

Permasert® Mechanical Couplings



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In 1976, Elster Perfection revolutionized natural gas distribution with the introduction of the first polyethylene mechanical coupling...Permasert.

Since that time, Permasert couplings have been accepted as an industry standard and helped utilities throughout the world simplify service line installations and save money. The reason for this success is simple. Permasert couplings are safe and remarkably easy to install. In addition, Permasert couplings are non-corrosive and require no cathodic protection or protective coatings.

Permasert couplings utilize a tapered collet and a stainless steel support ring to "grip" the tubing. With this system, the greater the pull-out force, the more tightly the collet grips the tubing. As a result, the pull-out strength of Permasert couplings is greater than the connected polyethylene tubing. Under normal conditions, the Permasert coupling imparts almost no stress on the PE tubing. The coupling's one-piece construction ensures consistent, gas-tight connections in any weather condition.



Elster Perfection

Permasert® Saves Time and Money

Increased competition in the energy market place is forcing natural gas utilities to monitor and evaluate all aspects of their cost structure.

Benefits

- Fast and easy installation, requires only one person.
- Total installed cost savings versus electrofusion and heat-fusion joined polyethylene.
- No special tools, costly installation equipment, or special training required to install.
- Smaller ditch required means lower excavation and restoration costs.
- Non-corrosive couplings eliminate the need for protective coatings and cathodic protection.
- Safe, dependable performance for over 30 years. More than 40 million installed worldwide.
- Minimal stress on PE tubing.
- Molded from industry leading PE4710/PE3408.
- Available in metric sizes.
- All weather installations.

Easiest method for installation of EFVs into the service line.

Field studies prove Permasert couplings save as much as 50% compared to fusion methods.



Time Proven Products

Since its introduction, the Permasert Mechanical Coupling has become the number one polyethylene mechanical fitting in the world. In achieving and maintaining this valued leadership position, Elster Perfection has worked hard to earn the confidence of its customers. We're proud that with a 30-year track record and over 40 million Permasert couplings in use in every conceivable climate and soil condition, Permasert continues to deliver safe, reliable performance.

Saves Time and Money

One area of focus is the installation of new gas services and the repair of existing services. For this reason many utilities are re-evaluating their method of joining plastic pipe.

An ever increasing number of utilities, and their contractors, are arriving at the same conclusion...Permasert mechanical couplings offer significant total installed cost savings compared to alternate connection methods. Why? It's simple. Permasert takes one person only a few minutes to install...without any expensive equipment or extensive training. All you do is cut the PE piping, chamfer the end, mark the proper stab depth and insert the PE piping into the coupling. That's it. No torque requirements and no special tools. Fast, safe and easy...saving you time and money.



Permasert couplings simplify repairing damaged service lines.



Installing a blind end cap allows for easy future connections.



Permasert outlets make connecting to valves and tees fast and easy.

Permasert® Mechanical Couplings

Connect with safety, integrity and speed.
Connect with Elster Perfection.

Time Proven Products

Elster Perfection molds its complete line of Permasert mechanical joining products from PE4710/PE3408. This resin shares many of the same properties as PE2406 and PE3408, while offering several significant performance enhancements. PE4710/PE3408 provides excellent resistance to Rapid Crack Propagation (RCP) and Slow Crack Growth (SCG). In fact, it is 20 and 60 times more resistant to SCG than typical PE2406 and PE3408. The resin also provides greater than 6,000 hours PENT (Pennsylvania Notch Test), which is 60 times the ASTM D 2513 requirement. In addition, PE4710 has a proven track record having been successfully used around the world for more than 20 years. All of which adds up to greater gas distribution integrity.

Our Complete System... From Main To Meter

Only Elster Perfection has developed a complete mechanical polyethylene gas distribution system for installing a main-to-meter gas service. This family of easy-to-install products incorporates our Permasert couplings and allows you to make fast and safe piping connections without the use of special tools or expensive equipment.

Complementing the wide variety of couplings, we offer anodeless service line risers, PermaLock® Mechanical Tapping Tees, PSV™ polyethylene shut-off valves, and Perfection excess flow valve. Each of these products features Permasert coupling outlets and are available in a broad range of sizes.



