

You can't beat the system.

SUBMITTAL PACKAGE

# Submittal Package Cast Iron Service Weight System

(Updated April 20, 2022)

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## SUBMITTAL FOR CHARLOTTE PIPE<sup>®</sup> SERVICE CAST IRON SOIL PIPE AND FITTINGS

Date:

Job Name:\_\_\_\_\_

Engineer:\_\_\_\_\_

Location:

Contractor:

#### Scope:

This specification covers Service Cast Iron pipe, fittings, and compression gaskets used in sanitary drain, waste and vent (DWV), sewer, and storm drainage applications. This system is intended for use in non-pressure applications.

#### Specification:

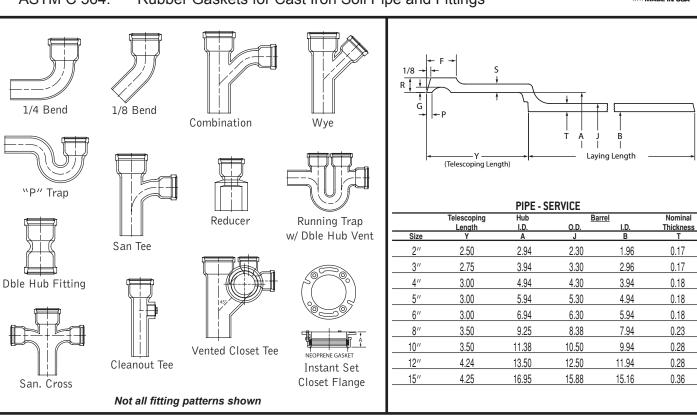
Pipe and fittings shall comply with ASTM A 74. Compression gaskets shall comply with ASTM C 564. All pipe and fitting shall be made in the United States, and marked with the collective trademark of the Cast Iron Soil Pipe Institute, . Service cast iron pipe and fittings are listed by NSF<sup>®</sup> International to the UP Code.

#### Installation:

Installation shall comply with the latest installation instructions published by Charlotte Pipe and Foundry Company<sup>®</sup> and shall conform to all applicable plumbing, fire, and building code requirements. The system shall be hydrostatically tested after installation to 10 ft. of head (4.3 psi maximum). **WARNING!** Never test with or transport/store compressed air or gas in Cast Iron pipe or fittings. Doing so can result in explosive failures and cause severe injury or death.

#### Referenced Standards:

ASTM A 74: Cast Iron Soil Pipe and Fittings ASTM C 564: Rubber Gaskets for Cast Iron Soil Pipe and Fittings



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## CHARLOTTE PIPE AND FOUNDRY COMPANY®

## **Certifications**

This is to verify that products manufactured by Charlotte Pipe and Foundry, Cast Iron Division, are manufactured in the United States and conform to the following standards:

#### **SERVICE HUB AND SPIGOT PIPE AND FITTINGS**

All cast iron soil pipe and fittings shall be marked with the collective trademark of the Cast Iron Soil Pipe Institute (CISPI). ASTM A 74 Listed by NSF<sup>®</sup> International to the UP Code ISO 9001:2008 Certified

#### **EXTRA HEAVY HUB AND SPIGOT PIPE AND FITTINGS**

All cast iron soil pipe and fittings shall be marked with the collective trademark of the Cast Iron Soil Pipe Institute (CISPI). ASTM A 74 Listed by NSF<sup>®</sup> International to the UP Code ISO 9001:2008 Certified

#### **HUBLESS PIPE AND FITTINGS**

All cast iron soil pipe and fittings shall be marked with the collective trademark of the Cast Iron Soil Pipe Institute (CISPI). CISPI Standard 301 ASTM A 888 Listed by NSF<sup>®</sup> International to the UP Code ISO 9001:2008 Certified

#### **HUBLESS COUPLINGS**

CISPI Standard 310 ASTM C 1277 Certified by NSF<sup>®</sup> International

#### **HUBLESS HEAVY DUTY COUPLINGS**

Meets ASTM C 1540

#### **COMPRESSION GASKETS**

ASTM C 564 CISPI HSN 85

Very truly yours,

Hope Handison

Hooper Hardison, President

Verie L. Wilson

Notary Public My commission expires July 02, 2022

LC-CI (7-18-18)

TERRI L WILSON NOTARY PUBLIC UNION COUNTY, NC My Commission Expires 7-2-2022





## **Reference Standards Cast Iron**

#### AMERICAN SOCIETY FOR TESTING AND MATERIALS

ASTM	TITLE
A 74	SPECIFICATION FOR CAST IRON SOIL PIPE AND FITTINGS HUB AND SPIGOT (SERVICE AND EXTRA HEAVY)
SCOPE:	THIS SPECIFICATION COVERS CAST IRON PIPE AND FITTINGS USED IN SANITARY DRAIN, WASTE, AND VENT (DWV), SEWER, AND STORM DRAINAGE APPLICATION. THIS SYSTEM IS INTENDED FOR USE IN NONPRESSURE APPLICATIONS.
C 564 SCOPE:	SPECIFICATION FOR RUBBER GASKETS FOR CAST IRON SOIL PIPE AND FITTINGS THIS SPECIFICATION COVERS PREFORMED RUBBER GASKETS USED TO SEAL JOINTS IN CAST IRON SOIL PIPE AND FITTINGS.
C 1277	SPECIFICATION FOR COUPLING FOR USE IN CONNECTION WITH HUBLESS CAST IRON PIPE AND FITTINGS FOR SANITARY AND STORM DRAIN, WASTE, AND VENT PIPING APPLICATION (REGULAR HUBLESS COUPLING)
SCOPE:	THE PURPOSE OF THIS SPECIFICATION IS TO ESTABLISH CRITERIA FOR MATERIAL DIMENSIONS AND TOLERANCES FOR ONE TYPE OF COUPLING USED IN HUBLESS CAST IRON SOIL PIPE AND FITTING FOR SANITARY AND STORM DRAIN, WASTE AND VENT PIPING APPLICATIONS.
C 1540	SPECIFICATION FOR SHIELDED COUPLINGS JOINING HUBLESS CAST IRON SOIL PIPE AND FITTINGS (HEAVY DUTY COUPLINGS)
SCOPE:	THIS SPECIFICATION COVERS THE EVALUATION OF THE PERFORMANCE OF SHIELDED HUBLESS COUPLINGS TO JOIN CAST IRON SOIL PIPE AND FITTINGS.

#### **CAST IRON SOIL PIPE INSTITUTE**

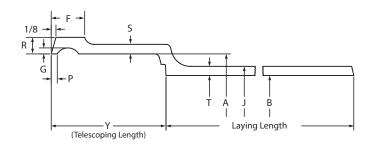
CISPI	TITLE
301	SPECIFICATION FOR HUBLESS CAST IRON SOIL PIPE AND FITTINGS FOR SANITARY AND STORM DRAIN, WASTE, AND VENT PIPING APPLICATIONS
SCOPE:	THE PURPOSE OF THIS STANDARD IS TO ESTABLISH STANDARDS COVERING MATERIAL, DIMENSIONS, AND TOLERANCE FOR PIPE AND FITTINGS FOR HUBLESS CAST IRON SANITARY AND STORM DRAIN, SANITARY WASTE, AND VENT PIPING APPLICATIONS.
310	SPECIFICATION FOR COUPLING FOR USE IN CONNECTION WITH HUBLESS CAST IRON PIPE AND FITTINGS FOR SANITARY AND STORM DRAIN, WASTE, AND VENT PIPING APPLICATION (REGULAR HUBLESS COUPLING)
SCOPE:	THE PURPOSE OF THIS SPECIFICATION IS TO ESTABLISH CRITERIA FOR MATERIAL DIMENSIONS AND TOLERANCES FOR ONE TYPE OF COUPLING USED IN HUBLESS CAST IRON SOIL PIPE AND FITTING FOR SANITARY AND STORM DRAIN, WASTE AND VENT PIPING APPLICATIONS.

**Composition of Gray Iron** 

## **Gray Iron Physical Properties**

	•		
Tensile Strength	20,000 p.s.i. — 60,000 p.s.i. (21,000 p.s.i.)	The following are typical ranges of elements present in unalloyed gray cast iron normally produced in commercial practice:	
Elastic Modulus (Young's modulus)	10 - 23 x 10 <sup>6</sup> p.s.i.		
		Carbon (C)	2.60 - 3.85%
Hardness (Brinell)	150 - 250 BHN		
		Silicon (Si)	1.25 - 2.90%
Thermal Conductivity	0.110 - 0.137		
	calories/cm²/Sec/cm/ °C	Manganese (Mn)	0.40 - 1.00%
Thermal Expansion	10 x 10 <sup>-6</sup> / °C	Phosphorus (P)	0.02 - 0.90%
	6 x 10 <sup>-6</sup> / °F		
Doncity	0.25 - 0.28 lb./in³	Sulfur (S)	0.04 - 0.20%
Density	6.95 - 7.35 gm/cm <sup>3</sup>		
	0.75 - 7.55 gm/cm		
Specific Heat	0.13 BTU / lb / °F		
	0.13 cal / gm / °C		

# Service Cast Iron



## **A** WARNING

Testing with or use of compressed air or gas in Cast Iron pipe or fittings can result in explosive failures and cause severe injury or death.

AIR/GAS

- NEVER test with or transport/store compressed air or gas in Cast Iron pipe or fittings.
- NEVER test Cast Iron pipe or fittings with compressed air or gas.
- ONLY use Cast Iron pipe and fittings for drain, waste and vent or sanitary sewer applications.

