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Fig. 7001 Flexible Coupling

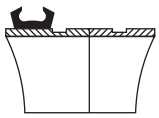
1 Check & Lubricate Gasket

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

Slip the gasket over the pipe end making sure the gasket lip does not overhang the pipe end.

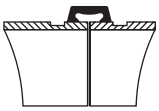
On couplings 10" and larger it may be easier to turn the gasket inside out then lubricate and slide the gasket over the pipe end as shown.



3 Alignment

After aligning the two pipe ends, pull the gasket into position centering it between the grooves on each pipe. Gasket should not extend into the groove on either pipe.

On couplings 10" and larger, flip or roll the gasket into centered position.



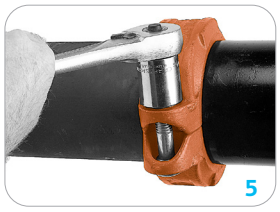
4 Housings

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

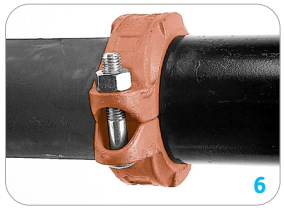
Tighten the nuts alternately and equally to the specified bolt torque. The housing bolt pads must make metal-to-metal contact.

CAUTION: Uneven tightening may cause the gasket to pinch.



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.



Note: The housings for sizes 16" and larger are cast in four or more segments.

To Install: Loosely pre-assemble the segments into two "Housing Halves" making sure that the alignment tang(s) and slot(s) on the bolt pad(s) are properly mated. Install the "Housing Halves" as shown in steps 4 & 5. The coupling is properly installed when all bolt pads are firmly together - Metal-to-Metal.

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.

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Fig. 7001–2 Two–Piece Large Diameter 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.

- 7001–2 bolts must be lightly coated with Gruvlok Xtreme lube before installation. See chart for torque requirements.
- Minimum wall pipe suitable for 14" – 24": 7001–2 roll grooved installation is 0.250" wall thickness.
- Pipe preparation grooved dimensions must conform to the Gruvlok Roll/Cut groove specifi ation.

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.

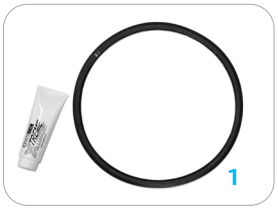
4 Housing

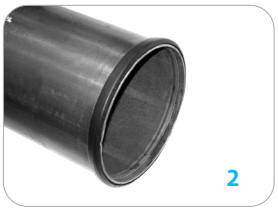
Place each housing half on the pipe and into each groove making sure that the gasket does not slip out of position in between the pipe ends or groove.

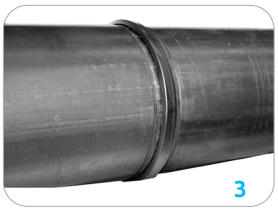
5 Bolts

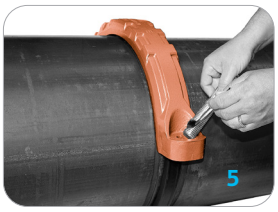
Apply a thin coat of Xtreme lube to the bolt threads. Tighten the nuts alternately and equally to the specified bolt torque.

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









ANSI Specified Bolt Torque

Pipe Sizes	Bolt Size	Specified Bolt Torque	Lubrication
In.	In.	Ft.-Lbs	
14	7/8	180–220	Gruvlok Xtreme Lubricant
16	1	250–300	
18	1	250–300	
20	1 1/8	375–425	
24	1 1/8	375–425	

6 Final Assembly

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

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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.

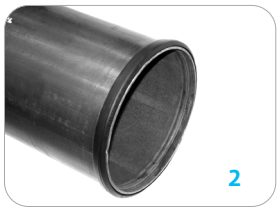
Use appropriate personal protective equipment.

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

Pipe Preparation

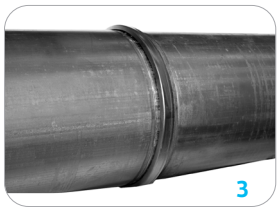
Check Pipe ends for proper grooved dimensions and to ensure that the pipe is free of indentations, projections, or other imperfections that would prevent proper sealing of the gasket.

- 7401-2 bolts must be lightly coated with Gruvlok Xtreme lube before installation. See chart for torque requirements.
- Minimum wall pipe suitable for 14" – 24": 7401-2 roll grooved installation is 0.250" wall thickness.
- Pipe preparation grooved dimensions must conform to the Gruvlok Roll/Cut groove specifi ation.



