2,656.24	3,137.91	2,699.90	3,181.57	87#
	23.80 - 24.20	SST - 24.20		6"	2,722.00	3,351.29	2,771.49	3,400.77	90#
	24.20 - 24.60	SST - 24.60		8"	3,254.30	4,079.25	3,323.60	4,148.55	120#
	24.60 - 25.00	SST - 25.00		10"	4,346.88	5,481.06	4,434.00	5,568.18	145#
	24.90 - 25.30	SST - 25.30		12"	4,552.17	6,157.54	4,679.49	6,284.86	230#
	25.30 - 25.70	SST - 25.70							
	25.60 - 26.00	SST - 26.00							
	25.90 - 26.30	SST - 26.30							
	26.10 - 26.50	SST - 26.50							

⁴ Not Available with 10" branch.

⁵ For 12" flanged outlets, the recommended cutter size is, 11 1/2 ".

⁶ Not available with 12" MJ Outlet.

TO ORDER: SPECIFY SLEEVE NUMBER X BRANCH SIZE X OUTLET TYPE.

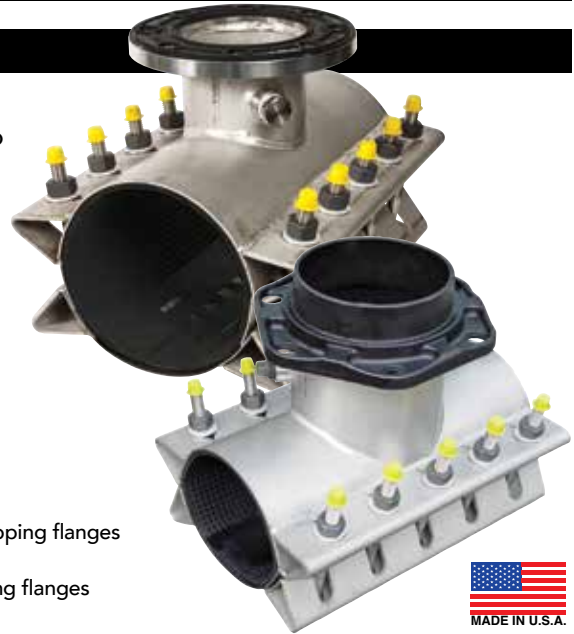
EXAMPLE: SST - 9.45 x 6" D.I. FLG Other sizes are available on request - P.O.A

SST III STAINLESS STEEL TAPPING SLEEVE



MATERIAL SPECIFICATIONS

- SHELL & LUGS:** Stainless steel per ASTM A240, type 304 and type 304L.
- TEST PLUG:** 3/4" NPT type 304 Stainless Steel. Plug threads coated to prevent galling.
- BOLTS:** 5/8" UNC rolled thread, stainless steel per ASTM A193, type 304.
- NUTS:** Heavy hex, stainless steel per ASTM A194, type 304, coated to prevent galling
- WASHERS:** Stainless steel per ASTM A240, type 304 and plastic lubricating washer.
- GASKETS:** SBR per ASTM D 2000 MAA 610, compounded for water and sewer service. Other compounds available on request.
- MJ BOLTS & NUTS:** 3/4" UNC T-Bolts, heavy hex nuts, high strength low alloy steel per AWWA C111.

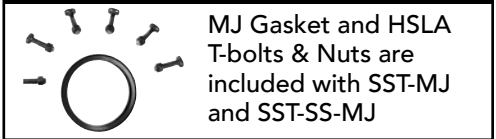


MEETS REQUIREMENTS OF MSS SP-124 AND AWWA C223

OUTLET OPTIONS

- DUCTILE IRON FLANGE** per ASTM A536, Grade 65-45-12. Will accommodate tapping flanges per MSS SP-60.
- STAINLESS STEEL FLANGE** per ASTM A 240, type 304. Will accommodate tapping flanges per MSS SP-60.
- DUCTILE IRON MECHANICAL JOINT OUTLET** MJ style in accordance with AWWA standard C111. Cast from ductile (nodular) iron, meeting or exceeding ASTM A536, Grade 65-45-12.
- STAINLESS STEEL MECHANICAL JOINT OUTLET** MJ style in accordance with AWWA standard C111. Stainless steel per ASTM A351 CF3 (Type 304L).

SST III SLEEVES WITH MJ OUTLETS



NSF61 certified upon request.

MEETS AWWA C223

NOMINAL PIPE SIZE	SLEEVE O.D. RANGE (inches)	SLEEVE #	BY	BRANCH SIZE	D.I. FLANGE	304 S.S. FLANGE	D.I. MJ OUTLET	304 S.S. MJ OUTLET	APPROX. WEIGHT (lbs.)
4"	4.40 - 4.60	SSTIII- 4.60	X	3" 4" ¹	NA \$1,008.41	\$1,254.48 1,254.48	NA \$1,052.07	\$1,298.14 1,298.14	37# 42#
	4.50 - 4.80	SSTIII- 4.80							
	4.70 - 5.00	SSTIII- 5.00							
	5.00 - 5.30	SSTIII- 5.30							
	5.30 - 5.60	SSTIII- 5.60							
	5.60 - 5.90	SSTIII- 5.90							
6"	5.90 - 6.25 ²	SSTIII- 6.25	X	3" 4" 6"	NA 1,062.42 1,084.08	1,254.48 1,254.48 1,293.26	NA 1,106.08 1,133.59	1,298.14 1,298.14 1,342.77	50# 54# 59#
	6.25 - 6.60 ²	SSTIII- 6.60							
	6.60 - 7.00	SSTIII- 7.00							
	6.82 - 7.12	SSTIII- 7.12							
	6.90 - 7.30	SSTIII- 7.30							
	7.10 - 7.50	SSTIII- 7.50							
8"	7.90 - 8.30 ³	SSTIII- 8.30	X	3" 4" 6" 8"	NA 1,103.99 1,201.38 1,552.69	1,285.89 1,285.89 1,391.20 1,701.59	NA 1,147.67 1,250.87 1,621.98	1,329.57 1,329.57 1,440.68 1,770.88	56# 60# 63# 83#
	8.30 - 8.63	SSTIII- 8.63							
	8.62 - 9.06	SSTIII- 9.06							
	8.97 - 9.37	SSTIII- 9.37							
	9.04 - 9.45	SSTIII- 9.45							
	9.20 - 9.60	SSTIII- 9.60							
	9.55 - 9.95	SSTIII- 9.95							
	9.90 - 10.30	SSTIII-10.30							
10"	10.33 - 10.73 ⁴	SSTIII- 10.73	X	3" 4" 6" 8" 10"	NA 1,234.80 1,265.40 1,560.27 2,199.53	1,481.71 1,481.71 1,494.66 1,960.23 2,869.23	NA 1,278.47 1,314.89 1,629.57 2,286.68	1,525.38 1,525.38 1,544.16 2,029.53 2,956.38	60# 64# 68# 88# 121#
	10.73 - 11.13	SSTIII- 11.13							
	11.02 - 11.42	SSTIII- 11.42							
	11.06 - 11.45	SSTIII- 11.45							
	11.45 - 11.85	SSTIII- 11.85							
	11.79 - 12.19	SSTIII- 12.19							
	12.10 - 12.50	SSTIII- 12.50							

¹ For 4" flanged outlets, the recommended cutter size is 3 1/2"

² Not Available with 6" branch.

³ Not Available with 8" branch.

⁴ Not Available with 10" branch.

TO ORDER: Specify Sleeve Number x Branch Size x Outlet Type. **EXAMPLE: SSTIII - 9.45 x 6" D.I. FLG** Other sizes are available on request - P.O.A



SST III STAINLESS STEEL TAPPING SLEEVE

NOMINAL PIPE SIZE	SLEEVE O.D. RANGE (inches)	CATALOG NUMBER			LIST PRICE EACH				APPROX. WEIGHT (lbs.)	
		SLEEVE #	BY	BRANCH SIZE	D.I. FLANGE	304 S.S. FLANGE	D.I. MJ OUTLET	304 S.S. MJ OUTLET		
12"	12.35 - 12.75 ^{5,6}	SSTIII - 12.75	X	3"	NA	\$1,659.09	NA	\$1,702.75	65#	
	12.45 - 12.85 ^{5,6}	SSTIII - 12.85			NA	1,659.09	NA	1,702.75	68#	
	12.70 - 12.90 ^{5,6}	SSTIII - 12.90			4"	\$1,422.71	1,659.09	\$1,466.37	1,702.75	68#
	12.75 - 13.20 ^{5,6}	SSTIII - 13.20			4"	1,455.74	1,836.44	1,505.25	1,885.95	72#
	12.90 - 13.30	SSTIII - 13.30			6"	1,878.95	2,239.29	1,948.26	2,308.60	93#
	13.12 - 13.52	SSTIII - 13.52			8"	2,437.22	2,932.05	2,524.38	3,019.21	123#
	13.16 - 13.56	SSTIII - 13.56			10"	2,883.20	3,247.94	3,010.53	3,375.28	159#
	13.40 - 13.80	SSTIII - 13.80			12"					
	13.70 - 14.10	SSTIII - 14.10								
	13.98 - 14.38	SSTIII - 14.38								
14.38 - 14.80	SSTIII - 14.80									
14"	14.80 - 15.20	SSTIII - 15.20	X	3"	NA	1,696.03	NA	1,739.68	70#	
	15.20 - 15.60	SSTIII - 15.60		4"	1,747.82	1,696.03	1,791.47	1,739.68	75#	
	15.60 - 16.00	SSTIII - 16.00		6"	1,702.65	2,135.75	1,752.15	2,185.25	80#	
	15.80 - 16.20	SSTIII - 16.20		8"	1,991.27	2,673.37	2,060.56	2,742.66	103#	
	16.00 - 16.40	SSTIII - 16.40		10"	2,537.68	3,301.55	2,624.87	3,388.74	134#	
	16.38 - 16.78	SSTIII - 16.78		12"	3,189.59	3,617.45	3,249.24	3,677.10	174#	
16"	16.78 - 17.20	SSTIII - 17.20	X	3"	NA	2,344.51	NA	2,407.17	92#	
	17.15 - 17.55	SSTIII - 17.55		4"	1,750.01	2,344.51	1,865.48	2,407.17	96#	
	17.40 - 17.80	SSTIII - 17.80		6"	1,976.11	2,658.60	2,025.62	2,708.11	102#	
	17.55 - 17.95	SSTIII - 17.95		8"	2,227.51	2,889.56	2,296.81	2,958.86	110#	
	17.85 - 18.25	SSTIII - 18.25		10"	2,760.73	3,425.34	2,847.86	3,512.47	140#	
	18.20 - 18.60	SSTIII - 18.60		12"	3,628.08	3,961.10	3,755.43	4,088.46	205#	
	18.58 - 18.98	SSTIII - 18.98								
18.90 - 19.30	SSTIII - 19.30									
18"	19.30 - 19.70	SSTIII - 19.70	X	3"	NA	2,381.48	NA	2,425.13	97#	
	19.70 - 20.10	SSTIII - 20.10		4"	1,859.46	2,381.48	1,903.10	2,425.13	102#	
	19.80 - 20.20	SSTIII - 20.20		6"	2,011.13	2,843.35	2,060.63	2,892.84	107#	
	20.20 - 20.60	SSTIII - 20.60		8"	2,201.66	3,074.30	2,317.56	3,190.19	115#	
	20.60 - 21.00	SSTIII - 21.00		10"	2,590.18	3,610.09	2,879.94	3,899.85	152#	
	21.00 - 21.40	SSTIII - 21.40		12"	3,878.96	4,330.63	4,006.31	4,457.97	230#	
20"	21.40 - 21.80	SSTIII - 21.80	X	3"	NA	2,475.70	NA	2,519.35	104#	
	21.70 - 22.10	SSTIII - 22.10		4"	1,926.83	2,475.70	1,970.48	2,519.35	109#	
	21.90 - 22.30	SSTIII - 22.30		6"	2,078.44	2,935.74	2,127.95	2,985.24	114#	
	22.30 - 22.70	SSTIII - 22.70		8"	2,269.03	3,116.80	2,338.31	3,186.08	120#	
	22.70 - 23.10	SSTIII - 23.10		10"	2,824.86	3,794.84	2,912.00	3,881.98	155#	
	23.00 - 23.40	SSTIII - 23.40		12"	3,923.00	4,700.14	4,006.31	4,783.44	232#	
24"	23.30 - 23.70	SSTIII - 23.70	X	3"	NA	2,606.88	NA	2,650.56	107#	
	23.60 - 24.00	SSTIII - 24.00			4"	1,983.71	2,606.88	2,027.39	2,650.56	112#
	23.80 - 24.20	SSTIII - 24.20			6"	1,992.06	3,028.11	2,041.56	3,077.60	117#
	24.20 - 24.60	SSTIII - 24.60			8"	2,159.76	3,401.31	2,229.05	3,470.60	124#
	24.60 - 25.00	SSTIII - 25.00			10"	2,673.41	3,979.59	2,760.56	4,066.74	158#
	24.90 - 25.30	SSTIII - 25.30			12"	4,338.87	5,069.64	4,466.22	5,196.99	236#
	25.30 - 25.70	SSTIII - 25.70								
	25.60 - 26.00	SSTIII - 26.00								
	25.90 - 26.30	SSTIII - 26.30								
26.10 - 26.50	SSTIII - 26.50									
28"	27.20 - 27.80 ⁶	SSTIII - 27.80	X	3"	NA	3,466.66	NA	3,510.32	185#	
	27.80 - 28.40 ⁶	SSTIII - 28.40		4"	2,843.51	3,466.66	2,887.16	3,510.32	190#	
	28.40 - 29.00 ⁶	SSTIII - 29.00		6"	2,990.79	4,026.82	3,040.28	4,076.31	195#	
	29.00 - 29.60 ⁶	SSTIII - 29.60		8"	3,281.87	4,523.11	3,351.16	4,592.40	202#	
				10"	3,985.93	5,292.12	4,073.08	5,379.27	236#	
				12"	5,409.35	6,741.66	5,536.70	6,869.01	314#	
30"	29.60 - 30.20 ⁶	SSTIII - 30.20	X	3"	NA	3,747.72	NA	3,791.38	232#	
	30.20 - 30.80 ⁶	SSTIII - 30.80		4"	3,124.58	3,747.72	3,168.24	3,791.38	237#	
	30.80 - 31.40 ⁶	SSTIII - 31.40		6"	3,317.27	4,353.30	3,366.77	4,402.81	242#	
	31.40 - 32.00 ⁶	SSTIII - 32.00		8"	3,648.31	4,889.83	3,717.58	4,959.10	249#	
				10"	4,415.02	5,721.20	4,502.15	5,808.33	283#	
				12"	5,955.96	7,288.28	6,083.30	7,415.63	361#	

⁵ For 12" flanged outlets, the recommended cutter size is 11 1/2"

⁶ Not available with 12" MJ Outlet. ⁶ Three piece sleeve.

TO ORDER: Specify Sleeve Number x Branch Size x Outlet Type.

EXAMPLE: SSTIII - 9.45 x 6" D.I. FLG Other sizes are available on request - P.O.A

FTS419 FABRICATED STEEL TAPPING SLEEVE



MATERIAL SPECIFICATIONS

BODY AND OUTLET NOZZLE: Carbon steel, A-36 or equal.

BOLTS AND NUTS: Trackhead bolts, heavy hex nuts, 5/8" UNC rolled thread, high strength, low alloy, steel per AWWA C111. Optional stainless steel, type 304.

GASKETS: SBR per ASTM D 2000 MBA 710, compounded for water and sewer service use. Other compounds available on request.

TEST PLUG: 3/4" NPT type 304 stainless steel test plug.

COATING: Fusion epoxy 8-12 mil. lined and coated. Other coatings available. Romac packages sleeves to protect coating.

FLANGE: AWWA Class "D" plate flange, ANSI Class 150 drilling, proper recessing for tapping valves. Will accommodate tapping flanges per MSS SP-60.

USE: Recommended for PVC, steel, D.I., copper pipe.

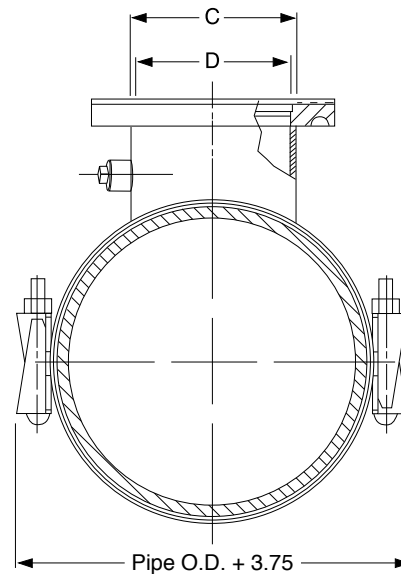
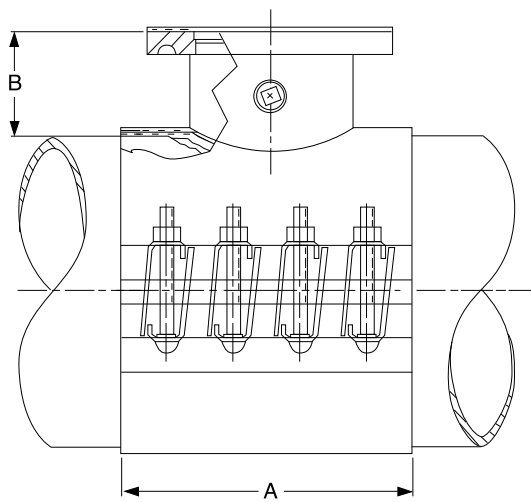
Meets requirements of MSS SP-124 and AWWA C223



NSF61 certified upon request.

MEETS
AWWA C223

Certified to NSF/ANSI 61 & 272



FLANGE SIZE	A	B	C	D	BOLTS QTY: SIZE
3"	9"	5.18"	4.03"	3.06 - 3.54	6:5/8" x 6"
4"	9"	5.18"	5.03"	4.26 - 4.73	6:5/8" x 6"
6"	12"	5.18"	7.03"	6.42 - 6.73	8:5/8" x 6"
8"	15"	5.18"	9.03"	8.42 - 8.73	10:5/8" x 6"
10"	18"	5.50"	11.03"	10.73	12:5/8" x 6"
12"	24"	5.75"	13.03"	12.73	16:5/8" x 6"

TO ORDER: Specify catalog number by the desired O.D. and flange size. Add S.S. for optional 304 stainless steel bolts and nuts. Other sizes and outlets are available upon request.



FTS419 FABRICATED STEEL TAPPING SLEEVE

NOMINAL PIPE SIZE	SLEEVE O.D. RANGE (inches)	CATALOG NUMBER			LIST PRICE EACH		APPROX. WEIGHT (lbs.)
		SLEEVE #	BY	BRANCH SIZE	W/ ALLOY BOLTS	W/ 304 SS BOLTS & NUTS	
4"	4.00 4.13	FTS419-4.00 FTS419-4.13	X	3" *	\$719.69	\$791.84	28#
	4.50 - 4.80	FTS419-4.80	X	3" * 4" *	719.69 719.69	793.12 793.12	34# 34#
5"	5.13 5.56	FTS419-5.13 FTS419-5.56	X	3" * 4" *	719.69 719.69	793.12 793.12	34# 35#
	6.00 6.13	FTS419-6.00 FTS419-6.13	X	3" 4"	741.90 741.90	815.33 815.33	34# 36#
6"	6.63 - 6.90	FTS419-6.90	X	3" 4" 6" *	741.90 741.90 827.29	815.33 815.33 918.25	34# 36# 53#
	8.00 8.13	FTS419-8.00 FTS419-8.13	X	3" 4" 6"	797.72 797.72 858.61	871.16 871.16 949.59	34# 38# 55#
	8.63 - 9.05	FTS419-9.05	X	3" 4" 6" 8" *	797.72 797.72 858.61 1,049.37	871.16 871.16 949.59 1,157.79	38# 40# 56# 77#
10"	10.00	FTS419-10.00	X	3" 4" 6" 8"	799.64 799.64 887.22 1,094.41	873.09 873.09 978.19 1,202.84	38# 41# 58# 79#
	10.75 - 11.10	FTS419-11.10	X	3" 4" 6" 8" 10" *	799.64 799.64 887.22 1,094.41 1,456.03	873.09 873.09 978.19 1,202.84 1,581.95	41# 43# 60# 81# 108#
12"	12.75 - 13.20	FTS419-13.20	X	3" 4" 6" 8" 10" 12" *	848.05 848.05 966.05 1,167.25 1,538.13 1,827.51	921.51 921.51 1,057.00 1,275.68 1,664.02 1,988.38	44# 46# 64# 85# 111# 129#
	14.00 15.30	FTS419-14.00 FTS419-15.30	X	3" 4" 6" 8" 10" 12"	934.29 938.13 1,035.97 1,252.47 1,778.46 2,000.96	1,117.60 1,117.60 1,092.22 1,538.87 2,088.01 2,321.29	47# 49# 67# 88# 114# 136#
	16.00 17.40	FTS419-16.00 FTS419-17.40	X	3" 4" 6" 8" 10" 12"	975.69 975.69 1,093.59 1,201.59 1,841.43 2,112.17	1,157.00 1,206.77 1,279.82 1,592.29 2,154.85 2,437.90	50# 52# 71# 92# 117# 144#
	18.00 19.50	FTS419-18.00 FTS419-19.50	X	3" 4" 6" 8" 10" 12"	1,002.46 1,002.46 1,127.13 1,369.67 1,917.86 2,144.35	1,185.07 1,185.07 1,315.79 1,661.85 2,234.17 2,471.66	56# 57# 76# 96# 120# 160#
	20.00 21.60	FTS419-20.00 FTS419-21.60	X	3" 4" 6" 8" 10" 12"	1,029.25 1,029.25 1,160.63 1,480.95 1,994.24 2,173.74	1,213.18 1,213.18 1,350.93 1,731.42 2,314.26 2,505.37	56# 58# 78# 100# 123# 160#
24"	24.00 25.80	FTS419-24.00 FTS419-25.80	X	3" 4" 6" 8" 10" 12"	1,182.04 1,182.04 1,332.20 1,726.21 2,315.90 2,471.34	1,373.39 1,373.39 1,530.81 1,988.62 2,651.57 2,814.53	63# 64# 86# 107# 130# 176#

* Size-on-size taps require shell cutters that are 1/2" smaller than the nominal size.

FTS420 FABRICATED STEEL TAPPING SLEEVE



MATERIAL SPECIFICATIONS

BODY AND OUTLET NOZZLE: Carbon steel, A-36 or equal. (Also available in type 304SS, Style STS420)

BOLTS AND NUTS: Trackhead bolts, heavy hex nuts, 3/4" UNC rolled thread, high strength, low alloy, steel per AWWA C111. Optional stainless steel, type 304.

OUTLET GASKETS: SBR per ASTM D 2000, compounded for water and sewer service use. For 3"-12" size-on-size flanges, the gaskets are reinforced with a metal ring. Larger than 12" size-on-size sleeves use a square profile o-ring NBR per ASTM D2000 set in a full body thickness cavity. Other compounds available on request.

TEST PLUG: 3/4" NPT type 304 stainless steel test plug.

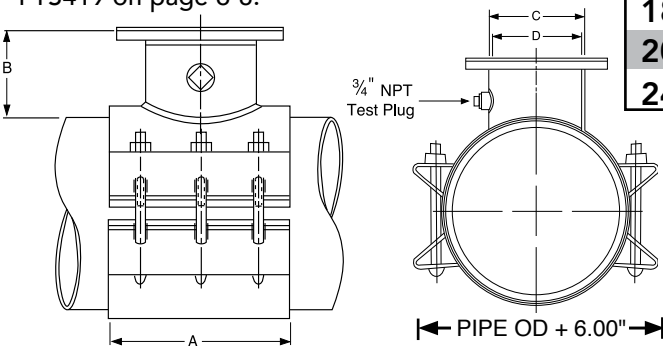
FLANGE GASKETS: 3" - 12" full face proprietary gasket are made from Styrene Butadiene Rubber (SBR) compounded for water and sewer service in accordance with ASTM D2000. Other compounds available for petroleum, chemicals or high temperature service.

COATING: Fusion epoxy 8-12 mil. lined and coated. Other coatings available. Romac packages sleeves to protect coating.

FLANGE: AWWA Class "D" plate flange, ANSI Class 150 drilling, proper recessing for tapping valves. Will accommodate tapping flanges per MSS SP-60. (Also Available with a threaded outlet, Style FTS420T - see page 5-11 & 5-12)

Meets requirements of MSS SP-124, and AWWA C223

NOTE: FTS420 is not recommended for use on thin wall pipe such as IPS size PVC pipe, PIP and SDR35. For applications on thin wall PVC pipe, see FTS419 on page 6-8.



NSF61 certified upon request.

MEETS
AWWA C223

FLANGE SIZE	A	B	C	D	BOLTS QTY: SIZE ¹
3"	12"	5.18"	4.03"	3 1/2"	6: 3/4" x 9"
4"	12"	5.18"	5.03"	6 1/2"	6: 3/4" x 9"
6"	12"	5.18"	7.03"	6 1/2"	6: 3/4" x 9"
8"	16"	5.18"	9.03"	8 1/2"	8: 3/4" x 9"
10"	20"	5.50"	11.03"	10 1/2"	10: 3/4" x 9"
12"	20"	5.75"	13.03"	12 1/2"	10: 3/4" x 9"
14" ²	24"	6.00"	15.03"	14 1/2"	12: 3/4" x 9"
16" ²	28"	6.00"	17.03"	16 1/2"	14: 3/4" x 9"
18" ²	32"	6.00"	19.03"	18 1/2"	16: 3/4" x 9"
20" ²	32"	6.00"	21.03"	20 1/2"	16: 3/4" x 9"
24" ²	36"	6.63"	25.03"	24 1/2"	18: 3/4" x 9"

¹ 7.16-14.56" sizes use 8" long bolts.

² Valve Manufacturer must be specified upon ordering.

FTS420-T FABRICATED STEEL TAPPING SLEEVE

MATERIAL SPECIFICATIONS

THREADED OUTLET MODEL FTS420T (for detailed information see pg. 5-11 & 5-12)

BODY: Carbon steel, A-36 or equal.

OUTLET: NPT (IP) or AWWA (CC) Female Threads

BOLTS AND NUTS: Trackhead bolts, heavy hex nuts, 3/4" UNC rolled thread, high strength, low alloy, steel per AWWA C111. Optional stainless steel, type 304.

GASKETS: SBR per ASTM D 2000 MBA 710, compounded for water and sewer service use. Other compounds available on request.

PAINT: Romac shopcoat for corrosion protection in transit. Optional fusion epoxy 8-12 mil. lined and coated. Other coatings available. Romac packages sleeves to protect any special coatings.





FTS420 FABRICATED STEEL TAPPING SLEEVE

NOMINAL PIPE SIZE	SLEEVE O.D. RANGE (inches)	CATALOG NUMBER			LIST PRICE EACH		APPROX. WEIGHT (lbs.)
		SLEEVE #	BY	BRANCH SIZE	W/ ALLOY BOLTS	W/ 304 SS BOLTS & NUTS	
6"	6.83 - 7.16 ¹	FTS420 - 7.16	X	3"	\$733.87	\$857.90	65 #
	7.05 - 7.40 ¹	FTS420 - 7.40		4"	733.87	857.90	70 #
	7.40 - 7.73 ¹	FTS420 - 7.73		6"	861.40	985.42	70 #
8"	7.74 - 8.35 ²	FTS420 - 8.35	X	3"	798.90	922.96	75 #
	8.36 - 8.75 ¹	FTS420 - 8.75		4"	798.90	922.96	75 #
	8.98 - 9.37 ¹	FTS420 - 9.37		6"	871.79	995.82	80 #
	9.27 - 9.69 ¹	FTS420 - 9.69		8"	1,095.57	1,260.93	100 #
10"	9.83 - 10.25 ²	FTS420 - 10.25	X	3"	804.17	928.19	85 #
	10.64 - 10.86 ¹	FTS420 - 10.86		4"	804.17	928.19	85 #
	11.03 - 11.47 ¹	FTS420 - 11.47		6"	897.83	1,021.86	90 #
	11.36 - 11.80 ¹	FTS420 - 11.80		8"	1,137.21	1,302.55	110 #
	11.76 - 12.24	FTS420 - 12.24		10"	1,483.37	1,690.02	135 #
12"	12.25 - 12.61 ²	FTS420 - 12.61	X	3"	869.17	993.21	95 #
	12.62 - 12.88 ¹	FTS420 - 12.88		4"	869.17	993.21	95 #
	13.13 - 13.60 ¹	FTS420 - 13.60		6"	949.86	1,073.91	100 #
	13.60 - 14.09	FTS420 - 13.60		8"	1,210.07	1,375.45	125 #
				10"	1,665.51	1,872.21	150 #
				12"	1,834.62	2,041.34	170 #
14"	14.10 - 14.56 ²	FTS420 - 14.56	X	3"	910.82	1,034.84	100 #
	14.59 - 15.08 ²	FTS420 - 15.08		4"	910.82	1,034.84	105 #
				6"	1,061.65	1,185.70	110 #
	15.23 - 15.80	FTS420 - 15.80		8"	1,221.88	1,387.26	130 #
				10"	1,787.81	1,995.26	160 #
				12"	2,050.67	2,257.34	180 #
				14"	2,763.69	3,011.77	220 #
16"			2,880.41	3,128.49	240 #		
17"	2,975.67	3,265.08	275 #				
16"	15.73 - 16.22 ²	FTS420 - 16.22	X	3"	947.27	1,071.31	105 #
	16.30 - 16.73 ²	FTS420 - 16.73		4"	947.27	1,071.31	110 #
				6"	1,061.76	1,185.77	115 #
	16.74 - 17.26	FTS420 - 17.26		8"	1,221.88	1,474.35	145 #
				10"	1,787.81	1,994.50	175 #
				12"	2,050.67	2,257.34	195 #
				14"	2,880.41	3,128.49	240 #
				16"	2,975.67	3,265.08	275 #
				18"	3,308.64	3,598.06	330 #
				20"	3,617.69	3,907.11	375 #
22"			3,916.74	4,216.15	420 #		
18"	17.88 - 18.43 ²	FTS420 - 18.43	X	3"	947.27	1,071.31	115 #
	18.44 - 18.61 ²	FTS420 - 18.61		4"	947.27	1,071.31	115 #
				6"	1,061.76	1,185.77	120 #
	18.62 - 19.19 ²	FTS420 - 19.19		8"	1,221.88	1,474.35	155 #
				10"	1,787.81	1,994.50	185 #
				12"	2,050.67	2,257.34	210 #
				14"	3,006.24	3,254.31	250 #
				16"	3,141.19	3,430.60	300 #
				18"	3,308.64	3,598.06	330 #
				20"	3,617.69	3,907.11	375 #
22"			3,916.74	4,216.15	420 #		
20"	20.00 - 20.60 ²	FTS420 - 20.60	X	3"	999.27	1,123.31	130 #
	20.29 - 20.94 ²	FTS420 - 20.94		4"	999.27	1,123.31	135 #
				6"	1,126.83	1,250.86	140 #
	20.93 - 21.57 ²	FTS420 - 21.57		8"	1,437.82	1,603.18	175 #
				10"	1,936.18	2,142.85	210 #
				12"	2,113.11	2,319.81	230 #
				14"	3,159.71	3,407.80	280 #
				16"	3,263.96	3,553.38	325 #
				18"	3,376.79	3,666.18	360 #
				20"	3,617.69	3,907.11	375 #
22"			3,916.74	4,216.15	420 #		

¹ For size on size taps, a 1/2" undersized shell cutter is required. ² For size on size taps, 2" undersized shell cutter is required.

Other sizes, ranges and outlets available - POA.

Test plugs furnished on all applicable models.

TO ORDER: Specify catalog number by the desired O.D. range and flange size. Add S.S. for optional 304 stainless steel bolts & nuts.

EXAMPLE: FTS420 - 17.87 x 6 - SSFE

NOTE: For flanges 14" and larger, please specify valve manufacturer upon ordering.

FTS420 FABRICATED STEEL TAPPING SLEEVE



NOMINAL PIPE SIZE	SLEEVE O.D. RANGE (inches)	CATALOG NUMBER			LIST PRICE EACH		APPROX. WEIGHT (lbs.)
		SLEEVE #	BY	BRANCH SIZE	W/ ALLOY BOLTS	W/ 304 SS BOLTS & NUTS	
24"	24.15 - 24.85	FTS420 - 24.85	X	3"	\$1,147.62	\$1,271.67	145 #
	24.82 - 25.52	FTS420 - 25.52		4"	1,147.62	1,271.67	150 #
	25.71 - 26.41	FTS420 - 26.41		6"	1,293.42	1,417.42	155 #
	26.55 - 27.25	FTS420 - 27.25		8"	1,675.93	1,841.31	195 #
	27.26 - 27.96	FTS420 - 27.96		10"	2,339.89	2,455.16	235 #
	27.43 - 28.13	FTS420 - 28.13		12"	2,399.37	2,606.06	260 #
	28.14 - 28.84	FTS420 - 28.84		14"	3,573.76	3,821.84	315 #
				16"	3,623.66	3,913.08	370 #
				18"	3,833.87	4,123.29	410 #
				20"	4,048.09	4,337.50	420 #
				24"	5,915.76	6,287.88	485 #
30"	29.78 - 30.48	FTS420 - 30.48	X	3"	1,254.37	1,378.37	170 #
	30.48 - 31.18	FTS420 - 31.18		4"	1,254.37	1,378.37	175 #
	31.15 - 31.85	FTS420 - 31.85		6"	1,433.87	1,557.92	180 #
	31.30 - 32.00	FTS420 - 32.00		8"	1,863.33	2,028.66	230 #
	31.52 - 32.22	FTS420 - 32.22		10"	2,313.50	2,520.20	285 #
	32.20 - 33.00	FTS420 - 33.00		12"	2,399.37	2,655.50	305 #
	33.00 - 33.80	FTS420 - 33.80		14"	3,690.12	3,938.17	370 #
	33.80 - 34.60	FTS420 - 34.60		16"	3,794.35	4,083.76	435 #
	34.60 - 35.40	FTS420 - 35.40		18"	4,004.57	4,293.98	485 #
				20"	4,266.52	4,555.91	495 #
				24"	6,236.32	6,608.43	570 #
36"	35.40 - 36.20	FTS420 - 36.20	X	3"	1,823.45	1,947.47	210 #
	36.20 - 37.00	FTS420 - 37.00		4"	1,823.45	1,947.47	215 #
	37.00 - 37.80	FTS420 - 37.80		6"	1,891.74	2,015.78	220 #
	37.80 - 38.60	FTS420 - 38.60		8"	2,220.70	2,386.08	285 #
	38.60 - 39.40	FTS420 - 39.40		10"	2,863.35	3,070.09	345 #
	39.40 - 40.20	FTS420 - 40.20		12"	3,024.79	3,231.52	370 #
	40.20 - 41.00	FTS420 - 41.00		14"	4,390.34	4,638.40	445 #
	41.00 - 41.80	FTS420 - 41.80		16"	5,236.29	5,525.70	520 #
				18"	6,126.49	6,415.90	585 #
				20"	6,320.71	6,677.84	595 #
				24"	8,050.18	8,422.28	680 #
42"	41.80 - 42.60	FTS420 - 42.60	X	3"	1,957.09	2,081.13	220 #
	42.60 - 43.40	FTS420 - 43.40		4"	1,957.09	2,081.13	225 #
	43.40 - 44.20	FTS420 - 44.20		6"	2,051.10	2,175.16	230 #
	44.20 - 45.00	FTS420 - 45.00		8"	3,075.29	3,240.67	300 #
				10"	3,375.49	3,582.22	365 #
				12"	3,531.83	3,743.64	390 #
				14"	4,714.05	4,962.11	470 #
				16"	5,555.72	5,845.13	550 #
				18"	6,445.93	6,735.34	615 #
				20"	6,707.86	6,997.27	630 #
				24"	8,369.61	8,741.72	720 #
48"	45.00 - 45.80	FTS420 - 45.80	X	3"	2,700.04	2,824.05	320 #
	45.80 - 46.60	FTS420 - 46.60		4"	2,700.04	2,824.05	325 #
	46.60 - 47.40	FTS420 - 47.40		6"	2,903.36	3,068.87	330 #
	47.40 - 48.20	FTS420 - 48.20		8"	3,202.51	3,385.09	430 #
	48.20 - 49.00	FTS420 - 49.00		10"	5,096.41	5,308.48	530 #
	49.00 - 49.80	FTS420 - 49.80		12"	5,176.23	5,482.04	560 #
	49.80 - 50.60	FTS420 - 50.60		14"	7,298.73	7,658.82	675 #
	50.60 - 51.40	FTS420 - 51.40		16"	7,761.29	8,132.62	785 #
	51.40 - 52.20	FTS420 - 52.20		18"	8,562.75	8,936.60	885 #
				20"	9,350.00	9,727.93	895 #
				24"	9,744.09	10,126.03	1,015 #



STS420 STAINLESS STEEL TAPPING SLEEVE

MATERIAL SPECIFICATIONS

BODY AND OUTLET: Stainless steel, thick gauge ASTM A240 type 304/304L or equal. Chemically passivated after welding for maximum corrosion resistance. Type 316 stainless steel is optional.

BOLTS AND NUTS: Trackhead bolts, heavy hex nuts, 5/8" UNC rolled thread, type 304 SS. Nuts coated to prevent galling.

OUTLET GASKETS: SBR per ASTM D 2000, compounded for water and sewer service use. For 3"-12" size-on-size flanges, the gaskets are reinforced with a metal ring. Larger than 12" size-on-size sleeves use a square profile o-ring NBR per ASTM D2000 set in a full body thickness cavity. Other compounds available on request.

TEST PLUG: 3/4" NPT type 304 stainless steel test plug.

FLANGE GASKETS: 3" - 12" full face proprietary gasket are made from Styrene Butadiene Rubber (SBR) compounded for water and sewer service in accordance with ASTM D2000. Other compounds available for petroleum, chemicals or high temperature service.

FLANGE: Stainless steel, ASTM A240 type 304 per AWWA C228 class "D" plate flange, ANSI class 150 drilling, proper recessing for tapping valves. Will accommodate tapping flanges per MSS SP-60.

Meets requirements of MSS SP-124 and AWWA C223.

USE: The STS420 Stainless Steel Tapping Sleeve is used to make a branch outlet from a main supply line on most types of pipe (except for reinforced concrete cylinder pipe).

ALSO AVAILABLE WITH THREADED
OUTLET MODEL STS420T

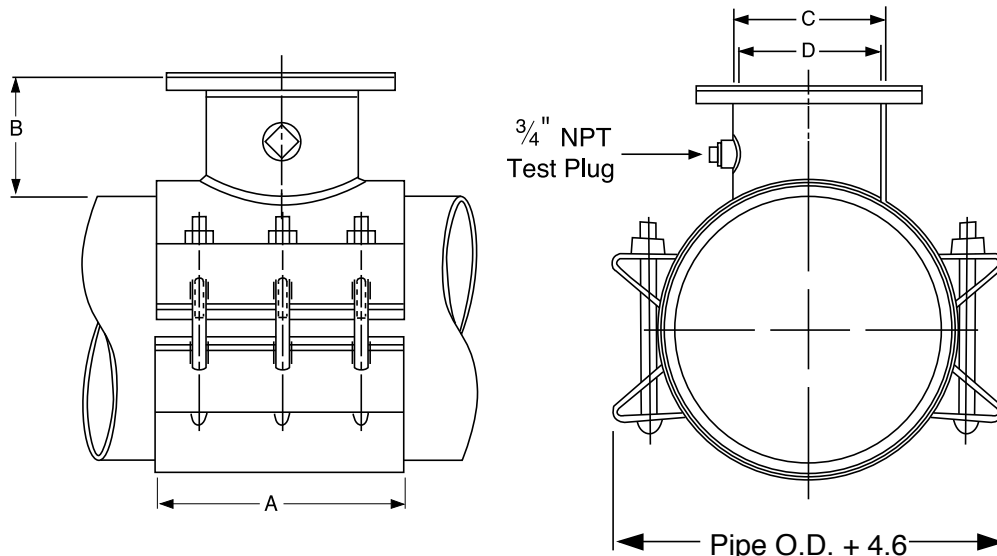


NSF61 certified upon request.

MEETS
AWWA C223

FLANGE SIZE	A	B	C	D	BOLTS QTY: SIZE
3"	12"	5.18"	4.03"	3.26"	8: 5/8" x 7"
4"	12"	5.18"	5.03"	4.79"	8: 5/8" x 7"
6"	12"	5.18"	7.03"	6.79"	8: 5/8" x 7"
8"	16"	5.18"	9.03"	8.79"	10: 5/8" x 7"
10"	20"	5.50"	11.03"	10.79"	14: 5/8" x 7"
12"	20"	5.75"	13.03"	12.79"	14: 5/8" x 7"
14" ¹	24"	6.00"	15.03"	14.79"	16: 5/8" x 7"
16" ¹	30"	6.00"	17.03"	16.79"	20: 5/8" x 7"
18" ¹	30"	6.00"	19.03"	18.79"	20: 5/8" x 7"
20" ¹	36"	6.00"	21.03"	20.73"	24: 5/8" x 7"
24" ¹	48"	6.63"	25.03"	24.73"	32: 5/8" x 7"

¹NOTE: Tapping valve manufacturer must be specified.



STS420 STAINLESS STEEL TAPPING SLEEVE



NOMINAL PIPE SIZE	SLEEVE O.D. RANGE (inches)	CATALOG NUMBER			LIST PRICE	APPROX. WEIGHT (lbs.)		
		SLEEVE #	BY	BRANCH SIZE				
6"	6.83 - 7.16	STS420 - 7.16	X	3"	\$2,152.63	70 #		
	7.05 - 7.40	STS420 - 7.40		4"	2,152.63	75 #		
	7.40 - 7.73	STS420 - 7.73		6"	2,419.31	80 #		
8"	7.74 - 8.35 ²	STS420 - 8.35	X	3"	2,296.43	75 #		
	8.36 - 8.75 ¹	STS420 - 8.75		4"	2,296.43	80 #		
	8.98 - 9.37	STS420 - 9.37		6"	2,539.59	85 #		
	9.27 - 9.69	STS420 - 9.69		8"	3,127.87	90 #		
10"	9.83 - 10.25 ¹	STS420 - 10.25	X	3"	2,531.74	85 #		
	10.64 - 10.86	STS420 - 10.86		4"	2,531.74	90 #		
	11.03 - 11.47	STS420 - 11.47		6"	2,722.60	95 #		
	11.36 - 11.80	STS420 - 11.80		8"	3,350.10	100 #		
	11.76 - 12.24	STS420 - 12.24		10"	4,780.26	125 #		
12"	12.25 - 12.61	STS420 - 12.61	X	3"	2,565.74	100 #		
	12.62 - 12.88	STS420 - 12.88		4"	2,565.74	100 #		
	13.13 - 13.60	STS420 - 13.60		6"	2,842.87	105 #		
	13.60 - 14.09	STS420 - 13.60		8"	3,501.74	110 #		
		STS420 - 14.09		10"	4,918.83	135 #		
12"	12.25 - 12.61	STS420 - 12.61	X	12"	6,275.79	155 #		
14"	14.10 - 14.56 ²	STS420 - 14.56	X	3"	3,185.37	105 #		
	14.59 - 15.08 ²	STS420 - 15.08		4"	3,185.37	110 #		
	15.23 - 15.80	STS420 - 15.08		6"	3,504.37	115 #		
		STS420 - 15.80		8"	4,775.02	120 #		
	14"	14.10 - 14.56 ²		STS420 - 14.56	X	10"	6,312.39	145 #
	14"	14.59 - 15.08 ²		STS420 - 15.08	X	12"	6,806.40	165 #
14"	15.23 - 15.80	STS420 - 15.80	X	14"	7,478.25	200 #		
16"	15.73 - 16.22 ²	STS420 - 16.22	X	3"	3,405.01	115 #		
	16.30 - 16.73 ²	STS420 - 16.73		4"	3,405.01	120 #		
	16.74 - 17.26	STS420 - 17.26		6"	3,742.28	125 #		
	17.33 - 17.87	STS420 - 17.26		8"	5,078.31	130 #		
		STS420 - 17.87		10"	6,474.48	160 #		
	16"	15.73 - 16.22 ²		STS420 - 16.22	X	12"	6,951.12	175 #
	16"	16.30 - 16.73 ²		STS420 - 16.73	X	14"	7,739.74	215 #
16"	16.74 - 17.26	STS420 - 17.26	X	16"	9,948.74	270 #		
18"	17.88 - 18.43 ²	STS420 - 18.43	X	3"	3,462.53	125 #		
	18.44 - 18.61 ²	STS420 - 18.61		4"	3,462.53	130 #		
	18.62 - 19.19	STS420 - 18.61		6"	3,815.48	135 #		
		STS420 - 19.19		8"	5,188.12	140 #		
	18.87 - 19.45	STS420 - 19.19		10"	6,497.89	170 #		
		STS420 - 19.45		12"	7,001.86	190 #		
	18"	17.88 - 18.43 ²		STS420 - 18.43	X	14"	8,001.19	230 #
	18"	18.44 - 18.61 ²		STS420 - 18.61	X	16"	10,201.14	285 #
18"	18.62 - 19.19	STS420 - 19.19	X	18"	10,680.87	290 #		
20"	19.41 - 20.01 ²	STS420 - 20.01	X	3"	3,582.80	145 #		
	19.60 - 20.20 ²	STS420 - 20.20		4"	3,582.80	150 #		
	20.00 - 20.60 ²	STS420 - 20.60		6"	3,961.50	155 #		
	20.29 - 20.94	STS420 - 20.94		8"	5,381.61	160 #		
	20.93 - 21.57	STS420 - 20.94		10"	6,525.31	195 #		
		STS420 - 21.57		12"	7,003.49	210 #		
	21.51 - 22.15	STS420 - 22.15		14"	8,262.69	255 #		
	22.16 - 22.81	STS420 - 22.81		16"	10,447.12	315 #		
	22.78 - 23.45	STS420 - 23.45		18"	10,959.89	320 #		
	23.46 - 24.16	STS420 - 23.45		20"	12,821.41	390 #		
		STS420 - 24.16						

¹ For size on size taps, a 1/2" undersized shell cutter is required. ² For size on size taps, 2" undersized shell cutter is required.

Other sizes, ranges and outlets available - POA.

Test plugs furnished on all applicable models.



No Cancel, No Return Item.

TO ORDER: Specify catalog number by the desired O.D. range and flange size.

EXAMPLE: STS420 - 17.87 x 6

NOTE: For flanges 14" and larger, please specify valve manufacturer upon ordering.

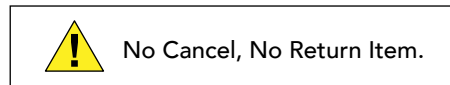


STS420 STAINLESS STEEL TAPPING SLEEVE

NOMINAL PIPE SIZE	SLEEVE O.D. RANGE (inches)	CATALOG NUMBER			LIST PRICE	APPROX. WEIGHT (lbs.)
		SLEEVE #	BY	BRANCH SIZE		
24"	24.15 - 24.85 24.82 - 25.52 25.71 - 26.41 26.55 - 27.25 27.26 - 27.96 27.97 - 28.13 28.14 - 28.84	STS420 - 24.85 STS420 - 25.52 STS420 - 26.41 STS420 - 27.25 STS420 - 27.96 STS420 - 28.13 STS420 - 28.84	X	3"	\$3,839.02	165 #
				4"	3,839.02	170 #
				6"	4,129.38	175 #
				8"	5,747.64	180 #
				10"	6,530.08	220 #
				12"	7,102.31	240 #
				14"	8,524.16	290 #
				16"	10,711.14	360 #
				18"	11,472.68	365 #
				20"	13,334.18	435 #
				24"	16,737.16	585 #
30"	29.78 - 30.48 30.48 - 31.18 31.15 - 31.85 31.30 - 32.00 31.52 - 32.22 32.20 - 33.00 33.00 - 33.80 33.80 - 34.60 34.60 - 35.40	STS420 - 30.48 STS420 - 31.18 STS420 - 31.85 STS420 - 32.00 STS420 - 32.22 STS420 - 33.00 STS420 - 33.80 STS420 - 34.60 STS420 - 35.40	X	3"	4,860.36	190 #
				4"	4,860.36	195 #
				6"	5,430.25	200 #
				8"	5,989.77	205 #
				10"	6,569.99	250 #
				12"	7,139.89	270 #
				14"	8,785.62	320 #
				16"	11,475.87	400 #
				18"	11,988.64	405 #
				20"	13,850.15	480 #
				24"	17,253.12	645 #
36"	35.40 - 36.20 36.20 - 37.00 37.00 - 37.80 37.80 - 38.60 38.60 - 39.40 39.40 - 40.20 40.20 - 41.00 41.00 - 41.80	STS420 - 36.20 STS420 - 37.00 STS420 - 37.80 STS420 - 38.60 STS420 - 39.40 STS420 - 40.20 STS420 - 41.00 STS420 - 41.80	X	3"	5,449.40	215 #
				4"	5,449.40	220 #
				6"	5,937.39	225 #
				8"	6,425.39	230 #
				10"	6,913.37	285 #
				12"	7,401.36	300 #
				14"	9,047.10	360 #
				16"	11,959.05	450 #
				18"	12,471.82	455 #
				20"	14,333.33	540 #
				24"	17,736.32	725 #
42"	41.80 - 42.60 42.60 - 43.40 43.40 - 44.20 44.20 - 45.00	STS420 - 42.60 STS420 - 43.40 STS420 - 44.20 STS420 - 45.00	X	3"	6,038.45	230 #
				4"	6,038.45	235 #
				6"	6,444.55	240 #
				8"	6,850.65	245 #
				10"	7,256.74	300 #
				12"	7,662.83	385 #
				14"	9,308.58	475 #
				16"	12,442.22	480 #
				18"	12,955.00	575 #
				20"	14,816.53	580 #
				24"	18,219.49	770 #
48"	45.00 - 45.80 45.80 - 46.60 46.60 - 47.40 47.40 - 48.20 48.20 - 49.00 49.00 - 49.80 49.80 - 50.60 50.60 - 51.40 51.40 - 52.20	STS420 - 45.80 STS420 - 46.60 STS420 - 47.40 STS420 - 48.20 STS420 - 49.00 STS420 - 49.80 STS420 - 50.60 STS420 - 51.40 STS420 - 52.20	X	3"	7,005.13	265 #
				4"	7,005.13	270 #
				6"	7,129.60	275 #
				8"	7,357.76	280 #
				10"	7,792.64	340 #
				12"	8,290.82	360 #
				14"	10,002.39	430 #
				16"	12,414.02	535 #
				18"	12,870.84	540 #
				20"	15,983.78	645 #
				24"	19,524.24	860 #

Other sizes, ranges and outlets available - POA.

Test plugs furnished on all applicable models.



TO ORDER: Specify catalog number by the desired O.D. range and flange size.

EXAMPLE: STS420 - 42.60 x 12

NOTE: For flanges 14" and larger, please specify valve manufacturer upon ordering.

FTS425 FABRICATED STEEL TAPPING SLEEVE



MATERIAL SPECIFICATIONS

BODY AND OUTLET NOZZLE: Carbon steel, A-36 or equal.

BOLTS AND NUTS: Trackhead bolts, heavy hex nuts, UNC rolled thread, high strength, low alloy, steel per AWWA C111. Optional stainless steel, type 304.

GASKETS: SBR per ASTM D 2000 MBA 710, compounded for water and sewer service use. Other compounds available on request.

PAINT: Romac shopcoat for corrosion protection in transit. Optional fusion epoxy 8-12 mil. lined and coated. Other coatings available. Romac packages sleeves to protect any special coatings.

FLANGE: AWWA Class "D" plate flange, ANSI Class 150 drilling, proper recessing for tapping valves. Will accommodate tapping flanges per MSS SP-60.

Meets requirements of MSS SP-124 and AWWA C223



NSF61 certified upon request.

MEETS
AWWA C223

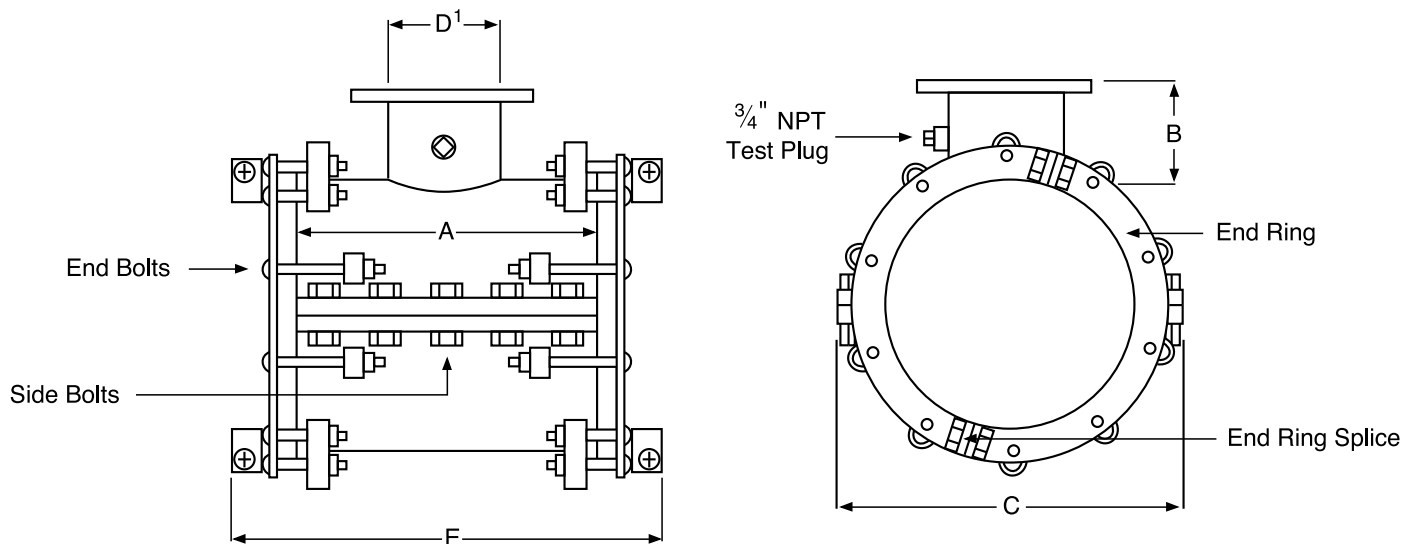
Certified to
NSF/ANSI 61 & 372

The Romac steel sleeve with side and end gasket seals provides extra protection on lines subject to excessive beam loads.

Fabricated to special order only.

- Exact O.D. of pipe required
- No range provided
- Price on application

Contact Romac Engineering for high pressure and larger than 24" pipe applications



¹ For D dimension: 4" - 12" flanges will accommodate tapping flanges per MSS SP-60.

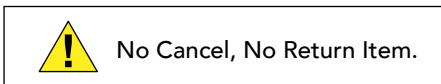


FTS425 FABRICATED STEEL TAPPING SLEEVE

NOMINAL PIPE SIZE	PIPE O.D.	FLANGE SIZE	A	B	C	E	SIDE BOLTS QTY: SIZE	END BOLTS QTY: SIZE	APPROX. WEIGHT (lbs.)
12"	Ductile Iron 13.20	4"	15.3	6.00	18.38	22.36	8: 1"	16: 5/8"	217#
		6" & 8"	19.0	6.00	18.38	26.13	10: 1"	16: 5/8"	261#
		10" & 12"	22.8	6.00	18.38	29.90	12: 1"	16: 5/8"	325#
	Cast Iron 13.50	4"	15.3	6.00	18.68	22.36	8: 1"	16: 5/8"	220#
		6" & 8"	19.0	6.00	18.68	26.13	10: 1"	16: 5/8"	264#
		10" & 12"	22.8	6.00	18.68	29.90	12: 1"	16: 5/8"	329#
	A/C 13.55	4"	15.3	6.00	18.73	22.36	8: 1"	16: 5/8"	221#
		6" & 8"	19.0	6.00	18.73	26.13	10: 1"	16: 5/8"	264#
		10" & 12"	22.8	6.00	18.73	29.90	12: 1"	16: 5/8"	329#
14"	Ductile Iron 15.30	4"	15.3	6.00	20.48	22.36	8: 1"	20: 5/8"	241#
		6" & 8"	19.0	6.00	20.48	26.13	10: 1"	20: 5/8"	288#
		10" & 12"	22.8	6.00	20.48	29.90	12: 1"	20: 5/8"	355#
	Cast Iron 15.55	4"	15.3	6.00	20.83	22.36	8: 1"	20: 5/8"	244#
		6" & 8"	19.0	6.00	20.83	26.13	10: 1"	20: 5/8"	291#
		10" & 12"	22.8	6.00	20.83	29.90	12: 1"	20: 5/8"	358#
	A/C 15.65	4"	15.3	6.00	20.73	22.36	8: 1"	20: 5/8"	244#
		6" & 8"	19.0	6.00	20.73	26.13	10: 1"	20: 5/8"	292#
		10" & 12"	22.8	6.00	20.73	29.90	12: 1"	20: 5/8"	360#
16"	Ductile Iron 17.40	4"	15.3	6.00	22.58	22.36	8: 1"	20: 5/8"	261#
		6" & 8"	19.0	6.00	22.58	26.13	10: 1"	20: 5/8"	311#
		10" & 12"	22.8	6.00	22.58	29.90	12: 1"	20: 5/8"	388#
	A/C 17.55	4"	15.3	6.00	22.98	22.36	8: 1"	20: 5/8"	265#
		6" & 8"	19.0	6.00	22.98	26.13	10: 1"	20: 5/8"	316#
		10" & 12"	22.8	6.00	22.98	29.90	12: 1"	20: 5/8"	387#
Cast Iron 17.80	4"	15.3	6.00	22.73	22.36	8: 1"	20: 5/8"	263#	
	6" & 8"	19.0	6.00	22.73	26.13	10: 1"	20: 5/8"	313#	
	10" & 12"	22.8	6.00	22.73	29.90	12: 1"	20: 5/8"	384#	
18"	Ductile Iron 19.50	4" & 6"	18.3	6.00	24.68	25.42	8: 1 1/8"	24: 5/8"	338#
		8", 10" & 12"	23.0	6.00	24.68	30.10	10: 1 1/8"	24: 5/8"	430#
		4" & 6"	18.3	6.00	25.10	25.42	8: 1 1/8"	16: 5/8"	343#
	Cast Iron 19.92	8", 10" & 12"	23.0	6.00	25.10	30.10	10: 1 1/8"	24: 5/8"	435#
		4" & 6"	18.3	6.00	25.68	25.42	8: 1 1/8"	24: 5/8"	349#
		8", 10" & 12"	23.0	6.00	25.68	30.10	10: 1 1/8"	24: 5/8"	443#
20"	Ductile Iron 21.60	4" & 6"	18.4	6.00	27.78	25.49	8: 1 1/4"	24: 5/8"	395#
		8", 10" & 12"	23.0	6.00	27.78	30.10	10: 1 1/4"	24: 5/8"	500#
		4" & 6"	18.4	6.00	28.24	25.49	8: 1 1/4"	24: 5/8"	400#
	Cast Iron 22.06	8", 10" & 12"	23.0	6.00	28.24	30.10	10: 1 1/4"	24: 5/8"	505#
		4" & 6"	18.4	6.00	28.88	25.49	8: 1 1/4"	24: 5/8"	410#
		8", 10" & 12"	23.0	6.00	28.88	30.10	10: 1 1/4"	24: 5/8"	515#
24"	Ductile Iron 25.80	4" & 6"	18.4	6.00	31.98	25.49	8: 1 1/4"	28: 5/8"	446#
		8", 10" & 12"	23.0	6.00	31.98	30.10	10: 1 1/4"	28: 5/8"	558#
		4" & 6"	18.4	6.00	32.50	25.49	8: 1 1/4"	28: 5/8"	452#
	Cast Iron 26.32	8", 10" & 12"	23.0	6.00	32.50	30.10	10: 1 1/4"	28: 5/8"	565#
		4" & 6"	18.4	6.00	33.33	25.49	8: 1 1/4"	28: 5/8"	460#
		8", 10" & 12"	23.0	6.00	33.33	30.10	10: 1 1/4"	28: 5/8"	576#

All prices POA.

Sizes not listed are available on request.



FTS435 FABRICATED STEEL TAPPING SLEEVE

ROMAC
INDUSTRIES, INC.

BODY & OUTLET: ASTM A 36 Steel Plate. Thickness and length along pipe determined by application pressure and size.

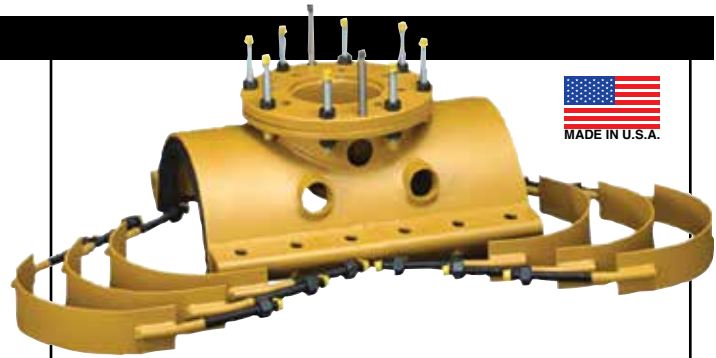
FLANGE: Steel Ring Flange, compatible with ANSI Class 125 and 150 bolt circles, are standard. Counterbored to fit tapping valve lip per MSS SP-60 where applicable. Other flange styles are available. Information about make of valve and size of cutter necessary for flanges 14" and larger.

STRAP ASSEMBLIES: High strength low alloy steel studs and nuts, meeting AWWA Standard C111. Straps are ASTM A 36 steel. Type 304 and 316 Stainless Steel stud, nut and strap material optional.

NECK GASKET: Gaskets are made from Styrene Butadiene Rubber (SBR) Compounded for water and sewer service in accordance with ASTM D 2000 3 BA715. Other compounds available for petroleum, chemical, or high temperature service.

GROUT SEAL: One inch square High density Nitrile foam. 1/2" hard rubber stops provided to maintain minimum space between body of tapping sleeve and O.D. of pipe.

COATINGS: Shop coat applied to parts for corrosion protection in transit. Fusion bonded epoxy is optional.



THE FTS435 FABRICATED TAPPING SLEEVE IS DESIGNED FOR CONCRETE STEEL CYLINDER PIPE.

THIS TYPE OF PIPE, TYPICALLY MANUFACTURED TO AWWA C300 OR C301 STANDARDS, IS A STEEL PIPE LINED WITH CONCRETE AND THEN WRAPPED WITH REINFORCING BARS AND COATED WITH CONCRETE.



NSF61 certified upon request.

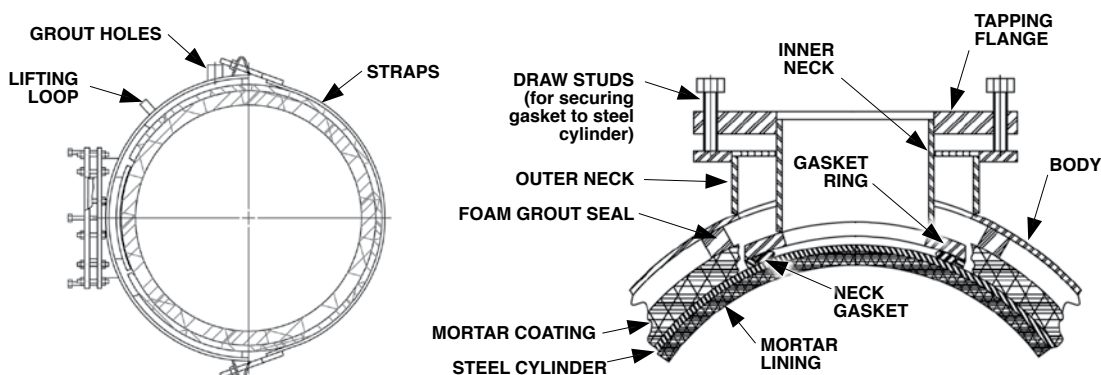
MEETS AWWA C223 & MANUAL M-9

INSTALLATION

The body of the sleeve is bolted onto the pipe (no welding is required) and the concrete inside the outlet is then chipped away along with removing the bars exposing the steel cylinder. The inner neck is then installed which seals on the steel cylinder OD. At this point you can safely make a tap into the concrete cylinder pipe and be assured of a watertight seal.

The FTS435 is available for all sizes of Concrete Cylinder pipe.

When ordering or requesting a quotation, please provide the Concrete pipe OD, Steel Cylinder OD, Outlet Flange size, Pipeline Pressure, Coating, and fastener requirements.



No Cancel, No Return Item.



FTS445 FABRICATED STEEL TAPPING SLEEVE

MATERIAL SPECIFICATIONS

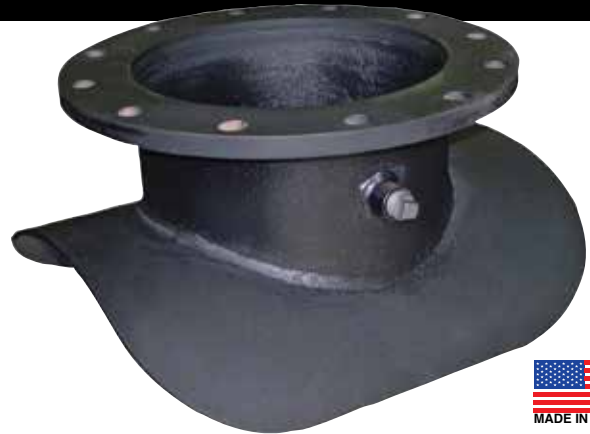
BODY AND OUTLET NOZZLE: Carbon steel, A-36 or equal. Also available with type 304 stainless steel (style STS445)

FLANGE: Carbon steel, A-36 or equal. AWWA Class "D" plate flange, ANSI CLS 150 drilling, proper recessing for tapping valves. Will accommodate tapping flanges per MSS SP-60.