## Service Cast Iron Soil Pipe

Size <sup>A</sup>	Inside Diameter of Hub <sup>®</sup>	Outside Diameter of Barrel	Telescoping Length	Inside Diameter of Barrel	Thick of Ba	
Availability <sup>₿</sup>	•		v	D	Т	
-	Α	J	T	В	Nom	Min
2″	2.94	2.30	2.50	1.96	0.17	0.14
3″	3.94	3.30	2.75	2.96	0.17	0.14
4″	4.94	4.30	3.00	3.94	0.18	0.15
5″	5.94	5.30	3.00	4.94	0.18	0.15
6″	6.94	6.30	3.00	5.94	0.18	0.15
8″	9.25	8.38	3.50	7.94	0.23	0.17
10″	11.38	10.50	3.50	9.94	0.28	0.22
12″	13.50	12.50	4.25	11.94	0.28	0.22
15″	16.95	15.88	4.25	15.16	0.36	0.30

	Thickness of Hub Distance from		Depth of Lead Groove			
Size <sup>A</sup>	Hub Body	Over Bead	<ul> <li>Width of Hub Bead</li> </ul>	Lead Groove to End, Pipe and Fittings <sup>B</sup>	Depth of L	ead Groove
	S (min)	R (min)	F(min)	Р	G (min)	G (max)
2″	0.13	0.34	0.75	0.22	0.10	0.19
3″	0.16	0.37	0.81	0.22	0.10	0.19
4′′	0.16	0.37	0.88	0.22	0.10	0.19
5″	0.16	0.37	0.88	0.22	0.10	0.19
6″	0.18	0.37	0.88	0.22	0.10	0.19
8″	0.19	0.44	1.19	0.38	0.15	0.22
10″	0.27	0.53	1.19	0.38	0.15	0.22
12″	0.27	0.53	1.44	0.47	0.15	0.22
15″	0.30	0.58	1.44	0.47	0.15	0.22

<sup>A</sup>Nominal inside diameter.

<sup>B</sup>For tolerances, please refer to the chart Dimensional Tolerances for Extra Heavy and Service Cast Iron Soli Pipe and Fittings.

## **A** WARNING

Cast Iron pipe and fittings are only intended for DWV (drain, waste and vent) non-pressure applications. Using cast iron pipe and fittings in pressure applications could result in explosive failures, causing serious injury or death or property damage.

# Service Cast Iron

## Service Cast Iron Soil Pipe

Part No. SV 1 Pipe, 5' Lengths, Single Hub

Size	Weight
2"x5'	22.5
3"x5'	31.8
4"x5'	41.0
5"x5'	52.5
6″x5′	69.2
8″x5′	101.0
10″×5′	150.9
12″x5′	197.3
15"x5'	287.5

#### Part No. SV 3 Pipe, 10' Lengths, Single Hub

OUPCO THE PALET PARE OUSA CHARLOTTE	PIPE: 0056 3 50 40 ASTH A 74 06 29 85 12 87
Size	Weight
2"x10'	40.1
3"x10'	59.5
4"x10'	75.1
5"x10'	100.4
6"x10'	122.8
8″x10′	180.5
10"x10'	259.7
12"x10'	345.9
15"x10'	525.1

#### Part No. SV 1A Pipe, 30" Lengths, Single Hub

Size	Weight		
8"x30"	63.8		
10"x30"	91.7		
12"x30"	107.1		
15"x30"	166.3		

#### Part No. SV 4 Pipe, 30" Lengths, Double Hub

	182. N
Size	Weight
2"x30"	13.8
3"x30"	17.6
4"x30"	27.1

#### Part No. SV 2 Pipe, 5' Lengths, Double Hub

Size	Weight	
2″x5′	22.4	
3″x5′	33.6	
4′′×5′	42.5	
5"x5′	55.8	
6″x5′	73.8	



Testing with or use of compressed air or gas in Cast Iron pipe or fittings can result in explosive failures and cause severe injury or death.



- NEVER test with or transport/store compressed air or gas in Cast Iron pipe or fittings.
- NEVER test Cast Iron pipe or fittings with compressed air or gas.
- ONLY use Cast Iron pipe and fittings for drain, waste and vent or sanitary sewer applications.



## Service Cast Iron

#### PART NO. SV 1

+ L	+I

Pipe, 5' Lengths, Single Hub				
Size	L	Weight		
2″ x 5′	5′	23.8		
3'' x 5'	5′	31.8		
4″ x 5′	5′	41.0		
5″ x 5′	5′	52.5		
6″ x 5′	5′	69.2		
8″ x 5′	5′	101.0		
10″ x 5′	5′	150.9		
12″ x 5′	5′	197.3		
15" x 5'	5′	302.7		

Weights are approximate and are for shipping purposes only.

#### PART NO. SV 1A



Pipe, 30''	Lengths,	Single	Hub

	,	
Size	L	Weight
8" x 30"	30″	63.8
10" x 30"	30″	91.7
12" x 30"	30″	107.1
15" x 30"	30″	166.3

#### PART NO. SV 2



#### Pipe, 5' Lengths, Double Hub

	Tipe, 5 Lengins, Double Hub			
2	Size	L	Weight	
	2" x 5'	4′ 91/2″	22.4	
	3'' x 5'	4′ 9¹/4′′	33.6	
	4'' x 5'	4′ 9′′	42.5	
	5″ x 5′	4′ 9′′	55.8	
	6'' x 5'	4′ 9′′	73.8	

#### PART NO. SV 3

<u> </u>	
ll	
+ L	

#### Pipe, 10' Lengths, Single Hub

L	Weight
10′	40.1
10′	59.5
10′	75.1
10′	100.4
10′	122.8
10′	180.5
10′	276.1
10′	345.9
10′	525.1
	L 10' 10' 10' 10' 10' 10' 10' 10' 10' 10'

#### PART NO. SV 4

Pipe, 30'	″ Lengths, Dou	uble Hub
Size	L	Weight
2" x 30"	25″	13.8
3" x 30"	241/2″	17.6
4" x 30"	24″	27.1



#### PART NO. SV 900

#### Service Weight Charlotte Seal Gasket

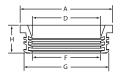
5	CIVIC	- noig	in cina	10000	Jui ous	NC C
Size	Α	D	F	G	Н	Weight
2	31/2	2 <sup>3</sup> /16	21/8	31/8	1 <sup>31</sup> / <sub>32</sub>	0.3
3	4 <sup>1</sup> /2	3 <sup>3</sup> /16	31/8	4 <sup>1</sup> /8	2 <sup>1</sup> /16	0.4
4	5½	4 <sup>3</sup> /16	4 <sup>1</sup> /8	5 <sup>1</sup> /4	2 <sup>9</sup> /32	0.5
5	61/2	5 <sup>3</sup> /16	51/8	61/4	2%32	0.6
6	71/2	6 <sup>3</sup> /16	6 <sup>1</sup> /8	71/4	2 <sup>1</sup> /4	0.8
8	9 <sup>3</sup> /4	8 <sup>13</sup> /32	8 <sup>3</sup> /16	9%32	3	1.5
10	127/16	101/2	105/16	1111/16	23/4	2.4



#### PART NO. SV 950

#### Service Weight Quik-Tite Gasket

Service weight walk-life basket						
Size	Α	D	F	G	Н	Weight
2	31/2	2 <sup>1</sup> /16	2	31/4	1 <sup>3</sup> / <sub>32</sub>	0.3
3	47/8	3 <sup>1</sup> /16	3 <sup>1</sup> /16	4 <sup>3</sup> /8	13⁄4	0.4
4	53/4	4	4	5 <sup>3</sup> /16	13/4	0.5
5	63/4	5	5	6	2 <sup>1</sup> /16	0.8
6	8	65/16	65/16	7 <sup>11</sup> /32	25/32	0.8
8	10	83/16	<b>8</b> <sup>3</sup> /16	81/2	21/2	1.5
10	121/4	10¹⁄4	10	111/2	21/2	2.3
12	143⁄/8	12¹/4	12	14	2 <sup>7</sup> /8	3.0



#### PART NO. SV 5

Quarter Bend (90° Ell)				
Size	D	X	Weight	
2	6	31/4	5.1	
3	7	4	7.7	
4	8	4 <sup>1</sup> /2	13.1	
5	81/2	5	16.2	
6	9	5½	21.7	
8	111/2	6 <sup>5</sup> ⁄8	36.5	
10	121/2	75/8	57.3	
12	15	83/4	82.8	
15	(XH)	(XH)	(XH)	



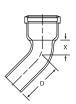
#### PART NO. SV 7

Sixth Bend (60° Ell)				
Size	D	Х	Weight	
2	43/4	2	4.3	
3	5 <sup>1</sup> /2	2 <sup>1</sup> /2	6.9	
4	6 <sup>5</sup> /16	2 <sup>13</sup> /16	10.8	
5	65/8	31/8	14.0	
6	67⁄8	33⁄8	16.4	
8	9	4 <sup>1</sup> /8	32.5	



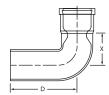
#### (HX) Please see Extra Heavy dimensions

Eighth Bend (45° Ell)				
Size	D	Х	Weight	
2	41/4	11/2	4.2	
3	4 <sup>15</sup> /16	1 <sup>15</sup> /16	6.5	
4	5 <sup>11</sup> /16	2 <sup>3</sup> /16	10.7	
5	57/8	2 <sup>3</sup> /8	13.1	
6	6 <sup>1</sup> /16	2%16	16.6	
8	8	31/8	32.3	
10	8 <sup>3</sup> ⁄8	31/2	44.1	
12	105/16	4 <sup>1</sup> /16	65.4	
15	(XH)	(XH)	(XH)	



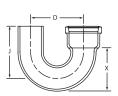
#### PART NO. SV 18

Reducing Quarter Bend						
/eight	Х	D	Size			
7.0	3 <sup>3</sup> ⁄8	7	3 x 2			
1.7	4 <sup>1</sup> /2	71/2	4 x 2			
9.1	4 <sup>3</sup> /8	8 <sup>1</sup> /8	4 x 3			
	4%	0 78	4 X 3			



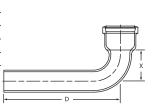
#### PART NO. SV 23

Single Hub Return Bend							
Size	D	Х	J	Weight			
3	5 <sup>5</sup> /8	5	57/8	9.4			
4	71/2	611/32	7³/16	16.4			



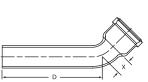
#### PART NO. SV 25

	Long Quarter Bend						
Size	D	Х	Weight				
2 x 12	12	31/4	6.9				
3 x 12	12	4	10.3				
4 x 12	12	4 <sup>1</sup> /2	15.4				
4 x 16	16	4 <sup>1</sup> /2	20.4				
4 x 18	18	4 <sup>1</sup> /2	21.4				
4 x 24	24	4 <sup>1</sup> /2	27.9				



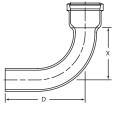
#### PART NO. SV 26

	Long Eighth Bend					
Size	D	X	Weight			
2 x 12	12	11/2	6.2			
3 x 12	12	1 <sup>15</sup> ⁄16	9.9			
3 x 18	18	1 <sup>15</sup> ⁄16	12.4			
4 x 12	12	23/16	15.6			
4 x 18	18	2 <sup>3</sup> /16	20.6			
6 x 18	18	2%16	31.0			



