

Special points of interest:

- Bolt Torque
- Pipe Preparation
- Pipe End Gap
- Sizing

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



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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 the 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. De-scale and clean the plain end of the pipe prior to stabbing the coupling and gasket assembly over the pipe end. Use soapy water only, to lubricate the pipe end.
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. Stab the Hymax Hydraulic end-seal over the pipe end with bolts positioned on the top of the pipe. Note: If the coupling will not stab over the pipe end, the inner layer of the gasket must be peeled out to accommodate pipe diameters within the high range of the gasket. (see below)
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 to 8 inch diameters – 60 ft.lbs./lb.
10 to 12 inch diameters – 80 ft.lbs./lb.
14 to 24 inch diameters– 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 3-04

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 - 12" 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 C219-01.

Size Range: Available in nominal diameter ranges from 1.5 to 24 inches on all pipe classes as indicated in the Hymax Product Chart.

Flanged Adapter: Consists of one compression end and gasket, coupling center sleeve and AWWA Class "D" Flange (per AWWA C207-94).

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 2 to 12 inches and two bolts per end on the 16 to 24 inch nominal diameter coupling.)

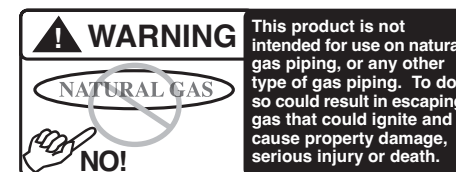
Hydraulic Wide Range Gasket: Chloramine Resistant NSF-61 Approved EPDM gasket designed with a multi-layered wide range removable outer layer. Gasket hydraulically actuated with a pressure-equalizing dam, pressure cavity and sealing lip for working pressure of 260 psi (1.5 to 16 inches) and 232 psi (18 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 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 a minimum deflection of 8 degrees, up to 260 psi working pressure 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.



Hymax® Product Chart

Nominal Size	Part Number	Overall Pipe Range	Pipes Covered - Nominal Diameters in Inches	Overall Length Inches	Overall Diameter Inches	Max End gap Between Pipe Ends	Weight Lbs.
1.5"	2000-0213-260	1.61 - 2.13	1.5"CTS, 1.5"IPS, 1.5"PVC, 2"CTS	5.9	4	3.35	5
2"	2000-0303-260	2.10 - 3.03	2"CTS, 2"IPS, 2.5"CTS, 2.5"IPS, 2.5"DR21	6.7	5.24	3.35	6
3"	2000-0433-260	3.46 - 4.33	3"PE(SCLAIR), 3"IPS, 3"Pit Cast, 3"AC Class 100-200, 4"CTS	8.7	6.69	5.5	11
4"	2000-0563-260	4.25 - 5.63	4"IPS, 4"DIP, 4"Pit Cast, 4"AC Class 100-200, 4"Clay	8.7	7.48	5.5	15
6"	2000-0768-260	6.42 - 7.68	6"IPS, 6"PE(SCLAIR), 6"Ductile, 6"AC Class 100-200, 6"Clay	10.8	10.75	7.5	23
8"	2000-0984-260	8.54 - 9.84	8"IPS, 8"PE(SCLAIR), 8"Ductile, 8"AC Class 100-200, 8"Clay	10.8	12.91	7.5	28
10"	2000-1200-260	10.70 - 12.00	10"IPS, 10"PE(SCLAIR), 10"Ductile, 10"AC Class 100	10.8	15.04	7.5	33
10"OS	2000-1226-260	10.96 - 12.26	10"Ductile, 10"AC Class 100-200, 10"Clay	10.8	15.28	7.5	33
12"	2000-1366-260	12.40 - 13.66	12"IPS, 12"PE(SCLAIR), 12"Ductile, 12"Pit Cast	10.8	16.61	7.5	39
12"OS	2000-1441-260	13.15 - 14.41	12"Ductile, 12"AC Class 100-200, 12"Clay	10.8	17.32	7.5	39
14"	2000-1710-260	15.00 - 17.10	14"Ductile, 14"AC Class 100-200, 16"IPS	11.6	21.00	8.0	75
16"	2000-1920-260	17.10 - 19.20	16"Ductile, 16"Pit Cast, 16"AC Class 100-200, 18"IPS	11.6	23.15	8.0	85
18"	2000-2160-232	19.50 - 21.60	18"Ductile, 18"Pit Cast, 18"AC Class 100-200, 20"IPS	11.6	25.55	8.0	95
20"	2000-2360-232	21.50 - 23.60	20"Ductile, 20"Pit Cast, 20"AC Class 100-150ME	11.6	27.56	8.0	101
24"	2000-2670-232	24.60 - 26.70	20"AC Class 100-200, 24"Ductile, 24"Pit Cast	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" to 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 may occur towards the flow restricted end (or the small gasket end of the product), when a maximum pipe transition has been made. This may occur at pressures in excess of 20 psi and in unrestrained above ground applications.

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 pin and pipe interference. Note: The centering pins 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 each of the centering pins, making 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 stab each pipe end up to, but not over, the reference mark on the pipe surface.
6. Tighten the compression end-ring bolts to the required torque as indicated on the general installation instruction tag.
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.

