

## Double Groove Coupling Fig. 7377



Gruvlok Fig. 7377 is a flexible coupling utilizing double groove technology designed for high pressure piping applications. Fig. 7377 is specifically designed for use in mining, oil, gas, slurry, sludge, and hydraulic systems. The maximum working pressure for each pipe schedule and size are listed in the table below. Fig. 7377 is an ideal solution for high pressure applications, exceeding ASC's Fig. 7004 capabilities. See page 3 for double groove piping dimensions.

### Material Specifications

#### ANSI Bolts/Nuts

SAE J429, Grade 5, Zinc Electroplated

#### Heavy Hex Nuts

ASTM A563, Grade A, Zinc Electroplated

#### Housing

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

#### Coatings

Rust inhibiting paint - Color: Copper (standard)  
Hot Dipped Zinc Galvanized (optional)  
Other Colors Available (IE: RAL3000 and RAL9000) For other Coating requirements contact an ASC Engineered Solution Representative

#### Gasket Materials

Properties as designated in accordance with ASTM D 2000

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.

Additional gaskets available, please contact an ASC Engineered Solution Representative

#### Gasket Type

C Style (1" - 24")  
Flush Gap (2" - 4")

#### Lubrication

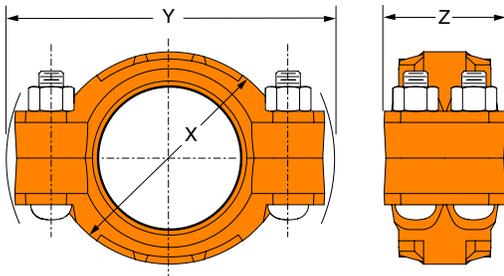
Standard  
Gruvlok Xtreme™ (Do Not use with Grade "L")

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



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

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Nominal Size	O.D.	Schedule 160		Schedule 80		Range of Pipe End Separation		Coupling Dimensions			Coupling Bolts		Specified Torque §		Approx. Wt. Ea.
		Max. Working Pressure	Max. End Load	Max. Working Pressure*	Max. End Load	Standard	End Guard	X	Y	Z	Qty.	Size	Min.	Max.	
In./DN(mm)	In./mm	PSI/bar	Lbs./kN	PSI/bar	Lbs./kN	In./mm	In./mm	In./mm	In./mm	In./mm		In./mm	Ft.-Lbs./N-m	Lbs./Kg	
6	6.625	4,000	137,886	3,000	103,415	0.070 - 0.250	0.110 - 0.290	8 <sup>6</sup> / <sub>7</sub>	12 <sup>3</sup> / <sub>4</sub>	5	4	1 x 5 <sup>1</sup> / <sub>2</sub>	450	525	42.6
150	168.3	275.8	613.3	206.8	460.0	1.78 - 6.35	2.79 - 7.37	225	324	127		-	-	-	19.3
8	8.625	3,500	204,492	2,500	146,060	0.060 - 0.250	0.132 - 0.322	11 <sup>1</sup> / <sub>8</sub>	15 <sup>1</sup> / <sub>2</sub>	6	4	1 <sup>1</sup> / <sub>8</sub> x 6 <sup>1</sup> / <sub>2</sub>	500	600	72.0
200	219.1	241.3	909.6	172.4	649.6	1.52 - 6.35	3.35 - 8.18	287	396	152		-	-	-	32.7
10	10.750	3,000	272,288	2,500	226,906	0.080 - 0.250	0.152 - 0.322	13 <sup>1</sup> / <sub>2</sub>	18 <sup>3</sup> / <sub>4</sub>	6 <sup>1</sup> / <sub>8</sub>	4	1 <sup>1</sup> / <sub>8</sub> x 6 <sup>1</sup> / <sub>2</sub>	500	600	98.3
250	273.1	206.8	1,211.1	172.4	1,009.3	2.03 - 6.35	3.86 - 8.18	343	476	156		-	-	-	44.6

\* Maximum line pressure, including surge, to which a joint can be subjected. Working pressures are based on pipe in accordance with Gruvlok double cut groove specifications. Maximum allowable working pressure may be limited by code requirements, system components, and system design. Note: For a one time field test only, the maximum working pressure may be increased by 1.25 times the figure shown.

For additional details see "Coupling Data Chart Notes" in the Introduction Section of the Gruvlok Catalog.

§ - Lubricate bolts with Gruvlok Xtreme Lubricant.

See Installation & Assembly directions on last page.