#### PART NO. SV 29

	Short Sweep Bend						
Size	D	Х	Weight				
2	8	5 <sup>1</sup> /4	6.2				
3	9	6	9.4				
4	10	61/2	16.6				
5	101/2	7	20.7				
6	11	71/2	26.6				
8	131/2	85/8	37.4				
10	14½	9 <sup>5</sup> /8	71.5				
12	17	103⁄4	100.6				

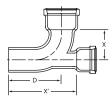


#### PART NO. SV 9

Six	Sixteenth Bend (22 1/2° Ell)						
Size	D	Х	Weight				
2	35/8	7/8	3.4				
3	4 <sup>3</sup> / <sub>16</sub>	1 <sup>3</sup> /16	6.0				
4	4 <sup>13</sup> /16	15/16	8.8				
5	47/8	13⁄/8	11.6				
6	5	11/2	13.8				
8	6 <sup>11</sup> /16	1 <sup>13</sup> /16	24.6				
10	67⁄8	2	37.1				
12	85/8	2 <sup>3</sup> /8	57.7				
15	(XH)	(XH)	(XH)				

#### PART NO. SV 10

Quarter Bend with Low Heel Inlet						
Size	D	Х	X'	Weight		
3 x 2	7	4	9	9.8		
4 x 2	8	4 <sup>1</sup> /2	10½	13.0		



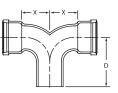
(Illustration Shows Right Hand Inlet)

#### PART NO. SV 12

Quarter Bend with Side Opening					
Size	D	Х	Weight		
4w2LH	8	31/2	16.2		
4w2RH	8	31/2	16.5		

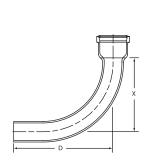
#### PART NO. SV 15

Double Quarter Bend					
Size	D	Х	Weight		
4	8	4 <sup>1</sup> /2	15.0		



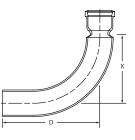


	Long Sweep Bend					
Size	D	Х	Weight			
2	11	81/4	7.6			
3	12	9	12.2			
4	13	9 <sup>1</sup> / <sub>2</sub>	21.2			
5	13½	10	25.3			
6	14	101/2	29.9			
8	16½	115⁄/8	52.9			
10	171/2	125/8	82.6			
12	20	133⁄4	103.5			
15	(XH)	(XH)	(XH)			



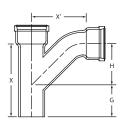
#### PART NO. SV 31

Reducing Long Sweep Bend					
D	Х	Weight			
12	9	12.0			
13	9 <sup>1</sup> /2	17.6			
	lucing Lon D 12 13	D         X           12         9           13         9 <sup>1</sup> / <sub>2</sub>			



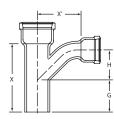
#### PART NO. SV 32

Combination Wye & Eighth Bend (Charlotte Pattern)								
Size	Size G H X X' Weight							
4	5 <sup>7</sup> /16	4 <sup>3</sup> / <sub>8</sub>	113⁄/8	61/2	20.3			



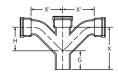
#### PART NO. SV 33

Combination Wye & Eighth Bend								
(Long Turn Pattern)								
Size G H X	X' Weight							
2 x 2 4 3 <sup>3</sup> / <sub>8</sub> 8	47/8 8.6							
<u>3 x 2 4<sup>3</sup>/<sub>16</sub> 4 9</u>	5 <sup>3</sup> / <sub>4</sub> 11.1							
<u>3 x 3 5 5<sup>1</sup>/16 10<sup>1</sup>/2</u>	7 14.8							
4 x 2 3 <sup>11</sup> / <sub>16</sub> 4 <sup>1</sup> / <sub>2</sub> 9	6 <sup>1</sup> / <sub>4</sub> 15.5							
4 x 3 4 <sup>1</sup> / <sub>2</sub> 5 <sup>9</sup> / <sub>16</sub> 10 <sup>1</sup> / <sub>2</sub>	7 <sup>1</sup> / <sub>2</sub> 19.2							
4 x 4 4 <sup>1</sup> / <sub>2</sub> 7 <sup>1</sup> / <sub>2</sub> 12	9 24.5							
5 x 2 3 <sup>3</sup> / <sub>8</sub> 5 9	6 <sup>3</sup> / <sub>4</sub> 14.6							
5 x 3 4 6 <sup>1</sup> / <sub>16</sub> 10 <sup>1</sup> / <sub>2</sub>	8 21.3							
	9 <sup>1</sup> / <sub>2</sub> 25.9							
5 x 5 5 <sup>1</sup> / <sub>2</sub> 8 <sup>5</sup> / <sub>8</sub> 13 <sup>1</sup> / <sub>2</sub>	11 33.6							
6 x 2 2 <sup>11</sup> / <sub>16</sub> 5 <sup>1</sup> / <sub>2</sub> 9	7 <sup>1</sup> / <sub>4</sub> 19.6							
6 x 3 3 <sup>1</sup> / <sub>8</sub> 6 <sup>9</sup> / <sub>16</sub> 10 <sup>1</sup> / <sub>4</sub>	8 <sup>1</sup> / <sub>2</sub> 24.7							
6 x 4 4 <sup>1</sup> /4 7 <sup>13</sup> / <sub>16</sub> 12	10 31.7							
<u>6 x 5 5<sup>1</sup>/16 9<sup>1</sup>/8 13<sup>1</sup>/2</u>	11½ 34.3							
6 x 6 5 <sup>3</sup> / <sub>4</sub> 10 <sup>5</sup> / <sub>16</sub> 15	127/8 44.2							
8 x 2 3 <sup>1</sup> / <sub>8</sub> 6 <sup>1</sup> / <sub>2</sub> 10 <sup>1</sup> / <sub>2</sub>	8 <sup>1</sup> / <sub>4</sub> 34.0							
<u>8 x 4 43/4 813/16 131/2</u>	11 40.1							
8 x 5 5 <sup>1</sup> / <sub>2</sub> 10 <sup>1</sup> / <sub>8</sub> 15	121/2 49.6							
8 x 6 6 <sup>5</sup> / <sub>16</sub> 11 <sup>5</sup> / <sub>16</sub> 16 <sup>1</sup> / <sub>2</sub>	13 <sup>7</sup> /8 55.7							
8 x 8 7 <sup>11</sup> / <sub>16</sub> 13 <sup>7</sup> / <sub>8</sub> 19 <sup>1</sup> / <sub>2</sub>	17 85.6							



#### PART NO. SV 35

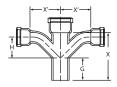
Double Combination Wye & Eighth Bend (Charlotte Pattern)						
Size	G	Н	Х	X'	Weight	
4	57/16	4 <sup>3</sup> /8	113⁄8	61/2	26.0	



#### PART NO. SV 35F

#### Double Combination Wye & Eighth Bend

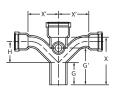
(Long Turn Pattern)						
Size	G	Н	Х	X'	Weight	
2 x 2	4	3 <sup>3</sup> /8	8	47/8	12.0	
3 x 2	4 <sup>3</sup> /16	4	9	53/4	14.6	
3 x 3	5	51/16	101/2	7	22.0	
4 x 2	3 <sup>11</sup> /16	4 <sup>1</sup> /2	9	6 <sup>1</sup> /4	19.7	
4 x 3	4 <sup>1</sup> /2	5%16	10½	71/2	26.5	
4 x 4	5 <sup>1</sup> /4	6 <sup>13</sup> /16	12	9	36.2	
5 x 4	4 <sup>1</sup> / <sub>4</sub>	75⁄16	12	9 <sup>1</sup> /2	30.9	
6 x 4	4 <sup>1</sup> /4	7 <sup>13</sup> /16	12	10	41.0	
6 x 6	53/4	105/16	15	127⁄8	69.6	



#### PART NO. SV 35F

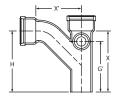
Double Combination Wye & Eighth Bend with 2" Cup Hub Inlet

Size	G	G'	Н	Х	X'	Weight
4	4 <sup>1</sup> /4	10	6 <sup>13</sup> /16	12	9	41.7



#### PART NO. SV 39A

Combination Wye & Eighth Bend with Side Inlet						
Size	G'	Н	Х	X'	Weight	
4w/2RH	10	121/16	12	9	27.3	
4w/2LH	10	12 <sup>1</sup> /16	12	9	28.3	

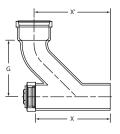


#### PART NO. SV 41

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Combination Wye & Eighth Bend with Cleanout on Main						
	IPS					
Size	Tap	G	Х	X'	Weig	

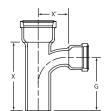
Size	Tap	G	Х	X'	Weight
4	31/2	9	123/16	121/4	18.9



Straight Tee						
Size	G	X	X'	Weight		
2 x 2	6 <sup>1</sup> /4	8	13⁄4	7.0		
3 x 2	7	9	21/2	9.0		
3 x 3	71/2	10	21/2	12.0		
4 x 2	7	9	3	12.7		
4 x 3	71/2	10	3	14.0		
4 x 4	8	11	3	16.6		
5 x 5	8 <sup>1</sup> /2	12	31/2	19.0		
6 x 4	8	11	4	19.9		
6 x 6	9	13	4	24.0		
8 x 4	9 <sup>5</sup> /8	121/8	5 <sup>1</sup> /4	37.0		

