

Volume 6, June 2011
 AWWA C-219 Installation
 Requirements
 Special points of interest:
 • Bolt Torque
 • Pipe Preparation
 • Pipe End Gap
 • Sizing



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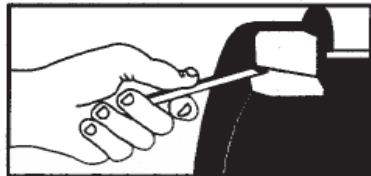
Installation Instructions Hymax® 2000 Coupling/Hymax® 2100 Flanged Adapter



The Hymax-2000 Coupling and the Hymax-2100 Flanged Adapter are stab type, wide range coupling products capable of connecting pipes of varying diameters. Both the Hymax coupling and Hymax Flanged Adapter come ready to install (stab feature), and the products require no disassembly prior to installation. The compression ends are equipped with permanently attached wide range multi-layered Hydraulic gaskets, and permanently attached type 304 stainless steel nuts and bolts.

1. Begin by selecting the Hymax Coupling that best fits the nominal pipe diameter. Note: The Hymax Coupling and Flanged Adapter are designed for use on nearly all pipe types and classes that conform to AWWA standards (including polyethylene pipe in wall thickness greater than or equal to SDR 17).
2. Prepare the pipe ends. Clean and de-scale each pipe end. Remove any debris or build up on the pipe ends and clean the outer pipe surface with soapy water. Clean each pipe end to a distance that is equal to the length of the coupling body center ring. Make sure there is no corrosion on the outer pipe ends that could affect the gasket seal. Again, clean each pipe end with soapy water.
3. Determine the stab depth of the coupling on the pipe. Make sure that the pipe end is positioned at least 1 inch past the end of the gasket inside the coupling. (Note: On polyethylene pipe, the required stab depth is 2.5 inches – no insert stiffener is required with PE pipe in wall thickness greater than or equal to SDR17). There are no other pipe end gap requirements.
4. Sizing the gasket. This is a wide range stab fit coupling with a two layer hydraulic gasket. Do not tear out the inner gasket layer unless the measured pipe diameter falls within the upper range of the coupling as shown on the product label. If the inner layer of the gasket must be removed for proper fit to the pipe, then fold the inner layer of the gasket in and break the parting line with a screwdriver. Under no circumstances should the inner layer of the gasket be removed unless the pipe diameter is verified to fall in the high (upper) range of the coupling as shown on the product label.
5. Stab the other end of the pipe into the coupling following the above procedure.
6. Tighten the bolt or bolts on each end of the coupling to the recommended torque.

Torque requirements as follows:	1.5" diameter 35 ft. lbs./lb.	For large diameter 14" -24",
	2" & 3" diameter 50 ft. lbs./lb.	see special instructions on
	4" to 12" diameter 65 ft. lbs./lb.	inside.
	14" to 24" diameter 150 ft. lbs./lb.	



The 2-layered gasket provides a built-in wide range.

1. The low range is provided by the 2-layered gasket.
2. Removing the inner layer enables the high range.

Each side self-seals

Multi-ranged Hydraulic Gasket Sizing

A two-layered gasket feature, dividing the overall range into a High Range and Low Range position allows the coupling to function over a wide series of ranges within each nominal pipe diameter. This feature is designed into the Hymax coupling at both ends allowing for maximum transitional capability. If the coupling will not stab over the pipe end, the inner layer of the gasket must be removed to allow for ease of insertion over the pipe end. To remove the inner layer, insert a pocketknife, screwdriver or other object between the two gasket layers, break through the seal and peel away the inner layer with your hand.

FORM #HYMAX INST 06/11

Hymax® 2000 and Hymax® 2100 Specifications

Hymax-2000 Series Wide Range Hydraulic Coupling (1.5" - 24" O.D.)

Hymax-2100 Series Wide Range Hydraulic Flanged Coupling Adapter (1.5" - 24" O.D.)

Hymax Coupling: Sleeve Type design consisting of center sleeve, one end ring and multi-range two layered EPDM gasket and stainless steel spanner per end, one or two type 304 stainless steel nuts and bolts per end. Design per AWWA C219-07.

Size Range: Available in nominal diameter ranges from 1.5 to 24 inches.

Flanged Adapter: Consists of one compression end and gasket, coupling center sleeve and AWWA Class "D" Flange (per AWWA C207-07).

Coupling body: Center sleeves fabricated of high strength carbon steel tubing equivalent to ANSI/AWWA C200.

Compression End Rings: One gasket compression end ring per coupling end. End rings to be of either one or two bolt design, fabricated of carbon steel equivalent to ASTM A576. (One bolt per end in Nominal Size ranges of 1.5 to 12 inches and two bolts per end on the 14 to 24 inch diameter coupling end.)

Hydraulic Wide Range Gasket: Chloramine Resistant NSF-61 Approved EPDM gasket designed with a multi-layered wide range removable outer layer. Gasket hydraulically actuated with a pressure-equalizing dam, pressure cavity and sealing lip for working pressure of 260 psi (1.5 to 16 inches) and 232 psi (18 to 24 inch nominal diameter coupling).

Nuts and bolts: ANSI 304 Grade Stainless Steel with yield strengths that conform to all nationally recognized standards. Bolts to be pre-coated with an anti-seize type coating to prevent galling.

Coating: Interior and Exterior NSF-61 Approved Fusion Bonded Epoxy coating generally conforming to AWWA C213-01 section 4.5. Average thickness, 12 MILS.

