Rigidlok® Coupling
Fig. 7401–2



The Gruvlok 7401–2 is a 2–piece large diameter rigid coupling. The 7401–2 is designed for use with roll groove or cut groove dimensions conforming to AWWA C–606, as well as with grooved–end fittings and valves. The Figure 7401–2 has a pressure rating up to 350 psi on standard wall pipe.

- Uses standard grooves (conforming to AWWA C–606)
- No special grooves or grooving tools needed
- Pressure rating of 350 PSI on cut or roll grooved standard wall pipe with a wall thickness of 0.375"
- No special fittings needed
- No special valves needed
- Up to 23% less weight than competitive models

Material Specifications

Bolts
SAE J429, Grade 5, Zinc Electroplated

Heavy Hex Nuts
ASTM A563, Grade A, Zinc Electroplated

Stainless Steel Bolts & Nuts
304SS bolts and nuts are available as a standard option.
(316SS are available for special order).

Material Specifications (Continued)

Housing
Ductile Iron conforming to ASTM A 536, Grade 65–45–12

Coatings
☐ Rust inhibiting paint – Color: ORANGE (standard)
☐ Hot Dipped Zinc Galvanized (optional)
For other Coating requirements contact an ASC Engineered Solutions™ Representative.

Gasket Materials
Properties as designated in accordance with ASTM D 2000
☐ **Grade "E" EPDM** (Green color code)
–40°F to 230°F (Service Temperature Range)
(–40°C to 110°C)
Recommended for water service, diluted acids, alkalies solutions, oil–free air and many other chemical services.
NOT FOR USE IN PETROLEUM APPLICATIONS.
☐ **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.

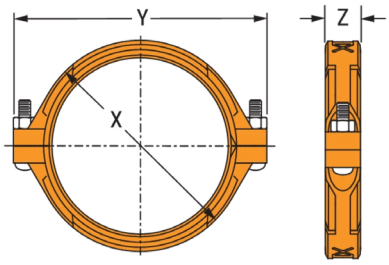
Gasket Type
Flush Gap (Standard)

Lubrication
☐ Standard
☐ Gruvlok Xtreme

Working Pressure, End Load & Pipe End Separation
Based on standard wall steel pipe with cut or roll grooves in accordance with Gruvlok specifications. See technical data section for design factors.

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

Rigidlok® Coupling
Fig. 7401-2



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	Ft-Lbs/N-m	Lbs./kg
16	16	350	70,372	0-0.25	18 5/16	22	3	2	1 x 5 1/2	250	300	46.0
400	406.4	24.1	313.03	0-6.35	465	558	76		—	340	408	20.9
18	18	350	89,064	0-0.25	20 3/4	24 1/4	3 1/8	2	1 x 5 1/2	250	300	62.5
450	457.2	24.1	396.18	0-6.35	527	615	79		—	340	408	28.3
20	20	350	109,956	0-0.25	23	27 1/8	3 1/8	2	1 1/8 x 5 1/2	375	425	73.5
500	508.0	24.1	489.11	0-6.35	582	691	79		—	510	578	33.3
24	24	350	158,336	0-0.25	27 1/4	31 1/8	3 3/16	2	1 1/8 x 5 1/2	375	425	90.5
600	609.6	24.1	704.31	0-6.35	688	791	81		—	510	578	41.1

Note:

Maximum end load is defined as the max allowable force from the combination of internal pressure thrust at the pipe joint and external loads based on the use of standard ASME B36.10 pipe that is grooved in accordance with ASC's groove specification.

Pressure ratings and end loads may differ for other pipe materials and/or wall thicknesses.

asc-es.com

Building Connections That Last™

Fig. 7401–2 Two–Piece Large Diameter Groove Couplings

WARNING

Read and understand all instructions before use.

Ensure system is drained and depressurized before installation or service.

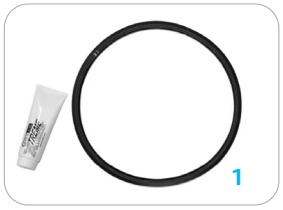
Use appropriate personal protective equipment.

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

Pipe Preparation

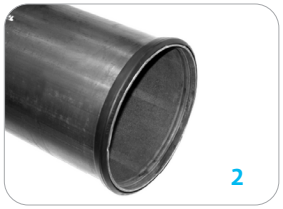
Check Pipe ends for proper grooved dimensions and to ensure that the pipe is free of indentations, projections, or other imperfections that would prevent proper sealing of the gasket.

- 7401–2 bolts must be lightly coated with Gruvlok Xtreme lube before installation. See chart for torque requirements.
- Pipe preparation grooved dimensions must conform to the Gruvlok Roll/Cut groove specification.



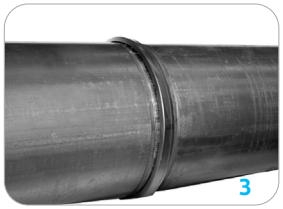
1 Check & Lubricate Gasket

Check gasket to be sure it is compatible for the intended service. Apply a thin coat of Gruvlok lubricant to the exterior surface and sealing lips of the gasket. 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.



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.



4 Housing

Place each housing half on the pipe and into each groove making sure that the gasket does not slip out of position in between the pipe ends or groove.



5 Bolts

Apply a thin coat of Xtreme lube to the bolt threads. Securely tighten nuts alternately and equally, keeping the gaps at the bolt pads evenly spaced.

NOTICE: Uneven tightening may cause the gasket to pinch.

Recommended Bolt Torque

Pipe Size (In.)	Bolt Size (In.)	Ft-Lbs	Lubrication
16	1	250 - 300	Gruvlok Xtreme Lubricant
18	1	250 - 300	
20	1 1/8	375 - 425	
24	1 1/8	375 - 425	

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

WARNING:
Proper tightening of coupling bolts is required to obtain specified performance. Over tightening the bolts may result in joint damage. Pipe joint separation may result in significant property damage and serious injury.

6 Final Assembly

Visually inspect the pipe joint to assure the coupling keys are fully engaged in the pipe grooves. A small gap may be present when recommended torque is achieved. This gap may be approximately 1/8".



asc-es.com

Building Connections That Last™