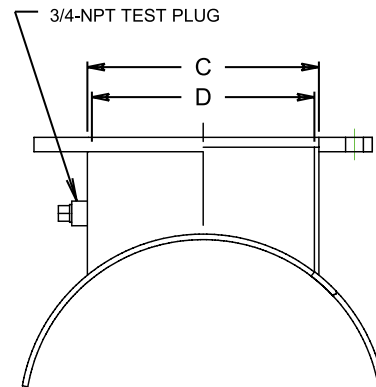
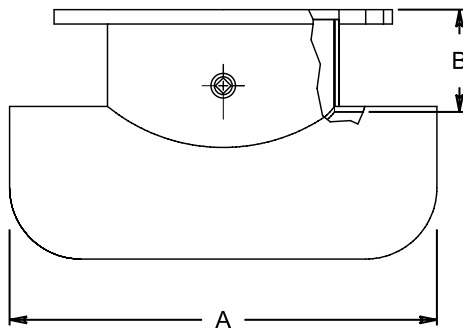
TEST PLUG: 3/4" NPT type 304 stainless steel test plug.

COATINGS: Romacshopcoat for corrosion protection in transit. Other coatings available upon request.

MEETS AWWA C223 & MANUAL M-9



FABRICATED TAPPING SLEEVE FOR WELD-ON OUTLETS



FLANGE SIZE	A	B	C	D	MIN. PIPE DIAMETER
4"	9.0	5.18	5.03	4.73	6.00
6"	12.0	5.18	7.03	6.73	8.00
8"	16.0	5.18	9.03	8.73	10.00
10"	20.0	5.50	11.03	10.73	12.00
12"	22.0	5.75	13.03	12.73	14.00
14"*	24.0	6.00	15.03	14.73	16.00
16"*	29.0	6.00	17.03	16.73	20.00
18"*	32.0	6.00	19.03	18.73	22.00
20"*	35.0 ¹	6.00	21.03	20.73	24.00
24"*	42.0 ¹	6.63	25.03	24.73	36.00

* Please specify tapping valve manufacturer, and flange dimensions for flange sizes larger than 12 inches.

¹ Dimension "A" increases on pipe ODs greater than 40".

Larger sizes and outlets available.

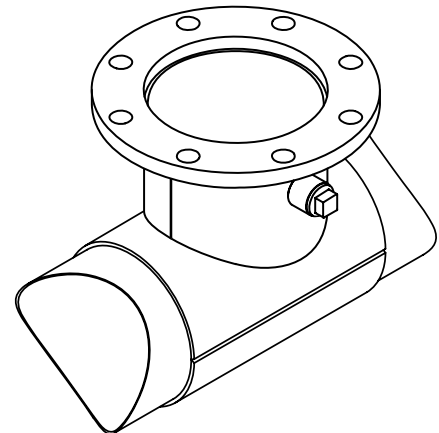
All prices POA



No Cancel, No Return Item.

Sleeves designed for a minimum pipe wall thickness of 0.25" and a minimum pipe material yield strength of 36 ksi will be collar style.

Size on size sleeves, and sleeves for thinner or lower strength pipe will require full wrap style sleeve (see illustration below).



SST-X LINE STOP SLEEVE



MATERIAL SPECIFICATIONS

NUTS: Heavy hex, 304 stainless steel. Four inch sleeves use 1/2" UNC threads, six inch and larger use 5/8" UNC threads. Nuts coated to prevent galling.

WASHERS: 304 stainless steel flat washers. Plastic washers prevent galling between nut or stainless steel washer and lifter bar on all sizes.

BLIND FLANGE: ASTM A36 or equivalent. Epoxy coated.

COMPLETION PLUG: Ductile Iron per ASTM A536.

PLUG O-RING: Styrene butadiene rubber (SBR) compounded for water and sewer service in accordance with ASTM D2000.

FLANGE: 304 Stainless steel flange per AWWA C228-08. ANSI class 150 drillings and raised face to accept blind flange. GMAW welded to neck.

SLEEVE SHELL AND SIDE BARS: 304 stainless steel.

TEST PLUG: 3/4" NPT type 304 Stainless Steel. Plug threads coated to prevent galling.

BOLTS: 304 stainless steel. Four inch sleeves use 1/2" UNC threads, six inch and larger use 5/8" UNC threads.

ARMORS: 304 stainless steel.

SLEEVE GASKET: Virgin SBR rubber compounded for water and sewer service in accordance with ASTM D2000 MAA 610.

THE SST-X LINE STOP SLEEVE PROVIDES THE SAME HIGH QUALITY AND FEATURES OF ROMAC SST TAPPING SLEEVES.

VERSATILE

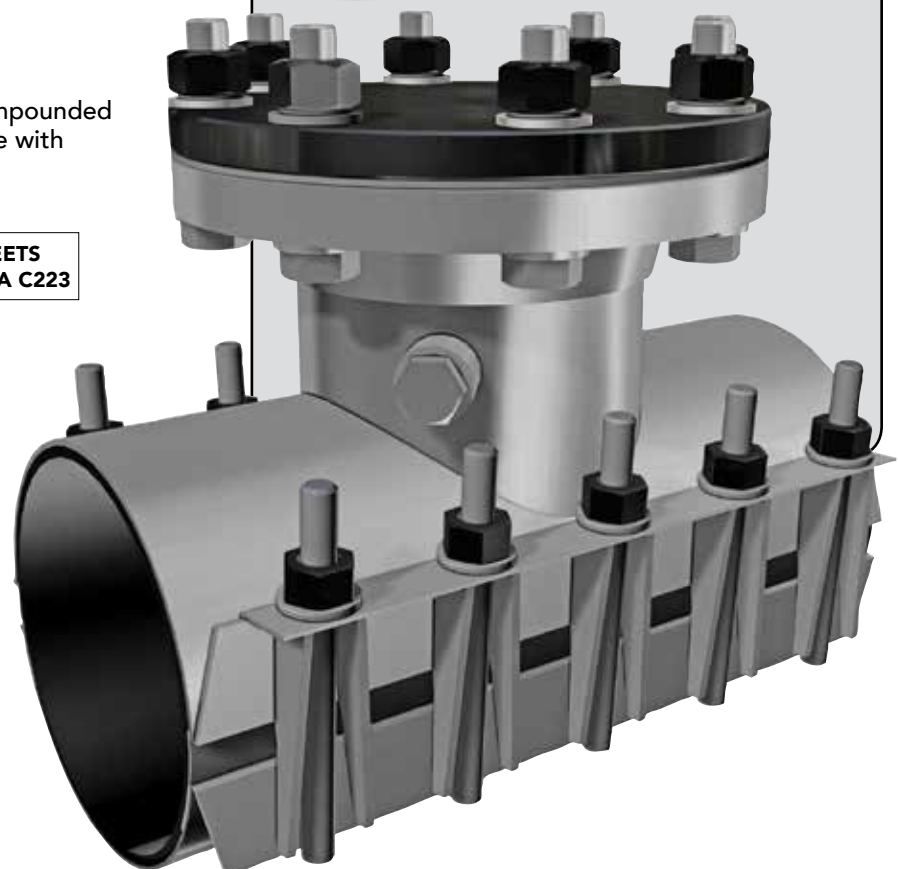
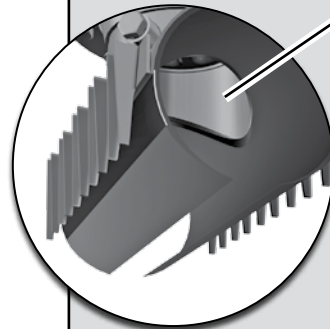
- Fits most line stopping equipment.
- Built in range means that one sleeve fits various classes of pipe.

REINFORCES THE PIPE

- Full circle design reduces stress on the pipe opposite line stop equipment.

ROMAC GASKET

- Hydrodynamic sealing gasket.



NSF61 certified upon request.

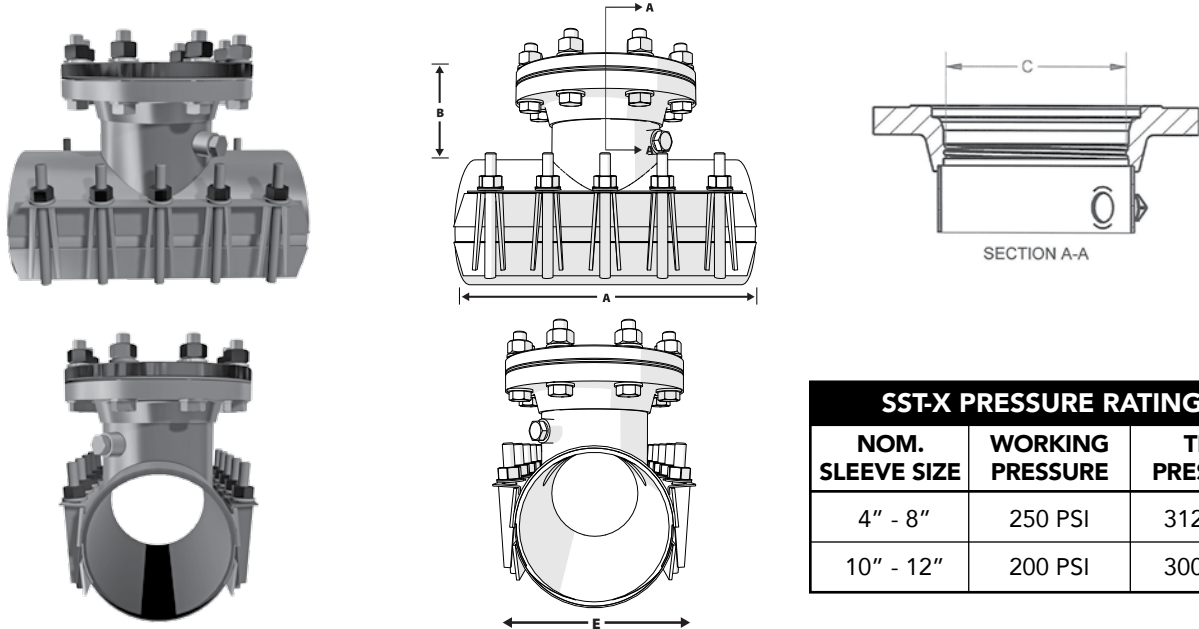
Certified to NSF/ANSI 61 & 372



MEETS
AWWA C223



SST-X LINE STOP SLEEVE



SST-X PRESSURE RATINGS		
NOM. SLEEVE SIZE	WORKING PRESSURE	TEST PRESSURE
4" - 8"	250 PSI	312 PSI
10" - 12"	200 PSI	300 PSI

NOMINAL PIPE SIZE	SLEEVE O.D. RANGE (inches)	CATALOG NUMBER	LIST PRICE	NO. OF BOLTS	DIMENSIONS				APPROX. WEIGHT (lbs.)
					A LAY LENGTH	B NECK HEIGHT	C NECK ID	E SLEEVE WIDTH	
4"	4.50 - 4.80 *	SST-X - 4.80	\$1,281.86	8	12	4.00"	4.00"	PIPE OD +3.00"	50
	4.70 - 5.00 *	SST-X - 5.00							
	5.00 - 5.30 *	SST-X - 5.30							
6"	6.60 - 7.00 *	SST-X - 7.00	1,669.20	10	16	4.50"	6.00"	PIPE OD +3.00"	85
	7.10 - 7.50 *	SST-X - 7.50							
	7.50 - 7.90 *	SST-X - 7.90							
8"	8.30 - 8.63	SST-X - 8.63	1,977.36	14	20	5.00"	8.00"	PIPE O D +3.00"	130
	8.62 - 9.06	SST-X - 9.06							
	9.04 - 9.45	SST-X - 9.45							
	9.20 - 9.60	SST-X - 9.60							
10"	10.73 -11.13 *	SST-X - 11.13	3,254.94	16	24	5.50"	10.00"	PIPE OD +3.00"	190
	11.06 -11.45 *	SST-X - 11.45							
	11.45 -11.85 *	SST-X - 11.85							
	11.79 -12.19 *	SST-X - 12.19							
12"	12.45 -12.85	SST-X - 12.85	3,490.34	20	30	5.75"	12.00"	PIPE OD +3.00"	300
	13.16 -13.56	SST-X - 13.56							
	13.98 -14.38	SST-X - 14.38							

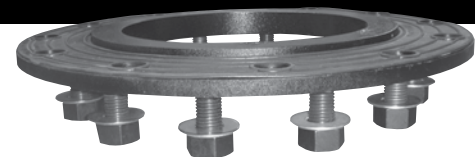
TO ORDER: Specify Sleeve Number. **EXAMPLE: SST-X - 9.45** Other sizes are available on request.

ADAPTER PLATES

SST-X list prices shown above, do not include adapter plate.

* Because SST-X Line Stopping Sleeves have ANSI B16.5 CL150 stainless steel flanges, the 4", 6" and 10" sleeve ranges require an adapter plate to connect to the temporary slide gates commonly used in most line stopping equipment.

One adapter plate connects 4 & 6 inch sleeves to the 8 inch gate valve. A separate adapter plate connects 10 inch sleeves to a 12 inch valve.



NOM. PIPE SIZE	CATALOG NUMBER	LIST PRICE	APPROX. WEIGHT
4" & 6"	107-AP040601	\$779.73	44 #
10"	107-AP100001	962.18	44 #



SEWER PRODUCTS



CB
SEWER SADDLE

PAGE 7-3

STYLE CB SEWER SADDLE
PATENT #4494780



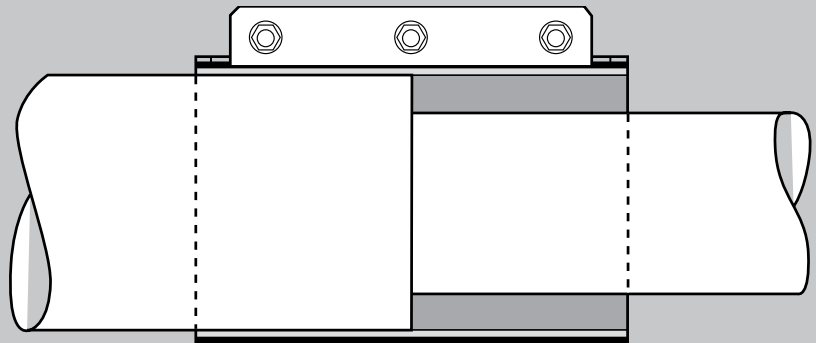
501
DUCTILE IRON COUPLING FOR SEWER

PAGE 7-6



LSS1, LSS2 & LSS3
SEWER CLAMP COUPLINGS

PAGE 7-7 & 7-8



TRANSITION CLAMP COUPLING for SEWER

PAGE 7-8



A/C x PVC
SEWER ADAPTER GASKET

PAGE 7-9



LCT™
MANHOLE ADAPTER GASKET

PAGE 7-10



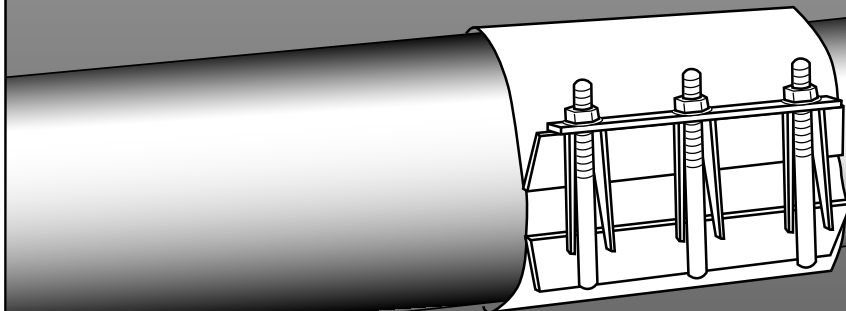
MJ x SDR 35
TRANSITION GASKET (PVC SEWER)

PAGE 7-10

SEWER PIPE OD CHART

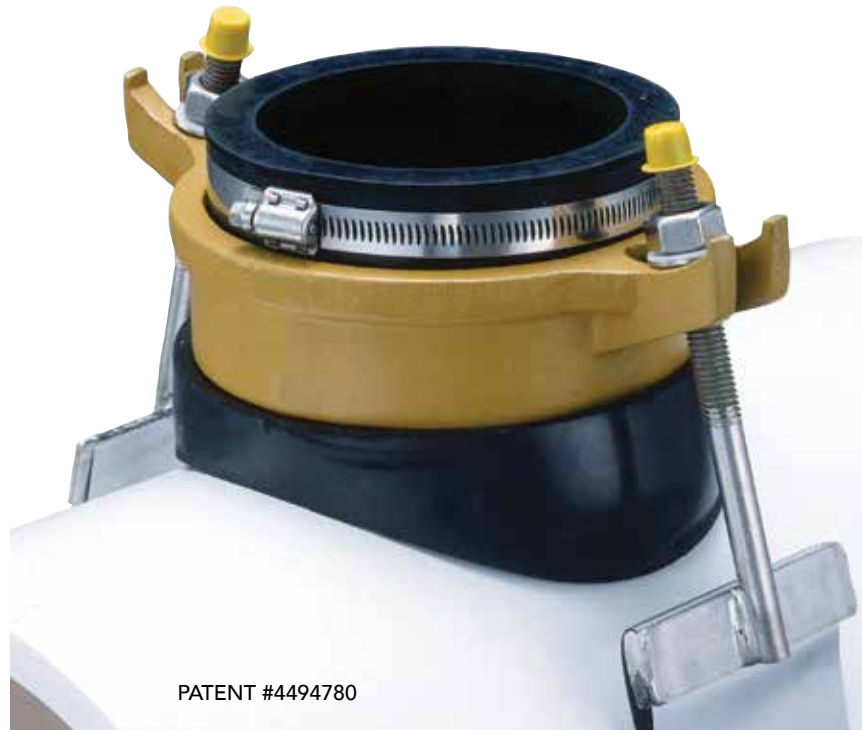
NOM. PIPE SIZE	ASBESTOS CEMENT SEWER						PVC			CI SOIL NO HUB	CLAY	CONCRETE (Average)
	CL1500	CL2400	CL3300	CL4000	CL5000	A/CME	SDR 35	SDR 41	PIP			
4"	4.81	4.87	5.05			4.62	4.215	4.50	4.130	4.30	4.85-5.38	6.00
5"	5.90	5.97	6.15			5.78		5.563		5.30	6.31-6.65	
6"	6.92	6.98	7.14			6.66	6.275	6.625	6.140	6.30	7.19-7.93	8.00
8"	9.02	9.04	9.22			8.96	8.40	8.625	8.160	8.40	9.25-10.09	10.25
10"	11.12	11.16	11.36	11.50	11.70	11.05	10.50	10.75	10.20	10.50	11.50-12.88	12.75
12"	13.22	13.26	13.50	13.64	13.86	13.15	12.50	12.75	12.24	12.50	13.75-15.30	15.50
14"	15.30	15.36	15.46	15.78	16.00	15.23						
15"	16.34	16.42	16.66	16.84	17.06	16.11	15.30		15.30	15.62	17.19-18.70	18.75
16"	17.38	17.46	17.72	17.90	18.14	17.31						
18"		19.54	19.82	20.02	20.36	19.39	18.70		18.70		20.65-22.40	22.00
20"		21.66	21.88	22.10	22.32	21.45						
21"		22.47	23.03	23.29	23.66	22.37	22.05		22.05		24.13-26.43	25.50
22"												
24"		25.78	26.10	26.32	26.60	25.67	24.80		24.80		27.50-29.84	29.00
27"							27.95		27.96		31.00-32.13	32.25
28"												
30"			32.34	32.60	32.90	32.13					34.38-35.63	35.50

NOTE: Due to variations in outside diameters and specifications, dimensions listed above are approximate. For this reason, the O.D. of pipe being used should be determined before ordering Romac products.



A ROMAC ORIGINAL

- 1981 -



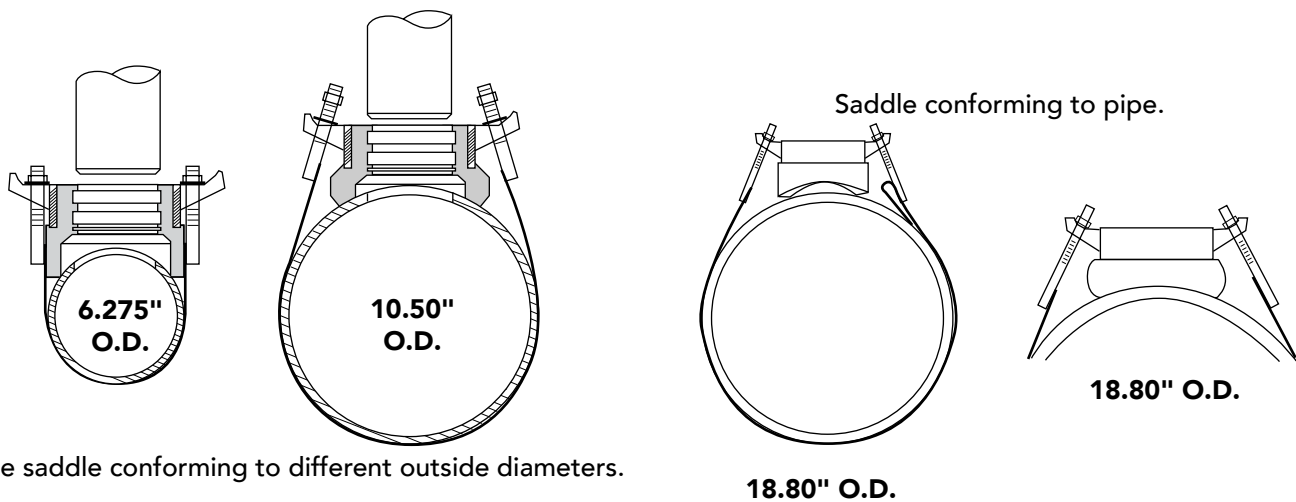
PATENT #4494780

DESIGN ADVANTAGES:

- **INVENTORY REDUCTION:** Unique gaskets fit wide range of diameters.
- **EASE OF INSTALLATION:** Saddle can be installed by unskilled labor, using a socket or open end wrench. Built-in stop prevents blockages due to inadvertant insertion of branch into main.
- **SUPERIOR STRAP:** Strong 304 stainless steel band GMAW & GTAW welded to roll threaded 304 stainless bolts adjusts over a wide range. Clamping force is well distributed by 3 1/2" width.
- **FLEXIBILITY:** Gasket allows considerable deflection due to earth movement, while large sealing surface and wide band strongly resist displacement.
- **RELIABILITY:** Continuous rubber connection between rim and branch eliminates potential leak spots. Saddles have been tested to pressures well in excess of typical service test requirements.

NOTE: A pipe stop capable of withstanding 1000 pounds of thrust is molded into the CB saddle gasket. Care must be taken during system design and installation to assure that this thrust limit is not exceeded.

DETAIL SPECIFICATIONS FOR ROMAC "CB"™ SEWER SADDLES





STYLE "CB"™ SEWER SADDLE

SEWER

MATERIAL SPECIFICATIONS

CASTINGS: Ductile iron per ASTM 536, Grade 65-45-12. Protected with a yellow shopcoat.

ADJUSTABLE STRAP: 3 1/2" wide, stainless steel per ASTM A 240, type 304.

BOLTS: 1/2" UNC rolled thread, lubricant coated, stainless steel per ASTM A 193, type 304.

NUTS: Stainless steel per ASTM A 194, type 304.

WASHERS: Stainless steel per ASTM A 240, type 304 and plastic lubricating washers.

GASKET: SBR per ASTM D 2000 MBA 710, compounded for water and sewer service. Other compounds available on request.



CB-4.80UN
PATENT #4494780



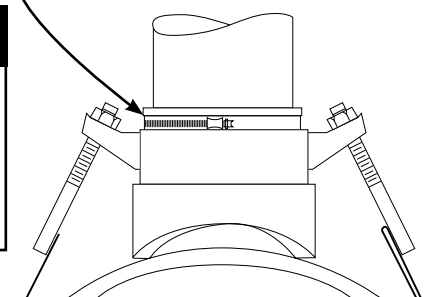
NOM. BRANCH SIZE	NOM. PIPE SIZE	RANGE	BRANCH TYPE	BRANCH O.D.	CATALOG NUMBER	LIST PRICE	ADD-ON EPOXY	APPROX. WEIGHT (lbs.)
4"	6" - 12" 48" strap	26.27 - 14.40 Regular Gasket	PVC Sewer	4.215	CB-4.215	\$131.05		10 #
			Tyseal	4.28	CB-4.28			
			C.I. Soil-No Hub	4.38	CB-4.38			
			PVC	4.50	CB-4.50			
			Universal ¹	4.20 - 4.80	CB-4.80UN ¹			
			Clay ¹	5.00 - 5.38	CB-5.38 ¹			
	14" - 24" 96" strap	14.40 - 25.80 Large O.D. Gasket	PVC Sewer	4.215	CB-4.215LS	166.65	\$39.86	11 #
			Tyseal	4.28	CB-4.28LS			
			C.I. Soil-No Hub	4.38	CB-4.38LS			
			PVC	4.50	CB-4.50LS			
			Universal ¹	4.20 - 4.80	CB-4.80UNLS ¹			
			Clay ¹	5.00 - 5.38	CB-5.38LS ¹			
	24" - 48" 192" strap	25.80 - 54.00 Large O.D. Gasket	PVC Sewer	4.215	CB-4.215XLS	309.30		13 #
			Tyseal	4.28	CB-4.28XLS			
			C.I. Soil-No Hub	4.38	CB-4.38XLS			
PVC			4.50	CB-4.50XLS				
Universal ¹			4.20 - 4.80	CB-4.80UNXLS ¹				
Clay ¹			5.00 - 5.38	CB-5.38XLS ¹				
6"	8" - 12" 48" strap	28.00 - 14.40 Regular Gasket	PVC Sewer	6.27 - 6.30	CB-6.30	174.70		12 #
			C.I. Soil-No Hub	6.27 - 6.66	CB-6.66UN ¹			
			Universal ¹	6.27 - 6.66	CB-6.66UN ¹			
			Cast Iron-D.I.	6.90	CB-6.90			
	14" - 24" 96" strap	14.40 - 25.80 Large O.D. Gasket	PVC Sewer	6.27 - 6.30	CB-6.30LS	208.61	60.29	13 #
			C.I. Soil-No Hub	6.27 - 6.66	CB-6.66UNLS ¹			
			Universal ¹	6.27 - 6.66	CB-6.66UNLS ¹			
			Cast Iron-D.I.	6.90	CB-6.90LS			
			Clay ¹	7.19 - 8.00	CB-8.00LS ¹			
	24" - 48" 192" strap	25.80 - 54.00 Large O.D. Gasket	PVC Sewer	6.27 - 6.30	CB-6.30XLS	351.27		15 #
			C.I. Soil-No Hub	6.27 - 6.66	CB-6.66UNXLS ¹			
			Universal ¹	6.27 - 6.66	CB-6.66UNXLS ¹			
			Cast Iron-D.I.	6.90	CB-6.90XLS			
			Clay ¹	7.19 - 8.00	CB-8.00XLS ¹			

¹ CB Sewer Saddles for Universal and Clay pipe include stainless steel hose clamp.

² Regular gaskets are NOT interchangeable with large gaskets.

BRANCH SIZE	SIZE	SADDLE GASKET	SLIDING CASTING	HOSE BOLT	HOSE CLAMP ¹	STRAP
4"	6-12"	\$42.72				REG (48") \$42.38
	14-24"	58.27	\$45.95	\$15.62	\$12.70	LS (96") 62.42
	24-48"	58.27				
6"	8-12"	75.23				XLS (192") 205.08
	14-24"	89.10	57.09	15.62	13.52	
	24-48"	89.10				

STAINLESS STEEL HOSE CLAMP SUPPLIED FOR UNIVERSAL GASKET



TO ORDER: Specify catalog number.

EXAMPLE: To fit 4" branch to 6" -12" nominal pipe with branch 4.20 - 4.80, order **CB-4.80UN**

STYLE 501

STRAIGHT & TRANSITION COUPLINGS FOR SEWER



MATERIAL SPECIFICATIONS

CENTER RINGS: Ductile iron per ASTM A 536, Grade 65-45-12. Yellow shopcoat. Epoxy and special coatings available on request.

END RINGS: Ductile iron per ASTM A 536, Grade 65-45-12. Color coded RED for O.D. and Std. Stl., BLACK for cast iron and YELLOW for A/C.

GASKETS: SBR per ASTM D 2000 MBA 710, compounded for water and sewer service. Other compounds available on request.

BOLTS AND NUTS: Trackhead bolts, heavy hex nuts, 5/8" UNC rolled thread, high strength, low alloy corrosion resistant steel per AWWA C111. Threads protected with plastic caps on each bolt end. Other materials or special coatings available on request.



PIPE SIZE	COLOR CODE	ONE END		X	OTHER END		LIST PRICE				APPROX. WEIGHT (lbs.)	
		GASKET RANGE 1st Half Cat. No.	APPROX. USE		COLOR CODE	GASKET RANGE 2nd Half Cat. No.	APPROX. USE	SHOPCOAT		FUSION EPOXY		
								w/STD B&N	w/304 SS B&N	w/STD B&N		w/304 SS B&N
4"	RED	4.06 - 4.31	Cl-Soil, PVC Sewer	X	RED	4.06 - 4.31	Cl-Soil, PVC Sewer	\$140.25	\$185.46	\$173.30	\$218.51	16 #
	BLACK	4.74 - 5.10	A/C-CL. 1500, 2400, 3300		BLACK	4.74 - 5.10	A/C-CL. 1500, 2400, 3300					
		5.11 - 5.30	Clay		BLACK	5.11 - 5.30	Clay					
6"	RED	6.05 - 6.30	Cl-Soil, PVC Sewer	X	RED	6.05 - 6.30	Cl-Soil, PVC Sewer	190.89	247.40	235.88	292.38	26 #
	BLACK	6.86 - 7.20	A/C-CL. 1500, 2400, 3300		BLACK	6.86 - 7.20	A/C-CL. 1500, 2400, 3300					
		YELLOW	7.15 - 7.45		Clay	YELLOW	7.15 - 7.45						Clay
8"	RED	8.30 - 8.55	Cl-Soil, PVC Sewer	X	RED	8.30 - 8.55	Cl-Soil, PVC Sewer	241.84	309.66	298.83	366.65	32 #
	BLACK	8.99 - 9.40	A/C-CL. 1500, 2400, 3300		BLACK	8.99 - 9.40	A/C-CL. 1500, 2400, 3300					
		YELLOW	9.25 - 9.75		Clay	YELLOW	9.25 - 9.75						Clay
10"	RED	10.20 - 10.55A ¹	Cl-Soil, PVC Sewer	X	RED	10.20 - 10.55A ¹	Cl-Soil, PVC Sewer	333.68	425.45	412.30	504.08	62 #
	BLACK	10.89 - 11.40B ¹	A/C-CL. 1500, 2400, 3300		BLACK	10.89 - 11.40B ¹	A/C-CL. 1500, 2400, 3300					
		YELLOW	11.55 - 11.75B ¹ 11.76 - 12.12B ¹		Clay Clay	YELLOW	11.55 - 11.75B ¹ 11.76 - 12.12B ¹						Clay Clay
12"	RED	11.95 - 12.25A ¹ 12.24 - 12.50A ¹ 12.65 - 12.95A ¹	PVC SDR 41 PVC SDR 35 IPS	X	RED	11.95 - 12.25A ¹ 12.24 - 12.50A ¹ 12.65 - 12.95A ¹	PVC SDR 41 PVC SD R 35 IPS	401.31	506.21	495.87	600.77	71 #
	BLACK	13.15 - 13.55B ¹	A/C-Cl. 1500, 2400, 3300		BLACK	13.15 - 13.55B ¹	A/C-Cl. 1500, 2400, 3300					
		YELLOW	13.85 - 14.10B ¹ 14.03 - 14.40B ¹		Clay Clay	YELLOW	13.85 - 14.10B ¹ 14.03 - 14.40B ¹						Clay Clay

¹ To accommodate the wide range of pipe sizes within the 10" and 12" categories, it is necessary that the center rings be made in three sizes: A, AB, and B.

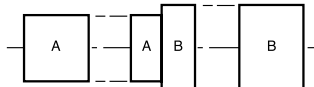
For sizes 14" - 24" see page 3-3

Other gasket ranges and larger sizes are available.



Flexible couplings do not provide protection against possible pullout of pipe ends in unrestrained conditions.

See Page 3-4
for Parts List



TO ORDER: Determine O.D. of pipes to be coupled. Select proper gasket range for each pipe from above table. Insert top range of each gasket, as indicated in gray column, into catalog number as follows: 501 (one end x other end).

EXAMPLE: To couple 4" PVC and 4" Clay, order **501-5.30 x 4.31**



STYLE LSS1 LIGHTWEIGHT REPAIR CLAMP

MATERIAL SPECIFICATIONS

SHELLS AND LUGS: Stainless steel per ASTM A 240, type 304.

BOLTS: UNC rolled thread, stainless steel per ASTM A 193, type 304.

NUTS: Stainless steel per ASTM A 194, type 304.

WASHERS: Stainless steel per ASTM A 240, type 304 and plastic lubricating washers.

GASKETS: SBR per ASTM D 2000 MAA 610, compounded for water and sewer service. Other compounds available on request.



LSS1-5.14 X 8" REPAIR CLAMP

NUMBER OF BOLTS PER CLAMP LENGTH

OD RANGE	4"	6"	8"	10"	12"	16"	20"
All Sizes	1	2	2	3	3	4	5

NOM. PIPE SIZE	O.D. SIZE RANGE	CATALOG NUMBER	PRICE / WEIGHT							
			4"	6"	8"	10"	12"	16"	20"	
2"	2.13	LSS1-2.13 x length								
	2.38 - 2.63 2.62 - 2.87	LSS1-2.63 x length ¹ LSS1-2.87 x length ¹	\$51.37 3 #	\$91.07 3 #	\$124.75 4 #	\$173.52 4 #	\$207.47 4 #	\$223.42 8#	NA	
2½"	2.87 - 3.12	LSS1-3.12 x length ¹	57.80 3 #	95.08 3 #	129.65 4 #	180.65 4 #	212.27 5 #	230.00 8#	NA	
3"	3.45 - 3.70 3.75 - 4.00	LSS1-3.70 x length ¹ LSS1-4.00 x length ¹	64.47 3 #	110.15 4 #	136.06 4 #	188.04 4 #	220.35 5 #	248.80 9#	\$319.16 13#	
	3½"	3.95 - 4.20	LSS1-4.20 x length ¹	65.72 3 #	115.65 4 #	146.52 4 #	199.01 5 #	232.00 6 #	259.23 10#	337.30 14#
4"	4.00 - 4.40 4.45 - 4.85 4.74 - 5.14 4.95 - 5.35 5.20 - 5.60	LSS1-4.40 x length LSS1-4.85 x length LSS1-5.14 x length LSS1-5.35 x length LSS1-5.60 x length	—	122.99 4 #	153.48 4 #	209.14 6 #	243.75 7 #	271.06 11#	411.10 14#	
	5.95 - 6.35 6.25 - 6.65 6.60 - 7.00 6.84 - 7.24 7.05 - 7.46 7.40 - 7.80	LSS1-6.35 x length LSS1-6.65 x length LSS1-7.00 x length LSS1-7.24 x length LSS1-7.46 x length LSS1-7.80 x length	—	153.11 5.5#	183.69 6 #	260.64 8 #	293.27 8 #	323.40 12#	487.86 15#	
	8.00 - 8.40 8.30 - 8.70 8.60 - 9.00 9.00 - 9.40 9.30 - 9.70	LSS1-8.40 x length LSS1-8.70 x length LSS1-9.00 x length LSS1-9.40 x length LSS1-9.70 x length	—	179.81 6#	215.17 7 #	285.06 9 #	345.35 10 #	394.63 13#	559.06 17#	
	10.15 - 10.55 10.40 - 10.80 11.00 - 11.40 11.55 - 11.95 11.95 - 12.23	LSS1-10.55 x length LSS1-10.80 x length LSS1-11.40 x length LSS1-11.95 x length LSS1-12.23 x length	—	223.03 8#	272.19 7 #	358.04 9 #	427.04 10 #	490.71 20#	655.20 24#	
	12.15 - 12.55 12.40 - 12.80 13.15 - 13.55 13.80 - 14.20 14.20 - 14.60	LSS1-12.55 x length LSS1-12.80 x length LSS1-13.55 x length LSS1-14.20 x length LSS1-14.60 x length	—	261.41 9#	309.03 12 #	409.84 14 #	494.93 16 #	559.65 22#	777.21 26#	

¹ .25" Range

TO ORDER: Specify catalog number x length of clamp.

EXAMPLE: For a one-section clamp for pipe with an O.D. between 4.74 and 5.14 and clamp length of 8", order **LSSI - 5.14 x 8"**

STYLE LSS2 & LSS3 SEWER CLAMP COUPLING

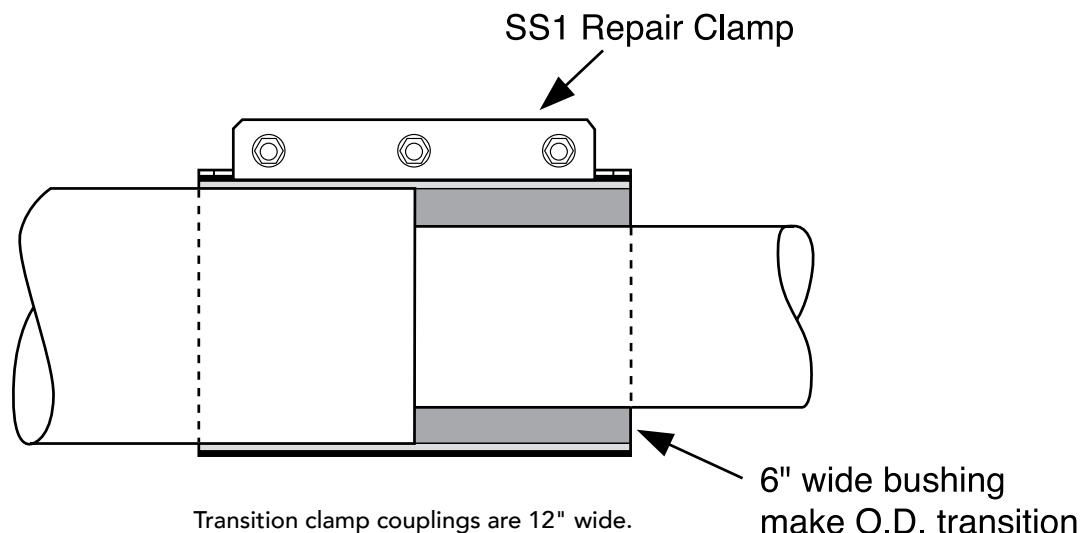


(DOUBLE & TRIPLE SECTIONS)
SIZES 14" AND LARGER

NOMINAL PIPE SIZE	O.D. SIZE RANGE	APPROXIMATE USE	CATALOG NUMBER	LIST PRICE WEIGHT
15" to 16"	14.90 - 15.70	PVC, Clay &	LSS2 - 15.70 x 12	\$1,043.57
	17.10 - 17.90	A/C (CL1500, CL2400, CL3300)	LSS2 - 17.90 x 12	22.2 #
18"	18.30 - 19.10	PVC, C.I. & Clay	LSS2 - 19.10 x 12	1,143.28
	19.10 - 19.90		LSS2 - 19.90 x 12	26.7 #
	20.65 - 21.45		LSS2 - 21.45 x 12	
21"	21.45 - 22.25	PVC, C.I. & Clay	LSS2 - 22.25 x 12	1,264.90
	24.20 - 25.00		LSS2 - 25.00 x 12	28.5 #
24"	24.70 - 25.90	PVC, Concrete, C.I. & Clay	LSS3 - 25.90 x 12	1,840.74
	25.50 - 26.70		LSS3 - 26.70 x 12	30.4 #
	27.35 - 28.55		LSS3 - 28.55 x 12	

TO ORDER: Specify catalog number. Sizes and lengths not listed are available on request.

TRANSITION CLAMP COUPLING FOR SEWER



TO ORDER: Contact Romac Engineering with the type of pipe and outside diameters of each end to be joined. Prices on application.

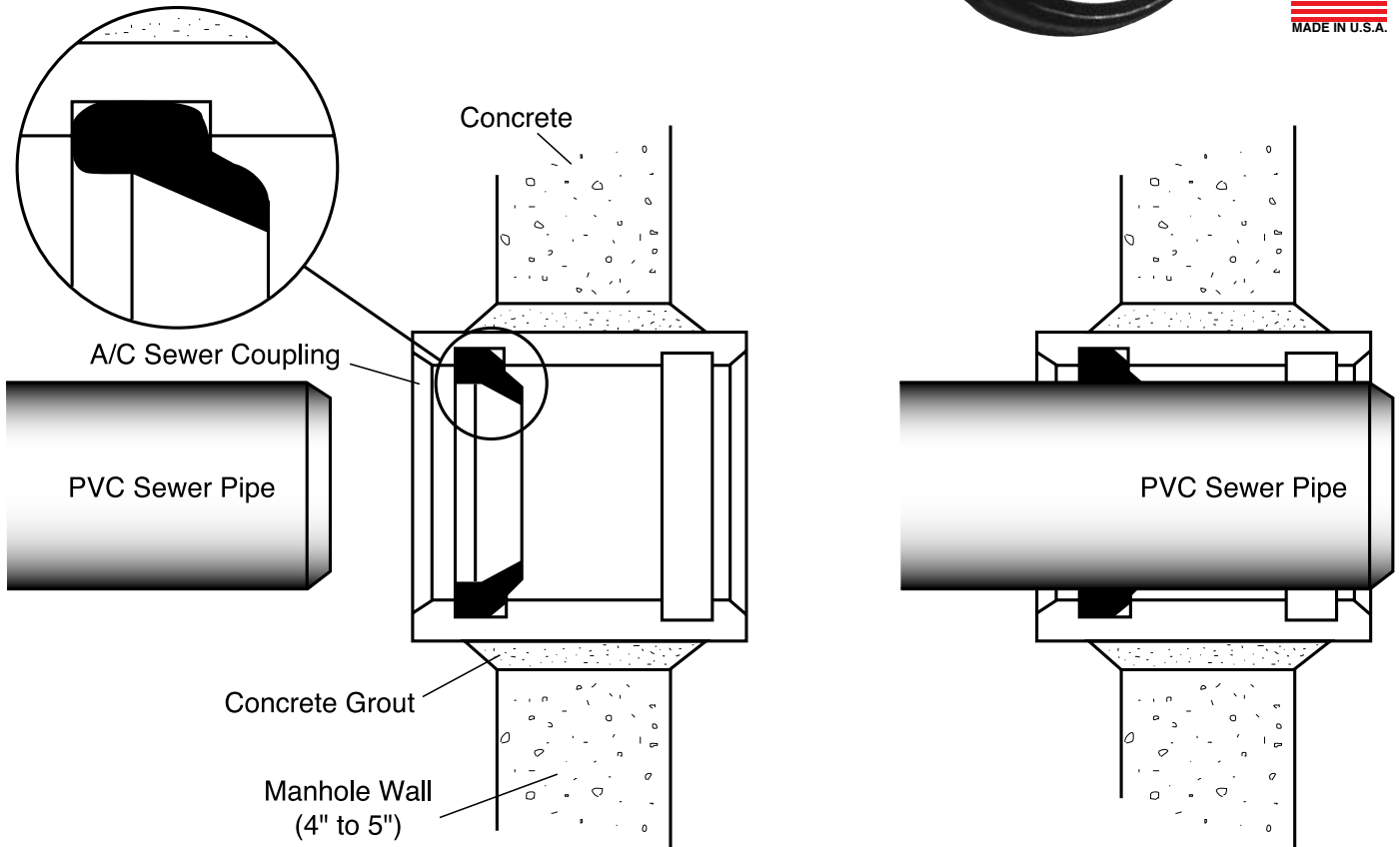


A/C X PVC SEWER ADAPTER GASKET

MATERIAL SPECIFICATIONS

GASKET: SBR per ASTM D 2000 MBA 710, compounded for water and sewer service. Other compounds available on request.

USE: The gasket is designed to be used in an A/C sewer coupling to adapt PVC sewer pipe to the coupling. The coupling is grouted in a sewer manhole wall.



NOMINAL PIPE SIZE	CATALOG NUMBER	APPROXIMATE WEIGHT (lbs.)	LIST PRICE
4"	4" AC X PVC Sewer Gasket	.20#	\$15.03
6"	6" AC X PVC Sewer Gasket	.25#	17.17
8"	8" AC X PVC Sewer Gasket	.45#	25.26

TO ORDER: Specify catalog number.

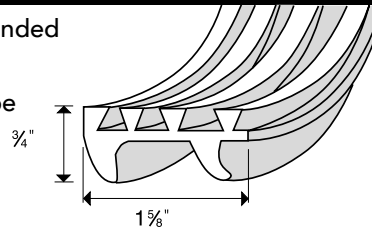
ROMAC STYLE "LCT"TM MANHOLE ADAPTER GASKET



MATERIAL SPECIFICATIONS

GASKET: Virgin SBR per ASTM D 2000 M2AA 60, compounded for water and sewer service.

USE: The gasket is designed to be used on PVC sewer pipe when grouting into a concrete manhole wall.



"LCT" GASKET CROSS SECTION



MANHOLE
ADAPTER
GASKET



NOMINAL PIPE SIZE	CATALOG NUMBER	SIZED FOR SDR 35 PIPE O.D.s	APPROXIMATE WEIGHT (lbs.)	LIST PRICE
4"	4" LCT- Adapter Gasket	4.215	0.30 #	\$26.67
6"	6" LCT- Adapter Gasket	6.275	0.45 #	28.97
8"	8" LCT- Adapter Gasket	8.4	0.55 #	32.59
10"	10" LCT- Adapter Gasket	10.5	0.70 #	35.31
12"	12" LCT- Adapter Gasket	12.5	0.85 #	38.02
15"	15" LCT- Adapter Gasket	15.3	1.00 #	41.04
18"	18" LCT- Adapter Gasket	18.7	1.25 #	47.60
21"	21" LCT- Adapter Gasket	22.05	1.50 #	56.83
24"	24" LCT- Adapter Gasket	24.8	1.65 #	63.53
27"	27" LCT- Adapter Gasket	27.96	1.85 #	67.14

TO ORDER: Specify catalog number. Other sizes available, please specify pipe O.D. Price on application.

EXAMPLE: For 6.28 O.D., order **6" LCT**

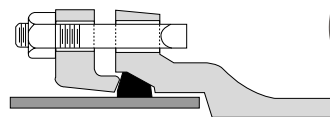
MJ X SDR35 TRANSITION GASKET (PVC SEWER)

MATERIAL SPECIFICATIONS

GASKET: Virgin SBR per ASTM D 2000 MBA 710, compounded for water and sewer service. Other compounds available on request.

USE: The gasket is designed to be used in cast iron mechanical joint fittings for adapting to PVC sewer pipe.

PRESSURE RATING: Up to 10 psi. For higher pressure ratings, contact Romac Engineering.



MJ X SDR35
TRANSITION
GASKET

NOMINAL PIPE SIZE	CATALOG NUMBER	APPROXIMATE WEIGHT (lbs.)	LIST PRICE
4"	4" MJ x SDR35 Transition Gasket	0.60 #	\$22.21
6"	6" MJ x SDR35 Transition Gasket	0.90 #	24.56
8"	8" MJ x SDR35 Transition Gasket	1.15 #	28.50
10"	10" MJ x SDR35 Transition Gasket	1.60 #	47.48
12"	12" MJ x SDR35 Transition Gasket	1.90 #	60.08
18"	18" MJ x SDR35 Transition Gasket	3.16 #	151.41
24"	24" MJ x SDR35 Transition Gasket	5.00 #	178.84

TO ORDER: Specify catalog number.



RESTRAINT SYSTEMS

RESTRAINT SYSTEMS



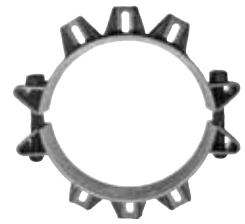
GripRing™
PIPE RESTRAINT

PAGE 8-2



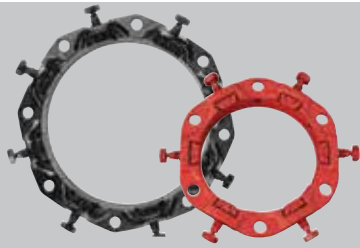
600 SERIES
PIPE RESTRAINT

PAGE 8-4



470
LARGE DIAMETER PVC PIPE RESTRAINT

PAGE 8-20



RomaGrip™ & PVC RomaGrip™
PIPE RESTRAINTS

PAGE 8-6 & 8-8



400RG
RESTRAINED COUPLING

PAGE 8-9



RFCA & PVC RFCA
RESTRAINED FLANGE COUPLING ADAPTERS

PAGE 8-10 & 8-11



DJ400
DISMANTLING JOINT WITH TIE-RODS

PAGE 8-12



DJ405
DISMANTLING JOINT WITH ROMAGRIP

PAGE 8-13



FJ Restraint
FLEXIBLE EXPANSION JOINT

PAGE 8-14



Field Flange
PIPE RESTRAINT

PAGE 8-17



Piranha™
RESTRAINT GASKET

PAGE 8-18



Armor Lock™
RESTRAINT COUPLING

PAGE 8-19



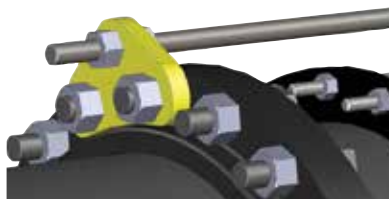
Duc Lug & 90° Eye-Bolt
PIPE RESTRAINTS

PAGE 8-21



A.W.W.A M11
HARNES RESTRAINT

PAGE 8-22



Harness Lugs
PIPE RESTRAINT

PAGE 8-23



ALPHA
RESTRAINED COUPLING, END CAP & FLANGED COUPLING

PAGE 1-4 – 1-8

GRIPRING™ PIPE RESTRAINER

FOR USE ON DUCTILE IRON, C-900, & IPS SIZE PVC¹



RESTRAINT SYSTEMS

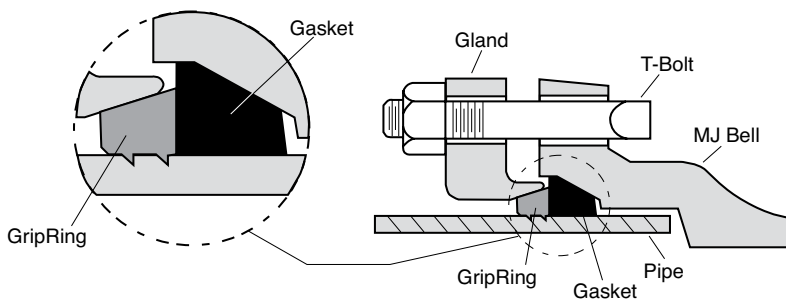


A ROMAC ORIGINAL GripRing™

U.S. PAT. NO. 5335946

The GripRing's articulating wedge action provides the restraint required for virtually any pressure.

- Full circumferential pipe restraint.**
 This spreads the restraining forces more evenly than restrainers using radial bolts or pads.
- Easy to install.**
 The GripRing™ uses standard mechanical joint gasket and T-bolts. There are no radial bolts or pads for the installer to forget to tighten. When the T-bolts on the gland are tightened, the GripRing restraint system is engaged.
- Rated to full working pressure of pipe.**
 GripRing pipe restrainers may be used at the full rated capacity of the pipe, including an allowance for pressure surges.
- Built-in stop to prevent damage to pipe.**
 The "gap" in each GripRing is designed to completely close before a pipe can be excessively stressed.
- The GripRing flexes to accommodate deflection allowed in a Mechanical Joint.**
 Restrains under the misalignment conditions often found in the field.
- The gland is painted yellow to avoid confusion.**
 Since the gland used with the GripRing restraint system is similar in looks to a standard MJ gland, it is painted yellow. The inspector can easily see that a restrainer has in fact, been used.



NSF61 certified upon request.

GRIPRING™ PIPE MATERIAL COMPATIBILITY CHART

PIPE MATERIAL	RING COLOR	WORKING PRESSURE	COMMENTS
Ductile Iron - AWWA C151	Black	350	
Cast Iron - Obsolete Std.	Black	350	OD is same as DI, C151.
PVC - D.I. Size, AWWA C900	Black	Rating of pipe	Class 235 & 305.
PVC - "Class Pipe", ASTM D 2241	Red	Rating of pipe	4"-8" Class 160-200. 10" & 12" Class 200 only.
PVC - ASTM D 1785	Red	Rating of pipe	4"-8" Class Sched. 40-80. 10" & 12" Sched. 80 only.
PVC Molecularly Oriented (C909)	-	-	GripRing is not for use on C909 pipe.

For pipe and classes not listed in the compatibility chart above, contact Romac Industries.

¹Consult GripRing Pipe Material Compatibility Chart.

²UL Listed & FM Approved



GRIPRING™ ACCESSORY PACK

RESTRAINT SYSTEMS

MATERIAL SPECIFICATIONS

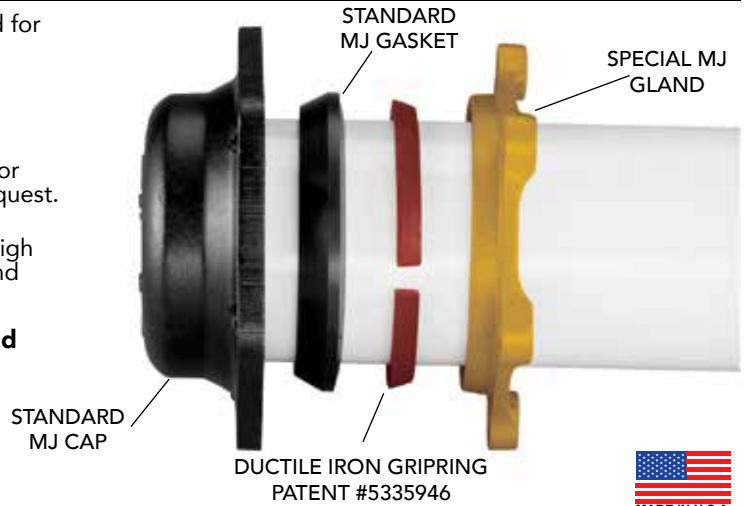
GRIPRING: Hardened ductile iron. GripRing is painted red for IPS, and black for D.I. and C-900.

GLAND: Ductile iron per ASTM A 536, Grade 65-45-12. Gland is painted yellow.

GASKET: SBR per ASTM D 2000 MBA 710, compounded for water and sewer service. Other compounds available on request.

T-BOLTS AND NUTS: 3/4" UNC T-bolts, heavy hex nuts, high strength, low alloy steel per AWWA C111. Stainless steel and R-Blue available upon request.

Not for use on polyethylene pipe, steel pipe, plain end mechanical joint fittings, Molarly Oriented Polyvinylchloride (PVC) AWWA C909-02. See pipe material compatibility chart for details.



NSF61 certified upon request.

**MEETS
AWWA C111**

DUCTILE IRON AND C-900

NOM. PIPE SIZE	ACCESSORY PACK (Gland, GripRing, Gasket, Bolts & Nuts)					NOM. PIPE SIZE	GLAND & GRIPRING ONLY		
	CATALOG NUMBER	BOLTS (Qty: Size)	WEIGHT (lbs.)	LIST PRICE			CATALOG NUMBER	WEIGHT (lbs.)	LIST PRICE
				STD. B&N	R-BLUE ¹ B&N				
4"	4" GRAP-DI	4: 3/4" x 3 1/2"	8#	\$71.64	\$85.41	4"	4" GR-DI	4#	\$48.06
6"	6" GRAP-DI	6: 3/4" x 4"	11#	83.29	100.67	6"	6" GR-DI	6#	55.04
8"	8" GRAP-DI	6: 3/4" x 4"	14#	118.73	136.12	8"	8" GR-DI	8#	84.26
10"	10" GRAP-DI	8: 3/4" x 4"	18#	170.10	193.28	10"	10" GR-DI	11#	126.72
12"	12" GRAP-DI	8: 3/4" x 4"	20#	232.39	259.19	12"	12" GR-DI	13#	183.81

PVC-IRON PIPE SIZE (IPS)

NOM. PIPE SIZE	ACCESSORY PACK (Gland, GripRing, Gasket, Bolts & Nuts)					NOM. PIPE SIZE	GLAND & GRIPRING ONLY		
	CATALOG NUMBER	BOLTS (Qty: Size)	WEIGHT (lbs.)	LIST PRICE			CATALOG NUMBER	WEIGHT (lbs.)	LIST PRICE
				STD. B&N	R-BLUE ¹ B&N				
4"	4" GRAP-IP	4: 3/4" x 3 1/2"	8#	\$81.90	\$95.67	4"	4" GR-IP	4#	\$58.51
6"	6" GRAP-IP	6: 3/4" x 4"	11#	99.41	116.80	6"	6" GR-IP	6#	71.13
8"	8" GRAP-IP	6: 3/4" x 4"	14#	139.47	156.86	8"	8" GR-IP	9#	104.99
10"	10" GRAP-IP	8: 3/4" x 4"	18#	242.13	265.31	10"	10" GR-IP	12#	198.69
12"	12" GRAP-IP	8: 3/4" x 4"	20#	256.85	280.04	12"	12" GR-IP	14#	208.74

¹ R-BLUE Bolts and Nuts, see page 10-3 for more information.

TO ORDER: Specify catalog number.

611 PIPE RESTRAINING SYSTEM



MATERIAL SPECIFICATIONS

CASTINGS: Ductile iron, meeting or exceeding ASTM A 536, Grade 65-45-12.

CLAMPING BOLTS FOR SIZES 4" - 12": High Strength Low Alloy Steel per AWWA C111. Nuts are ANSI B 18.2.2.

CLAMPING BOLTS AND HEX NUTS FOR SIZES 14" - 36": High strength steel in accordance with ASTM A449 and zinc plated to B633, Type III Sc.1 for corrosion resistance.

RESTRAINING RODS AND NUTS FOR SIZES 4" - 12": High strength, low alloy steel per AWWA C111.

RESTRAINING RODS AND NUTS FOR SIZES 14" - 36": high strength, low alloy steel in accordance with AWWA/ANSI C111/A21.11 and provide a minimum 45,000 psi yield and 60,000 psi tensile strength.

COATING 4" - 12": Color coded shop coat. Black for ductile iron and C900 sizes, Red for IPS size PVC.

COATING 14" - 36": Red for C905 PVC only.

NOTE: Stainless steel bolts and rods are available upon request, please provide maximum pressure.



6 INCH 611 RESTRAINING PIPE ENDS ON BOTH SIDES OF A ROMAC 501 COUPLING

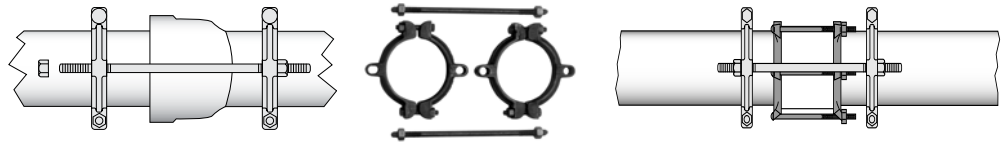


600 SERIES APPROVED FOR 4" - 10" SIZES FOR C900

RESTRAINT SYSTEMS

STYLE 611

for Bell & Spigot Joints, Romac Couplings and Transitions



NOM. PIPE SIZE	PIPE MATERIAL	PIPE O.D.	CATALOG NUMBER	CLAMPING BOLTS ¹ QTY: SIZE	RESTRAINING RODS QTY: SIZE	APPROX. WEIGHT (lbs.)	LIST PRICE
4"	IPS size PVC DI, C-900	4.50	611 - 4.50	4: 5/8" x 4"	2: 3/4" x 18"	20 #	\$70.36
		4.80	611 - 4.80				
6"	IPS size PVC DI, C-900	6.63	611 - 6.63	4: 5/8" x 4"	2: 3/4" x 20"	22 #	93.29
		6.90	611 - 6.90				
8"	IPS size PVC DI, C-900	8.63	611 - 8.63	4: 3/4" x 5"	2: 3/4" x 20"	40 #	151.17
		9.05	611 - 9.05				
10"	IPS size PVC DI, C-900	10.75	611 - 10.75	4: 7/8" x 5"	4: 3/4" x 22"	50 #	263.52
		11.10	611 - 11.10				
12"	IPS size PVC DI, C-900	12.75	611 - 12.75	4: 7/8" x 5"	4: 3/4" x 22"	60 #	288.31
		13.20	611 - 13.20				
14" ²	C905	15.30	611 - 15.30 ²	8: 7/8" x 6 1/4"	6: 3/4" x 30"	105 #	570.00
16" ²	C905	17.40	611 - 17.40 ²	8: 7/8" x 6 1/4"	6: 3/4" x 30"	115 #	605.00
18" ²	C905	19.50	611 - 19.50 ²	8: 1" x 6 1/4"	8: 3/4" x 30"	165 #	695.00
20" ²	C905	21.60	611 - 21.60 ²	8: 1 1/4" x 6 1/2"	8: 3/4" x 36"	235 #	1,200.00
24" ²	C905	25.80	611 - 25.80 ²	8: 1 1/4" x 6 1/2"	10: 3/4" x 36"	290 #	1,305.00
30" ²	C905	32.00	611 - 32.00 ²	8: 1 1/4" x 8 1/2"	10: 1" x 40"	465 #	2,150.00
36" ²	C905	38.30	611 - 38.30 ²	8: 1 1/4" x 8 1/2"	12: 1" x 40"	525 #	2,670.00

¹ Per pair of castings

Not for use on polyethylene pipe, C909, steel pipe or ductile iron pipe larger than 12 inches.

² Imported

TO ORDER: Specify catalog number.

EXAMPLE: For a 6" DI or C-900 Bell & Spigot Joint, order **STYLE 611 - 6.90**



612 PIPE RESTRAINING SYSTEM

RESTRAINT SYSTEMS

MATERIAL SPECIFICATIONS

CASTINGS: Ductile iron, meeting or exceeding ASTM A 536, Grade 65-45-12.

CLAMPING BOLTS FOR SIZES 4" - 12": High Strength Low Alloy Steel per AWWA C111. Nuts are ANSI B 18.2.2.

CLAMPING BOLTS AND HEX NUTS FOR SIZES 14" - 36": High strength steel in accordance with ASTM A449 and zinc plated to B633, Type III Sc.1 for corrosion resistance.

T-BOLTS AND NUTS FOR SIZES 4" - 12": High strength, low alloy steel per AWWA C111.

T-BOLTS AND NUTS FOR SIZES 14" - 36": high strength, low alloy steel in accordance with AWWA/ANSI C111/A21.11 and provide a minimum 45,000 psi yield and 60,000 psi tensile strength.

COATING 4" - 12": Color coded shop coat. Black for ductile iron and C900 sizes, Red for IPS size PVC.

COATING 14" - 36": Red for C905 PVC only.



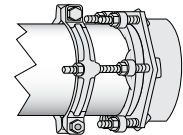
16 INCH 612 RESTRAINING A STANDARD MECHANICAL JOINT.



600 SERIES APPROVED FOR 4" - 10" SIZES FOR C900

STYLE 612

for Mechanical Joints & Push-On Fittings with Restraint Ears.



NOM. PIPE SIZE	PIPE MATERIAL	PIPE O.D.	CATALOG NUMBER	CLAMPING BOLTS QTY: SIZE	RESTRAINING RODS QTY: SIZE	APPROX. WEIGHT (lbs.)	LIST PRICE
4"	IPS size PVC DI, C-900	4.50	612 - 4.50	2: 5/8" x 4"	2: 3/4" x 7"	10 #	\$49.93
		4.80	612 - 4.80				
6"	IPS size PVC DI, C-900	6.63	612 - 6.63	2: 5/8" x 4"	2: 3/4" x 7"	15 #	60.50
		6.90	612 - 6.90				
8"	IPS size PVC DI, C-900	8.63	612 - 8.63	2: 3/4" x 5"	2: 3/4" x 7"	25 #	89.98
		9.05	612 - 9.05				
10"	IPS size PVC DI, C-900	10.75	612 - 10.75	2: 7/8" x 5"	4: 3/4" x 7"	28 #	168.80
		11.10	612 - 11.10				
12"	IPS size PVC DI, C-900	12.75	612 - 12.75	2: 7/8" x 5"	4: 3/4" x 7"	32 #	179.35
		13.20	612 - 13.20				
14"	C905	15.30	612 - 15.30 ¹	4: 7/8" x 6 1/4"	6: 3/4" x 17"	52 #	310.00
16"	C905	17.40	612 - 17.40 ¹	4: 7/8" x 6 1/4"	6: 3/4" x 17"	58 #	340.00
18"	C905	19.50	612 - 19.50 ¹	4: 1" x 6 1/4"	8: 3/4" x 17"	86 #	390.00
20"	C905	21.60	612 - 21.60 ¹	4: 1 1/4" x 6 1/2"	8: 3/4" x 24"	123 #	640.00
24"	C905	25.80	612 - 25.80 ¹	4: 1 1/4" x 6 1/2"	10: 3/4" x 24"	151 #	780.00
30"	C905	32.00	612 - 32.00 ¹	4: 1 1/4" x 8 1/2"	10: 1" x 24"	240 #	1,290.00
36"	C905	38.30	612 - 38.30 ¹	4: 1 1/4" x 8 1/2"	10: 1" x 24"	269 #	1,550.00

¹ Imported

Not for use on polyethylene pipe, C909, plain end mechanical joint fittings, steel pipe or ductile iron pipe larger than 12 inches.

