

## Rigidlok® Coupling Fig. 7401



The Fig. 7401 Rigidlok Coupling is an ideal connector for service and applications that require a rigid connection.

The Fig. 7401 Rigidlok coupling utilizes a technologically advanced housing design that conforms to and grips the pipe.

Coupling installation is fast and easy, remove only one nut and swing the housing over the gasket and into the grooves. The exclusive Guidelok feature automatically separates the grooved pipe ends and guides the coupling into position as the bolts are tightened. Precisely sized and oriented tines in the housing key section firmly grip the pipe. The combination of these designed in features produce a secure, rigid pipe joint connection.

The Fig. 7401 Rigidlok Coupling is designed for use with roll grooved or cut grooved standard weight and roll grooved lightweight pipe, as well as with grooved-end fittings and valves. The Rigidlok Coupling provides a rigid pipe connection allowing pipe hanging practices per ASME B31 pipe codes.

The Fig. 7401 Rigidlok Coupling allows for a maximum working pressure of 750 psi (51.7 bar) when used on standard wall roll or cut grooved pipe.

### Material Specifications

**Bolts**  
SAE J429, Grade 5, Zinc Electroplated (standard)

**Heavy Hex Nuts**  
SAE A563, Grade A, Zinc Electroplated (standard)

**Hardware Kits**  
304 Stainless Steel (available in sizes up to ¾")  
Kit includes:

- (2) Bolts per ASTM A193, Grade B8 and
- (2) Heavy Hex Nuts per ASTM A194, Grade 8.

### Material Specifications (continued)

#### Hardware Kits (continued)

EcoGuard (available in sizes up to ¾")  
Kit includes:

- Bolts per SAE J429, Grade 5, with EcoGuard corrosion-resistant zinc flake coating and
- (2) Heavy Hex Nuts per ASTM A563, Grade A, EcoGuard corrosion-resistant zinc flake coating.

#### Housing

Ductile Iron conforming to ASTM A536, Grade 65-45-12.

#### Coatings

Rust inhibiting paint  
Color: Orange (standard)  
Hot Dipped Zinc Galvanized (optional)

#### Gaskets

Properties as designated in accordance with ASTM D2000

**Grade "EP" EPDM** (Green and Red color code)

-40°F to 250°F (Service Temperature Range)

(-40°C to 121°C)

Recommended for water service, diluted acids, alkalies solutions, oil-free air and many other chemical services.

NOT FOR USE IN PETROLEUM APPLICATIONS.

For hot water applications the use of Gruvlok Xtreme Temperature lubricant is recommended. NSF-61.

**Grade "T" Nitrile** (Orange color code)

NOT FOR USE IN DRINKING WATER

-20°F to 180°F (Service Temperature Range)

(-29°C to 82°C)

Recommended for petroleum applications. Air with oil vapors and vegetable and mineral oils.

NOT FOR USE IN HOT WATER OR HOT AIR

**Grade "O" Fluoro-Elastomer** (Blue color code)

NOT FOR USE IN DRINKING WATER

Size Range: 1" - 12" (C style only)

20°F to 300°F (Service Temperature Range)

(-29°C to 149°C)

Recommended for high temperature resistance to oxidizing acids, petroleum oils, hydraulic fluids, halogenated hydrocarbons and lubricants.

**Grade "L" Silicone** (Red color code)

NOT FOR USE IN DRINKING WATER

Size Range: 1" - 8" (C style only)

-40°F to 350°F (Service Temperature Range)

(-40°C to 177°C)

Recommended for dry, hot air and some high temperature chemical services.

#### Gasket Type

C Style (1" - 24")

Flush Gap (1" - 24")

#### Lubrication

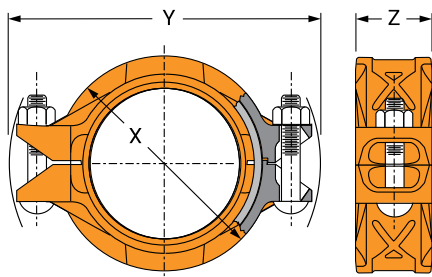
Standard

Gruvlok Xtreme (Do Not use for Grade "L")

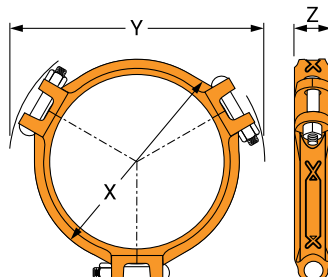


PROJECT INFORMATION	APPROVAL STAMP
Project:	Approved
Address:	Approved as noted
Contractor:	Not approved
Engineer:	Remarks:
Submittal Date:	
Notes 1:	
Notes 2:	