1a 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. Tighten the nuts alternately and equally to the specified bolt torque.

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

ANSI Specified Bolt Torque

Pipe Size	Bolt Size	Specified Bolt Torque	Lubrication
In.	In.	Ft.-Lbs	
14	7/8	180-220	Gruvlok Xtreme Lubricant
16	1	250-300	
18	1	250-300	
20	1 1/8	375-425	
24	1 1/8	375-425	

6 Final Assembly

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

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Fig. 7011 Standard Coupling

WARNING

Read and understand all instructions before use.

Ensure system is drained and depressurized before installation or service.

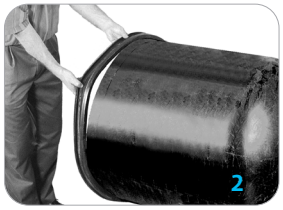
Use appropriate personal protective equipment.

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

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.

1 Pipe Preparation
Inspect the pipe ends making sure the criteria, in the Gruvlok Large Diameter Pipe Roll and Cut Groove specifications, are met.

2 Gasket Installation
Turn the gasket inside out and slide the gasket completely over one of the pipe ends. Turning the gasket inside out will reduce the stretching necessary to put the gasket into position. Ideally, approximately 75% of the pipe's gasket-sealing surface, (Dimension A) should be visible when the gasket is in proper position. This will aid in step 4.

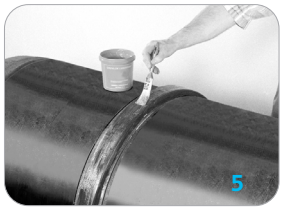


3 Lubricate Gasket
Lubricate the gasket sealing lips. The use of Gruvlok lubricants ensures compatibility between the lubricant and the gasket.

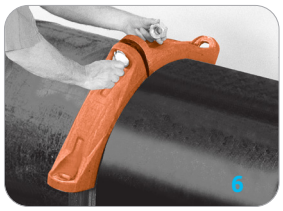
4 Alignment
Pull the two pipes into contact aligning the pipe ends.

CAUTION: Be careful not to pinch fingers during this step. Working your way around the circumference of the pipe, flip the gasket toward the pipe end so that the proper side is facing out. The end of this procedure will result in the gasket snapping into place. Position the gasket centrally between the grooves of the two pipe ends.

5 Lubricate Gasket
Lubricate the exterior surface of the gasket. This helps prevent pinching of the gasket during assembly.



6 Housings
Secure the housings about the pipes making sure the coupling keys are engaged in the pipe end grooves. Hint: For horizontal assembly, place housing segment on top of the pipe to support the weight of the housing segment. Secure the adjacent housing with an oval neck track bolt and heavy hex nut and then rotate the secured housings, again balancing the weight of the housings on the top of the pipe. Continue this procedure for all segments.



7 Tighten Nuts
Firmly torque each bolt. The specified minimum torque for each nut is 600 ft.-lbs. The speci-fied maximum torque for each nut is 800 ft.-lbs.

8 Assembly is Complete
Installation of the Figure 7011 Standard Coupling is completed.

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.

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Fig. 7003 Hingelok Coupling

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.

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.

Note: Remove locking pin from handle before opening coupling.

2 Gasket Installation

Slip the gasket over the pipe end making sure the gasket lip does not overhang the pipe end.

3 Alignment

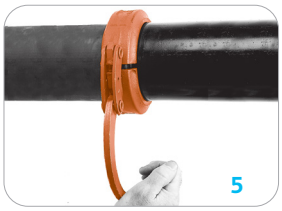
After aligning the two pipe ends, pull the gasket into position centering it between the grooves on each pipe. Gasket should not extend into the groove on either pipe.

4 Housings

Put one half of the open coupling over the gasket as the coupling keys fit firmly into the grooves on each pipe end. Swing the other half of the coupling into position around the gasket and into the grooves.

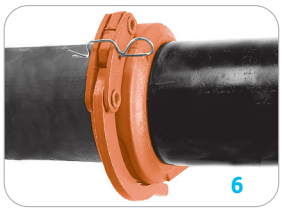
5 Lock Coupling

Fit the nose of the locking handle in the notch of the opposite housing. Press firmly down on the handle until it makes contact with the coupling housing. Insert locking pin into handle linkage to secure handle in closed position. (See Caution.)



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.