TO ORDER: Specify catalog number.

EXAMPLE: For a 6" DI or C-900 MJ fitting, order **Style 612 - 6.90**

ROMAGRIP™ PIPE RESTRAINT



MATERIAL SPECIFICATIONS

GLAND: Ductile (nodular) iron, meeting or exceeding ASTM A 536, Grade 65-45-12.

GASKETS: 3-24" sizes: A standard MJ gasket is used with this fitting. See ANSI/AWWA C111/A21.11 for gasket specs. For 30-48" sizes, SBR in accordance with ASTM D2000. Other compounds available for petroleum, chemical or high temperature service.

RESTRAINING BOLT: Ductile (nodular) iron, meeting or exceeding ASTM A 536-84. (3-24" sizes: 7/8 - 9 roll thread), (30-48" sizes: 1 1/4 - 7 roll thread)

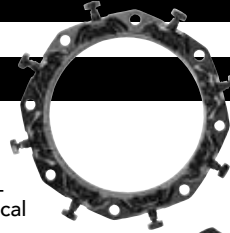
RESTRAINING LUGS: Ductile (nodular) iron, meeting or exceeding ASTM A 536-84. Heat treated using a proprietary process.

LUG LOCATORS: Polyurethane, a thermo-set plastic.

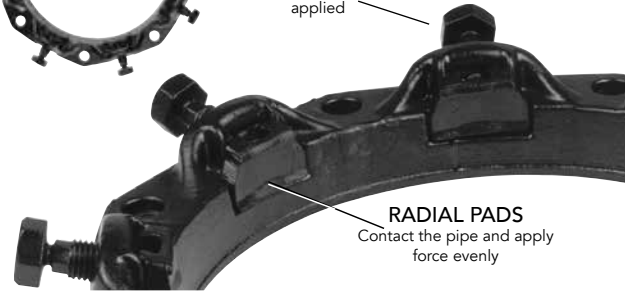
COATINGS: Shop coat applied to the casting for corrosion protection in transit. Romabond polyester available upon request

USE: Ductile iron pipe 3" - 48", cast iron pipe 3" - 48" (same OD's as ductile iron), IPS size steel 3" - 12" with transition gasket and a minimum thickness per ASTM A53 std. weight class pipe.

Not for use on polyethylene pipe, PVC pipe or plain end mechanical joint fittings.



TORQUE OFF BOLTS
Assure the proper torque is applied



RADIAL PADS
Contact the pipe and apply force evenly



ROMAGRIP for DUCTILE IRON PIPE ACCESSORY PACK (RomaGrip, Gasket, Bolts and Nuts)

NOM. PIPE SIZE	CATALOG NUMBER	T-BOLTS QTY.- SIZE	APPROX. WEIGHT (ea.)	ACCESSORY PACK LIST PRICE (EA.)				CRATE QTY
				SHOPCOAT w/ STD B&N	SHOPCOAT w/ R-BLUE ¹ B&N	ROMABOND w/ STD B&N	ROMABOND w/ R-BLUE ¹ B&N	
3"	3" RGAP-D	4: 5/8" x 3"	8#	\$60.98	\$73.54	\$64.64	\$77.95	54
4"	4" RGAP-D	4: 3/4" x 31/2"	11#	65.81	79.58	69.76	84.36	96
6"	6" RGAP-D	6: 3/4" x 4"	17#	81.51	98.90	86.40	104.83	72
8"	8" RGAP-D	6: 3/4" x 4"	22#	110.79	128.17	117.43	135.86	48
10"	10" RGAP-D	8: 3/4" x 4"	31#	156.98	180.16	166.39	190.96	30
12"	12" RGAP-D	8: 3/4" x 4"	37#	211.31	234.50	224.00	248.57	32
14"	14" RGAP-D	10: 3/4" x 41/2"	53#	326.03	367.69	358.63	404.46	-
16"	16" RGAP-D	12: 3/4" x 41/2"	62#	386.40	436.39	425.04	480.03	-
18"	18" RGAP-D	12: 3/4" x 41/2"	68#	543.38	593.37	597.71	652.70	-
20"	20" RGAP-D	14: 3/4" x 41/2"	78#	664.13	722.45	730.54	794.70	-
24"	24" RGAP-D	16: 3/4" x 5"	98#	821.10	895.48	903.21	985.03	-
30"	30" RGAP-IMPORT	20: 1" x 6"	295#	SEE PAGE 8-8				-
36"	36" RGAP-IMPORT	24: 1" x 6"	380#					-
42"	42" RGAP-IMPORT	28: 1 1/4" x 81/2"	595#					-
48"	48" RGAP-IMPORT	32: 1 1/4" x 81/2"	730#					-
								-

Accessory packs are available with stainless steel fasteners. Call for price and availability.

ROMAGRIP for DUCTILE IRON (RomaGrip ONLY)

NOM. PIPE SIZE	CATALOG NUMBER	APPROX. WEIGHT (ea.)	LIST PRICE (EA.)		BANDED QTY
			SHOP COAT	ROMABOND	
3"	3" RG-D	6#	\$40.46	\$42.88	5
4"	4" RG-D	7#	41.66	44.16	5
6"	6" RG-D	11#	49.51	52.48	5
8"	8" RG-D	16#	75.17	79.68	5
10"	10" RG-D	21#	111.09	117.76	3
12"	12" RG-D	28#	161.81	171.52	3
14"	14" RG-D	41#	259.61	285.58	-
16"	16" RG-D	49#	319.99	351.99	-
18"	18" RG-D	56#	470.93	518.02	-
20"	20" RG-D	64#	585.64	644.21	-
24"	24" RG-D	81#	725.71	798.28	-
30"	30" RG-IMPORT	250#	SEE PAGE 8-8		-
36"	36" RG-IMPORT	325#			-
42"	42" RG-IMPORT	479#			-
48"	48" RG-IMPORT	594#			-
					-

¹ R-BLUE Bolts and Nuts, see page 10-3 for more information.



Some initial axial movement may occur in lug style restraints as the lugs seat. Movement is directly related to the size of the piping system and the system pressure. In general terms movement of approximately 0.25" can be expected in restraints under 16". For larger sizes, movement of approximately 0.4" may be seen. If this is critical to your application please contact Romac Engineering for additional information.



ROMAGRIP™ FOR PVC PIPE

RESTRAINT SYSTEMS

MATERIAL SPECIFICATIONS

GLAND: Ductile (nodular) iron, meeting or exceeding ASTM A 536, Grade 65-45-12.

GASKET: SBR, compounded for water and sewer service in accordance with ASTM D 2000 MBA 710. Other compounds available for petroleum, chemical, or high temperature service.

RESTRAINING BOLTS: 7/8 -9 roll thread, Ductile (nodular) iron, meeting or exceeding ASTM A 536.

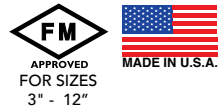
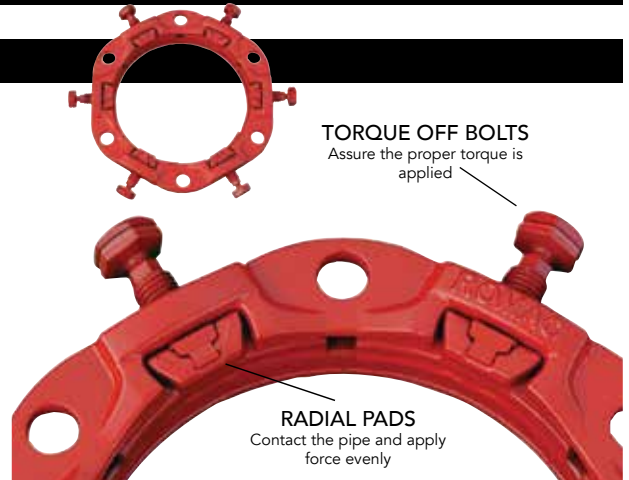
RESTRAINING LUGS: Ductile (nodular) iron, meeting or exceeding ASTM A 536. Heat treated using a proprietary process.

T-BOLTS AND NUTS: HSLA steel T-head bolt. National coarse rolled thread and heavy hex nut. Steel meets AWWA C111 composition specifications. Stainless steel and R-Blue available upon request.

COATINGS: Shop coat applied to cast parts for corrosion protection in transit. Romabond polyester available upon request.

USE: C900 Class 235 and Class 305 4"-12", C905 14"-24", IPS 3"-12" Class 160 and greater and Sch. 40 & 80. For thin wall pipe such as IPS PVC (less than Class 160) C909 and Class 165 C900 (see installation instructions).

Not for use on polyethylene or ductile iron pipe.



ROMAGRIP for PVC ACCESSORY PACK (RomaGrip, Gasket, Bolts and Nuts)

NOM. PIPE SIZE	RANGE	CATALOG NUMBER	T-BOLTS QTY:SIZE	WEIGHT (ea.)	ACCESSORY PACK LIST PRICE (EA.)				CRATE QTY
					SHOPCOAT w/ STD B&N	SHOPCOAT w/ R-BLUE ¹ B&N	ROMABOND w/ STD B&N	ROMABOND w/ R-BLUE ¹ B&N	
3"	3.50	3" RG-PVCAP-D	4: 3/8" x 3"	11#	\$73.66	\$86.22	\$78.08	\$91.39	54
4"	4.50-4.80	4" RG-PVCAP-D	4: 3/4" x 3 1/2"	15#	75.47	87.42	80.00	92.67	80
6"	6.63-6.90	6" RG-PVCAP-D	6: 3/4" x 4"	20#	95.39	112.78	101.12	119.54	48
8"	8.63-9.05	8" RG-PVCAP-D	6: 3/4" x 4"	24#	129.20	146.59	136.95	155.39	30
10"	10.75-11.10	10" RG-PVCAP-D	8: 3/4" x 4"	30#	223.39	246.57	236.80	261.37	32
12"	12.75-13.20	12" RG-PVCAP-D	8: 3/4" x 4"	37#	235.46	258.65	249.60	274.17	32
14"	15.30	14" RG-PVCAP-D	10: 3/4" x 4 1/2"	58#	416.59	458.25	458.25	504.07	-
16"	17.40	16" RG-PVCAP-D	12: 3/4" x 4 1/2"	68#	501.11	551.10	551.23	606.22	-
18"	19.50	18" RG-PVCAP-D	12: 3/4" x 4 1/2"	80#	627.90	677.89	690.69	745.68	-
20"	21.60	20" RG-PVCAP-D	14: 3/4" x 4 1/2"	87#	766.76	825.09	843.44	907.60	-
24"	25.80	24" RG-PVCAP-D	16: 3/4" x 5"	112#	851.29	925.67	936.42	1,018.24	-

Accessory packs are available with stainless steel fasteners. Call for price and availability.

ROMAGRIP for PVC (PVC-RomaGrip ONLY)

NOM. PIPE SIZE	RANGE	CATALOG NUMBER	WEIGHT (ea.)	LIST PRICE (EA.)		
				SHOP COAT	ROMABOND	BANDED QTY
3"	3.50	3" RG-PVC-D	9#	\$50.72	\$53.76	5
4"	4.50-4.80	4" RG-PVC-D	11#	53.13	56.32	5
6"	6.63-6.90	6" RG-PVC-D	14#	64.00	67.84	5
8"	8.63-9.05	8" RG-PVC-D	18#	94.19	99.83	5
10"	10.75-11.10	10" RG-PVC-D	22#	179.92	190.71	3
12"	12.75-13.20	12" RG-PVC-D	28#	188.37	199.67	3
14"	15.30	14" RG-PVC-D	47#	319.99	351.99	-
16"	17.40	16" RG-PVC-D	53#	422.63	464.89	-
18"	19.50	18" RG-PVC-D	68#	543.38	597.71	-
20"	21.60	20" RG-PVC-D	72#	664.13	730.54	-
24"	25.80	24" RG-PVC-D	95#	748.65	823.52	-

¹ R-BLUE Bolts and Nuts, see page 10-3 for more information.

NOTE: 4" - 12" special Romac gasket works on both IPS and C-900 ODs.

IMPORT ROMAGRIP™ & ROMAGRIP™ FOR PVC



ROMAGRIP™ FOR DUCTILE IRON PIPE

Specifications for the RomaGrip are located on page 8-7. **TO ORDER:** Specify catalog number.



IMPORT - ROMAGRIP for DUCTILE IRON PIPE ACCESSORY PACK

(RomaGrip, Gasket, Bolts and Nuts)

NOM. PIPE SIZE	CATALOG NUMBER	T-BOLTS QTY : SIZE	WEIGHT (ea.)	LIST PRICE (EA.)
14"	14" RGAP - I	10: 3/4" x 4 1/2"	53#	N/A
16"	16" RGAP - I	12: 3/4" x 4 1/2"	62#	N/A
18"	18" RGAP - I	12: 3/4" x 4 1/2"	68#	\$473.34
20"	20" RGAP - I	14: 3/4" x 4 1/2"	78#	N/A
24"	24" RGAP - I	16: 3/4" x 5"	98#	N/A
30"	30" RGAP - I	20: 1" x 6"	295#	1,799.18
36"	36" RGAP - I	24: 1" x 6"	380#	2,336.51
42"	42" RGAP - I	28: 1 1/4" x 8 1/2"	595#	3,592.31
48"	48" RGAP - I	32: 1 1/4" x 8 1/2"	730#	4,238.33

IMPORT - ROMAGRIP for DUCTILE IRON PIPE (RomaGrip ONLY)

NOM. PIPE SIZE	CATALOG NUMBER	WEIGHT (ea.)	LIST PRICE (EA.)
14"	14" RG - I	41#	N/A
16"	16" RG - I	49#	N/A
18"	18" RG - I	56#	\$410.55
20"	20" RG - I	64#	N/A
24"	24" RG - I	81#	N/A
30"	30" RG - I	250#	1,630.13
36"	36" RG - I	325#	2,070.86
42"	42" RG - I	479#	3,048.94
48"	48" RG - I	594#	4,014.94

ROMAGRIP™ FOR PVC PIPE

Specifications for the RomaGrip are located on page 8-8. **TO ORDER:** Specify catalog number.



IMPORT - ROMAGRIP for PVC ACCESSORY PACK

(RomaGrip for PVC, Gasket, Bolts and Nuts)

NOM. PIPE SIZE	RANGE	CATALOG NUMBER	T-BOLTS QTY : SIZE	WEIGHT (ea.)	LIST PRICE (EA.)
14"	15.30	14" RG-PVCAP - I	10: 3/4" x 4 1/2"	58#	N/A
16"	17.40	16" RG-PVCAP - I	12: 3/4" x 4 1/2"	68#	N/A
18"	19.50	18" RG-PVCAP - I	12: 3/4" x 4 1/2"	80#	N/A
20"	21.60	20" RG-PVCAP - I	14: 3/4" x 4 1/2"	87#	\$694.31
24"	25.80	24" RG-PVCAP - I	16: 3/4" x 5"	112#	754.69

IMPORT - ROMAGRIP for PVC (RomaGrip for PVC, ONLY)

NOM. PIPE SIZE	RANGE	CATALOG NUMBER	WEIGHT (ea.)	LIST PRICE (EA.)
14"	15.30	14" RG-PVC - I	47#	N/A
16"	17.40	16" RG-PVC - I	53#	N/A
18"	19.50	18" RG-PVC - I	68#	N/A
20"	21.60	20" RG-PVC - I	72#	\$597.71
24"	25.80	24" RG-PVC - I	95#	664.13

Catalog Numbers ending in "I" indicate a RomaGrip imported into the US.



Some initial axial movement may occur in lug style restraints as the lugs seat. Movement is directly related to the size of the piping system and the system pressure. In general terms movement of approximately 0.25" can be expected in restraints under 16". For larger sizes, movement of approximately 0.4" may be seen. If this is critical to your application please contact Romac Engineering for additional information.

RESTRAINT SYSTEMS



400RG & 400RG-PVC RESTRAINED COUPLINGS

RESTRAINT SYSTEMS

MATERIAL SPECIFICATIONS

BODY (CENTER RING): Beveled, flared, or formed carbon steel meeting AWWA C219 Standard.

GASKETS: 14-24" sizes: A standard MJ gasket is used with this fitting. See ANSI/AWWA C111/A21.11 for gasket specs. For 12" and 30-48" sizes, SBR in accordance with ASTM D2000. Other compounds available for petroleum, chemical or high temperature service.

GLANDS: Romac RomaGrip™ (two required). See pages 8-6 and 8-7.

RESTRAINING BOLTS: 7/8 -9 roll thread, Ductile (nodular) iron, meeting or exceeding ASTM A 536.

RESTRAINING LUGS: Ductile (nodular) iron, meeting or exceeding ASTM A 536. Heat treated using a proprietary process.

BOLTING: ASTM A193 Grade B7 all-thread-rod. Nuts per ASTM A194. Stainless steel bolts and nuts available on request.

COATINGS: Shop coat applied to parts for corrosion protection in transit. Fusion bonded epoxy, RomaGrip Romabond polyester, liquid epoxy and other coatings available on request.

- NOTES:**
- 12" special Romac gasket works on both steel and D.I. ODs.
 - For 3" - 10" sizes, Romac recommends a mechanical joint solid sleeve with 2 RomaGrip™ Accessory Packs (see page 8-6).



14" 400RG - RESTRAINED COUPLING FOR FLANGED END (FC400RG) OR OTHER CONFIGURATION, CONTACT YOUR ROMAC REPRESENTATIVE.



NSF61 certified upon request.

MEETS AWWA C230



Not for use on HDPE pipe or plain-end mechanical joint fittings.

400RG

For use on Ductile Iron Pipe 12 - 48", cast iron pipe 12" - 48" (same OD's as ductile iron) and IPS size STD steel pipe 12".

NOM. PIPE SIZE	GASKET RANGE	MAX DEFLECTION	BOLTING (Qty:Size)	CATALOG NUMBER	LIST PRICE	WEIGHT (lbs.)
12"	12.75-13.20	10°	8: 3/4" x 18"	400RG - 13.20	\$2,044.80	120 #
14"	15.30	4°	10: 3/4" x 18"	400RG - 15.30	2,606.28	158 #
16"	17.40	4°	12: 3/4" x 18"	400RG - 17.40	3,106.09	186 #
18"	19.50	3°	12: 3/4" x 18"	400RG - 19.50	3,525.78	207 #
20"	21.60	3°	14: 3/4" x 18"	400RG - 21.60	4,017.93	234 #
24"	25.80	3°	16: 3/4" x 18"	400RG - 25.80	4,986.87	287 #
30"	32.00	2°	20: 1" x 22.5"	400RG - 32.00	6,526.95	725 #
36"	38.30	2°	24: 1" x 22.5"	400RG - 38.30	8,493.20	919 #
42"	44.50	2°	28: 1 1/4" x 25"	400RG - 44.50	13,367.08	1,394 #
48"	50.80	2°	32: 1 1/4" x 25"	400RG - 50.80	17,060.67	1,685 #

400RG-PVC

For use on C900 PVC and IPS PVC pipe 12". C905 PVC 14"-24"

NOM. PIPE SIZE	GASKET RANGE	MAX DEFLECTION	BOLTING (Qty:Size)	CATALOG NUMBER	LIST PRICE	WEIGHT (lbs.)
12"	12.75-13.20	10°	8: 3/4" x 18"	400RG-PVC - 13.20	\$2,073.78	120 #
14"	15.30	4°	10: 3/4" x 18"	400RG-PVC - 15.30	2,702.88	170 #
16"	17.40	4°	12: 3/4" x 18"	400RG-PVC - 17.40	3,287.21	194 #
18"	19.50	3°	12: 3/4" x 18"	400RG-PVC - 19.50	3,888.03	231 #
20"	21.60	3°	14: 3/4" x 18"	400RG-PVC - 21.60	4,150.76	250 #
24"	25.80	3°	16: 3/4" x 18"	400RG-PVC - 25.80	5,733.11	315 #



No Cancel, No Return Item.

TO ORDER: Specify Catalog Number.

EXAMPLE: For a 12" 400RG Order: **400RG- 13.20**

RFCA (RESTRAINED FLANGED COUPLING ADAPTER)



MATERIAL SPECIFICATIONS

FLANGE BODY: Ductile (nodular) iron, meeting or exceeding ASTM A 536, Grade 65-45-12. Flange meets the dimensional requirements of ANSI Class 125 and 150 bolt circles.

GASKETS: Compounded for water and sewer service in accordance with ASTM D 2000 (Flange gasket is o-ring style, NBR standard). Other compounds available for petroleum, chemical, or high temperature service.

GLAND: Romac RomaGrip™. See page 8-6.

RESTRAINING BOLTS: 7/8 –9 roll thread, Ductile (nodular) iron, meeting or exceeding ASTM A 536.

RESTRAINING LUGS: Ductile (nodular) iron, meeting or exceeding ASTM A 536. Heat treated using a proprietary process.

LUG LOCATORS: Polyurethane, a thermal plastic.

T-BOLTS AND NUTS: High strength low alloy steel T-head bolt. National coarse rolled thread and heavy hex nut. Steel meets AWWA C111 composition specifications. Stainless steel bolts and nuts available on request.

COATINGS: Shop coat applied to cast parts for corrosion protection in transit. Fusion bonded epoxy and Romabond Polyester available on request.

USE: Ductile Iron Pipe 3 - 24", cast iron pipe 3" - 24" (same OD's as ductile iron) and IPS size steel pipe 3 - 12" a minimum thickness per ASTM A53 std. weight class pipe.



NSF61 certified upon request.

RESTRAINT SYSTEMS

NOM. PIPE SIZE	GASKET RANGE	LENGTH	GLAND BOLTS QTY: SIZE	CATALOG NUMBER	LIST PRICE				WEIGHT (lbs.)
					SHOPCOAT w/STD. B&N	SHOPCOAT w/304 SS B&N	FUSION EPOXY w/STD. B&N	FUSION EPOXY w/304 SS B&N	
3"	3.50-3.96	8.00"	4: 5/8" x 3"	RFCA - 3.96	\$175.63	\$190.25	\$199.36	\$213.97	21
4"	4.50-4.80	9.00"	4: 3/4" x 3 1/2"	RFCA -4.80	221.36	252.88	251.01	282.54	29
6"	6.63-6.90	9.25"	6: 3/4" x 3 1/2"	RFCA - 6.90	282.38	329.66	322.53	369.81	40
8"	8.63-9.05	9.25"	6: 3/4" x 3 1/2"	RFCA - 9.053	381.08	428.36	429.65	476.94	53
10"	10.75-11.10	10.25"	8: 3/4" x 3 1/2"	RFCA - 11.10	702.71	765.77	808.65	871.71	83
12"	12.75-13.20	10.25"	8: 3/4" x 3 1/2"	RFCA - 13.20	763.30	826.34	893.38	956.42	110
14"	15.30	11.70"	10: 3/4" x 4 1/2"	RFCA -15.30	1,065.97	1,143.95	1,232.30	1,310.28	170
16"	17.40	11.70"	12: 3/4" x 4 1/2"	RFCA -17.40	1,480.31	1,573.27	1,702.85	1,795.80	200
18"	19.50	11.80"	12: 3/4" x 4 1/2"	RFCA -19.50	1,626.05	1,719.00	1,866.95	1,959.90	217
20"	21.60	11.80"	14: 3/4" x 4 1/2"	RFCA - 21.60	1,836.84	1,946.42	2,140.82	2,250.40	256
24"	25.80	12.00"	16: 3/4" x 5"	RFCA - 25.80	2,228.30	2,366.23	2,572.44	2,710.37	305

! Some initial axial movement may occur in lug style restraints as the lugs seat. Movement is directly related to the size of the piping system and the system pressure. In general terms movement of approximately 0.25" can be expected in restraints under 16". For larger sizes, movement of approximately 0.4" may be seen. If this is critical to your application please contact Romac Engineering for additional information.

TO ORDER: Specify catalog number.

EXAMPLE: For a 12" RFCA Order: **RFCA - 13.20**

NOTE: 3" - 12" special Romac gasket works on both steel and D.I. ODs.

! Not for use on PVC, HDPE pipe or plain-end mechanical joint fittings. For applications on PVC pipe, see page 4-7.



RFCA FOR PVC PIPE

RESTRAINT SYSTEMS

MATERIAL SPECIFICATIONS

FLANGE BODY: Ductile (nodular) iron, meeting or exceeding ASTM A 536, Grade 65-45-12. Flange meets the dimensional requirements of ANSI Class 125 and 150 bolt circles.

GASKETS: Compounded for water and sewer service in accordance with ASTM D 2000 (Flange gasket is o-ring style, NBR standard). Other compounds available for petroleum, chemical, or high temperature service.

GLAND: Romac RomaGrip™ for PVC (see page 8-7).

RESTRAINING BOLTS: 7/8 –9 roll thread, Ductile (nodular) iron, meeting or exceeding ASTM A 536.

RESTRAINING LUGS: Ductile (nodular) iron, meeting or exceeding ASTM A 536. Heat treated using a proprietary process.

T-BOLTS AND NUTS: High strength low alloy steel T-head bolt. National coarse rolled thread and heavy hex nut. Steel meets AWWA C111 composition specifications. Stainless steel bolts and nuts available on request.

COATINGS: Shop coat applied to cast parts for corrosion protection in transit. Fusion bonded epoxy and Romabond Polyester available on request.

USE: C900 Class 235 and Class 305 4"-12", C905 14"-24", IPS 3"-12" Class 160 and greater and Sch. 40 & 80. For thin wall pipe such as IPS PVC (less than Class 160) C909 and Class 165 C900 (see installation instructions).



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NOM. PIPE SIZE	GASKET RANGE	LENGTH	GLAND BOLTS QTY: SIZE	CATALOG NUMBER	LIST PRICE				WEIGHT (lbs.)
					SHOPCOAT w/STD. B&N	SHOPCOAT w/304 SS B&N	FUSION EPOXY w/STD. B&N	FUSION EPOXY w/304 SS B&N	
3"	3.50	8"	4: 5/8" x 3"	RFCA-PVC-3.50	\$181.93	\$196.55	\$205.66	\$220.27	25
4"	4.50-4.80	9"	4: 3/4" x 3 1/2"	RFCA-PVC-4.80	228.56	260.09	258.23	289.74	31
6"	6.63-6.90	9.25"	6: 3/4" x 3 1/2"	RFCA-PVC-6.90	292.05	339.33	332.20	379.48	41
8"	8.63-9.05	9.25"	6: 3/4" x 3 1/2"	RFCA-PVC-9.05	393.07	440.35	441.64	488.93	53
10"	10.75-11.10	10.25"	8: 3/4" x 3 1/2"	RFCA-PVC-1.10	751.07	814.12	857.01	920.05	83
12"	12.75-13.20	10.25"	8: 3/4" x 3 1/2"	RFCA-PVC-13.20	778.12	841.18	908.21	971.04	110
14"	15.30	11.7"	10: 3/4" x 4 1/2"	RFCA-PVC-15.30	1,122.59	1,200.57	1,288.92	1,366.90	170
16"	17.40	11.7"	12: 3/4" x 4 1/2"	RFCA-PVC-17.40	1,543.33	1,636.29	1,765.87	1,858.83	200
18"	19.50	11.8"	12: 3/4" x 4 1/2"	RFCA-PVC-19.50	1,662.68	1,755.63	1,903.58	1,996.53	217
20"	21.60	11.8"	14: 3/4" x 4 1/2"	RFCA-PVC-21.60	1,884.41	1,994.00	2,188.40	2,298.00	256
24"	25.80	12"	16: 3/4" x 5"	RFCA-PVC-25.80	2,246.03	2,383.98	2,590.17	2,728.12	305

TO ORDER: Specify catalog number.

EXAMPLE: For a 12" RFCA Order: **RFCA-PCV - 13.20**

NOTE: 4" - 12" special Romac gasket works on both IPS and C-900 ODs.

Not for use on metal or HDPE pipe. For applications on steel or ductile iron, please contact your Romac representative.

STYLE DJ400 DISMANTLING JOINT



MATERIAL SPECIFICATIONS

FLANGE SPOOL: AWWA Class D Ring Flange, compatible with ANSI Class 125 and 150 bolt circles. For 3" - 12" sizes, pipe is Sch 40 ASTM A53. For 14" - 72" sizes, ASTM A36 Carbon Steel. Other flange classes available. Bolts, nuts and gaskets for flange end not supplied. For more information contact Romac Industries.

END RING & BODY: For 3" - 12" sizes, body and end ring are ASTM A536 ductile (nodular) iron meeting or exceeding Grade 65-45-12. For 14" - 72" ASTM A36 Carbon Steel with AWWA C207 Class D flanges. 3" - 72" meet the dimensional requirements of ANSI C Class 125 and 150 bolt circles.

GASKETS: Compounded for water and sewer service in accordance with ASTM D 2000 (ductile iron flange bodies, 3" - 12" have flange o-ring gaskets). Other compounds available for petroleum, chemical or high temperature services.

BOLTS & NUTS: High strength low alloy steel bolts and nuts. Steel meets ASTM A588. Type 304 and 316 Stainless Steel bolt material available.

COATING: Fusion bonded epoxy.

TIE-RODS: High strength steel per ASTM A193 B7. Optional stainless steel per ASTM A193 gr B8 or B8M.

Other lengths, materials and higher pressures can be accommodated. For more information, contact your Romac representative.



NSF61 certified upon request.

Certified to NSF/ANSI 61 & 372

**MEETS
AWWA C219**

NOM. PIPE SIZE	LENGTH			CATALOG NUMBER	ER BOLTS		TIE-RODS			LIST PRICE			APPROX. WEIGHT (lbs.)	
	NOM.	MIN.	MAX.		QTY	SIZE	SIZE (UNC)	LENGTH	ALLOY STEEL	S.S.	w/STD B&N	w/304 SS B&N		w/316 SS B&N
3"	8.00	7.00	9.00	DJ400-03	2	5/8 - 11 x 7 1/2	5/8 - 11	13.50	2	2	\$594.67	\$652.10	\$718.98	31
4"	8.00	7.00	9.00	DJ400-04	4	5/8 - 11 x 7 1/2	5/8 - 11	13.50	2	2	611.21	668.81	739.84	36
6"	8.38	7.38	9.38	DJ400-06	4	3/4 - 10 x 8	3/4 - 10	15.00	2	2	726.83	836.02	902.92	55
8"	8.38	7.38	9.38	DJ400-08	4	3/4 - 10 x 8	3/4 - 10	15.00	2	2	892.03	1,003.24	1,070.11	72
10"	10.50	9.50	11.50	DJ400-10	6	5/8-11 x 7/8-9x9 1/2	7/8 - 9	17.75	2	2	1,271.96	1,437.95	1,504.85	108
12"	10.50	9.50	11.50	DJ400-12	6	7/8 - 9 x 9	7/8 - 9	17.75	2	2	1,635.38	1,805.80	1,872.70	134
14"	13.50	12.00	15.00	DJ400-14	8	5/8 - 11 x 5	1 - 8	22.00	2	2	2,246.59	2,474.64	2,608.39	175
16"	13.50	12.00	15.00	DJ400-16	10	5/8 - 11 x 5	1 - 8	22.00	2	2	2,527.40	2,775.61	2,942.80	210
18"	13.75	12.25	15.25	DJ400-18	10	5/8 - 11 x 5	1 1/8 - 7	23.25	2	4	2,758.68	3,461.16	3,728.69	230
20"	13.75	12.25	15.25	DJ400-20	12	5/8 - 11 x 5	1 1/8 - 7	23.25	2	4	3,122.11	3,979.49	4,263.74	270
24"	14.25	12.75	15.75	DJ400-24	14	5/8 - 11 x 5	1 1/4 - 7	25.50	2	4	4,014.13	4,932.55	5,233.52	365
30"	14.75	13.25	16.25	DJ400-30	16	5/8 - 11 x 5	1 1/4 - 7	25.50	4	6	5,170.45	6,403.95	6,805.24	585
36"	15.75	14.25	17.25	DJ400-36	18	5/8 - 11 x 5	1 1/2 - 6	27.50	4	6	7,004.08	9,079.25	9,497.25	855
42"	16.50	15.00	18.00	DJ400-42	20	5/8 - 11 x 6	1 1/2 - 6	29.25	4	6	9,184.61	11,303.07	11,787.96	1,120
48"	16.75	15.25	18.25	DJ400-48	22	5/8 - 11 x 6	1 1/2 - 6	29.25	6	8	12,752.71	15,433.05	16,018.28	1,400
54"	17.75	16.25	19.25	DJ400-54	24	5/8 - 11 x 6	1 3/4 - 5	31.75	6	8	17,179.83	21,385.55	22,522.53	1,825
60"	18.00	16.50	19.50	DJ400-60	28	5/8 - 11 x 6	1 3/4 - 5	31.75	6	10	31,154.95	36,935.62	38,340.14	2,175
72"	18.75	17.25	20.25	DJ400-72	32	5/8 - 11 x 6	1 3/4 - 5	33.50	10	14	39,183.22	46,967.94	48,907.51	3,300

TO ORDER: Specify catalog number.

EXAMPLE: For a 12" DJ400 Order: **DJ400-12**



STYLE DJ405 DISMANTLING JOINT

RESTRAINT SYSTEMS

MATERIAL SPECIFICATIONS

FLANGE SPOOL: AWWA C207 Class D, meets the dimensional requirements of ANSI Class 125 and 150 bolt circles. For 3" - 12" sizes, pipe is Sch 40 ASTM A53. For 14" - 24" pipe material is ASTM A36. Bolts, nuts and gaskets for flange end not supplied.

FLANGE BODY: ASTM A536 ductile (nodular) iron meeting or exceeding Grade 65-45-12. Flange meets the dimensional requirements of ANSI Class 125 and 150 bolt circles.

GASKETS: Compounded for water and sewer service in accordance with ASTM D 2000 (RFCA gasket is o-ring style, NBR standard). Other compounds available for petroleum, chemical, or high temperature service.

GLAND: Romac RomaGrip™. See page 8-6.

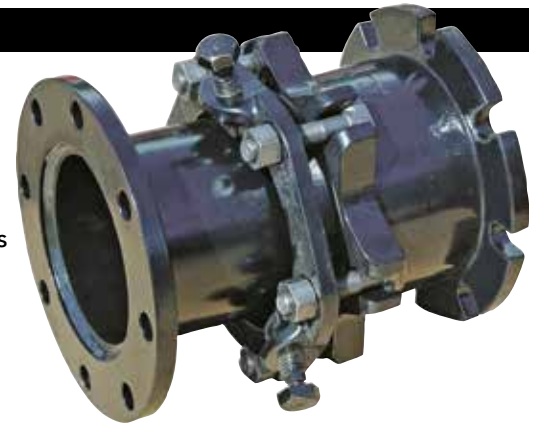
RESTRAINING BOLTS: 7/8 -9 roll thread, Ductile (nodular) iron, meeting or exceeding ASTM A 536.

RESTRAINING LUGS: Ductile (nodular) iron, meeting or exceeding ASTM A 536. Heat treated using a proprietary process.

LUG LOCATORS: Polyurethane, a thermal plastic.

T-BOLTS AND NUTS: High strength low alloy steel T-head bolt. National coarse rolled thread and heavy hex nut. Steel meets AWWA C111 composition specifications. Stainless steel bolts and nuts available on request.

COATINGS: Body and spool fusion bonded epoxy. RomaGrip is Romabond polyester.



NSF61 certified upon request.

**MEETS
AWWA C219**

NOM. PIPE SIZE	LENGTH			CATALOG NUMBER	QTY	T - BOLTS		ALLOWABLE DEFLECTION (degrees)	LIST PRICE		APPROX. WEIGHT (lbs.)
	NOM.	MIN.	MAX.			SIZE	LENGTH		w/STD B&N	w/304 SS B&N	
3"	11.50	10.00	13.00	DJ405-03	4	5/8"	3.75	2.0	\$743.35	\$760.81	33
4"	12.75	11.00	14.50	DJ405-04	4	3/4"	4.25	3.5	764.02	801.73	46
6"	13.50	11.50	15.50	DJ405-06	6	3/4"	4.25	3.5	908.54	965.07	68
8"	13.50	11.50	15.50	DJ405-08	6	3/4"	4.25	3.3	1,115.04	1,171.55	94
10"	14.75	12.50	17.00	DJ405-10	8	3/4"	4.25	3.0	1,589.96	1,665.31	143
12"	14.75	12.50	17.00	DJ405-12	8	3/4"	4.25	3.0	2,044.28	2,123.76	193
14"	19.25	16.75	21.75	DJ405-14	10	3/4"	4.50	2.0	2,808.26	2,901.47	297
16"	19.25	16.75	21.75	DJ405-16	12	3/4"	4.50	2.0	3,285.63	3,396.72	352
18"	20.25	17.75	22.75	DJ405-18	12	3/4"	4.50	1.5	3,724.27	3,835.32	390
20"	20.25	17.75	22.75	DJ405-20	14	3/4"	4.50	1.5	4,214.84	4,345.81	457
24"	21.25	18.75	23.75	DJ405-24	16	3/4"	5.00	1.5	5,419.08	5,583.95	569



Some initial axial movement may occur in lug style restraints as the lugs seat. Movement is directly related to the size of the piping system and the system pressure. In general terms movement of approximately 0.25" can be expected in restraints under 16". For larger sizes, movement of approximately 0.4" may be seen. If this is critical to your application please contact Romac Engineering for additional information.

TO ORDER: Specify catalog number.

EXAMPLE: For a 12" DJ405 Order: **DJ405-12**

FJ RESTRAINT FLEXIBLE EXPANSION JOINT



MATERIAL SPECIFICATIONS

USE: The FJ Restraint is a flexible ductile iron fitting, developed to accommodate pipeline forces that result in damaged pipe or loss of service. The FJ Restraint is designed to compensate for expansion, contraction, rotation, bending and settlement of your pipeline all at the same time, with one fitting.

MATERIALS

CASTINGS: The Casing, Ball and Sleeve are cast of ductile (nodular) iron, meeting or exceeding ASTM A 536, Grade 65-45-12.

FLANGE ENDS: Flanges meet the dimensional requirements of ANSI Class 125 and 150 bolt circles.

MJ ENDS: Mechanical Joint ends meet the dimensional requirements of either ANSI/AWWA C111/A21.11 or ANSI/AWWA C153/A21.53 depending on size.

MJ RESTRAINT: To securely fix MJ ends of the FJ Restraint, Romac Grip Rings or Roma Grip can be supplied.

LOCK RING: Series 400 stainless steel. Limits expansion and contraction of FlexiJoint up to maximum working pressure. Standard MJ gasket is used with this fitting. See ANSI/AWWA C111/A21.11 for specifications. Transition gaskets may be used for steel (IPS) pipe size PVC.

RING GASKETS: Ring gaskets are made of dual durometer Ethylene Propylene Diene Methylene rubber (EPDM) compounded for water and sewer service.

CASING COVERS, 3-12 INCH: Ethylene Propylene Diene Methylene (EPDM) compounded for water and sewer service.

FJ RESTRAINT™ FLEXIBLE EXPANSION JOINT

U.S. PATENT: 5,897,146



Sizes 3" - 12"
NSF61 certified upon request.

Certified to NSF/ANSI 61 & 372

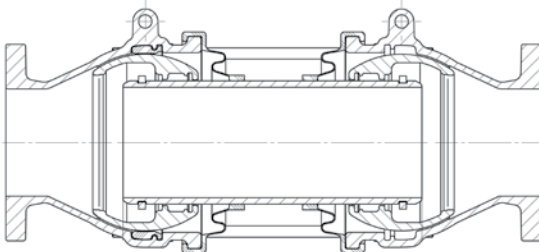
CASING COVERS, 14 - 24 INCH: Protective polyethylene debris cover.

COATINGS: The entire fitting is lined and coated with fusion bonded epoxy.

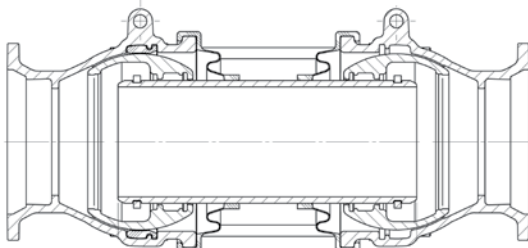
PROTECTIVE SLEEVE: Polyethylene sleeve, 8 mils thick to cover entire FJ Restraint assembly after installation. Provided with flexible rubber bands to secure to pipe ends and FJ Restraint.

PRESSURE: When properly installed the FJ Restraint can be used at working pressures up to 350 psi.

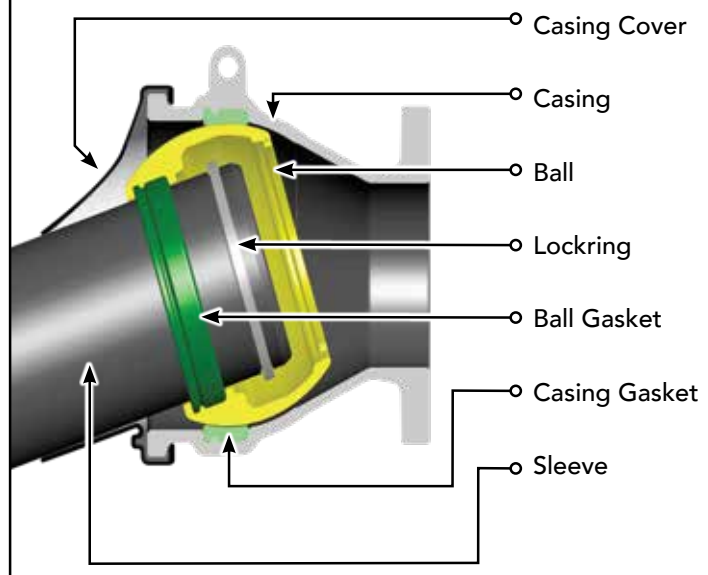
FJ RESTRAINT WITH FLANGED ENDS



FJ RESTRAINT WITH MECHANICAL JOINT ENDS



FJ RESTRAINT COMPONENTS

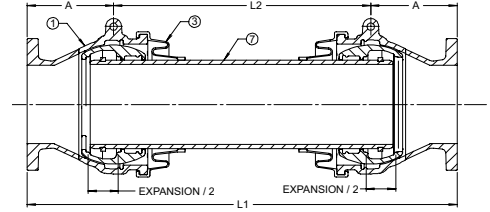
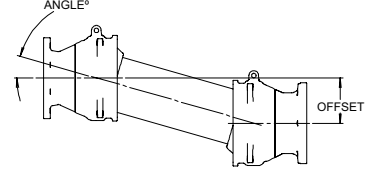
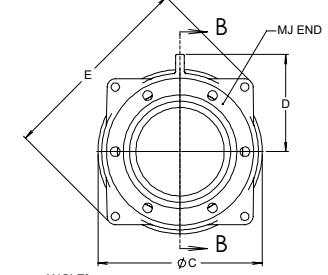
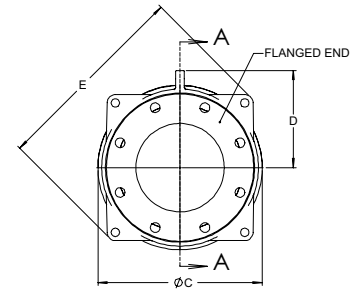




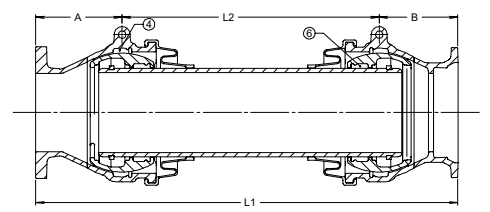
FJ RESTRAINT FLEXIBLE EXPANSION JOINT

3" - 24" DIMENSIONS

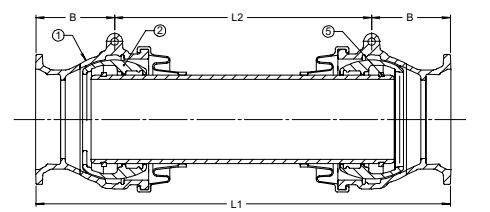
NOM SIZE	OFFSET	A	B	C	D	E	FLANGE X FLANGE	MJ X FLANGE	MJ X MJ	TOTAL EXPANSION	ANGLE	
							L1	L1	L1			L2
3"	4	6.8	6.2	8.2	5.7	11.9	24.7	24.1	23.5	11.2	4.00	20.0°
	8						35.7	35.1	34.5	22.2		
	12						46.7	46.1	45.5	33.2		
	16						57.7	57.1	56.5	44.2		
	20						68.7	68.1	67.5	55.2		
4"	4	7.0	6.4	9.4	6.3	13.2	26.7	26.1	25.5	12.6	4.00	19.0°
	8						37.7	37.1	36.5	23.6		
	12						49.7	49.1	48.5	35.6		
	16						60.7	60.1	59.5	46.6		
	20						72.7	72.1	71.5	58.6		
6"	4	7.9	7.5	11.9	7.4	15.6	28.9	28.6	28.2	13.2	6.26	18.0°
	8						40.9	40.6	40.2	25.2		
	12						52.9	52.6	52.2	37.2		
	16						65.9	65.6	65.2	50.2		
	20						77.9	77.6	77.2	62.2		
8"	4	8.8	8.0	14.4	8.7	18.1	31.1	30.3	29.5	13.4	6.26	17.0°
	8						44.1	43.3	42.5	26.4		
	12						57.1	56.3	55.5	39.4		
	16						70.1	69.3	68.5	52.4		
	20						83.1	82.3	81.5	65.4		
10"	4	9.3	8.6	16.9	10.1	20.7	33.6	32.9	32.2	14.9	6.26	16.0°
	8						46.6	45.9	45.2	27.9		
	12						60.6	59.9	59.2	41.9		
	16						74.6	73.9	73.2	55.9		
	20						88.6	87.9	87.2	69.9		
12"	4	10.0	9.2	19.4	11.3	23.7	35.5	34.7	33.9	15.4	7.88	15.0°
	8						50.5	49.7	48.9	30.4		
	12						65.5	64.7	63.9	45.4		
	16						80.5	79.7	78.9	60.4		
	20						95.5	94.7	93.9	75.4		
14"	4	10.9	11.0	21.7	12.7	26.2	42.9	43.0	43.1	21.0	7.88	15.0°
	8						55.9	56.0	56.1	34.0		
	12						69.9	70.0	70.1	48.0		
	16						84.9	85.0	85.1	63.0		
	20						99.9	100.0	100.1	78.0		
16"	4	11.7	11.7	24.1	14.0	28.6	46.7	46.5	46.4	23.0	9.44	15.0°
	8						57.7	57.5	57.4	34.0		
	12						72.7	72.5	72.4	49.0		
	16						87.7	87.5	87.4	64.0		
	20						102.7	102.5	102.4	79.0		
18"	4	12.5	12.3	26.3	15.1	30.9	49.0	48.7	48.5	23.9	9.44	15.0°
	8						60.0	59.7	59.5	34.9		
	12						74.0	73.7	73.4	48.9		
	16						89.0	88.7	88.5	63.9		
	20						104.0	103.7	103.5	78.9		
20"	4	13.7	13.2	29.2	16.9	34.3	52.9	52.4	51.9	25.5	11.82	15.0°
	8						61.9	61.4	60.9	34.5		
	12						77.9	77.4	76.9	50.5		
	16						92.9	92.4	91.9	65.5		
	20						107.9	107.4	106.9	80.5		
24"	4	14.9	14.5	34.7	19.7	39.4	56.2	55.8	55.4	26.5	11.82	15.0°
	8						64.2	63.8	63.4	34.5		
	12						80.2	79.8	79.4	50.5		
	16						95.2	94.8	94.4	65.5		
	20						110.2	109.8	109.4	80.5		



SECTION A-A
FLANGE X FLANGE



SECTION B-B
FLANGE X MJ



SECTION C-C
MJ X MJ

Note: Dimension L1 Equals Midpoint of Expansion.
See page 8-16 for weights.

RESTRAINT SYSTEMS

FJ RESTRAINT FLEXIBLE EXPANSION JOINT



RESTRAINT SYSTEMS

NOM. SIZE	OFFSET	FLANGE x FLANGE		FLANGE x MJ		MJ x MJ		LIST PRICE
		*LENGTH / PART NUMBER	APPROX. WT (lbs.)	*LENGTH / PART NUMBER	APPROX. WT (lbs.)	*LENGTH / PART NUMBER	APPROX. WT (lbs.)	
3"	4.0	24.67 / 221-01-0314	97	24.07 / 221-03-0314	93	23.47 / 221-02-0314	95	POA
	8.0	35.67 / 221-01-0325	110	35.07 / 221-03-0325	106	34.47 / 221-02-0325	108	
	12.0	46.67 / 221-01-0336	123	46.07 / 221-03-0336	119	45.47 / 221-02-0336	121	
	16.0	57.67 / 221-01-0347	136	57.07 / 221-03-0347	132	56.47 / 221-02-0347	134	
	20.0	68.67 / 221-01-0358	149	68.07 / 221-03-0358	145	67.47 / 221-02-0358	147	
4"	4.0	26.66 / 221-01-0416	138	26.06 / 221-03-0416	128	25.46 / 221-02-0416	133	POA
	8.0	37.66 / 221-01-0427	155	37.06 / 221-03-0427	145	36.46 / 221-02-0427	150	
	12.0	49.66 / 221-01-0439	173	49.06 / 221-03-0439	163	48.46 / 221-02-0439	168	
	16.0	60.66 / 221-01-0450	189	60.06 / 221-03-0450	179	59.46 / 221-02-0450	184	
	20.0	72.66 / 221-01-0462	207	72.06 / 221-03-0462	197	71.46 / 221-02-0462	202	
6"	4.0	28.92 / 221-01-0617	215	28.55 / 221-03-0617	200	28.18 / 221-02-0617	208	POA
	8.0	40.92 / 221-01-0629	245	40.55 / 221-03-0629	230	40.18 / 221-02-0629	237	
	12.0	52.92 / 221-01-0641	274	52.55 / 221-03-0641	260	52.18 / 221-02-0641	267	
	16.0	65.92 / 221-01-0654	307	65.55 / 221-03-0654	292	65.18 / 221-02-0654	299	
	20.0	77.92 / 221-01-0666	336	77.55 / 221-03-0666	321	77.18 / 221-02-0666	329	
8"	4.0	31.07 / 221-01-0818	331	30.27 / 221-03-0818	303	29.47 / 221-02-0818	317	POA
	8.0	44.07 / 221-01-0831	372	43.27 / 221-03-0831	344	42.47 / 221-02-0831	358	
	12.0	57.07 / 221-01-0844	414	56.27 / 221-03-0844	386	55.47 / 221-02-0844	400	
	16.0	70.07 / 221-01-0857	456	69.27 / 221-03-0857	428	68.47 / 221-02-0857	442	
	20.0	83.07 / 221-01-0870	498	82.27 / 221-03-0870	470	81.47 / 221-02-0870	484	
10"	4.0	33.61 / 221-01-1020	466	32.91 / 221-03-1020	428	32.21 / 221-02-1020	447	POA
	8.0	46.61 / 221-01-1033	520	45.91 / 221-03-1033	482	45.21 / 221-02-1033	501	
	12.0	60.61 / 221-01-1047	578	59.91 / 221-03-1047	541	59.21 / 221-02-1047	559	
	16.0	74.61 / 221-01-1061	637	73.91 / 221-03-1061	599	73.21 / 221-02-1061	618	
	20.0	88.61 / 221-01-1075	695	87.91 / 221-03-1075	657	87.21 / 221-02-1075	676	
12"	4.0	35.48 / 221-01-1221	630	34.68 / 221-03-1221	561	33.88 / 221-02-1221	596	POA
	8.0	50.48 / 221-01-1236	708	49.68 / 221-03-1236	640	48.88 / 221-02-1236	674	
	12.0	65.48 / 221-01-1251	787	64.68 / 221-03-1251	718	63.88 / 221-02-1251	752	
	16.0	80.48 / 221-01-1266	865	79.68 / 221-03-1266	796	78.88 / 221-02-1266	830	
	20.0	95.48 / 221-01-1281	943	94.68 / 221-03-1281	874	93.88 / 221-02-1281	908	
14"	4.0	42.88 / 221-01-1427	832	42.98 / 221-03-1427	776	43.08 / 221-02-1427	804	POA
	8.0	55.88 / 221-01-1440	909	55.98 / 221-03-1440	853	56.08 / 221-02-1440	881	
	12.0	69.88 / 221-01-1454	993	69.98 / 221-03-1454	937	70.08 / 221-02-1454	965	
	16.0	84.88 / 221-01-1469	1,082	84.98 / 221-03-1469	1,026	85.08 / 221-02-1469	1,054	
	20.0	99.88 / 221-01-1484	1,171	99.98 / 221-03-1484	1,115	100.08 / 221-02-1484	1,143	
16"	4.0	46.42 / 221-01-1629	1,090	46.42 / 221-03-1629	1,034	46.42 / 221-02-1629	1,062	POA
	8.0	57.42 / 221-01-1640	1,166	57.42 / 221-03-1640	1,110	57.42 / 221-02-1640	1,138	
	12.0	72.42 / 221-01-1655	1,270	72.42 / 221-03-1655	1,214	72.42 / 221-02-1655	1,242	
	16.0	87.42 / 221-01-1670	1,374	87.42 / 221-03-1670	1,318	87.42 / 221-02-1670	1,346	
	20.0	102.42 / 221-01-1685	1,477	102.42 / 221-03-1685	1,421	102.42 / 221-02-1685	1,449	
18"	4.0	48.98 / 221-01-1830	1,307	48.74 / 221-03-1830	1,259	48.50 / 221-02-1830	1,283	POA
	8.0	59.98 / 221-01-1841	1,394	59.74 / 221-03-1841	1,346	59.50 / 221-02-1841	1,370	
	12.0	73.98 / 221-01-1855	1,505	73.74 / 221-03-1855	1,457	73.50 / 221-02-1855	1,481	
	16.0	88.98 / 221-01-1870	1,625	88.74 / 221-03-1870	1,577	88.50 / 221-02-1870	1,601	
	20.0	103.98 / 221-01-1885	1,744	103.74 / 221-03-1885	1,696	103.50 / 221-02-1885	1,720	
20"	4.0	52.90 / 221-01-2032	1,755	52.40 / 221-03-2032	1,667	51.90 / 221-02-2032	1,711	POA
	8.0	61.90 / 221-01-2041	1,844	61.40 / 221-03-2041	1,756	60.90 / 221-02-2041	1,800	
	12.0	77.90 / 221-01-2057	2,004	77.40 / 221-03-2057	1,916	76.90 / 221-02-2057	1,960	
	16.0	92.90 / 221-01-2072	2,153	92.40 / 221-03-2072	2,065	91.90 / 221-02-2072	2,109	
	20.0	107.90 / 221-01-2087	2,303	107.40 / 221-03-2087	2,215	106.90 / 221-02-2087	2,259	
24"	4.0	56.22 / 221-01-2433	2,402	55.82 / 221-03-2433	2,290	55.42 / 221-02-2433	2,349	POA
	8.0	64.22 / 221-01-2441	2,503	63.82 / 221-03-2441	2,391	63.42 / 221-02-2441	2,447	
	12.0	80.22 / 221-01-2457	2,704	79.82 / 221-03-2457	2,592	79.42 / 221-02-2457	2,648	
	16.0	95.22 / 221-01-2472	2,893	94.82 / 221-03-2472	2,781	94.42 / 221-02-2472	2,837	
	20.0	110.22 / 221-01-2487	3,081	109.82 / 221-03-2487	2,969	109.42 / 221-02-2487	3,025	

* Length shown is nominal, or shipped length

Larger Sizes Available Upon Request

TO ORDER: Specify Part Number and contact Romac Quotations Department

EXAMPLE: For a 3" Flange to Flange FJ Restraint with an offset of 4" Order: **221-01-0314**



ROMAC FIELD FLANGE™

RESTRAINT SYSTEMS

MATERIAL SPECIFICATIONS

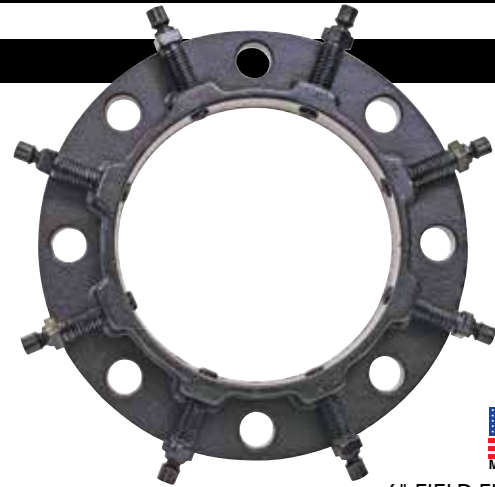
CASTINGS: Ductile iron per ASTM A 536, Grade 65-45-12. Flange in accordance with ANSI Class 150 drilling. Black shop-coat.

SET SCREWS: 5/8" x 2", 4140 steel alloy. Screws are designed with a unique "TRUE TORQUE"™ head (7/16", 12 point) which will shear off at approximately 80 ft-lbs. of torque.

GASKETS: SBR per ASTM D-2000 MBA 710, compounded for water and sewer service. Other compounds available on request.

USE: The Field Flange™ joins plain-end pipe of ductile iron and steel sizes to flanged fittings. It requires no threading or welding.

NOT FOR USE ON PVC PIPE OR PLAIN END MECHANICAL JOINT FITTINGS.



6" FIELD FLANGE™



NSF61 certified upon request.

CERTIFIED TO NSF/ANSI 61 & 372

NOM. PIPE SIZE	CATALOG NUMBER	SET SCREWS NUMBER : SIZE	APPROX. WEIGHT (lbs.)	WORKING PRESSURE PSI ¹	MAXIMUM JOINT DEFLECTION	LIST PRICE		
						GASKET ONLY MJ X IPS	GASKET ONLY MJ X CI	FIELD FLANGE ONLY
4"	4" Field Flange	4: 5/8" x 2"	11 #	300	3°	\$9.91	\$9.91	\$110.27
6"	6" Field Flange	8: 5/8" x 2"	16 #	300	2°	10.04	10.04	118.73
8"	8" Field Flange	8: 5/8" x 2"	19 #	300	2°	10.23	10.23	138.79
10"	10" Field Flange	12: 5/8" x 2"	31 #	250	2°	13.65	13.65	297.68
12"	12" Field Flange	12: 5/8" x 2"	43 #	175	1.5°	17.63	17.63	346.78

¹ Based on test pressure of at least two times rated pressure.

Note: Not recommended for use on thin wall pipe such as, Thickness Class 50 and Pressure Class 350 ductile iron pipe.

FIELD FLANGE™ INSTALLATION INSTRUCTIONS

1. Cut pipe to length. Pipe must be cut square and clean.
2. Slip flange over end of pipe. Tighten pins so that they are touching the pipe all around. Inspect to make sure that any gap between pipe and flange is even all the way around the pipe.
3. Tap flange into place. Face of the flange should be flush with the end of the pipe.
4. Tighten pins evenly, checking to be sure that even gap between pipe and flange is maintained. Continue until 80-85 ft-lbs. torque is reached or until the pin heads break off above the notch.
5. Stretch gasket over end of pipe and press firmly into flange.
6. Bolt Field Flange™ to its mating flange.

TO ORDER: Specify catalog description.

PIRANHA RESTRAINT GASKET™



MATERIAL SPECIFICATIONS

RUBBER: 4 - 10 inch: Styrene Butadiene Rubber (SBR) in accordance with ASTM D2000 MBA 710. NSF61 Certified.
 12 inch: Styrene Butadiene Rubber (SBR), dual durometer 55/80 per ASTM D2000. NSF61 Certified.
 14 - 24 inch: Dual durometer SBR per ASTM D 2000 MBA 610Z and MBA 810, compounded for water and sewer service. Meets ANSI/AWWA C111/A21.11-00. For other compounds, contact Romac Industries, Inc.

TEETH: Hardened Stainless Steel vulcanized into the rubber.

USE: For use only on *Tyton® Ductile Iron Bell and Spigot Push-On Joints. Not for use with PVC pipe.

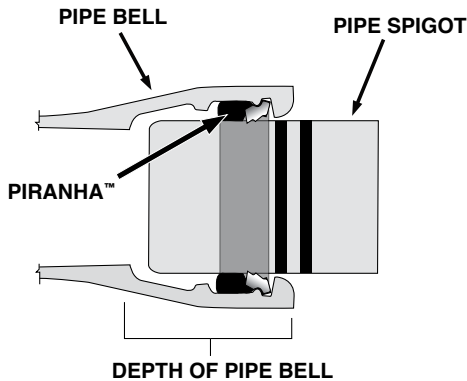


**HARDENED
 STAINLESS STEEL TEETH
 INTEGRATED INTO THE
 GASKET GRIP AND
 HOLD THE PIPE IN
 PLACE**



**SIZES
 4" - 12"**

Certified to
 NSF/ANSI 61 & 372



- **DUAL FUNCTION GASKET.**
 Simultaneously seals and restrains Tyton Joint® ductile iron pipe, valves and fittings.
- **SIMPLE INSTALLATION.**
 No threaded fasteners to torque.
- **MADE IN THE U.S.A.**

Go to www.romac.com, or contact Romac customer service for complete installation instructions.

NOM. PIPE SIZE	CATALOG NUMBER	PIPE O.D.	DEPTH OF BELL	WORKING PRESSURE (PSI)	MAX JOINT DEFLECTION (degrees)	LIST PRICE	WEIGHT (lbs.)
4"	PIRANHA - 0480	4.80	3.15	350	5	\$70.22	0.4 #
6"	PIRANHA - 0690	6.90	3.38	350	5	100.53	0.6 #
8"	PIRANHA - 0905	9.05	3.69	350	5	134.33	1.0 #
10"	PIRANHA - 1110	11.10	3.75	350	5	192.60	1.4 #
12"	PIRANHA - 1320	13.20	3.75	350	5	220.57	1.7 #
14"	PIRANHA - 1530	15.30	5.00	350	4	452.51	3.9 #
16"	PIRANHA - 1740	17.40	5.00	350	4	524.77	4.4 #
18"	PIRANHA - 1950	19.50	5.00	350	4	635.49	5.1 #
20"	PIRANHA - 2160	21.60	5.50	350	2.5	740.39	5.7 #
24"	PIRANHA - 2580	25.80	5.95	350	2.5	1,048.08	6.4 #

*TYTON® and TYTON JOINT® are registered trademarks of the United States Pipe and Foundry, LLC which has no affiliation with Romac Industries, Inc. United States Pipe and Foundry Company, LLC does not manufacture, or endorse the Piranha Gasket.

Piranha™ is not recommended for above ground use.

TO ORDER PIRANHA™ RESTRAINT GASKET: Specify Piranha™ catalog number.

RESTRAINT SYSTEMS



ARMOR LOCK™ RESTRAINT COUPLING

RESTRAINT SYSTEMS

MATERIAL SPECIFICATIONS

SHELL: 304 Stainless Steel, other materials available upon request.

GASKET: Ethylene Propylene Diene Monomer (EPDM) compounded for water and sewer service. Other compounds available on request.

BOLTS AND NUTS: 304 stainless steel, metric socket head cap screws. Other materials available upon request.

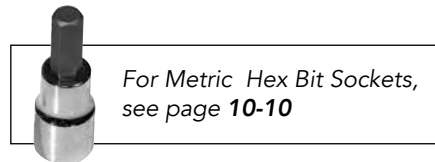
USE: For the connection and restraint of pipe ends.

Compatible Pipe Materials: Steel, Cast Iron, Ductile Iron, PVC, HDPE (PE 4710 & PE3408) and other types of pipe.



INSTALLING AN ARMOR LOCK™ ON A 16 INCH BRANCH.

- ALL STAINLESS STEEL.
- FAST STAB-FIT INSTALLATION.
- COMPATIBLE WITH HDPE, PVC, DI & STEEL PIPE.
- ACCOMODATES ANGULAR DEFLECTION AND MISALIGNED PIPES.



NOM. PIPE SIZE	O.D. (inches)	CATALOG NUMBER	NOM. LENGTH	ALLOWABLE DEFLECTION	WORKING PRESSURE†	HEX BIT SIZE	LIST PRICE	APPROX. WEIGHT (lbs.)
4"	4.50	ALOCK - 4.50	4"	4°	235	6 mm	\$616.42	4.0
	4.80	ALOCK - 4.80	4"	4°	235	8 mm	628.29	5.5
6"	6.63	ALOCK - 6.63	4"	2°	235	8 mm	663.92	6.6
	6.90	ALOCK - 6.90	8"	2°	235	10 mm	806.45	16.3
8"	8.63	ALOCK - 8.63	8"	2°	235	10 mm	1,162.76	18.5
	9.05	ALOCK - 9.05	8"	2°	235	10 mm	1,186.51	19.0
10"	10.75	ALOCK - 10.75	8"	2°	235	10 mm	1,293.41	25.1
	11.10	ALOCK - 11.10	8"	2°	235	10 mm	1,305.28	25.4
12"	12.75	ALOCK - 12.75	8"	2°	150	10 mm	1,542.82	28.2
	13.20	ALOCK - 13.20	8"	2°	150	10 mm	1,566.58	29.1

† Not to exceed pipe pressure rating.



