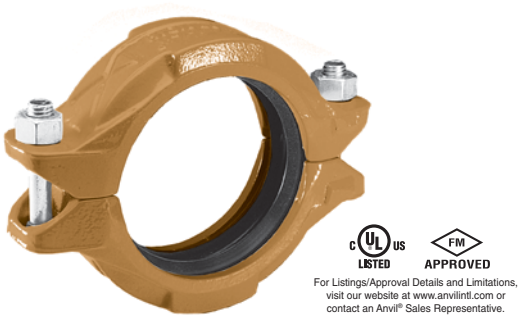
FIG. 7401

Rigidlok® Coupling



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
ISO 898-1, Class 8.8, Zinc Electroplated followed by a Yellow Chromate Dip

HEAVY HEX NUTS:
ASTM A563, Grade A, Zinc Electroplated
ISO 898-2, Class 8.8, Zinc Electroplated followed by a Yellow Chromate Dip

STAINLESS STEEL BOLTS & NUTS:
304SS bolts and nuts are available as a standard option.
(316SS are available for special order).

HOUSING:
Ductile Iron conforming to ASTM A 536, Grade 65-45-12

COATINGS:
- ☐ Rust inhibiting paint – Color: ORANGE (standard)
- ☐ Hot Dipped Zinc Galvanized (optional)
- ☐ Other Colors Available (IE: RAL3000 and RAL9000)

For other Coating requirements contact an Anvil Representative.

GASKETS: Materials
Properties as designated in accordance with ASTM D 2000

☐ **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 Extreme Temperature lubricant is recommended. NSF-61 Certified for cold and hot water applications up through 12".

☐ **Grade "T" Nitrile** (Orange color code)
-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)
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)
Size Range: 1" - 12" (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. Contact an Anvil Representative for availability.

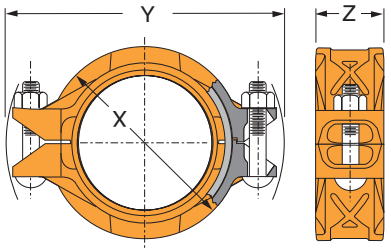
GASKET TYPE:
- ☐ C Style (1" - 24")
- ☐ Flush Gap (1" - 24")

LUBRICATION:
- ☐ Standard
- ☐ Gruvlok Xtreme™ (Do Not use with Grade "L")

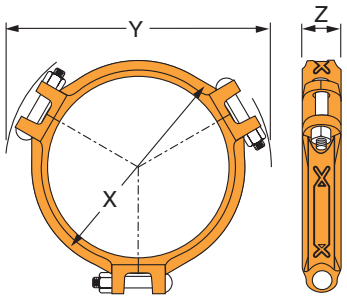
PROJECT INFORMATION	APPROVAL STAMP
Project:	☐ **Approved**
Address:	☐ **Approved as noted**
Contractor:	☐ **Not approved**
Engineer:	**Remarks:**
Submittal Date:	
Notes 1:	
Notes 2:	

FIG. 7401

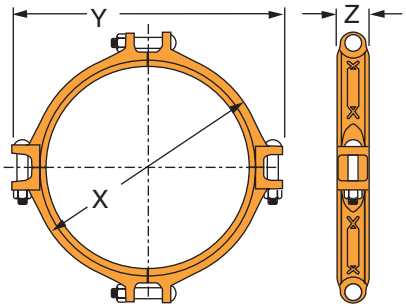
Rigidlok® Coupling



SIZES 1 1/2" - 14"



SIZE 16"



SIZES 18" - 24"

