



SUBMITTAL

IDEAL-TRIDON HEAVY DUTY POW'R-GEAR NO-HUB COUPLINGS

DATE

Architect

Project

Contractor

Engineer

IDEAL-TRIDON patented Heavy Duty Pow'r-Gear No-Hub Couplings are engineered to connect hub-less cast iron pipe and fittings. The coupling sleeve or gasket is manufactured from a properly vulcanized virgin compound where the primary elastomer is polychloroprene (neoprene). The gasket is housed inside a 301 stainless steel corrugated shield. Depending on the size of the shield, (2) or (4) 301 stainless steel clamps surround the shield and provide the sealing force. The 5/16" hex-head screws are made from 305 grade stainless steel. The IDEAL-TRIDON Heavy Duty Pow'r-Gear No-Hub Couplings are available in sizes ranging from 1-1/2" to 10". The couplings are designed for installation torque of 80 in-lbs. The entire coupling is corrosion resistant.

Size	Part No.	Installation Torque Inch Pounds	No. of Clamps Per Coupling
1 1/2"	6217P8G	80	2
2"	6218P8G	80	2
3"	6219P8G	80	2
4"	6220P8G	80	2
5"	6221P8G	80	4
6"	6222P8G	80	4
8"	6223P8G	80	4
10"	6230P8G	80	4

The Design

The IDEAL-TRIDON Heavy Duty Pow'r-Gear-No-Hub is designed to fit properly between the locator lug on the fitting and the pipe without sacrificing Heavy Duty sealing performance or structural re-enforcement. Conventional HD couplings are wider and must seal over the lug which is difficult in that it creates a potential leak path. The clamp includes an "Industry First" visual indicator that the coupling has been properly tightened. The coupling is NSF® Certified and is in full compliance to, ASTM C1277 and ASTM C564. The coupling meets the performance requirements of ASTM C1540.

The Gasket

The gasket is made from a properly vulcanized virgin compound in compliance to ASTM C-564. The IDEAL-TRIDON No-Hub gasket features multiple sealing beads under the clamp bands. The sealing beads on the gasket impede the movement of the gasket and pipe, providing a positive, reliable seal.

The Shield

The 0.007" thick type 301 stainless steel shield requires less band load to transfer pressure to the gasket, leaving more clamping load in reserve to compress the gasket. The patented, bi-directional corrugations create clamp sealing pressure in both parallel and transverse patterns on the gasket and pipe, thereby avoiding pull-out failures, and providing a positive, reliable seal.

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The Clamps

High Efficiency design ensures maximum transfer of tension to the band and increased band load. All SS Pow'r-Gear Clamps with 5/8" wide and 0.028" thick bands provide 11% more sealing surface than conventional HD clamps. Long profile two-piece orbitally formed clamp housing ensures a maximum number of screw thread to band engagement (135% greater than conventional HD clamps). 301 SS bands and 5/16" hex-head 305 screws provide maximum sealing force.

Clamp Housing

Robust two-piece design employs orbital riveting process to connect the housing components versus conventional two-piece staked housing connection which can come apart under higher loads. The orbital riveted housing design exhibits 2x the joining strength of the conventional two-piece staked housing design.

TEST	GASKET PHYSICAL TEST MIN. OR MAX. REQUIREMENTS	ASTM METHOD
Tensile Strength	1500 psi min.	D 412
Elongation	250 min.	D 412
Durometer (Shore A)	70 +/-5 @ 76°F +/- 5°F	D 2240
Accelerated Aging	15% maximum tensile and 20% maximum elongation, 10 points maximum increase in hardness, all determinations after oven aging for 96 hours at 158°F	D573
Compression Set	25% max. after 22 hours at 158°F	D 395 Method B
Oil Immersion	80% max. volume change after immersion in IRM 903 for 70 hours at 212°F.	D 471
Ozone Cracking	No visible cracking at 2 times magnification of the gasket after 100 hours exposure in 1.5 ppm ozone concentration at 104°F. Testing and inspection to be on gasket which is loop mounted to give approximately 20% elongation of outer surface.	D 1149
Tear Resistance	150 lbs /in. min.	D 624
Water Absorption	20% max. by weight after 7 days at 158°F	D 471

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MATERIALS	
Clamp:	Type 301 AISI stainless steel
Screw:	Type 305 AISI stainless steel 5/16" hex head/shoulder
Shield:	Type 301 AISI stainless steel, corrugated. Shield thickness 0.007"
Gasket:	The gasket is made of a properly vulcanized compound that meets the requirements of ASTM C-564.

The IDEAL-TRIDON patented Heavy Duty Pow'r-Gear No-Hub Coupling has been engineered to provide an all stainless steel coupling; balancing the desire for a more rigid joint with the need to provide a superior, positive, reliable seal which can accommodate possible disparities in the mating of No-Hub pipe and fittings.

The 1 1/2", 2", 3" and 4" diameter couplings consist of a 2-1/8" wide bi-directional, corrugated 301 stainless steel shield in conjunction with two (2) stainless steel clamps mounted in a series, secured in place by means of fixed and "floating" eyelets to allow the clamp "travel" during tightening. The 5" and 6" couplings consist of a 3" wide corrugated 301 stainless steel shield in conjunction with four (4) clamps and the 8" and 10" coupling consists of a 4" wide corrugated 301 stainless steel shield with four (4) stainless steel clamps.

All IDEAL-TRIDON Heavy Duty Pow'r-Gear No-Hub Couplings are designed to be installed with a pre-set torque wrench calibrated at 80 in-lbs. to accommodate the 305 stainless steel 5/16" hex-head/shoulder screw.

Country of Origin - USA