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Figure 7400 Rigidlite Coupling for Fire Protection Systems

The Figure 7400 Rigidlite Coupling from Gruvlok is specially designed to provide a rigid, locked-in pipe connection to meet the specific demands of rigid design steel pipe. Fast and easy swing-over installation of the rugged lightweight housing produces a secure, rigid pipe joint. The Figure 7400 Rigidlite Coupling is UL/ULC Listed and FM Approved for fire protection service in both wet and dry systems with roll grooved or cut grooved steel pipe prepared in accordance with Gruvlok grooving specifications. Working pressure ratings shown are for reference only and are based on Schedule 40 pipe. For the latest UL/ULC Listed and FM Approved pressure ratings versus pipe schedule see www.anvilintl.com or contact your local AnvilStar Representative.

The Figure 7400 Rigidlite Coupling with a DRI-SEAL® “C” style Grade “E” type “A” gasket, identified by purple nuts, is intended for use in fire protection systems installed in accordance with NFPA Standard 13 “Sprinkler Systems”.

Material Specifications:

- **Housing:**
Ductile Iron conforming to ASTM-A536, Grade 65-45-12
- **Coatings:**
Rust inhibiting lead-free paint
Color: Orange (standard)
Hot Dipped Zinc Galvanized (optional)
For other coating requirements contact your AnvilStar Representative.
- **ANSI Bolts and Heavy Hex Nuts:**
Heat treated, oval-neck track head bolts conforming to ASTM A-183 Grade 2 with a minimum tensile strength of 110,000 psi and heavy hex nuts of carbon steel conforming to ASTM A563. Bolts and nuts are provided zinc electroplated as standard.
Stainless Steel Bolts and Nuts are also available. Contact your AnvilStar Representative for details.
- **Gasket: Materials (Specify when ordering)**
Properties as designated by ASTM D-2000.
 - DRI-SEAL® “C” Style Grade E, Type A Gasket**
(Violet color code)
Service Temperature Range: -40°F to +150°F (-40°C to +65°C)
Recommended for wet and dry (oil free air) pipe fire protection sprinkler systems. For dry pipe systems, Gruvlok® SPF/Anvil™ Xtreme Lubricant™ is required.
 - Grade “E” EPDM (Green color code)** NSF 61 Certified
Service Temperature Range: -40°F to 230°F (-40°C to 110°C)
Recommended for water service, diluted acids, alkaline solutions, oil-free air and many chemical services.
NOT FOR USE IN PETROLEUM APPLICATIONS.
 - Grade “T” Nitrile (Orange color code)**
Service Temperature Range: -20°F to 180°F (-29°C to 82°C)
Recommended for petroleum applications, air with oil vapors, vegetable and mineral oils.
NOT FOR USE IN HOT WATER OR HOT AIR.