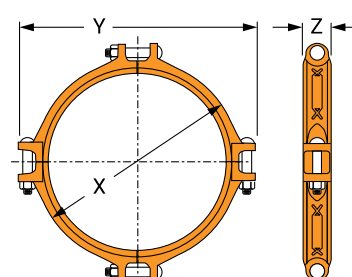
## Rigidlok® Coupling Fig. 7401



Sizes 1½" – 14"



Size 16"



Sizes 18" – 24"

Nominal Size	Pipe O.D.	Max. Working Pressure†	Max. End Load	Allowable Pipe End Separation	Coupling Dimensions			Coupling Bolts		Approx. Wt. Ea.
					X	Y	Z	Qty.	Size	
In./DN(mm)	In./mm	PSI/bar	Lbs./kN	In./mm	In./mm	In./mm	In./mm		In./mm	Lbs./kg
1½	1.900	750	2,126	0.13	3	5⅞	1⅞	2	⅜ x 2¼	1.8
40	48.3	51.7	9.46	3.18	76	130	48		M10 x 57	0.8
2	2.375	750	3,323	0.13	3½	5⅞	1⅞	2	⅜ x 2½	2.4
50	60.3	51.7	14.78	3.18	89	143	48		M10 x 63	1.1
2½	2.875	750	4,869	0.13	4	6⅞	1⅞	2	⅜ x 2½	2.9
65	73.0	51.7	21.66	3.18	102	156	48		M10 x 63	1.3
3 O.D.	2.996	750	5,207	0.13	4⅞	6⅞	1⅞	2	⅜ x 2½	3.4
76.1	76.1	51.7	23.52	3.18	105	156	48		M10 x 63	1.5
3	3.500	750	7,216	0.13	4¾	7¼	1⅞	2	½ x 3	3.6
80	88.9	51.7	32.10	3.18	121	184	48		M12 x 76	1.6
4	4.500	750	11,928	0.20	5⅞	8⅞	2⅞	2	½ x 3	5.0
100	114.3	51.7	53.06	5.08	149	213	54		M12 x 76	2.3
5	5.563	750	18,229	0.20	7	10	2⅞	2	⅝ x 3½	6.9
125	141.3	51.7	81.09	5.08	178	254	54		M16 x 85	3.1
6½ O.D.	6.500	750	24,887	0.20	8	11	2⅞	2	⅝ x 3½	7.6
165.1	165.1	51.7	110.70	5.08	203	279	54		M16 x 85	3.4
6	6.625	750	25,854	0.20	8⅞	11⅞	2⅞	2	⅝ x 3½	7.9
150	168.3	51.7	115.00	5.08	206	283	54		M16 x 85	3.6

### Notes:

Range of Pipe End Separation values are for roll grooved pipe and may be doubled for cut groove pipe.

† Maximum Working Pressure Rating is for schedule 40 steel pipe. For light wall, stainless steel, aluminum and ISO pipe pressure ratings, please refer to the technical data section.

For additional details see "Coupling Data Chart Notes" in the Introduction Section of the Gruvlok Catalog.

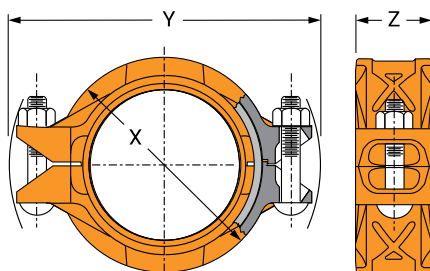
See Installation & Assembly directions on last page.