#### PART NO. SV 43

	S	anitary Te	е	
Size	G	Х	X'	Weight
2 x 2	61/4	8	23/4	7.9
3 x 2	7	9	4	10.9
3 x 3	71/2	10	4	11.9 14.2
4 x 2	7	9	41/2	14.2
4 x 3	71/2	10	41/2	16.9
4 x 4	8	11	4 <sup>1</sup> /2	18.6
5 x 4	8	11	5 5	17.9
5 x 5	8 <sup>1</sup> /2	12	5	22.3
6 x 2	7	9	5½	15.0
6 x 3	71/2	10	5½	21.4
6 x 4	8	11	5½	22.8
6 x 6	9	13	5 <sup>1</sup> /2	29.8 35.7
8 x 4	9 <sup>3</sup> /4	13	61/2	35.7
8 x 6	103⁄4	15	6 <sup>1</sup> /2	43.0
8 x 8	113⁄4	17	65⁄8	50.8
10 x 4	9 <sup>3</sup> /4	13	71/2	52.0
10 x 6	10 <sup>3</sup> ⁄4	15	7 <sup>1</sup> /2	57.7
10 x 8	113⁄4	17	75/8	68.0
10 x 10	123⁄4	19	75/8	75.9
12 x 6	12	16½	81/2	79.0
12 x 8	13	18½	85/8	104.0
12 x 10	14	201/2	85/8	123.0
12 x 12	15	22 <sup>1</sup> /2	83/4	113.0
15 x 6	12	16½	10	145.0
15 x 8	13	181/2	10½	173.0
15 x 12	15	221/2	10¹⁄4	204.0
15 x 15	(XH)	(XH)	(XH)	(XH)

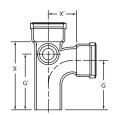


Size	G	Wye	X'	Weight
2 x 2	4	8	4	8.3
3 x 2	4 <sup>3</sup> /16	9	5	10.9
3 x 3	5	101/2	51/2	12.2
4 x 2	35/8	9	53/4	14.4
4 x 3	47/16	101/2	6 <sup>1</sup> /4	16.8
4 x 4	5 <sup>1</sup> /4	12	63/4	20.3
5 x 2	31/8	9	6 <sup>1</sup> /2	15.3
5x3	37/8	101/2	7	19.8
5 x 4	411/16	12	71/2	23.0
5x5	51/2	131/2	8	27.0
6 x 2	2%16	9	71/4	19.7
6 x 3	33/8	101/2	73/4	23.7
6 x 4	4 <sup>3</sup> /16	12	8 <sup>1</sup> /4	26.7
6x5	415/16	131/2	8 <sup>3</sup> /4	29.5
6 x 6	53/4	15	9 <sup>1</sup> /4	36.5
8 x 2	3 <sup>1</sup> /8	101/2	8 <sup>1</sup> /2	31.0
8 x 3	315/16	12	9	33.2
8 x 4	43/4	131/2	91/2	38.3
8 x 5	5 <sup>1</sup> /2	15	10	41.2
8 x 6	6 <sup>5</sup> /16	16 <sup>1</sup> /2	101/2	45.4
8 x 8	711/16	191/2	1113/16	58.4
10 x 3	23/4	12	103/4	54.0
10 x 4	3%16	131/2	111/8	55.4
10 x 5	45/16	15	115/8	60.6
10 x 6	5 <sup>1</sup> /8	16 <sup>1</sup> /2	121/8	64.1
10 x 8	6 <sup>1</sup> /2	19 <sup>1</sup> /2	137/16	86.9
10 x 10	8	221/2	141/2	111.1
12 x 4	4 <sup>1</sup> /8	15	127/16	69.7
12 x 5	47/8	16½	1215/16	78.0
12 x 6	5 <sup>1</sup> 1/16	18	137/16	87.7
12 x 8	7 <sup>1</sup> /16	21	143⁄4	100.6
12 x 10	8%16	24	15 <sup>13</sup> /16	131.0
12 x 12	101/8	27	167/8	175.2
15 x 4	6 <sup>3</sup> /8	15	15	138.5
15 x 6	4	18	153/4	153.6
15 x 8	5 <sup>3</sup> /8	21	171/16	187.1
15 x 10	67/8	24	18 <sup>1</sup> /8	225.0
15 x 12	87/16	27	193/16	260.0
15 x 15	(XH)	(XH)	(XH)	(XH)

PART NO. SV 44

#### PART NO. SV 50

Sanitary Tee with Left Hand Side Tap					
Size	G	G'	Х	X'	Weight
4w/2	8	9	11	41/2	16.3



#### PART NO. SV 50A

Sanitary Tee with Right Hand Side Tap						
Size	G	G'	Х	X'	Weight	
4w/2	8	9	11	41/2	16.5	

#### PART NO. SV 50B

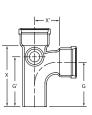
Sanitary Tee with Right and Left Hand Side Taps						
Size	G	G'	Х	X'	Weight	
4w/2	8	9	11	41/2	16.3	



#### $\ensuremath{^{(XH)}}$ Please see Extra Heavy dimensions

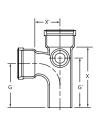


Weight
20.2



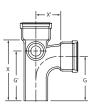
#### PART NO. SV 56B

	Sanitary Tee with Right Hand Side Inlet						
Size	G	G'	Х	X'	Weight		
4w/2	8	9	11	41/2	20.0		



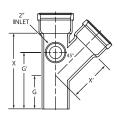


Sanitary Tee with Right and Left Hand Side Inlets						
Size	G	G'	Х	X'	Weight	
4w/2	8	9	11	4 <sup>1</sup> /2	23.1	



PART	10. SV	57
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	Wye wi	th Left	Hand S	ide Inlet	t
Size	G	G'	Х	X'	Weight
4w/2	5 <sup>1</sup> /4	10	12	63⁄4	23.8

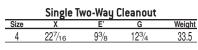


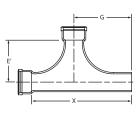
INÎ FT

PART NO. SV 57A	
Wye with Right Hand Side Inlet	t

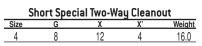
			wye with Right Hand Side Inlet							
' Weight	X'	G'	G	Size						
4 23.8	63/4	10	5 <sup>1</sup> /4	4w/2						
)3	6	10	5 <sup>1</sup> /4	4w/2						

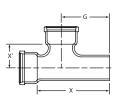
#### PART NO. SV 71A





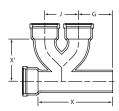
#### PART NO. SV 71B





PART	NO.	SV	72
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Double Two-Way Cleanout					
G	J	Х	X'	Weight	
6 <sup>1</sup> /2	67/16	135⁄/8	71/2	31.2	
61/2	67/16	135⁄8	81/4	39.1	
	<b>G</b> 6 <sup>1</sup> /2	<b>G J</b> 6 <sup>1</sup> / <sub>2</sub> 6 <sup>7</sup> / <sub>16</sub>	<b>G J X</b> 6 <sup>1</sup> / <sub>2</sub> 6 <sup>7</sup> / <sub>16</sub> 13 <sup>5</sup> / <sub>8</sub>	<b>G J X X'</b> 6 <sup>1</sup> / <sub>2</sub> 6 <sup>7</sup> / <sub>16</sub> 13 <sup>5</sup> / <sub>8</sub> 7 <sup>1</sup> / <sub>2</sub>	



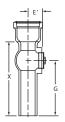
#### PART NO. SV 76

Sanitary Tee with Cleanout on Main					
	IPS				
Size	Tap	G	<u>X</u>	<u>X'</u>	Weight
4	31/2	8	121/8	41/2	16.7



#### PART NO. SV 79

	Washington Test Tee <sup>¥</sup>						
Size	IPS Tap	E'	G	х	Weight		
2	2	13⁄4	7	9	7.3		
3	4	27/8	71/8	103⁄4	13.1		
4	4	31/4	71/4	105⁄/8	16.8		
5	5	35/8	7	11	22.5		
6	6	4	83/4	13	26.9		
8	8	5	11	16 <sup>3</sup> ⁄8	41.6		
10	10	71/2	11	175⁄/8	68.7		



#### PART NO. SV 80

#### Cleanout Tee with Brass Plug

cicaliout ice with blassi lug					
	IPS				
Size	Tap	E'	G	X	Weight
2	11/2	2	6¹⁄4	8	6.2
3	2	21/2	7	9	9.3
4	3	3	8	11	14.6
5	4	31/2	8 <sup>1</sup> /2	12	18.7
6	4	4 <sup>1</sup> / <sub>4</sub>	9	13	25.3
12	8	8	13	18½	92.2

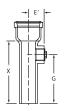
#### PART NO. SV 81

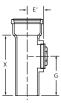
Miami Test Tee, Less Plug

#### and PART NO. SV 81S

Miami Test Tee with Southern Raised-Head Brass Plug Installed

Size	IPS Tap	E'	G	х	Weight
2	2	2 <sup>1</sup> /32	61/2	9	7.0
3	3	21/2	65⁄8	9 <sup>5</sup> /8	10.0
4	4	3	71/4	11	15.5
6	6	4	9	131/4	22.8





 $^{\rm 4}$  This fitting can be ordered without or with a Southern Raised Head Brass Plug installed (2'' through 8'' available with plug).

Test Tee with Internal Tap						
Size	E'	G	Х	Weight		
4	215/16	77/8	12	15.9		

#### PART NO. SV 83

Straight Tapped Tee						
Size	E'	G	Х	Weight		
2 x 1½	2	61/4	8	5.5		
2 x 2	2	61/4	8	6.0		
3 x 1½	2 <sup>1</sup> /2	7	9	7.4		
3 x 2	21/2	7	9	8.6		
4 x 2	3	7	9	12.3		
4 x 3	4	8	11	14.0		
4 x 4	3	71/4	11	15.0		
5 x 2	31/2	7	9	13.5		
5 x 4	31/2	8 <sup>1</sup> /2	12	17.9		
6 x 4	4 <sup>1</sup> / <sub>4</sub>	9	13	24.4		

Sanitary Tapped Tee

G

6<sup>1</sup>/4

61/4

7

7

7

7

8

8

8

9

9

9

9

11

Weight

6.0

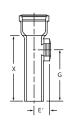
5.8

8.0

8.1

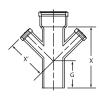
10.3

11.7 13.6



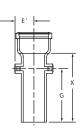
### PART NO. SV 92

Tapped Double Wye					
Size	G	Х	X'	Weight	
4 x 2	5 <sup>3</sup> /4	12	7 <sup>7</sup> /8	16.9	