FIGURE 7401 RIGIDLOK COUPLING

Nominal Size	O.D.	Max. Working Pressure†	Max. End Load	Range of Pipe End Separation	Coupling Dimensions			Coupling Bolts*		Specified Torque §		Approx. Wt. Ea.
					X	Y	Z	Qty.	Size	Min.	Max.	
In./DN(mm)	*In./mm*	*PSI/bar*	*Lbs./kN*	*In./mm*	*In./mm*	*In./mm*	*In./mm*		*In./mm*	*Ft.-Lbs/N-M*		*Lbs./kg*
1½	1.900	750	2,126	0-1/32	3	5⅛	1⅞	2	⅜ x 2¼	30	45	1.8
40	*48.3*	*51.7*	*9.46*	*0-0.79*	*76*	*130*	*48*		*M10 x 57*	*40*	*60*	*0.8*
2	2.375	750	3,323	0-1/32	3½	5⅝	1⅞	2	⅜ x 2½	30	45	2.4
50	*60.3*	*51.7*	*14.78*	*0-0.79*	*89*	*143*	*48*		*M10 x 63*	*40*	*60*	*1.1*
2½	2.875	750	4,869	0-1/32	4	6⅛	1⅞	2	⅜ x 2½	30	45	2.9
65	*73.0*	*51.7*	*21.66*	*0-0.79*	*102*	*156*	*48*		*M10 x 63*	*40*	*60*	*1.3*
3 O.D.	*2.996*	*750*	*5,207*	*0-1/32*	*4⅛*	*6⅛*	*1⅞*	*2*	*⅜ x 2½*	*80*	*100*	*3.4*
76.1	76.1	51.7	23.52	0-0.79	105	156	48		M10 x 63	110	150	1.5
3	3.500	750	7,216	0-1/32	4¾	7¼	1⅞	2	½ x 3	80	100	3.6
80	*88.9*	*51.7*	*32.10*	*0-0.79*	*121*	*184*	*48*		*M12 x 76*	*110*	*150*	*1.6*
4	4.500	750	11,928	0-3/32	5⅞	8⅜	2⅛	2	½ x 3	80	100	5.0
100	*114.3*	*51.7*	*53.06*	*0-2.38*	*149*	*213*	*54*		*M12 x 76*	*110*	*150*	*2.3*
5½ O.D.	*5.500*	*750*	*17,819*	0-3/32	*7*	*9¾*	*2⅛*	*2*	*⅝ x 3½*	*100*	*130*	*6.9*
139.7	139.7	51.7	79.26	*0-2.38*	178	248	54		M16 x 85	135	175	3.1
5	5.563	750	18,229	0-3/32	7	10	2⅛	2	⅝ x 3½	100	130	6.9
125	*141.3*	*51.7*	*81.09*	*0-2.38*	*178*	*254*	*54*		*M16 x 85*	*135*	*175*	*3.1*
6½ O.D.	*6.500*	*750*	*24,887*	*0-3/32*	*8*	*11*	*2⅛*	*2*	*⅝ x 3½*	*100*	*130*	*7.6*
165.1	165.1	51.7	110.70	0-2.38	203	279	54		M16 x 85	135	175	3.4
6	6.625	750	25,854	0-3/32	8⅛	11⅛	2⅛	2	⅝ x 3½	100	130	7.9
150	*168.3*	*51.7*	*115.00*	*0-2.38*	*206*	*283*	*54*		*M16 x 85*	*135*	*175*	*3.6*
8	8.625	600	35,056	0-3/32	10½	14⅛	2⅝	2	¾ x 4½	130	180	15.9
200	*219.1*	*41.4*	*155.94*	*0-2.38*	*267*	*359*	*67*		*M20 x 110*	*175*	*245*	*7.2*
10	10.750	500	45,381	0-3/32	12⅞	17½	2⅝	2	1 x 6	200	250	25.6
250	*273.1*	*34.5*	*201.87*	*0-2.38*	*327*	*445*	*67*		*M24 x 150*	*270*	*340*	*11.6*
12	12.750	400	51,070	0-3/32	15	19½	2⅝	2	⅞ x 6	180	220	30.5
300	*323.9*	*27.6*	*227.17*	*0-2.38*	*381*	*495*	*67*		*M22 x 150*	*245*	*300*	*13.8*
14	14.000	300	46,181	0-3/32	16¼	19¾	3	2	⅞ x 5½	180	220	36.1
350	*355.6*	*20.7*	*205.43*	*0-2.38*	*413*	*502*	*76*		*M22 x 140*	*245*	*300*	*16.4*
16	16.000	300	60,319	0-3/32	18⅛	22¼	3	3	⅞ x 5½	180	220	42.0
400	*406.4*	*20.7*	*268.31*	*0-2.38*	*460*	*565*	*76*		*M22 x 140*	*245*	*300*	*19.1*
18	18.000	300	76,341	0-3/32	20½	24⅜	3⅛	4	1 x 4	200	250	51.6
450	*457.2*	*20.7*	*339.58*	*0-2.38*	*521*	*619*	*79*		*M24 x 100*	*270*	*340*	*23.4*
20	20.000	300	94,248	0-3/32	23	26⅞	3⅛	4	1 x 4	200	250	68.3
500	*508.0*	*20.7*	*419.23*	*0-2.38*	*581*	*683*	*79*		*M24 x 100*	*270*	*340*	*31.0*
24	24.000	250	113,097	0-3/32	27⅛	30⅞	3⅛	4	1 x 4	200	250	89.3
600	*609.6*	*17.2*	*503.08*	*0-2.38*	*689*	*784*	*79*		*M24 x 100*	*270*	*340*	*40.5*

