ASC Engineered Solutions

Outlet Coupling
Fig. 7042

The Gruvlok Fig. 7042 Outlet Coupling is designed to join two sections of grooved end pipe and form a reducing outlet connection. The outlet couplings are available for the 1½" through 6" IPS or ISO run pipe sizes with the outlet pipe sizes ranging from ½" through 2".

Assembly of the coupling will create a gap between the pipe ends allowing the space required for the introduction of an outlet connection. The outlet connections are available grooved (Fig. 7042G), FPT (Fig. 7042F) and MPT (Fig. 7042M).

The gaskets are available in EPDM and Nitrile to suit a wide range of applications. The gasket design is a unique pressure responsive design that provides a higher sealing force as pressure is increased. The outlet gasket seal is reinforced by a steel ring and is mated to a machined housing surface to assure a leak-tight outlet seal. Center ribs inside the gasket ease positioning of the pipe during installation and provide additional support to the gasket. The outlet couplings are **NOT** recommended for vacuum applications or for use with beveled end pipe.

The Figure 7074 Cast Caps are NOT recommended for use on run connections. Contact an ASC Engineered Solutions™ Representative for additional details. Figure 7075 Bull Plugs must be used on end of line run connections. Figure 7074 Cast Caps may be used on Figure 7042G outlet connections. Flow into the outlet connection of the Figure 7042 Outlet Couplings must not exceed 7 ft./sec.

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 Stainless Steel 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)
☐ Hot Dipped Zinc Galvanized (optional)
For other Coating requirements contact an ASC Engineered Solutions Representative.

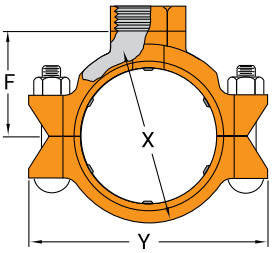
Gasket Materials
☐ **Grade "E" EPDM** (Green color code)
-40°F to 230°F (Service Temperature Range)
(-40°C to 110°C)
Recommended for water service, diluted acids, alkalies solutions, oil-free air and many other chemical services.
NOT FOR USE IN PETROLEUM APPLICATIONS.
☐ **Grade "T" Nitrile** (Orange color code)
-20°F to 180°F (Service Temperature Range)
(-29°C to 82°C)
Recommended for petroleum applications. air with oil vapor and vegetable and mineral oils.
NOT FOR USE IN HOT WATER OR HOT AIR.

Lubrication
☐ Standard Gruvlok
☐ Gruvlok Xtreme (Do Not use with Grade "L")

