

Permasert® XL Large Diameter Mechanical Couplings



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Elster Perfection revolutionized natural gas distribution with the introduction of the first polyethylene, mechanical coupling...Permasert®.

In 1976, Elster Perfection revolutionized natural gas distribution with the introduction of the first polyethylene (PE), mechanical coupling...Permasert®. Now Elster Perfection has answered an industry need by developing the first large diameter plastic mechanical couplings for joining and repairing gas mains... Permasert XL. These new couplings offer the same benefits as Permasert couplings – non-corrosive, easy to install, and provide the security of knowing you've made a safe, gas-tight connection. Permasert XL couplings are available in varying sizes for joining PE-to-PE, Steel-to-PE, PVC-to-PE and Cast Iron-to-PE gas mains.



Elster Perfection

Non-Corrosive Permasert® XL Couplings

Permasert® XL couplings offer the same benefits as Permasert couplings – non-corrosive, easy to install, and provide the security of knowing you’ve made a safe, gas-tight connection.

Advantages

- The Permasert XL provides total installed cost savings versus fusion joining methods
 - Eliminates the need for cathodic protection and the record keeping associated with buried steel couplings
 - The pull out strength and pressure bearing capability of the XL coupling is greater than the connected PE gas piping
 - Fast and easy installation, requires only one person
 - All weather installation
 - Design qualified for joining PE gas pipe (2406/2708 and 3408/4710) to PE, PVC, Steel and Cast Iron Mains
 - Quick, easy installation
- PE-to-Steel: 2" - 6" IPS
 - PE-to-PVC: 2" IPS and 4" IPS
 - PE-to-Cast Iron: 4" IPS and 6" IPS
 - PE-to-Polyethylene: 2" - 8" IPS



Total Installed Cost Savings

Permasert XL plastic couplings save time and money on gas main repairs, extensions and tie-ins, when compared to bolt-on metallic couplings or electrofusion fittings.

Permasert XL vs. Bolt-on Metallic Couplings

Bolt-on metallic body couplings require cathodic protection in order to meet federal code requirements. When comparing material costs, include the stiffeners, anode, or wax tape and tar required to install a metallic coupling. Permasert XL is shipped ready to go in the ground. Permasert XL couplings also provide significant labor savings compared to metallic couplings when considering the time to completely install the fitting, anode and apply protective coatings. In addition, there is no future cost for anodic cell monitoring and maintenance.



Permasert XL Large Diameter Mechanical Coupling PE-to-Polyethylene



Permasert XL Large Diameter Mechanical Coupling PE-to-Steel



Permasert XL Large Diameter Mechanical Coupling PE-to-Cast Iron

Polyethylene (PE)-to-Polyethylene

Permasert XL Large Diameter couplings offer the same benefits as Permasert couplings - non-corrosive, easy to install, and provide the security of knowing you've made a safe, gas-tight connection. Permasert XL couplings are available in varying sizes for joining PE-to-PE gas mains.

Advantages

- Easy to install, no special tooling or power generators required
- Accommodates out-of-round and misaligned pipe ends
- Excavation sites can be significantly reduced

PE-to-Cast Iron , PE-to-Steel, PE-to-PVC,

Permasert XL Large Diameter couplings offer the same benefits as Permasert couplings - non-corrosive, easy to install, and provide the security of knowing you've made a safe, gas-tight connection. Permasert XL couplings are available in varying sizes for joining PE-to-Steel, Pe-to-PVC and PE-to-Cast Iron gas mains.

Features

- Includes unique breakaway bolt on PE-to-Steel coupling
- Secure, gas-tight connection from Polyethylene-to-PVC, steel or cast iron repairs or replacement programs

Advantages

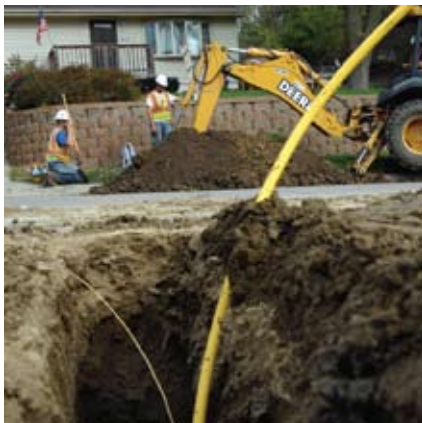
- Insures secure, gas-tight connection to non-PE piping
- Allows for quick transitions between Polyethylene and PVC, steel or cast iron piping
- Easy to install, no special tooling or power generators required. Accommodates out-of-round and misaligned pipe ends
- Total installed cost savings versus alternate methods. Excavation sites can be significantly reduced

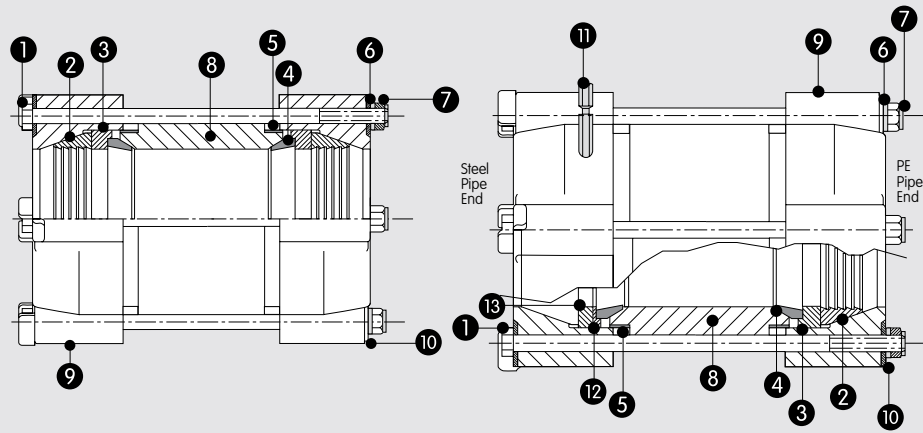
Permasert XL vs. Electrofusion

Electrofusion, when used for main repairs, extensions and tie-ins has numerous drawbacks compared to the Permasert XL. Electrofusion requires more installation time for surface preparation, dealing with misaligned pipe and fusion cool time.