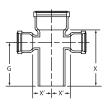
#### PART NO. SV 93

Tapped Cross					
Size	E'	G	Х	Weight	
3 x 2	21/2	7	9	9.4	
4 x 2	3	7	9	13.1	



#### PART NO. SV 108

Straight Cross					
Size	G	X	X'	Weight	
4 x 2	7	9	3	16.0	
4	8	11	3	17.0	



#### PART NO. SV 109

Sanitary Cross					
Size	G	X	X'	Weight	
2	61/4	8	2 <sup>3</sup> /4	10.0	
3 x 2	7	9	4	12.5	
3	71/2	10	4	15.6	
4 x 2	7	9	4 <sup>1</sup> /2	16.0	
4 x 3	71/2	10	4 <sup>1</sup> /2	20.0	
4	8	11	41/2	22.9	
5 x 4	8	11	5	23.2	
6 x 4	8	11	51/2	29.0	
6	9	13	51/2	34.9	
8	113⁄4	17	65⁄8	105.0	

## PART NO. SV 85

PART NO. SV 84

E

2<sup>13</sup>/16

3<sup>1</sup>/16

35/16

3%16

313/16

4<sup>1</sup>/16

4<sup>1</sup>/16

Size

2 x 2

3 x 2

4 x 2

4 x 3

2 x 1½

3 x 1½

4 x 1½

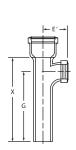
Tapped Wye				
G	X	X'	Weight	
5	10½	65⁄8	10.3	
4 <sup>1</sup> /2	9	6 <sup>1</sup> /2	11.0	
41/4	9	6	12.7	
	G 5	<b>G X</b> 5 10 <sup>1</sup> /2	<b>G X X'</b> 5 10 <sup>1</sup> /2 6 <sup>5</sup> /8	

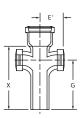
#### PART NO. SV 89

Long Sanitary Tapped Tee					
Size	E'	G	Х	Weight	
2 x 2 x 18	31/16	16	18	8.8	

PART	NO.	SV	91

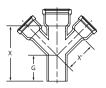
Sanitary Tapped Cross					
Size	E'	G	Х	Weight	
2 x 1½	2 <sup>13</sup> /16	6 <sup>1</sup> /4	8	11.3	
2 x 2	3 <sup>1</sup> /16	6 <sup>1</sup> /4	8	6.7	
3 x 2	3%16	7	9	9.0	
4 x 2	4 <sup>1</sup> /16	7	9	11.6	





#### PART NO. SV 110

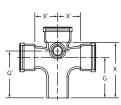
Double Wye						
Size	G	X	X'	Weight		
2	4	8	4	9.7		
3 x 2	4 <sup>3</sup> /16	9	5	12.8		
3	5	10½	5 <sup>1</sup> /2	17.5		
4 x 2	35/8	9	53/4	16.2		
4 x 3	47/16	101/2	61/4	19.8		
4	5 <sup>1</sup> /4	12	63/4	27.2		
5	5 <sup>1</sup> /2	13½	8	27.0		
6 x 3	33⁄8	101/2	73⁄4	24.6		
6 x 4	4 <sup>3</sup> /16	12	8 <sup>1</sup> /4	31.8		
6	53/4	15	9 <sup>1</sup> / <sub>4</sub>	44.0		
8 x 4	43/4	13½	91/2	44.5		
8 x 6	6 <sup>5</sup> /16	16½	10½	57.3		
8	7 <sup>11</sup> /16	19½	11 <sup>13</sup> /16	90.0		
10 x 6	5 <sup>1</sup> /8	16½	121/8	73.7		
10 x 8	6 <sup>1</sup> /2	19½	137/16	99.0		
10	8	22 <sup>1</sup> /2	14½	172.0		
12 x 6	5 <sup>11</sup> /16	18	137/16	112.0		
12 x 8	7 <sup>11</sup> /16	21	143⁄4	135.0		
12	10½	27	167⁄8	216.1		
15	(XH)	(XH)	(XH)	(XH)		



(XH)	Please	see	Extra	Heavy	dimensions	
------	--------	-----	-------	-------	------------	--

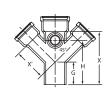


Sanitary Cross with 2 <sup>11</sup> Side Inlet					
Size	G	G'	Х	X'	Weight
4	8	9	11	4 <sup>1</sup> /2	27.0



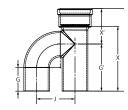
#### PART NO. SV 115

D	ouble W	ye with	2'' Sid	e Openi	ng
Size	G	Н	Х	X'	Weight
4 x 4	5 <sup>1</sup> /4	10	12	63⁄4	31.8



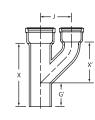
#### PART NO. SV 134

Vent Branch							
Size	Х	X'	J	G	G'	Weight	
4	11	6	6½	4	8	19.6	



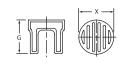
#### PART NO. SV 135

``H″ Branch						
Size	Х	X'	J	G	Weight	
4 x 3	12 <sup>3</sup> /16	7%16	6	41/2	17.0	
4	13 <sup>15</sup> /16	8 <sup>11</sup> /16	6 <sup>1</sup> /2	5 <sup>1</sup> /4	19.6	



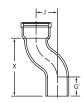
PART NO. SV 137

	Bar Grat	te with Legs	i
Size	G	Х	Weight
4	3	43/4	2.0



PART NO. SV 141

45° Offset							
Size/Offset	Х	G'	J	Weight			
4 x 4	11	4	4	11.6			
4 x 6	13	4	6	15.0			
4 x 8	15	4	8	15.6			



	Reducer	
Size	Х	Weight
3 x 2	43/4	4.6
4 x 2	5	6.0
4 x 3	5 5	7.0
5 x 2	5	6.6
5 x 3	5	6.8
5 x 4	5	9.0
6 x 2	5 5 5	8.2
6 x 3		9.9
6 x 4	5	10.4
6 x 5	5	10.9
8 x 3	6	14.3
8 x 4	6	16.6
8 x 5	6	16.4
8 x 6	6	16.8
10 x 4	6	20.0
10 x 5	6	23.9
10 x 6	6	24.0
10 x 8	6	26.5
12 x 4	61/2	32.2
12 x 6	6 <sup>1</sup> /2	34.4
12 x 8	6 <sup>1</sup> /2	37.2
12 x 10	61/2	38.4
15 x 6	61/2	52.3
15 x 8	61/2	55.0
15 x 10	61/2	55.7
15 x 12	61/2	64.9

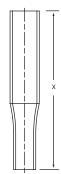
#### PART NO. SV 144

PART NO. SV 143

Re	ducer Increas	ser
Size	Х	Weight
2 x 4	9	9.4
3 x 4	9	8.8
4 x 5	9	11.3
4 x 6	9	15.2
4 x 8	12	24.5
5 x 6	9	12.8
6 x 8	12	24.0
8 x 10	12	44.0

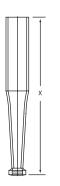
#### PART NO. SV 147

Long Plain Increaser					
Size	Х	Weight			
3 x 4 x 24	24	13.6			
4 x 5 x 30	30	27.4			



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				ļ

Long Tapped Increaser				
Х	Weight			
30	22.8			
	pped Incre x 30			



PART NO. SV 151

Ta	apped Spig	ot	
Size	Α	Weight	
4 x 2	4 <sup>1</sup> / <sub>4</sub>	4.7	

#### PART NO. SV 153

Dou	uble Hub Fitt	ing
Size	Х	Weight
2	11/4	4.2
3	11/4	7.0
4	11/2	9.1
6	11/2	13.1
8	11/2	22.1
10	11/2	36.3
12	11/2	46.3
15	(XH)	(XH)

#### PART NO. SV 155

	Pipe Plug	
Size	X	Weight
2	31/2	1.3
3	33/4	2.5
4	4	4.1
5	4	6.0
6	4	8.0
8	4 <sup>1</sup> /2	12.4
10	4 <sup>1</sup> /2	17.7
12	5 <sup>1</sup> /4	23.3
15	(XH)	(XH)

#### PART NO. SV 159

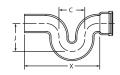
Vent Cap with Set Screw						
Size Weight						
4	2.6					

#### PART NO. SV 169

``P'' Trap							
Size	J	X	Weight				
2	4	9 <sup>1</sup> / <sub>2</sub>	7.1				
3	51/2	12	13.1				
4	6 <sup>1</sup> /2	14	23.2				
5	71/2	15½	30.4				
6	81/2	17	42.0				
8	10½	22 <sup>1</sup> /16	86.2				
	10/2	LL / 10	00.2				

#### PART NO. SV 170

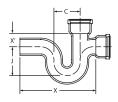
Running Trap							
Size X C J Weight							
4	4 17 <sup>1</sup> / <sub>2</sub> 6 6 <sup>1</sup> / <sub>2</sub> 19.3						
6	211/2	8	8½	48.0			



#### PART NO. SV 174

#### Running Trap with Single Hub Vent

Size	Vent Size	с	J	Х	X'	Weight
3	3	5	51/2	15	21/2	15.3
4	4	6	6 <sup>1</sup> /2	171/2	3	28.3
5	4	7	71/2	19½	31/2	39.7
6	4	8	8 <sup>1</sup> /2	21½	4	45.9
8	4	10	11	275/8	51/4	95.9
8	6	10	11	275/8	5 <sup>1</sup> /4	110.0

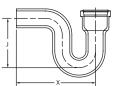


#### PART NO. SV 175

Running Trap with Double Hub Vent							
Size	Vent Size	с	J	х	X'	Weight	
3	3	5	5 <sup>1</sup> /2	15	21/2	23.0	
4	4	6	6 <sup>1</sup> /2	171/2	3	36.3	
5	4	7	71/2	19½	31/2	42.5	
6	4	8	8 <sup>1</sup> /2	21½	4	57.3	
6	6	8	81/2	211/2	4	61.5	
8	4	10	11	275/8	5 <sup>1</sup> /4	98.8	
8	6	10	11	275/8	5 <sup>1</sup> /4	99.7	
10	8	12	13	315⁄8	61/4	187.0	
12	10	15	15	38 <sup>3</sup> /4	71/4	287.6	
15	12	18½	18½	45	9	460.0	

#### PART NO. SV 180

Deep Seal ``P'' Trap					
Size	X	J	Weight		
2	9 <sup>1</sup> /2	6	8.1		
3	12	7	14.3		
4	14	8	29.0		
6	17	9 <sup>1</sup> /2	40.4		



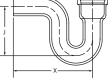
## PART NO. SV 184<sup>[T]</sup>

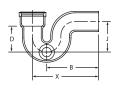
Improved Running Trap with Double Cleanout and Tee Branch

