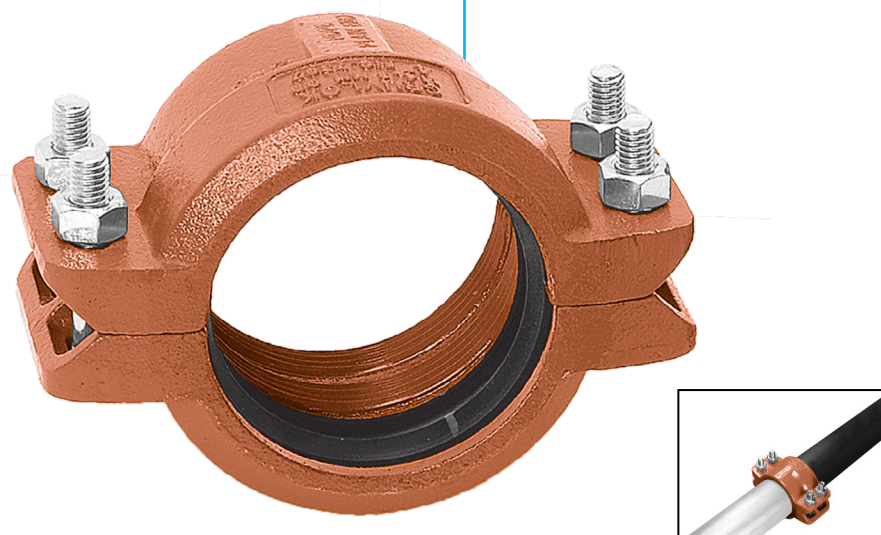


## HDPE Transition Coupling Fig. 7307



The Gruvlok Figure 7307 HDPE Transition Coupling is a cost effective, easy to assemble, mechanical joint intended to connect HDPE pipe to Gruvlok standard weight roll or cut grooved steel pipe, lightweight roll grooved pipe, or Gruvlok grooved-end fittings and valves. The Figure 7307 is compatible with HDPE pipe conforming to ASTM F714, D2447, D3000, or D3035 having wall thicknesses ranging from SDR 32.5 to SDR 7.3 and any schedule steel pipe conforming to Gruvlok's standard pipe specifications.

Each coupling uses four bolts to drive sharply machined teeth into the outside of the HDPE pipe and engages a keyed section into the grooved steel pipe or fitting. When the teeth effectively grip into the pipe, it provides a secure and rigid mechanical connection with pressure capabilities exceeding that of the HDPE pipe itself without the need for costly fusion equipment.

The banks of teeth are positioned away from the gasket to enhance the coupling's sealing ability throughout the operating temperature range. As a result, the temperature and pressure capabilities of the Figure 7307 Transition Coupling exceed the highest temperature and pressure ratings of the HDPE pipe.

The Figure 7307 HDPE Transition Coupling also features a low-profile contoured housing with ramps along the outside diameter. This allows the coupling to slide over most obstacles when long lengths of the pipeline are relocated.

### WARNING:

1. Gruvlok products for HDPE pipe must be installed using Gruvlok Xtreme Temperature Lubricant.
2. The listed gasket temperature rating may exceed the manufacturer's temperature rating for HDPE pipe. Consult with the HDPE pipe manufacturer for appropriate service temperatures before use.
3. The Figure 7307 HDPE Coupling is intended for use on HDPE Pipe only. Use of other plastic pipe materials is prohibited.

## Material Specifications

### Housing

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

### Coating

Rust inhibiting paint

Color: Orange

Other Colors Available  
(IE: RAL3000 and RAL9000)

For other Coating requirements contact an ASC Engineered Solutions™ Representative.

### Hardware

Bolts: SAE J429, Grade 5, Zinc Electroplated

Heavy Hex Nuts: ASTM A563, Grade A, Zinc Electroplated

Washers: Zinc Coated, Hardened Steel Washers per ASTM F436

### Gaskets

Properties in accordance with ASTM D 2000

#### Grade E EPDM (Green color code)

Service Temperature Range: -30°F to 230°F (-34°C to 110°C).