CAUTION:

- Hammering or banging on the handle or coupling housing could cause serious damage to the locking device and coupling assembly. The result may be an unsuitable pipe joint and unusable coupling assembly.
- Care needs to be taken so that fingers do not get caught or pinched when handle is placed in locked position as a result of cam action of handle assembly.
- When re-using coupling and gasket, always inspect gasket for damage and hinge/handle assembly for looseness, distortion or any other damage.

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Fig. 7010 Reducing Coupling

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.

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.

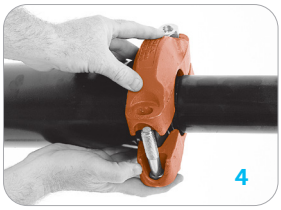
2 Gasket Installation
Place the smaller opening of the gasket over the smaller pipe. Angle the gasket over the pipe end and pull the gasket lip open around the circumference of the pipe. The center leg of the gasket should make flush contact with the pipe end and will prevent telescoping of the smaller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

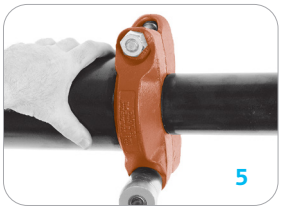
3 Alignment
Align the adjoining pipe center lines, and insert the larger pipe end into the gasket. Angle the pipe end slightly to the face of the gasket and tilt the pipe into the gasket to ease assembly.

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
Tighten the nuts alternately and equally to the specified bolt torque. The housing bolt pads must make metal-to-metal contact.

Caution: Uneven tightening may cause the gasket to pinch.





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.

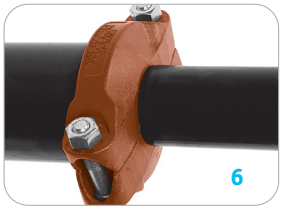
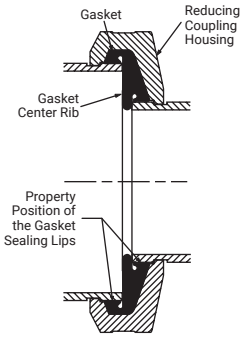


Fig. A
Note: Fig. A illustrates the correct position of the Fig. 7010 Reducing Coupling gasket and housing properly assembled onto adjacent pipe ends.



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

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Fig. 7012 Gruvlok® Flange (2"–12")

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.

WARNING

The Gruvlok Flange gasket must be inserted so that the sealing lips face toward the pipe end and the mating flange. The lip of the gasket, sealing on the pipe, should not extend beyond the pipe end. The pipe should extend out beyond the end of the sealing lip by approximately 1/8" on the 2"–6" sizes and 3/16" on the 8"–12" sizes.

Applications which require Gruvlok Flange Adapter Insert

1. When mating to a wafer valve (lug valve), if the valve is rubber faced in the area designated by the sealing surface dimensions (A Max. to B Min.), place the Gruvlok Flange Adapter Insert between the valve and the Gruvlok flange.
2. When mating to a rubber-faced metal flange, the Gruvlok Flange Adapter Insert is placed between the Gruvlok Flange and the rubber-faced flange.
3. When mating to a serrated flange surface, a standard full-faced flange gasket is installed against the serrated flange face and the Gruvlok Flange Adapter Insert is placed between the Gruvlok Flange and the standard Flange gasket.
4. When mating to valves or other component equipment where the flange face has an insert, use procedure described in note 3.

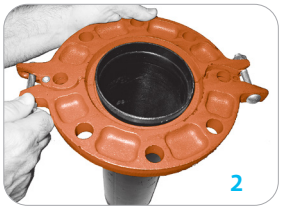
Check pipe end for proper grooved dimensions and to assure that the pipe end is free of indentations and projections that would prevent proper sealing of the Gruvlok flange gasket.

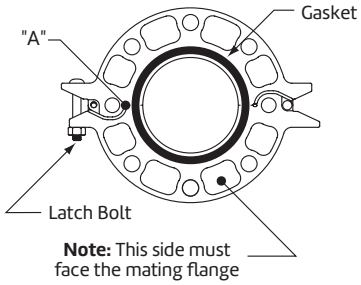
1 Install Housings

On the side without the hinge pin, loosen the latch bolt nut to the end of the bolt thread. (It is not necessary to remove the nut from the latch bolt.) Swing the latch bolt out of the slot. Open the Gruvlok Flange and place around the grooved pipe end with the key section fitting into the groove. The flange gasket cavity must face the pipe end.