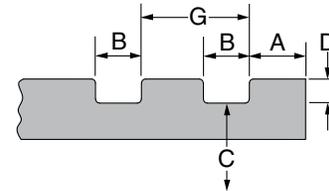
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## Double Groove Coupling Fig. 7377

### Gruvlok Standard Double Cut Groove Specification For Steel & Other IPS Or ISO Size Pipe

-1- Nominal IPS Pipe Size	-2- O.D.		-3- Gasket Seat "A" ±0.030/ ±0.76	-4- Groove Sep "G" ±0.005/ ±0.127	-5- Groove Width "B" ±0.030/ ±0.76	-6- Groove Diameter "C"		-7- Actual Groove Depth "D" (Ref. Only)	-8- Min. Allowable Bolt Torque Required for Assembly
	Actual	Tolerance				Actual	Tol. +0.000		
In./ DN(mm)	In./mm	+In./mm -In./mm	In./mm	In./mm	In./mm	In./mm	-In./mm	In./mm	Ft.-Lbs./N-m
6	6.625	+0.063 -0.031	0.625	0.785	0.375	6.340	-0.022	0.142	450
150	168.3	+1.60 -0.79	15.88	20.0	9.53	161.0	-0.56	3.6	610.2
8	8.625	+0.063 -0.031	0.750	0.855	0.500	8.240	-0.022	0.192	500
200	219.1	+1.60 -0.79	19.05	21.7	12.70	209.3	-0.56	4.9	678.0
10	10.750	+0.063 -0.031	0.750	0.855	0.500	10.350	-0.022	0.200	500
250	273.1	+1.60 -0.79	19.05	21.7	12.70	262.9	-0.56	5.1	678.0



#### COLUMN 1

Nominal IPS Pipe size.  
Nominal ISO Pipe size.

#### COLUMN 2

IPS outside diameter.  
ISO outside diameter.

#### COLUMN 3, 4 & 5

Gasket seat must be free from scores, seams, chips, rust or scale which may interfere with proper coupling assembly.

#### COLUMN 6

The groove must be of uniform depth around the entire pipe circumference. (See column 7).

#### COLUMN 7

Groove depth: for reference only. Groove must conform to the groove diameter "C" listed in column 6.

#### COLUMN 8

Minimum allowable bolt torque required for complete assembly.

**Out of roundness:** Difference between maximum O.D. and minimum O.D. measured at 90° must not exceed total O.D. tolerance listed.

**For IPS pipe,** the maximum allowable tolerance from square cut ends is 0.03" for 1" thru 3½"; 0.045" for 4" thru 6"; and 0.060" for sizes 8" and above measured from a true square line.

**For ISO size pipe,** the maximum allowable tolerance from square cut ends is 0.75mm for sizes 25mm–80mm; 1.15mm for sizes 100mm–150mm; and 1.50mm for sizes 200mm and above, measured from a true square line.

**Beveled-End Pipe** in conformance with ANSI B16.25 (37½°) is acceptable, however square cut is preferred.

### Gruvlok "End Guard" Double Cut Groove Specification For Steel & Other Ips Or Iso Size Pipe

-1- Nominal IPS Pipe Size	-2- O.D.		-3- Gasket Seat "A" ±0.010/ ±0.76	-4- Groove Sep "G" ±0.005/ ±0.127	-5- Groove Width "B" +0.010/ -0.005	-6- Groove Diameter "C"		-7- Actual Groove Depth "D" (Ref. Only)	-8- Min. Allowable Bolt Torque Required for Assembly
	Actual	Tolerance				Actual	Tol. +0.000		
In./ DN(mm)	In./mm	+In./mm -In./mm	In./mm	In./mm	In./mm	In./mm	-In./mm	In./mm	Ft.-Lbs./N-m
6	6.625	+0.063 -0.031	0.605	0.785	0.375	6.340	-0.022	0.142	450
150	168.3	+1.60 -0.79	15.4	20.0	9.53	161.0	-0.56	3.6	610.2
8	8.625	+0.063 -0.031	0.714	0.855	0.500	8.240	-0.022	0.192	500
200	219.1	+1.60 -0.79	18.1	21.7	12.70	209.3	-0.56	4.9	678.0
10	10.750	+0.063 -0.031	0.714	0.855	0.500	10.350	-0.022	0.200	500
250	273.1	+1.60 -0.79	18.1	21.7	12.70	262.9	-0.56	5.1	678.0



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**Fig. 7377 Double Groove Coupling**

## 1 Check and 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. Ensure that foreign particles do not adhere to the lubricated surface

## 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, pull the gasket into position, centering it between the grooves on each pipe. The gasket lip should not engage with either of the pipe grooves.

## 4 Housing

Place each half of the coupling housing over the gasket, making sure the housing keys engage the pipe grooves.

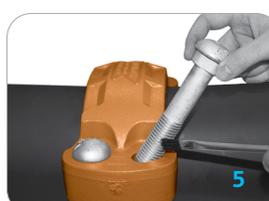
## 5 Bolts

Apply a thin coat of Xtreme Lube to the bolt threads. Tighten the nuts alternately and equally to the specified bolt torque.

CAUTION: Uneven tightening may result in the housings pinching the gasket and causing an improper seal.

## 6 Final Assembly

Visually inspect the pipe joint to ensure the coupling keys are fully engaged in the pipe grooves, both bolt pads are a firm and even metal-to-metal contact, and the gasket is not visible.



**Caution:** When using an impact wrench, verify that the torque output on the impact wrench is within the required torque range. It is recommended that a torque wrench be used for accurate assembly in order to obtain specified performance.

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**

Pipe Sizes	Bolt Size	Specified Bolt Torque	Lubrication
In.	In.	Ft.-Lbs	-
6	1	450 - 525	Gruvlok Xtreme™ Lubricant
8	1 1/8	500 - 600	
10	1 1/8	500 - 600	



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