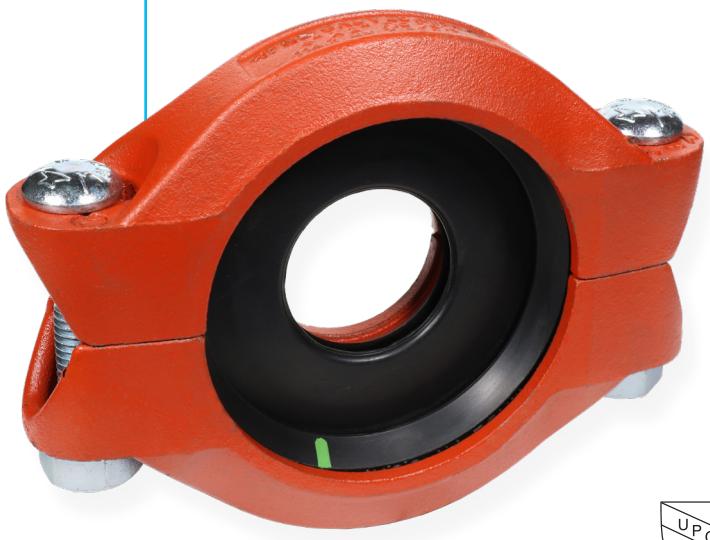
Reducing Coupling
Fig. 7010



The Fig. 7010 Reducing Coupling makes it possible to directly connect two different pipe sizes, eliminating the need for two couplings and a reducing fitting. The specially designed reducing coupling gasket with a center rib assures proper positioning of the gasket and prevents the smaller pipe from telescoping into the larger during assembly. Fig. 7010 Reducing Coupling allows for working pressure ratings up to 500 PSI (34.5 bar). Not recommended for vacuum applications.

For Listings/Approval Details and Limitations, visit our website at www.asc-es.com or contact an ASC Engineered Solutions™ Sales Representative.

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

Material Specifications (continued)

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.

EcoGuard (available in sizes up to ¾")
Kit includes:
- (2) 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 A 536, Grade 65-45-12, or

Malleable Iron conforming to ASTM A 47, Grade 32510.

Coatings
Rust inhibiting paint
Color: Orange (standard)

Hot Dipped Zinc Galvanized (optional)

Gaskets
Properties as designated in accordance with ASTM D2000

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.

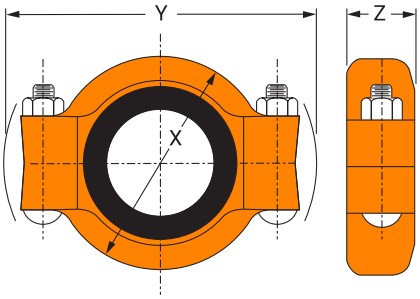
Lubrication
Standard Gruvlok

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:	