Vent Size	Size	Е	G	х	X'	Weight
4	3	5 <sup>1</sup> /4	6 <sup>1</sup> /4	20 <sup>1</sup> /2	51/2	34.3
4	4	5 <sup>3</sup> /8	61/4	201/2	51/2	33.7

#### **PART NO. SV 188**<sup>[T]</sup>

``P'' Trap with Cleanout Right Side						
Size	Х	J	В	D	Weight	
4	14	61/2	11	51/2	20.0	





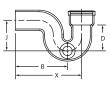
(T) Note: 31/2" IPS tap

0	10/2	22 /16	00.2



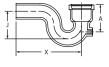
#### **PART NO. SV 188A**<sup>[T]</sup>

``P'' Trap with Cleanout Left Side						
Size	Х	J	В	D	Weight	
4	14	6 <sup>1</sup> /2	11	5½	20.0	



#### **PART NO. SV 198**

	P'' Trap with $1/2''$ Heel Tap						
Size	Х	J	Α	Weight			
2	9 <sup>1</sup> /2	4	4	6.8			
3	12	5 <sup>1</sup> /2	4 <sup>3</sup> /8	13.0			
4	14	61/2	45/8	23.1			

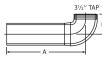


#### **PART NO. SV 200**

Close	et Bend, Pla	ain - Less	Collar
Size	А	В	Weight
3 x 4	6	12	11.3
3 x 4	6	15	12.0
3 x 4	6	16	12.0
3 x 4	6	18	13.0
3 x 4	8	18	14.0
3 x 4	10	12	13.0
3 x 4	10	15	13.0
3 x 4	10	16	17.5
3 x 4	10	18	16.0
3 x 4	12	12	15.9
3 x 4	16	16	20.6
3 x 4	18	18	22.7
3	16	16	16.7
4	4	12	12.3
4	4	16	14.3
4	4	18	17.1
4	6	12	12.5
4	6	15	15.0
4	6	16	16.9
4	6	18	14.0
4	8	16	18.4
4	8	18	19.8
4	10	12	15.3
4	10	15	18.0
4	10	16	19.6
4	10	18	19.0
4	12	12	14.0
4	12	14	14.0
4	12	16	20.8
4	12	18	19.0
4	14	16	22.6
4	14	18	24.0
4	16	16	23.8
4	16	18	24.7
4	18	18	27.4

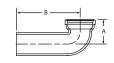
#### PART NO. SV 206

Tapped Closet Bend with Southern Code Brass Plug						
Size	Α	В	Weight			
3 <sup>1</sup> /2 x 4 x 4 x 18	18	4	17.4			



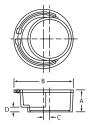
#### PART NO. SV 208

Hub-	Hub-End Closet Bend, Low Hub				
Size	Α	В	Weight		
4	45/8	12	14.2		
4	45/8	14	15.4		
4	45/8	16	17.5		
4	45/8	18	18.9		



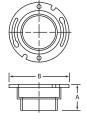
#### PART NO. SPL 217

Offset Closet Flange (To Offset 1'')					
Α	В	С	D	Weight	
2	6	1	5/ <sub>8</sub>	2.5	
2 <sup>1</sup> /2	7 <sup>3</sup> /16	1	<sup>5</sup> /8	3.3	
4	6 <sup>1</sup> /4	2	2	4.5	
	<u>а</u> 2	<u>а</u> в 2 б	<u>а в с</u> 2 6 1	A B C D 2 6 1 <sup>5</sup> / <sub>8</sub>	



#### PART NO. SPL 219

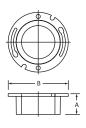
Greensboro Reducing Closet Flange (Can be used to connect 4<sup>17</sup> fixture with  $3^{\prime\prime}$  line, or  $4^{\prime\prime}$  No-Hub) Size В Weight 4 x 3 x 3 31/8 7<sup>3</sup>/16 3.7



#### PART NO. SPL 220\*

#### **Closet Flange, Notched and Slotted**

Size	A	В	Weight
4 x 1	1	7 <sup>3</sup> /16	2.0
4 x 1½	11/2	73/16	2.6
4 x 2	2	7 <sup>3</sup> /16	3.0
4 x 2 <sup>1</sup> /2	21/2	7 <sup>3</sup> /16	3.6
4 x 3	3	73/16	4.3
4 x 4	4	7 <sup>3</sup> /16	4.7
4 x 5	5	7 <sup>3</sup> /16	4.5
4 x 6	6	73/16	5.3



#### PART NO. SPL 225

Instant Set Closet Flange					
Size	A	Weight			
3 x 2†	2	3.5			
4 x 2‡	2	5.6			
4 x 3§	2	3.0			
4 x 4‡	4	4.0			







◊ 2" Offset

- Caulk type to go over pipe.
  Four-bolt pattern. Test cap configuration not offered.
  Three-bolt pattern. Available with or without test cap.
  Three-bolt reducing pattern, with test cap.

(T) Note: 31/2" IPS tap

Iron Body Cleanout Ferrule, Body Only, Less Brass Plug

#### and PART NO. SV 228S

Iron Body Cleanout Ferrule with Southern Raised-Head Brass Plug Installed ¥

Size	Tap Size	Α	Weight
2	11/2	31/2	1.3
3	21/2	33⁄4	2.0
4	3	41/4	3.6
5	4	4 <sup>1</sup> / <sub>4</sub>	4.5
6	5	4 <sup>1</sup> / <sub>4</sub>	5.2
8	6	41/2	11.7
10	6	41/2	16.3
12	6	5 <sup>1</sup> /4	25.5
15	(XH)	(XH)	(XH)
4 x 3 <sup>1</sup> /2	31/2	41/2	4.0
4 x 8	31/2	8	8.1
4 x 12	31/2	12	9.2

#### PART NO. SV 253

	Sission Insertable Joint						
Size	A	В	С	Weight			
2	14	6	6	7.0			
3	16	8	63⁄4	11.6			
4	14½	7	6	12.9			
5	151/8	9	57/8	17.0			
6	16 <sup>3</sup> /16	8 <sup>1</sup> /2	6	20.4			
8	18	10	63/4	37.0			

#### PART NO. SV 458

Vented Closet Tee with 2" Top Vent and 2" Extended Side Inlet (Right Hand or Left Hand; Designed for use below the floor; Fitting does not require a baffle) A B C D E Weight Size 4x4x2x2x4 RH 11 4<sup>1</sup>/<sub>2</sub> 5<sup>3</sup>/<sub>16</sub> 4<sup>9</sup>/<sub>16</sub> 4<sup>3</sup>/<sub>16</sub> 37.0 4x4x2x2x4LH 11 41/2 53/16 49/16 43/16 37.8

## (Illustration Shows Right Hand)

(Not a Baff**l**ed Fitting)

#### PART NO. SV 459D

Vented Closet Cross with 2" Top Vent and 2" Extended Side Inlet						
(Desigi	(Designed for use below the floor;					
Fitting does not have a baffle)						
Size A B C Weight						
4x4x2x2x4	11	61/4	43⁄4	47.0		

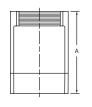
#### PART NO. SV 460

Vented Closet Tee with 2" Top Vent (Right Hand or Left Hand; Designed for use below the floor; Fitting does not require a baffle)

Size	Α	В	C	Weight
4x4x2x4RH	11	41/2	5 <sup>3</sup> /16	35.0
4x4x2x4LH	11	4½	5 <sup>3</sup> /16	35.0

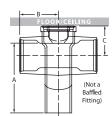
(XH) Please see Extra Heavy dimensions.

 $\pm$  This fitting not available with plug installed in 4 x 3½ and 4 x 8 fitting sizes.



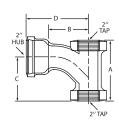
#### PART NO. SV 463D

Vented Closet Cross with 2 <sup>11</sup> Top Vent							
and 2" Extended Side Inlet							
(Des	igned for	use below	the floor	r;			
Fit	ting does	not have a	a baffle)				
Size	Α	В	С	Weight			
4 x 4 x 2	11	61/4	43/4	43.8			



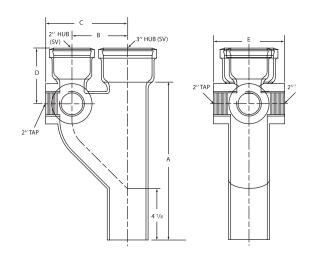
#### PART NO. SV 566

Tapped Long Sweep Tee							
Size	Α	В	С	D	Weight		
2 x 2	51/2	31/8	4	55/8	6.2		



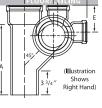
#### PART NO. SV 581

Double Sink Stack-1770								
(Designed for use above the floor)								
Size	Α	В	С	D	E	Weight		
3 x 2 x 2 12 <sup>3</sup> / <sub>4</sub> 4 <sup>1</sup> / <sub>2</sub> 6 <sup>5</sup> / <sub>8</sub> 4 <sup>1</sup> / <sub>2</sub> 5 <sup>3</sup> / <sub>4</sub> 18.0								



#### **PART NO. SV 581**

Double Sink Stack-1770 (Designed for use above the floor)										
Size	A	В	С	D	Weight					
4 x 2 x 2	121/2	5	71/2	4 <sup>1</sup> /2	21.4					
	2" H (SV) 2" TAP			HUB (SV)						

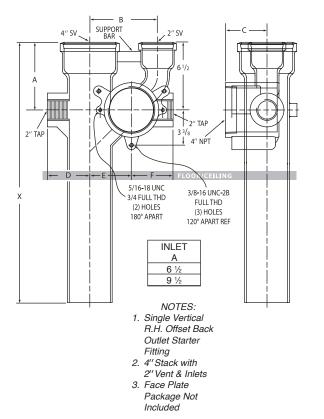


ŧ (Illustration Shows Left Hand)

#### PART NO. SV 973R

Right Hand Starter Fitting with 4" Tap and 2" Tapped "A" Side Inlet
(Designed for use above the floor with back-outlet water closets)

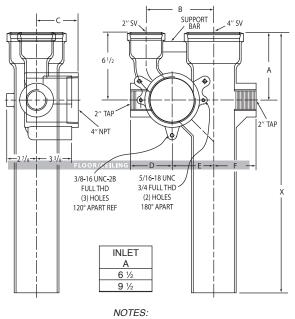
Size	Inlet	A	В	С	D	E	F	Х	Weight
4	6 <sup>1</sup> /2	See Chart	6 <sup>1</sup> /2	4	4 <sup>1</sup> /16	4	4	25	34.8
4	91/2	See Chart	6 <sup>1</sup> /2	4	41/16	4	4	25	34.4