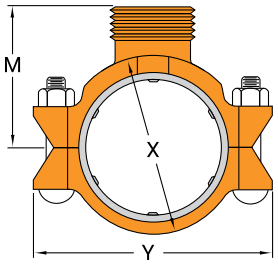
GRUVLOK
An ASC Engineered Solution

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

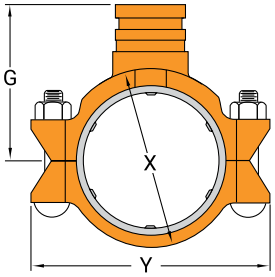
Outlet Coupling
Fig. 7042

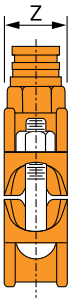


Female IPS Outlet - 7042F



Male IPS Outlet - 7042M





Grooved Outlet - 7042G

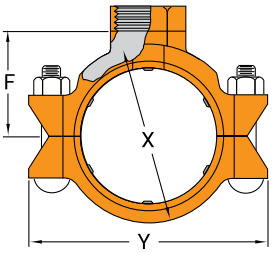
Nominal Pipe Size			Working Pressure	Max. Run End Load	Range of Pipe End Separation	Coupling Dimensions						Bolt Size	Approx. Wt. Each
Run	Outlet FPT F	Outlet MPT/Grv. M/G				X	Y	Z	FPT F	MPT M	Grv. G		
In./DN(mm)	In./mm	In./mm	PSI/bar	Lbs./kN	In./mm	In./mm	In./mm	In./mm	In./mm	In./mm	In./mm	In./mm	Lbs./kg
	½ 15	– –	500 34.5	1418 6.31	¾-1 1/16 19-27	2 15/16 75	4¾ 121	2¾ 70	2 1/16 52	– –	– –	⅜ x 2⅛ –	2.6 1.2
1½ 40	¾ 20	– –	500 34.5	1418 6.31	¾-1 1/16 19-27	2 15/16 75	4¾ 121	2¾ 70	2 1/16 52	– –	– –	⅜ x 2⅛ –	2.6 1.2
	1 25	– –	500 34.5	1418 6.31	¾-1 1/16 19-27	2 15/16 75	4¾ 121	2¾ 70	1 15/16 49	– –	– –	⅜ x 2⅛ –	2.9 1.3
	½ 15.0	– –	500 34.5	2215 9.85	11/16-1 17-25	3 7/16 87	5¼ 133	2¾ 70	2 5/16 59	– –	– –	⅜ x 2⅛ –	3.1 1.4
2 50	¾ 20	– –	500 34.5	2215 9.85	11/16-1 17-25	3 7/16 87	5¼ 133	2¾ 70	2 5/16 59	– –	– –	⅜ x 2⅛ –	3.1 1.4
	1 25	1 25	500 34.5	2215 9.85	11/16-1 17-25	3 7/16 87	5¼ 133	2¾ 70	2 3/16 56	2 7/8 73	3½ 89	⅜ x 2⅛ –	3.3 1.5
	½ 15	– –	500 34.5	3246 14.44	1 3/16-1½ 30-38	4 3/16 106	6½ 165	3¼ 83	2 9/16 65	– –	– –	½ x 2⅜ –	4.8 2.2
	¾ 20	– –	500 34.5	3246 14.44	1 3/16-1½ 30-38	4 3/16 106	6½ 165	3¼ 83	2 9/16 65	– –	– –	½ x 2⅜ –	4.6 2.1
2½ 65	1 25	– –	500 34.5	3246 14.44	1 3/16-1½ 30-38	4 3/16 106	6½ 165	3¼ 83	2 7/16 62	– –	– –	½ x 2⅜ –	4.4 2.2
	– –	1¼ 32	500 34.5	3246 14.44	1 3/16-1½ 30-38	4 3/16 106	6½ 165	3¼ 83	– –	3 5/8 92	3 5/8 92	½ x 2⅜ –	5.1 2.3
	– –	1½ 40	500 34.5	3246 14.44	1 3/16-1½ 30-38	4 3/16 106	6½ 165	3¼ 83	– –	3 5/8 92	3 5/8 92	½ x 2⅜ –	5.9 2.4

Note:

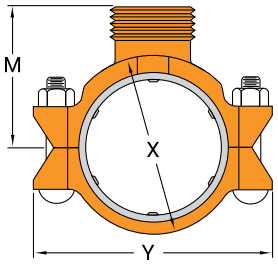
Pipe ends must be prepared in accordance with Gruvlok "Roll or Cut Groove Specifications for Steel and Other IPS or ISO size Pipe". Not recommended on beveled pipe.
Pressure and end load ratings are for use with standard wall steel pipe.
For a one-time field test only, the maximum working pressure may be increased 1½ times the figure shown.

For additional details see "Coupling Data Chart Notes" in the Introduction Section of the Gruvlok Catalog.
See Installation & Assembly directions on next page.
Not for use in copper systems.