Recommended for water service, dilute 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).

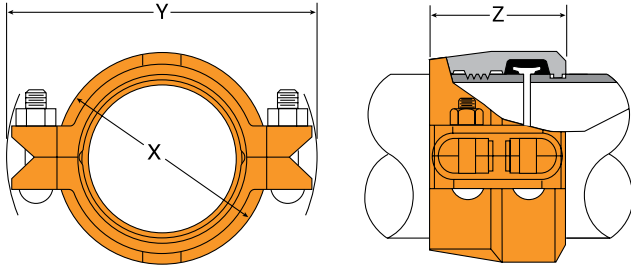
Recommended for petroleum applications, air with oil vapor, vegetable and mineral oils.

NOT FOR USE WITH HOT WATER OR HOT AIR.

For specific chemical applications, reference the Gruvlok Gasket Recommendations section of the Gruvlok catalog.

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

## HDPE Transition Coupling Fig. 7307



Nominal Size	Pipe O.D.	Coupling Dimensions			Coupling Bolts		Approx. Wt. Ea.
		X	Y	Z	Qty.	Size	
In./DN(mm)	In./DN(mm)	In./DN(mm)	In./DN(mm)	In./DN(mm)		In.	Lbs./Kg
2 50	2.375 60.3	3½ 89	5⅞ 149	3⅞ 79	4	½ X 2⅜	4.5 2.0
3 80	3.500 88.9	4⅞ 117	7 178	3⅞ 79	4	½ X 3	8.5 3.9
4 100	4.500 114.3	5⅞ 149	8¼ 210	3¾ 95	4	½ X 3	12 5.4
6 150	6.625 168.3	8 203	11⅞ 283	3¾ 95	4	⅝ X 3½	18 8.2
8 200	8.625 219.1	10⅞ 262	13½ 343	4¼ 108	4	⅝ X 3¾	30 13.6
10 250	10.750 273.1	12¾ 324	16¾ 425	5 127	4	¾ X 4¾	43 19.5
12 300	12.750 323.9	14¾ 375	19 483	5 127	4	⅞ X 5	58 26.3

**Note:** The pressure rating of the Figure 7307 HDPE Transition Coupling is determined by the working pressure of the HDPE pipe installed. Consult with the HDPE pipe manufacturer for the appropriate working pressure before use. HDPE working pressures are determined by wall thickness, pipe composition, and applicable service temperature.



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## HDPE Transition Coupling Fig. 7307

### HDPE Pipe Dimensional Specifications

Nominal Size	Pipe O.D.	O.D. Tolerance +/-	Out of Roundness Tolerance +/-	Pipe Wall Thickness						
				SDR 7.3	SDR 9	SDR 11	SDR 15.5	SDR 17	SDR 21	SDR 32.5
In./DN(mm)	In./mm	In./mm	In./mm	In./mm	In./mm	In./mm	In./mm	In./mm	In./mm	In./mm
2 50	2.375 60.3	0.006 0.15	0.035 0.89	0.325 8.3	0.264 6.7	0.216 5.5	0.153 3.9	0.140 3.6	0.113 2.9	— —
3 80	3.500 88.9	0.016 0.41	0.040 1.02	0.479 12.2	0.389 9.9	0.318 8.1	0.226 5.7	0.206 5.2	0.167 4.2	0.108 2.7
4 100	4.500 114.3	0.020 0.51	0.040 1.02	0.616 15.6	0.500 12.7	0.409 10.4	0.290 7.4	0.265 6.7	0.214 5.4	0.138 3.5
6 150	6.625 168.3	0.030 0.76	0.050 1.27	0.908 23.1	0.736 18.7	0.602 15.3	0.427 10.8	0.327 8.3	0.265 6.7	0.204 5.2
8 200	8.625 219.1	0.039 0.99	0.075 1.91	1.182 30	0.958 24.3	0.784 19.9	0.556 14.1	0.507 12.9	0.340 8.6	0.265 6.7
10 250	10.750 273.1	0.048 1.22	0.075 1.91	1.473 37.4	1.194 30.3	0.977 24.8	0.694 17.6	0.632 16.1	0.512 13.0	0.331 8.4
12 300	12.750 323.9	0.057 1.45	0.075 1.91	7.747 44.4	1.417 36.0	1.159 29.4	0.823 20.9	0.750 19.1	0.607 15.4	0.392 10.0