#### PART NO. SV 973L

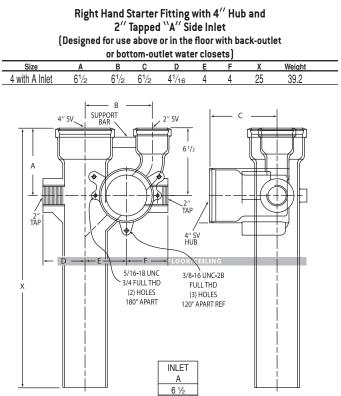
## Left Hand Starter Fitting with 4" Tap and 2" Tapped "A" Side Inlet

	LDes	signea for us	e adov	e the fi	oor witr	і раск-	outlet	water c	iosetsj	
Size	Inlet	Α	В	С	D	E	F	Х	Weight	
4	6 <sup>1</sup> /2	See Chart	6 <sup>1</sup> /2	4	4	4	4	25	39.2	
4	9 <sup>1</sup> /2	See Chart	6 <sup>1</sup> /2	4	4	4	4	25	39.0	



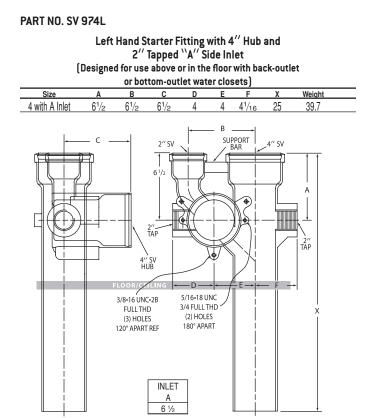
- 1. Single Vertical L.H. Offset Back
- Outlet Starter
- Fitting 2. 4" Stack with
- 2" Vent & Inlets 3. Face Plate
  - Package Not Included

#### PART NO. SV 974R



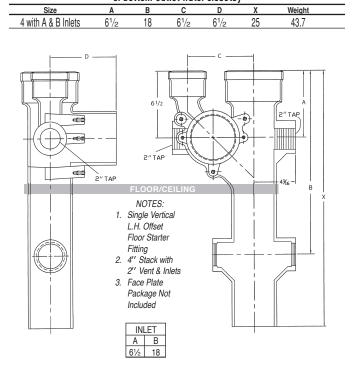
#### PART NO. SV 974R

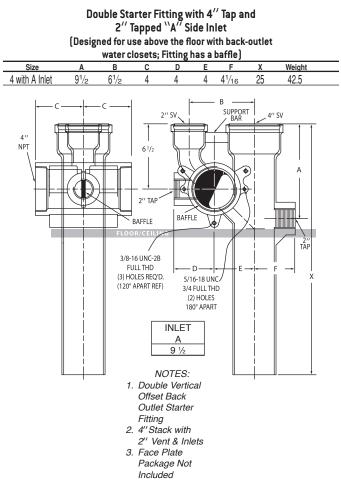
Right Hand Starter Fitting with 4" Hub and 2" Tapped "A" and "B" Side Inlets (Designed for use above or in the floor with back-outlet or bottom-outlet water closets) Size D Weight ۸ R С 4 with A & B Inlets 61/2 18 61/2 61/2 25 46.2 D 61/2 Δ TAF E3> 63-2" TAP ⊨⇒ В 2" TÁP 4% Х NOTES: 1. Single Vertical R.H. Offset Floor Starter ø3¼ Fitting 2. 4" Stack with 2" Vent & Inlets 3. Face Plate Package Not Included INLET A B 6½ 18



#### PART NO. SV 974L

Left Hand Starter Fitting with 4" Hub and 2" Tapped "A" and "B" Side Inlets (Designed for use above or in the floor with back-outlet or bottom-outlet water closets)





#### **PART NO. SV 976**

Size

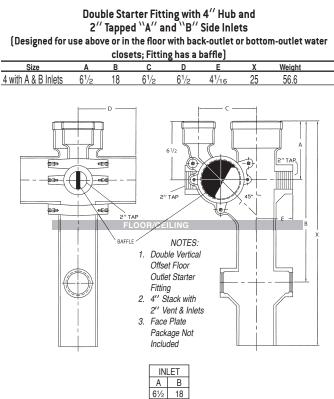
Double Starter Fitting with 4 $^{\prime\prime}$ Hub and 2 $^{\prime\prime}$ Tapped ``A $^{\prime\prime}$ Side Inlet
(Designed for use above or in the floor with back-outlet
or bottom-outlet water closets: Fitting has a haffle)

D

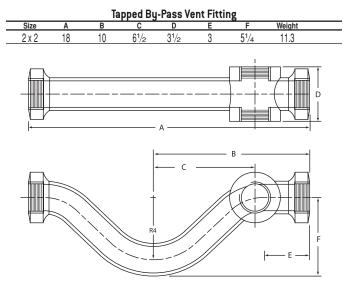
Weight

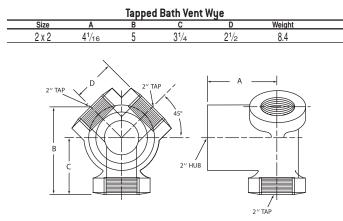
4 with A Inlet	6 <sup>1</sup> /2	6 <sup>1</sup> /2	6 <sup>1</sup> /2	4	4	4 <sup>1</sup> /16	25	50.8
4"SV HUB		3/8- [(3) H0	2" 6 1/2 2" TAP FFLE OR / CELL HE OR / CELL HE OL THD JLL THD JLL THD JLL THD JLL THD JLL THD APART REF)	3/- 1 ET	- D	B SUPPO BAR E		A" SV

#### PART NO. SV 976

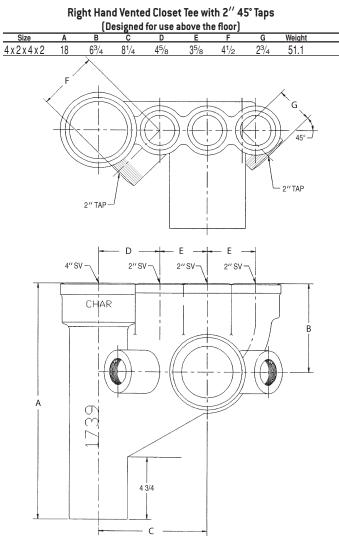


#### **PART NO. SV 982**

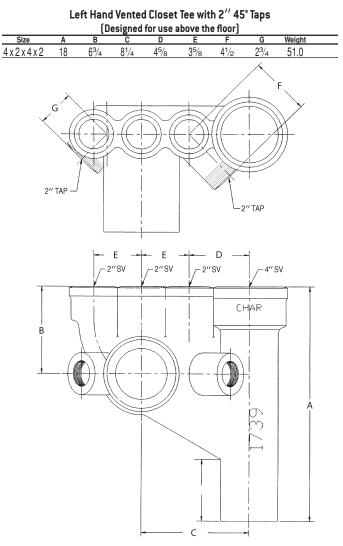




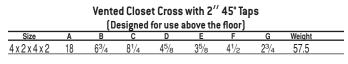
PART NO. SV 1739R

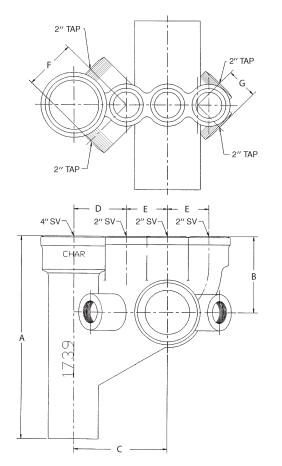


PART NO. SV 1739L

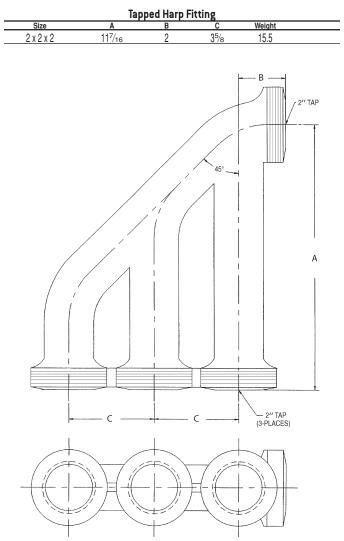


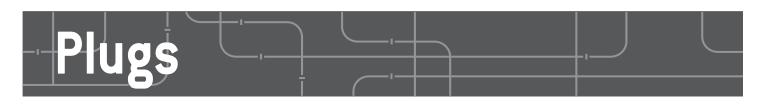
#### PART NO. SV 1739 D



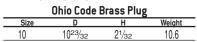


#### PART NO. SV 1801





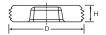
#### PART NO. PLG 410





#### PART NO. PLG 440

Souther	Southern Code Countersunk Brass Plug									
Size	D	Н	Weight							
1 <sup>1</sup> /2	1 <sup>57</sup> / <sub>64</sub>	<sup>13</sup> / <sub>32</sub>	0.2							
2	2 <sup>23</sup> / <sub>64</sub>	<sup>7</sup> /16	0.3							
3	3 <sup>15</sup> /32	<sup>33</sup> / <sub>64</sub>	0.6							
3 <sup>1</sup> /2	363/64	<sup>33</sup> / <sub>64</sub>	0.8							
4	4 <sup>31</sup> / <sub>64</sub>	<sup>35</sup> / <sub>64</sub>	0.9							
5	5 <sup>35</sup> /64	<sup>11</sup> /16	1.7							
6	6 <sup>19</sup> /32	<sup>11</sup> /16	2.3							



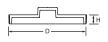
#### PART NO. PLG 430

S	Southern Code Brass Plug										
Size	D	Н	Weight								
11/2	1 <sup>57</sup> / <sub>64</sub>	<sup>49</sup> / <sub>64</sub>	0.2								
2	223/64	49/64	0.3								
2 <sup>1</sup> /2	255/64	<sup>51</sup> / <sub>64</sub>	0.4								
3	3 <sup>15</sup> /32	<sup>57</sup> / <sub>64</sub>	0.6								
31/2	363/64	57/ <sub>64</sub>	0.7								
4	4 <sup>31</sup> / <sub>64</sub>	<sup>61</sup> / <sub>64</sub>	1.1								
5	5 <sup>35</sup> /64	<sup>61</sup> / <sub>64</sub>	1.5								
6	6 <sup>19</sup> /32	17/32	2.5								
8	8 <sup>39</sup> / <sub>64</sub>	1%32	4.0								



#### PART NO. PLG 450

Cast Iron Plug					
Size	D	Н	Weight		
6	6 <sup>35</sup> ⁄64	1 <sup>17</sup> / <sub>64</sub>	4.2		
10	10 <sup>39</sup> ⁄64	1 <sup>31</sup> / <sub>32</sub>	9.0		





## SUBMITTAL FOR CHARLOTTE<sup>®</sup> SEAL AND QUIK-TITE COMPRESSION GASKETS

### **Charlotte Seal Gasket**

Charlotte Seal Gaskets are used for joining Hub and Spigot Cast Iron pipe and fittings conforming to ASTM A 74.