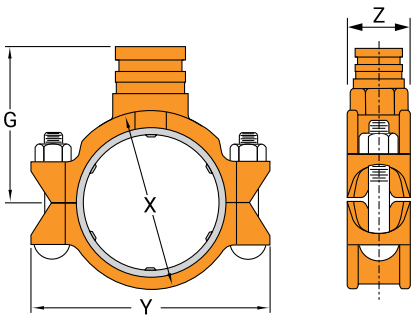
Outlet Coupling
Fig. 7042



Female IPS Outlet - 7042F



Male IPS Outlet - 7042M



Grooved Outlet - 7042G

Nominal Pipe Size						Coupling Dimensions							
Run	Outlet		Working Pressure	Max. Run End Load	Range of Pipe End Separation	X	Y	Z	FPT F	MPT M	Grv. G	Bolt Size	Approx. Wt. Each
	FPT F	MPT/Grv. M/G											
In./DN(mm)	In./mm	In./mm	PSI/bar	Lbs./kN	In./mm	In./mm	In./mm	In./mm	In./mm	In./mm	In./mm	In./mm	Lbs./kg
3 80	¾ 20	– –	500 34.5	4811 21.40	1 3/16-1 ½ 30-38	4 ¾ 121	7 ¼ 184	3 ¼ 83	2 13/16 72	– –	– –	½ x 3 –	5.9 2.7
	1 25	1 25	500 34.5	4811 21.40	1 3/16-1 ½ 30-38	4 ¾ 121	7 ¼ 184	3 ¼ 83	2 ¾ 70	3 ⅜ 86	4 102	½ x 3 –	6.2 2.8
	– –	1 ½ 40	500 34.5	4811 21.40	1 3/16-1 ½ 30-38	4 ¾ 121	7 ¼ 184	3 ¼ 83	– –	4 102	4 102	½ x 3 –	6.4 2.9
4 100	¾ 20	– –	500 34.5	7952 35.37	1 9/16-1 ⅞ 40-48	6 3/16 157	8 ⅞ 225	3 ⅝ 92	3 11/16 94	– –	– –	⅝ x 3 ½ –	9.2 4.2
	1 25	– –	500 34.5	7952 35.37	1 9/16-1 ⅞ 40-48	6 3/16 157	8 ⅞ 225	3 ⅝ 92	3 9/16 91	– –	– –	⅝ x 3 ½ –	9.5 4.3
	– –	1 ½ 40	500 34.5	7952 35.37	1 9/16-1 ⅞ 40-48	6 3/16 157	8 ⅞ 225	3 ⅝ 92	– –	4 ⅞ 124	4 ⅞ 124	⅝ x 3 ½ –	9.5 4.3
	– –	2 50	500 34.5	7952 35.37	1 9/16-1 ⅞ 40-48	6 3/16 157	8 ⅞ 225	3 ⅝ 92	– –	4 ⅞ 124	4 ⅞ 124	⅝ x 3 ½ –	9.9 4.5
6 150	1 25	– –	500 34.5	17236 76.66	1 5/8-1 15/16 41-51	8 ⅛ 206	11 ¼ 286	3 11/16 94	4 ¾ 121	– –	– –	⅝ x 3 ½ –	13.2 6.0
	1 ½ 40	1 ½ 40	500 34.5	17236 76.66	1 5/8-1 15/16 41-51	8 ⅛ 206	11 ¼ 286	3 11/16 94	4 ¾ 121	6 154	6 152	⅝ x 3 ½ –	13.6 6.2
	– –	2 50	500 34.5	17236 76.66	1 5/8-1 15/16 41-51	8 ⅛ 206	11 ¼ 286	3 11/16 94	– –	6 154	6 152	⅝ x 3 ½ –	14.3 6.5

Note:

Pipe ends must be prepared in accordance with Gruvlok "Roll or Cut Groove Specifications for Steel and Other IPS or ISO size Pipe". Not recommended on beveled pipe.
Pressure and end load ratings are for use with standard wall steel pipe.
For a one-time field test only, the maximum working pressure may be increased 1½ times the figure shown.

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See Installation & Assembly directions on next page.
Not for use in copper systems.

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Fig. 7042 Outlet Coupling

These instructions are based on pipe grooved in accordance with Gruvlok® grooving specifications. Check pipe ends for proper groove dimensions and to assure that the pipe ends are free of indentations and projections which would prevent proper sealing. Fig. 7042 Outlet Coupling is recommended for use on straight runs of pipe, not recommended for use with Gruvlok End Cap or Gruvlok Cast Fittings.

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

Slip the gasket over one pipe end making sure the pipe abuts the gasket's center ribs.

3 Alignment

Align the pipe ends and pull the pipe into the gasket until the center ribs are in contact with the pipe ends. The gasket should not extend into the groove on either pipe. Rotate the gasket to align the outlet of the gasket to the same direction as the branch outlet.

4 Housing Assembly

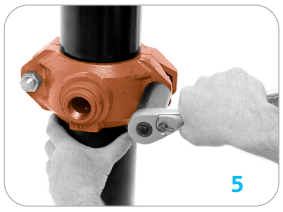
With one nut and bolt removed and the other loosened, place one side of the housing over the gasket. Make sure the ribs on the outside of the gasket align with the recesses in the housing and the keys in the housing are in the grooves on both pipes. Swing the other housing over the gasket and into the grooves on both sides of the pipe. Make sure the recess in the outlet of the housing is properly aligned with gasket outlet.

5 Tighten Nuts

Re-insert the bolt and run-up both nuts finger tight. Securely tighten the nuts alternately and equally until they are completely tightened and there is no gap between the bolt pads. Continue tightening the nuts alternately and equally until the specified bolt torque is reached.

Caution: Make sure the ribs on the exterior of the gasket are enclosed in the housing recesses.

6 Assembly is Complete



ALWAYS USE A GRUVLOK LUBRICANT FOR PROPER COUPLING ASSEMBLY.

Thorough lubrication of the gasket is essential to prevent pinching and possible damage to the gasket.

Fig. 7042 – Specified Bolt Torque

Specified bolt torque is for the oval neck track bolts used on Gruvlok 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.

ANSI Specified Bolt Torque

Coupling Size	Bolt Size	Wrench Size	Specified Bolt Torque*
In.	In.	In.	Ft.-Lbs
1 ½	⅜ x 2 ⅛	11/16	30-45
2	⅜ x 2 ½	11/16	30-45
2 ½	½ x 2 ⅜	⅞	80-100
3	½ x 3	⅞	80-100
4	⅝ x 3 ½	1 1/16	100-130
6	⅝ x 3 ½	1 1/16	100-130

* Non-lubricated bolt torques.

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