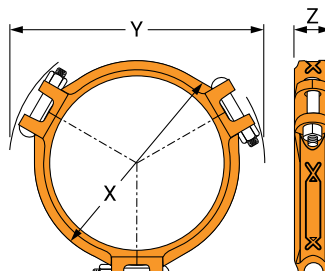
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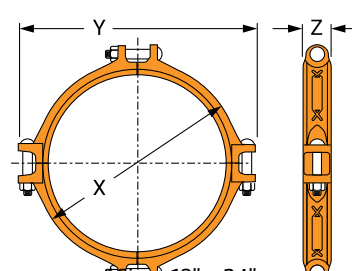
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Nominal Size	Pipe O.D.	Max. Working Pressure †	Max. End Load	Allowable Pipe End Separation	Coupling Dimensions			Coupling Bolts		Approx. Wt. Ea.
					X	Y	Z	Qty.	Size	
In./DN(mm)	In./mm	PSI/bar	Lbs./kN	In./mm	In./mm	In./mm	In./mm		In./mm	Lbs./kg
8 200	8.625 219.1	600 41.4	35,056 155.94	0.20 5.08	10½ 267	14⅞ 359	2⅝ 67	2	¾ x 4½ M20 x 110	15.9 7.2
10 250	10.750 273.1	500 34.5	45,381 201.87	0.20 5.08	12⅞ 327	17½ 445	2⅝ 67	2	1 x 6 M24 x 150	25.6 11.6
12 300	12.750 323.9	400 27.6	51,070 227.17	0.20 5.08	15 381	19½ 495	2⅝ 67	2	⅞ x 6 M22 x 150	30.5 13.8
14 350	14.000 355.6	300 20.7	46,181 205.43	0.20 5.08	16¼ 413	19¾ 502	3 76	2	⅞ x 5½ M22 x 140	36.1 16.4
16 400	16.000 406.4	300 20.7	60,319 268.31	0.20 5.08	18⅞ 460	22¼ 565	3 76	3	⅞ x 5½ M22 x 140	42.0 19.1
18 450	18.000 457.2	300 20.7	76,341 339.58	0.20 5.08	20½ 521	24⅜ 619	3⅞ 79	4	1 x 4 M24 x 100	51.6 23.4
20 500	20.000 508.0	300 20.7	94,248 419.23	0.20 5.08	23 581	26⅞ 683	3⅞ 79	4	1 x 4 M24 x 100	68.3 31.0
24 600	24.000 609.6	250 17.2	113,097 503.08	0.20 5.08	27⅞ 689	30⅞ 784	3⅞ 79	4	1 x 4 M24 x 100	89.3 40.5

### Notes:

Range of Pipe End Separation values are for roll grooved pipe and may be doubled for cut groove pipe.

† Maximum Working Pressure Rating is for schedule 40 steel pipe. For light wall, stainless steel, aluminum and ISO pipe pressure ratings, please refer to the technical data section.

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See Installation & Assembly directions on next page.



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**Fig. 7401 Rigidlok® Coupling**



Read and understand all instructions before use.

## WARNING

Ensure system is drained and depressurized before installation or service.

Use appropriate personal protective equipment.



Failure to follow these instructions could result in serious personal injury and/or property damage.

Check pipe ends for proper grooved dimensions and to ensure that the pipe is free of indentations, projections, or other imperfections that would prevent proper sealing of the gasket.

## 1 Check & Lubricate Gasket

Check gasket to be sure it is compatible for the intended service. Apply a thin coating of Gruvlok lubricant to the exterior surface and sealing lips of the gasket. Some applications require lubrication of the entire gasket surface. Be careful that foreign particles do not adhere to lubricated surfaces.

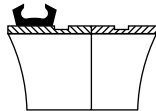
**Notice:** Gruvlok Xtreme Lubricant must be applied when used in dry pipe systems or freezer applications. separation. Pipe joint separation may result in significant property damage and serious injury.



## 2 Gasket Installation

Slip the gasket over the pipe end making sure the gasket lip does not overhang the pipe end.

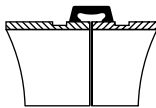
On couplings 10" and larger it may be easier to turn the gasket inside out then lubricate and slide the gasket over the pipe end as shown.



## 3 Alignment

After aligning the two pipe ends, pull the gasket into position centering it between the grooves on each pipe. Gasket should not extend into the groove on either pipe.

On couplings 10" and larger, flip or roll the gasket into centered position.



## 4 Housings

Remove one nut and bolt and loosen the other nut. Place one housing over the gasket, making sure the housing keys fit into the pipe grooves. Swing the other housing over the gasket and into the grooves on both pipes, making sure the tongue and recess of each housing is properly mated. Reinsert the bolt and run-up both nuts finger tight.



## 5 Tighten Nuts

Securely tighten nuts alternately and equally, keeping the gaps at the bolt pads evenly spaced.

**Notice:** Uneven tightening may cause the gasket to pinch. Gasket should not be visible between segments after bolts are tightened.



ANSI Specified Bolt Torque		
Bolt Size	Wrench Size	Specified Bolt Torque*
In.	In.	Ft.-Lbs
3/8	11/16	30-45
1/2	7/8	80-100
5/8	1 1/16	100-130
3/4	1 1/4	130-180
1	1 5/8	200-250

\* Non-lubricated bolt torques.

## 6 Assembly is Complete

Visually inspect the pipe joint to assure the coupling keys are fully engaged in the pipe grooves. The bolt pads are to have equal gaps on each side of the coupling.

**Notice:** Visually inspect both sides of the coupling to ensure gaps between bolt pads are evenly spaced and are parallel. Any deviations must be corrected before placing coupling into service.

**Notice:** Sizes 16" and larger are cast in multiple segments. To install the larger sizes align the tongue and pocket of the couplings appropriately and tighten the nuts alternately to the specified bolt torque. When properly assembled there will be a small equal gap between the adjacent bolt pads.



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