- Pipe stiffeners are required on HDPE pipe.
- For applications on thin wall pvc pipe and pipelines subject to vacuum conditions, contact Romac Engineering.
- For temperature limitations on HDPE pipe applications, see installation instructions.

TO ORDER: Specify catalog number.

Other sizes, lengths and tapped outlets available upon request. For other compatible pipe materials, steam or air supply pipeline applications, contact Romac Engineering, 1.800.426.9341.

470 SERIES PIPE RESTRAINING SYSTEM



MATERIAL SPECIFICATIONS

RESTRAINT RING: Mild steel, meeting or exceeding ASTM A 36, machined teeth.

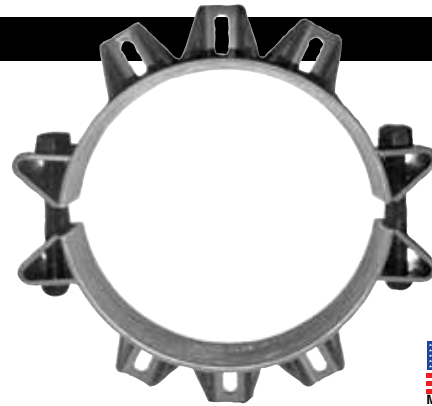
CLAMPING BOLTS AND NUTS: High strength, low alloy steel per AWWA C111.

RESTRAINING RODS: High strength, low alloy steel per AWWA C111.

COATING: Romac shopcoat enamel. Fusion bonded epoxy (exterior only) available on request.

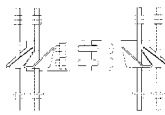
USE: For PVC pipe only.

Not for use on polyethelene pipe.



470 PIPE RESTRAINER

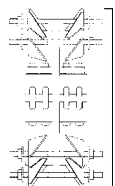
RESTRAINT SYSTEMS



STYLE 470MJ for MECHANICAL JOINTS

- Tie-Rod clearance is pipe OD + 5.0"

NOM. PIPE SIZE	PIPE O.D.	CATALOG NUMBER	LIST PRICE COMPLETE	CLAMPING BOLTS & NUTS		RESTRAINING RODS W/NUTS		APPROX. WEIGHT (lbs.)	OD (inches)
				QTY: SIZE	PRICE ea.	QTY: SIZE	PRICE ea.		
14"	15.30	470MJ - 15.30	\$727.77	4:1" x 9"	\$25.37	6: 3/4" x 14"	\$9.94	60#	23.4
16"	17.40	470MJ - 17.40	767.63	4:1" x 9"	25.37	6: 3/4" x 14"	9.94	65#	25.5
18"	19.50	470MJ - 19.50	809.17	4:1" x 9"	25.37	8: 3/4" x 14"	9.94	75#	27.6
20"	21.60	470MJ - 21.60	1,030.87	6:1" x 9"	25.37	8: 3/4" x 16"	9.94	95#	29.7
24"	25.80	470MJ - 25.80	1,178.91	6:1" x 9"	25.37	12: 3/4" x 16"	9.94	120#	33.9
30"	32.00	470MJ - 32.00	POA	8:11/8" x 9"	POA	14: 1" x 24"	POA	253#	43.0



STYLE 470SJ for BELL JOINTS & COUPLINGS

- Sizes 14" - 24" accommodates up to 12" long center ring.
- Sizes 30" accommodate up to 16" long center ring.
- Tie-Rod clearance is pipe OD + 5.0"

NOM. PIPE SIZE	PIPE O.D.	CATALOG NUMBER	LIST PRICE COMPLETE	CLAMPING BOLTS & NUTS		RESTRAINING RODS W/NUTS		APPROX. WEIGHT (lbs.)	OD (inches)
				QTY: SIZE	PRICE ea.	QTY: SIZE	PRICE ea.		
14"	15.30	470SJ - 15.30	\$1,061.02	8:1" x 9"	\$25.37	6: 3/4" x 30"	\$15.24	110#	23.9
16"	17.40	470SJ - 17.40	1,156.15	8:1" x 9"	25.37	6: 3/4" x 30"	15.24	120#	26.0
18"	19.50	470SJ - 19.50	1,228.94	8:1" x 9"	25.37	8: 3/4" x 30"	15.24	135#	28.1
20"	21.60	470SJ - 21.60	1,623.37	12:1" x 9"	25.37	8: 3/4" x 36"	16.80	180#	30.2
24"	25.80	470SJ - 25.80	1,988.05	12:1" x 9"	25.37	12: 3/4" x 36"	16.80	230#	34.4
30"	32.00	470SJ - 32.00	POA	16:11/8" x 9"	POA	14: 1" x 48"	POA	477#	44.3

For other PVC pipe sizes, contact Romac Engineering.

TO ORDER: Specify catalog number.

EXAMPLE: For 16" C905 to MJ Romac 470MJ, order Style **470MJ-17.40**



ROMAC DUCTILE LUG

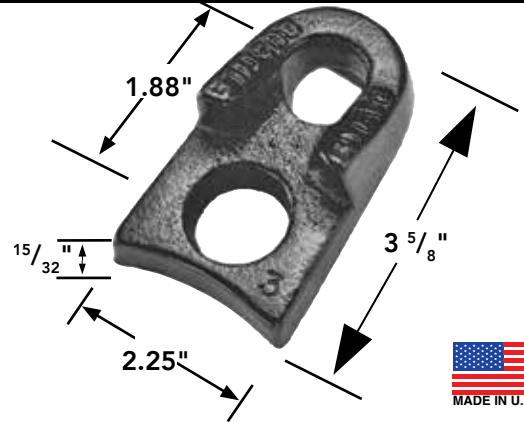
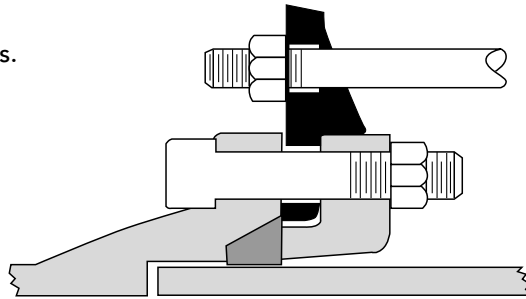
RESTRAINT SYSTEMS

MATERIAL SPECIFICATIONS

LUG: Ductile iron per ASTM A 536, Grade 65-45-12.

USE: Restraint of MJ fittings 4" - 24". Accommodates 3/4" rod.

MAX. LOAD: 7,500 lbs.



CATALOG NUMBER	APPROX. WEIGHT (lbs.)	LIST PRICE
Ductile Lug	.844 #	\$4.50

90° EYE BOLT

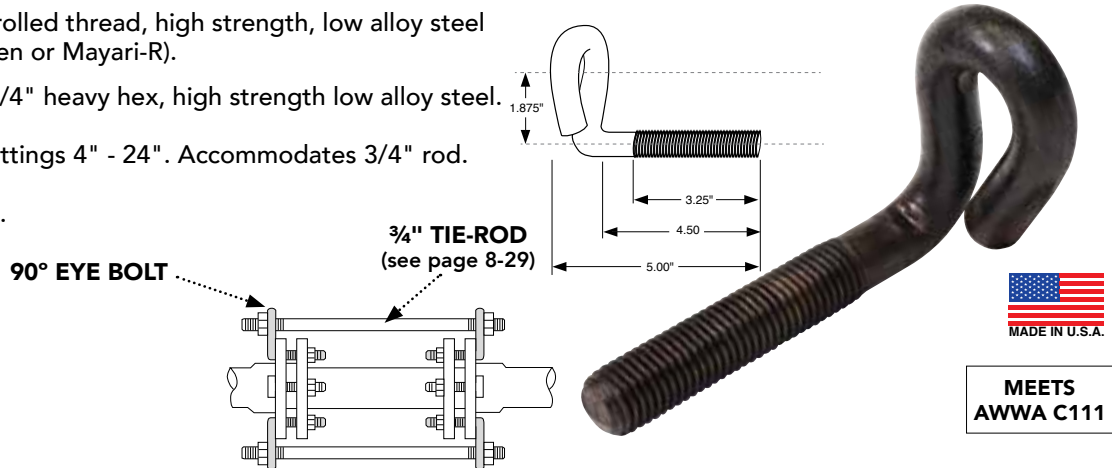
MATERIAL SPECIFICATIONS

EYE BOLT: 3/4" UNC rolled thread, high strength, low alloy steel per AWWA C111 (Corten or Mayari-R).

NUT AND WASHER: 3/4" heavy hex, high strength low alloy steel.

USE: Restraint of MJ fittings 4" - 24". Accommodates 3/4" rod.

MAX. LOAD: 7,500 lbs.



MEETS AWWA C111

ITEM	CATALOG NUMBER	LIST PRICE EACH PER QUANTITY					APPROX. WEIGHT (lbs.)
		1-200	400	600	800	1000	
3/4" Eye-Bolts	EYE-3/4	\$11.84	\$11.76	\$11.68	\$11.57	\$11.42	200 # / crate
3/4" Nuts	HH-3/4	1.87	1.80	1.74	1.66	1.58	40 # / crate
3/4" Washers	WASHER-3/4	1.66	1.55	1.55	1.48	1.38	4 # / 100

Bolts and nuts are packaged 2000 per crate. **TO ORDER:** Specify catalog number.

A.W.W.A MANUAL M11 HARNESS RESTRAINT



MATERIAL SPECIFICATIONS

RESTRAINT RINGS: This weldment is manufactured from ASTM A36 Steel with a minimum yield stress of 36,000 psi. Two of these are required, one on each side of the coupling.

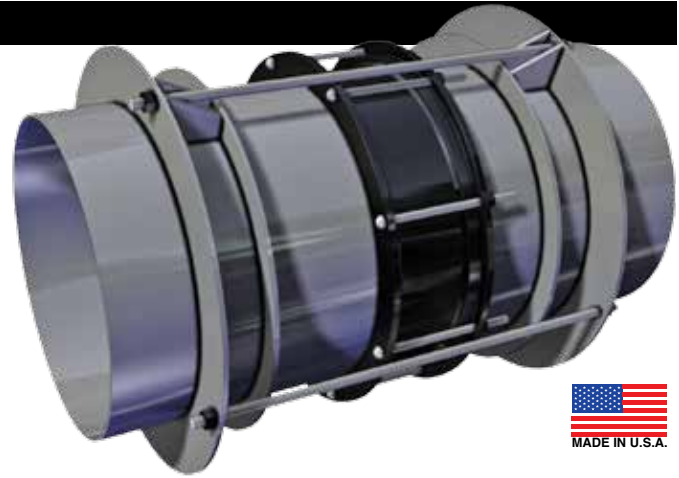
TIE RODS: High tensile alloy steel per ASTM A193 grade B7. Type 304 or 316 stainless steel is optional and requires twice as many rods.

COATING: Bare, unless otherwise specified.

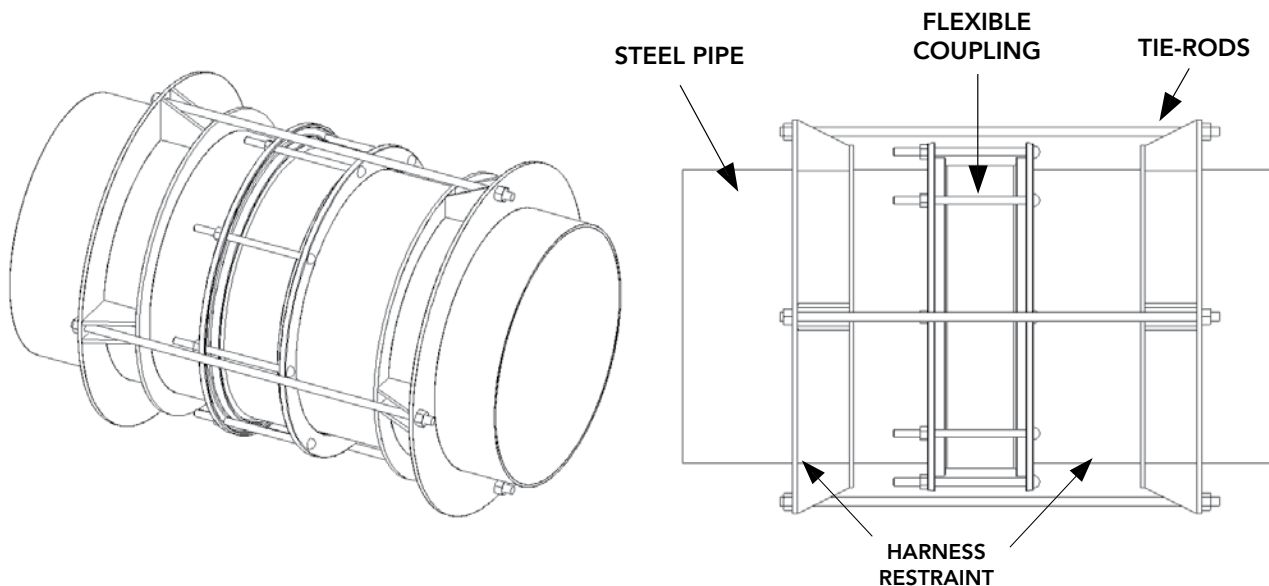
PRESSURE: The standard design pressures of 50, 100, 150, 200, & 250 psi are specified in the AWWA M11 manual. These pressures specify the tie rod quantities and diameter. Other pressures can be accommodated.

RING TOLERANCE: The Harness weldment inner diameter (ID) is manufactured with a 3/16 inch (on diameter) clearance between the specified pipe OD up through 24 inch and 1/4 inch larger than 24 inch.

SIZES: 6"- 96" for steel pipe. Other sizes available on request.



ROMAC MANUFACTURES JOINT HARNESSES AS SPECIFIED PER AWWA M11, CHAPTER 13, DESIGNED TO RESTRAIN FLEXIBLE COUPLINGS (STYLE 501 AND STYLE 400) ON STEEL PIPELINES. THESE HARNESS ASSEMBLIES ARE FIELD WELDED IN PLACE.



Contact your Romac representative for more information.

ALL PRICES: Priced On Application.



ROMAC HARNESS LUGS

RESTRAINT SYSTEMS

MATERIAL SPECIFICATIONS

HARNESS LUG: ASTM A36 Steel, profile shape cut with plasma arc or oxy-fuel. Holes plasma arc cut or drilled. Stainless steel optional.

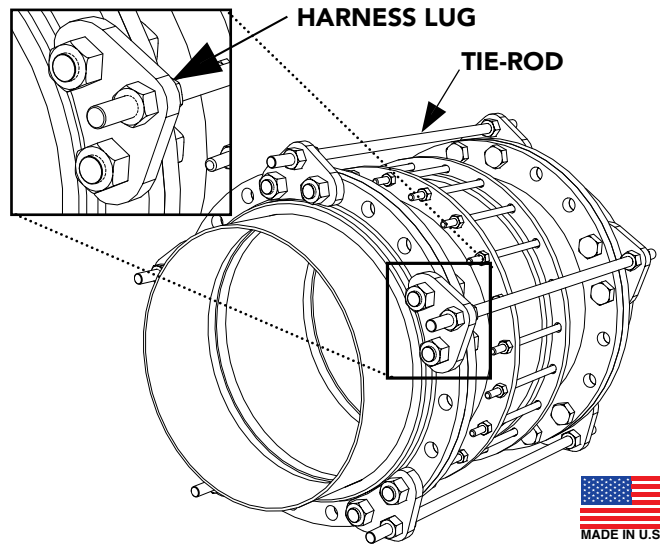
TIE-RODS: All Thread Rod. Alloy steel per ASTM A193 Grade B7. Stainless steel, type 304 per ASTM A193 Grade B8. Stainless steel, type 316 per Grade B8M

COATING: Bare, shopcoat paint for corrosion protection in transit, or fusion bonded epoxy.

FLANGE COMPATIBILITY:

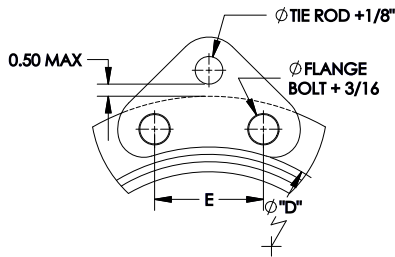
Style 490, 492, 493, 494 Harness Lugs:
Designed for use with an ANSI B16.1 Cls 125, ANSI B16.5 Cls 150, AWWA C207 Cls B, AWWA C207 Cls D, or AWWA C207 Cls E flange. Radius of lug designed to provide clearance on the majority of high hub threaded ductile iron flanges.

Style 491 Harness Lugs:
Designed for Cls 250 / 300.



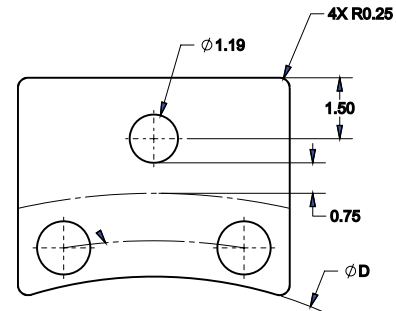
STYLE 490 - PG. 8-24

THREE-HOLE TRIANGULAR



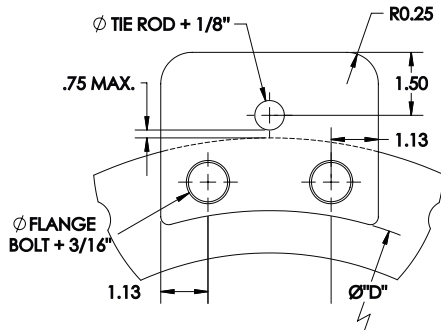
STYLE 493 - PG. 8-28

THREE-HOLE RECTANGULAR



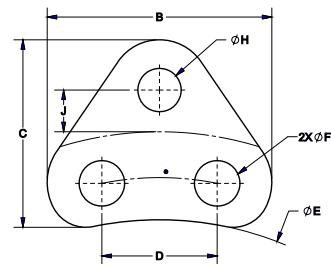
STYLE 492 - PG. 8-27

THREE-HOLE RECTANGULAR



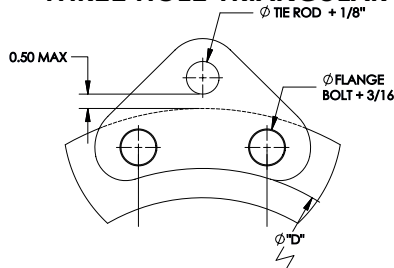
STYLE 491 - 8-25

THREE-HOLE TRIANGULAR



STYLE 494 - PG. 8-26

THREE-HOLE TRIANGULAR



CAUTION: Some threaded ductile iron flanges have large diameter hubs which may interfere with harness lug radius. Check lug diameter (pg. 8-24 through 8-28) for clearance over flange hub.



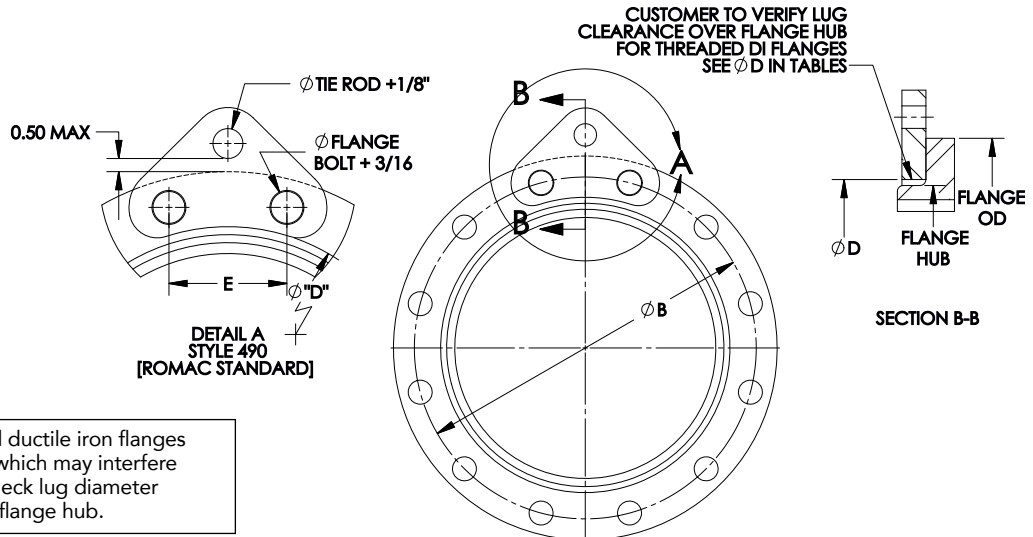
STYLE 490 TRIANGULAR HARNESS LUGS



MATERIAL SPECIFICATIONS

FLANGE COMPATIBILITY:

Designed for use with an ANSI B16.1 Cls 125, ANSI B16.5 Cls 150, AWWA C207 Cls B, AWWA C207 Cls D, or AWWA C207 Cls E flange. Radius of lug designed to provide clearance on the majority of high hub threaded ductile iron flanges.



CAUTION: Some threaded ductile iron flanges have large diameter hubs which may interfere with harness lug radius. Check lug diameter (below) for clearance over flange hub.

STYLE 490 REQUIREMENTS:

- 1.) DRAWING REFERENCES: 3" - 12" B3305-A; 14" - 72" B3292-A
- 2.) (2) LUGS REQUIRED PER TIE ROD
- 3.) 4 NUTS REQUIRED PER TIE ROD, (DOUBLE NUT CONFIGURATION.)
- 4.) TIE ROD SIZE VARIES, SEE TABLE



STYLE 490

ROMAC STANDARD LUG - 3" HOLE

FLANGE SIZE	REQUIRED TIE-ROD QUANTITY MAXIMUM PRESSURE					TIE-ROD SIZE (UNC)	LUG THICKNESS	LIST PRICE EACH (2 LUGS REQUIRED PER ROD)			LUG DIAMETER (for clearance ØD)
	50 PSI	100 PSI	150 PSI	200 PSI	275 PSI			BARE	SHOPCOAT	EPOXY	
3"	2	2	2	2	2	5/8	0.50	\$43.90	\$42.77	\$50.37	Ø4.80
4"	2	2	2	2	2	5/8	0.50	57.63	56.50	60.87	Ø6.38
6"	2	2	2	2	2	5/8	0.75	68.85	67.71	74.29	Ø8.16
8"	2	2	2	3	3	5/8	0.75	85.86	83.42	89.51	Ø10.38
10"	2	2	2	3	3	3/4	1.00	100.59	99.46	108.41	Ø12.68
12"	2	2	2	3	3	7/8	1.00	119.71	118.58	131.89	Ø15.12
14"	2	2	2	3	3	1	1.00	128.44	127.30	133.54	Ø16.68
16"	2	2	2	3	4	1	1.00	135.74	134.61	144.05	Ø19.32
18"	2	2	3	4	5	1	1.00	146.01	144.88	149.74	Ø20.90
20"	2	3	4	5	6	1	1.00	155.93	154.79	162.11	Ø23.00
24"	2	3	5	6	9	1	1.00	164.40	162.37	171.17	Ø27.28
30"	2	3	5	6	9	1 1/4	1.25	217.12	215.99	219.75	Ø33.82
36"	3	5	7	9	12	1 1/4	1.25	217.17	225.02	225.10	Ø40.12
42"	3	6	9	12	16	1 1/4	1.25	233.04	232.06	245.95	Ø46.68
48"	3	6	8	11	15	1 1/2	1.75	457.70	456.56	476.00	Ø52.82
54"	4	7	10	14	18	1 1/2	1.75	508.55	507.41	523.09	Ø59.26
60"	5	9	13	17	23	1 1/2	1.75	521.93	520.80	543.38	Ø65.76
66"	4	8	11	15	20	1 3/4	2.00	547.12	545.99	580.48	Ø72.00
72"	5	9	13	18	24	1 3/4	2.00	699.99	698.86	748.43	Ø79.00

*NOTE: Harness Lugs used with Romac FCA501s require longer flange and through bolts than what are provided as standard with 3" - 12" FCA501s. 490 Style Lugs cannot be used with 10" B FCA501 Bodies. Contact Romac Engineering for more information.

TO ORDER: Specify style, flange size and coating option.

For Tie-Rods see page 8-29.

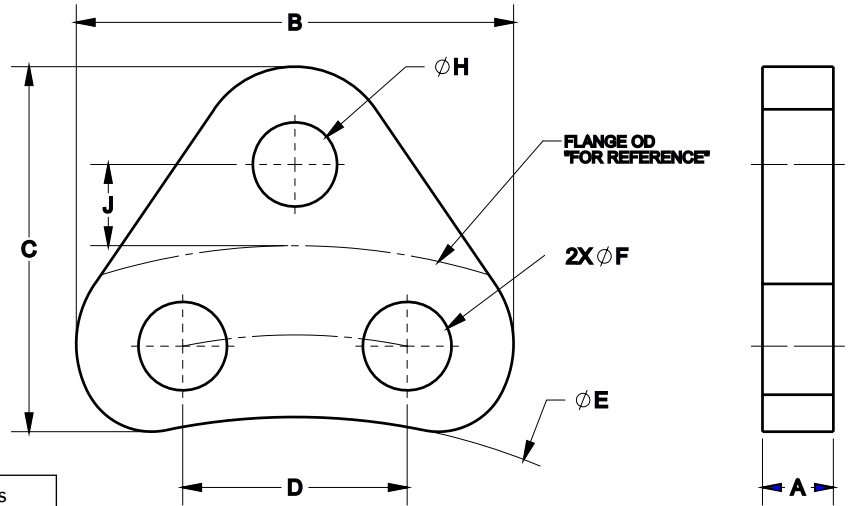


STYLE 491 TRIANGULAR HARNESS LUGS

MATERIAL SPECIFICATIONS

FLANGE COMPATIBILITY: Designed for use with an AWWA C207 CLS F, ANSI B16.1 CLS 250 and ANSI B16.5 CLS 300.

Radius of lug designed to provide clearance on the majority of high hub threaded ductile iron flanges.



CAUTION: Some threaded ductile iron flanges have large diameter hubs which may interfere with harness lug radius. Check lug diameter (below) for clearance over flange hub.



STYLE 491

STANDARD THICKNESS - 3" HOLE TRIANGULAR

FLANGE SIZE	REQUIRED TIE-ROD QTY 300 PSI MAX	TIE ROD SIZE	LUG THICKNESS A	LUG WIDTH B	LUG HEIGHT C	FLANGE HOLE CHORD LENGTH D	LUG ID E	FLANGE BOLT HOLE ØF	BOLT CIRCLE ØG	TIE-ROD BOLT HOLE ØH	FLANGE OD-TIE ROD BC J	LIST PRICE EACH (2 LUGS REQUIRED PER ROD)			APPROX. WEIGHT (lbs)
												BARE	SHOPCOAT	EPOXY	
3"	2	5/8	1/2	4.79	3.92	2.54	4.92	0.88	6.62	0.75	0.88	\$47.40	46.27	53.87	1.5
4"	2	5/8	1/2	5.27	4.22	3.02	6.25	0.88	7.88	0.75	0.88	61.13	60.00	64.37	1.8
6"	2	5/8	3/4	5.00	4.24	2.75	8.62	0.88	10.62	0.75	0.88	72.60	72.46	78.04	2.5
8"	4	5/8	3/4	5.86	4.24	3.36	10.75	1.00	13.00	0.75	0.88	89.86	88.72	87.42	3.1
10"	4	3/4	1	5.73	4.44	2.98	13.12	1.13	15.25	0.88	0.88	104.70	103.57	112.52	4.2
12"	4	7/8	1	6.46	5.02	3.46	15.38	1.25	17.75	1.00	0.94	123.96	122.83	136.14	5.3
14"	4	1	1	6.17	5.15	3.17	18.00	1.25	20.25	1.19	1.07	133.34	132.21	138.44	5.3
16"	4	1	1	7.02	5.40	3.52	20.13	1.38	22.50	1.19	1.07	141.34	140.21	149.65	6.3
18"	6	1	1 1/4	6.73	5.47	3.23	22.38	1.38	24.75	1.19	1.07	152.31	151.18	156.04	7.7
20"	7	1	1 1/4	7.02	5.60	3.52	24.63	1.38	27.00	1.19	1.07	162.93	161.79	169.11	8.2
24"	6	1 1/4	1 3/4	8.18	6.82	4.18	28.88	1.63	32.00	1.44	1.25	240.00	237.97	246.77	16.5
30"	9	1 1/4	1 3/4	8.89	6.82	4.39	35.88	1.88	39.25	1.44	1.25	311.62	310.49	322.75	17.7
36"	9	1 1/2	2	9.51	7.79	4.51	41.88	2.13	46.00	1.69	1.50	368.37	366.77	397.30	24.7
42"	12	1 1/2	2	9.60	7.90	4.60	48.75	2.13	52.75	1.69	1.56	409.44	408.46	427.35	25.3
48"	12	1 3/4	2	9.77	8.38	4.77	56.80	2.13	60.75	1.94	1.84	508.10	506.96	526.40	27.4

STYLE 491 REQUIREMENTS:

- 1.) REFERENCE DRAWING CAD-011545
- 2.) (2) LUGS REQUIRED PER TIE ROD
- 3.) 4 NUTS REQUIRED PER TIE ROD, (DOUBLE NUT CONFIGURATION.)

TO ORDER: Specify style, flange size and coating option.
For Tie-Rods see page 8-29.

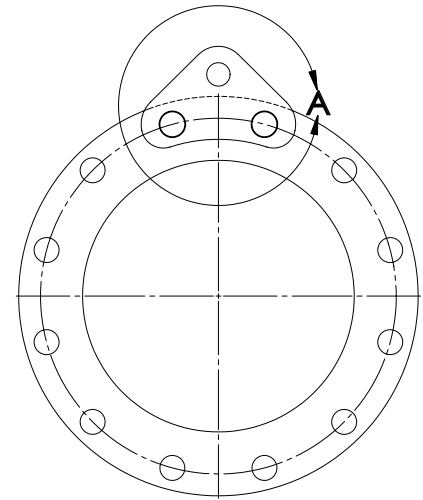
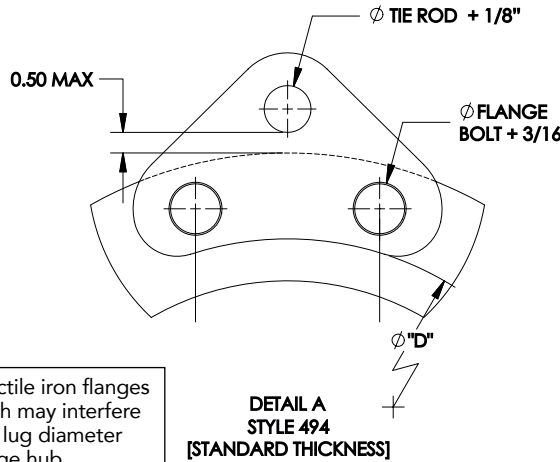
STYLE 494 TRIANGULAR HARNESS LUGS



MATERIAL SPECIFICATIONS

FLANGE COMPATIBILITY:

Designed for use with an ANSI B16.1 Cls 125, ANSI B16.5 Cls 150, AWWA C207 Cls B, AWWA C207 Cls D, or AWWA C207 Cls E flange. Radius of lug designed to provide clearance on the majority of high hub threaded ductile iron flanges.



CAUTION: Some threaded ductile iron flanges have large diameter hubs which may interfere with harness lug radius. Check lug diameter (below) for clearance over flange hub.

**DETAIL A
STYLE 494
[STANDARD THICKNESS]**

STYLE 494

STANDARD THICKNESS - 3" HOLE TRIANGULAR



FLANGE SIZE	REQUIRED TIE-ROD QUANTITY MAXIMUM PRESSURE		TIE-ROD SIZE (UNC)	LUG THICKNESS	LIST PRICE EACH (2 LUGS REQUIRED PER ROD)			LUG DIAMETER (for clearance ØD)
	100 PSI	200 PSI			BARE	SHOPCOAT	EPOXY	
3"	2	2	3/4	1.00	\$51.62	\$50.48	\$59.00	Ø4.75
4"	2	2	3/4	1.00	64.14	63.01	67.74	Ø5.57
6"	2	2	3/4	1.00	76.60	75.46	82.68	Ø7.81
8"	2	2	3/4	1.00	95.50	94.36	92.80	Ø9.98
10"	2	4	3/4	1.00	99.70	98.56	107.52	Ø12.31
12"	2	4	3/4	1.00	118.82	117.68	131.00	Ø14.41
14"	2	4	3/4	1.00	127.54	126.41	132.65	Ø16.50
16"	4	6	3/4	1.00	134.85	133.72	143.16	Ø18.69
18"	4	8	3/4	1.00	145.12	143.99	148.85	Ø20.78
20"	4	6	1	1.25	155.03	153.90	161.20	Ø22.88
24"	4	6	1	1.25	163.51	162.37	170.28	Ø27.07
30"	6	10	1	1.25	201.05	199.92	209.37	Ø33.00
36"	8	14	1	1.25	208.82	207.69	216.44	Ø39.37

*NOTE: Harness Lugs used with Romac FCA501s require longer flange and through bolts than what are provided as standard with 3" - 12" FCA501s. 494 Style Lugs cannot be used with 10" B FCA501 Bodies. Contact Romac Engineering for more information.

STYLE 494 REQUIREMENTS:

- 1.) DRAWING REFERENCES: B2784-A
- 2.) (2) LUGS REQUIRED PER TIE ROD
- 3.) 4 NUTS REQUIRED PER TIE ROD, (DOUBLE NUT CONFIGURATION.)

TO ORDER: Specify style, flange size and coating option.

For Tie-Rods see page 8-29.



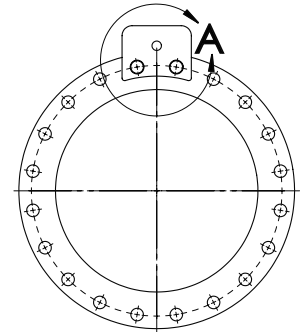
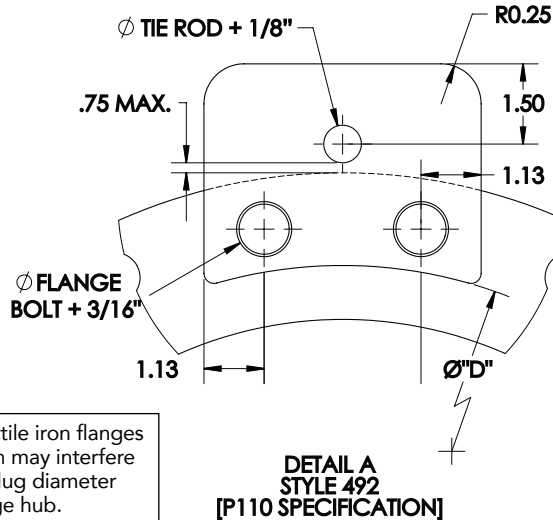
STYLE 492 RECTANGULAR HARNESS LUGS

RESTRAINT SYSTEMS

MATERIAL SPECIFICATIONS

FLANGE COMPATIBILITY:

Designed for use with an ANSI B16.1 Cls 125, ANSI B16.5 Cls 150, AWWA C207 Cls B, AWWA C207 Cls D, or AWWA C207 Cls E flange. Radius of lug designed to provide clearance on the majority of high hub threaded ductile iron flanges.



CAUTION: Some threaded ductile iron flanges have large diameter hubs which may interfere with harness lug radius. Check lug diameter (below) for clearance over flange hub.

STYLE 492

SPECIFICATION P110 - 3" HOLE RECTANGULAR



FLANGE SIZE	REQUIRED TIE-ROD QUANTITY, MAXIMUM PRESSURE										LUG THICK-NESS	LIST PRICE EACH (2 LUGS REQUIRED PER ROD)			LUG DIAMETER (for clearance ØD)
	50 PSI	TIE ROD SIZE	100 PSI	TIE ROD SIZE	150 PSI	TIE ROD SIZE	200 PSI	TIE ROD SIZE	250 PSI	TIE ROD SIZE		BARE	SHOPCOAT	EPOXY	
4"	2	3/4	2	3/4	2	3/4	2	3/4	2	3/4	1.00	\$67.63	\$66.50	\$71.37	Ø6.38
6"	2	3/4	2	3/4	2	3/4	2	3/4	2	3/4	1.00	80.60	79.46	86.92	Ø8.16
8"	2	3/4	2	3/4	2	3/4	3	3/4	3	3/4	1.00	100.24	99.11	97.44	Ø10.38
10"	2	3/4	2	3/4	3	3/4	4	3/4	5	3/4	1.00	104.62	103.49	112.75	Ø12.68
12"	2	3/4	3	3/4	4	3/4	5	3/4	NA	NA	1.00	124.51	123.38	137.17	Ø15.12
14"	2	3/4	4	3/4	5	3/4	NA	NA	NA	NA	1.00	130.90	129.77	138.88	Ø16.84
16"	2	3/4	4	3/4	NA	NA	NA	NA	NA	NA	1.00	141.16	140.04	149.81	Ø19.32
18"	3	3/4	5	3/4	NA	NA	NA	NA	NA	NA	1.00	151.85	150.72	157.52	Ø20.90
20"	4	3/4	NA	NA	NA	NA	NA	NA	NA	NA	1.00	162.17	161.04	167.96	Ø23.00
24"	5	3/4	NA	NA	NA	NA	NA	NA	NA	NA	1.00	170.97	169.85	178.03	Ø27.28

*NOTE: Harness Lugs used with Romac FCA501s require longer flange and through bolts than what are provided as standard with 3" - 12" FCA501s. 492 Style Lugs cannot be used with 10" B FCA501 Bodies. Contact Romac Engineering for more information.

STYLE 492 REQUIREMENTS:

- 1.) HARNESS PLATE THICKNESS IS 1.0"
- 2.) TIE ROD SIZE IS 3/4"
- 3.) (2) LUGS REQUIRED PER TIE ROD
- 4.) 4 NUTS REQUIRED PER TIE ROD, (DOUBLE NUT CONFIGURATION.)

TO ORDER: Specify style, flange size and coating option.
For Tie-Rods see page 8-29.

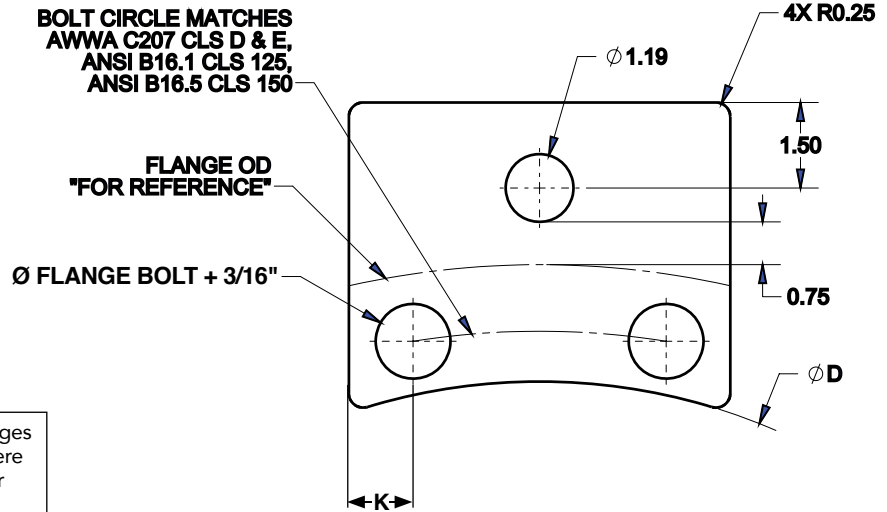
STYLE 493 RECTANGULAR HARNESS LUGS



MATERIAL SPECIFICATIONS

FLANGE COMPATIBILITY:

Designed for use with an ANSI B16.1 Cls 125, ANSI B16.5 Cls 150, AWWA C207 Cls B, AWWA C207 Cls D, or AWWA C207 Cls E flange. Radius of lug designed to provide clearance on the majority of high hub threaded ductile iron flanges.



CAUTION: Some threaded ductile iron flanges have large diameter hubs which may interfere with harness lug radius. Check lug diameter (below) for clearance over flange hub.

STYLE 493

3" HOLE RECTANGULAR



FLANGE SIZE	REQUIRED TIE-ROD QUANTITY, MAXIMUM PRESSURE										SIDE TO BOLT HOLE K	LIST PRICE EACH (2 LUGS REQUIRED PER ROD)			LUG DIAMETER (for clearance ØD)
	50 PSI	TIE ROD SIZE	100 PSI	TIE ROD SIZE	150 PSI	TIE ROD SIZE	200 PSI	TIE ROD SIZE	250 PSI	TIE ROD SIZE		BARE	SHOPCOAT	EPOXY	
12"	NA	NA	NA	NA	NA	NA	NA	NA	4	1	1.13	\$129.41	\$128.28	\$142.08	15.12
14"	NA	NA	NA	NA	NA	1	4	1	5	1	1.13	135.81	134.67	143.79	16.84
16"	NA	NA	NA	NA	4	1	5	1	6	1	1.13	146.76	145.64	155.41	19.32
18"	NA	NA	NA	NA	5	1	6	1	8	1	1.13	158.15	157.02	163.82	20.90
20"	NA	NA	4	1	6	1	8	1	9	1	1.13	169.18	168.04	174.96	23.00
24"	NA	NA	6	1	8	1	NA	NA	NA	NA	1.16	179.37	178.25	186.43	27.28
30"	4	1	8	1	12	1	NA	NA	NA	NA	1.16	206.27	204.98	212.11	33.82
36"	6	1	12	1	NA	NA	NA	NA	NA	NA	1.38	237.22	235.74	243.94	40.12
42"	8	1	15	1	NA	NA	NA	NA	NA	NA	1.38	272.80	271.09	280.52	46.68
48"	10	1	20	1	NA	NA	NA	NA	NA	NA	1.38	313.72	311.76	322.60	52.82
54"	13	1	NA	NA	NA	NA	NA	NA	NA	NA	1.59	360.78	358.52	370.99	59.26

*NOTE: Harness Lugs used with Romac FCA501s require longer flange and through bolts than what are provided as standard with 12" FCA501s.

STYLE 493 REQUIREMENTS:

- 1.) HARNESS PLATE THICKNESS IS 1.0"
- 2.) TIE ROD SIZE IS 1.0"
- 3.) (2) LUGS REQUIRED PER TIE ROD
- 4.) 4 NUTS REQUIRED PER TIE ROD, (DOUBLE NUT CONFIGURATION.)

TO ORDER: Specify style, flange size and coating option.

For Tie-Rods see page 8-29.

RESTRAINT SYSTEMS

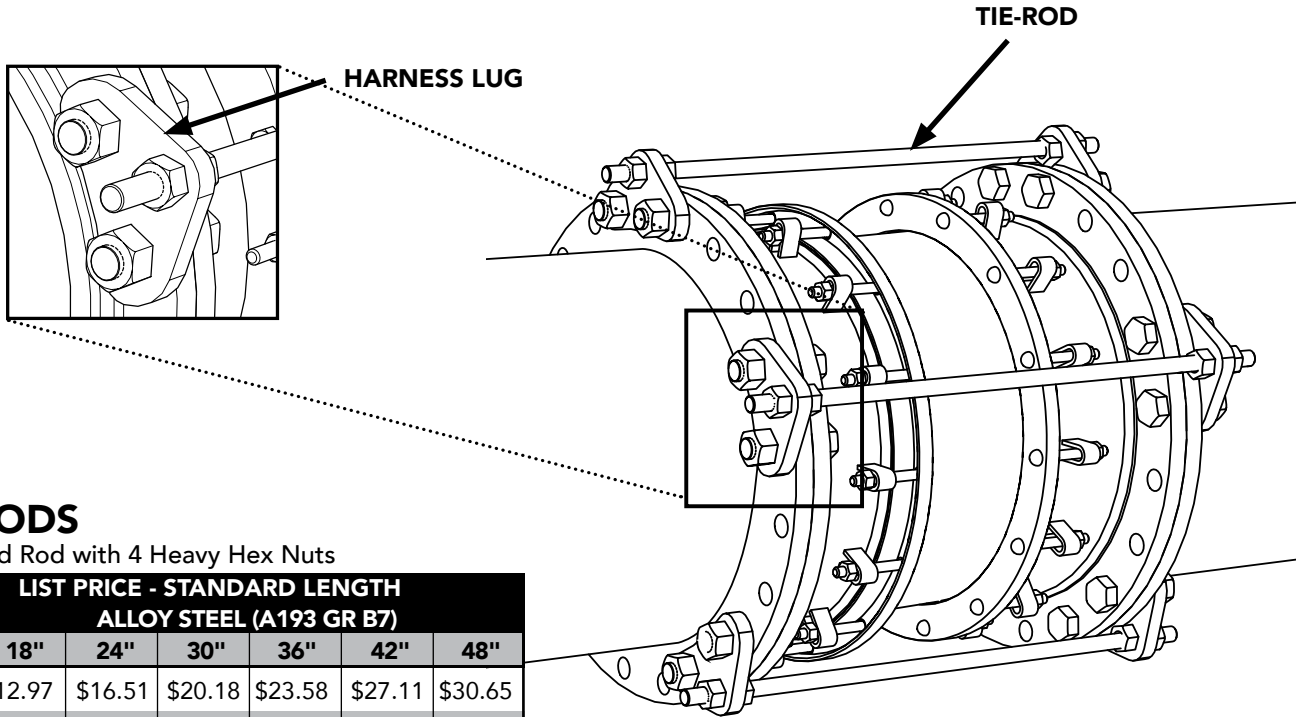


TIE-RODS FOR HARNESS LUGS

RESTRAINT SYSTEMS

MATERIAL SPECIFICATIONS

TIE-RODS: All Thread Rod. Alloy steel per ASTM A193 Grade B7. Stainless steel, type 304 per ASTM A193 Grade B8. Stainless steel, type 316 per Grade B8M



TIE RODS

All Thread Rod with 4 Heavy Hex Nuts

LIST PRICE - STANDARD LENGTH						
ALLOY STEEL (A193 GR B7)						
SIZE (UNC)	18"	24"	30"	36"	42"	48"
5/8"	\$12.97	\$16.51	\$20.18	\$23.58	\$27.11	\$30.65
3/4"	18.22	23.20	28.36	33.13	38.10	43.04
7/8"	24.72	30.45	36.17	41.89	47.62	53.35
1"	38.48	46.41	54.06	61.39	69.02	76.67
1 1/8"	47.34	58.34	68.93	79.11	89.68	100.28
1 1/4"	68.02	81.75	94.94	107.61	120.81	133.99
1 1/2"	100.73	120.61	139.71	158.02	176.27	196.21
1 3/4"	246.38	300.24	352.11	401.91	453.79	506.53



LIST PRICE - STANDARD LENGTH						
304 STAINLESS STEEL (A193 GR B8)						
SIZE (UNC)	18"	24"	30"	36"	42"	48"
5/8"	\$50.80	\$61.62	\$72.84	\$83.22	\$94.03	\$104.83
3/4"	71.57	86.93	102.91	117.64	133.02	148.38
7/8"	102.65	125.66	147.81	169.06	191.19	213.33
1"	155.61	185.83	214.88	242.78	271.83	300.88
1 1/8"	213.03	256.21	297.75	337.62	379.13	420.67
1 1/4"	285.11	341.27	395.27	449.28	501.10	555.11
1 1/2"	434.78	517.40	596.85	673.11	752.56	832.00
1 3/4"	638.10	755.40	868.17	976.45	1,089.22	1,201.99

LIST PRICE - STANDARD LENGTH						
316 STAINLESS STEEL (A193 GR B8M)						
SIZE (UNC)	18"	24"	30"	36"	42"	48"
5/8"	\$81.35	\$97.60	\$114.50	\$130.11	\$146.35	\$162.60
3/4"	125.18	149.74	175.27	198.84	223.40	247.95
7/8"	189.64	225.62	263.02	297.58	333.54	369.50
1"	219.04	304.79	354.98	403.16	453.36	503.56
1 1/8"	332.44	396.24	457.56	516.44	577.77	639.11
1 1/4"	421.68	503.37	581.93	660.47	735.90	814.45
1 1/2"	666.65	795.28	918.99	1,037.71	1,161.42	1,285.11
1 3/4"	1,009.61	1,204.62	1,392.11	1,572.10	1,759.61	1,947.10

TO ORDER: Specify size, length and type of steel. To determine the number of necessary tie-rods see harness lug charts on pages 8-24 - 8-28.



IMPORTANT INFORMATION

PROPERTIES OF HDPE PIPE

High density polyethylene pipe (HDPE) has several properties that make it very different from “traditional” water works pipe materials:

- **Coefficient of thermal expansion** is over 10 times that of DI and steel and 3 times that of PVC. In practical terms, this means HDPE pipe shrinks 10 times as much as DI and 3 times as much as PVC when it gets cold. This can loosen any fittings installed on it. Also, it’s length shrinks 1 inch per 100 feet of pipe length with a 10° F temperature drop, making it likely to pull out of unrestrained couplings.
- **Yield strength** of HDPE is approximately 1/50 that of DI or steel and 1/5 that of PVC.
- **Modulus of Elasticity** of HDPE is much lower than other pipe materials, which means it is not as rigid.
- **Creep** is continuous yield of material under stress. HDPE will creep if the stress placed on it gets above a certain level. If great care is not taken when designing fittings for use on HDPE pipe, this stress level can be exceeded and fittings that work great today may fail later as the HDPE creeps.
- **Low coefficient of friction** means HDPE is very “slick.” This makes it easy for fittings to rotate on the pipe or migrate along it.
- **Toe-in** occurs when HDPE is cut. This can affect tapping sleeves and saddles, and makes stiffeners difficult to install in pipe ends.

LIMITATIONS OF ROMAC PRODUCTS FOR USE ON HDPE PIPE

HDPE has a lower modulus of elasticity and higher coefficient of thermal expansion than other pipe materials. These properties cause HDPE pipe to expand and contract much more from changes in temperature and/or pressure than other piping materials. Because of these and other properties, great care must be taken in choosing fittings and repair products for use on HDPE pipe. Romac products in this catalog section are designed to function within the following limitations:

- Pipe must be manufactured in accordance with AWWA Standard ANSI/AWWA C906 / with respect to size.
- Operating temperatures are limited to 85° F maximum and 32° F minimum.
- Operating pressure is limited to 150 psi or the rating of the pipe, whichever is less.
- Pipe systems must be designed to compensate for pipe movement so as to prevent fittings from migrating or rotating on the pipe.
- Products are intended for use in underground service only.
- Romac internal pipe stiffeners must be used when coupling pipe ends except for Alpha Restrained Joint products on HDPE pipe SDRs 9, 11, 13.5 and 17 (see Alpha installation instructions for details).
- Proper restraint must be used when coupling pipe ends to prevent pullout from hydraulic forces or temperature changes.



Romac cannot warrant products used in applications that are outside one or more of these limitations. Contact Romac’s Engineering Department at 1-800-426-9341 if you have questions about the use of our products on HDPE pipe.

IMPORTANT INFORMATION

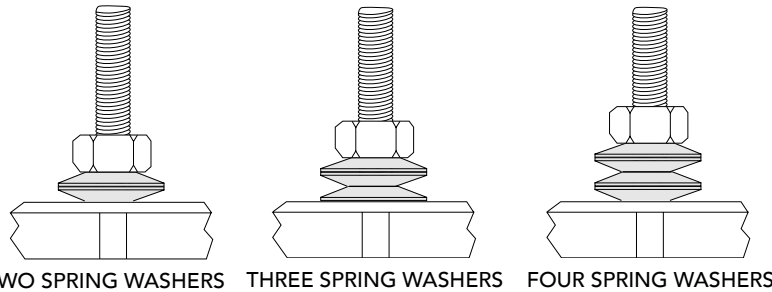
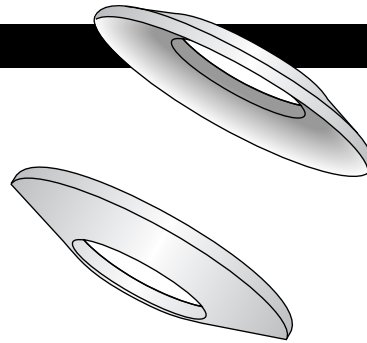


HDPE FOR HIGH DENSITY POLYETHYLENE PIPE

SPRING WASHERS

Spring washers are used with Romac products for HDPE pipe to help counteract the problem of pipe contraction during temperature and pressure changes. They are made of a special "spring" grade of stainless steel.

The proper number of bolts have been provided for each fitting based on the limitations on Page 9-1.



DIMENSIONS OF COMMON HDPE PIPE

NOMINAL PIPE SIZE	OUTSIDE DIAMETER	SDR 21 PRESSURE CLASS 80		SDR 17 PRESSURE CLASS 100		SDR 13.5 PRESSURE CLASS 128		SDR 11 PRESSURE CLASS 160		SDR 9 PRESSURE CLASS 200	
		INSIDE DIAMETER	WALL THICKNESS	INSIDE DIAMETER	WALL THICKNESS	INSIDE DIAMETER	WALL THICKNESS	INSIDE DIAMETER	WALL THICKNESS	INSIDE DIAMETER	WALL THICKNESS
3"	3.50	3.167	0.167	3.088	0.206	2.981	0.259	2.864	0.318	2.722	0.389
4"	4.50	4.071	0.214	3.971	0.265	3.833	0.333	3.682	0.409	3.500	0.500
	4.80	4.343	0.229	4.235	0.282	4.089	0.356	3.927	0.436	3.733	0.533
5"	5.56	5.033	0.265	4.909	0.327	4.739	0.412	4.552	0.506	4.327	0.618
6"	6.63	5.994	0.315	5.846	0.390	5.644	0.491	5.420	0.602	5.153	0.736
	6.90	6.243	0.329	6.088	0.406	5.878	0.511	5.645	0.627	5.367	0.767
8"	8.63	7.804	0.411	7.610	0.507	7.347	0.639	7.057	0.784	6.708	0.958
	9.05	8.188	0.431	7.985	0.532	7.709	0.670	7.405	0.823	7.039	1.006
10"	10.75	9.726	0.512	9.485	0.632	9.157	0.796	8.795	0.977	8.361	1.194
	11.10	10.043	0.529	9.794	0.653	9.456	0.822	9.082	1.009	8.633	1.233
12"	12.75	11.536	0.607	11.250	0.750	10.861	0.944	10.432	1.159	9.917	1.417
	13.20	11.943	0.629	11.647	0.776	11.244	0.978	10.800	1.200	10.267	1.467
14"	14.00	12.667	0.667	12.353	0.824	11.926	1.037	11.455	1.273	10.889	1.556
16"	16.00	14.476	0.762	14.118	0.941	13.630	1.185	13.091	1.455	12.444	1.778
18"	18.00	16.286	0.857	15.882	1.059	15.333	1.333	14.727	1.636	14.000	2.000
20"	20.00	18.095	0.952	17.647	1.176	17.037	1.481	16.364	1.818	15.556	2.222
22"	22.00	19.905	1.048	19.412	1.294	18.741	1.630	18.000	2.000	17.111	2.444
24"	24.00	21.714	1.143	21.176	1.412	20.444	1.778	19.636	2.182	18.667	2.667

This chart is based on information in AWWA Standard ANSI/AWWA C906-90. All dimensions are nominal and subject to manufacturing tolerances.



Only products listed in the HDPE Products section are suitable for use with HDPE pipe. Do not use products not listed in this section on HDPE!

Contact Romac's Engineering Department at 1-800-426-9341 for sizes not listed in the catalog.

HDPE



SS1-H, SS2-H AND SS3-H REPAIR CLAMPS

MATERIAL SPECIFICATIONS

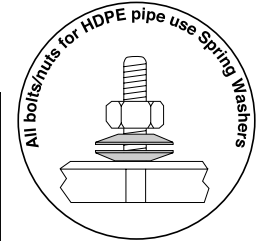
SHELLS AND LUGS: Stainless steel per ASTM A 240, type 304, fully passivated.¹

Bolts: UNC rolled thread, stainless steel per ASTM A 193, type 304.

NUTS: Stainless steel per ASTM A 194, type 304.

WASHERS: Flat washers are stainless steel per ASTM A 240, type 304; spring washers are special "spring" grade of stainless steel and plastic lubricating washers.

GASKETS: SBR per ASTM D 2000 MAA 610. Compounded for water and sewer service. Other compounds available on request.



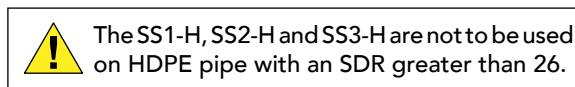
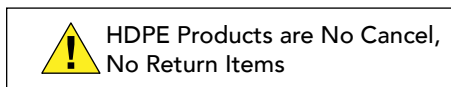
For above-ground HDPE applications, contact Romac's Engineering Department at 1-800-426-9341. Products and prices listed below are standard Romac sizes. For information on other sizes, contact Romac's Engineering Department. For important technical information on HDPE pipe, see Page 9-1 & Page 9-2.

NOM. PIPE SIZE	OUTSIDE DIAMETER	CATALOG NUMBER	LIST PRICE (WEIGHT) for LENGTH of:			
			8"	12"	16"	20"
2"	2.38	SS1-H - 2.38 x length	\$160.82 (4#)	\$262.97 (5#)	\$293.92 (8#)	-
3"	3.50	SS1-H - 3.50 x length	187.62 (5#)	298.75 (6#)	350.41 (9#)	-
4"	4.50	SS1-H - 4.50 x length	206.18 (5#)	323.68 (8#)	374.09 (10#)	-
	4.80	SS1-H - 4.80 x length	206.18 (5#)	323.68 (8#)	374.09 (10#)	-
6"	4.80	SS2-H - 4.80 x length	280.30 (9#)	437.12 (13#)	528.72 (17#)	-
	6.63	SS1-H - 6.63 x length	273.33 (7#)	428.88 (10#)	499.88 (14#)	-
8"	6.63	SS2-H - 6.63 x length	370.92 (11#)	554.89 (17#)	710.52 (22#)	-
	6.90	SS1-H - 6.90 x length	273.33 (7#)	428.88 (10#)	499.88 (14#)	-
10"	6.90	SS2-H - 6.90 x length	370.92 (11#)	554.89 (17#)	710.52 (22#)	-
	8.63	SS1-H - 8.63 x length	306.93 (8#)	484.44 (12#)	575.80 (15#)	-
12"	8.63	SS2-H - 8.63 x length	413.05 (12#)	604.40 (19#)	790.31 (24#)	-
	9.05	SS1-H - 9.05 x length	306.93 (8#)	484.44 (12#)	575.80 (15#)	-
14"	9.05	SS2-H - 9.05 x length	413.05 (12#)	604.40 (19#)	790.31 (24#)	-
	10.75	SS2-H - 10.75 x length	513.14 (11#)	983.24 (16#)	1,078.47 (24#)	-
16"	10.75	SS3-H - 10.75 x length	642.82 (15#)	1,056.94 (23#)	1,421.64 (32#)	-
	11.10	SS2-H - 11.10 x length	513.14 (11#)	983.24 (16#)	1,078.47 (24#)	-
18"	11.10	SS3-H - 11.10 x length	642.82 (15#)	1,056.94 (23#)	1,421.64 (32#)	-
	12.75	SS2-H - 12.75 x length	664.37 (16#)	1,114.69 (25#)	1,285.33 (33#)	-
20"	12.75	SS3-H - 12.75 x length	700.57 (22#)	1,159.65 (33#)	1,479.40 (43#)	\$2,114.64 (56#)
	13.20	SS2-H - 13.20 x length	664.37 (16#)	1,114.69 (25#)	1,285.33 (33#)	-
24"	13.20	SS3-H - 13.20 x length	700.57 (22#)	1,159.65 (33#)	1,479.40 (43#)	2,114.64 (56#)

¹ **Passivated:** Chemically treated after welding to produce a highly corrosion-resistant coating.

For higher working pressures, clamp length should equal or exceed diameter of pipe. Sizes and lengths not listed are available on request. Clamps are not to be used for joining plain end pipe.

For Tapped Outlets See Page 9-4



TO ORDER: Specify catalog number x length of clamp desired. Indicate if for above ground application.

EXAMPLE: For a one-section clamp for pipe with an O.D. of 6.63, and clamp length of 12", order **SS1-H - 6.63 x 12"**

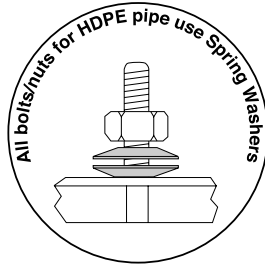
TAPS FOR REPAIR CLAMPS SS1-H, SS2-H AND SS3-H



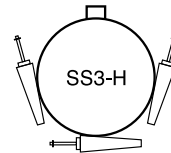
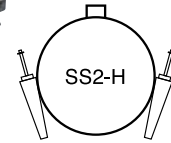
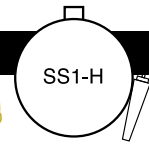
HDPE FOR HIGH DENSITY POLYETHYLENE PIPE

AVAILABLE IN ALL STYLES

The same design, construction, and installation features as Styles SS1-H, SS2-H and SS3-H. Tapped outlet is stainless steel per ASTM A 240, type 304, permanently "fused" by GTAW welding, and fully passivated ¹.



6" SS1-H - 6.63 X 12 X 3/4" IP TAPPED REPAIR CLAMP



For above-ground HDPE applications, contact Romac's Engineering Department at 1-800-426-9341. Products and prices listed below are standard Romac sizes. For information on other sizes, contact Romac's Engineering Department. For important technical information on HDPE pipe, see Page 9-1 & Page 9-2.

ADD ON LIST PRICES FOR TAPPED CLAMPS

TAP SIZE	TYPE OF THREAD	MINIMUM PIPE O.D.	MINIMUM LENGTH	ADD ON LIST PRICE
3/4"	Iron Pipe or AWWA Taper (CC)	2.38"	8"	\$63.15
1"	Iron Pipe or AWWA Taper (CC)	2.38"	8"	63.15
1 1/4"	Iron Pipe or AWWA Taper (CC)	2.88" ²	12"	98.98
1 1/2"	Iron Pipe or AWWA Taper (CC)	3.50"	12"	98.98
2"	Iron Pipe	3.50"	12"	98.98
2"	AWWA Taper (CC)	4.50"	12"	121.19
2 1/2" ³	Iron Pipe only (MIP, FIP)	6.63" ⁴	12"	279.91
3" ³	Iron Pipe only (MIP, FIP) SS2, SS3 only	8.63" ⁴	12"	279.91

¹ Passivated: Chemically treated after welding to produce a highly corrosion-resistant coating.

² CC tap requires 3.50 OD minimum.

³ Requires SS2-H or SS3-H

⁴ MIP only

HDPE Products are No Cancel, No Return Items.

The SS1-H, SS2-H and SS3-H are not to be used on HDPE pipe with an SDR greater than 26.

TO ORDER:

1. Select size, length, and style of clamp.
2. Select size and type of tapped thread desired from the table below.
3. Add list price for tap to the list price of clamp selected from separate price sheet.
4. Indicate if for above ground application.

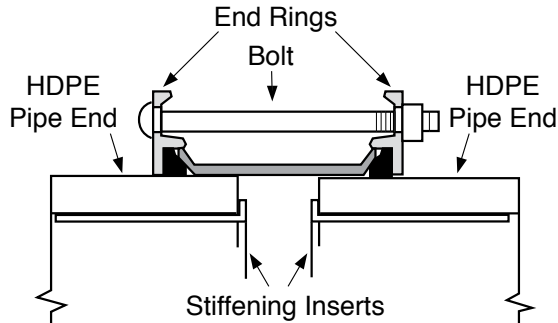
EXAMPLE: For a one-section clamp for pipe with an O.D. of 6.63, with length of 12" and a 3/4" iron pipe tap size, order **SS1-H-6.63 x 12 x 3/4" IP**



STIFFENING INSERTS

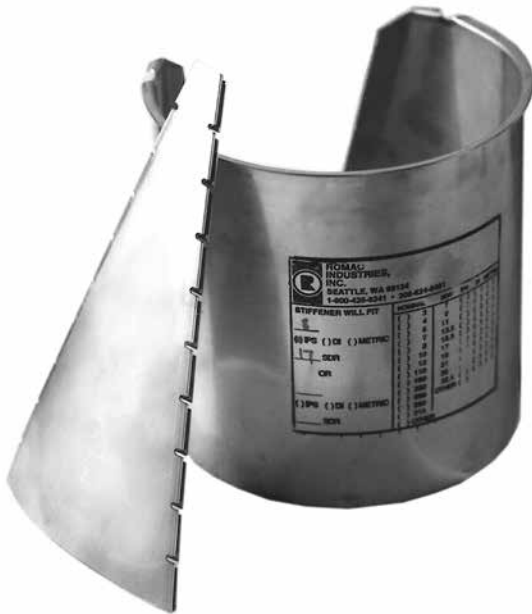
MATERIAL SPECIFICATIONS

Romac's specially designed Stiffening Inserts provide circumferential inside support of pipe ends to allow use of couplings on HDPE Pipe. The Stiffening Inserts are constructed of stainless steel per ASTM 240, type 304 (optional 316). The thin, yet strong wall reinforces the pipe without disturbing the flow characteristic of the medium.