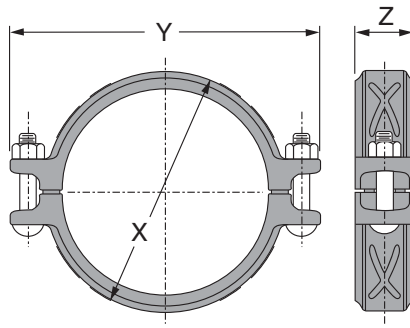


FIGURE 7400 RIGIDLITE COUPLING

Nominal Size	O.D.	Max. Wk. 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
1 25	1.315 33.4	300 20.7	407 1.81	0-1/8 0-3.2	2 1/4 57	4 1/2 114	1 3/4 44	2	3/8 x 2 1/4 M10 x 57	30 40	45 60	1.2 0.5
1 1/4 32	1.660 42.2	300 20.7	649 2.89	0-1/8 0-3.2	2 5/8 67	4 3/4 121	1 3/4 44	2	3/8 x 2 1/4 M10 x 57	30 40	45 60	1.3 0.6
1 1/2 40	1.900 48.3	300 20.7	851 3.78	0-1/8 0-3.2	2 7/8 73	4 7/8 124	1 3/4 44	2	3/8 x 2 1/4 M10 x 57	30 40	45 60	1.4 0.6
2 50	2.375 60.3	300 20.7	1,329 5.91	0-1/8 0-3.2	3 1/4 83	5 1/2 140	1 3/4 44	2	3/8 x 2 1/4 M10 x 57	30 40	45 60	1.6 0.7
2 1/2 65	2.875 73.0	300 20.7	1,948 8.66	0-1/8 0-3.2	3 3/8 98	6 152	1 3/4 44	2	3/8 x 2 1/4 M10 x 57	30 40	45 60	1.9 0.9
3 O.D. 76.1	2.996 76.1	300 20.7	2,115 9.41	0-1/8 0-3.2	4 102	5 5/8 149	1 3/4 44	2	3/8 x 2 1/4 M10 x 57	30 40	45 60	1.9 0.9
3 80	3.500 88.9	300 20.7	2,886 12.84	0-1/8 0-3.2	4 1/2 114	6 3/4 171	1 3/4 44	2	3/8 x 2 3/4 M10 x 70	30 40	45 60	2.1 1.0
4 100	4.500 114.3	300 20.7	4,771 21.22	0-1/4 0-6.4	5 5/8 143	7 3/4 197	1 5/8 48	2	3/8 x 2 3/4 M10 x 70	30 40	45 60	3.1 1.4
5 1/2 O.D. 139.7	5.500 139.7	300 20.7	7,127 31.70	0-1/4 0-6.4	6 3/4 171	9 1/4 235	2 51	2	1/2 x 3 M12 x 76	80 110	100 150	4.5 2.0
5 125	5.563 141.3	300 20.7	7,292 32.44	0-1/4 0-6.4	6 7/8 175	9 1/4 235	2 51	2	1/2 x 3 M12 x 76	80 110	100 150	4.6 2.1
6 1/2 O.D. 165.1	6.500 165.1	300 20.7	9,955 44.28	0-1/4 0-6.4	7 3/4 200	10 3/8 264	2 51	2	1/2 x 3 M12 x 76	80 110	100 150	5.5 2.5
6 150	6.625 168.3	300 20.7	10,341 46.00	0-1/4 0-6.4	7 7/8 200	10 3/8 264	2 51	2	1/2 x 3 M12 x 76	80 110	100 150	5.5 2.5
8 200	8.625 219.1	300 20.7	17,528 77.97	0-1/8 0-3.2	10 1/4 260	12 3/4 324	2 3/8 60	2	1/2 x 3 M12 x 76	80 110	100 150	8.4 3.8

Note: Figure 7400 with Grade E EPDM is required for use in copper systems.

§ – For additional Bolt Torque information refer to the Specified Bolt Torque Section.

For Data Chart Notes refer to the Gruklok Catalog.

Installation & Assembly - Figure 7400 Coupling

These instructions are based on pipe grooved in accordance with Gruzlok® grooving specifications. Check pipe ends for proper groove dimensions and to assure that the pipe ends are free of indentations, projections, or other imperfections which would prevent proper sealing.

Gruzlok® DRI-SEAL® gaskets do not require lubrication except when used in dry pipe systems or freezer applications. Gruzlok® SPF/Anvil™ Xtreme Lubricant™ is recommended for dry pipe systems or freezer applications. All Gruzlok® SPF/Anvil™ Lubricants may be used on DRI-SEAL gaskets without adversely affecting the performance of the gaskets. **Caution:** Do NOT use DRI-SEAL gaskets in grooved copper tube systems.

If you are NOT installing a DRI-SEAL gasket, then lubrication is always required. When using lubrication, always use a Gruzlok SPF/Anvil lubricant. Refer to the Gruzlok SPF/Anvil Data Sheet 3, for guidance on selecting the proper lubricant for the application.

1 Check and lubricate gasket if not using DRI-SEAL brand.

Check the gasket to assure that it is compatible with the intended service. For dry pipe systems and freezer applications lubrication of the gasket is required, Gruzlok SPF/Anvil Xtreme Lubricant is recommended. If using a DRI-SEAL gasket without lubrication, proceed to step 2. Otherwise, apply a thin coating of a Gruzlok SPF/Anvil Standard Lubricant to the outside and sealing lips of the gasket. Do not over-lubricate. When using Gruzlok SPF/Anvil Xtreme Lubricant, apply a thin layer of the lubricant to the interior surface of the gasket also.



2 Gasket installation

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



3 Alignment

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



Step 4

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. Re-insert the bolt and run-up both nuts finger tight.



Step 5

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.



Step 6

6 Assembly is completed

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.

Specified Bolt Torque

Specified bolt torque is for the oval neck track bolts used on Gruzlok and SPF™ couplings and flanges. The nuts must be tightened alternately and evenly until fully tightened. **Caution:** Use of an impact wrench is not recommended because the torque output can vary significantly due to many variables including air pressure supply, battery strength and operational variations.

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.

Note: For VDS approved applications, please refer to data sheet VDSGruv: "VDS – Roll Grooving Approval Specifications" in the Technical Data/Installation Instruction Section at www.anvilintl.com.

ANSI			Metric		
Specified Bolt Torque			Specified Bolt Torque		
Bolt Size	Wrench Size	Specified Bolt Torque*	Bolt Size	Wrench Size	Specified Bolt Torque*
<i>In.</i>	<i>In.</i>	<i>Ft.-Lbs</i>	<i>mm</i>	<i>mm</i>	<i>N-M</i>
3/8	11/16	30-45	M10	16	40-60
1/2	7/8	80-100	M12	22	110-150

* Non-lubricated bolt torque * Non-lubricated bolt torque



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