With electrofusion, there are additional costs for the larger ditch size and resulting increased excavation and restoration, as well as lost time sheltering the fusion process in poor weather conditions.

If transitioning from steel or cast iron to PE, a transition fitting is required as well as a fusion fitting. The Permasert XL offers additional savings realized from the reduced labor and overtime wages often associated with emergency repairs. The bottom line is Permasert XL will deliver measurable savings to all utilities.





Legend

- ① Body Bolt (4)
- ② Collet (2)
- ③ Engagement Ring (2)
- ④ Gasket (2)
- ⑤ SS Support Band (2)
- ⑥ Lock Washer (4)
- ⑦ Nut (4)
- ⑧ Body Tube
- ⑨ Retaining Ring (2)
- ⑩ Washer (4)
- ⑪ Breakaway 3/8" Bolt
- ⑫ Thrust Washer
- ⑬ Clamp Collar

2" - 8" Plastic Mechanical Couplings

	Permasert® XLP PE-to-PE			Permasert® XLS PE-to-Steel			Permasert® XL PVC PE-to-PVC			Permasert® XLC PE-to-Cast Iron		
	Size	Part#	Rating	Size	Part#	Rating	Size	Part #	Rating	Size	Part#	Rating
2" IPS	SDR 11	55161	Category 1	SDR 11	55164	Category 1	40 PVC	55167	Category 1	SDR 11	55171	Category 1
	SDR 9/9.3	55162	-	SDR 9/9.3	55165	-	SDR 11 PE x SCH			21 PVC	55168	-
3" IPS	SDR 11/11.5	55131	Category 1	SDR 11/11.5	55140	Category 1	SDR 11 PE x SDR			2.45-2.60"	-	
	SDR 9.3	55132	-	SDR 9.3	55141	-			(Cast Size)			
	SDR 13.5	55133	-	SDR 13.5	55142	-						
4" IPS	SDR 11/11.5	55101	Category 1	SDR 11/11.5	55121	Category 1	40 PVC	55157	-	SDR 11/11.5	55151	Category 1
	SDR 9.3	55102	-	SDR 9.3	55122	-	SDR 11 PE x SCH			SDR 9.3	55152	-
	SDR 13.5	55103	-	SDR 13.5	55123	-	21 PVC	55158	Category 1	SDR 13.5	55153	-
6" IPS	SDR 11	55183	Category 1	SDR 11	55187	Category 1	SDR 11 PE x SDR			4.74-4.87"		
	SDR 11.5	55182	-	SDR 11.5	55186	-				SDR 11	55191	Category 1
	SDR 13.5	55181	-	SDR 13.5	55185	-				SDR 11.5	55192	-
8" IPS	SDR 11	55196	Category 1							SDR 13.5	55193	-
	SDR 11.5	55197	-							6.83-7"		
	SDR 13.5	55198	-									

Specifications

Pressure Ratings MAOP	Designed to withstand the the pressure of the PE piping or tubing installed	125 psig	125 psig	125 psig
Pull-Out Resistance	2-6" ASTM D-2513 <ul style="list-style-type: none"> • Category 1 • 0.2" (5mm)/min. • Full Seal/Full Restraint • Pulls to PE Yield • 8" 30,000lb. Max 	ASTM D-2513 <ul style="list-style-type: none"> • Category 1 • 0.2" (5mm)/min. • Full Seal/Full Restraint • Pulls to PE Yield 	ASTM D-2513 <ul style="list-style-type: none"> • Category 1 • 0.2" (5mm)/min. • Full Seal/Full Restraint • Pulls to PE Yield 	<ul style="list-style-type: none"> • 2" Category 1 • 4" 14,000lb. Max • 6" 20,000lb. Max
Body	Polyethylene – 2406/2708 and 3408/4710 (ASTM D-2513/ISO 4437 gas grade), except for 8" coupling (Polyamide - 11)			
Hydrostatic	ASTM D-2513/D-1598, No Failure/1000+hours [@ 1600 pci, (11Mpa), 73°F (23°C)]			

All Elster Perfection Large Diameter Couplings Meet or Exceed the Requirements Specified in US DOT 192.283(b).

About Elster Group

A world leader in advanced metering infrastructure, integrated metering, and utilization solutions to the gas, electricity and water industries. Elster's systems and solutions reflect over 170 years of knowledge and experience in measuring precious resources and energy.

Elster provides solutions and advanced technologies to help utilities more easily, efficiently and reliably obtain and use advanced metering intelligence to improve customer service, enhance operational efficiency, and increase revenues. Elster's AMI solutions enable utilities to cost-effectively generate, deliver, manage, and conserve the life-essential resources of gas, electricity, and water.

Elster has over 7,500 staff and operations in 38 countries in North and South America, Europe, and Asia.

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