SIZES 4" - 12" (PGS. 9-6 & 9-7)
FEATURE A WEDGE INSERT FOR INSTALLATION
 (SEE PHOTO ABOVE).

SIZES 14" - 36" (PG. 9-8)
ARE CUSTOM MOLDED TO THE ACTUAL PIPE I.D. AND HAVE A TAPERED EDGE FOR EASE OF INSTALLATION.



- Flexible couplings do not provide protection against possible pullout of pipe ends in unrestrained conditions.
- Romac couplings are not to be used on HDPE pipe with an SDR greater than 32.5.
- Romac only warrants the use of Romac stiffeners with Romac couplings.
- A Stiffener must be used in a coupling for SDR greater than 7.
- For above-ground HDPE applications, contact Romac's Engineering Department at 1-800-426-9341.
- For important technical information on HDPE pipe, see Page 9-1 & Page 9-2.

STIFFENING INSERTS

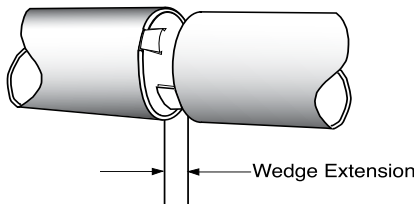


HDPE FOR HIGH DENSITY POLYETHYLENE PIPE

FOR IPS PIPE SIZE

NOM. PIPE SIZE	OUTSIDE DIAMETER	SDR	SUGGESTED CENTER RING LENGTH	AVERAGE PIPE ID	AVERAGE PIPE WALL	MAX. WEDGE EXTENSION*	CATALOG NUMBER	LIST PRICE	WEIGHT (lbs.)
4"	4.5		7	3.44	0.530	2.2	206-04020907	\$95.08	1.6#
				3.63	0.434	1.9	206-04021107		
				3.79	0.353	1.7	206-04021307		
				3.88	0.308	1.6	206-04021507		
				3.94	0.281	1.5	206-04021707		
				4.00	0.251	1.5	206-04021907		
				4.05	0.227	1.4	206-04022107		
				4.13	0.183	1.3	206-04022607		
				4.22	0.138	1.2	206-04023207		
				6"	6.625		7		
5.35	0.638	2.0	206-06021107						
5.58	0.520	1.8	206-06021307						
5.72	0.453	1.7	206-06021507						
5.80	0.413	1.6	206-06021707						
5.89	0.370	1.5	206-06021907						
5.96	0.334	1.5	206-06022107						
6.08	0.270	1.4	206-06022607						
6.22	0.204	1.3	206-06023207						
8"	8.625		7					6.59	1.016	2.2	206-08020907	122.21	4.2#
				6.96	0.831	1.9	206-08021107		
				7.27	0.677	1.7	206-08021307		
				7.45	0.590	1.6	206-08021507		
				7.55	0.538	1.5	206-08021707		
				7.66	0.481	1.5	206-08021907		
				7.75	0.435	1.4	206-08022107		
				7.92	0.352	1.3	206-08022607		
				8.10	0.265	1.2	206-08023207		
				10"	10.75		7	8.22	1.266	2.7	206-10020907			139.69	6.0#
8.68	1.036	2.4	206-10021107						
9.06	0.844	2.1	206-10021307						
9.28	0.735	2.0	206-10021507						
9.41	0.670	1.9	206-10021707						
9.55	0.600	1.8	206-10021907						
9.66	0.543	1.7	206-10022107						
9.87	0.438	1.6	206-10022607						
10.09	0.331	1.5	206-10023207						
12"	12.75		7					9.75	1.502	3.2	206-12020907	154.03	7.0#
				10.29	1.229	2.8	206-12021107		
				10.75	1.001	2.5	206-12021307		
				11.01	0.872	2.4	206-12021507		
				11.16	0.795	2.3	206-12021707		
				11.33	0.711	2.2	206-12021907		
				11.46	0.644	2.1	206-12022107		
				11.71	0.520	1.9	206-12022607		
				11.97	0.392	1.8	206-12023207		
				14" & up	see page 9-8				

* **MAXIMUM WEDGE EXTENSION:** This would be the extension if the pipe was made to the smallest permissible inside diameter and the stiffener was installed at zero Fahrenheit. This extension also takes into account the slight collapsing of the pipe on the cut end "toe in" (1% of the outside diameter). The typical wedge extension, at room temperature and for the average pipe ID would be half the values listed above. For best results, install wedges so that they're not directly opposed



- Provide pipe SDR when ordering.
- HDPE Products are No Cancel, No Return Items.

TO ORDER: Determine Nominal Pipe Size and SDR Size.

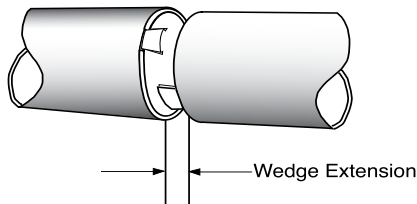


STIFFENING INSERTS

FOR DUCTILE IRON PIPE SIZE

NOM. PIPE SIZE	OUTSIDE DIAMETER	SDR	SUGGESTED CENTER RING LENGTH	AVERAGE PIPE ID	AVERAGE PIPE WALL	MAX. WEDGE EXTENTION*	CATALOG NUMBER	LIST PRICE	WEIGHT (lbs.)
4"	4.80	9	7	3.67	0.565	2.3	206-04010907	\$104.73	1.7#
				3.87	0.463	2.0	206-04011107		
				4.05	0.377	1.8	206-04011307		
				4.14	0.328	1.7	206-04011507		
				4.20	0.299	1.6	206-04011707		
				4.26	0.268	1.6	206-04011907		
				4.32	0.242	1.5	206-04012107		
				4.41	0.196	1.4	206-04012607		
				4.50	0.148	1.3	206-04013207		
				6"	6.90	9	7		
5.57	0.665	2.1	206-06011107						
5.82	0.542	1.9	206-06011307						
5.96	0.472	1.8	206-06011507						
6.04	0.430	1.7	206-06011707						
6.13	0.385	1.6	206-06011907						
6.20	0.348	1.5	206-06012107						
6.34	0.281	1.4	206-06012607						
6.48	0.212	1.3	206-06013207						
8"	9.05	9	7					6.92	1.066	2.3	206-08010907	133.49	4.4#
				7.31	0.872	2.0	206-08011107		
				7.63	0.711	1.8	206-08011307		
				7.81	0.619	1.7	206-08011507		
				7.92	0.564	1.6	206-08011707		
				8.04	0.505	1.5	206-08011907		
				8.14	0.457	1.5	206-08012107		
				8.31	0.369	1.4	206-08012607		
				8.49	0.278	1.3	206-08013207		
				10"	11.10	9	7	8.49	1.307	2.8	206-10010907			154.03	6.1#
8.96	1.070	2.5	206-10011107						
9.36	0.872	2.2	206-10011307						
9.58	0.759	2.1	206-10011507						
9.72	0.692	2.0	206-10011707						
9.86	0.619	1.9	206-10011907						
9.98	0.560	1.8	206-10012107						
10.20	0.453	1.7	206-10012607						
10.42	0.342	1.6	206-10013207						
12"	13.20	9	7					10.09	1.555	3.3	206-12010907	168.39	7.3#
				10.66	1.272	2.9	206-12011107		
				11.13	1.036	2.6	206-12011307		
				11.39	0.903	2.5	206-12011507		
				11.55	0.823	2.4	206-12011707		
				11.73	0.736	2.2	206-12011907		
				11.87	0.666	2.1	206-12012107		
				12.12	0.538	2.0	206-12012607		
				12.39	0.406	1.9	206-12013207		
				14" & up	see page 9-8				

* **MAXIMUM WEDGE EXTENSION:** This would be the extension if the pipe was made to the smallest permissible inside diameter and the stiffener was installed at zero Fahrenheit. This extension also takes into account the slight collapsing of the pipe on the cut end "toe in" (1% of the outside diameter). The typical wedge extension, at room temperature and for the average pipe ID would be half the values listed above. For best results, install wedges so that they're not directly opposed



- Provide pipe SDR when ordering.
- HDPE Products are No Cancel, No Return Items.

TO ORDER: Determine Nominal Pipe Size and SDR Size.

STIFFENING INSERTS

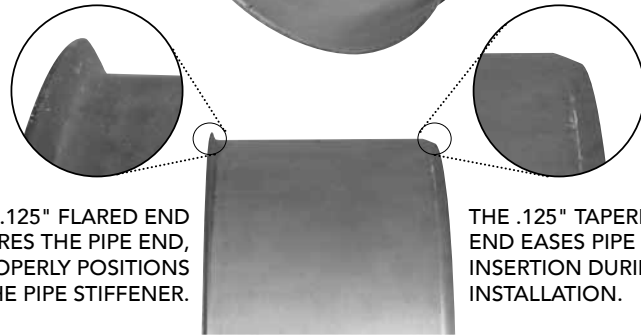
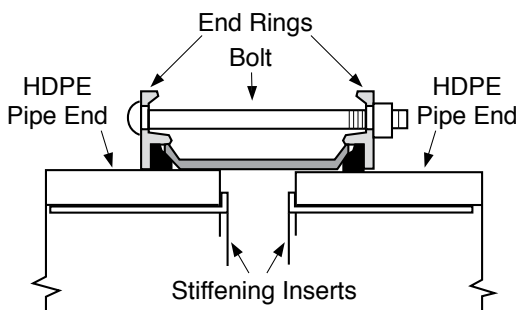


HDPE FOR HIGH DENSITY POLYETHYLENE PIPE

MATERIAL SPECIFICATIONS

Romac's specially designed Stiffening Inserts provide circumferential inside support of HDPE pipe ends. The Stiffening Inserts are constructed of stainless steel per ASTM 240, type 304 (optional 316). The thin, yet strong wall reinforces the pipe without disturbing the flow characteristic of the medium.

To ensure that pipe stiffeners are properly sized, we require the actual pipe I.D. at the time of order.



THE .125" FLARED END CAPTURES THE PIPE END, AND PROPERLY POSITIONS THE PIPE STIFFENER.

THE .125" TAPERED END EASES PIPE INSERTION DURING INSTALLATION.

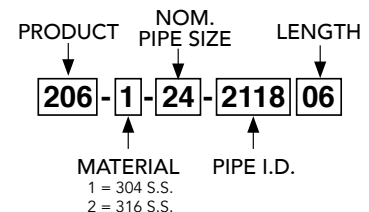
14" - 36" HDPE PIPE END STIFFENERS

NOM. PIPE SIZE	STIFFENER LENGTH		THICKNESS (GAUGE)	CATALOG NUMBER	LIST PRICE
	6"	12"			
14"	6"	12"	17	206-1-14- [PIPE ID] 06	POA
	12"	12"		206-1-14- [PIPE ID] 12	
16"	6"	12"	17	206-1-16- [PIPE ID] 06	POA
	12"	12"		206-1-16- [PIPE ID] 12	
18"	6"	12"	17	206-1-18- [PIPE ID] 06	POA
	12"	12"		206-1-18- [PIPE ID] 12	
20"	6"	12"	17	206-1-20- [PIPE ID] 06	POA
	12"	12"		206-1-20- [PIPE ID] 12	
22"	6"	12"	17	206-1-22- [PIPE ID] 06	POA
	12"	12"		206-1-22- [PIPE ID] 12	
24"	6"	12"	17	206-1-24- [PIPE ID] 06	POA
	12"	12"		206-1-24- [PIPE ID] 12	
30"	6"	12"	17	206-1-30- [PIPE ID] 06	POA
	12"	12"		206-1-30- [PIPE ID] 12	
36"	6"	12"	17	206-1-36- [PIPE ID] 06	POA
	12"	12"		206-1-36- [PIPE ID] 12	

For larger sizes, contact Romac Quotations Department.

- Provide pipe SDR when ordering.
- HDPE Products are No Cancel, No Return Items.

TO REQUEST PRICING: Indicate nominal pipe size. Select stiffener length and actual pipe ID.
EXAMPLE: For a 6" long stiffener for IPS size 24" nominal SDR 17 HDPE pipe, with an inside diameter of 21.18, the catalog number is: **206-01-2118 06**





101N-H AND 202N-H SERVICE SADDLES

MATERIAL SPECIFICATIONS

STRAP: Type 304 (18-8) heavy gauge Stainless Steel per ASTM A 240. Straps are two inches wide to spread out clamping forces on the pipe. GMAW and GTAW welds. Passivated for corrosion resistance.

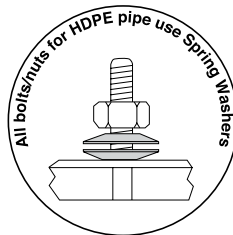
BOLTS: For sizes 2" through 3", 1/2" UNC roll thread Type 304 (18-8) Stainless Steel bolts with heavy hex nuts. 4" and above use 5/8" UNC roll thread Type 304 (18-8) Stainless Steel bolts with heavy hex nuts. Rod for bolts are per ASTM A 240 and nuts are per ASTM A 194. All welds fully passivated for enhanced corrosion resistance.

NUTS: Heavy hex, stainless steel per ASTM A 194, type 304. Coated to prevent galling.

WASHERS: Flat washers are stainless steel per ASTM A 240, type 304; spring washers are special "spring" grade of stainless steel and plastic lubricating washers.

SADDLE CASTINGS: Ductile iron per ASTM A-536, grade 65-45-12, covered by black nylon fused coat, approx. 10-12 mil thick, with approximate dielectric strength of 1,000 v/mil.

GASKETS: NBR per ASTM MBC 610, compounded for water and sewer service. Other compounds available on request.



STYLE 101N-H
NYLON SADDLE WITH STAINLESS STEEL SINGLE STRAP



STYLE 202N-H
NYLON SADDLE WITH STAINLESS STEEL DOUBLE STRAP

For above-ground HDPE applications, contact Romac's Engineering Department at 1-800-426-9341.

Products and prices listed below are standard Romac sizes. For information on other sizes, contact Romac's Engineering Department.

For important technical information on HDPE pipe, see Page 9-1 & Page 9-2.

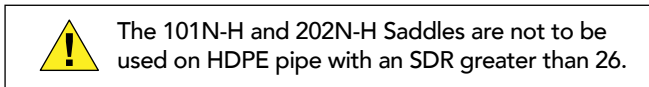
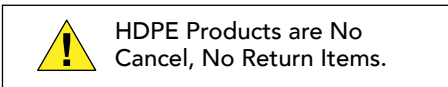
NOM. PIPE SIZE	OUTSIDE DIAMETER	1/2" I.P., 3/4" & 1" I.P. or C.C. TAP				1 1/4" - 1 1/2" - 2" I.P. or C.C. TAP (2 1/2" I.P. ONLY)			
		101N-H LIST PRICE	101N-H APPROX. WEIGHT	202N-H LIST PRICE	202N-H APPROX. WEIGHT	101N-H LIST PRICE	101N-H APPROX. WEIGHT	202N-H LIST PRICE	202N-H APPROX. WEIGHT
2"	2.13	\$98.91	1.7 #	N/A	N/A	\$117.08 ⁴	2.1 # ⁴	N/A	N/A
	2.38	98.91	1.7 #	\$186.08	3.5 #	N/A	N/A	\$198.92 ²	3.5 #
3"	3.50	102.47	2.5 #	191.25	5.0 #	N/A	N/A	197.54 ³	5.0 #
	4.50	112.88	4.3 #	212.06	7.5 #	131.04	4.3 #	223.47	7.5 #
4"	4.80								
	6.63	129.54	5.1 #	231.53	9.0 #	145.36	5.1 #	244.71	9.0 #
6"	6.90								
	8.63	179.91	5.5 #	334.25	10.0 #	200.05	5.5 #	349.16	10.0 #
8"	9.05								
	10.75	194.55	7.5 #	368.50	11.5 #	215.76	7.5 #	384.84	11.5 #
10"	11.10								
	12.75	213.08	9.0 #	403.79	12.5 #	237.76	9.0 #	422.22	12.5 #
12"	13.20								

¹ Passivated: Chemically treated after welding to produce a highly corrosion-resistant coating.

² 202N-H - 2.38 can accommodate up to 1 1/2" I.P. and 1 1/4" C.C. only.

³ 202N-H - 3.50 can accommodate up to 2" I.P. and 1 1/2" C.C. only.

⁴ 1 1/4" IP Tap only.



TO ORDER: Add tap size and thread type to the outside diameter. Indicate if for above ground application.

EXAMPLE: 101N-H - 6.63 x 3/4" IP
STYLE OUTSIDE TAP THREAD
DIAMETER SIZE TYPE

305-H AND 306-H ALL STAINLESS STEEL SERVICE SADDLES



HDPE FOR HIGH DENSITY POLYETHYLENE PIPE

MATERIAL SPECIFICATIONS

Shells: Stainless steel per ASTM A 240, type 304, fully passivated ¹.

Bolts: UNC rolled thread, Teflon coated, stainless steel per ASTM A 193, type 304.

Nuts: Stainless steel per ASTM A 194, type 304.

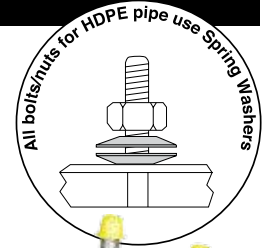
Washers: Flat washers are stainless steel per ASTM A 240, type 304; spring washers are special "spring" grade of stainless steel and plastic lubricating washers.

Gasket: NBR per ASTM D 2000 MBC 610, compounded for water and sewer service. Other compounds available on request.

Tappped Outlet: Stainless steel per ASTM A 240, type 304.



305-H SADDLE



306-H SADDLE



Certified to NSF/ANSI 61 & 372

For above-ground HDPE applications, contact Romac's Engineering Department at 1-800-426-9341.

Products and prices listed below are standard Romac sizes. For information on other sizes, contact Romac's Engineering Department.

For important technical information on HDPE pipe, see Page 9-1 & Page 9-2.

"306-H" SADDLE

NOM. PIPE SIZE	OUTSIDE DIAMETER	TAP	I.P.	C.C.	WEIGHT (lbs.)
2"	2.13	3/4" & 1"	\$128.89	\$128.89	2 #
	2.38				
3"	3.50	3/4" & 1"	246.39	246.39	3 #
		1 1/4"	283.02	283.02	
		1 1/2"	283.02	283.02	
		2"	283.02	NA	
4"	4.50 4.80	3/4" & 1"	253.01	253.01	4 #
		1 1/4"	283.02	283.02	
		1 1/2"	283.02	283.02	
		2"	283.02	283.02	
5"	5.56	3/4" & 1"	265.32	265.32	4 #
		1 1/4"	310.01	310.01	
		1 1/2", 2"	310.01	310.01	
6"	6.63 6.90	3/4" & 1"	295.68	295.68	4 #
		1 1/4"	316.69	316.69	
		1 1/2", 2"	316.69	316.69	
8"	8.63 9.05	3/4" & 1"	318.55	318.55	6 #
		1 1/4"	345.81	345.81	
		1 1/2", 2"	345.81	345.81	

"305-H" SADDLE

NOM. PIPE SIZE	OUTSIDE DIAMETER	I.P. or C.C. 3/4", 1"	I.P. or C.C.		WEIGHT (lbs.)
			1 1/4", 1 1/2", 2"	FIP or MIP 2 1/2", 3"	
10"	10.75	\$452.80	\$494.60	\$1,003.66	14#
	11.10				
12"	12.75	452.80	494.60	1,003.66	14#
	13.20				

305-H

8" wide with four 5/8" bolts.

306-H

- (A) 2" through 5" nominal sizes with small (3/4" or 1") taps are 6" long with two 1/2" bolts.
- (B) 6" through 8" sizes with small (3/4" or 1") taps are 6" long with two 5/8" bolts.
- (C) 3" through 8" sizes with large (1 1/4", 1 1/2", or 2") taps are 8" long with two 5/8" bolts.



HDPE Products are No Cancel, No Return Items.



The 305-H and 306-H are not to be used on HDPE pipe with an SDR greater than 26.

¹ Passivated: Chemically treated after welding to produce a highly corrosive resistant coating.

TO ORDER: Use pipe O.D. when ordering. Add tap size and thread type. Be specific when ordering. Indicate if for above ground application.

EXAMPLE: 305-H - 10.75 x 3/4" I.P.

HDPE



"BP" ALL STAINLESS STEEL SEWER SADDLE

MATERIAL SPECIFICATIONS

SHELL AND LUGS: Stainless steel per ASTM A 240, type 304.

NECK: Stainless steel per ASTM A 240, type 304; Sch 10 pipe

BOLTS: 5/8" UNC rolled thread, stainless steel per ASTM A 193, type 304. Fasteners coated to prevent galling.

NUTS: Heavy hex, stainless steel per ASTM A 194, type 304.

WASHERS: Flat washers are stainless steel per ASTM A 240, type 304; spring washers are special "spring" grade of stainless steel and plastic lubricating washers.

GASKETS: SBR per ASTM D 2000 MAA 610, compounded for water and sewer service. Other compounds available on request.



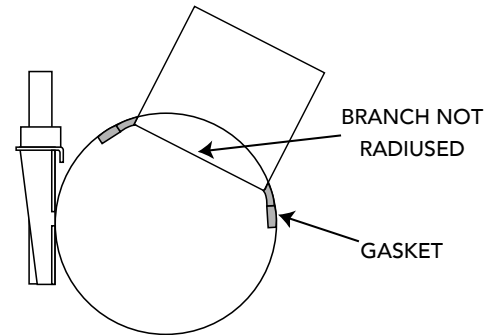
A ROMAC ORIGINAL

For above-ground HDPE applications, contact Romac's Engineering Department at 1-800-426-9341.

Products and prices listed below are standard Romac sizes. For information on other sizes, contact Romac's Engineering Department.

For important technical information on HDPE pipe, see Page 9-1 & Page 9-2.

NOM. BRANCH SIZE	NOM. PIPE SIZE	OUTSIDE DIAMETER	BRANCH O.D.	CATALOG NUMBER	C.C.	WEIGHT (lbs.)
4"	6"	6.63	4.50	BP-6.63 x 4.50	\$652.90	14.5 #
		6.90		BP-6.90 x 4.50		
	8"	8.63	4.50	BP-8.63 x 4.50	711.75	14.8 #
		9.05		BP-9.05 x 4.50		
10"	10.75	4.50	BP-10.75 x 4.50	780.58	15.3 #	
	11.10		BP-11.10 x 4.50			
12"	12.75	4.50	BP-12.75 x 4.50	823.83	15.3 #	
	13.20		BP-13.20 x 4.50			
6"	8"	8.63	6.63	BP-8.63 x 6.63	860.28	15.8 #
		9.05		BP-9.05 x 6.63		
	10"	10.75	6.63	BP-10.75 x 6.63	929.11	15.8 #
11.10		BP-11.10 x 6.63				
12"	12.75	6.63	BP-12.75 x 6.63	972.33	16.3 #	
	13.20		BP-13.20 x 6.63			



Standard orientation of bolts to branch
Other orientations and variations available on request.

Branch on the inside of the saddle is not radiusued. This part of the branch will intersect the wall of the main, eliminating the potential for the saddle to migrate around or along the pipe. The pipe must be tapped before installing the saddle.

Other sizes are available on request - P.O.A.

Branch to Neck Connection: This connection can be made with Romac's Style SS1-H Repair Clamp (or any other standard coupling). See Page 9-3.

The BP Sewer Saddle is not to be used on HDPE pipe with an SDR greater than 32.5.

HDPE Products are No Cancel, No Return Items.

TO ORDER: Sewer main O.D. x branch O.D. **Indicate if for above ground application.**

EXAMPLE: For a sewer main O.D. of 8.63" and branch O.D. of 4.50", order **BP - 8.63 x 4.50**

SST-H STAINLESS STEEL TAPPING SLEEVE



HDPE FOR HIGH DENSITY POLYETHYLENE PIPE

MATERIAL SPECIFICATIONS

SHELL AND LUGS: Stainless steel per ASTM A 240, type 304 and type 304L.

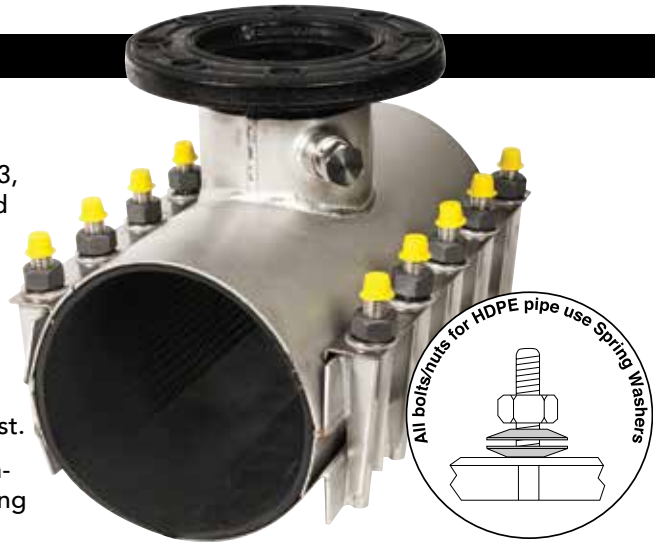
BOLTS: 5/8" UNC rolled thread, stainless steel per ASTM A 193, type 304. 4" nominal pipe size has 1/2" bolts. Fasteners coated to prevent galling.

NUTS: Heavy hex, stainless steel per ASTM A 194, type 304.

WASHERS: Plastic lubricating flat washers; spring washers are special "spring" grade stainless steel.

GASKETS: SBR per ASTM D 2000 MAA 610, compounded for water and sewer service. Other compounds available on request.

FLANGE: Ductile iron per ASTM 536, Grade 65-45-12; or stainless steel per ASTM A 240, type 304. Will accommodate tapping flanges per MSS SP-60.



NSF61 certified upon request.

For above-ground HDPE applications, contact Romac's Engineering Department at 1-800-426-9341.

Products and prices listed below are standard Romac sizes. For information on other sizes, contact Romac's Engineering Department.

For important technical information on HDPE pipe, see Page 9-1 & Page 9-2.

NOMINAL PIPE SIZE	OUTSIDE DIAMETER	CATALOG NUMBER			LIST PRICE EACH		APPROX. WEIGHT (lbs.)
		SLEEVE #	BY	BRANCH SIZE	DUCTILE FLANGE	S.S. FLANGE	
4"	4.50	SST-H - 4.50	X	3" FLG.	NA	\$1,398.12	28#
	4.80	SST-H - 4.80					
6"	6.63	SST-H - 6.63	X	3" FLG.	NA	1,535.31	36#
	6.90	SST-H - 6.90		4" FLG.	\$1,180.37	1,535.31	38#
8"	8.63 9.05	SST-H - 8.63 SST-H - 9.05	X	3" FLG.	NA	1,675.92	42#
				4" FLG.	1,288.16	1,675.92	44#
				6" FLG.	1,351.29	1,831.18	48#
10"	10.75 11.10	SST-H - 10.75 SST-H - 11.10	X	3" FLG.	NA	1,794.86	45#
				4" FLG.	1,390.17	1,794.86	48#
				6" FLG.	1,472.85	1,924.35	55#
				8" FLG.	1,842.24	2,478.55	70#
12"	12.75 13.20	SST-H - 12.75 SST-H - 13.20	X	3" FLG.	NA	2,163.41	50#
				4" FLG.	1,609.83	2,163.41	52#
				6" FLG.	1,703.67	2,379.31	60#
				8" FLG.	2,079.68	2,904.79	81#
				10" FLG.	3,172.58	3,292.10	96#

Other sizes are available on request - P.O.A.



The SST-H Tapping Sleeve is not to be used on HDPE pipe with an SDR greater than 17.



HDPE Products are No Cancel, No Return Items.

TO ORDER: Specify Sleeve Number x Branch Size x Flange Type. Indicate if for above ground application.

EXAMPLE: SST-H - 8.63 x 6" D.I. FLG

HDPE



FTS423-H FABRICATED STEEL TAPPING SLEEVE

MATERIAL SPECIFICATIONS

BODY AND OUTLET NOZZLE: Carbon steel, A-36 or equal.

BOLTS AND NUTS: Trackhead bolts, heavy hex nuts, 5/8" UNC rolled thread, high strength, low alloy, steel per AWWA C111. Optional stainless steel, type 304.

GASKETS: SBR per ASTM D 2000 MBA 710, compounded for water and sewer service use. Other compounds available on request.

COATING: Fusion epoxy 8-12 mil. lined and coated. Other coatings available. Romac packages sleeves to protect coating.

FLANGE: AWWA Class "D" plate flange, ANSI Class 150 drilling, proper recessing for tapping valves. Will accommodate tapping flanges per MSS SP-60.



NSF61 certified upon request.

For above-ground HDPE applications, contact Romac's Engineering Department at 1-800-426-9341.

Products and prices listed below are standard Romac sizes. For information on other sizes, contact Romac's Engineering Department.

For important technical information on HDPE pipe, see Page 9-1 & Page 9-2.

NOMINAL PIPE SIZE	OUTSIDE DIAMETER	CATALOG NUMBER			LIST PRICE EACH		APPROX. WEIGHT (lbs.)
		SLEEVE #	BY	BRANCH SIZE	FUSION EPOXY w/ ALLOY BOLTS & NUTS	FUSION EPOXY w/304 SS BOLTS & NUTS	
4"	4.50	FTS423-H - 4.50	X	3"	\$702.46	\$806.84	30 #
	4.80	FTS423-H - 4.80					
6"	6.63	FTS423-H - 6.63	X	3"	828.04	898.13	33 #
	6.90	FTS423-H - 6.90		4"	828.04	898.13	37 #
8"	8.63	FTS423-H - 8.63	X	3"	941.23	1,011.33	37 #
	9.05	FTS423-H - 9.05		4"	941.23	1,011.33	40 #
				6"	1,001.15	1,146.12	56 #
10"	10.75	FTS423-H - 10.75	X	3"	943.08	1,013.18	40 #
	11.10	FTS423-H - 11.10		4"	943.08	1,013.18	43 #
				6"	1,086.60	1,173.43	60 #
				8"	1,344.29	1,447.80	80 #
12"	12.75	FTS423-H - 12.75	X	3"	1,049.20	1,119.32	43 #
	13.20	FTS423-H - 13.20		4"	1,049.20	1,119.32	46 #
				6"	1,241.80	1,328.59	64 #
				8"	1,867.73	1,963.45	85 #
				10"	2,223.85	2,503.83	157 #

NOTE: All 423 tapping sleeves require the use of a 1/2" undersize shell cutter.

Test plugs furnished on all applicable models, and are stainless steel when tapping sleeve is ordered with S.S. bolts & nuts.

The FTS423-H is not to be used on HDPE pipe with an SDR greater than 17.

HDPE Products are No Cancel, No Return Items.

TO ORDER: Specify catalog number by the desired O.D. range and flange size. Add SSFE for optional 304 stainless steel bolts and nuts. Indicate if for above ground application.

EXAMPLE: FTS423-H - 6.63 x 4 - SSFE

NOTES



HDPE FOR HIGH DENSITY POLYETHYLENE PIPE

HDPE

Lined area for notes with horizontal ruling lines.



MISCELLANEOUS



MJ Accessory Pack
MECHANICAL JOINT ACCESSORY PACK

PAGE 10-2



R-Blue T-Bolts
XYLAN COATED T-BOLTS & NUTS

PAGE 10-3

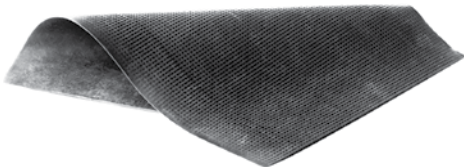
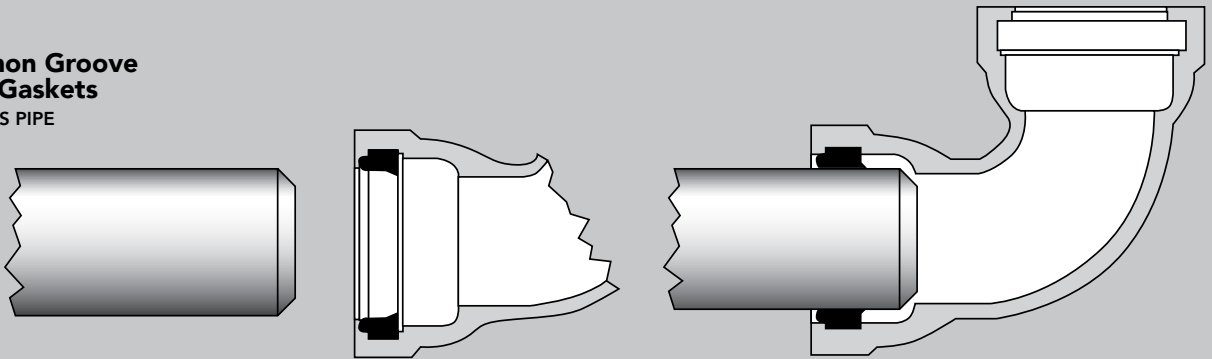


MJ Gaskets
FOR CI AND IPS PIPE

PAGE 10-4

**A/C Common Groove
Transition Gaskets**
FOR CI AND IPS PIPE

PAGE 10-5



Rubber Gasket Mat

PAGE 10-6



Threaded Flange Gaskets

PAGE 10-7



Tapping Flange Gaskets

PAGE 10-7



Fire Hydrant Gaskets

PAGE 10-8



Meter Companion Flange & Gaskets

PAGE 10-10



**Extra Deep Socket &
OD Tape Measure**

PAGE 10-11

MJ ACCESSORY PACK (FOR DUCTILE IRON & IPS)



MATERIAL SPECIFICATIONS

GLAND: Ductile iron per ASTM A 536, Grade 65-45-12.

GASKET: SBR per ASTM D 2000 MBA 710, compounded for water and sewer service. Other compounds available on request.

T-BOLTS AND NUTS: 3/4" UNC T-bolts, heavy hex nuts, high strength, low alloy steel per AWWA C111.



NSF61 certified upon request.

Certified to NSF/ANSI 61 & 372

NOM. PIPE SIZE	CATALOG NUMBER	T-BOLTS QTY: SIZE	APPROX. WEIGHT EACH (lbs.)	ACCESSORY PACK LIST PRICE (EACH)		
				STANDARD BOLTS & NUTS	304 S.S. BOLTS & NUTS	R-BLUE ² BOLTS & NUTS
3"	3-MJAP ¹	4: 5/8" x 3"	5.0	\$23.17	\$89.44	\$35.51
4"	4-MJAP ¹	4: 3/4" x 3 1/2"	7.0	23.17	92.99	36.70
6"	6-MJAP ¹	6: 3/4" x 3 1/2"	11.0	33.26	138.01	53.56
8"	8-MJAP ¹	6: 3/4" x 4"	13.0	38.01	141.90	54.62
10"	10-MJAP ¹	8: 3/4" x 4"	16.0	47.51	186.04	70.31
12"	12-MJAP ¹	8: 3/4" x 4"	17.0	49.88	188.42	72.69

¹ **TO ORDER:** For Ductile Iron, specify catalog number and add "CI".

EXAMPLE: 6-MJAP-CI

For IPS, specify catalog number and add "IP".

EXAMPLE: 6-MJAP-IP

For SDR35, specify catalog number and add "SDR35".

EXAMPLE: 6-MJAP-SDR35

INDIVIDUAL PARTS MJ GLAND

NOM. PIPE SIZE	CATALOG NUMBER	LIST PRICE	APPROX. WEIGHT EACH (lbs.)
3"	3-MJG	\$12.94	2.2 #
4"	4-MJG	12.94	3.5 #
6"	6-MJG	17.61	4.8 #
8"	8-MJG	18.67	6.4 #
10"	10-MJG	24.96	8.0 #
12"	12-MJG	27.60	9.2 #

GASKETS For Gaskets See Page 10-4

GASKET PACK (STD. T-BOLTS & NUTS) GASKET, T-BOLTS & NUTS

NOM. PIPE SIZE	CATALOG NUMBER	LIST PRICE	APPROX. WEIGHT EACH (lbs.)
3"	241-GP 0350 241-GP 0396	\$15.98	3.2 #
4"	241-GP 0450 241-GP 0480	15.98	3.5 #
6"	241-GP 0663 241-GP 0690	16.09	5.5 #
8"	241-GP 0863 241-GP 0905	29.50	6.0 #
10"	241-GP 1075 241-GP 1110	32.86	8.0 #
12"	241-GP 1275 241-GP 1320	41.47	8.5 #

² R-BLUE Bolts and Nuts, see page 10-3 for more informa-

T-BOLTS & NUTS

NOM. PIPE SIZE	CATALOG NUMBER	LIST PRICE (EA.)			APPROX. WEIGHT EACH (lbs.)
		STD.	304 SS	R-BLUE	
3"	5/8" x 3" T-bolts & nuts	\$3.45	\$20.01	\$4.82	175 lbs./crate
4" & 6"	3/4" x 3 1/2" T-bolts & nuts	3.56	21.03	5.59	175 lbs./crate
8", 10" & 12"	3/4" x 4" T-bolts & nuts	4.75	22.06	5.94 ³	168 lbs./crate

³ Minimum quantity may apply.



R-BLUE T-BOLTS & NUTS

MATERIAL SPECIFICATIONS

T-BOLT: High Strength, Low-Alloy / Corrosion Resistant Steel, (Cor-Ten™), (Mayari-R™). Meets or exceeds ASTM A 588, Grade E. AWWA C111 composition specifications. The material specifications of ASTM A-588 meets or exceeds ASTM A 307 Grade A..

NUT: High Strength, Low-Alloy / Corrosion Resistant Steel, (Cor-Ten™), (Mayari-R™). Meets or exceeds ASTM A563 Grade, C3, AWWA C111 composition specifications. The material specifications of ASTM A 563 Grade C3 meets or exceeds ASTM A 563 Grade A.

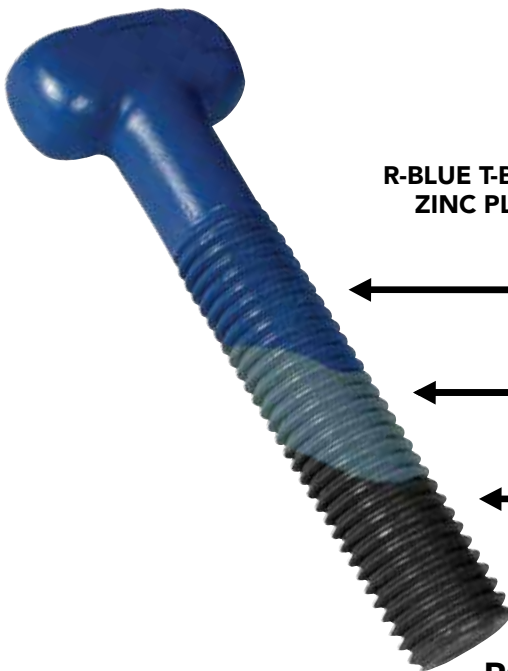
COATING: Xylan 1424 polytetrafluoroethylene (PTFE) a dry-film lubricant (VOC compliant), resin bonded, PTFE based coating formulated for use on fasteners to prevent corrosion and facilitate make up torque.

BASE COAT: Zinc plating.



ROMAC R-BLUE ADVANTAGES

- **LOW FRICTION**
Reduces make up torque as much as 70%.
- **EXCEPTIONAL CORROSION RESISTANCE**
Xylan 1424 with Zinc Plating base coat survives salt fog testing (ASTM B117) for up to 3,000 hours.
- **RESISTANT TO ABRASION, WEAR & CHIPPING.**
Achieves a 5A rating for adhesion per ASTM D3359.



R-BLUE T-BOLTS AND NUTS COMBINE THE PROTECTION OF XYLAN 1424 AND ZINC PLATING TO OFFER A HIGHER LEVEL OF CORROSION RESISTANCE.

- ← XYLAN 1424 TOP COAT
- ← ZINC PLATING BASE COAT
- ← HIGH STRENGTH LOW ALLOY (PER AWWA C111)

- **XYLAN 1424**
Formulated specifically for waterworks applications, the Xylan 1424 top coat simultaneously provides lubricity and superior corrosion protection.
- **ZINC PLATING**
Zinc plating base coat provides an additional layer of protection that outperforms other surface preparations.

ROMAC R-BLUE T-BOLTS & NUTS

BOLT SIZE	CATALOG NUMBER	LIST PRICE			ACCESSORY WEIGHT EACH (lbs.)		
		EACH	4 PACK	6 PACK	EACH	4 PACK	6 PACK
5/8" x 3"	3" - R-BLUE	\$4.82	NA	NA	0.5	NA	NA
3/4" x 3 1/2"	3.5" - R-BLUE	5.59	NA	NA	0.75	NA	NA
3/4" x 4"	4" - R-BLUE	NA	23.75	35.63	0.85	3.40	5.10
3/4" x 4 1/2"	4.5" - R-BLUE	NA	25.89	38.84	0.90	3.60	5.40
3/4" x 5"	5" - R-BLUE	NA	29.69	NA	0.95	3.80	NA

TO ORDER: Specify catalog number and bolt / pack quantity.

MJ GASKETS (FOR CI AND IPS PIPE)



MATERIAL SPECIFICATIONS

GASKET: SBR per ASTM D 2000 MBA 710, compounded for water and sewer service. Other compounds available on request.

NOTE: Known in the industry as an "MJ Gasket." Meets specifications of AWWA C 111.

USE: The gasket is designed to be used in cast iron mechanical joint fittings for cast iron size pipe (ductile iron and C-900 PVC).

PRESSURE RATING: Rating of pipe.

NSF61 certified upon request.

Certified to NSF/ANSI 61 & 372

**MEETS
AWWA C111**

MADE IN U.S.A.

MJ X CI GASKET

NOM. PIPE SIZE	CATALOG NUMBER	APPROX. WEIGHT EACH (lbs.)	LIST PRICE
3"	3" - MJ x CI Gasket	0.2 #	\$9.91
4"	4" - MJ x CI Gasket	0.4 #	9.91
6"	6" - MJ x CI Gasket	0.5 #	10.04
8"	8" - MJ x CI Gasket	0.7 #	10.23
10"	10" - MJ x CI Gasket	0.9 #	13.65
12"	12" - MJ x CI Gasket	1.0 #	17.63
14"	14" - MJ x CI Gasket	1.3 #	22.40
16"	16" - MJ x CI Gasket	1.3 #	27.18
18"	18" - MJ x CI Gasket	1.5 #	32.84
20"	20" - MJ x CI Gasket	1.0 #	37.84
24"	24" - MJ x CI Gasket	2.0 #	44.17

MJ X IPS TRANSITION GASKET

MATERIAL SPECIFICATIONS

GASKET: SBR per ASTM D 2000 MBA 710, compounded for water and sewer service. Other compounds available on request.

BACKING RING: Heavy gauge 304 stainless steel.

USE: The gasket is designed to be used in cast iron mechanical joint fittings for adapting to PVC or steel pipe (IPS dimensions).

PRESSURE RATING: 2-12", up to 350 psi. 14-24", up to 10 psi without backing ring, with backing ring 150 psi.

NSF61 certified upon request.

Certified to NSF/ANSI 61 & 372

**MEETS
AWWA C111**

MADE IN U.S.A.

NOM. PIPE SIZE	CATALOG NUMBER	APPROX. WEIGHT (lbs.)	LIST PRICE
2"	2" - MJ x IPS Transition Gasket	0.2 #	\$9.91
3"	3" - MJ x IPS Transition Gasket	0.3 #	9.91
4"	4" - MJ x IPS Transition Gasket	0.5 #	9.91
6"	6" - MJ x IPS Transition Gasket	0.7 #	10.04
8"	8" - MJ x IPS Transition Gasket	1.1 #	10.23
10"	10" - MJ x IPS Transition Gasket	1.2 #	13.65
12"	12" - MJ x IPS Transition Gasket	1.5 #	17.63
14"	14" - MJ x IPS Transition Gasket	2.5 #	130.82
16"	16" - MJ x IPS Transition Gasket	3.3 #	136.17
18"	18" - MJ x IPS Transition Gasket	3.8 #	141.51
20"	20" - MJ x IPS Transition Gasket	5.0 #	157.32
24"	24" - MJ x IPS Transition Gasket	6.0 #	167.12

BACKING RING

NOM. PIPE SIZE	CATALOG NUMBER	APPROX. WEIGHT (lbs.)	LIST PRICE
14"	14" - MJ x IPS Gasket Backing Ring	2.0 #	\$168.78
16"	16" - MJ x IPS Gasket Backing Ring	2.4 #	192.20
18"	18" - MJ x IPS Gasket Backing Ring	3.0	218.49
20"	20" - MJ x IPS Gasket Backing Ring	3.0 #	247.63
24"	24" - MJ x IPS Gasket Backing Ring	4.0 #	314.29

MJ x SDR Transition Gasket available.
See Page 7-10.

TO ORDER: Specify catalog number.



A/C COMMON GROOVE TRANSITION GASKETS (FOR CI & IPS PIPE)

MATERIAL SPECIFICATIONS

GASKET: SBR per ASTM D 2000 MBA 710, compounded for water and sewer service. Other compounds available on request.

USE: The gasket is designed to be used in cast iron fittings with an A/C common groove, or asbestos-cement couplings for adapting to C900 PVC or ductile iron pipe.



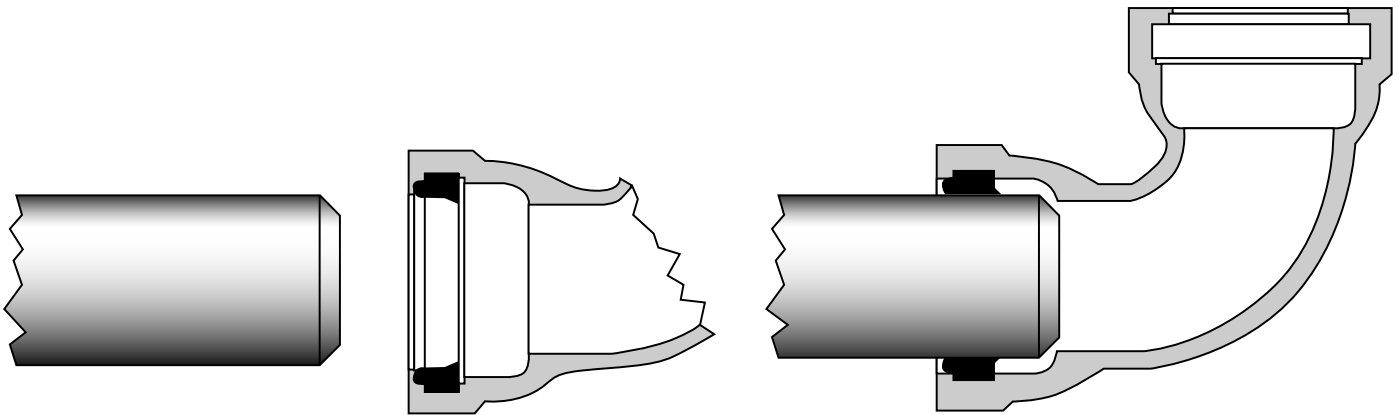
NSF61 certified upon request.



A/C x CI TRANSITION GASKET

NOM. PIPE SIZE	CATALOG NUMBER	APPROX. WEIGHT (lbs.)	LIST PRICE
4"	4" - A/C x CI Transition Gasket	0.3 #	\$14.42
6"	6" - A/C x CI Transition Gasket	0.5 #	17.79
8"	8" - A/C x CI Transition Gasket	0.8 #	21.03
10"	10" - A/C x CI Transition Gasket	1.0 #	29.53
12"	12" - A/C x CI Transition Gasket	1.0 #	37.99

TO ORDER: Specify catalog number.



MATERIAL SPECIFICATIONS

GASKET: SBR per ASTM D 2000 MBA 710, compounded for water and sewer service. Other compounds available on request.

USE: The gasket is designed to be used in cast iron fittings with an A/C common groove, or asbestos-cement couplings for adapting to PVC or steel pipe (IPS dimension).



NSF61 certified upon request.



A/C x IPS TRANSITION GASKET

NOM. PIPE SIZE	CATALOG NUMBER	APPROX. WEIGHT (lbs.)	LIST PRICE
4"	4" - A/C x IPS Transition Gasket	0.3 #	\$13.04
6"	6" - A/C x IPS Transition Gasket	0.5 #	15.35
8"	8" - A/C x IPS Transition Gasket	0.8 #	20.15

TO ORDER: Specify catalog number.

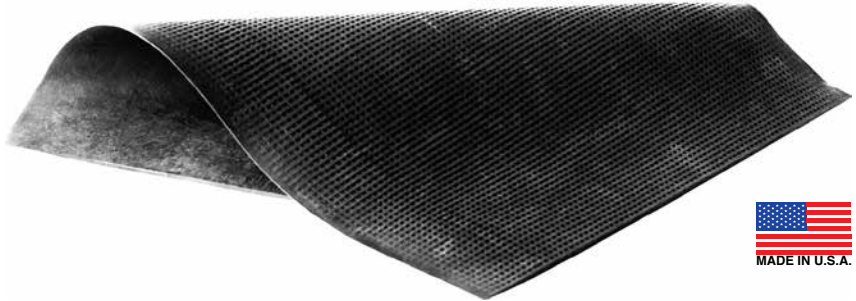
A/C x PVC Sewer Adapter Gasket available. See Page 7-9.

RUBBER GASKET MAT



MATERIAL SPECIFICATIONS

RUBBER: SBR per ASTM D 2000 MAA 610Z (Z = 60 Durometer), compounded for water & sewer service. Other compounds available on request. Gaskets are specially formulated with antioxidant/antiozanant agents to increase shelf life.



NSF61 certified upon request.

Certified to NSF/ANSI 61 & 372



MAT DIMENSION	APPROX. WEIGHT (lbs.)	THICKNESS (inches)	CATALOG NUMBER	LIST PRICE
6" x 24"	0.8 #	.125"	6 x 24 RM	\$22.79
9" x 24"	1.0 #	.25"	9 x 24 RM	22.79
10" x 24"	2.0 #	.25"	10 x 24 RM	23.43
12" x 24"	2.0 #	.25"	12 x 24 RM	28.05
16" x 24"	3.0 #	.25"	16 x 24 RM	38.55
20" x 24"	4.0 #	.25"	20 x 24 RM	46.85
21" x 24"*	4.0 #	.25"	21 x 24 RM	49.17
23" x 24"	4.0 #	.25"	23 x 24 RM	53.85
27" x 24"	5.0 #	.25"	27 x 24 RM	63.18
34" x 24"	6.0 #	.25"	34 x 24 RM	79.56
37" x 30"	8.0 #	.25"	37 x 30 RM	108.27

* No taper

TO ORDER: Specify catalog number.

MISCELLANEOUS



FLANGE GASKETS

MATERIAL SPECIFICATIONS

GASKET: SBR per ASTM D 2000 MBA 710, compounded for water and sewer service. Other compounds available on request.

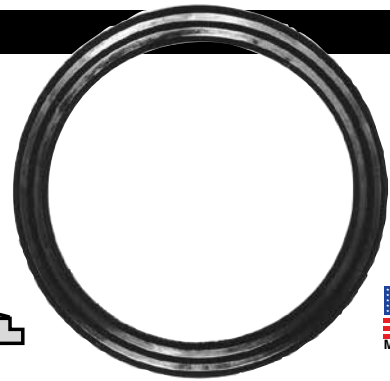
USE: The gasket is designed to effect a seal between two flanged surfaces.



NSF61 certified upon request.



CROSS SECTION OF GASKET



THREADED FLANGE GASKET

NOM. PIPE SIZE	CATALOG NUMBER	APPROX. WEIGHT (lbs.)	LIST PRICE
4"	4" - Threaded Flange Gasket	0.2 #	\$10.96
6"	6" - Threaded Flange Gasket	0.3 #	11.30
8"	8" - Threaded Flange Gasket	0.5 #	11.92

TO ORDER: Specify catalog number.

MATERIAL SPECIFICATIONS

GASKET: SBR per ASTM D 2000 MBA 710, compounded for water and sewer service. Other compounds available on request.

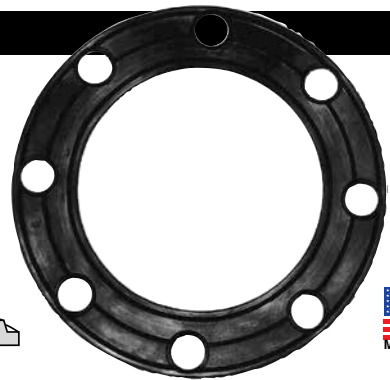
USE: The gasket is designed to effect a seal between a tapping flange and tapping valve.



NSF61 certified upon request.



CROSS SECTION OF GASKET



TAPPING FLANGE GASKET

NOM. PIPE SIZE	CATALOG NUMBER	APPROX. WEIGHT (lbs.)	LIST PRICE
3"	3" - Tapping Flange Gasket	0.2 #	\$10.96
4"	4" - Tapping Flange Gasket	0.2 #	10.96
6"	6" - Tapping Flange Gasket	0.3 #	11.30
8"	8" - Tapping Flange Gasket	0.5 #	11.92
10"	10" - Tapping Flange Gasket	0.6 #	17.89
12"	12" - Tapping Flange Gasket	0.8 #	22.64
16"	16" - Tapping Flange Gasket	0.9 #	27.99

TO ORDER: Specify catalog number.

FIRE HYDRANT VALVE GASKETS



MATERIAL SPECIFICATIONS

GASKET: SBR per ASTM D 2000 MBA 910, compounded for water service.



NSF61 certified upon request.

Certified to
NSF/ANSI GI & 372



NOM. PIPE SIZE	CATALOG NUMBER	OUTSIDE DIAMETER	COMPATIBLE WITH	APPROX. WEIGHT (lbs.)	LIST PRICE
5 1/4"	RV - 588	5.91"	Vogt - 55	0.6 #	\$58.51
	RC - 601	6.01"	Clow Medallion	1.4 #	58.51
	RC - 585	5.85"	Clow #24	0.6#	58.51
	RD - 596	5.96"	R.D. Wood Special	1.1 #	58.51
	RE - 640	6.40"	Eddy	0.6 #	58.51
	RI - 585	5.85"	Iowa	0.7 #	58.51
	RM - 588	5.88"	Mueller	1.3 #	58.51
	RMH - 580	5.80"	M&H, Dresser 300, 500 129T	1.1 #	58.51
	RTC - 610	6.10"	Traverse City	0.6 #	58.51
5 1/2"	RAD - 567	5.67"	American Darling	1.2 #	58.51
	RMA - 625	6.25"	Matthews	1.3 #	58.51
5"	RV - 700	6.95"	Vogt - 25	2.0 #	58.51
	RR - 573	5.73"	Rensselaer	1.1 #	58.51
-	RG - 563	5.63"	Greenburg	1.2 #	58.51
	RR - 165	1.65"	Rensselaer (Drip Valve Rubber)	0.1 #	31.16
5"	RK - 542	5.42"	Kupferle	1.2 #	58.51

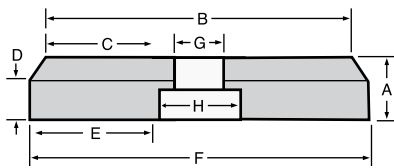
TO ORDER: Specify catalog number.

MISCELLANEOUS

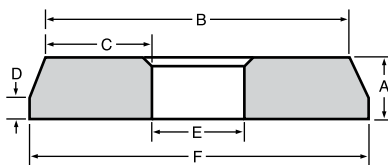


FIRE HYDRANT VALVE GASKET DIMENSIONS

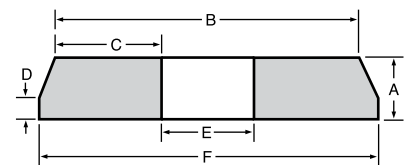
CATALOG NUMBER	COMPATIBLE WITH	A	B	C	D	E	F	G	H	I
RC - 601	Clow Medallion	1.12"	5.64"	2.50"	0.80"	2.14"	6.01"	1.00"	1.74"	—
RC - 585	Clow #24	0.87"	5.29"	0.87"	0.27"	3.28"	5.87"	—	—	—
RD - 596	R.D. Wood Special	1.13"	5.25"	1.58"	0.38"	2.04"	5.54"	—	—	—
RV - 588	Vogt 55	1.153"	5.262"	2.051"	0.925"	1.184"	5.908"	—	—	—
RV - 700	Vogt 25	1.268"	6.224"	1.970"	0.525"	2.239"	6.946"	—	—	—
RE - 640	Eddy	0.92"	1.38"	0.48"	5.25"	5.97"	6.38"	3.58"	0.08"	5.13"
RI - 585	Iowa	0.87"	5.13"	1.20"	0.30"	0.80"	5.86"	3.28"	2.74"	—
RM - 588	Mueller	1.16"	5.29"	2.14"	0.62"	0.92"	5.87"	—	—	—
RMH - 580	M&H, Dresser 300, 500 129T	1.06"	5.34"	2.13"	0.54"	1.04"	5.79"	—	—	—
RTC - 610	Traverse City	0.80"	0.46"	0.15"	6.07"	0.73"	5.20"	3.71"	—	—
RAD - 567	American Darling	1.02"	5.27"	2.13"	0.44"	1.02"	0.10"	1.23"	5.67"	—
RMA - 625	Matthews	1.11"	5.52"	1.74"	0.41"	2.00"	6.19"	—	—	—
RR - 573	Rensselaer	1.30"	5.09"	1.24"	0.86"	2.54"	5.70"	—	—	—
RG - 563	Greenburg	1.37"	5.04"	1.23"	0.97"	2.51"	5.60"	—	—	—
RR - 165	Rensselaer (Drip Valve Rubber)	0.76"	1.63"	0.48"	0.24"	1.28"	0.07"	—	—	—
RK - 542	Kupferle	1.14"	4.96"	2.06"	0.62"	0.84"	5.41"	—	—	—



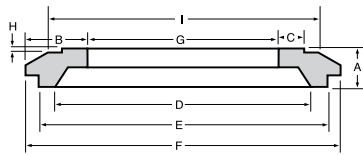
RC-601



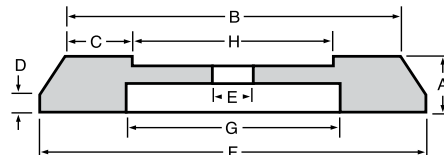
RC-585, RMA-625



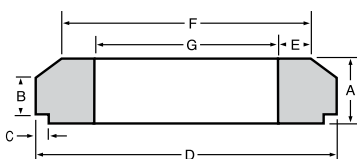
RD-596, RM-588, RMH-580, RR-573, RG-563, RK-542, RV-588, RV-700



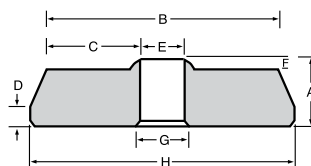
RE-640



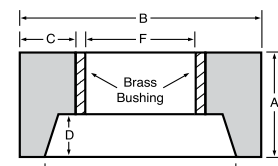
RI-585



RTC-610



RAD-567



RR-165

MISCELLANEOUS

METER COMPANION FLANGES & GASKETS

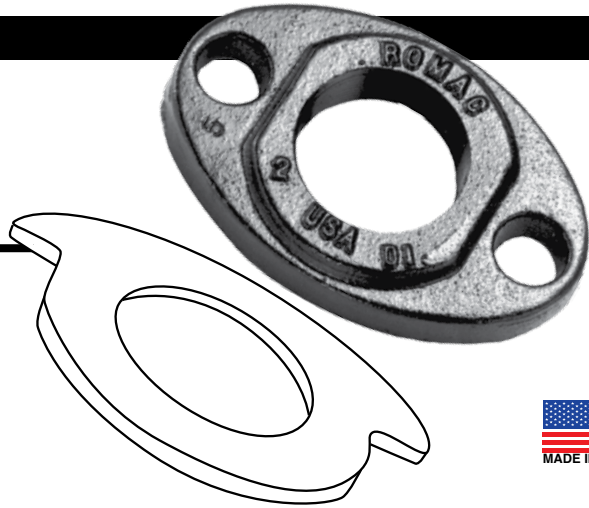


MATERIAL SPECIFICATIONS

ROMAC COMPANION FLANGE

CASTINGS: Ductile iron per ASTM A 536, Grade 65-45-12. Black shopcoat.

THREADS: NPT per ANSI / ASME B1.20.1



ROMAC METER COMPANION FLANGE GASKET

GASKET: 60 Neoprene compounded for water and sewer service, 1/8" thick.

COMPANION FLANGE

NOM. PIPE SIZE	CATALOG NUMBER	APPROX. WEIGHT (lbs.)	LIST PRICE
1 1/2"	1 1/2" Companion Flange	2.0#	\$26.34
2"	2" Companion Flange	3.0#	27.87

COMPANION FLANGE GASKET

NOM. PIPE SIZE	CATALOG NUMBER	APPROX. WEIGHT (lbs.)	LIST PRICE
1 1/2"	1 1/2" - Drop-in Meter Companion Flange Gasket	0.1#	\$2.54
2"	2" - Drop-in Meter Companion Flange Gasket	0.2#	3.28

TO ORDER: Specify catalog number.

METRIC HEX BIT SOCKETS FOR ARMOR SEAL, ARMOR LINK & ARMOR LOCK

MATERIAL SPECIFICATIONS

- Heavy duty heat treated alloy steel bits.
- Chrome plated sockets for durability.
- No set screws to tighten.
- 1/2" Drive.



HEX BIT SIZE (MM)	CATALOG NUMBER	DRIVE (inches)	BIT LENGTH (inches)	OVERALL LENGTH (inches)	LIST PRICE	APPROX. WEIGHT (lbs.)
6	380-HBS0806MM	0.5	2	2.6	\$10.90	0.16
8	380-HBS0808MM	0.5	2	2.5	11.25	0.16
10	380-HBS0810MM	0.5	2	2.5	11.59	0.18
14	380-HBS0814MM	0.5	2	2.5	13.35	0.3
17	380-HBS0817MM	0.5	2	2.5	15.09	0.4



EXTRA DEEP SOCKET

MATERIAL SPECIFICATIONS

Designed for speed, extra deep sockets help to quickly tighten hex nuts on repair clamps, couplings, saddles, tapping sleeves and other fittings.

6-PT Heat treated alloy deep socket for use on long bolts. Silver finish. Socket barrel is carbon steel.

Not for use with power or impact tools.



SOCKET SIZE	CATALOG NUMBER	OVERALL LENGTH	DRIVE	LIST PRICE	APPROX. WEIGHT (lbs.)
1 1/16"	1063 DEEP SOCKET	6 1/4"	1/2"	\$84.26	1.3
1 1/4"	1250 DEEP SOCKET	6 1/2"	1/2"	93.19	1.5

OD TAPE MEASURE

MATERIAL SPECIFICATIONS

- Side one features Romac logo side two.
- Side two features pipe O.D. chart. You may replace the O.D. chart with your logo for an additional charge.
- Standard inches on top of tape (up to 116").
- Diameter inches to 100ths on bottom of tape (up to 38.30").



DESCRIPTION	CATALOG NUMBER	APPROX. WEIGHT (lbs.)	LIST PRICE
Romac Logo Only	001-0001	0.2 #	\$20.95
With Additional Logo ¹	001-0002	0.2 #	22.68

¹ Minimum order of 150 to add second logo.

NOTES



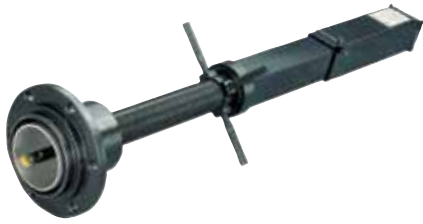
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TRANSMATE WATERWORKS TOOLS

TAPMATE MAIN DRILLING MACHINES



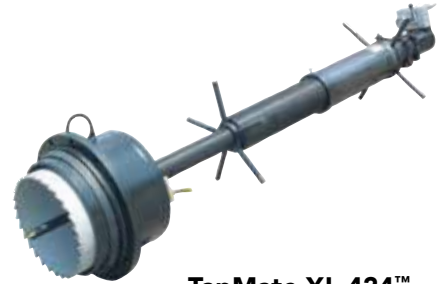
TapMate™
3" - 12" RANGE OF CUTS

PAGE TM-2



TapMate Too™
3/4" - 2" RANGE OF CUTS

PAGE TM-4



TapMate XL-424™
3 - 24" RANGE OF CUTS

PAGE TM-8

DIRECT CORPORATION STOP INSERTION



B-1™
DRILLS & INSERTS 3/4" TO 1"
CORPORATION STOPS UNDER
PRESSURE.

PAGE TM-10



B-Too™
DRILLS & INSERTS 3/4" TO
1" CORPORATION STOPS
UNDER PRESSURE.

PAGE TM-14



TapMate Dry Tap™
DRILLS & TAPS 3/4" TO 1"
HOLES IN DRY MAINS.

PAGE TM-21

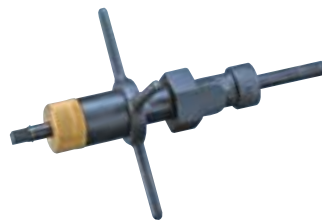
PIPE DRILLING MACHINE

Valve Exerciser



The Exerciser™
HYDRAULIC VALVE
EXERCISER

PAGE TM-25



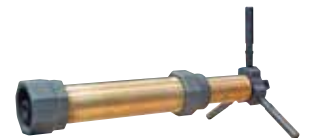
M-1
3/4" - 1" RANGE OF CUTS.

PAGE TM-18



5930
3/4" - 1" RANGE OF CUTS.

PAGE TM-19



5935
3/4" - 2" RANGE OF CUTS.