ASC Engineered Solutions

Reducing Coupling
Fig. 7010



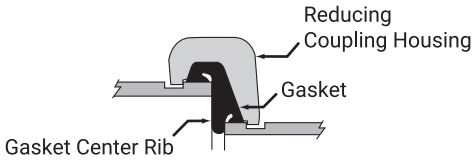


Fig. 7010 Coupling with Gasket

Nominal Size	Larger O.D.	Smaller O.D.	Max. Working Pressure on Sched. 40	Max. Working Pressure on Sched. 10	Max. End Load	Range of Pipe End Separation	Deflection From ℄		Coupling Dimensions			Coupling Bolts		Approx. Wt. Ea.
							Angular	Linear	X	Y	Z	Qty.	Size	
In./DN(mm)	In./mm	In./mm	PSI/bar	PSI/bar	Lbs./kN	In./mm	Deg(°)-Min(')	In./Ft.-mm/m	In./mm	In./mm	In./mm		In./mm	Lbs./kg
2 x 1½ 50 x 40	2.375 60.3	1.900 48.3	500 34.5	350 24.1	2,215 9.85	0-0.13 0-3.18	1.50	0.31 26.2	3⅝ 92	5⅞ 149	1⅞ 48	2	½ x 2¾ M12 x 76	2.0 0.9
2½ x 2 65 x 50	2.875 73.0	2.375 60.3	500 34.5	350 24.1	3,246 14.44	0-0.13 0-3.18	1.23	0.26 21.8	4¼ 108	6⅜ 162	1⅞ 48	2	½ x 2¾ M12 x 76	3.5 1.6
3 x 2 80 x 50	3.500 88.9	2.375 60.3	500 34.5	350 24.1	4,811 21.40	0-0.13 0-3.18	1.03	0.21 17.8	4⅞ 124	7⅛ 181	1⅞ 48	2	½ x 2¾ M12 x 76	4.4 2.0
3 x 2½ 80 x 65	3.500 88.9	2.875 73.0	500 34.5	350 24.1	4,811 21.40	0-0.13 0-3.18	1.03	0.21 17.8	4⅞ 124	7⅛ 181	1⅞ 48	2	½ x 2¾ M12 x 76	4.1 1.9
4 x 2 100 x 50	4.500 114.3	2.375 60.3	500 34.5	300 20.7	7,952 35.37	0-0.20 0-5.08	1.50	0.31 26.2	6¼ 159	8⅞ 225	2 51	2	⅝ x 3½ M16 x 95	8.9 4.0
4 x 2½ 100 x 65	4.500 114.3	2.875 73.0	500 34.5	300 20.7	7,952 35.37	0-0.20 0-5.08	1.23	0.26 21.8	6¼ 159	8⅞ 225	2 51	2	⅝ x 3½ M16 x 95	7.9 3.6
4 x 3 100 x 80	4.500 114.3	3.500 88.9	500 34.5	300 20.7	7,952 35.37	0-0.20 0-5.08	1.03	0.21 17.8	6¼ 159	8⅞ 225	2 51	2	⅝ x 3½ M16 x 95	6.7 3.0
5 x 4 125 x 100	5.563 141.3	4.500 114.3	500 34.5	300 20.7	12,153 54.06	0-0.25 0-6.35	1.29	0.27 22.4	7¼ 184	10⅝ 270	2⅛ 54	2	¾ x 4½ M20 x 115	11.4 5.2
6 x 4 150 x 100	6.625 168.3	4.500 114.3	500 34.5	300 20.7	17,236 76.67	0-0.25 0-6.35	1.09	0.23 19.2	8¼ 210	11⅝ 295	2⅛ 54	2	¾ x 4½ M20 x 115	13.4 6.1
6 x 5 150 x 125	6.625 168.3	5.562 141.3	500 34.5	300 20.7	17,236 76.67	0-0.25 0-6.35	1.09	0.23 19.2	8½ 216	11⅝ 295	2⅛ 54	2	¾ x 4½ M20 x 115	13.5 6.1
8 x 6 200 x 150	8.625 219.1	6.625 168.3	500 34.5	250 17.2	29,213 129.95	0-0.25 0-6.35	0.82	0.17 14.5	10½ 267	14 356	2¼ 57	2	¾ x 4½ M20 x 115	17.7 8.0

Notes:

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.

See Gruvlok Coupling Working Pressure Ratings document published in the resources section of the website for pressure ratings on alternate pipe materials.

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Building connections that last™

Fig. 7010 Reducing 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. Be careful that foreign particles do not adhere to lubricated surfaces.

2 Gasket Installation

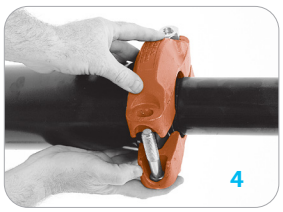
Place the smaller opening of the gasket over the smaller pipe. Angle the gasket over the pipe end and pull the gasket lip open around the circumference of the pipe. The center leg of the gasket should make flush contact with the pipe end and will prevent telescoping of the smaller pipe inside the larger.

3 Alignment

Align the adjoining pipe center lines, and insert the larger pipe end into the gasket. Angle the pipe end slightly to the face of the gasket and tilt the pipe into the gasket to ease assembly.

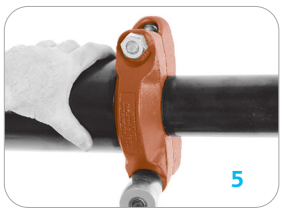
4 Housings

Place the coupling housing halves over the gasket making sure the housing keys engage the grooves. Insert bolts and turn nuts finger tight.



5 Tighten Nuts

Securely tighten nuts alternately and equally, keeping the gaps at the bolt pads evenly spaced until there is metal-to-metal contact at the bolt pads.The housing bolt pads must make metal-to-metal contact.



Maximum Bolt Torque

Bolt Size (In.)	Wrench Size (In.)	Ft-Lbs
1/2	7/8	120
5/8	1 1/16	235
3/4	1 1/2	425

NOTICE: Uneven tightening may cause 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 Assembly is Complete

Visually inspect the pipe joint to assure the coupling keys are fully engaged in the pipe grooves and the bolt pads are in firm even metal-to-metal contact on both sides of the coupling.

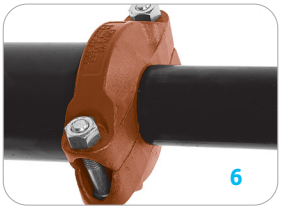
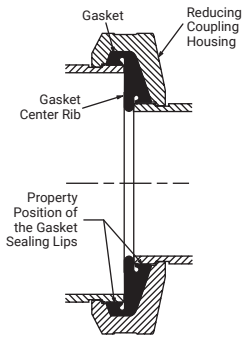


Fig. A



Note:
Fig. A illustrates the correct position of the Fig. 7010 Reducing Coupling gasket and housing properly assembled onto adjacent pipe ends.

Caution:
In vertical installations the pipes must be supported to prevent telescoping during installation.

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