Reducing Couplings
and Reducing Tees

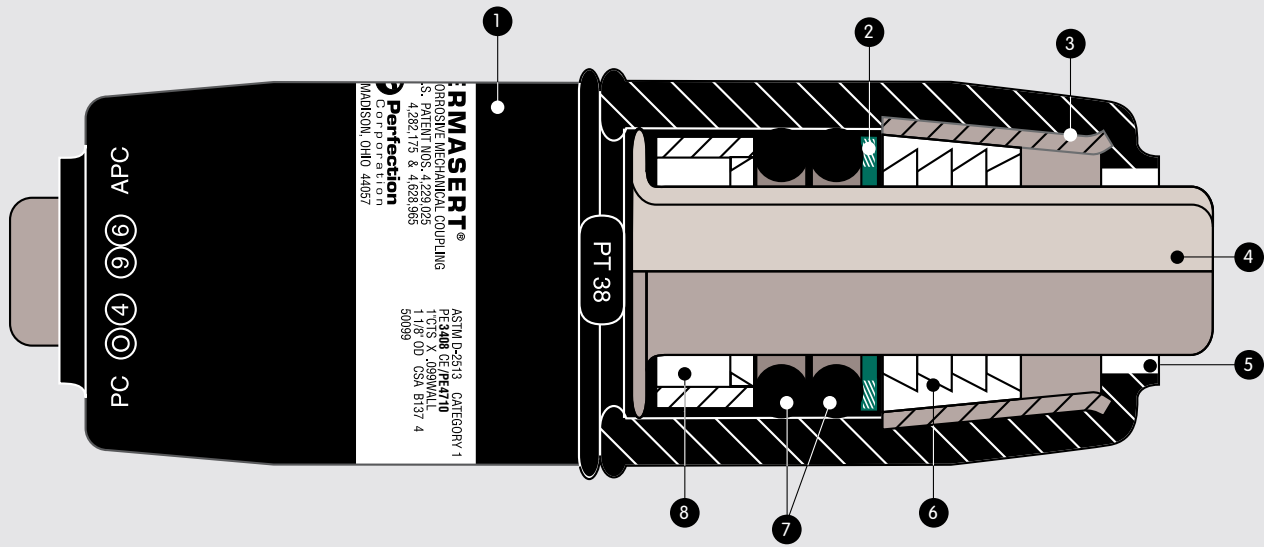
Blind End Caps
and Stubs

Mechanical
Couplings

Couplings with EFV
Excess Flow Valves

Tees, Wyes and Ells

Repair Couplings



Legend

- 1 Permasert® Coupling: Molded from PE4710/PE3408 resin. Permasert meets or exceeds ASTM D 2513, category 1; US DOT Part 192; NFPA 58; EN 1555; and NF T 54 069/54 067; IAPMO®/UPC® listed; CSA B 137.4 and DVGW VP 600 (G94e153) certified.
- 2 Thrust Washer: Provides even distribution of force on the collet.
- 3 Support Ring: Stainless steel ring molded into body of coupling for added strength and support of the gripping collet.
- 4 Stiffener: Zinc-plated steel stiffener guarantees proper alignment and adds support.
- 5 Moisture Seal: Prevents entry of dust, dirt and moisture.
- 6 Collet: Tapered gripping collet prevents pipe pull-out.
- 7 "O" Rings: BUNA-N (Nitrile) elastomer seals provide permanent leak-proof protection.
- 8 Spacer Retainer Ring: Guarantees precise centering of pipe and increases the locking power of collet.

Specifications

Body	<ul style="list-style-type: none"> - Gas Grade Polyethylene (PE4710/PE3408) - Gripping Support Ring: Stainless Steel - Collet: Acetal (POM) - Thrust Washer: Polyethylene (PE) - O-Rings: BUNA-N (Nitrile) - Spacer Retainer Ring: Acetal (POM) - Insert Stiffener: Zinc-plated Carbon Steel
Testing	<p>Pull-out Resistance</p> <ul style="list-style-type: none"> - 0.2"(5 mm)/min. - Full Restraint, pulls to PE yield <hr/> <p>Pull-out Resistance</p> <ul style="list-style-type: none"> - 20"(500 mm)/min. - Full Restraint, pulls to PE yield <hr/> <p>Hydrostatic</p> <ul style="list-style-type: none"> - 580 psi (4 MPa) hoop stress - 176°F (80°C) - No Failure >340 hrs. <hr/> <p>Quick Burst (SDR 11): >493 psig (34 bar)</p>
Pressure ratings	Couplings are designed to meet or exceed the maximum design pressure requirements of the piping system.
Sizes	1/2" CTS through 2" IPS (20 mm through 63 mm)