2 Latch Housings

Place the latch bolt back into the slotted hole. Tighten the nut until there is a 1/16" gap between the flange halves at location "A". (See Figure below)





3 Check & Lubricate Gasket

Check the gasket to assure that it is properly suited for the intended service. Lubricate the entire exterior surface of the gasket, including the sealing lips, using the proper Gruvlok lubricant.

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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 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

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 insignificant 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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Fig. 7005 Roughneck® Coupling

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.

1 Pipe Preparation

Make certain the pipe ends are free of indentations, projections, weld splatter, or other imperfections which could prevent proper sealing of the gasket.

2 Pipe Marking

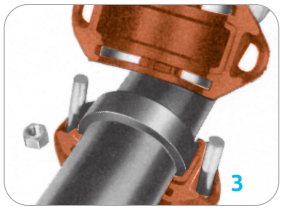
Mark each pipe at a distance from the pipe end according to the pipe run size. See Image 1 and the chart.

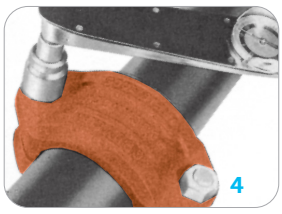
3 Check & Lubricate Gasket

Check the gasket color code to verify that the gasket grade is properly suited for the intended service. Apply a thin coating of Gruvlok Lubricant to the gasket lips and the exterior surface of the gasket and slip the gasket over one pipe. See Image 2. Make sure the gasket does not overhang the pipe end.

Pipe Run Size

Pipe Size	Distance from Pipe End Mark	Bolt Torque	
		Min.	Max.
In./DN(mm)	In./mm	Ft.-Lbs./N-m	Ft.-Lbs./N-m
2–2½ 50-65	1 25.4	150 203	190 257
3–4 80-100	1 25.4	200 271	250 339
5–8 125-200	1¼ 31.8	250 339	300 406
10 250	1¾ 44.5	500 678	600 814
12 300	1¾ 44.5	550 746	700 949
14–16 350-400	1¾ 44.5	550 746	700 949





4 Pipe Alignment

Align the second pipe and while holding the pipe in the butted position slide the gasket back over the second pipe end. The gasket should be equally spaced between the lines scribed on each pipe.

5 Housing

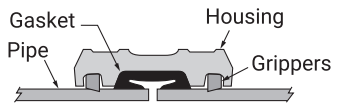
Place each half of the Roughneck coupling over the gasket, making sure that the tongue on one housing half is aligned with the recess on the other housing half. See Image 3.

6 Tighten Nuts

Tighten the nuts alternately and uniformly until the required bolt torque is reached. See Image 4 and chart for bolt torque.

7 Reinstallation

Reinstallation after a disassembly will require that the threads on the bolt and in the nut are clean and lubricated with a light oil.



Note: Torque requirements must be met and housing halves must be assembled with equal gaps between bolt pads.

Working pressure and end load are based on a properly assembled Roughneck coupling with bolts fully torqued to the above specifications, on plain-end or beveled standard wall steel pipe and Gruvlok Plain-End Fittings.

Roughneck Couplings are designed to be used on plain-end pipe and Gruvlok Plain-End Fittings only. For externally coated pipe applications, contact an Anvil International Representative.

Not recommended for use on steel pipe with a hardness greater than 150 Brinell, plastic, HDPE, cast iron or other brittle pipe.

Re-Installation: The 7005 roughneck coupling may be re-installed following a quick visual inspection of the gripper and pipe ends. Any damage on the gripper and or pipe ends may compromise the integrity of the joint and it is advised that the coupling and or individual gripper be replaced and the pipe end cut back to where they are free from damage.

*Bolt torque ratings shown must be applied at installation.

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Fig. 7004 Coupling

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.

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 Housings

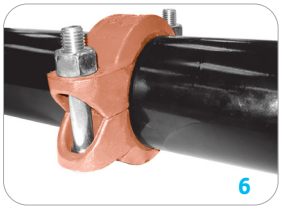
Place each housing halves on the pipe making sure the housing key fits into the groove. Be sure that the tongue and recess portions of the housing mate properly. Insert the bolts and run up the nuts finger tight.

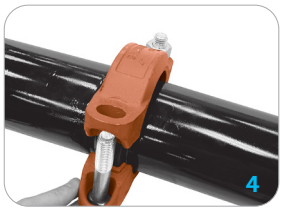
5 Tighten Nuts

Securely tighten nuts alternately and equally to the required indicator. For 2" - 4" 7004 couplings, please use the table below for required torque values. For 7004 5" and larger, tighten nuts till housings are in metal-to-metal contact.