PAGE TM-20



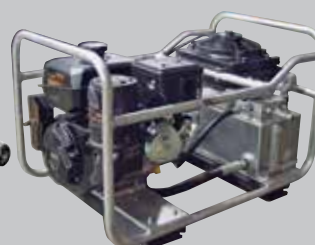
Dechlorinator

PAGE TM-22



Sewer Pipe Tapping Machine

PAGE TM-24



Power Units

HYDRAULIC & ELECTRIC DRIVES

PAGES TM-26 - TM-29



Tools & Accessories

PAGES TM-30 & TM-31

TAPMATE™

3" TO 12" RANGE OF CUTS



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a Division of Romac Industries, Inc.

MATERIAL SPECIFICATIONS

- **LATERAL TAPS** - For 3" - 12" lateral taps.
- **LIGHTWEIGHT** - Weighs 65 lbs., allowing easy handling and operation
- **EASY-TO-USE** - No hidden gears or mechanisms. Simple control and the depth scale is always visible.
- **PIPE COMPATIBILITY** - Taps any pipe commonly used in underground water mains
- **EASY TO MAINTAIN** - Simple construction allows in-house maintenance and repair
- **FLEXIBLE** - Use with hydraulic, electric or air drive units.



TO ORDER:

1. Order Base Machine
2. Order Cutters per size
3. Order Adapters per size and outlet type
4. Order Extra Spade Bit (350-03-08) if doing A/C taps
5. If doing 10" and 12" taps, you must order Pilot Drill Extension (350-14)
6. Select Power Unit (below)

ITEM NUMBER	DESCRIPTION	LIST PRICE
350-00	TAPMATE™ BASE MACHINE & STORAGE BOX For lateral tapping	\$11,299.54

INCLUDED WITH TAPMATE MACHINE:		
350-21-A	1" Shaft Nose	included
350-03-08	1" Spade Bit	"
350-04	PVC Pilot (required for any plastic pipe taps)	"
350-61	Storage Box	"
353-10-1	Tapping Compound	"

360-00	QUIKVALVE™ BASE MACHINE	
	For lateral tapping, QuikValve™ & InsertaValve™ installations	See pg. QV-5 for pricing
	For QuikValve see QV-2 & InsertaValve see QV-7	

POWER OPTIONS		
370-000	Electric Drive	pg. TM-28
371-00	Air Drive	pg. TM-29
372-00	Hydraulic Drive*	pg. TM-26

Contact Romac Industries for other power options

ADAPTER BELLS		
350-05-1024	3" MJ Adapter Bell	\$ 509.25
350-05-1032	4" MJ Adapter Bell	579.94
350-05-1048	6" MJ Adapter Bell	667.67
350-05-1064	8" MJ Adapter Bell	786.36
350-05-1080	10" MJ Adapter Bell	1,028.69
350-05-1096	12" MJ Adapter Bell	1,157.79
350-05-2024	3" 125# Flange Adapter Bell	488.41
350-05-2032	4" 125# Flange Adapter Bell	579.94
350-05-2048	6" 125# Flange Adapter Bell	684.52
350-05-2064	8" 125# Flange Adapter Bell	786.99
350-05-2080	10" 125# Flange Adapter Bell	1,414.18
350-05-2096	12" 125# Flange Adapter Bell	1,542.94

Adapter Bells for both metric and push-on style pipe connections are also available
Special Adapter Bells can be made upon request .

ITEM NUMBER	DESCRIPTION	ACTUAL SIZE	LIST PRICE
SHELL CUTTERS			
For Ductile, Cast Iron, Steel, A/C & PVC			

350-01-1024	3" Carbide Cutter	2 1/2"	\$545.99
350-01-1032	4" Carbide Cutter	3 1/2"	709.88
350-01-1048	6" Carbide Cutter	5 1/2"	1,052.20
350-01-1064	8" Carbide Cutter	7 1/2"	1,391.71
350-01-1080 ¹	10" Carbide Cutter	9 1/2"	3,107.61
350-01-1096 ¹	12" Carbide Cutter	11 1/2"	3,675.67

For HDPE & PVC			
350-01-2024 ²	3" Cutter for HDPE & PVC Pipe	2 1/2"	544.46
350-01-2028 ²	Cutter for HDPE & PVC Pipe	3"	708.22
350-01-2032 ²	4" Cutter for HDPE & PVC Pipe	3 1/2"	708.22
350-01-2040 ²	Cutter for HDPE & PVC Pipe	5"	1,049.64
350-01-2048 ²	6" Cutter for HDPE & PVC Pipe	5 1/2"	1,049.64
350-01-2056 ²	Cutter for HDPE & PVC Pipe	7"	1,385.67
350-01-2064 ²	8" Cutter for HDPE & PVC Pipe	7 1/2"	1,385.67
350-01-2072 ²	Cutter for HDPE & PVC Pipe	9"	3,099.86
350-01-2080 ^{1,2}	10" Cutter for HDPE & PVC Pipe	9 1/2"	3,099.86
350-01-2088 ²	Cutter for HDPE & PVC Pipe	11"	3,668.00
350-01-2096 ^{1,2}	12" Cutter for HDPE & PVC Pipe	11 1/2"	3,668.00

For Steel			
350-01-5024	3" Cutter for Steel	2 1/2"	545.88
350-01-5032	4" Cutter for Steel	3 1/2"	709.88
350-01-5048	6" Cutter for Steel	5 1/2"	1,052.20
350-01-5064	8" Cutter for Steel	7 1/2"	1,391.71
350-01-5080 ¹	10" Cutter for Steel	9 1/2"	3,107.61
350-01-5096 ¹	12" Cutter for Steel	11 1/2"	3,677.31

NOTE: Shell Cutters can be resharpened, and retooled

ACCESSORIES			
350-03-08	1" Spade Bit		\$ 102.85
350-21-A	Shaft Nose (includes 1" Spade Bit)		385.72
350-14 ¹	Pilot Drill Extension (required for 10" & 12" taps)		153.84
350-04 ²	PVC Pilot		194.21
350-04H	HDPE Pilot		390.57
350-05-571	Adapter Bell O-Ring		17.56
350-05-512	Adapter Set Screw		7.09

Please call Romac for recommendations on ordering and using HDPE Holesaws

TRANSMATE

¹ 10" and 12" Cutters require the Pilot Drill Extension
² HDPE Pilot needed (350-04H) if tapping HDPE pipe only
 * Considered hazardous material if shipped by air.

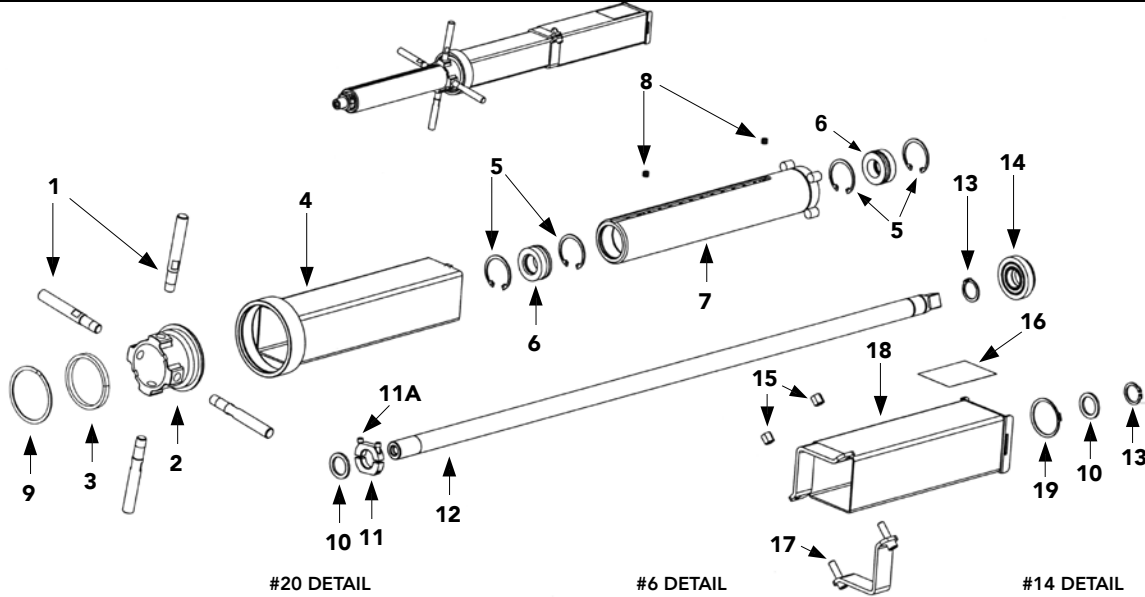


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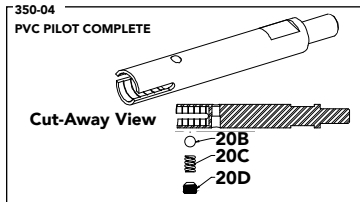
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TAPMATE™ PARTS LIST

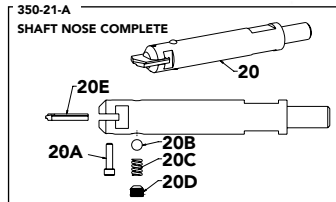
TAPMATE™ 350-00 (BASE MACHINE ONLY)



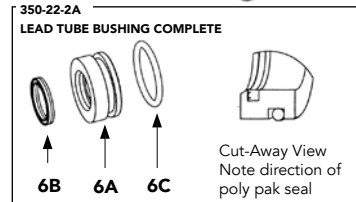
#21 DETAIL



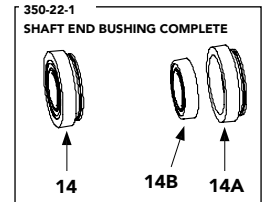
#20 DETAIL



#6 DETAIL



#14 DETAIL



REF. NUMBER	DESCRIPTION	ITEM NUMBER	LIST PRICE
1	Handle for Lead Nut (4 required)	350-29	\$ 98.78
2	Lead Nut	350-24	634.90
3	Lead Nut Nylatron Washer	350-24-531	44.00
4	Thrust Tube	350-32	917.12
5	Lead Tube Snap Ring (4 required)	350-23-54	12.72
6	Lead Tube Bushing Complete (2 required)	350-22-2A	267.06
6A	Lead Tube Bushing Only (2 required)	350-22-2	217.07
6B	Shaft Poly Pak Seal (1 per bushing, 2 per machine)	350-57-2	27.14
6C	Lead Tube Bushing O-Ring (1 per bushing, 2 per machine)	350-57-1-62	14.11
7	Lead Tube	350-23	1,509.52
8	Lead Tube Socket Plug (2 required)	350-23-512	7.09
9	Lead Nut Snap Ring	350-24-54	28.22
10	Jam Nut Thrust Washer (2 required)	350-20-531	21.82
11	Jam Nut (for cutters)	350-52	59.33
11A	Jam Nut Set Screw	350-52-1	1.26
12	Shaft Main	350-20	987.15
13	Shaft End Snap Ring (2 required)	350-20-54	12.72
14	Shaft End Bushing Complete	350-22-1	276.54
14A	Shaft End Bushing	350-22	153.46
14B	Shaft End Bearing	350-20-56	126.99
15	Brake Nut (2 required)	350-31-52	8.46
16	Serial Number Plate	350-58	15.48
17	Brake Half, Threaded	350-31	118.49
18	Brake Tube Complete	350-30	917.02
19	Shaft End Bushing Snap Ring	350-22-54	12.72
20	Shaft Nose Complete	350-21-A	385.72
20A	Spade Bit Lock Screw	350-03-531	7.09
20B	Coupon Retainer Ball (5/16)	350-21-561	7.09
20C	Coupon Retainer Spring	350-21-55	7.55
20D	Coupon Retainer Set Screw	350-21-512	7.09
20E	1" Spade Bit	350-03-08	102.85
21	PVC Pilot Complete	350-04	194.21

TAPMATE TOO™

3/4" TO 2" RANGE OF CUTS

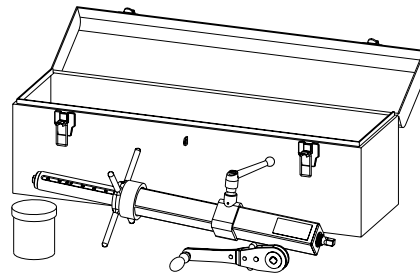
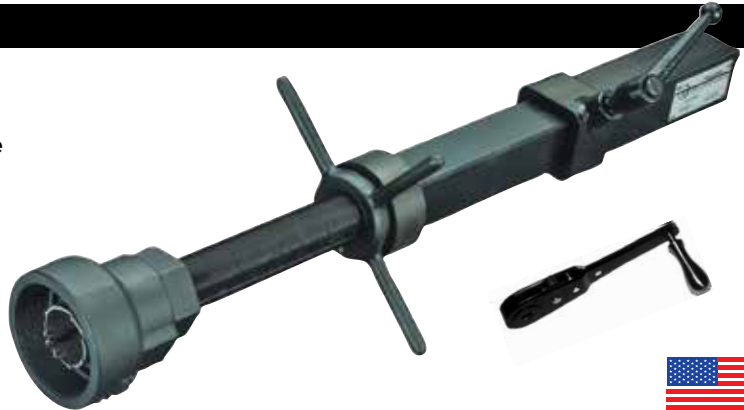


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MATERIAL SPECIFICATIONS

- Weighs 10 lbs., allowing easy handling and operation
- Safety brake provides controlled boring bar release on high pressure cuts
- Sturdy construction with more than 12" of boring bar travel
- Taps any pipe commonly used in underground water mains
- Simple construction allows in-house maintenance and repair



TO ORDER:

1. Order Base Machine
2. Order Cutters or Spade Bits per desired pipe type and size
3. Order Adapters per size and corp outlet type
4. Order Arbors per size
5. Select Power Option.

ITEM NUMBER	DESCRIPTION	LIST PRICE
351-00	Base Machine and Tool Box	\$1,721.26
Included with Tapmate Too Machine:		
351-60-1	Hand Ratchet	included
351-61	Tool Box	included
353-10-1	Tapping Compound	included

POWER OPTIONS YOU CHOOSE HOW TO POWER YOUR TAPMATE TOO...

TapMate Too Hydraulic Drive

*372-351

SEE PAGE TM-29



Ridgid 690 Electric Drive

SEE PAGE TM-28



ITEM NUMBER	DESCRIPTION	LIST PRICE
*372-351	TapMate Too Hydraulic Drive System	\$5,541.32
	complete	
*372-351-01	Base Unit	included
373-351	Ridgid 690 Electric Drive with 1/2" Adapter for TM-Too	\$3,075.52
		included
370-70	GF-15 Ground Fault Interrupter Plug (required)	131.61

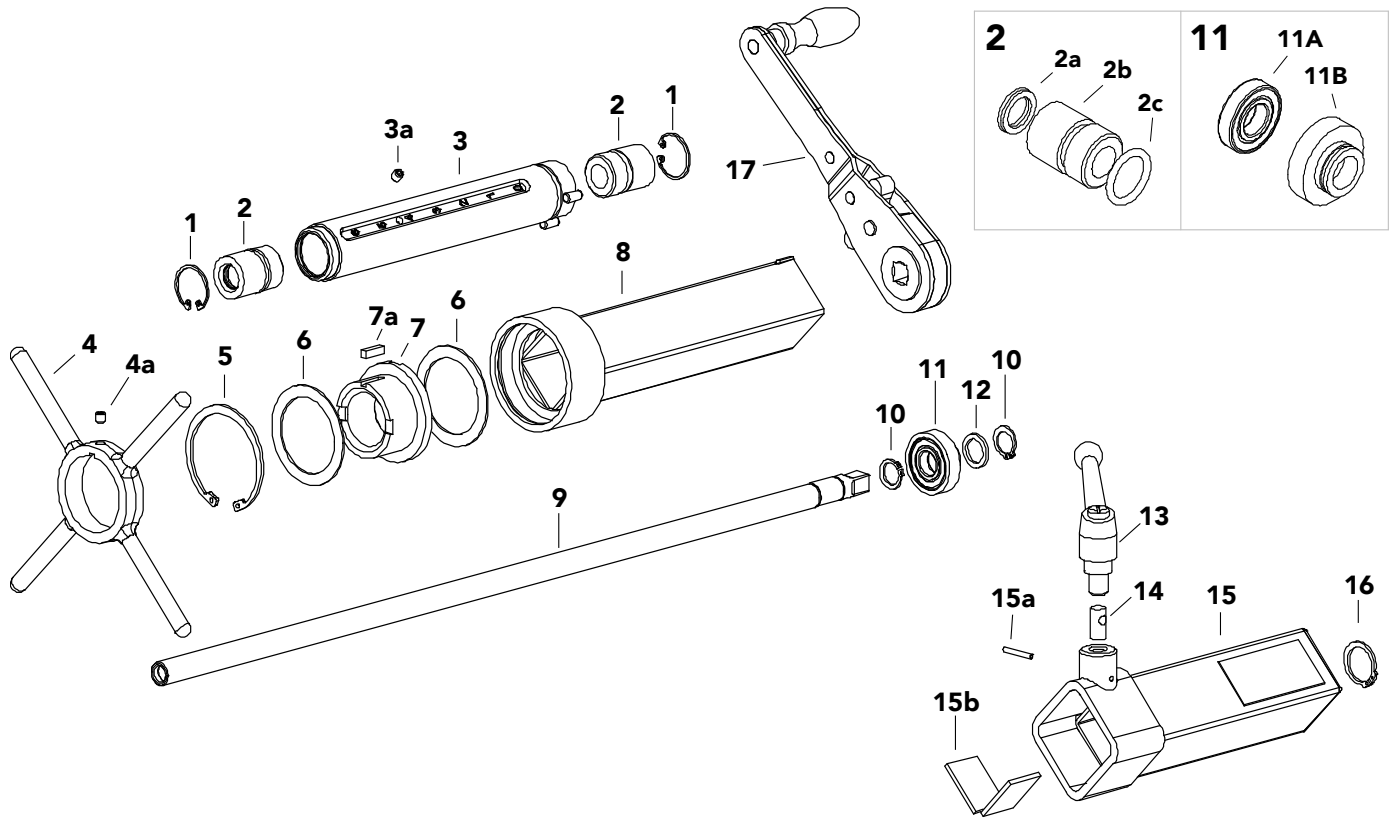
*Considered Hazardous Material When Shipped by Air. For other power options, contact Romac Industries, Inc.



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TAPMATE TOO™ PARTS LIST



REF. NUMBER	DESCRIPTION	ITEM NUMBER	LIST PRICE
1	Lead Tube Snap Ring (2 required)	351-23-54	\$2.57 ea.
2	Lead Tube Bushing Complete (includes Bushing, Shaft Seal,O-Ring)	351-22-2A	80.64
2a	Poly Pak Shaft Seal	351-57-2	6.70
2b	Lead Tube Bushing	351-22-2	73.88
2c	Lead Tube Bushing O-Ring	351-57-1-62	1.32
3	Lead Tube	351-23	404.32
3a	Lead Tube Set Screw	351-23-512	1.32
4	Handle for Lead Nut	351-29-1	162.66
4a	Arbor & Handle Set Screw	351-51-2	1.32
5	Lead Nut Snap Ring	351-24-54	4.02
6	Lead Nut Nylatron Washers (2 required)	351-24-531	15.87 ea.
7	Lead Nut	351-24	162.66
7a	Lead Nut Key	351-24-66	5.19
8	Thrust Tube	351-32	131.90
9	Shaft	351-20	198.91
10	Shaft End Snap Ring (2 required)	351-20-54	2.57 ea.
11	Shaft End Bushing Complete	351-22-1A	120.90
11a	Shaft End Bearing	351-20-56	53.71
11b	Shaft End Bushing	351-22-1	88.67
12	Shaft End Nylatron Washer	351-20-531	9.42
13	Brake Handle	351-29-2	40.34
14	Brake Pin	351-50-2	33.12
15	Brake Tube (includes Brake Pads)	351-30	296.87
15a	Roll Pin	351-50-3	1.32
15b	Brake Pad (2 required)	351-30-1	15.89
16	Shaft End Bushing Snap Ring	351-22-54	2.57 ea.
17	Ratchet Wrench	351-60-1	219.46
NOT ILLUSTRATED			
	Toolbox	351-61	202.13

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TAPMATE TOO™ ACCESSORIES

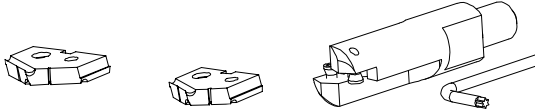


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SPADE BITS

The spade bit provides a low cost alternative to the traditional twist drill bit, pilot and holesaw/cutters. Spade bits are attached to the spade bit holder using the two Torx™ screws provided. Spade bits are available in the 3/4" nominal (23/32" actual), and the 1" nominal (7/8" actual) sizes.



ITEM NUMBER	DESCRIPTION	LIST PRICE
351-03-106	3/4" Spade Bit (actual OD 23/32")	\$76.85
351-03-108	1" Spade Bit (actual OD 7/8")	80.64
351-03-12	Spade Bit Holder (includes Torx Key Wrench and Screws; required for Spade Bit use)	275.38
351-60-5	Torx Key Wrench	8.08
351-03-512	Spade Bit Screw (2 required)	5.85 ea.

HOLESAWS

Five types of Holesaws are available in 5 sizes

- The carbide cutter is best for use on A/C, Cast Iron, or Ductile Iron pipe.
- The HSS carbide tipped Holesaw works well on ductile iron, cast iron and A/C.
- The Bi-Metal holesaw is best for use with Steel Pipe, but may be used for ductile, cast iron and A/C as well.
- The PVC Cutter is necessary for cutting into plastic pipe.
- Special deep throated cutters for HDPE (see page TM-7) are also available.

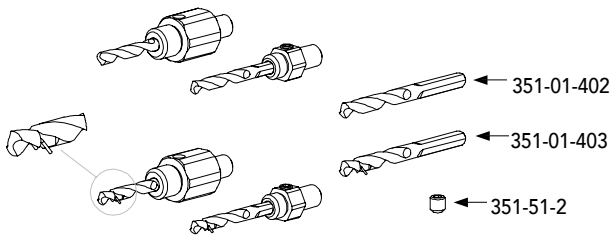


HOLESAW SIZE CHART			
NOMINAL	O.D.	NOMINAL	O.D.
3/4"	11/16"	1 1/2"	1 3/8"
1"	7/8"	2"	1 3/4"
1 1/4"	1 1/8"		

ITEM NUMBER	DESCRIPTION	LIST PRICE
For Ductile, Cast Iron & A/C		
351-01-106	3/4" Carbide Cutter	\$126.31
351-01-108	1" Carbide Cutter	142.38
351-01-110	1 1/4" Carbide Cutter	149.62
351-01-112	1 1/2" Carbide Cutter	161.23
351-01-116	2" Carbide Cutter	217.64
For Ductile, Cast Iron & A/C		
351-01-406	3/4" HSS Carbide Tip Holesaw	44.33
351-01-408	1" HSS Carbide Tip Holesaw	52.14
351-01-410	1 1/4" HSS Carbide Tip Holesaw	57.28
351-01-412	1 1/2" HSS Carbide Tip Holesaw	65.88
351-01-416	2" HSS Carbide Tip Holesaw	73.78
For Ductile, Cast Iron, A/C & Steel		
351-01-506	3/4" Bimetal Holesaw	24.94
351-01-508	1" Bimetal Holesaw	N/A
351-01-510	1 1/4" Bimetal Holesaw	29.54
351-01-512	1 1/2" Bimetal Holesaw	30.91
351-01-516	2" Bimetal Holesaw	40.34
For PVC Only		
351-01-206	3/4" PVC Cutter	131.40
351-01-208	1" PVC Cutter	134.37
351-01-210	1 1/4" PVC Cutter	147.82
351-01-212	1 1/2" PVC Cutter	161.23
351-01-216	2" PVC Cutter	174.68

HOLESAW ARBORS

The arbors mate the end of the shaft to the holesaw/cutter being used. Two arbors are available. The Small Arbor accommodates 3/4" - 1 1/4" cuts. The Large Arbor is necessary for 1 1/2" and 2" cuts.



ITEM NUMBER	DESCRIPTION	LIST PRICE
351-14-1	Small Holesaw Arbor, includes Arbor Pilot Drill 351-01-402 (for 3/4", 1" and 1 1/4" holesaws/cutters)	\$86.02
351-14-2	Large Holesaw Arbor, includes Arbor Pilot Drill 351-01-402 (for 1 1/2" and 2" holesaws/cutters)	134.37
351-01-402	1/4" Arbor Pilot Drill (for Small and Large Holesaw Arbor)	17.46
351-01-403	1/4" Arbor Pilot Drill w/Retaining Spring	32.00
351-51-2	Arbor & Handle Set Screw	1.32
351-14-5	Small Holesaw Arbor, includes Arbor Pilot Drill 351-01-403 (for 3/4", 1" and 1 1/4" holesaws/cutters)	100.55
351-14-6	Large Holesaw Arbor, includes Arbor Pilot Drill 351-01-403 (for 1 1/2" and 2" holesaws/cutters)	148.89

TRANSMATE



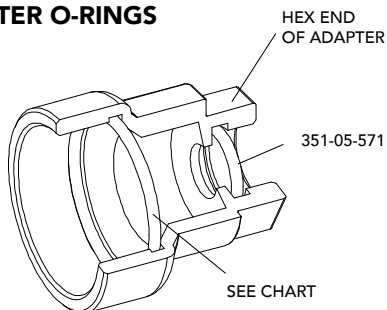
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TAPMATE TOO™ ACCESSORIES

ADAPTERS

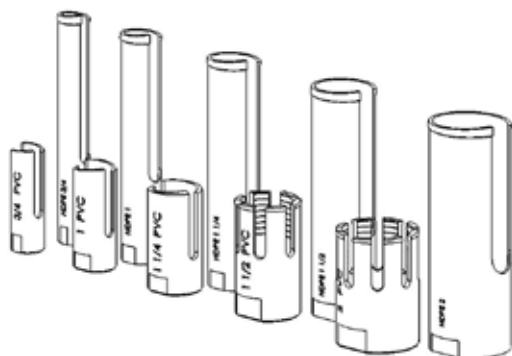
ITEM NUMBER	DESCRIPTION	LIST PRICE	ITEM NUMBER	DESCRIPTION	LIST PRICE
<i>Note: Adapter thread description describes thread machined on the adapter</i>					
351-05-406	3/4" Female Iron Pipe Adapter	\$138.53	351-05-606	3/4" Male Iron Pipe Adapter	\$138.53
351-05-408	1" Female Iron Pipe Adapter	138.53	351-05-608	1" Male Iron Pipe Adapter	138.53
351-05-410	1 1/4" Female Iron Pipe Adapter	138.53	351-05-610	1 1/4" Male Iron Pipe Adapter	138.53
351-05-412	1 1/2" Female Iron Pipe Adapter	138.53	351-05-612	1 1/2" Male Iron Pipe Adapter	138.53
351-05-416	2" Female Iron Pipe Adapter	138.53	351-05-616	2" Male Iron Pipe Adapter	138.53
351-05-420	2 1/2" Female Iron Pipe Adapter	138.53	351-05-706	3/4" Fine Thread Compression Adapter	138.53
351-05-506	3/4" Coarse Thread Compression Adapter	138.53	351-05-708	1" Fine Thread Compression Adapter	138.53
351-05-508	1" Coarse Thread Compression Adapter	138.53	351-05-710	1 1/4" Fine Thread Compression Adapter	138.53
351-05-510	1 1/4" Coarse Thread Compression Adapter	138.53	351-05-712	1 1/2" Fine Thread Compression Adapter	138.53
351-05-512	1 1/2" Coarse Thread Compression Adapter	138.53	351-05-716	2" Fine Thread Compression Adapter	138.53
351-05-516	2" Coarse Thread Compression Adapter	138.53			

REPLACEMENT ADAPTER O-RINGS



ITEM NUMBER	DESCRIPTION	LIST PRICE
351-05-571	TT Adapter O-Ring (All TT Adapters)	\$2.69
351-05-5571-1	TT Adapter O-Ring 3/4" Coarse Thread Compression	2.69
351-05-5571-2	TT Adapter O-Ring 1" Coarse Thread Compression	2.69
351-05-5571-3	TT Adapter O-Ring 1 1/4" Coarse Thread Compression	2.69
351-05-5571-4	TT Adapter O-Ring 1 1/2" Coarse Thread Compression	2.69
351-05-5571-5	TT Adapter O-Ring 2" Coarse Thread Compression	2.69
351-05-706-57	TT Adapter O-Ring 3/4" Fine Thread Compression	2.69
351-05-708-57	T Adapter O-Ring 1" Fine Thread Compression	2.69
351-05-710-57	TT Adapter O-Ring 1 1/4" Fine Thread Compression	2.69
351-05-712-57	TT Adapter O-Ring 1 1/2" Fine Thread Compression	2.69
351-05-716-57	TT Adapter O-Ring 2" Fine Thread Compression	2.69

HDPE ADAPTERS & HOLESAWS



NOTE: HDPE cutters require HDPE adapters. This is due to the increased overall length (illustrated above with PVC cutters)

ITEM NUMBER	DESCRIPTION	LIST PRICE
<i>Note: Adapter thread description describes thread machined on the adapter</i>		
351-05-106	3/4" HDPE Female Iron Pipe Adapter	\$380.24
351-05-108	1" HDPE Female Iron Pipe Adapter	381.94
351-05-110	1 1/4" HDPE Female Iron Pipe Adapter	390.43
351-05-112	1 1/2" HDPE Female Iron Pipe Adapter	405.16
351-05-116	2" HDPE Female Iron Pipe Adapter	418.76
351-05-906	3/4" HDPE Coarse Thread Compression Adapter	380.24
351-05-908	1" HDPE Coarse Thread Compression Adapter	381.94
351-05-910	1 1/4" HDPE Coarse Thread Compression Adapter	390.43
351-05-912	1 1/2" HDPE Coarse Thread Compression Adapter	405.16
351-05-916	2" HDPE Coarse Thread Compression Adapter	418.76
351-05-206	3/4" HDPE Male Iron Pipe Adapter	380.24
351-05-208	1" HDPE Male Iron Pipe Adapter	381.94
351-05-210	1 1/4" HDPE Male Iron Pipe Adapter	390.43
351-05-212	1 1/2" HDPE Male Iron Pipe Adapter	405.16
351-05-216	2" HDPE Male Iron Pipe Adapter	418.76
351-01-906	3/4" HDPE Cutter	447.29
351-01-908	1" HDPE Cutter	449.85
351-01-910	1 1/4" HDPE Cutter	458.32
351-01-912	1 1/2" HDPE Cutter	466.68
351-01-916	2" HDPE Cutter	475.29

TRANSMATE

TAPMATE™ XL-424 MAIN DRILLING MACHINE

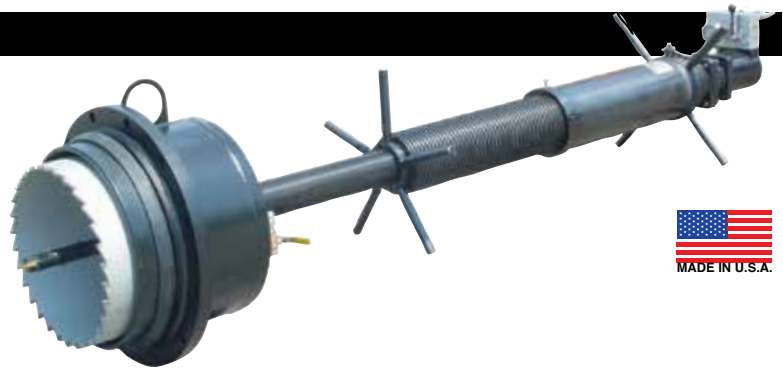


Transmate

a Division of Romac Industries, Inc.

MATERIAL SPECIFICATIONS

- 4" - 24" Taps.
- 300 PSI pressure rating.
- Can be used with existing TapMate and QuikValve equipment.
- Base Machine weighs 285 lbs.
- Taps any pipe commonly used in underground water mains.
- Storage crate functions as a workstation with storage space for tools, pilots and other accessories.
- Over 39 inches of travel.
- Integrated hydraulic motor.



TO ORDER:

1. Order Base Machine
2. Order Adapters per size and outlet type
3. Order necessary Cutters.
4. Order extra Spade Bit if doing A/C taps
5. Select Power Unit.

ITEM NUMBER	DESCRIPTION	LIST PRICE
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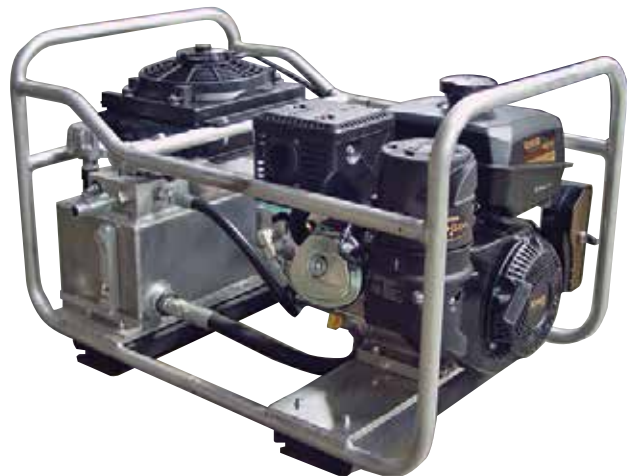
366-00	TapMate XL-424 Drilling Machine	\$25,887.53
Approximate Shipping Weight (base machine and items included with base machine): 650 lbs.		

INCLUDED WITH BASE MACHINE:

366-42	Small Adapter Hub (4" - 12")	\$614.98
366-43	Large Adapter Hub (14" - 24")	705.61
366-38	TM-XL Shaft Nose, Complete (18" - 24")	770.35
366-38-2	TM-XL Shaft Nose, Complete (14"-16")	678.38
366-39	TM-XL PVC Pilot, Complete (18" - 24")	576.14
366-39-2	TM-XL PVC Pilot, Complete (14" - 16")	512.32
350-21-A	TM Shaft Nose, Complete (4" - 12")	385.72
350-04	TM PVC Pilot (4" - 12")	207.80
350-14	TM,Pilot Drill Extension <i>(required for 10" & 12" taps)</i>	\$153.84
366-66-10	Tool Kit & Spare Parts	556.72
366-61	Storage Crate / Work-station	1,275.28
372-02-05	1/2" Hose Kit <i>(includes two hoses and two sets of Quick Disconnects)</i>	835.91

82000 HPU HYDRAULIC POWER UNIT (ALSO ON PAGE TM-27)

- Weighs approximately 200 lbs.
- 14 h.p. Kohler gasoline engine.
- Hydraulic pump delivering 8 gpm to 2,000 psi.
- 5 gallon hydraulic fluid reservoir.
- 12V electric air-to-oil heat exchanger.



ITEM NUMBER	DESCRIPTION	LIST PRICE
*372-82000-01	82000 HPU Hydraulic Base Power Unit	\$7,979.71

*Considered Hazardous Material When Shipped by Air



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TAPMATE™ XL-424 ACCESSORIES

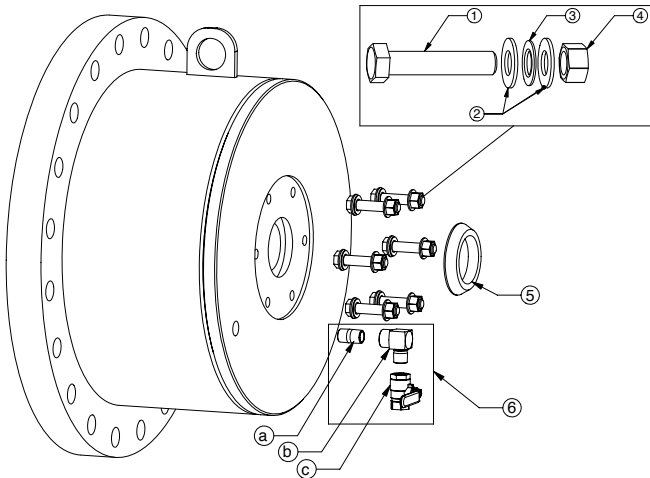
ITEM NUMBER	DESCRIPTION	LIST PRICE
ADAPTERS		
350-05-1032	4" MJ Adapter	\$579.94
350-05-1048	6" MJ Adapter	667.67
350-05-1064	8" MJ Adapter	786.36
350-05-1080	10" MJ Adapter	1,028.69
350-05-1096	12" MJ Adapter	1,157.79
366-05-1112	14" MJ Adapter	5,172.33
366-05-1128	16" MJ Adapter	6,078.62
366-05-1144	18" MJ Adapter	6,467.03
366-05-1160	20" MJ Adapter	6,855.44
366-05-1192	24" MJ Adapter	7,114.38
350-05-2032	4" Flange Adapter	\$579.94
350-05-2048	6" Flange Adapter	684.52
350-05-2064	8" Flange Adapter	786.99
350-05-2080	10" Flange Adapter	1,414.18
350-05-2096	12" Flange Adapter	1,542.94
366-05-2112	14" Flange Adapter	5,172.33
366-05-2128	16" Flange Adapter	6,078.62
366-05-2144	18" Flange Adapter	6,467.03
366-05-2160	20" Flange Adapter	6,855.44
366-05-2192	24" Flange Adapter	7,114.38

Special Adapter Bells (metric sizes and push-on style pipe connections) are also available.

ITEM NUMBER	DESCRIPTION	ACTUAL SIZE	LIST PRICE
CUTTERS			
For Ductile, Cast Iron, Steel, A/C & PVC			
350-01-1032	4" Carbide Cutter	3 1/2"	\$709.88
350-01-1048	6" Carbide Cutter	5 1/2"	1,052.20
350-01-1064	8" Carbide Cutter	7 1/2"	1,391.71
350-01-1080 ¹	10" Carbide Cutter	9 1/2"	3,107.61
350-01-1096 ¹	12" Carbide Cutter	11 1/2"	3,675.67
366-02-1108	14" Carbide Cutter	13 1/2"	4,531.45
366-02-1124	16" Carbide Cutter	15 1/2"	6,149.83
366-02-1140	18" Carbide Cutter	17 1/2"	6,797.18
366-02-1156	20" Carbide Cutter	19 1/2"	7,930.04
366-02-1180	24" Carbide Cutter	22 1/2"	9,224.74
For HDPE & PVC			
350-01-2032 ²	4" Cutter for HDPE & PVC Pipe	3 1/2"	\$708.22
350-01-2048 ²	6" Cutter for HDPE & PVC Pipe	5 1/2"	1,049.64
350-01-2064 ²	8" Cutter for HDPE & PVC Pipe	7 1/2"	1,385.67
350-01-2080 ^{1,2}	10" Cutter for HDPE & PVC Pipe	9 1/2"	3,099.86
350-01-2096 ^{1,2}	12" Cutter for HDPE & PVC Pipe	11 1/2"	3,668.00
For Steel			
350-01-5032	4" Cutter for Steel	3 1/2"	\$709.88
350-01-5048	6" Cutter for Steel	5 1/2"	1,052.20
350-01-5064	8" Cutter for Steel	7 1/2"	1,391.71
350-01-5080 ¹	10" Cutter for Steel	9 1/2"	3,107.61
350-01-5096 ¹	12" Cutter for Steel	11 1/2"	3,677.31

- 1 10" and 12" Cutters require the Pilot Drill Extension
- 2 HDPE Pilot needed (350-04H) if tapping HDPE pipe only

ADAPTER PARTS



ITEM NUMBER	DESCRIPTION	LIST PRICE
1. 361-06-05	QV Flange Bolt (Qty. 6)	3.03 ea.
2. 8FW-410	Washer (Qty. 12)	1.36 ea.
3. 350-05-80.96-57	TM,Hub Adapter Seals (Qty. 6)	3.85 ea.
4. 350-05-80.96-52	TM,Hub Adapter Nuts (Qty. 6)	2.58 ea.
5. 8R211S0300	Gasket (Qty. 1)	4.74
6. 366-05-01	TM-XL, Adapter Exhaust Valve (Qty. 1)	49.85
6a. 356-01-03	BT Slide Gate Pipe Nipple (Qty. 1)	2.32
6b. 356-03-04	BT,Exhaust Elbow (Qty. 1)	18.29
6c. 371-02	AD Air Drive Valve (Qty. 1)	24.57

ACCESSORIES

350-03-08	1" Spade Bit	\$102.85
358-88	1 3/8" Spade Bit	202.70
350-04H	HDPE Pilot	390.57
350-52	Cutter Jam Nut	59.33
353-10-1	Tapping Compound	33.90
350-05-571	Adapter O-Ring	17.56
366-44	TM-XL Adapter Hub O-Ring	3.56
366-68	TM-XL Anti-Seize Lubricant	21.62

NEW 14" - 24" ROMAC CUTTERS

CAN BE ADAPTED TO FIT OTHER MANUFACTURER'S TAPPING MACHINES. CONTACT ROMAC FOR PRICING AND AVAILABILITY.



TRANSMATE

B-1™ DRILLING AND TAPPING MACHINE

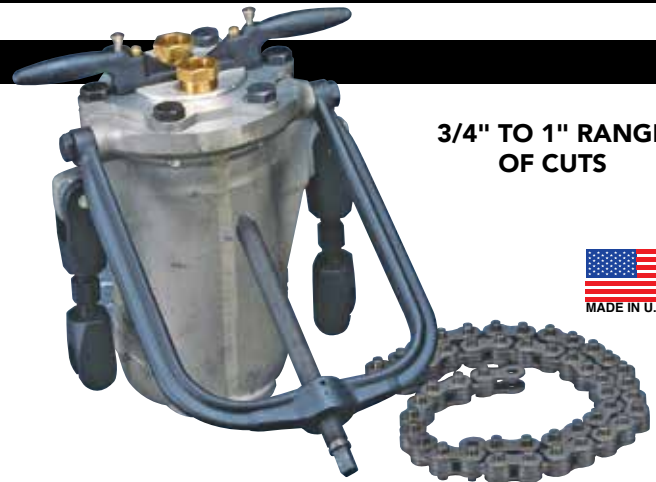


Transmate

a Division of Romac Industries, Inc.

MATERIAL SPECIFICATIONS

- Weighs approximately 32 lbs.
- Performs direct corporation stop insertion without time consuming disassembly
- Inserts any 3/4" to 1" corporation stop under pressure
- Extracts threaded corporation stops from the main and inserts a main plug
- Extracts a defective threaded corporation stop from the main and inserts a new corporation stop (3/4" size only)



3/4" TO 1" RANGE OF CUTS



FIRST CHOICE IN THE DITCH BECAUSE THE B-1...

- Is lighter and easier to handle.
- Is faster – no disassembly and reassembly during installation.
- Has no chip problems or water loss.
- Is simpler and easier to operate, manually or with power.
- Can be preloaded under cover in foul weather.



PREFERRED BY MANAGEMENT BECAUSE THE B-1...

- Has a low maintenance cost.
- Reduces installation time to save costs.
- Lets you buy only the parts and tools required for your jobs.
- Is made of strong lightweight metal alloys which hold up under stress to provide a long service life.

TO ORDER:

1. Order B-1 Drilling Machine
2. Order Drill/Taps per desired tap size, thread type and pipe type. Drill/Tap corresponds to body inlet threads on corporation stop
3. Order Screw Plugs with threads matching the body outlet threads of the corporation stops used
4. Order a pipe saddle for each size of pipe the B-1 will be used on. NOTE: One extra chain section (Item Number 353-58) required for 14" - 24" mains, two extra chain sections required for 26" - 32" mains (join chain sections with 353-58-4).
5. Order Power Unit if desired, Ridgid 690 (373-00) and B-1 Extended Feed Yoke (353-28E)
6. Order extra Tapping Compound if needed. (see Page TM-30)

POWER OPTION NOTE:

If ordering the Ridgid 690 electric power drive unit (373-00) by itself for use with the B-1 Drilling and Tapping Machine, you must order the Extended Feed Yoke (353-28E) as well. The B-1 cannot be used under power without the Extended Feed Yoke (353-28E).



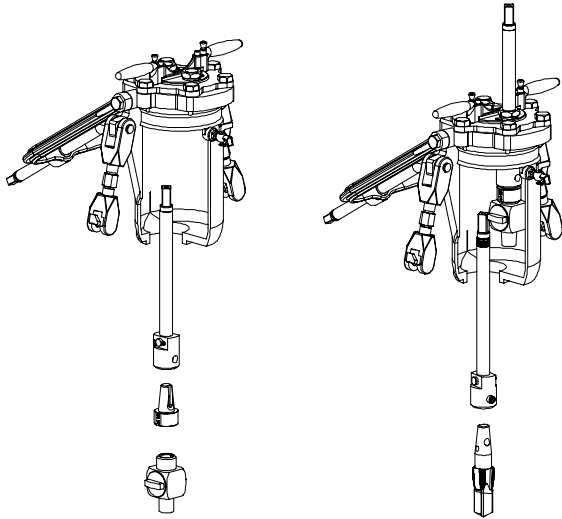
Transmate

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B-1™ DRILLING AND TAPPING MACHINE

INSTALLATION OF A CORPORATION STOP WITH PRESSURE IN THE MAIN IS COMPLETED IN THESE SIMPLE STEPS

1. LOAD THE MACHINE

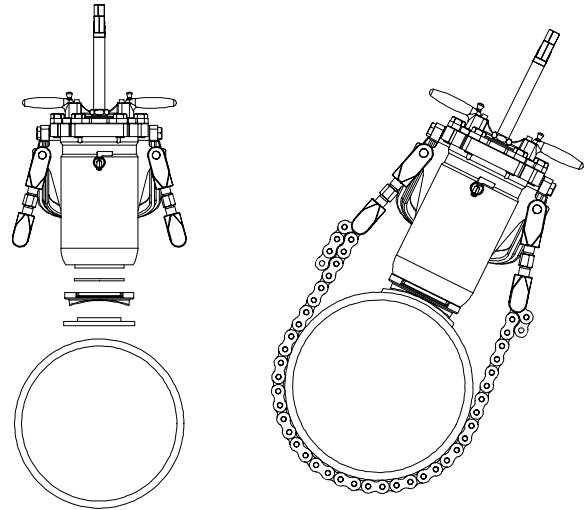


A. INSERT STOP HOLDER WITH STOP INTO MACHINE.

B. SWIVEL MACHINE HEAD 180°

C. INSERT HOLDER WITH DRILL/TAP INTO MACHINE.

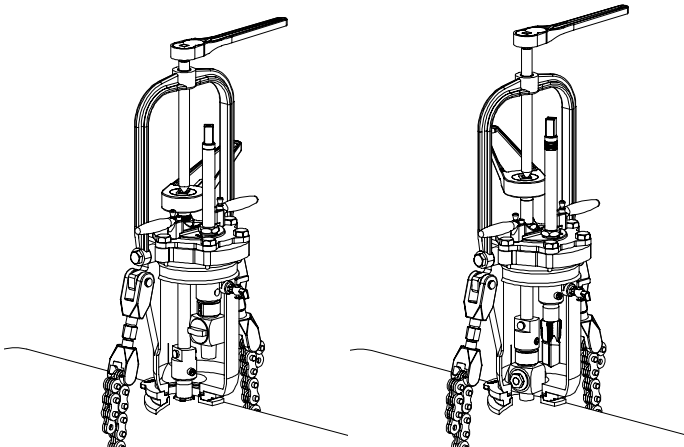
2. MOUNT MACHINE ON MAIN



A. PLACE GASKETS, SADDLE, AND MACHINE ON MAIN AND PARTIALLY TIGHTEN CHAIN.

B. POSITION MACHINE TO DESIRED ANGLE AND TIGHTEN CHAIN.

3. TAP OR DRILL AND INSERT STOP

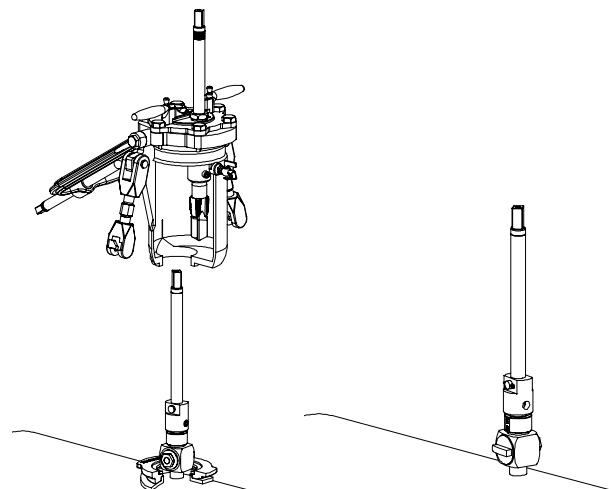


A. DRILL AND TAP PIPE WALL

B. SWIVEL MACHINE HEAD 180°

C. THREAD CORPORATION STOP INTO PIPE.

4. REMOVE MACHINE FROM MAIN



A. OPEN PET COCK TO RELEASE PRESSURE, DROP YOKE AND REMOVE CHAIN.

B. LIFT MACHINE FROM MAIN, LEAVING STOP HOLDER ON STOP

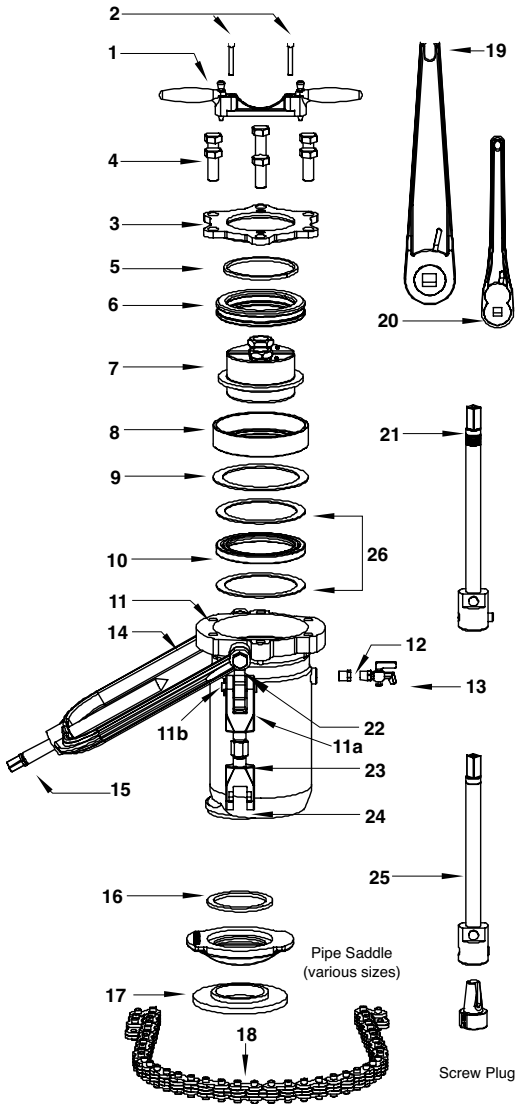
C. REMOVE STOP HOLDER WITH WRENCH PROVIDED.

B-1™ DRILLING AND TAPPING MACHINE



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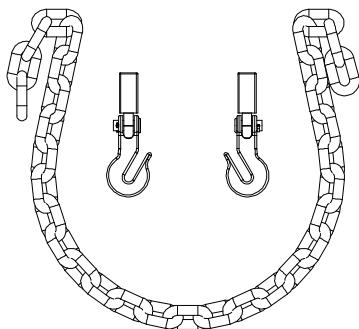


B-1 CHAIN RETROFIT KIT

353-58A.....\$310.82

INCLUDES:

- 353-58-7, B-1 ROUND CHAIN HOOK ASSEMBLY (2)
- 356-11 B-TOO™ CHAIN, ROUND



REF. NO.	DESCRIPTION	ITEM NUMBER	LIST PRICE
B-1 Drilling and Tapping Machine			353-003 \$6,149.20
Included with B1 Machine:			
1	Handle Assembly	353-29	\$301.65
	Handle	353-29-29	168.78 ea.
	Stop Pin Knobs (2)	353-29-49	45.09 ea.
	Stop Pins (2)	353-29-501	44.79 ea.
	Stop Pin Springs (2)	353-29-55	4.35 ea.
2	Socket Head Cap Screws (2)	353-51-2	2.60
3	Aluminum Alloy Flange Assembly	353-27	261.87
	Flange	353-27-27	170.92 ea.
	Stop Pin Inserts (2)	353-27-48	42.63 ea.
4	Hex Head Cap Screws (6)	353-51-1	3.10 ea.
5	Felt Dirt Seal	353-57-4	7.48
6	Thrust Bearing	353-56	426.06
7	Aluminum Alloy Head Assembly	353-26	526.59
	Head	353-26-26	458.89
	Bronze Bushings (2)	353-26-62	26.95 ea.
	Bronze Gland Nuts (2)	353-26-39	67.46 ea.
	Gland Packings (4)	353-26-573	9.46 ea.
8	Aluminum Alloy Ring	353-59-2	165.98
9	Ring Gasket	353-57-59	14.46
10	Pressure Seal	353-57-5	87.73
11	Aluminum Alloy Body Assembly	353-23	758.95
	Body	353-23-23	607.43
11a	Clevises (2)	353-23-42	120.32
11b	Clevis Pins (2)	353-23-4250	22.83 ea.
12	Brass Iron Pipe Plug	353-65	7.48 ea.
13	Brass Pet Cock (Replaces Brass Iron Pipe Plug)	353-64	74.17
14	Feed Yoke Assembly	353-28	474.00
	Feed Yoke	353-28-28	342.62
	Threaded Insert	353-28-48	92.79
	Socket Head Set Screw	353-28-512	1.53
15	Feed Screw	353-43	234.69
16	Top Saddle Gasket	353-57-080	16.80
17	Bottom Saddle Gasket 4" and Larger	353-57-084	50.59
	2" Size (not included)	353-57-082	38.72
	3" Size (not included)	353-57-083	22.34
18	B-1 Chain	353-58	458.68
	Additional 4 ft. chain section required for 14" - 24" mains, Two additional chain sections required for 26" - 32" mains Join chain sections with 353-58-4. 6.91		
19	Ratchet Wrench (large)	353-58-4	300.22
20	Ratchet Wrench (small)	353-60-11	209.99
21	Combination Drill/Tap Holder	353-11-1	656.56
	Holder	353-11-111	594.03
	Knockout Pin	353-11-505	53.57
	Cotter Pin	353-11-506	1.53
	Drive Stud	353-11-515	44.22
	Socket Head Set Screw	353-11-514	2.32
22	Yoke Bolts	353-28-511	42.18
23	Chain Tightening Studs (2)	353-58-515	79.77 ea.
24	B-1 Chain Holder (2)	353-58-6	88.67 ea.
25	Stop Holder	353-11-2	607.76
26	Brass Rings (2)	353-59-1	37.75 ea.
<i>Following Items NOT ILLUSTRATED:</i>			
	1/4" Hex Wrench	353-60-32	5.40
	3/16" Hex Wrench	353-60-31	3.33
	7/8" Open End Wrench	353-60-21	47.43
	1-15/16" Open End Wrench	353-60-22	79.77
	Steel Chest	353-61	610.24
	Tech Lube Tapping Compound	353-10-1	33.90

TRANSMATE



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B-1™ DRILLING & TAPPING MACHINE PARTS LIST

TO ORDER:

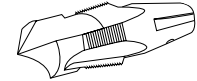
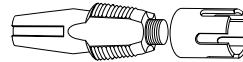
1. Order B-1 Drilling Machine.
2. Order Drill/Taps per desired tap size, thread type and pipe type. Drill/Tap corresponds to body inlet threads on corporation stop.
3. Order Screw Plugs with threads matching the body outlet threads of the corporation stops used.
4. Order a pipe saddle for each size of pipe the B-1 will be used on.

NOTE: One extra chain section (Item Number 353-58) required for 14" - 24" mains, two extra chain sections required for 26" - 32" mains.

5. Order Power Unit, Ridgid 600 (373-00) and the Extended Feed Yoke (353-28E) if desired.
6. Order extra Tapping Compound if needed (see Page TM-30).

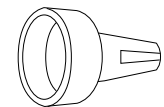
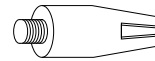
**CUTTING TOOLS AND ACCESSORIES
USE FOR THREADED CORPORATION STOPS**

CUTTING DRILL/TAPS



355-01-210 PVC CUTTER 3/4"
353-04-206 PVC TAP 3/4" CC
353-01-206 PVC CUTTER 1"
353-04-208 PVC TAP 1" CC

IRON PIPE THREAD OR
AWWA THREAD



DRIVE THREAD

**SCREW
PLUGS**

COMPRESSION
OR FEMALE
IRON PIPE

ITEM NUMBER	DESCRIPTION	LIST PRICE
PVC CUTTER AND TAP (requires both)		
For PVC Only		
355-01-210	Cutter, PV 3/4": 5957 (AWWA CC thread)	\$311.50
353-04-206	Tap, 3/4" PVC: 5956 (AWWA CC thread)	436.39
353-01-206	Cutter, 1" PVC: 5975-1 (AWWA CC thread)	312.24
353-04-208	Tap, 1" PVC: 5956 (AWWA CC thread)	504.54
DRILL/TAPS		
For Ductile, Cast Iron & A/C		
353-02-106	Drill/tap, 3/4" IP: 5951 (Iron Pipe thread)	457.16
353-02-108	Drill/tap, 1" IP: 5951 (Iron Pipe thread)	484.87
353-02-206	Drill/tap, 3/4" CC: 5950, 5952 (AWWA thread)	323.53
353-02-208	Drill/tap, 1" CC: 5950, 5952 (AWWA thread)	442.36
SCREW PLUGS (other thread forms available upon request)		
353-06-106	Screw Plug: 5960 (3/4" Coarse Thread Compression)	241.71
353-06-108	Screw Plug: 5960 (1" Coarse Thread Compression)	244.74
353-06-110	Screw Plug: 5960 (1 1/4" Coarse Thread Compression) ¹	322.22
353-06-306	Screw Plug: 5960-2 (3/4" Female Iron Pipe)	320.83
353-06-308	Screw Plug: 5960-2 (1" Female Iron Pipe)	329.74
353-06-406	Screw Plug: 5961 (3/4" Drive Thread)	329.74
353-06-408	Screw Plug: 5961 (1" Drive Thread)	338.64

¹ For use on 1" Corporations with 1-1/4" outlet threads.

ITEM NUMBER	DESCRIPTION	LIST PRICE
PIPE SADDLES		
353-08-016	*Pipe Saddle: 5970 (to mount B-1 on 2" pipe)	\$ 75.64
353-08-024	*Pipe Saddle: 5970 (to mount B-1 on 3" pipe)	75.64
353-08-032	Pipe Saddle: 5970 (to mount B-1 on 4" pipe)	75.64
353-08-048	Pipe Saddle: 5970 (to mount B-1 on 6" pipe)	75.64
353-08-064	Pipe Saddle: 5970 (to mount B-1 on 8" pipe)	75.64
353-08-080	Pipe Saddle: 5970 (to mount B-1 on 10" pipe)	75.64
353-08-096	Pipe Saddle: 5970 (to mount B-1 on 12" pipe)	75.64
353-08-112	Pipe Saddle: 5970 (to mount B-1 on 14" pipe)	75.64
353-08-128	Pipe Saddle: 5970 (to mount B-1 on 16" pipe)	75.64
353-08-144	Pipe Saddle: 5970 (to mount B-1 on 18" pipe)	75.64
353-08-160	Pipe Saddle: 5970 (to mount B-1 on 20" pipe)	75.64
353-08-192	Pipe Saddle: 5970 (to mount B-1 on 24" pipe)	75.64
353-08-240	Pipe Saddle: 5970 (to mount B-1 on 30" pipe)	248.02
353-08-288	Pipe Saddle: 5970 (to mount B-1 on 36" pipe)	248.02
353-08-336	Pipe Saddle: 5970 (to mount B-1 on 42" pipe)	248.02
353-08-384	Pipe Saddle: 5970 (to mount B-1 on 48" pipe)	248.02
353-08-432	Pipe Saddle: 5970 (to mount B-1 on 54" pipe)	248.02
353-08-480	Pipe Saddle: 5970 (to mount B-1 on 60" pipe)	248.02
* must order Bottom Saddle Gasket (see TM-12)		
TAPPING COMPOUND		
353-10-1	Tapping Compound	33.90
353-10-3	Tapping Compound / Case (12)	390.95
POWER OPTION		
373-00	Rigid 690 Electric Drive with 5/8" sq. drive adapter (373-05-1)	3,075.52
370-70	GF-15 Ground Fault Interrupter Plug (required)	131.61
353-28E	Extended Feed Yoke (required for use)	567.54

B-TOO™ DRILLING & TAPPING MACHINE

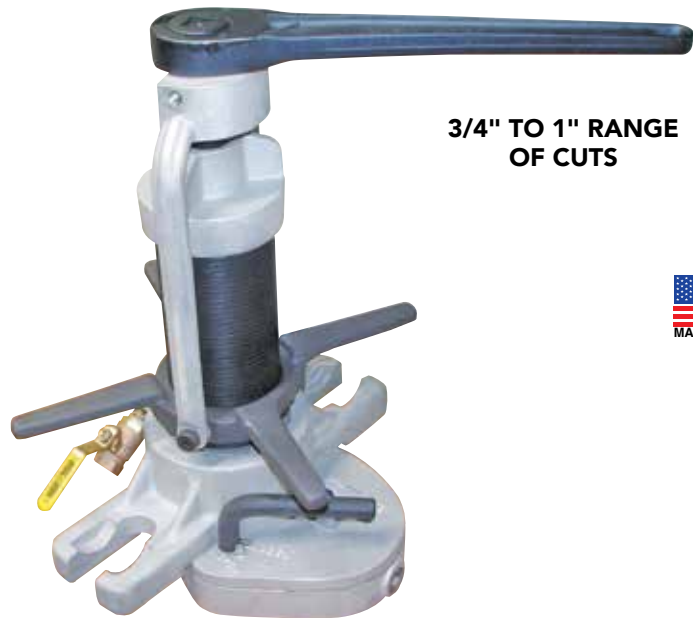


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MATERIAL SPECIFICATIONS

- Powered by hand or with Ridgid 690 (11-29)
- High strength, modular aluminum and steel components
- Inserts any 3/4" to 1" corporation stop under pressure
- Extracts threaded corporation stops from the main and inserts a main plug
- Uses Mueller B101 saddles, drill/taps, ratchets, chain holders, chains and screw plugs



3/4" TO 1" RANGE OF CUTS



SHORT COMPACT DESIGN

Provides greater stability when cutting with the drill tap and easier alignment when inserting the corporation stop.

Can be used on water pressures up to 250 psi without additional fittings or components.