**Note:**

HDPE Pipe Dimensions per ASTM F714, ASTM D2447, and ASTM D3035

For steel pipe requirements, refer to Gruvlok Groove Specifications for steel pipe in the Technical Data Section.

See Installation & Assembly directions on next page.



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## Fig. 7307 HDPE Transition Coupling



Read and understand all instructions before use.

### WARNING

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.

### 1 Pipe Preparation

Ensure the HDPE pipe ends are square cut to  $\frac{1}{8}$ " maximum for 2" to 4" sizes and  $\frac{5}{32}$ " maximum for 6" sizes and larger. The steel pipe must be grooved in accordance with Gruvlok Grooving Specification for Steel Pipe in the Technical Data Section. Ensure the gasket seating surface on each pipe end is clean and smooth for proper gasket sealing.

**CAUTION:** For proper coupling performance, the gasket seating surface of each pipe end must be free of scratches, indentations, projections, or other imperfections that could prevent proper sealing of the gasket.



### 2 Check & Lubricate Gasket

Check to assure the gasket material is acceptable for the intended service. The Gasket color code is green for EPDM and orange for Nitrile (Buna-N).

**CAUTION:** Use only Gruvlok Xtreme Lubricant. Gruvlok Xtreme Lubricant contains silicone. If silicone is unacceptable for the application contact Gruvlok for the lubrication recommendation. Apply a thin coating of Gruvlok Xtreme Lubricant to the gasket lip and the exterior surface of the gasket.



### 3 Gasket Installation

Slip the gasket over one of the pipe ends. Make sure the gasket does not overhang the pipe end. Align the second pipe and while holding it in the butted position, slide the gasket back over the second pipe end. The gasket must be positioned on the gasket seat surface of the grooved steel pipe. Make sure the gasket does not overhang into the pipe groove.



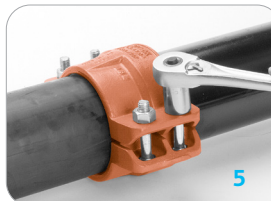
### 4 Housings

Place each half of the coupling housing over the gasket, making sure the housing grooved end is directed into the pipe groove.



### 5 Tighten Nuts

Insert the bolts and secure the nuts alternately and uniformly until the bolt pads make contact. Torque all bolts to the required bolt torque levels shown in the Specified Bolt Torque Table. Alternate and even tightening of the bolts will significantly reduce the torque needed to close the coupling.



**CAUTION:** To ensure proper performance, the Figure 7307 HDPE Transition Coupling should always be installed with the bolt pads making metal to metal contact.

### Specified Bolt Torque

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

Specified Bolt Torque

Coupling Bolts	Minimum		Maximum	
	In./DN(mm)	In./mm	Lbs./kg	
$\frac{1}{2}$ X $2\frac{3}{8}$		80	100	
		110	150	
$\frac{1}{2}$ X 3		80	100	
		110	150	
$\frac{5}{8}$ X $3\frac{1}{2}$		100	130	
		135	175	
$\frac{5}{8}$ X $3\frac{3}{4}$		100	130	
		135	175	
$\frac{3}{4}$ X $4\frac{3}{4}$		130	180	
		175	245	
$\frac{7}{8}$ X $5\frac{1}{2}$		180	220	
		245	300	



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