Performance: When properly installed the coupling will provide 8 degrees of deflection across the coupling (4 degrees per end); up to 260 psi working pressure for sizes 1.5" – 16", and 232 psi working pressure for sizes 18" – 24"; and 3/8 inch longitudinal pipe movement without leakage. (Flanged adapters will provide half the longitudinal movement and deflection.)

Testing: All products are proof tested to a minimum of 1.5 times working pressure.

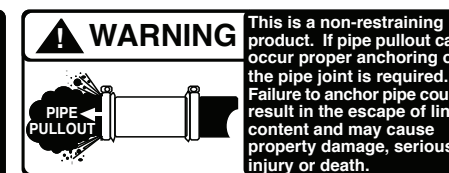
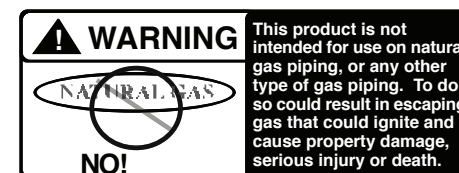


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All couplings must be supplied by Total Piping Solutions, Inc. in accordance with the design requirements of Krausz Metal Industries, Ltd.

*Hymax® is a patented product developed by Krausz Industries, Ltd. The Hymax Trademark is the property of Krausz Industries Ltd.



Specifications

Hymax® Product Chart

Nominal Size	Part Number	Overall Pipe Range	Overall Length Inches	Overall Diameter Inches	Max End gap Between Pipe Ends	Weight Lbs.
1.5"	2000-0213-260	1.61 - 2.13	5.9	4.00	3.35	5
2"	2000-0303-260	2.10 - 3.03	6.7	5.24	3.35	6
3"	2000-0433-260	3.46 - 4.33	8.7	6.69	5.5	9
4"	2000-0563-260	4.25 - 5.63	8.7	7.48	5.5	15
5"	2000-0638-260	5.12 - 6.38	10.8	9.45	5.5	17
6"	2000-0768-260	6.42 - 7.68	10.8	10.75	7.5	23
7"	2000-0874-260	7.48 - 8.74	10.8	11.73	7.5	26
8"	2000-0984-260	8.54 - 9.84	10.8	12.91	7.5	28
10"	2000-1200-260	10.70 - 12.00	10.8	15.04	7.5	33
10"OS	2000-1226-260	10.96 - 12.26	10.8	15.28	7.5	33
12"	2000-1366-260	12.40 - 13.66	10.8	16.61	7.5	39
12"OS	2000-1441-260	13.15 - 14.41	10.8	17.32	7.5	39
14"	2000-1710-260	15.00 - 17.10	11.6	21.00	8.0	82
16"	2000-1920-260	17.10 - 19.20	11.6	23.15	8.0	94
18"	2000-2130-232	19.20 - 21.30	11.6	25.55	8.0	101
20"	2000-2170-232	19.60 - 21.70	11.6	25.60	8.0	110
20"	2000-2335-232	21.25 - 23.35	11.6	27.56	8.0	110
24"	2000-2595-232	23.85 - 25.95	11.6	30.63	8.0	115
24"	2000-2670-232	24.60 - 26.70	11.6	30.63	8.0	115

Note: For specific information on the Hymax 2100 Series Flanged Adapter, consult Total Piping Solutions, Inc. for dimensions or call for catalogue.

Note: 14" and 24" Hymax Couplings come equipped with centering pins. See special instructions below.

Special Instructions: Hymax Couplings Equipped with Centering Pins (14" to 24" Diameter Couplings)

NOTE: All large diameter Hymax Couplings (14" - 24" nominal pipe diameter), are equipped with multiple one inch diameter hex-headed centering pins. When installed properly, the centering pins will prevent the coupling from drifting down the pipe towards the small end of the coupling when a pipe transition has been made by the removal of one of the inner gasket layers. Coupling drift will occur towards the flow restricted end (or the small gasket end of the product) when maximum pipe transition has been made. This will occur in any unrestrained applications (above or below ground).

1. Prepare the pipe ends to a distance of at least three inches beyond the length of the coupling. Make sure to follow the general installation instructions on the orange tag.
2. Place a reference mark on the pipe no more than five inches from the end of each pipe section. The end gap is left between the pipe ends. A pipe end gap of at least two inches is required between the pipe ends to prevent centering pin and pipe interference. Note: To function correctly, the centering pins must sit between the pipe ends, not against the pipe wall.
3. If the complete length of the coupling center ring must be fully stabbed over the pipe end, then the centering pins must be partially backed out of the thread-o-lets (normally there are three pins).
4. Back out of the centering pins, make sure that the bottom of the pin is flush with the inside surface of the center sleeve. This will prevent interference with the inner sleeve wall during installation.
5. Size the gasket in accordance with the general installation instructions on the orange tag and Step 4 on the front of this instruction sheet. Stab each pipe end up to, but not over, the reference mark on the pipe surface.
6. Tightening the end rings. Tighten the coupling bolts using a 15/16" socket wrench. Cross-tighten both bolts evenly on each end ring to a torque of 150 ft.lbs. Cross-tightening ensures that the gasket is evenly seated.

"DO NOT LUBRICATE THE BOLTS"

Note: use of a torque wrench is mandatory. The torque wrench will verify the proper torque has been achieved.

7. Completely tighten each centering pin until it bottoms out on the thread-o-let. The backside of the bolt head on each centering pin is equipped with an "O-Ring" seal to prevent leakage. The "O-Ring" must be kept free of contaminants to insure a positive seal. When tightened completely against the sealing surface of the thread-o-let, the "O-Ring" will form a fluid tight seal.