ITEM NUMBER	DESCRIPTION	LIST PRICE
356-00	B-Too Tapping Machine for Direct Insertion	\$4,366.81
353-60-32	1/4" Hex Wrench	included
353-10-1	Tapping Compound	included
356-61	Tool Box	included

see pages TM-16 and TM-17 for complete list of components

TO ORDER:

1. Order B-Too Drilling Machine.
2. Order Drill/Taps per desired tap size, thread type and pipe type. Drill/Tap corresponds to body inlet threads on corporation stop.
3. Order Screw Plug Body (356-22-01) and Quick Release Screw Plugs with threads matching the body outlet threads of the corporation stops used. See chart to match screw plugs to bodies. (see page TM-17)
4. Order a pipe saddle for each size of pipe the B-Too will be used on. One extra chain section (Item Number 356-11) required for 18" - 30" mains, two extra chain sections required for 32" - 48" mains.
5. Order Power Unit if desired.
6. Order extra Tapping Compound if needed. (see pg. TM-30)

TRANSMATE



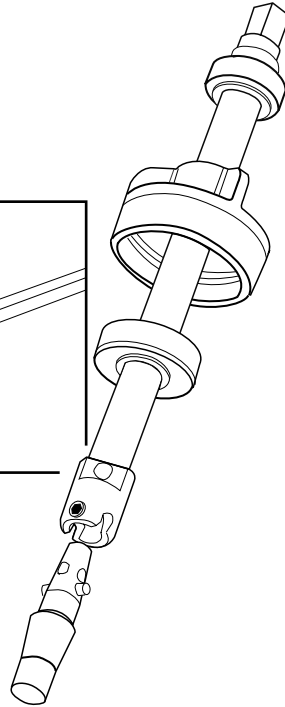
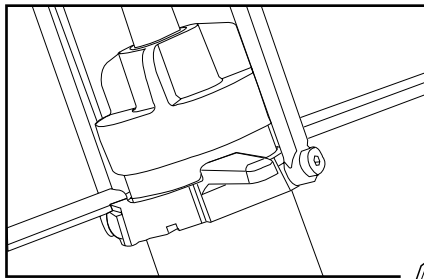
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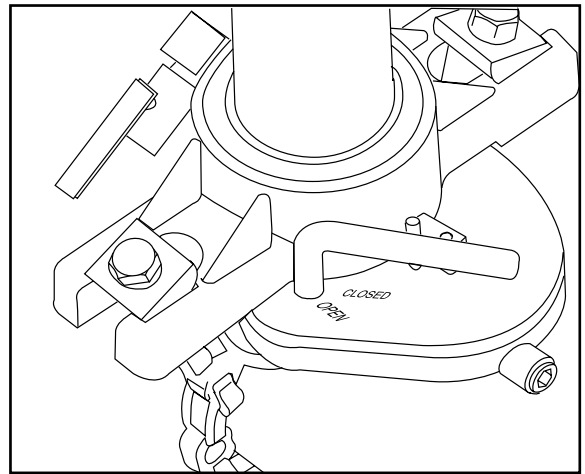
B-TOO™ DRILLING & TAPPING MACHINE

**THE RUGGED, LIGHTWEIGHT B-TOO™
MAKES DRILLING AND TAPPING A PIPE AS
SIMPLE AS THESE STEPS...**

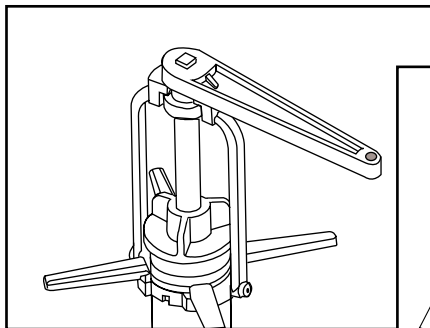
LOAD DRILL TAP



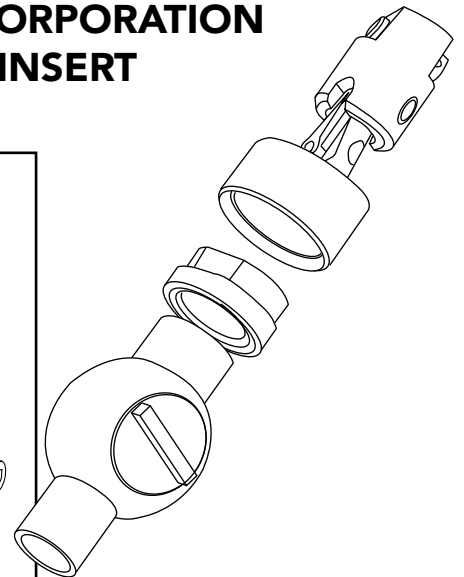
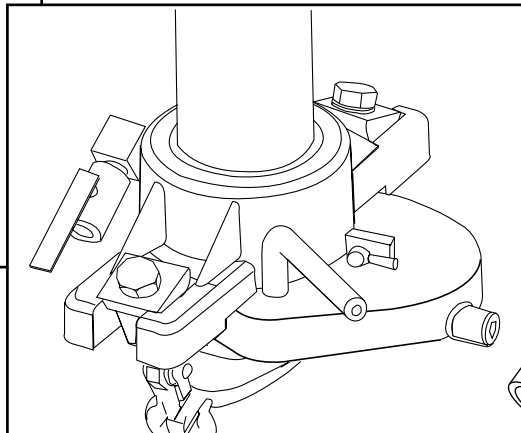
MOUNT ON PIPE



DRILL / TAP



**PREPARE CORPORATION
STOP AND INSERT**

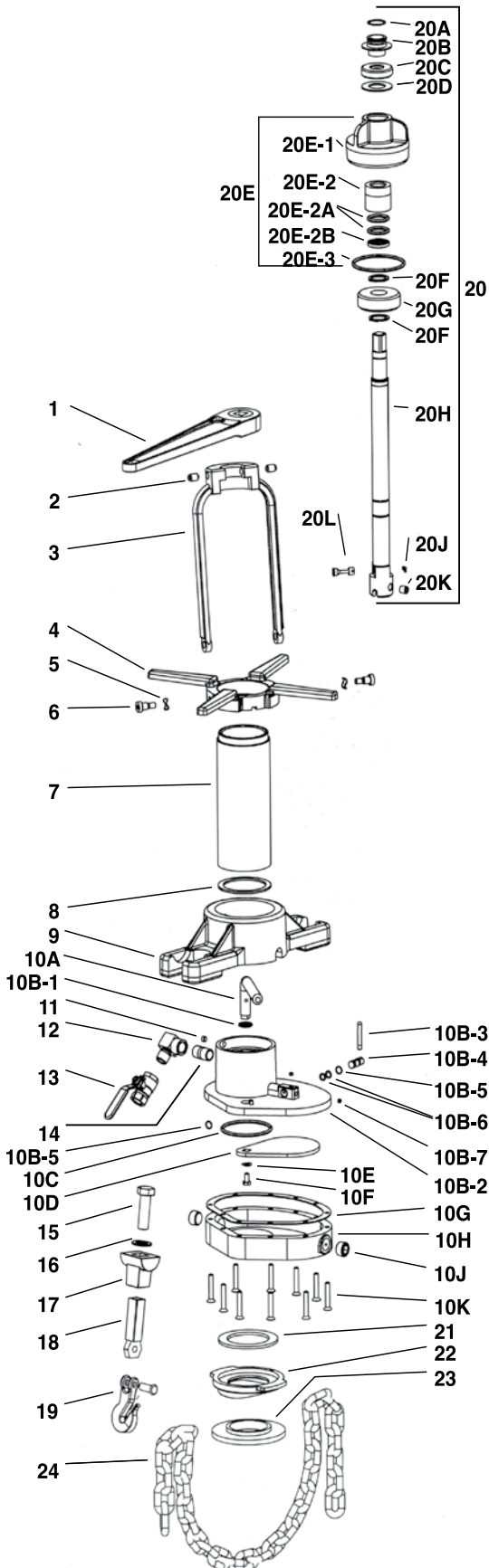


B-TOO™ DRILLING & TAPPING MACHINE



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REF. NO.	ITEM NUMBER	DESCRIPTION	LIST PRICE
1	356-19	Ratchet Wrench (13/16")	\$300.22
2	356-06-02	Yoke Plunger, Vlier Std. (2 req'd)	ea.17.32
3	356-06	Yoke	172.74
4	356-07	Feed Nut	167.27
5	356-06-03	Yoke Bolt Washer (2 req'd)	ea. 5.53
6	356-06-01	Yoke Bolt, 1/2" x 1/2" socket (2 req'd)	ea. 5.45
7	356-05	Barrel	207.89
8	356-08-03	Gasket, Slide Gate to Barrel	16.78
9	356-12	Clamp	199.07
10	356-01A	Slide Gate Assembly	874.30
10A	356-02	Slide Gate Disk Handle	128.47
10B	356-03A	Slide Gate Top Assembly	510.60
10B-1	356-02-01	Slide Gate Handle O-ring	3.88
10B-2	356-03	Slide Gate Top	336.96
10B-3	356-20-10	By-Pass Valve: 1/4" Spool Lever	32.90
10B-4	356-20-1	By-Pass Valve: 1/4" Spool	72.61
10B-5	356-20-09	By-Pass Valve: 1/4" Spool Retaining Ring (2 req'd)	ea. 1.33
10B-6	356-20-08	By-Pass Valve: 1/4" Spool O-ring	1.33
10B-7	356-03-01	Slide Gate Top Plug 1/16" NPT Plug (2 req'd)	ea. 1.33
10C	356-04-01	Slide Gate Disk O-ring (2 req'd)	4.13
10D	356-04	Slide Gate Disk	118.36
10E	356-04-03	Disk Handle Washer	5.62
10F	356-04-04	Slide Gate Disk Screw	1.33
10G	356-08-02	Gasket Slide Gate	43.66
10H	356-01	Slide Gate Bottom	269.37
10J	356-01-02	Slide Gate Bottom Plug (2 req'd) 3/4" NPT	ea. 3.33
10K	356-03-05	Slide Gate Screw (10 req'd)	ea. 1.33
11	356-03-03	Slide Gate Top to Barrel Set Screw	1.33
12	356-03-04	Exhaust Elbow	18.29
13	371-02	Exhaust Valve	24.57
14	356-01-03	Slide Gate Pipe Nipple	2.32
15	356-14-02	Swivel Bolt for Rd. Link Chain (2 req'd)	ea. 6.37
16	8FW-Z12	Zinc Plated Washer 3/4" (2 req'd)	ea. 1.12
17	356-15	Hook Holder (2 req'd)	ea. 62.38
18	356-16	Hook Link (2 req'd)	ea. 80.22
19	356-11-01	Round Link Chain Hook (2 req'd)	ea. 25.13
20	356-10A	Holder Assembly	926.10
20A	356-21	Spiral Snap Ring	6.66
20B	356-17	Stop Collar	88.90
20C	355-56	Thrust Bearing	44.57
20D	356-18	Shaft Support Thrust Washer	62.38
20E	356-08A	Cap Assembly	244.14
20E-1	356-08	Cap only	177.09
20E-2	356-09A	Holder Bushing Assembly	77.76
20E-2a	356-09-01	Holder Bushing O-ring (2 req'd)	ea. 1.33
20E-2b	356-09-02	Holder Bushing Wiper	17.44
20E-3	356-08-01	Cap O-ring	1.99
20F	350-20-54	Shaft End Snap Ring (2 req'd)	ea. 12.72
20G	356-13	Holder Guide	28.63
20H	356-10	Holder	305.53
20J	353-11-506	Holder Cotter Pin	1.53
20K	353-11-514	Holder Socket Head Set Screw	2.32
20L	353-11-505	Holder Knockout Pin	53.57
21	356-08-04	Top Saddle Gasket	17.19
22	356-23-xx	B-Too Saddle xx Mueller Style (See following page)	
23	353-57-084	4" Bottom Saddle Gasket for 4" and larger	50.59
	353-57-083	3" Bottom Saddle Gasket, (Not Included)	22.34
	353-57-082	2" Bottom Saddle Gasket, (Not Included)	38.72
24	356-11	Chain, Round Link	71.68
Not Illustrated:			
	353-60-32	1/4" Hex Wrench	5.40
	353-10-1	Tapping Compound	33.90
	356-61	Tool Box	620.89

TRANSMATE



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B-TOO™ DRILLING & TAPPING MACHINE PARTS LIST

ITEM NUMBER	DESCRIPTION	LIST PRICE
PVC Drills and Taps (requires both Cutter and Tap)		
355-01-210	Cutter, PCV 3/4": 5957 (AWWA CC thread)	\$311.50
353-04-206	Tap, 3/4" PVC: 5956 (AWWA CC thread)	436.39
353-01-206	Cutter, 1" PVC: 5975-1 (AWWA CC thread)	312.24
353-04-208	Tap, 1" PVC: 5956 (AWWA CC thread)	504.54
353-03	Drill Tap Roll Pin	1.96
DRILL/TAPS		
For Ductile, Cast Iron & A/C		
353-02-106	Drill/tap, 3/4" IP: 5951 (IP thread)	457.16
353-02-108	Drill/tap, 1" IP: 5951 (IP thread)	484.87
353-02-206	Drill/tap, 3/4" CC: 5950, 5952 (AWWA thread)	323.53
353-02-208	Drill/tap, 1" CC: 5950, 5952 (AWWA thread)	442.36
353-03	Drill Tap Roll Pin	1.96
SCREW PLUGS (other thread forms available upon request)		
356-22-01	B-Too, Quick Release Screw Plug Body 1"	213.88
356-22-02	B-Too, Quick Release Screw Plug 1" Coarse Thread Compression	169.34
356-22-03	B-Too, Quick Release Screw Plug 1" MIP	169.34
356-22-04	B-Too, Quick Release Screw Plug 1" Drive Thread	169.34
356-22-05	B-Too, Quick Release Screw Plug 1" FIP	169.34
356-22-06	B-Too, Quick Release Screw Plug 3/4" Coarse Thread Compression	169.34
356-22-07	B-Too, Quick Release Screw Plug 3/4" FIP	169.34
356-22-08	B-Too, Quick Release Screw Plug 3/4" MIP	169.34
356-22-09	B-Too, Quick Release Screw Plug 3/4" Drive Thread	169.34
356-22-10	B-Too, Quick Release Screw Plug Body 1-1/4" ¹	249.36
356-22-11	B-Too, Quick Release Screw Plug 1-1/4" Coarse Thread Compression ¹	196.07
356-22-12	B-Too, Quick Release Screw Plug 1-1/4" FIP ¹	196.07
356-22-13	B-Too, Quick Release Screw Plug 1" Fine Thread Compression	169.34
356-22-14	B-Too, Quick Release Screw Plug 3/4" Fine Thread Compression	169.34

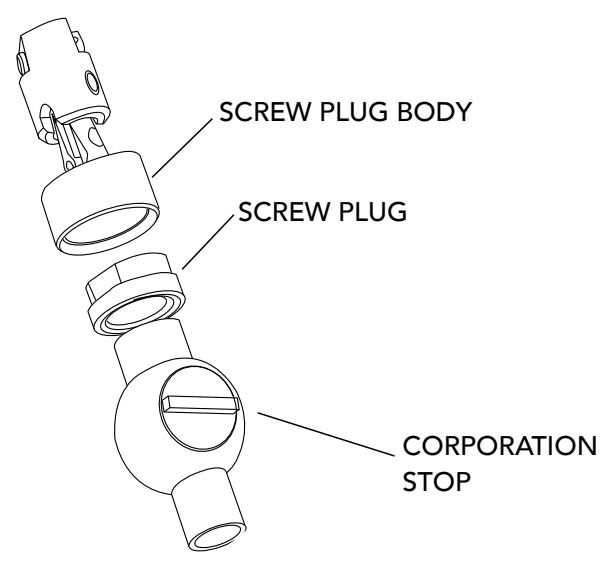
¹ For use on 1" Corporations with 1-1/4" outlet threads.

ITEM NUMBER	DESCRIPTION	LIST PRICE
PIPE SADDLES		
356-23-02	*B-Too, Saddle 2" Mueller Style	\$62.38
356-23-03	*B-Too, Saddle 3" Mueller Style	62.38
356-23-04	B-Too, Saddle 4" Mueller Style	62.38
356-23-06	B-Too, Saddle 6" Mueller Style	62.38
356-23-08	B-Too, Saddle 8" Mueller Style	62.38
356-23-10	B-Too, Saddle 10" Mueller Style	62.38
356-23-12	B-Too, Saddle 12" Mueller Style	62.38
356-23-14	B-Too, Saddle 14" Mueller Style	62.38
356-23-16	B-Too, Saddle 16" Mueller Style	62.38
356-23-18	B-Too, Saddle 18" Mueller Style	62.38
356-23-20	B-Too, Saddle 20" Mueller Style	62.38
356-23-24	B-Too, Saddle 24" Mueller Style	62.38

* must order bottom saddle gasket, see TM-16
30" - 60" SADDLES ALSO AVAILABLE

TAPPING COMPOUND		
353-10-1	Tapping Compound	33.90
353-10-3	Tapping Compound / Case (12)	390.95

POWER OPTION		
373-356	Ridgid 690 Electric Drive w/ 13/16" sq. drive adapter	3,075.52
370-70	GF-15 Ground Fault Interrupter Plug (required)	131.61



SCREW PLUG CHART		
BODY SIZE	SCREW PLUGS THAT FIT	
1" Body	1" Compression (356-22-01) 1" MIP 1" Drive Thread 1" Mueller Thread	3/4" Compression 1" FIP 3/4" FIP 3/4" MIP 3/4" Drive Thread 3/4" Mueller Thread
1-1/4" Body	1-1/4" Compression	1-1/4" FIP

CUTTING DRILL/TAPS



355-01-210 PVC CUTTER 3/4" CC
 353-04-206 PVC TAP 3/4" CC
 353-01-206 PVC CUTTER 1" CC
 353-04-208 PVC TAP 1" CC

IRON PIPE THREAD OR AWWA THREAD

M-1™ PIPE DRILLING MACHINE

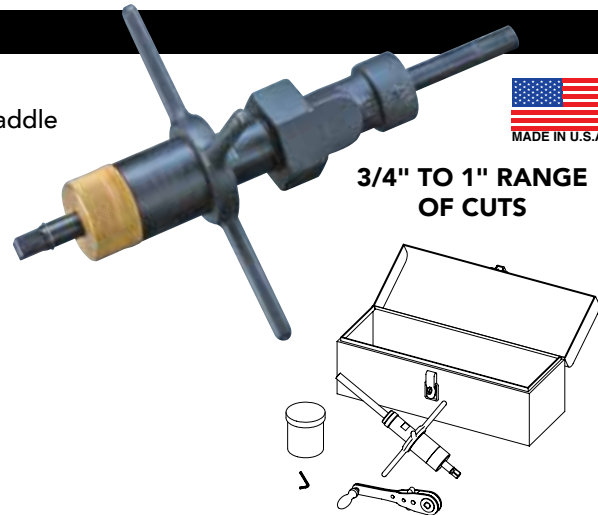


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MATERIAL SPECIFICATIONS

- Weighs approximately 10 lbs and easy to handle, 14" long
- 3/4" to 1" range of cuts using a separate corporation stop and saddle
- Cuts all types of water mains, wet and dry
- Easy to set up and use
- Uses TapMate Too adapters, arbor, shell cutters and ratchet.



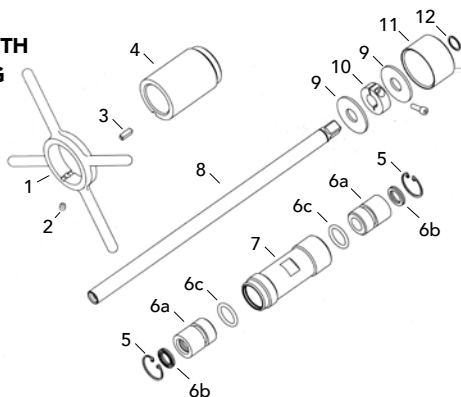
3/4" TO 1" RANGE OF CUTS

TO ORDER:

1. Order Base Machine
2. Order Cutters or Spade Bits per desired cut size and pipe type
3. Order Adapters per size and corp outlet type
4. Order Small Holesaw Arbor
5. Power Option if desired (see TM-28).

ITEM NUMBER	DESCRIPTION	LIST PRICE
352-00	M-1 Drilling Machine	\$1,286.56
Included with M1 Machine:		
351-60-1	Ratchet Wrench	included
352-60-3	5/32" Allen Wrench	included
352-61	Tool Box	included
353-10-1	Tapping Compound	included
HOLESAWS (require Small Holesaw Arbor)		
For Ductile, Cast Iron & A/C		
351-01-106	3/4" Carbide Cutter (actual OD 11/16")	126.31
351-01-108	1" Carbide Cutter (actual OD 7/8")	142.38
351-01-406	3/4" HSS Carbide Tip Holesaw (actual OD 11/16")	44.33
351-01-408	1" HSS Carbide Tip Holesaw (actual OD 7/8")	52.14
351-01-506	3/4" Bimetal Holesaw ¹	24.94
351-01-508	1" Bimetal Holesaw ¹	28.22
For PVC Only		
351-01-206	3/4" Cutter for PVC (actual OD 11/16")	131.40
351-01-208	1" Cutter for PVC (actual OD 7/8")	134.37
SPADE BITS		
351-03-12	Spade Bit Holder	275.38
351-03-106	3/4" Spade Bit (actual OD 11/16")	76.85
351-03-108	1" Spade Bit (actual OD 23/32")	80.64
351-60-5	Torx Key Wrench	8.08

M-1 PARTS INCLUDED WITH M1 DRILLING MACHINE



ITEM NUMBER	DESCRIPTION	LIST PRICE
ADAPTERS		
351-05-406	3/4" Female Iron Pipe Adapter	\$138.53
351-05-408	1" Female Iron Pipe Adapter	138.53
351-05-410	1 1/4" Female Iron Pipe Adapter ²	138.53
351-05-506	3/4" Coarse Thread Compression Adapter	138.53
351-05-508	1" Coarse Thread Compression Adapter	138.53
351-05-510	1 1/4" Coarse Thread Compression Adapter ²	138.53
351-05-606	3/4" Male Iron Pipe Adapter	138.53
351-05-608	1" Male Iron Pipe Adapter	138.53
351-05-706	3/4" Fine Thread Compression Adapter	138.53
351-05-708	1" Fine Thread Compression Adapter	138.53
351-05-710	1 1/4" Fine Thread Compression Adapter ²	138.53
<i>Special adapters can be made upon request</i>		
ARBOR		
351-14-1	Small Holesaw Arbor, (includes Arbor Pilot Drill 351-01-402) (use with 3/4" and 1" cutters / holesaws)	86.02
351-01-402	1/4" Arbor Pilot Drill (for small holesaw arbors) included w/ large & small arbors	17.46
POWER OPTION		
373-351	Ridgid 690 Electric Drive w/1/2" sq. adapter	3,075.52
370-70	GF-15 Ground Fault Interrupter Plug (required)	131.61
TAPPING COMPOUND		
353-10-1	Tapping Compound	33.90
353-10-3	Tapping Compound / Case (12)	390.95

² For use on 1" Corporations with 1-1/4" outlet threads.

REF. NO.	DESCRIPTION	ITEM NUMBER	LIST PRICE
1	Handle for Lead Nut	351-29-1	\$162.66
2	Arbors & Handle Set Screw	351-51-2	1.32
3	Lead Nut Key	351-24-66	5.19
4	M1 Feeder	352-24	137.12
5	Lead Tube Snap Ring	351-23-54	2.57
6	Lead Tube Bushing Complete	351-22-2A	80.64
6a	Lead Tube Bushing	351-22-2	73.88
6b	Poly Pak Seal	351-57-2	6.70
6c	Lead Tube Bushing O-Ring	351-57-1-62	1.32
7	Body	352-23	177.10
8	Shaft, Main	352-20	167.60
9	Thrust Washer	352-53-1	17.77
10	Clamp	352-63	29.63
11	Bronze Cap	352-35	141.92
12	Retaining Snap Ring	352-54	2.95

Drill Holders, Drills, Holesaws, PVC Adapters, Cutter Adapters, Pilot Drills and Machine Adapters are ordered separately (see above).

TRANSMATE



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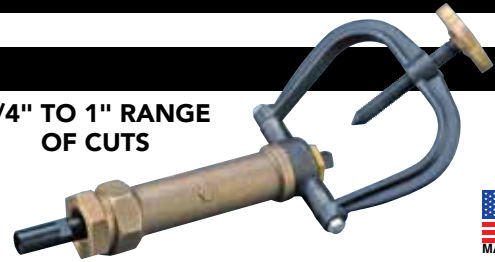
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5930™ PIPE DRILLING MACHINE

MATERIAL SPECIFICATIONS

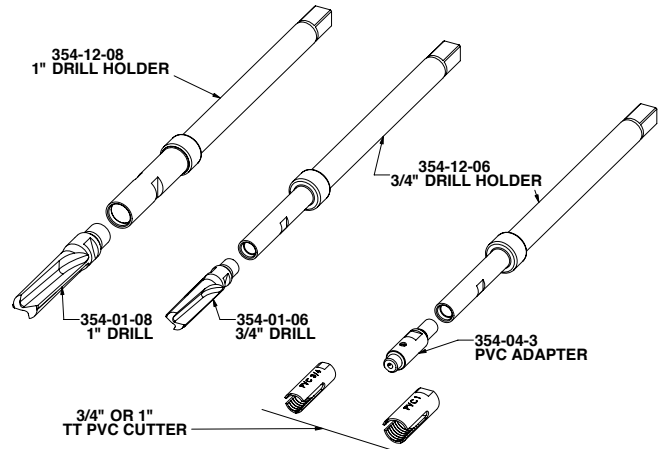
- Weighs approximately 20 lbs
- Compact and easy to handle
- 3/4" to 1" range of cuts using a corporation stop and saddle
- Cuts all types of water mains, wet and dry
- Easy to set up and use

3/4" TO 1" RANGE OF CUTS



TO ORDER:

1. Order Base Machine.
2. Order Drill Holder.
3. Order Cutters and Adapters per desired cut size for PVC.
4. Order Adapters per corp size and thread type.
5. Order Drills per cut sizes.
6. Order Drill Holders per drill sizes.



ITEM NUMBER	DESCRIPTION	LIST PRICE
354-00	5930 Drilling Machine	\$1,600.68

354-60-4	Crescent Wrench (2)	included
354-60-1	Ratchet Wrench	included
352-61	Tool Box	included
353-10-1	Tapping Compound	included

DRILLS AND DRILL HOLDERS

Individual Holder required for each size drill
For Ductile, Cast Iron, A/C & Steel

354-01-06	3/4" Drill: 5933 (actual OD 11/16")	175.59
354-01-08	1" Drill: 5933 (actual OD 15/16")	246.56
354-12-06	3/4" Drill Holder: 5934	346.10
354-12-08	1" Drill Holder: 5934	346.10
354-01-02	3/16" Pilot Drill: 9445	14.42

Not for use when tapping PVC

PVC

354-04-3	3/4" & 1" PVC Adapter: 9456 <i>Required for PVC Cutters (includes 354-01-02)</i>	230.57
354-12-06	3/4" Drill Holder	346.10
351-01-206	3/4" PVC Cutter (actual OD 11/16")	131.40
351-01-208	1" PVC Cutter (actual OD 7/8")	134.37

ITEM NUMBER	DESCRIPTION	LIST PRICE
ADAPTERS		

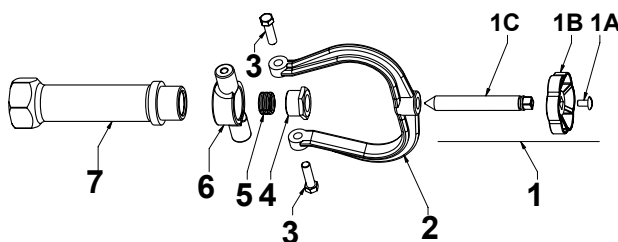
354-05-406	3/4" Female Iron Pipe Adapter: 5931-2	216.32
354-05-408	1" Female Iron Pipe Adapter: 5931-2	224.96
354-05-410	1 1/4" Female Iron Pipe Adapter: 5931-2 ¹	233.60
354-05-506	3/4" Coarse Thread Compression Adapter: 5931	216.32
354-05-508	1" Coarse Thread Compression Adapter: 5931	224.96
354-05-510	1 1/4" Coarse Thread Compression Adapter: 5931 ¹	233.60
354-05-606	3/4" Male Iron Pipe Adapter: 5932	216.32
354-05-608	1" Male Iron Pipe Adapter: 5932	224.96
354-05-610	1 1/4" Male Iron Pipe Adapter: 5932 ¹	233.60
354-05-706	3/4" Fine Thread Compression	215.48
354-05-708	1" Fine Thread Compression	224.96

Special adapters can be made upon request

¹ For use on 1" Corporations with 1-1/4" outlet threads.

5930 PARTS

INCLUDED WITH M1 DRILLING MACHINE



REF. NO.	DESCRIPTION	ITEM NUMBER	LIST PRICE
1	Feed Screw complete	354-43	\$204.20
1A	Feed Screw Bolt	354-54-51	1.40
1B	Wheel Feed Screw	354-43-1	26.68
1C	Feed Screw Bolt Only	354-43-0	185.97
2	Feed Yoke	354-28	176.51
3	Yoke Bolt (2 required)	354-28-511	ea. 1.73
4	Gland Nut	354-39	78.58
5	Gland Packing Seal (3 required)	353-26-573	ea. 9.46
6	Top Yoke	354-28-1	169.60
7	Body	354-25	393.23
<i>Not illustrated:</i>			
6"	Crescent Wrench (2 required)	354-60-4	ea. 57.78
	Tool Box	352-61	106.26
	Ratchet Wrench	354-60-1	382.66

5935™ PIPE DRILLING MACHINE



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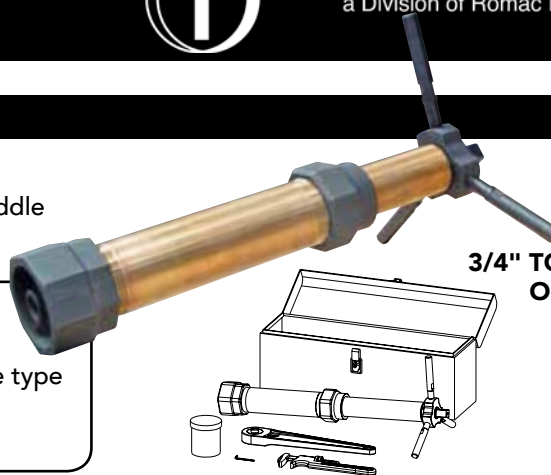
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MATERIAL SPECIFICATIONS

- Weighs approximately 40 lbs.
- 3/4" to 2" range of cuts using a corporation stop and saddle
- Cuts all types of water mains, wet and dry



3/4" TO 2" RANGE OF CUTS



TO ORDER:

1. Order Base Machine
2. Order Drills or Holesaws per desired cut size and pipe type
3. Order Adapters
4. Order Power Option if desired

ITEM NUMBER	DESCRIPTION	LIST PRICE
355-00	5935 Pipe Drilling Machine	\$2,429.55

Included with 5935 Machine:		
355-60-4	Adjustable Wrench SPUD	included
355-60-1	Ratchet Wrench	included
355-61	Tool Box	included
355-60-3	1/8" Allen Wrench	included
353-10-1	Tapping Compound	included

DRILL

For Ductile, Cast Iron, A/C & Steel		
354-01-06	3/4" Drill: 5933 (actual OD 11/16") Requires Drill Adapter 355-12-06	175.59
355-01-408	1" Drill: 5937-1 (actual OD 7/8")	440.50
355-01-410	1 1/4" Drill: 5937-1 (actual OD 1 1/8")	444.94
355-01-412	1 1/2" Drill: 5937 (actual OD 1 7/16")	448.22
355-01-416	2" Drill: 5937-1 (actual OD 1 3/4")	592.48
355-04-4	2.5 Drill Extension (Used when doing a 2" tap through a threaded gate valve)	238.88

PVC

351-01-206	3/4" PVC Cutter (actual OD 11/16")	131.40
351-01-208	1" PVC Cutter (actual OD 15/16")	134.37
351-01-210	1 1/4" PVC Cutter (actual OD 1 1/8")	147.82
351-01-212	1 1/2" PVC Cutter (actual OD 1 3/8")	161.23
351-01-216	2" PVC Cutter (actual OD 1 7/8")	174.68
355-12-06	Adapter: 5938 (required for 3/4", 1" and 1 1/4" PVC cutters. Adapter comes with, and requires the use of PVC Adapter: 354-04-3)	392.79
355-04-3	Large PVC Adapter: 9546 (Required for 1 1/2" & 2" PVC Cutters)	190.34

ITEM NUMBER	DESCRIPTION	LIST PRICE
ADAPTERS		

355-05-406	3/4" Female Iron Pipe Adapter: 5936-3	\$259.57
355-05-408	1" Female Iron Pipe Adapter: 5936-3	259.57
355-05-410	1 1/4" Female Iron Pipe Adapter: 5936-3	259.57
355-05-412	1 1/2" Female Iron Pipe Adapter: 5936-1	259.57
355-05-416	2" Female Iron Pipe Adapter: 5936-1	259.57
355-05-420	2 1/2" Female Iron Pipe Adapter: 5936-1	259.57
355-05-506	3/4" Coarse Thread Compression Adapter: 5936-2	259.57
355-05-508	1" Coarse Thread Compression Adapter: 5936-2	259.57
355-05-510	1 1/4" Coarse Thread Compression Adapter: 5936-2	259.57
355-05-512	1 1/2" Coarse Thread Compression Adapter: 5936	242.59
355-05-706	3/4" Fine Thread Compression	276.87
355-05-708	1" Fine Thread Compression	276.87
355-05-712	1 1/2" Fine Thread Compression	276.87
355-05-716	2" Fine Thread Compression	276.87

*** Special Adapters can be made per request ***

Note: Female Adapters thread into Part No. 355-37 except the 2 1/2" Female Iron Pipe Adapter which will replace Part No. 355-37. The 355-37 fits 2" Flare Copper Corporation Stops, no 2" Coarse Thread Compression is required.

TAPPING COMPOUND

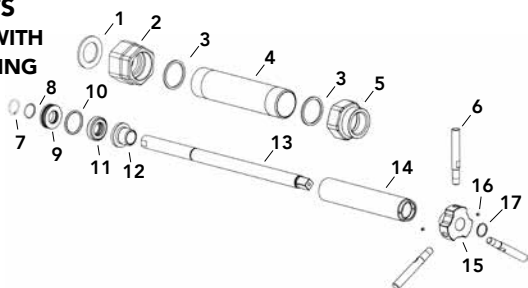
353-10-1	Tapping Compound	33.90
353-10-3	Tapping Compound / Case (12)	390.95

POWER OPTION

373-355	Ridgid 690 Electric Drive w/ 7/8" sq. drive adapter See pg. TM-28	3,075.52
370-70	GF-15 Ground Fault Interrupter Plug (required)	131.61

5935 PARTS

INCLUDED WITH 5935 DRILLING MACHINE



REF. NO.	DESCRIPTION	ITEM NUMBER	LIST PRICE
1	Adapter Gasket	355-57-05	\$ 16.23
2	Bottom Cylinder Coupling	355-37	219.76
3	Top & Bottom Cylinder Gaskets (2 req.)	355-38-57	ea. 11.67
4	Cylinder	355-38	\$210.42

REF. NO.	DESCRIPTION	ITEM NUMBER	LIST PRICE
5	Top Cylinder Coupling	355-36	363.40
6	Handle for Lead Nut (3 req.)	350-29	ea. 98.78
7	Shaft End Snap Ring	350-20-54	12.72
8	Collar O-Ring (inside)	355-40-5711	2.25
9	Collar	355-40	106.84
10	Collar O-Ring (outside)	355-40-5712	2.25
11	Thrust Bearing	355-56	44.57
12	Feed Screw (bottom)	355-43-2	135.95
13	Drill Holder	355-12	333.11
14	Feeder Screw	355-43	420.16
15	Tri-Handle Holder	355-29-1	207.65
16	Set Screw	351-23-512	1.32
17	Spiral Snap Ring	355-54	6.66
Not Illustrated:			
	Ratchet Wrench	355-60-1	369.42
	Adjustable Wrench	355-60-4	113.81
	1/8" Allen Wrench	355-60-3	3.01
	Tapping Compound	353-10-1	33.90
	Tool Box	355-61	223.37

Drill Holders, Drills, Holesaws, PVC Adapters, Cutter Adapters, Pilot Drills and Machine Adapters are ordered separately (see above).



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TAPMATE DRY TAP™

DRY DRILLING & TAPPING MACHINE

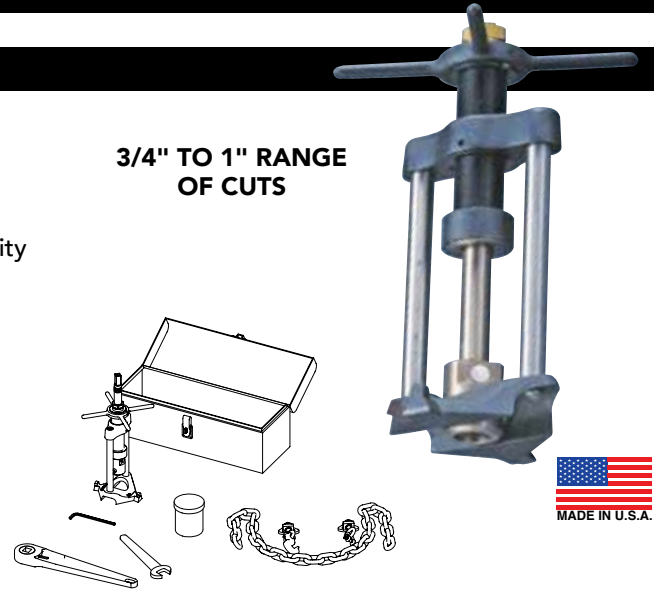
MATERIAL SPECIFICATIONS

- Weighs approximately 28 lbs.
- Easy to use, with or without power drive
- 3/4" through 1" drill/taps through all types of mains
- Drilling shaft is completely supported at two points for rigidity
- Uses B-1 drill/tap holder and accessories
- Lightweight and sturdy construction
- Conforms to pipe sizes 3" or larger (Extra chain lengths required for 18" mains or larger)

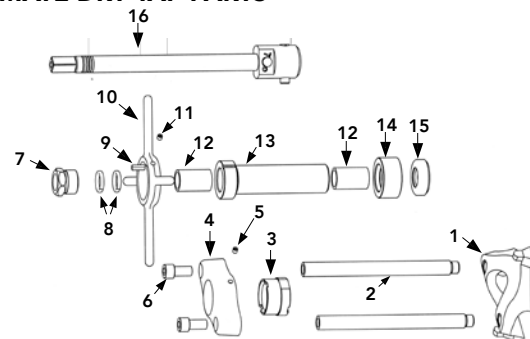
TO ORDER:

1. Order Base Machine.
2. Order Drill/Taps per cut size, thread type and tap size.
3. Order Power Option if desired.

3/4" TO 1" RANGE OF CUTS



TAPMATE DRY TAP PARTS



ITEM NUMBER	DESCRIPTION	LIST PRICE
357-00	TapMate Dry Tap	\$2,552.42
353-60-11	Included with Dry Tap Machine: Ratchet Wrench (5/8" sq. drive)	included
357-55	Delta ring chain assembly	included
353-11-1	Drill Tap Holder	included
353-60-22	1 5/16" Open End Wrench	included
353-60-32	1/4" Allen Wrench	included
353-10-1	Tapping Compound	included
355-61	Tool Box	included
OPTIONAL STRAPS AVAILABLE		
357-66	48" Strap (includes Strap Ratchet)	209.51
357-100	Long Strap (for 14" to 24" diameter mains)	130.98
356-11	Chain, Round Link Call for longer straps	71.68
PVC DRILL AND TAPS (require both tap and cutter)		
For PVC Only		
353-04-206	3/4" PVC Tap: 5956 (AWWA CC thread)	436.39
355-01-210	3/4" PVC Cutter - 5957-3/4"	311.50
353-04-208	1" PVC Tap: 5956 (AWWA CC thread)	504.54
353-01-206	1" PVC Cutter: 5975-1 (makes 1 1/4" hole)	312.24
DRILL / TAPS		
For Ductile, Cast Iron & A/C		
353-02-106	3/4" Iron Pipe Drill/Tap: 5951	457.16
353-02-108	1" Iron Pipe Drill/Tap: 5951	484.87
353-02-206	3/4" AWWA CC Drill/Tap: 5952	323.53
353-02-208	1" AWWA CC Drill/Tap: 5952	442.36
POWER OPTION		
373-357	Ridgid 690 Electric Drive w/ 5/8" sq. Drive Adapter See pg TM-28	3,075.52
370-70	GF-15 Ground Fault Interrupter Plug (req.d)	131.61
TAPPING COMPOUND		
353-10-1	Tapping Compound	33.90
353-10-3	Tapping Compound/ Case (12)	390.95

REF. NO.	ITEM NUMBER	DESCRIPTION	LIST PRICE
1	357-08	Saddle	\$178.24
2	357-35	Column	77.86
3	357-28-1	Top Yoke Insert	138.09
4	357-28	Top Yoke	307.18
5	351-23-512	Lead Tube Set Screw	1.32
6	357-35-51	Column Bolts (Qty 2)	ea 7.24
7	353-26-39	Head Gland Nut	67.46
8	353-26-573	Head Gland Packing (Qty 2)	ea 9.46
9	351-24-66	Lead Nut Key	5.19
10	351-29-1	Handle	147.87
11	351-51-2	Arbors & Handle Set Screw	1.32
12	353-26-62	Head Bronze Bushing (Qty 2)	ea 26.95
13	357-43	Feed Screw Complete	366.87
14	357-22	Bearing Housing	131.51
15	357-56	Thrust Bearing	28.75
16	353-11-1	Drill/Tap Holder Assembly	656.56

CUTTING DRILL/TAPS

355-01-210 PVC CUTTER 3/4"	IRON PIPE DRILL / TAP
353-04-206 PVC TAP 3/4" CC	AWWA CC DRILL / TAP
353-01-206 PVC CUTTER 1"	
353-04-208 PVC TAP 1" CC	

DECHLORINATOR



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MATERIAL SPECIFICATIONS

Aluminum, brass valves and stainless steel fasteners.

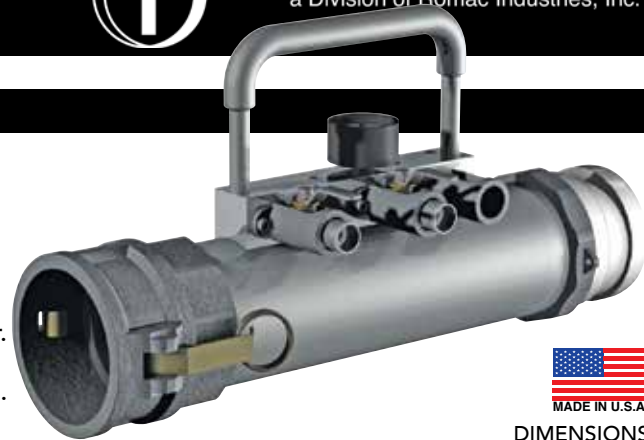
CONNECTION INLET: Type A cam and groove hydrant adapter (FNST) and Type D cam and groove adapter. Other hydrant adapters available on request.

CONNECTION OUTLET: Type A and D cam and groove adapter.

PORTING CONNECTIONS: 1/4" valves with quick disconnects.

REAGENTS: Can use all commonly available disinfection and dechlorination reagents.

FLOWS: 200 - 900 GPM

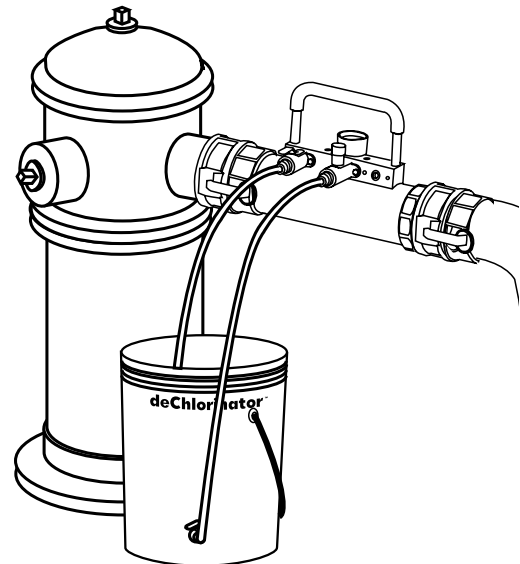
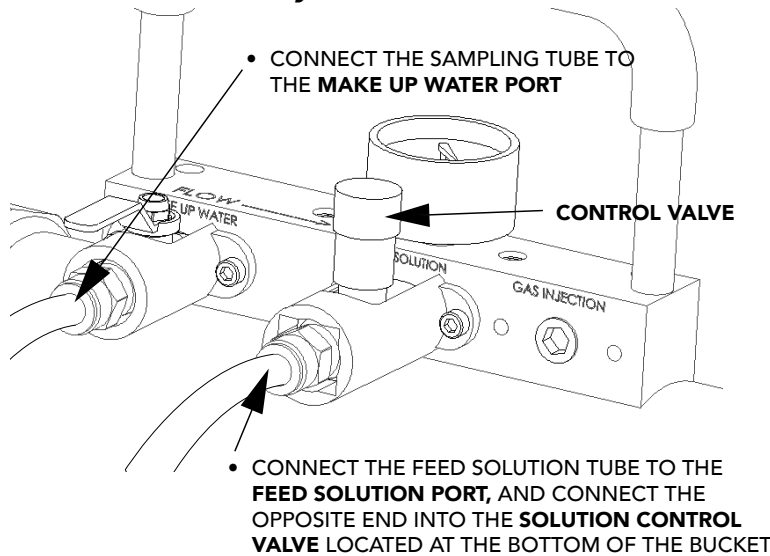


DIMENSIONS

LENGTH - 16 3/8"

WEIGHT - 9.3 LBS.

Connections are easy ...



Why Dechlorinate?

- Quickly dechlorinates and neutralizes pH of release water.
- Allows water utilities to meet regulations for residual chlorine concentration in released water.
- Enables contractors to quickly flush highly concentrated chlorinated water in new construction situations.
- Helps meet EPA, CWA, and SDWA legislation for released water entering receiving streams.

VITA-D-CHLOR FEED SOLUTION AND MIXING AND FEED SOLUTION VALVE SETTINGS

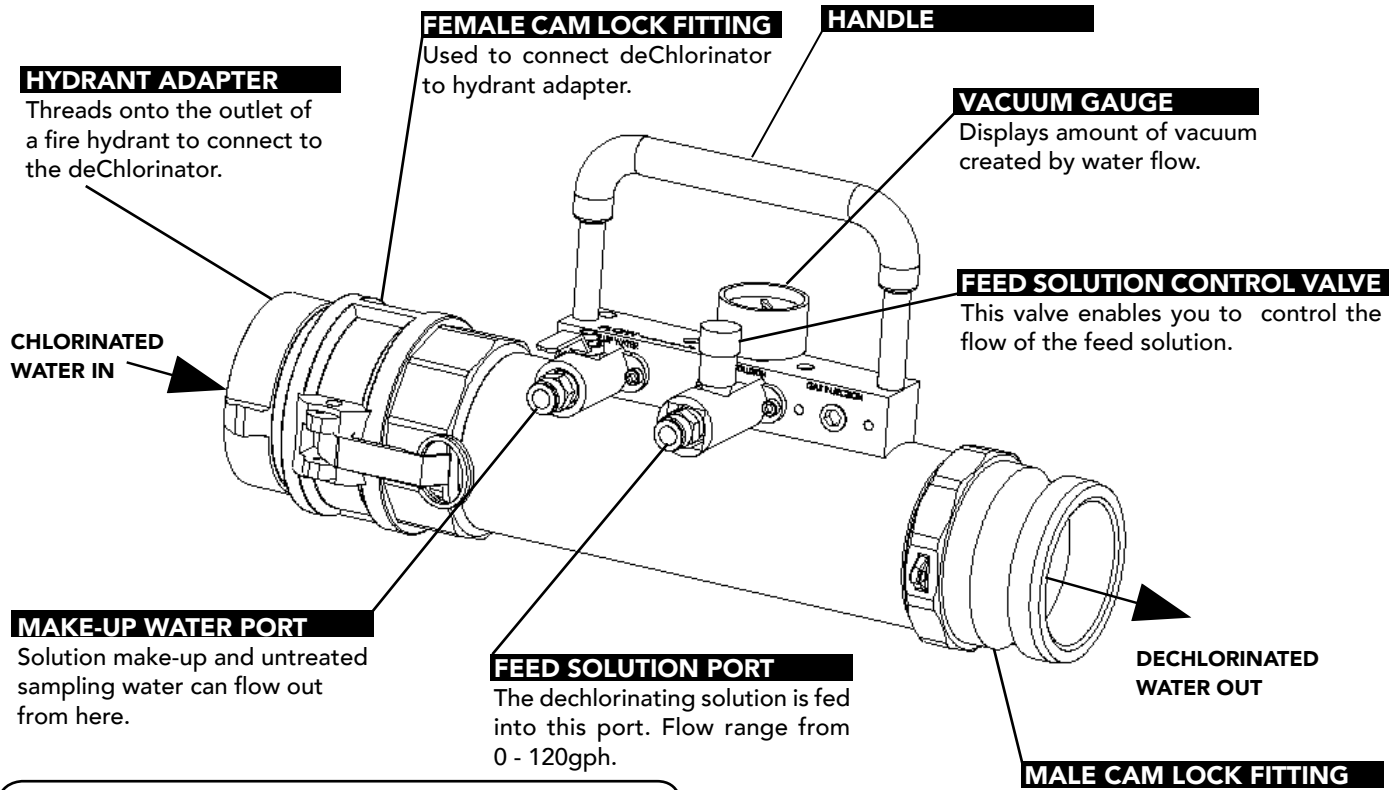
IF CHLORINE VALUE (ppm, mg/l)	THEN ADD... VITA-D-CHLOR CUPS PER 5 GAL WATER	SET CONTROL VALVE ON... FOR MAXIMUM CHLORINE
0 - .5	1/4 cup	2 Turns Open
.5 - 1	1/2 cup	2 Turns Open
1 - 1.5	1/2 cup	3 Turns Open
1.5 - 10	5 cups	2 Turns Open
10 - 30	15 cups	2 Turns Open
30 - 50	15 cups	3 Turns Open
50 - 150	25 cups	Full open
150 - 200	34 cups	Full open



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DECHLORINATOR



TO ORDER:

1. Order deChlorinator (378-032)
2. Order 3" Discharge Hose (378-06-03)
3. Order Diffuser (378-05-03)
4. Order Accessories (optional)
5. Order Analyzers (color wheel or test strips)
6. Order Analyzer reagents
 - Determine whether the system is "free" or "total"
 - free = chlorine only, total = chlorine & ammonia
7. Order dechlorinating chemicals
 - Vita-D-Chlor™ if you're dechlorinating only
 - Vita-D-Chlor™ neutral if the pH levels need to be maintained

ITEM NUMBER	DESCRIPTION	LIST PRICE
378-032	DC, Dechlorinator Kit 3" with 2" venturi	\$2,800.06
Included with DC Kit:		
378-030-17	Carrying Bucket	included
378-030-06	Male x Fire Hydrant Camlock Adapter	included
378-02-2	Test Strips	included
378-01-01-4	Dechlorinating Chemical (one cup)	included
378-030-10	Tubing (2 tubes, 4 feet long)	included
378-032M	deChlorinator Unit	included
ACCESSORIES		
378-05-03	Diffuser	650.98
378-06-03	3" Discharge Hose (20ft. long w/camlock fittings)	206.01
ANALYZERS		
378-02-1	Hach Free & Total Chlorine Color Disc	105.48
HACH CHLORINE TEST STRIPS		
378-02-2	0 - 10 PPM Range	23.73
378-02-3	10 - 200 PPM Range	95.14

ITEM NUMBER	DESCRIPTION	LIST PRICE
ANALYZER REAGENTS		
378-03-1	Hach DPD Free Chlorine 100 5ml Pillows	POA
378-03-2	Hach DPD Total Chlorine 100 5ml Pillows	POA
378-04-1	DPD Dispenser for Free Chlorine 10ml (250 doses)	POA
378-04-2	DPD Dispenser for Total Chlorine 10ml (250 doses)	POA
DECHLORINATION CHEMICALS		
Vita-D-Chlor™ (Ascorbic Acid, NSF)		
378-01-01-1	2.5 kg (5.5 lbs.)	POA
378-01-01-2	12 kg (26.4 lbs.)	POA
378-01-01-3	25 kg (55 lbs.)	POA
Vita-D-Chlor™, Neutral (Sodium Ascorbate, NSF)		
378-01-02-1	2.5 kg (5.5 lbs.)	POA
378-01-02-2	12 kg (26.4 lbs.)	POA
378-01-02-3	25 kg (55 lbs.)	POA
Vita-D-Chlor™, Tablets		
Treats 8500 gallons per tablet (85g of Ascorbic Acid per 2 5/8" tablet)		
378-01-03-1	6 tablets	POA
378-01-03-2	20 tablets	POA
378-01-03-3	40 tablets	POA
Vita-D-Chlor™, Tablet Sock (Coarse or Fine)		
(24" sock for holding tablets)		
378-01-04-1	Coarse	POA
378-01-04-2	Fine	POA

TRANSMATE

SEWER PIPE TAPPING MACHINE



Transmate

a Division of Romac Industries, Inc.

MATERIAL SPECIFICATIONS

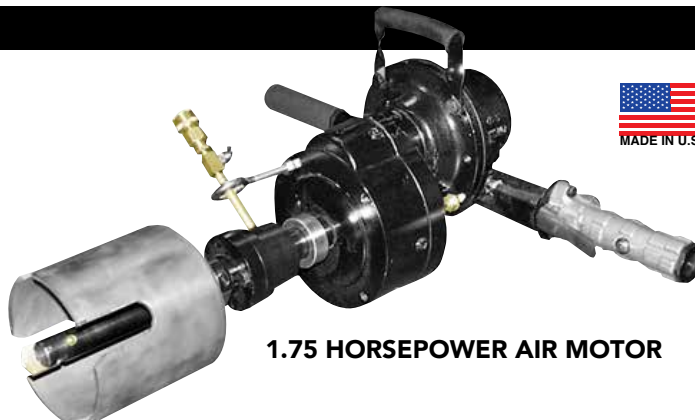
POWER: 1.75 HP Air Motor

AIR CONSUMPTION: 60-75 cfm @ 80 - 100 psi

WEIGHT: Machine less holesaw/cutter - 30lb.

WIDTH: 8" x 8"

HEIGHT: Machine less holesaw/cutter - 14"



1.75 HORSEPOWER AIR MOTOR

TO ORDER:

1. Order Base Machine
2. Order Holesaw / Cutters per size and type of pipe
3. Order Accessories depending on the type of pipe to be cut

CUTTING CLAY OR CEMENT PIPE

- 2 gallon Pressurized Water Tank required 377-14
- Diamond Tipped Holesaw
- 3/4" Diamond Tipped Pilot 377-10

CUTTING PVC / HDPE PIPE

- PVC Adapter 377-12
- PVC Pilot Complete 377-15
- TM Jam Nut 350-52
- PVC Cutter

ITEM NUMBER	DESCRIPTION	LIST PRICE
377-01	Air Powered Sewer Pipe Tapping Machine	\$3,726.45
377-11-1032	4" Diamond Tipped Holesaw	\$728.00
377-11-1036	4 1/2" Diamond Tipped Holesaw	739.52
377-11-1040	5" Diamond Tipped Holesaw	796.24
377-11-1044	5 1/2" Diamond Tipped Holesaw	840.44
377-11-1048	6" Diamond Tipped Holesaw	883.24
377-11-1052	6 1/2" Diamond Tipped Holesaw	982.80
377-11-1054	6 3/4" Diamond Tipped Holesaw	982.80
377-11-1056	7" Diamond Tipped Holesaw	1,037.42
377-11-1060	7 1/2" Diamond Tipped Holesaw	1,037.42
377-11-1064	8" Diamond Tipped Holesaw	1,084.20
377-11-1068	8 1/2" Diamond Tipped Holesaw	1,364.99
377-11-1070	8 3/4" Diamond Tipped Holesaw	1,389.80
377-10	3/4" Diamond Tipped Pilot Complete	526.39
377-14	Water Tank Complete	184.46

PCV ACCESSORIES REQUIRED

377-12	PVC Adapter	218.54
377-15	PVC Pilot Complete	263.93
350-03-08	1" Spade Bit (included with PVC Pilot)	102.85
350-52	TM Jam Nut	59.33
350-01-2032	3 1/2" Cutter For PVC Pipe	708.22
377-11-2032	4" Cutter For PVC Pipe	727.30
377-11-2036	4 1/2" Cutter For PVC Pipe	755.01
350-01-2040	5" Cutter For PVC Pipe	1,049.64
350-01-2048	5 1/2" Cutter For PVC Pipe	1,049.64
377-11-2048	6" Cutter For PVC Pipe	1,066.70
377-11-2052	6 1/2" Cutter For PVC Pipe	1,108.26
377-11-2054	6 3/4" Cutter For PVC Pipe	1,163.68
350-01-2056	7" Cutter For PVC Pipe	1,385.67
350-01-2064	7 1/2" Cutter For PVC Pipe	1,385.67
377-11-2064	8" Cutter For PVC Pipe	1,523.86
377-11-2068	8 1/2" Cutter For PVC Pipe	1,672.12
377-11-2070	8 3/4" Cutter For PVC Pipe	1,718.11

377-01 AIR DRIVEN SEWER PIPE TAPPING MACHINE

Included with machine:

- Steel Storage box
- Operations and Maintenance Manual
- Air Control Handle
- Dead Handle
- Main Swivel Housing (Cutter Adapter) and Bearing Housing (Water Jacket)
- Water Valve and Male Quick Disconnect
- Air Silencer
- AIR HOSE AND AIR FITTINGS TO BE PROVIDED BY END USER



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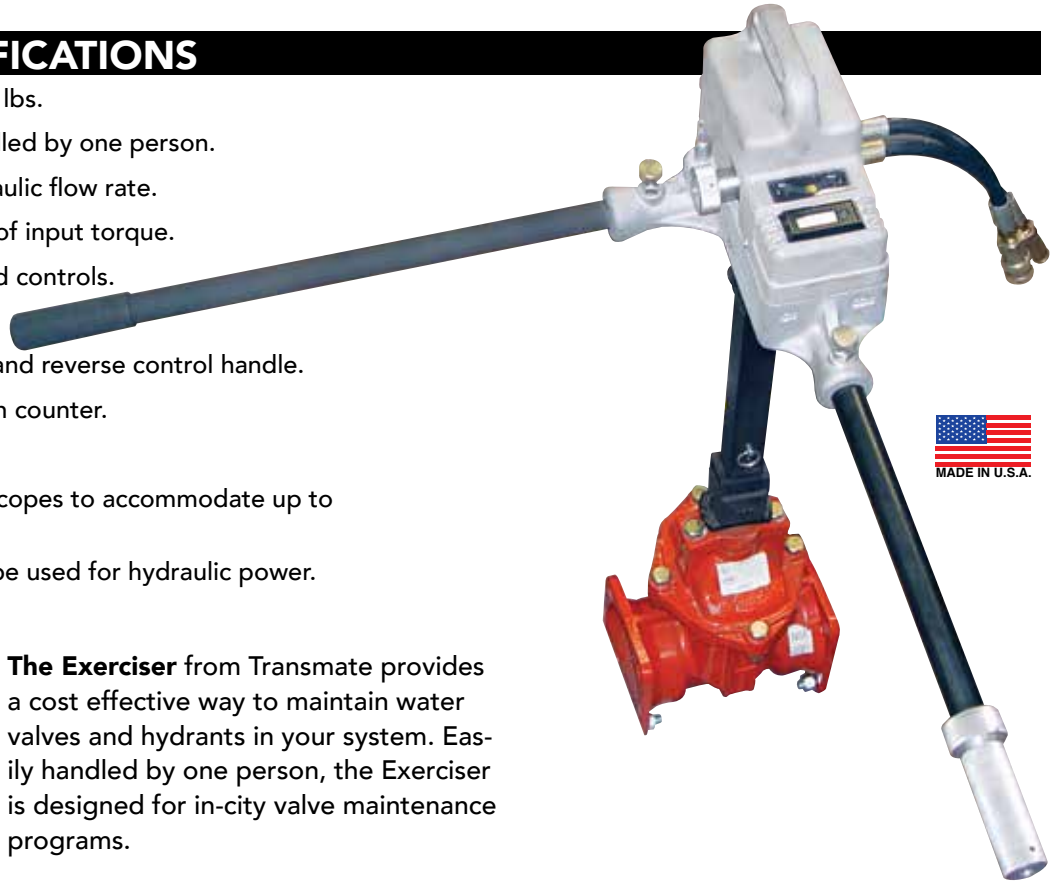
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THE EXERCISER™

VALVE & HYDRANT EXERCISER FOR MUNICIPAL USE

MATERIAL SPECIFICATIONS

- Weighs approximately 40 lbs.
- Compact, and easily handled by one person.
- Takes up to 15 gpm hydraulic flow rate.
- Provides up to 250 ft-lbs of input torque.
- Variable torque and speed controls.
- Quick kill safety collar.
- Motorcycle grip forward and reverse control handle.
- Easy-to-read up and down counter.
- Maximum speed 57 rpm.
- Valve Key Assembly telescopes to accommodate up to 38" of bury depth.
- Truck-mounted PTO can be used for hydraulic power.



The Exerciser from Transmate provides a cost effective way to maintain water valves and hydrants in your system. Easily handled by one person, the Exerciser is designed for in-city valve maintenance programs.

This lightweight valve turning device will deliver up to 250 ft-lbs of torque to any rough operating valve in your system.

OPTIONAL EQUIPMENT

HYDRANT ADAPTER
375-65



SWIVEL HEAD
375-111



VALVE KEY EXTENSION 375-10



TO ORDER:

1. Order Base Machine
2. Determine depth of valves to be exercised. Extra Valve Key Extensions may need to be ordered (see chart below).
3. Order power option.

HYDRANT SOCKETS MADE TO SPECIFICATIONS

VALVE DEPTH TO TOP OF VALVE for Valve Key Extension (375-10)

1 Extension	39"	to	77"	Depth
2 Extensions	78"	to	116"	Depth
3 Extensions	117"	to	155"	Depth
4 Extensions	156"	to	194"	Depth

ITEM NUMBER	DESCRIPTION	LIST PRICE
375-00	Hydraulic Valve Exerciser includes Carry Box and Valve Key Assembly	\$7,709.20
375-501A	Valve Key Assembly (includes 2" Drive Cup)	\$901.90
375-10	Valve Key Extension	184.91
375-65	Hydrant Adapter	135.77
375-111	Swivel Head, U Joint	389.04
*372-99	Valve Exerciser Hydraulic Drive (includes 372-01 and 372-02)	5,016.80

Note: The Hydraulic Unit 372-01 used with the TapMate may be also used as the hydraulic system for the Valve Exerciser. See Page TM-26 for details.

372-02	Set of 20' Valve Exerciser Hoses (includes Quick Disconnect)	631.57
*372-991	Valve Exerciser Hydraulic Drive with electric starter Includes: 372-98 and 372-02	5,910.47

*Considered Hazardous Material When Shipped by Air

MULTI-PURPOSE HYDRAULIC DRIVE



Transmate

a Division of Romac Industries, Inc.

MATERIAL SPECIFICATIONS

- Weighs approximately 80 lbs
- 7 h.p. Kohler gasoline engine
- Hydraulic pump delivering 4 gpm to 2,000 psi
- 2.5 gallon hydraulic fluid reservoir with drain plug
- By pass valve for cold weather starting or tool change while unit is running.



HYDRAULIC POWER UNIT
372-01



ADDITIONAL ITEM REQUIRED:
372-05

372-00 FOR USE WITH 350-00

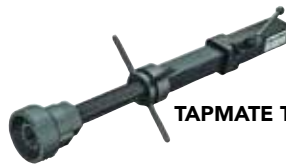


TAPMATE



ADDITIONAL ITEM REQUIRED:
372-351-05

ORDERED SEPARATELY FOR USE WITH 351-00



TAPMATE TOO



ADDITIONAL ITEM REQUIRED:
372-02

372-99 FOR USE WITH 375-00



THE EXERCISER

HIGHER RPM

Turning the TapMate motor at 60 RPM, you'll have more than three times the cutter speed available on the electric drive. This means faster, smoother cuts with much less effort expended. The TapMate Too motor is turned at 105 RPM and the Exerciser is turned at 57 RPM.

LIGHTWEIGHT

The entire system weighs about 80 pounds, light enough to hand carry to the ditch. This is the perfect option for making taps anywhere, especially in remote areas away from roads or in muddy terrain.

UTILITY

The hydraulic drive motors mount directly to the back of the TapMate and TapMate Too. This allows the motor to hold the counter torque created by the cutting tools so there is no lever arm to control. This means easier and faster operation for your crews.

SAFETY

Hydraulic power means safe operation in the routinely wet environment of a waterworks tap. The drive, while delivering 4 gpm up to 2000 psi, is quiet in the ditch to aid communication.

ITEM NUMBER	DESCRIPTION	LIST PRICE
*372-00	TM Hydraulic Power Unit, complete	\$6,580.32
*372-01	Base Unit	included
372-05	Motor and 3/8" Hoses	included

*372-01	Multi Purpose Base Unit only	4,678.02
*372-98	Multi Purpose Base Unit w/ electric start	5,574.42

ADDITIONAL ITEMS OPTIONAL:

372-05	TapMate Motor & Hose assembly (two uses)	2,216.53
1- Adapts 372-01 to TapMate		
2- Adapts alternative power unit to TapMate; requires		
3.3-10 gpm flow regulator, 1750-2300 psi hydraulic power system		
372-351-05	TapMate Too Drive Head assembly	2,077.99
(see Page TM-29) (Includes motor, hoses, control valve, drive coupling adapter with clamps, 2 sets of 1/4" I.D. hoses 372-02-03 and 1 set o 3/8" Q.D.s (372-13-0 and 372-13-1)		
372-02	Valve Exerciser Hoses (see Page TM-25)	631.57
(Includes 2-20 3/8" I.D. hoses 372-02-02 and 2-3/8" male Q.D.s 372-13-2 and 2-3/8" female Q.D.s 372-13-3)		
372-80	Hydraulic Drive Adapter	252.50
372-81	Hydraulic Drive Coupling	204.18

REPLACEMENT ADAPTER LATCHES

372-06-01	Hydraulic Adapter Latch (2 req.)	ea. 14.76
Includes bolts and nuts. Compatible with equipment manufactured through 2012.		
372-06-99	Hydraulic Adapter Latch (2 req.)	ea. 21.19
Includes bolts and nuts. Compatible with equipment manufactured after 2012.		

*Considered Hazardous Material When Shipped by Air

TRANSMATE


Transmate

a Division of Romac Industries, Inc.