#### Material:

Charlotte Seal Gaskets are a molded one-piece gasket made from Neoprene. Neoprene is one of the few elastomers that is well suited for direct burial because it has the ability to withstand the natural corrosive components of soil as well as sanitary effluent. Neoprene has a maximum operating temperature of 212°F and has a maximum joint deflection of 5 degrees.

#### Gasket Specification:

Charlotte Seal Gaskets are produced in conformance with ASTM C 564.

#### Features:

The molded bead design locks into the lead bead groove on Charlotte Pipe<sup>®</sup> Hub and Spigot Cast Iron Pipe and Fittings to provide a secure, leak free seal.



#### **Charlotte Seal Gasket**

Available for 2"-10" Service and 2"-15" Extra Heavy Cast Iron Systems

### **Quik-Tite Gasket**

Quik-Tite Gaskets are used for joining Hub and Spigot Cast Iron pipe and fittings conforming to ASTM A 74.

#### Material:

Quik-Tite Gaskets are a molded one-piece gasket made from Neoprene. Neoprene is one of the few elastomers that is well suited for direct burial because it has the ability to withstand the natural corrosive components of soil as well as sanitary effluent. Neoprene has a maximum operating temperature of 212°F and has a maximum joint deflection of 5 degrees.

#### Gasket Specification:

Quik-Tite Gaskets are produced in conformance with ASTM C 564.



Quik-Tite Gasket

Available for 2"-12" Service and 4"-15" Extra Heavy Cast Iron Systems



For more information, call us at 1-800-438-6091 or log on to www.charlottepipe.com.

## SUBMITTAL FOR CHARLOTTE<sup>®</sup> SEAL AND QUIK-TITE COMPRESSION GASKETS

## Installation

- 1. Clean the hub and spigot so they are free of all dirt, mud, sand, gravel, and other foreign materials.
- 2. Remove sharp edges by filing or tapping with a ballpeen hammer. Insert the gasket into the hub.
- The gasket must be completely inserted into the hub. Only the gasket's flange that shows identification information should remain exposed outside the hub.
- Lubricate the gasket following the pipe joint lubrication manufacturer's recommendations. For

small-diameter pipe and fittings (2" - 4"), coat the inside of the gasket with lubricant using a paint brush or rag, and then coat the outside of the spigot. For large-diameter pipe and fittings (5" - 15"), we recommend that an adhesive lubricant be used to ensure a water-tight seal. Adhesive lubricants should be applied to the inside of the gasket, the outside of the spigot and the inside of the hub.

5. Align the pipe so that it is straight, then push or pull the spigot through all the sealing rings of the gasket. Charlotte plain-end pipe is manufactured with beveled ends to make insertion easy. As the spigot barrel is forced

> into the gasket, the gasket is compressed and completely seals the joint in both displacement and compression. When seated correctly, you will feel the spigot end of the pipe "bottom" in the hub.

## NOTICE

Charlotte Pipe and Foundry Company strongly recommends that its cast iron hub and spigot pipe and fittings be joined with compression gaskets sold by our Company. Our hub and spigot pipe and fittings are manufactured to very specific manufacturing tolerances which conform to ASTM A 74. Our gaskets, produced in conformance with ASTM C 564, are especially designed to work with our pipe and fitting tolerances.





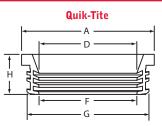


### **Dimensional Diagrams**



	Service						
	2″	3″	4″	5″	6″	8″	10″
А	<b>3</b> <sup>1</sup> / <sub>2</sub>	41/2	51/2	61/2	71/2	93/4	121/16
D	23/16	3¾16	43/16	5¾	6¾16	813/32	101/2
F	2 <sup>1</sup> / <sub>8</sub>	31/8	41/8	5 <sup>1</sup> /8	61/8	8¾16	105/16
G	31/8	41⁄8	5¼	6¼	71⁄4	9%32	1111/16
Н	131/32	21/16	21/32	23/32	21/4	3	2 3⁄4

	Extra Heavy							
	2″	3″	4″	5″	6″	8″	10″	12″
А	31/2	415/16	5¾	6¾	8	10	12 <sup>1</sup> / <sub>2</sub>	141/16
D	23/8	31/2	47/32	51/2	61/2	81/2	10¾	125⁄8
F	2%32	3 <sup>1</sup> / <sub>2</sub>	4 <sup>13</sup> / <sub>32</sub>	51/2	61/2	85/16	1011/32	125⁄8
G	<b>3</b> <sup>3</sup> / <sub>16</sub>	4½	51/16	63/16	7¾	91/2	11½	14
Н	11/8	21/4	21⁄4	21/2	21/2	3	3	3



	Service							
	2″	3″	4″	5″	6″	8″	10″	12″
А	31/2	41/8	5¾	6¾	8	10	12¼	143/8
D	2 <sup>1</sup> / <sub>16</sub>	31/16	4	5	65/16	<b>8</b> <sup>3</sup> ⁄16	10¼	121⁄4
F	2	31/16	4	5	65/16	<b>8</b> <sup>3</sup> ⁄16	10	12
G	31/4	4 <sup>3</sup> / <sub>8</sub>	5 <sup>3</sup> ⁄16	6	711/32	81/2	11½	14
Н	13/32	13/4	13/4	21/16	2 <sup>5</sup> / <sub>32</sub>	21/2	21/2	21/8

## NOTICE

Service Weight gaskets should only be used with Service Weight pipe and fittings, where Extra Heavy gaskets should be used with Extra Heavy pipe and fittings. Due to dimensional variances between systems, the two are not interchangeable.

Extra Heavy					
	4″ XH	15″ XH			
А	61/8	17¾			
D	41⁄4	1513/32			
F	4 <sup>13</sup> / <sub>32</sub>	15			
G	511/16	161/8			
н	113/16	3¼			

#### For more information, call us at 1-800-438-6091 or log on to www.charlottepipe.com.

## LIMITED WARRANTY

Charlotte Pipe and Foundry Company<sup>®</sup> (Charlotte Pipe<sup>®</sup>) Products are warranted to be free from manufacturing defects and to conform to currently applicable ASTM standards for a period of five (5) years from date of delivery. Buyer's remedy for breach of this warranty is limited to replacement of, or credit for, the defective product. This warranty excludes any expense for removal or reinstallation of any defective product and any other incidental, consequential, or punitive damages. **This limited warranty is the only warranty made by seller and is expressly in lieu of all other warranties, express and implied, including any warranties of merchantability and fitness for a particular purpose.** No statement, conduct or description by Charlotte Pipe or its representative, in addition to or beyond this Limited Warranty, shall constitute a warranty. This Limited Warranty may only be modified in writing signed by an officer of Charlotte Pipe.

This Limited Warranty will not apply if:

- 1) The Products are used for purposes other than their intended purpose as defined by local plumbing and building codes, and the applicable ASTM standard.
- 2) The Products are not installed in good and workmanlike manner consistent with normal industry standards; installed in compliance with the latest instructions published by Charlotte Pipe and good plumbing practices; and installed in conformance with all applicable plumbing, fire and building code requirements.
- 3) This limited warranty does not apply when the products of Charlotte Pipe are used with the products of other manufacturers that do not meet the applicable ASTM or CISPI standards or that are not marked in a manner to indicate the entity that manufactured them.
- 4) In hubless cast iron installations, this warranty will not apply if products are joined with unshielded hubless couplings. Charlotte Pipe requires that its hubless cast iron pipe and fittings be joined only with shielded hubless couplings manufactured in accordance with CISPI 310, ASTM C 1277 and certified by NSF<sup>®</sup> International or with Heavy Duty Couplings meeting ASTM C 1540.
- 5) The Products fail due to defects or deficiencies in design, engineering, or installation of the piping system of which they are a part.
- 6) The Products have been the subject of modification; misuse; misapplication; improper maintenance or repair; damage caused by the fault or negligence of anyone other than Charlotte Pipe; or any other act or event beyond the control of Charlotte Pipe.
- 7) The Products fail due to the freezing of water in the Products.
- 8) The Products fail due to contact with chemical agents, fire stopping materials, thread sealant, plasticized vinyl products, or other aggressive chemical agents that are not compatible.
- 9) Pipe outlets, sound attenuation systems or other devices are permanently attached to the surface of Charlotte<sup>®</sup> PVC, ABS or CPVC products with solvent cement or adhesive glue.

Charlotte Pipe products are manufactured to the applicable ASTM or CISPI standard. Charlotte Pipe and Foundry **cannot** accept responsibility for the performance, dimensional accuracy, or compatibility of pipe, fittings, gaskets, or couplings not manufactured or sold by Charlotte Pipe and Foundry.

This Limited Warranty will not apply unless written notice of a claim is mailed to Charlotte Pipe at the address below within 30 days of discovery of the allegedly defective product.

Any Charlotte Pipe products alleged to be defective **must** be made available to Charlotte Pipe at the following address for verification, inspection and determination of cause:

Charlotte Pipe and Foundry Company Attention: Technical Services 2109 Randolph Road Charlotte, North Carolina 28207

**Purchaser must obtain a return materials authorization** and instructions for return shipment to Charlotte Pipe of any product claimed defective or shipped in error.

Any Charlotte Pipe product **proved** to be defective in manufacture will be replaced F.O.B. point of original delivery, or credit will be issued, at the discretion of Charlotte Pipe.

4/20/21

Charlotte, Charlotte Pipe and "You can't beat the system" are registered trademarks of Charlotte Pipe and Foundry Company.



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