6 Assembly is Complete

Visually inspect the pipe joint to assure the coupling keys are fully engaged in the pipe grooves. For 2" - 4", ensure the gaps on each side are evenly spaced, and for 5" and larger couplings ensure the housings are in firm even metal-to-metal contact on both sides.





Specified Bolt Torque

Size	Bolt Size	Torque
In.	In.	Ft.-Lbs
2	5/8	100-130
2½	5/8	100-130
3	5/8	100-130
4	3/4	100-130
5	7/8	*
6	7/8	*
8	1	*
10	1	*
12	1	*

* Torque required to bring housing metal-to-metal contact.

CAUTION: When using an impact wrench, verify that the output of 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 per ormance.

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Fig. 7004EG High Pressure Coupling with End Guard Gasket

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.

CAUTION
Not using the correct groove dimensions may result in pipe joint separation. Pipe joint separation may result in significant property damage and serious injury.

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 & Pipe Installation

Slip the gasket half way on to the pipe end, stop when the center gasket leg comes in contact with the pipe end. Slide the second pipe end half way into the gasket, stopping then the pipe end comes in contact with the center gasket leg. Ensure pipes are aligned properly.

3 Housings

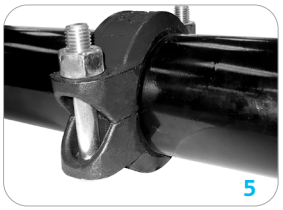
Place each housing halves on the pipe making sure the housing key fits into the groove. Be sure that the tongue and recess portions of the housing mate properly. Insert the bolts and run up the nuts, finger tight.

4 Tighten Nuts

Securely tighten nuts alternately and equally until the housings are in firm metal to-metal contact.

5 Assembly is Complete

Visually inspect the pipe joint to assure the coupling keys are fully engaged in the pipe grooves. Ensure the housings are in firm even metal-to-metal contact on both sides.



Specified Bolt Torque

Size	Bolt Size	Torque
In.	In.	Ft.-Lbs
2	5/8	100–130
2½	5/8	100–130
3	5/8	100–130
4	3/4	130–180
5	7/8	180–220
6	7/8	180–220
8	1	200–250
10	1	200–250
12	1	200–250

CAUTION: When using an impact wrench, verify that the output of the impact wrench is within the required torque range. Tool output varies and may require trial runs with the use of a torque wrench for accurate assembly.

Fig. 7305 HDPE Coupling

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.

1 Pipe Preparation

Ensure the HDPE pipe ends are square cut to ⅛" maximum for 2" to 4" sizes and 5/32" maximum for 6" sizes and larger. Ensure the gasket seating surface on each pipe end is clean and smooth for proper gasket sealing. Mark each pipe at a distance from the end as follows:

Size Inches	Distance to Mark
In./mm	In./mm
2–4 (51–102)	2 (25.4)
5–12 (127–305)	1½ (38.1)
14–18 (355–457)	1¾ (44.5)

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 keeping the pipes in the butted position slide the gasket back over the second pipe end. The gasket must be positioned centrally between the lines on the pipe ends.

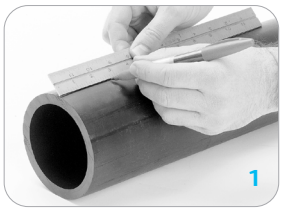
4 Housings

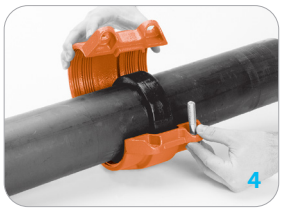
Place the Figure 7305 housing casting over the gasket, making sure the tongue on one casting is aligned with the recess of the other casting.

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 Bol 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 7305 HDPE 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 per ormance. 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
½ x 2⅜	80 110	100 150
½ x 3	80 110	100 150
⅝ x 3½	100 135	130 175
⅝ x 3¾	100 135	130 175
¾ x 4¾	130 175	180 245
1 x 5½	200 270	250 340

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Fig. 7307 HDPE Transition Coupling

WARNING

Read and understand all instructions before use.

Ensure system is drained and depressurized before installation or service.

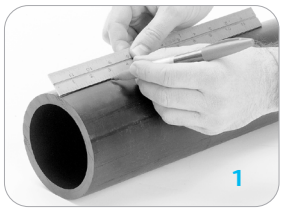
Use appropriate personal protective equipment.