82000 HPU HYDRAULIC POWER UNIT

MATERIAL SPECIFICATIONS

- Weighs approximately 200 lbs
- 14 h.p. Kohler gasoline engine
- Hydraulic pump delivering 8 gpm to 2,000 psi
- 5 gallon hydraulic fluid reservoir
- 12V electric air-to-oil heat exchanger

BENEFITS TO USERS:

- Full duty cycle hydraulic power system
- Able to run most hydraulic tools that require 7-9 gpm to 2,000 psi
- Electric start with recoil start backup
- By-pass valve for cold weather starting or to switch out tools while system is running



ITEM NUMBER	DESCRIPTION	LIST PRICE
*372-82000-01	82000 HPU Hydraulic Base Power Unit (Must order Motor and Hoses)	\$7,979.71

*Considered Hazardous Material When Shipped by Air

MOTOR AND HOSE KITS

ITEM NUMBER	DESCRIPTION	LIST PRICE
372-05-25	Motor and 1/2" Hoses (includes Motor, two Hoses and two sets of Quick Disconnects) For TapMate™ Machine	\$3,425.10
360-72-02	Motor and 1/2" Hoses For QuikValve Machine	3,425.10
372-02-05	1/2" Hose Kit (includes two Hoses and two sets of Quick Disconnects)	835.91
372-13-10	1/2" x 3/8" NPT Bushing	8.50

If using the Valve Exerciser with the 1/2" Quick Disconnects and Hoses, you need to order: (1) 372-13-6, (1) 372-13-7 (2) 372-13-10

HYDRAULIC HOSES AND FITTINGS

SELECT THE APPROPRIATE HOSES AND FITTINGS FOR POWERING YOUR TRANSMATE EQUIPMENT

ITEM NUMBER	DESCRIPTION	LIST PRICE
HOSES		
Also Required: Quick Disconnect Fittings		
372-02-03	1/4" Hydraulic Hose, 20' Long, 2250WP (for TapMate Too -2 required)	ea \$170.38
372-02-02	3/8" Hydraulic Hose, 20' Long, 2250WP (for TapMate and Valve Exerciser -2 required)	ea 144.66
372-02-01	1/2" Hydraulic Hose, 20' Long, 2250WP (for 82000 HPU and QuikValve machine -2 required)	ea 188.47

ITEM NUMBER	DESCRIPTION	LIST PRICE
FITTINGS		
372-13-2	3/8" Male QD Flush Face FF372-6FP	\$59.70
372-13-3	3/8" Female QD Flush Face FF371-6FP (Standard Dripless option for use with TapMate Drive Head, TapMate Too Drive Head, Multi-Purpose Power Unit and Exerciser)	173.84
372-13-6	1/2" Male QD Flush Face FF502-8FP	95.97
372-13-7	1/2" Female QD Flush Face FF501-8FP (Standard Dripless option for use with 82000 HPU Power Unit)	236.13

RIDGID 690 ELECTRIC DRIVE



Transmate

a Division of Romac Industries, Inc.

MATERIAL SPECIFICATIONS

- Weighs approximately 22 lbs
- 115 V Universal AC motor
- 50 to 60 cycle, 15 amps reversible
- Delivers 100 ft-lbs. at 15 amps - 32 rpm
- Delivers 200 ft-lbs. at stall
- Bump proof, momentary on operating switch
- Length of 24", width of 6"
- Can be used to thread pipe with addition of thread dies



ITEM NUMBER	DESCRIPTION	LIST PRICE
FOR USE ON TM TOO, M1, DRY TAP & 5935 WITH EXISTING RIDGID 690		
373-01	Ridgid 690 Drive Only* *Must order adapter for specific machine.	\$2,837.17
373-05-356	13/16" Adapter for B-Too	378.44
373-05-351	1/2" Adapter for TM-Too & M-1	378.44
373-05-357	5/8" Adapter for Dry Tap	378.44
373-05-355	7/8" Adapter for 5935	378.44
373-05-1	5/8" Adapter for B-1	378.44
373-05-1S	Special Square Adapters	505.31
370-70	GF-15 Ground Fault Interrupter Plug (required)	131.61

ITEM NUMBER	DESCRIPTION	LIST PRICE
FOR USE ON B-1 MACHINE		
373-00	Ridgid 690 Electric Drive Complete	\$3,075.52
353-28E	w/ 5/8" sq. drive adapter	
370-70	Extended Feed Yoke (required for use)	567.54
	GF-15 Ground Fault Interrupter Plug (required)	131.61
FOR USE ON B-TOO MACHINE		
373-356	Ridgid 690 Electric Drive Complete	3,075.52
370-70	w/ 13/16" sq. drive adapter	
	GF-15 Ground Fault Interrupter Plug (required)	131.61
FOR USE ON TAPMATE TOO AND M-1 MACHINE		
373-351	Ridgid 690 Electric Drive Complete	3,075.52
370-70	w/ 1/2" sq. drive adapter	
	GF-15 Ground Fault Interrupter Plug (required)	131.61
FOR USE ON TAPMATE DRY TAP MACHINE		
373-357	Ridgid 690 Electric Drive Complete	3,075.52
370-70	w/ 5/8" sq. drive adapter	
	GF-15 Ground Fault Interrupter Plug (required)	131.61
FOR USE ON 5935 MACHINE		
373-355	Ridgid 690 Electric Drive Complete	3,075.52
370-70	w/ 7/8" sq. drive adapter	
	GF-15 Ground Fault Interrupter Plug (required)	131.61

NOTE: Drive requires electric generator capable of 3KW output or better.

RIDGID 700 ELECTRIC DRIVE FOR THE TAPMATE

MATERIAL SPECIFICATIONS

- Weighs just 25 pounds
- Threads pipe from 1/8 to 2" with added thread dies
- Oversize gearset for maximum performance
- Deadman switch with forward and reverse control
- One piece aluminum frame
- Includes 1" square drive adapter
- Measures 28 1/2" long
- 115 V



ITEM NUMBER	DESCRIPTION	LIST PRICE
370-000	Ridgid 700 Electric Drive	\$5,390.15
370-000-05	1" Square Drive Adapter	included

ITEM NUMBER	DESCRIPTION	LIST PRICE
370-001	Ridgid 700 Electric Drive (only)	\$5,088.73
370-000-05	1" Square Drive Adapter	302.33
370-000-10	Hex Head Drive Adapter	283.65
370-70	GF 15 Ground Fault Interrupter Plug (required)	131.61

Drive requires electric generator capable of 3KW output or better. Ground fault protection is required.

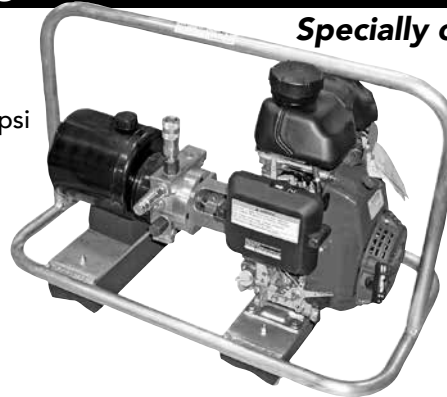


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HYDRAULIC DRIVE FOR THE TAPMATE TOO™ PIPE DRILLING MACHINE

MATERIAL SPECIFICATIONS

- Weighs approximately 73 lbs
- 3 h.p. Honda gasoline engine
- Hydraulic pump delivering 2 gpm @ 1,200 psi
- 1 gallon hydraulic fluid reservoir
- 90 rpm hydraulic motor
- 20 feet of connecting hoses



Specially created for the TapMate Too

Get the most out of your TapMate Too with this self-contained power source

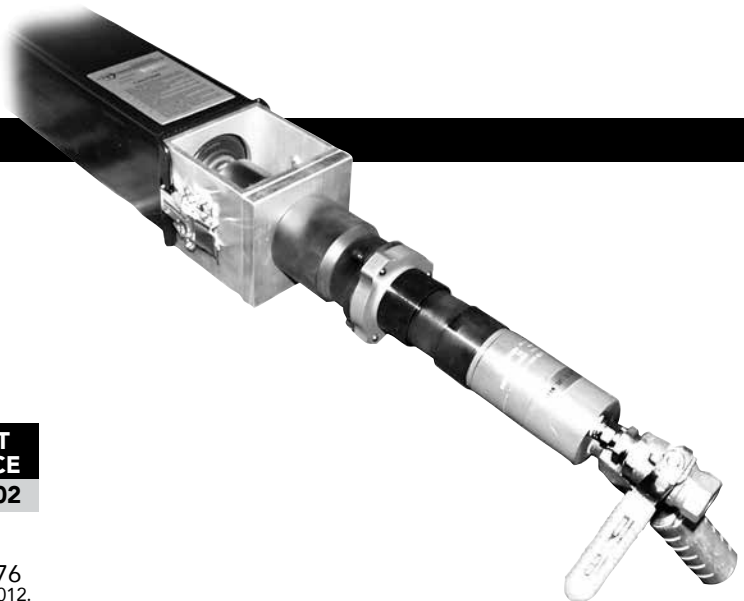
ITEM NUMBER	DESCRIPTION	LIST PRICE
*372-351	TapMate Too Hydraulic - Drive System, complete	\$5,541.32
*372-351-01	Base Unit	included
372-351-05	TapMate Too Hyd. Drive Head - Assembly with 1/4" Hoses	included
372-351-05	TapMate Too Hydraulic Motor and Drive Head Assembly w/ 1/4" Hoses	\$2,077.99
<small>(For adapting the Multi-Purpose Hydraulic Drive 372-01 or alternative power unit to the TapMate Too see Page TM-4)</small>		

*Considered Hazardous Material When Shipped by Air

AIR DRIVE AIR DRIVE FOR THE TAPMATE

MATERIAL SPECIFICATIONS

- Lightweight – just 11 pounds
- Unidirectional drive clips directly to the back of the TapMate
- Maximum .76 h.p. delivers 52 RPM
- 191 ft-lbs. running torque, 254 ft-lbs. stall torque



ITEM NUMBER	DESCRIPTION	LIST PRICE
371-00	Air Drive	\$7,171.02

REPLACEMENT ADAPTER LATCHES

372-06-01	Hydraulic Adapter Latch (2 req.)	ea 14.76
<small>Includes bolts and nuts. Compatible with equipment manufactured through 2012.</small>		
372-06-99	Hydraulic Adapter Latch (2 req.)	ea. 21.19
<small>Includes bolts and nuts. Compatible with equipment manufactured after 2012.</small>		

Air drive requires connection to an air compressor capable of producing at least 36 CFM at 90 psi

TEST GAUGE



Transmate

a Division of Romac Industries, Inc.

MATERIAL SPECIFICATIONS

- Designed to pressure test for leaks prior to tapping and during valve insertions.
- Pressure test any 3/4" NPT outlet.
- Compact design (8" x 6" x 1.25")
- Range: 0 - 200 PSIG



ITEM NUMBER	DESCRIPTION	LIST PRICE
359-60	3/4 Inch Pressure Test Gauge	\$172.88

TAPPING COMPOUND

MATERIAL SPECIFICATIONS

- Ideal for tapping, drilling, etc.
- 100% environmentally safe.
- 16 oz. containers.
- MSDS upon Request.

DRAMATICALLY IMPROVES TOOL LIFE



ITEM NUMBER	DESCRIPTION	LIST PRICE
353-10-1	Tapping Compound	ea. 33.90
353-10-3	Tapping Compound / Case (12)	390.95

FLARING TOOLS

MATERIAL SPECIFICATIONS

- Available in 1/2" to 2"
- Machined to exacting specifications at our factory
- An excellent result every time
- No lip to curl the copper tube back, thus assuring the proper fit



ITEM NUMBER	DESCRIPTION	LIST PRICE
359-001	1/2" Flaring Tool	\$64.17
359-002	3/4" Flaring Tool	81.98
359-003	1" Flaring Tool	90.91
359-004	1 1/4" Flaring Tool	123.92
359-005	1 1/2" Flaring Tool	139.19
359-006	2" Flaring Tool	171.13

TRANSMATE


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DOUBLE SOCKET RATCHET WRENCH

MATERIAL SPECIFICATIONS

- Heavy duty, double socket ratchet wrench can tighten nuts on long bolts or all-thread rod without bottoming out and has a simple lever operated reverse feature.
- The heavy-duty mechanism is sandwiched between steel plates for strength and protection.
- One socket fits heavy hex nuts on 3/4" bolts, used on 4" through 24" mechanical joints.
- One socket fits heavy hex nuts on 5/8" bolts used on clamps, couplings, saddles and 3" mechanical joints.
- The handle is covered with a resilient material to improve the grip and help resist slippage during use.
- Weighs 2 lb. 6 oz.

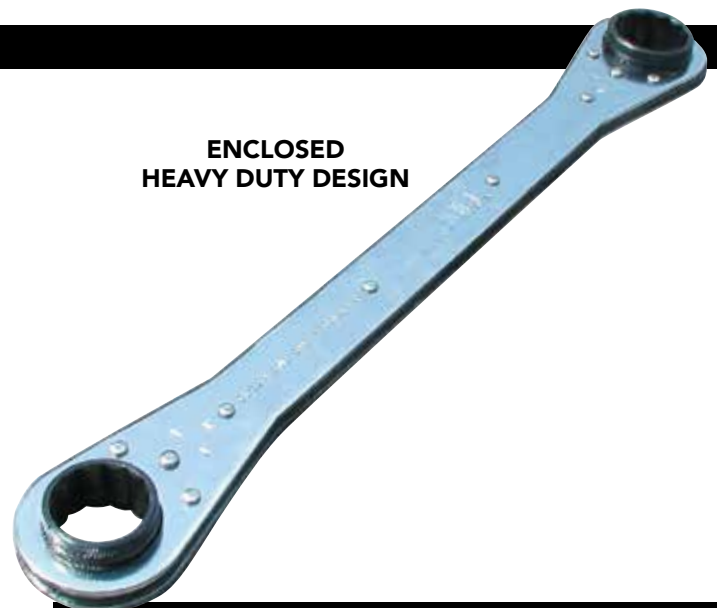


ITEM NUMBER	DESCRIPTION	LIST PRICE
359-3649982	1-1/16" fits 5/8" heavy hex nut	\$125.16
	1-1/4" fits 3/4" heavy hex nut	

RATCHET BOX WRENCH

MATERIAL SPECIFICATIONS

- Heavy-duty, ratcheting box end wrench can tighten nuts on long bolts or all-thread rod without bottoming out and has a simple flip-over reverse feature
- They have no loose sockets that can be misplaced and the enclosed design prevents rocks, pebbles or debris from entering the mechanism.
- The small end has a 1-1/16" socket which fits heavy hex nuts on 5/8" bolts, used on clamps, couplings, saddles and 3" mechanical joints.
- The large end has a 1-1/4" socket which fits heavy hex nuts on 3/4" bolts on 4" through 24" mechanical joints.
- Enclosed design keeps debris from jamming the mechanism
- Triple rivets keep plates from spreading under your heaviest tightening job.

**ENCLOSED
HEAVY DUTY DESIGN**


ITEM NUMBER	DESCRIPTION	LIST PRICE
359-3649980	1-1/16" fits 5/8" heavy hex nut	\$70.58
	1-1/4" fits 3/4" heavy hex nut	


Transmate

a Division of Romac Industries, Inc.

VALVE INSERTION

**"WHEN YOU ARE UNDER PRESSURE TO INSTALL A
VALVE IN AN OPERATING LINE"**



Quik Valve™

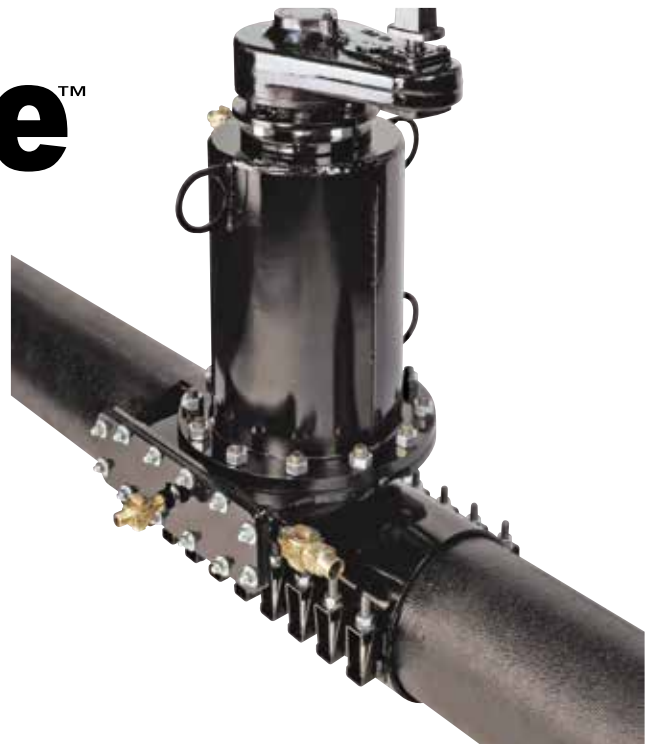
PAGE QV-2

- 4", 6" or 8" installations in cast iron, ductile iron, A/C and some classes of PVC pipe
- Uses modern resilient gate technology
- Can be used in water lines with up to 150 psi ambient pressure
- Installed valve has the same number of turns as any other comparable valve in your system

Insert Valve™

PAGE QV-7

- 10" - 12" installations in cast iron, ductile iron, A/C, PVC C-900 and steel pipe
- No loss of pressure
- Minimal water loss
- Completion time is less than 2 hours



QUIKVALVE™**Transmate**

a Division of Romac Industries, Inc.

QuikValve™



“When you are under pressure to install a valve in an operating line”

- 4", 6" or 8" installations in cast iron, ductile iron, A/C and some classes of PVC pipe
- Uses modern resilient gate technology
- Can be used in water lines with up to 150 psi ambient pressure
- Installed valve has the same number of turns as any other comparable valve in your system



PATENT #5074526

QUIKVALVE TAPPING SLEEVE

MATERIAL SPECIFICATIONS

GENERAL: The sleeve is fabricated to assure a 360° seal around the pipe under working pressures up to 150 psi. (Test pressure: 225 psi.) It is designed to accommodate the equipment and fixtures necessary to drill and ream the pipe and install the QuikValve insertion valve without any interruption in water service.

SLEEVE: ASTM A-36 steel.

FLANGE: A special flange is used that mates with the QuikValve installation equipment and insertion valve.

NECK: The neck is manufactured to precision tolerances that assure proper alignment, support, and sealing of the QuikValve insert.

BOLTS AND NUTS: High strength low alloy steel (Corten) bolts and nuts meeting AWWA standard C-111. Type 304 stainless steel bolts with SDC nuts are optional.

GASKETS: All gaskets are made of Styrene Butadiene Rubber (SBR) compounded for potable water service in accordance with ASTM D2000 3 BA715. The gaskets provide a positive 360° seal on the pipe and assure a tight, durable, and resilient seal at the pipe sleeve - valve insert junction.

COATING: The sleeve is lined and coated with fusion bonded epoxy.

ARMORS: Heavy gauge type 304 stainless steel armor plates are used to bridge the gap between the sleeve halves.

LUGS: Lugs on the sleeve are configured to properly align the sleeve halves during installation, provide a bolting surface, and assure a 360° seal. The lugs are designed to prevent excessive stress on the pipe, and minimize distortion of soft (PVC) pipe.

QUIKVALVE VALVE ASSEMBLY

MATERIAL SPECIFICATIONS

GENERAL: The valve assembly, when installed in a QuikValve sleeve, performs as a water control device with an effective shutoff of the flow of water. The valve is installed in the open position, under water pressure without any interruption of water service. The QuikValve gives a full unobstructed full flow waterway after installation.

INSERT: The insert consists of a ductile iron casting coated with SBR rubber compounded for water service with a durometer of 55 Shore A. The insert seals on the inside diameter of the QuikValve sleeve neck and the lower half of the water main.

VALVE STEM: The stem and nut assembly are in accordance with AWWA C-500-80, section 3.12.

FLANGE: A special flange, made of ASTM A-36 steel is used that holds the valve assembly together and acts to seal against the valve sleeve flange.

GASKET: The valve flange gasket is made of SBR rubber, compounded for water service in accordance with ASTM D2000 3 BA715, with a durometer of 70 Shore A. The gasket acts as the sealing interface between the valve flange and the sleeve flange.

BOLTS AND NUTS: Grade 3 Alloy steel, zinc plated for corrosion protection. Type 304 stainless steel bolts, nuts and washers are optional.

For more information on the QuikValve™ Machine, please contact your regional Romac/Transmate representative at 1-800-426-9341



QUIKVALVE™

1. Install the QuikValve sleeve

The QuikValve Sleeve supports and strengthens the pipe. The full all around gasket assures water containment for the life of the valve. The sleeve acts as the valve body and is designed to withstand additional temporary stresses during the QuikValve installation.

2. Drill the pipe wall and remove coupon

Drilling proceeds like a lateral tap. A coupon is removed from the top of the pipe. The temporary slide gate is used to control the water flow between the four installation steps.

3. Ream the pipe

A ball nosed reamer cleans away any tuberculation and forms a smooth sealing surface for the QuikValve insert.

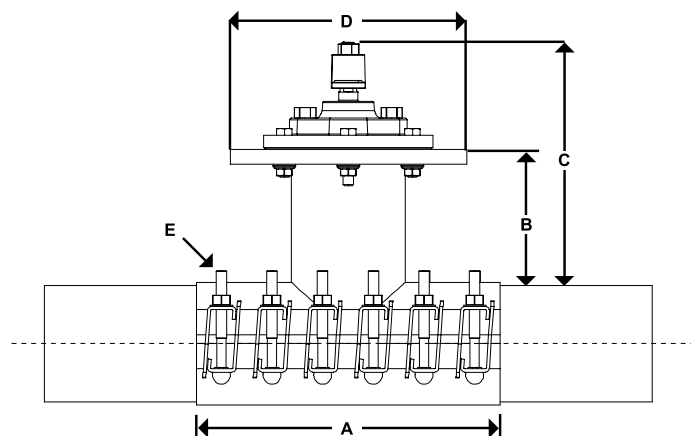
4. Insert the valve

The valve is pressed into the sleeve neck and bolted into place. Notice, the valve is inserted in the open position. You decide when to close the valve.

QuikValve™ SLEEVE DIMENSIONS

SLEEVE DIMENSIONS					
FLANGE SIZE	DIMENSIONS				
	A	B	C	D*	E
4"	18.0	6.75	12.65	12.35	12
6"	18.0	8.50	14.40	14.00	12
8"	24.0	10.50	16.40	16.50	16

*OD to accept QuikValve Installation Equipment



QUIKVALVE™



Transmate

a Division of Romac Industries, Inc.

QuikValve™

“When you are under pressure to install a valve in an operating line”



ITEM NUMBER	DESCRIPTION	LIST PRICE
364-00	QuikValve Package (Base Machine, \$51,899.62 Storage Box and All Accessories)	

- The following are included:
- Base Machine (360-00)
 - Slide Gate
 - 6" and 8" Reamers, Blades and Sizing Rings
 - Shell Cutters: 5.5", 6", 6.325", 7.5", 8" and 8.425"
 - Shaft Nose and PVC Pilot
 - Spacer Assembly
 - Hydraulic Power System 15 HP
 - Assorted fasteners, cap screws and nuts
 - 6" and 8" Blind Flanges
 - Job-site training
 - Sleeve and valve not included.

364-02	4" QuikValve™ Add-On	7,573.94
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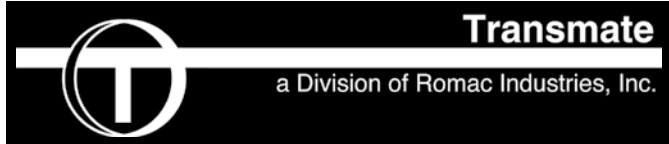
- The 4" Add-On Package includes:
- 4" Reamer, Blades and Sizing Ring
 - Shell Cutters 3.5", 4", 4.275"
 - Assorted Fasteners
 - 4" Blind Flange
 - Sleeve and valve not included.

360-00	QuikValve™ Base Machine	14,408.99
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- For lateral tapping, QuikValve™ & InsertaValve™ installations
- The Q.V. Base Machine includes:
- Q.V. Shaft Nose included (360-22)
 - 1" Spade Bit (350-03-08)
 - Q.V. PVC Pilot (360-24)
 - Storage Box (350-61)
 - Tapping Compound (353-10-1)

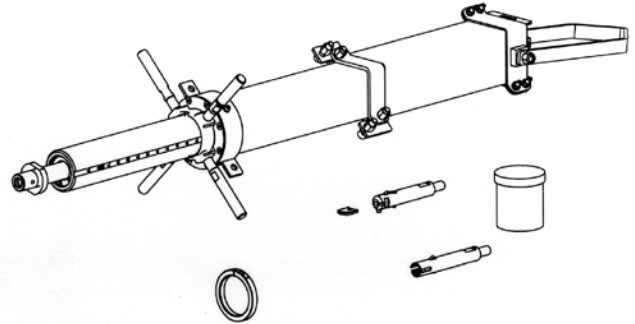
For more information on the QuikValve™ Machine, please contact your regional Romac/Transmate representative at 1-800-426-9341

ITEM NUMBER	DESCRIPTION	LIST PRICE	
4"	SLEEVES with alloy bolts & nuts		
	310-0450010 QVS-4.50 (4.48 - 4.55)*	\$1,404.88	
	310-0490010 QVS-4.90 (4.70 - 4.90)	1,404.88	
	310-0510010 QVS-5.10 (4.91 - 5.10)	1,404.88	
	310-0530010 QVS-5.30 (5.11 - 5.30)	1,404.88	
6"	310-0550010 QVS-5.50 (5.31 - 5.50)	1,404.88	
	310-0663010 QVS-6.63 (6.61 - 6.68)*	1,642.23	
	310-0700010 QVS-7.00 (6.81 - 7.00)	1,642.23	
	310-0720010 QVS-7.20 (7.01 - 7.20)	1,642.23	
	310-0740010 QVS-7.40 (7.21 - 7.40)	1,642.23	
8"	310-0760010 QVS-7.60 (7.41 - 7.60)	1,642.23	
	310-0863010 QVS-8.63 (8.61 - 8.68)*	2,010.46	
	310-0915010 QVS-9.15 (8.95 - 9.15)	2,010.46	
	310-0935010 QVS-9.35 (9.16 - 9.35)	2,010.46	
	310-0955010 QVS-9.55 (9.36 - 9.55)	2,010.46	
4"	310-0975010 QVS-9.75 (9.56 - 9.75)	2,010.46	
	SLEEVES with 304 S.S. bolts & nuts		
	310-0450011 QVS-4.50 (4.48 - 4.55)*	\$1,468.78	
	310-0490011 QVS-4.90 (4.70 - 4.90)	1,468.78	
	310-0510011 QVS-5.10 (4.91 - 5.10)	1,468.78	
6"	310-0530011 QVS-5.30 (5.11 - 5.30)	1,468.78	
	310-0550011 QVS-5.50 (5.31 - 5.50)	1,468.78	
	310-0663011 QVS-6.63 (6.61 - 6.68)*	1,758.57	
	310-0700011 QVS-7.00 (6.81 - 7.00)	1,758.57	
	310-0720011 QVS-7.20 (7.01 - 7.20)	1,758.57	
8"	310-0740011 QVS-7.40 (7.21 - 7.40)	1,758.57	
	310-0760011 QVS-7.60 (7.41 - 7.60)	1,758.57	
	310-0863011 QVS-8.63 (8.61 - 8.68)*	2,165.67	
	310-0915011 QVS-9.15 (8.95 - 9.15)	2,165.67	
	310-0935011 QVS-9.35 (9.16 - 9.35)	2,165.67	
4"	310-0955011 QVS-9.55 (9.36 - 9.55)	2,165.67	
	310-0975011 QVS-9.75 (9.56 - 9.75)	2,165.67	
	*For IPS size PVC pipe (Class 160) or greater		
	INSERTION VALVES		
	361-04	4", Left Open, Mang. Stem	\$1,268.58
361-04R	4", Right Open, Mang. Stem	1,268.58	
361-04-N	4", Left Open, NDZ Stem	1,353.67	
4"	361-04R-N	4", Right Open, NDZ Stem	1,353.67
	361-04SS	4", Left Open, Mang. Stem w/S.S. B&N	1,392.35
	361-04RSS	4", Right Open, Mang. Stem w/S.S. B&N	1,392.35
	361-04SS-N	4", Left Open, NDZ w/S.S. B&N	1,431.02
	361-04RSS-N	4", Right Open, NDZ Stem w/S.S. B&N	1,431.02
6"	361-06	6", Left Open, Mang. Stem	1,404.95
	361-06R	6", Right Open, Mang. Stem	1,404.95
	361-06-N	6", Left Open, NDZ Stem	1,485.10
	361-06R-N	6", Right Open, NDZ Stem	1,485.10
	361-06SS	6", Left Open, Mang. Stem w/S.S. B&N	1,635.38
	361-06RSS	6", Right Open, Mang. Stem w/S.S. B&N	1,635.38
	361-06SS-N	6", Left Open, NDZ Stem w/S.S. B&N	1,895.79
361-06RSS-N	6", Right Open, NDZ Stem w/S.S. B&N	1,895.79	
8"	361-08	8", Left Open, Mang. Stem	1,679.89
	361-08R	8", Right Open, Mang. Stem	1,679.89
	361-08-N	8", Left Open, NDZ Stem	1,816.57
	361-08R-N	8", Right Open, NDZ Stem	1,816.57
	361-08SS	8", Left Open, Mang. Stem w/S.S. B&N	1,910.43
	361-08RSS	8", Right Open, Mang. Stem w/S.S. B&N	1,910.43
	361-08SS-N	8", Left Open, NDZ Stem w/S.S. B&N	2,227.18
	361-08RSS-N	8", Right Open, NDZ Stem w/S.S. B&N	2,227.18



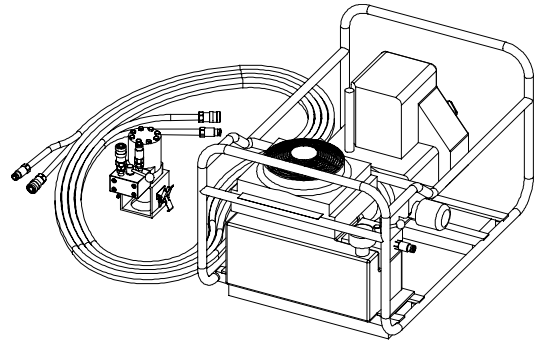
BASE MACHINE

ITEM NUMBER	DESCRIPTION	LIST PRICE
360-00	QuikValve, Base Machine	\$14,408.99
360-22	QuikValve, Shaft Nose	481.37
360-24	QuikValve, PVC Pilot	368.91
350-03-08	Spade Bit	102.85
360-01	QuikValve, Main Shaft	745.46
360-06-01	QuikValve, Posi-Brake Clip, High	54.42
360-06-03	QuikValve, Posi-Brake Clip, Low	54.42
360-31	QuikValve, Lead Tube Split Collar	336.99
351-51-2	Set Screw for Shaft Nose and PVC Pilot	1.32



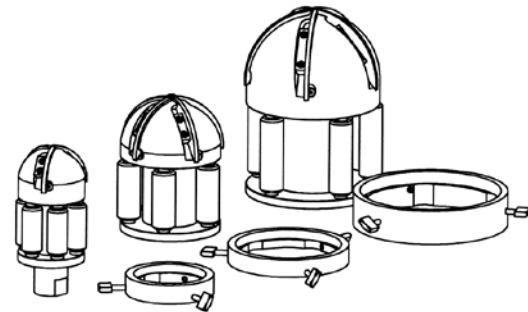
HYDRAULIC DRIVE

ITEM NUMBER	DESCRIPTION	LIST PRICE
360-72	QuikValve 15 HP Hydraulic Unit w/Motor & Hoses	\$12,066.98
372-82000-01	82000 HPU Hydraulic Base Power Unit	see pg. TM-27
360-72-02	Motor & Hose	see pg. TM-27



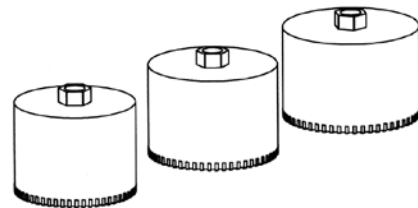
REAMERS

ITEM NUMBER	DESCRIPTION	LIST PRICE
362-04	QuikValve, 4" Reamer	\$5,194.40
362-04-08	QuikValve, 4" Reamer Roller	208.41
362-04-09	QuikValve, 4" Reamer Sizing Ring	630.95
362-04-11	QuikValve, 4" Reamer Blade	144.09
362-06	QuikValve, 6" Reamer	5,410.64
362-06-08	QuikValve, 6" Reamer Roller	213.08
362-06-09	QuikValve, 6" Reamer Sizing Ring	726.93
362-06-11	QuikValve, 6" Reamer Blade	159.07
362-08	QuikValve, 8" Reamer	7,155.82
362-08-08	QuikValve, 8" Reamer Roller	214.63
362-08-09	QuikValve, 8" Reamer Sizing Ring	822.90
362-08-11	QuikValve, 8" Reamer Blade	204.53



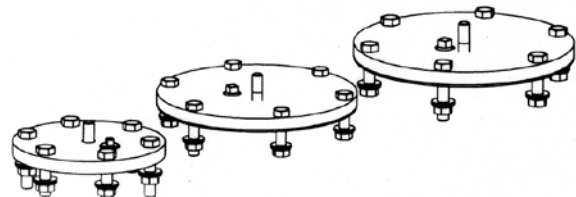
CUTTERS

ITEM NUMBER	DESCRIPTION	LIST PRICE
350-01-1032	Cutter, 3.5" O.D.	\$709.88
360-29-40	Cutter, 4" O.D.	812.20
360-29-42	Cutter, 4.25" O.D.	860.93
350-01-1048	Cutter, 5.5" O.D.	1,052.20
360-29-60	Cutter, 6" O.D.	1,218.31
360-29-63	Cutter, 6.325" O.D.	1,267.03
350-01-1064	Cutter, 7.5" O.D.	1,391.71
360-29-80	Cutter, 8" O.D.	1,591.90
360-29-84	Cutter, 8.425" O.D.	1,640.64



BLIND FLANGES

ITEM NUMBER	DESCRIPTION	LIST PRICE
360-30-04	QuikValve, 4" Blind Flange	\$409.08
360-30-06	QuikValve, 6" Blind Flange	409.08
360-30-08	QuikValve, 8" Blind Flange	454.54



QUIKVALVE™**Transmate**

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SOME ADVANTAGES OF THE QUIKVALVE...

- The valve is inserted in the open position, so no matter how the water flow is configured, there is no loss of water pressure.
- The process is quick, usually much faster than alternative methods of line stopping or cut-ins. The average installation time is between two and three hours.
- There is only one cut in the main, and the main is never severed. The pipe retains its structural integrity just as it would with a size on size lateral tap.
- The insert uses a standard valve stem and nut. Any QuikValve installation will have the same number of turns to open and close as any valve in the system.
- Should the need arise, the QuikValve insert is replaceable under pressure.
- The insert uses the newest valve technology, the rubber coated wedge. This gives the QuikValve good sealing characteristics with an installation pressure rating of up to 150 psi.
- Due to the small envelope of the installed QuikValve, it has been installed in places where other pipelines and conduits precluded a valve cut-in.
- The QuikValve insertion machine doubles as a 3" through 12" lateral tapping machine. With 27" of travel, the equipment easily handles a size on size 12" tap. Incidentally, the manual feed on the machine has proved to give the operator a real feel for the cut, allowing him to stop if trouble arises before damage to the main occurs.
- The QuikValve gives a new method to easily isolate hydrants, water towers or spurs.

FREQUENTLY ASKED QUESTIONS...

Q Does the valve have the same number of turns as a standard valve?

A Yes, and the same height.

Q What are the differences between the QuikValve sleeve and a standard fabricated tapping sleeve?

A There are three main differences:

1. The QuikValve sleeve has a machined neck due to the tolerances required to allow the insert to seal.
2. The QuikValve sleeve uses an all-around full seal gasket and armors instead of just a neck ring.
3. The QuikValve sleeve has a narrow range, just ± 0.10 , again to optimize sealing characteristics.

Q Why do you use an all around gasket instead of a neck ring on the QuikValve sleeve?

A We felt that sealing all the way around the pipe added significantly to the stability of the product. This is the design we have always used in our clamp products. The all around seal gives an increased safety margin against any leaking around the edges of the QuikValve sleeve, supports the pipe, and applies a more even pressure gradient to the outside diameter of the pipe wall.

Q What is the valve insert made of?

A The insert is a ductile iron cast plug that is encased with 55 durometer SBR rubber. The rubber is bonded to the casting during the rubber molding process.

Q Does this valve meet the AWWA valve specification?

A No, there is no AWWA specification that covers the QuikValve. If it ever does have an AWWA specification, it will be under a new category, separate from the standard cast valve specifications. The QuikValve's operating mechanism, the stem and nut, are standard and meet AWWA requirements.

Q Will the QuikValve always give a 100% seal?

A We don't guarantee a 100% seal. Our installations thus far have given a 100% seal. We do guarantee a seal that will allow work to be completed on your line.

Q What is the warranty period on the QuikValve?

A One year.

Q What does "NDZ Stem" mean?

A NDZ – Stands for "Non-Dezincification". One of the elements in most brass stems is zinc, and "Dezincification" is the leaching out of this zinc by corrosion. The following factors can lead to dezincification; warm water temperatures, high levels of acidity, chlorides and sulfides, in conjunction with high electrical conductivity. NDZ Bronze Stems address this phenomenon and still maintain AWWA standards.



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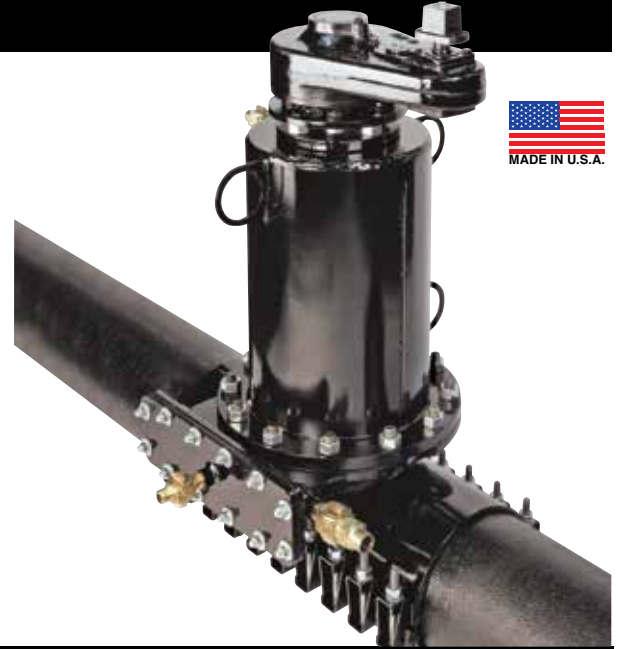
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INSERTAVALVE™

InsertaValve™

Valve insertion, simplified

- 10" - 12" installations in cast iron, ductile iron, A/C, PVC C-900 and steel pipe
- No Loss of Pressure
- Minimal Water Loss
- Completion time is less than 2 hours
- Much Faster Than Traditional Line Stopping And Cut-ins
- Horizontal or Vertical Installations



INSERTA VALVE™ SLEEVE

MATERIAL SPECIFICATIONS

INTENDED USE: Provides attachment to pipe for drilling and final assembly of the InsertaValve™ Water Control Valve. May be used on cast iron, ductile iron, asbestos cement and C900 PVC pipe.

GENERAL: The fabricated sleeve will assure a 360 degree seal around the pipe under working pressures up to 150 psi. It will accommodate the equipment and fixtures necessary to drill the pipe and install the InsertaValve™ valve assembly without any interruption in water service.

MATERIALS: Made of ASTM A-36 steel, epoxy coated to 10 -12 mils.

FLANGE: A special flange will mate with the InsertaValve™ installation equipment and valve assembly.

NECK: The precision manufacturing tolerances of the neck will assure proper alignment, and support, of the InsertaValve™ valve assembly. The neck will incorporate a slide gate body that will provide a connecting flange and sealing surface for the slide gate housing. The slide gate body will also provide a sealing surface for the slide gate disk o-ring.

BOLTS AND NUTS: High strength low alloy steel bolts and nuts meeting AWWA standard C-111. Type 304 stainless steel bolts with Xylan coated nuts to prevent galling, are optional.

LUGS: Sleeve sidebar lugs will properly align the sleeve halves during installation, provide a bolting surface, and assure a 360 degree seal. The lugs will prevent excessive stress on the pipe, and minimize distortion of soft (PVC) pipe.

MAT GASKETS: Made of Styrene Butadiene Rubber (SBR) compounded for potable water service in accordance with ASTM D2000 3 BA715. The gaskets provide a positive 360 degree seal on the pipe and assure a tight, durable, and resilient seal.

COATING: The sleeve will be lined and coated with fusion bonded epoxy.

ARMORS: Heavy gauge type 304 stainless steel armor plates will bridge the gap between the sleeve halves.

INSERTA VALVE™ ASSEMBLY

MATERIAL SPECIFICATIONS

GENERAL: Designed to be inserted into the InsertaValve™ Sleeve after the drilling procedure is performed, the Valve Assembly shall perform as a water control device giving an effective shutoff of the flow of water. The valve will be installed in the open position, under pressure and under flow conditions without any interruption of water service. The InsertaValve™ shall give a full flow waterway after installation.

PLUG: Constructed of urethane rubber, with a durometer of 65 Shore A. The plug shall seal on the on the inside diameter of the pipe and inside diameter to the drilled hole.

VALVE STEM AND STEM NUT: Manufactured of high strength bronze suitable for valve stems and nuts.

GEARBOX: The gearbox (inline style for vertical installations, or a 90° style for horizontal installations) will provide the force necessary to compress the plug to shut off the flow of water in the pipeline.

GASKETS: Made of SBR rubber, compounded for potable water service in accordance with ASTM D-2000 3 BA715, with a durometer of 70 Shore A. The gasket shall act as the sealing interface between the valve flange and the sleeve flange.

BOLTS AND NUTS: Grade 3 or better alloy steel, zinc plated for corrosion protection. Type 304 stainless steel bolts, nuts and washers are optional. Stainless steel nuts are Xylan coated to prevent galling.

The InsertaValve™ requires a minimum depth of bury from the top side of the pipe of 40" in vertical installations. For the horizontal installations, a 24" bury depth is recommended. The physical height of the sleeve and valve assembly is 35" off the top of the pipe.

The InsertaValve™ requires approximately 215 turns to completely open and close the valve.

InsertaValve™

Valve Insertion, Simplified

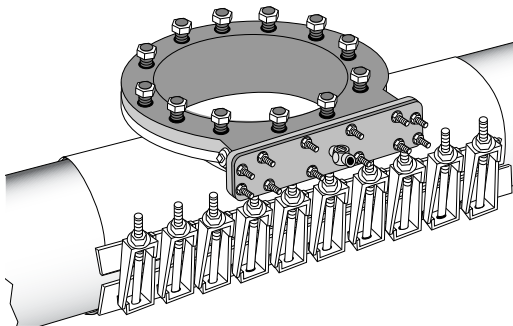
For more information on the InsertaValve™ Machine, please contact your regional Romac Customer Service at 1-800-426-9341

Note: This equipment is an add-on package to the QuikValve™ Base Machine (360-00) and requires the use of a hydraulic power supply.

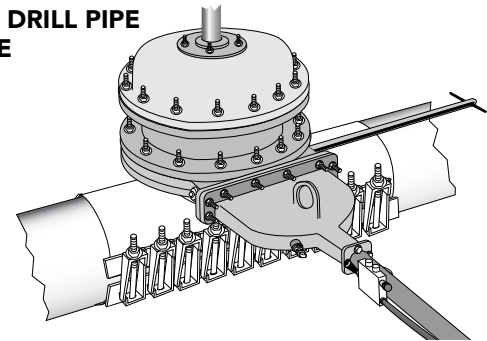


EASY INSTALLATION

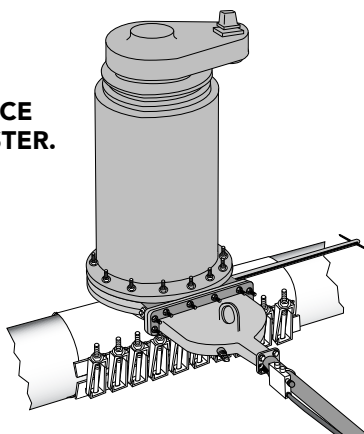
- 1** INSTALL THE INSERTAVALVE™ SLEEVE ON TO THE PIPE



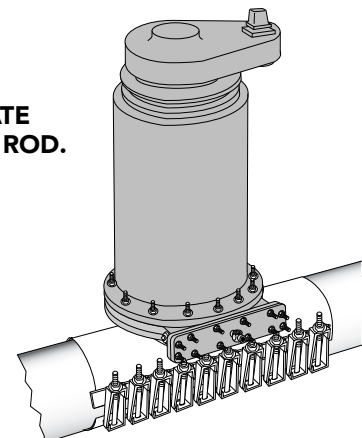
- 2** MOUNT THE SLIDE GATE ASSEMBLY & DRILLING MACHINE. DRILL PIPE AND CLOSE THE SLIDE GATE.



- 3** REMOVE DRILLING MACHINE & REPLACE WITH VALVE CANISTER.



- 4** OPEN SLIDE GATE. REMOVE SLIDE GATE ASSEMBLY & SEAL ROD.




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INSERTAVALVE™

InsertaValve™

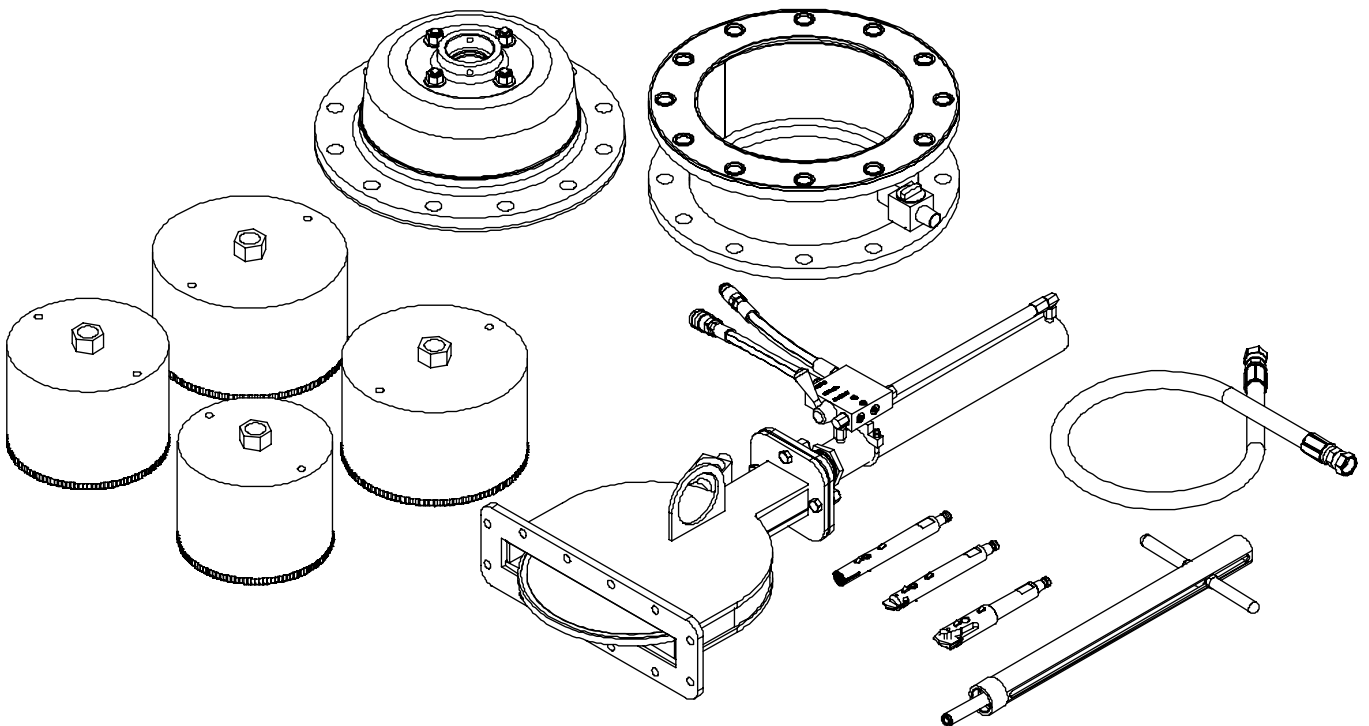
Valve Insertion, Simplified

ITEM NUMBER	DESCRIPTION	LIST PRICE
358-00	InsertaValve™ Equipment for 10 & 12-inch Valve Insertion	\$15,055.55

THE FOLLOWING ACCESSORIES ARE INCLUDED:

- Slide Gate (Hydraulically Powered)
- Seal Rod
- Drilling Machine Adapter Bell For I.V.S. (fits QuikValve™ drilling machine)
- (4) Holesaws that fit QuikValve™ Drilling Machine
- Machine Spacer
- By-Pass Hose
- Shaft Nose - for DI, CI and Steel
- PVC Pilot - for PVC and Plastic Pipe
- Assorted Fasteners and Gaskets
- Operations Manual

Note: This equipment is an add-on package to the QuikValve™ Base Machine (360-00) and requires the use of a hydraulic power supply.



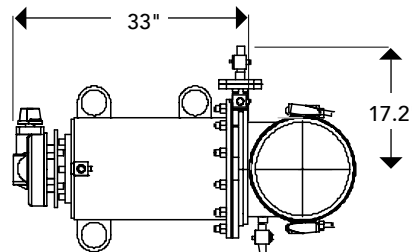
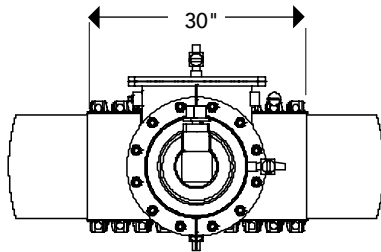
INSERTAVALVE™



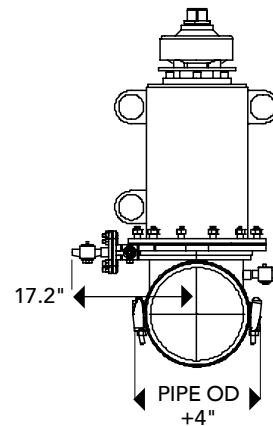
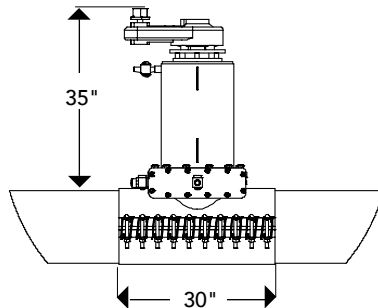
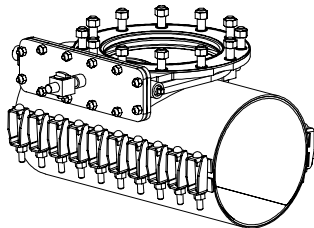
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HORIZONTAL INSTALLATIONS



VERTICAL INSTALLATIONS



ITEM NUMBER	DESCRIPTION	LIST PRICE
SLEEVES with alloy bolts & nuts		
311-1095010	IVS-10.95 (10.75 - 10.95)	\$3,260.59
311-1125010	IVS-11.25 (10.85 - 11.25)	3,260.59
311-1145010	IVS-11.45 (11.05 - 11.45)	3,260.59
311-1180010	IVS-11.80 (11.40 - 11.80)	3,260.59
311-1220010	IVS-12.20 (11.80 - 12.20)	3,260.59
10"		
311-1295010	IVS-12.95 (12.75 - 12.95)	3,260.59
311-1320010	IVS-13.20 (12.90 - 13.20)	3,260.59
311-1350010	IVS-13.50 (13.10 - 13.50)	3,260.59
311-1380010	IVS-13.80 (13.40 - 13.80)	3,260.59
311-1440010	IVS-14.40 (14.00 - 14.40)	3,260.59
311-1460010	IVS-14.60 (14.20 - 14.60)	3,260.59
311-1470010	IVS-14.70 (14.30 - 14.70)	3,260.59

ITEM NUMBER	DESCRIPTION	LIST PRICE
SLEEVES with 304 S.S. bolts & nuts		
311-1095011	IVS-10.95 (10.75 - 10.95)	\$3,688.84
311-1125011	IVS-11.25 (10.85 - 11.25)	3,688.84
311-1145011	IVS-11.45 (11.05 - 11.45)	3,688.84
311-1180011	IVS-11.80 (11.40 - 11.80)	3,688.84
311-1220011	IVS-12.20 (11.80 - 12.20)	3,688.84
10"		
311-1295011	IVS-12.95 (12.75 - 12.95)	3,688.84
311-1320011	IVS-13.20 (12.90 - 13.20)	3,688.84
311-1350011	IVS-13.50 (13.10 - 13.50)	3,688.84
311-1380011	IVS-13.80 (13.40 - 13.80)	3,688.84
311-1440011	IVS-14.40 (14.00 - 14.40)	3,688.84
311-1460011	IVS-14.60 (14.20 - 14.60)	3,688.84
311-1470011	IVS-14.70 (14.30 - 14.70)	3,688.84

Note: Sleeve and Canister dimensions are the same for 10 inch and 12 inch installations



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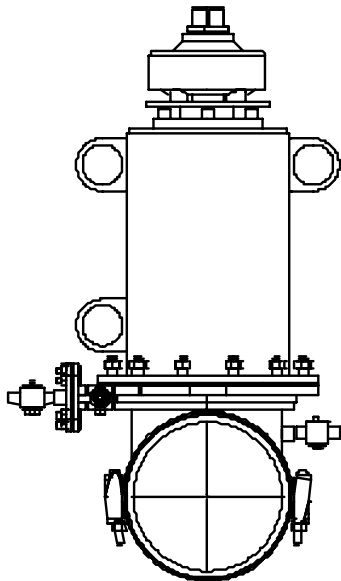
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INSERTAVALVE™

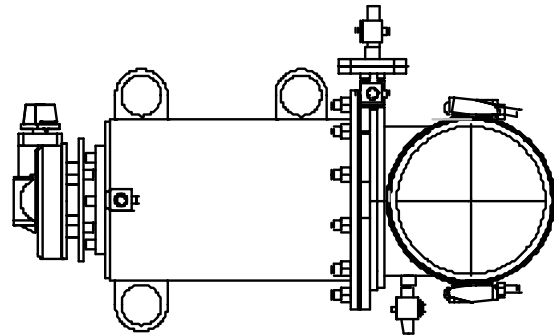
VALVE CANISTERS (PLUG INCLUDED)



VERTICAL



HORIZONTAL



	ITEM NUMBER	DESCRIPTION	LIST PRICE
10"	358-01-0938	9 3/8" Left Open, Alloy B&N	\$8,653.65
	358-01-0938R	9 3/8" Right Open, Alloy B&N	8,653.65
	358-01-0938-SS	9 3/8" Left Open, 304 SS B&N	8,967.51
	358-01-0938R-SS	9 3/8" Right Open, 304 SS B&N	8,967.51
10"	358-01-0975	9 3/4" Left Open, Alloy B&N	8,653.65
	358-01-0975R	9 3/4" Right Open, Alloy B&N	8,653.65
	358-01-0975-SS	9 3/4" Left Open, 304 SS B&N	8,967.51
	358-01-0975R-SS	9 3/4" Right Open, 304 SS B&N	8,967.51
12"	358-01-1138	11 3/8" Left Open, Alloy B&N	8,653.65
	358-01-1138R	11 3/8" Right Open, Alloy B&N	8,653.65
	358-01-1138-SS	11 3/8" Left Open, 304 SS B&N	8,967.51
	358-01-1138R-SS	11 3/8" Right Open, 304 SS B&N	8,967.51
12"	358-01-1175	11 3/4" Left Open, Alloy B&N	8,653.65
	358-01-1175R	11 3/4" Right Open, Alloy B&N	8,653.65
	358-01-1175-SS	11 3/4" Left Open, 304 SS B&N	8,967.51
	358-01-1175R-SS	11 3/4" Right Open, 304 SS B&N	8,967.51

HORIZONTAL

	ITEM NUMBER	DESCRIPTION	LIST PRICE
10"	358-01-0938-90GB	9 3/8" Left Open, Alloy B&N	\$8,653.65
	358-01-0938R-90GB	9 3/8" Right Open, Alloy B&N	8,653.65
	358-01-0938-90GB-SS	9 3/8" Left Open, 304 SS B&N	8,967.51
	358-01-0938R-90GB-SS	9 3/8" Right Open, 304 SS B&N	8,967.51
10"	358-01-0975-90GB	9 3/4" Left Open, Alloy B&N	8,653.65
	358-01-0975R-90GB	9 3/4" Right Open, Alloy B&N	8,653.65
	358-01-0975-90GB-SS	9 3/4" Left Open, 304 SS B&N	8,967.51
	358-01-0975R-90GB-SS	9 3/4" Right Open, 304 SS B&N	8,967.51
12"	358-01-1138-90GB	11 3/8" Left Open, Alloy B&N	8,653.65
	358-01-1138R-90GB	11 3/8" Right Open, Alloy B&N	8,653.65
	358-01-1138-90GB-SS	11 3/8" Left Open, 304 SS B&N	8,967.51
	358-01-1138R-90GB-SS	11 3/8" Right Open, 304 SS B&N	8,967.51
12"	358-01-1175-90GB	11 3/4" Left Open, Alloy B&N	8,653.65
	358-01-1175R-90GB	11 3/4" Right Open, Alloy B&N	8,653.65
	358-01-1175-90GB-SS	11 3/4" Left Open, 304 SS B&N	8,967.51
	358-01-1175R-90GB-SS	11 3/4" Right Open, 304 SS B&N	8,967.51

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INSERTAVALVE™

SLEEVE & PLUG CHART

SLEEVE CHART SLEEVE SPECIFIED BY LARGE OD

SLEEVE SIZE	PIPE AND CLASS	PART NUMBER
10.75 - 10.95	PVC 10" (10.75) ASTM D 2241CL 100,125,160,200 Steel 10 (10.75) Sch. 40, 80	311-1095010
10.85 - 11.25	DI 10" (11.10) 50 - 56 CI 10" (11.10) 50 CC & PC; 100 CC & PC; 150 CC & PIT; 200 CC & PIT; 250 CC; A, B. PVC C-900 10" (11.10) 100,150, 200	311-1125010
11.05 - 11.45	DI (11.10) 50 - 56 CI (11.10,11.40) PVC C-900 (11.10); 100, 150, 200 SIMPLEX (11.43); AC 150, AC 100 J-M (11.37)	311-1145010
11.40 - 11.80	CI 250 PIT (11.40), C (11.40),D (11.40) E, F (11.60) AC 100 CERTAIN-TEED (11.46), SIMPLEX (11.43)	311-1180010
11.80 - 12.20	CI G, H (11.84) AC 150 J-M (11.92) SIMPLEX (11.95); AC 200 J-M (11.92) CERTAIN-TEED (11.88)	311-1220010
12.20 - 12.60	AC 200 SIMPLEX (12.45)	Non-stocked item, please call for special quote
12.75 - 12.95	PVC 12" (12.75) ASTM D 2241CL 100, 125, 160, 200 Steel 12" (12.75) Sch. 40, 80	311-1295010
12.90 - 13.20	DI 12" (13.20) 50 - 56 CI 12" (13.20) 50 CC & PC; 100 CC & PC; 150 CC & PIT; 200 CC & PIT; 250 CC; A, B PVC C-900 12" (13.20) 100,150, 200	311-1320010
13.10 - 13.50	DI 12" (13.20) 50 - 56 CI 12" (13.20) 50 CC & PC; 100 CC & PC; 150 CC & PIT; 200 CC & PIT; 250 CC; A, B; A,B; CI (13.50) 250 PIT, C, D PVC C-900 12" (13.20) 100,150, 200 AC 100 J-M (13.49)	311-1350010
13.40 - 13.80	CI (13.50) 250 PIT, C, D, (13.76) E, F AC 100 J-M (13.49) CERTAIN-TEED (13.70) SIMPLEX (13.61)	311-1380010
13.70 - 14.10	CI G, H (14.08)	311-1410010
14.00 - 14.40	AC 150 J-M (14.18) CERTAIN-TEED (14.11) SIMPLEX (14.21) AC 200 J-M (14.18) CERTAIN-TEED (14.11)	311-1440010
14.40 - 14.80	AC 200 SIMPLEX (14.72)	Non-stocked item, please call for special quote

PLUG CHART

PLUG SIZE		PIPE AND CLASS	PART NUMBER
10"	NOM.	PVC C-900 CL 200 AC JM CL 200, CERTAIN-TEED CL 200; Steel Sch. 80	358-01-0938
	DIA.	9 3/8"	
12"	NOM.	DI 50 - 56 CI - All types C-900 CL 100,150; ASTM D 2241 PVC CL 100,125, 160, 200 AC100,150, SIMPLEX 200 Steel Sch. 40	358-01-0975
	DIA.	9 3/4"	
12"	NOM.	PVC C-900 CL 200 ASTM D 2241 PVC CL 200 AC JM CL 100, 200, CERTAIN-TEED CL 200 Steel Sch. 80	358-01-1138
	DIA.	11 3/8"	
12"	NOM.	DI 50 - 56 CI - All types C-900 CL 100,150; ASTM D 2241 PVC CL 100,125, 160, 200 AC100,150, SIMPLEX 200 Steel Sch. 40	358-01-1175
	DIA.	11 3/4"	

NOTES



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PIPE O.D. CHART

PIPE SIZE	STEEL & PLASTIC		CAST IRON			ASBESTOS - CEMENT				SOMPLEX -A/C			COPPER
	TYPE	TYPE	CURRENT D.I. PIPE SIZE	AWWA 1908	O.D.	TYPE	M.E. O.D.	R.B. O.D. MIN. MAX.		TYPE	M.E. O.D.	R.B. O.D.	O.D.
1/2"	STD.	.840											.625
5/8"													.750
3/4"	STD.	1.05											.875
1"	STD.	1.315											1.125
1 1/4"	STD.	1.66											1.375
1 1/2"	STD.	1.90											1.625
2"	STD.	2.375			2.50								2.125
2 1/2"	STD.	2.875											2.625
3"	O.D.	3.00	3.96	A	3.80	cl 100	3.74	4.00		cl 100	3.70	3.95	3.125
	STD.	3.50		B, C, D	3.96	cl 150	3.84	4.10		cl 150	3.88	4.13	
						cl 200	3.84	4.29		cl 200	4.20	4.45	
3 1/2"	STD.	4.00											3.625
4"	O.D.	4.00	4.80	A	4.80	cl 100	4.64	4.79	5.14	cl 100	4.70	4.95	4.125
	STD.	4.50		B, C, D	5.00	cl 150	4.81	4.97	5.27	cl 150	4.85	5.10	
						cl 200	4.81	5.22	5.57	cl 200	5.20	5.45	
4 1/2"	STD.	5.00											
5"	STD.	5.563											5.125
6"	O.D.	6.00	6.90	A	6.90	cl 100	6.91	7.05	7.40	cl 100	6.76	7.01	6.125
	RIV.	6.25		B, C, D	7.10	cl 150	6.91	7.07	7.37	cl 150	6.95	7.20	
	STD.	6.625		E, F	7.22	cl 200	6.91	7.26	7.56	cl 200	7.50	7.75	
				G, H	7.38								
7"	RIV.	7.25											
	STD.	7.625											
8"	O.D.	8.00	9.05	A, B	9.05	cl 100	9.11	9.22	9.57	cl 100	8.88	9.13	
	RIV.	8.25		C, D	9.30	cl 150	9.11	9.27	9.57	cl 150	9.15	9.40	
	STD.	8.625		E, F	9.42	cl 200	9.11	9.39	9.74	cl 200	9.76	10.01	
				G, H	9.60								
9"	STD.	9.625											
10"	O.D.	10.00	11.10	A, B	11.10	cl 100	11.24	11.42	11.77	cl 100	11.18	11.43	
	RIV.	10.25		C, D	11.40	cl 150	11.66	11.82	12.12	cl 150	11.70	11.95	
	STD.	10.75		E, F	11.60	cl 200	11.66	11.77	12.12	cl 200	12.20	12.45	
				G, H	11.84								
12"	O.D.	12.00	13.20	A, B	13.20	cl 100	13.44	13.69	14.04	cl 100	13.36	13.61	
	RIV.	12.25		C, D	13.50	cl 150	13.92	14.08	14.38	cl 150	13.96	14.21	
	STD.	12.75		E, F	13.76	cl 200	13.92	14.03	14.38	cl 200	14.46	14.72	
				G, H	14.08								
14"	STD.	14.00	15.30	A, B	15.30	cl 100	15.07	15.40	15.80	cl 100	15.56	15.94	
				C, D	15.65	cl 150	16.22	16.38	16.73	cl 150	16.26	16.64	
				E, F	15.98	cl 200	16.22	16.48	16.88	cl 200	16.88	17.26	
				G, H	16.32								
16"	STD.	16.00	17.40	A, B	17.40	cl 100	17.15	17.54	17.94	cl 100	17.76	18.14	
				C, D	17.80	cl 150	18.46	18.62	18.97	cl 150	18.50	18.88	
				E, F	18.16	cl 200	18.46	18.79	19.19	cl 200	19.30	19.68	
				G, H	18.54								
18"	STD.	18.00	19.50	A, B	19.50	cl 100	19.90	20.44					
				C, D	19.92	cl 150	20.94	21.20					
20"	STD.	20.00	21.60	A, B	21.60	cl 100	22.12	22.50					
				C, D	22.06	cl 150	23.28	23.54					
				G, H	23.02								
22"	STD.	22.00											
24"	STD.	24.00	25.80	A, B	25.80	cl 100	26.48	27.17					
				C, D	26.32	cl 150	27.96	28.22					

NOTE: Due to variation in outside diameters and specifications, dimensions listed above are approximate. For this reason, the O.D. of pipe being used should be determined before ordering Romac products.

DELIVERY SCHEDULES




BASED UPON CARRIERS' AVERAGE DELIVERY TIME

CUSTOMER SERVICE

Tel: (800) 426-9341 / (425) 951-6200
Fax: (425) 951-6201
Hours: 5:30 AM - 5:00 PM PST
Includes Alaska and Hawaii

QUOTATIONS

Tel: (800) 426-9341 / (425) 951-6200
Fax: (425) 951-6201
Includes Alaska and Hawaii

-  next-day delivery
-  2-day delivery
-  3-day delivery