NOTE:

Range of Pipe End Seperation 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.
* Available in ANSI or metric bolt sizes only as indicated.
§ – For additional Bolt Torque information, see the Technical Data Section of the Gruvlok Catalog.
See Installation & Assembly directions on next page.
Not for use in copper systems.

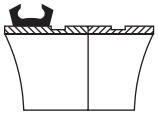
FIG. 7401

Rigidlok® Coupling

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.

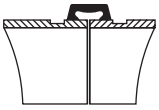
2 GASKET INSTALLATION— Slip the gasket over the pipe end making sure the gasket lip does not overhang the pipe end.

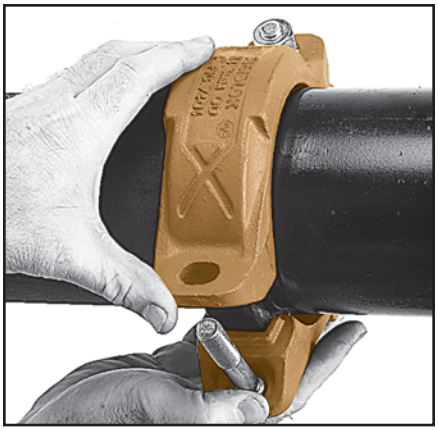
On couplings 10" and larger it may be easier to turn the gasket inside out then lubricate and slide the gasket over the pipe end as shown.



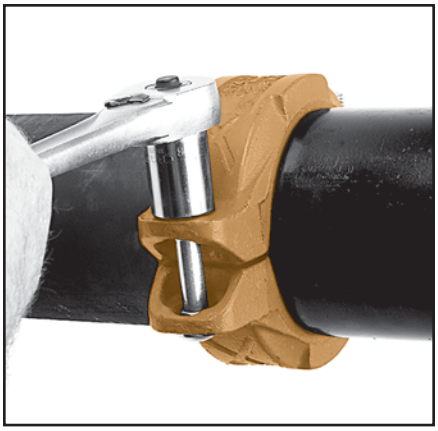
3 ALIGNMENT— After aligning the two pipe ends, pull the gasket into position centering it between the grooves on each pipe. Gasket should not extend into the groove on either pipe.

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



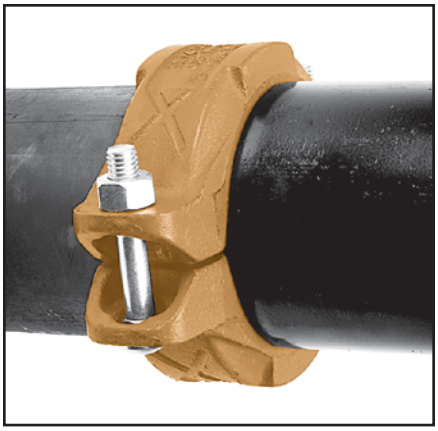


4 HOUSINGS— Remove one nut and bolt and loosen the other nut. Place one housing over the gasket, making sure the housing keys fit into the pipe grooves. Swing the other housing over the gasket and into the grooves on both pipes, making sure the tongue and recess of each housing is properly mated. Reinsert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



5 TIGHTEN NUTS— Securely tighten nuts alternately and equally to the specified bolt torque, keeping the gaps at the bolt pads evenly spaced.

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



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.

NOTE: 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.

CAUTION: Proper torquing of coupling bolts is required to obtain specified performance. Over torquing the bolts may result in damage to the bolt and/or casting which could result in pipe joint separation. Under torquing the bolts may result in lower pressure retention capabilities, lower bend load capabilities, joint leakage and pipe joint separation. Pipe joint separation may result in significant property damage and serious injury.