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

1 Pipe Preparation

Ensure the HDPE pipe ends are square cut to 1/8" maximum for 2" to 4" sizes and 5/32" maximum for 6" sizes and larger. The steel pipe must be grooved in accordance with Gruvlok Grooving Specifi ation 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).

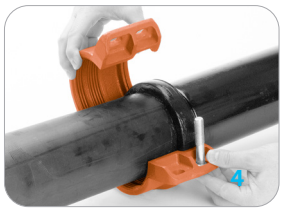
CAUTION: Use only Gruvlok Xtreme Lubricant. Gruvlok Xtreme Lubricant contains silicone. If silicone is unacceptable for the application contact Gruvlok for the lubrication recommendation. Apply a thin coating of Gruvlok Xtreme Lubricant to the gasket lip and the exterior surface of the gasket.

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

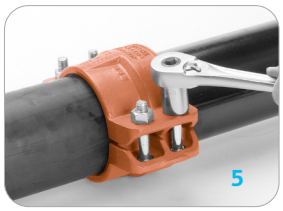
Place each half of the coupling housing over the gasket, making sure the housing grooved end is directed into the pipe groove.



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 Bol 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 inignificant property damage and serious injury.

Specified Bolt Torque

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

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Fig. 7312 HDPE Flange Adapter

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.

1 Pipe Preparation

Ensure the HDPE pipe ends are square cut to 1/8" maximum for 2" to 4" sizes and 5/32" maximum for 6" sizes and larger. Inspect the surface of the mating flange to ensure the gasket seating surface 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.

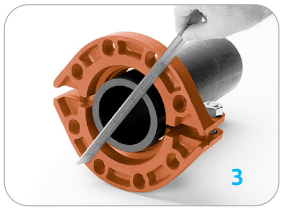
2 Check & Lubricate Gasket

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 Housing

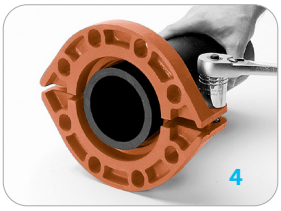
Place the housing over the end of the pipe and using a straight edge, align the face and the flange face with the end of the pipe. Do not let the pipe extend beyond the flange face.



4 Latch Housing

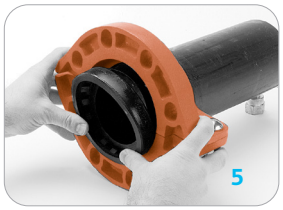
Tighten the housing nut until the housing bolt pads make firm metal to metal contact. Torque all bolts to the required latch bolt torque levels. Refer to the Specified La ch Bolt Torque Table.

CAUTION: For proper performance, the Figure 7312 HDPE Flange adapter should always be installed with the housing bolt pads making metal to metal contact.



5 Install Gasket

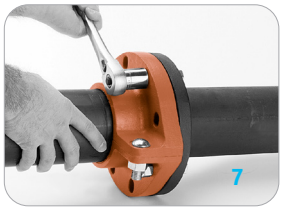
Position the Gruvlok Flange gasket around the pipe end and press the gasket into the flange gasket pocket. Be sure the flange sealing lips are facing out.



6 Align Pipe

Align the Gruvlok Flange bolt holes with the mating flange bolt holes. Insert a standard bolt or stud through one bolt hole and thread the nut on hand tight. Insert the next bolt or stud opposite the first and thread the nut on hand tight. Continue this procedure until all holes have been fit ed.

CAUTION: Take care to assure the gasket lip is not bent backwards and pinched between the two flanges.



7 Tighten Bolts

Tighten the flange face nuts alternately and evenly so that the flange faces remain parallel and make firm contact around the entire flange. Torque all bolts to the required mating flange joint torque levels. Refer to the Specified Mating Flange Bolt Torque Table.

Specified Bolt Torque for Latch & Mating Flange Bolts

Specified bolt torque is for the latch and mating flange bolts used on Gruvlok 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 signifi antly due to many variables including air pressure supply, battery strength and operational variations.

CAUTION: Proper torquing of latch and mating flange 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 signifi ant property damage and serious injury.

Latch Bolt Torque

Coupling Bolts	Minimum	Maximum
In./DN(mm)	Ft.-Lbs/N-m	Ft.-Lbs/N-m
5/8 x 2	100 135	130 175
3/4 x 3 1/2	130 175	180 245

Mating Flange Bolt Torque

Coupling Bolts	Minimum	Maximum
In.	Ft.-Lbs/N-m	Ft.-Lbs/N-m
5/8 x 3	110 149	140 190
3/4 x 3 1/2	220 298	250 339