

# MUNICIPAL PRESSURE PIPING SYSTEMS

PRODUCT INFORMATION BULLETIN



## IPEX CycleTough® IPS Piping Systems

**PVC Pressure Systems manufactured  
to CSA and ASTM Standards**

**CycleTough™ Pipe  
(40 mm – 600 mm), CSA B137.3,  
ASTM D2241**

**Injection Molded Fittings  
(40 mm – 200 mm), CSA B137.3,  
various ASTM Standards**

CycleTough™ IPS piping systems are specifically designed for irrigation systems and sewer forcemains. The constant cyclic surging that is associated with these applications demands a tough pipe, and more importantly, a specially engineered fitting.

Unlike many competing fittings, CycleTough fittings are made with a long-life compound that extends service by 25%. In addition, CycleTough fittings have been engineered using the latest techniques in Finite Element Analysis (FEA), ensuring problem-free performance for the long haul.

IPEX CycleTough systems are made with the same high-impact, engineered compound as our Blue Brute™ systems, and are tested to maintain the same high standards.

Proven in tough North American climates for over 50 years, IPEX PVC pipe systems have an established track record of performance.

**CYCLETOUGH™**



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### Key features include:

- **High Impact Strength**

CycleTough systems have a 2:1 safety factor for long-term pressures, and over 3.2:1 for temporary surges. CycleTough systems easily withstand surges over 600 psi.

- **Fittings Engineered Tough**

CycleTough fittings are engineered for versatility and reliability. Their unique design features extra material added for reinforcement to withstand the stresses imposed by tough irrigation and forcemain applications.

- **Iron Pipe Size Outside Diameters (IPSOD)**

CycleTough systems are made with an IPSOD, which is the same outside diameter configuration as schedule piping and most steel process piping.

- **Bottle-tight Joints, Removable Gaskets**

IPEX's patented gasket system not only withstands many times the rated system pressure, but also withstands full vacuum pressures. The unique removable gasket system allows special oil-resistant (nitrile) gaskets to be easily installed when working in contaminated soils.

**Note: Gaskets on molded fittings are not removable**

- **Third-party Certification**

All CycleTough systems are certified to CSA B137.3. Third-party certification verifies a system will perform as expected, meeting all applicable standards.

### Pressure Ratings and Burst Pressures

Size Range (mm)	Dimension Ratio	Pressure Rating (psi)	Minimum Burst Pressure (psi)
40 – 600	21	200	640
40 – 600	26	160	512
75 – 600	32.5	125	406
100 – 600	41	100	319

### Why CycleTough for Cyclic Applications?

Current research shows that PVC pipe has a virtually unlimited lifespan under some of the most demanding cyclic conditions. While the pipe is inherently 'CycleTough', fittings are subject to a variety of different stresses that can easily damage a conventionally designed product. CycleTough injection molded fittings have been specifically designed for high-pressure cyclic applications using the latest engineering methods, and extensive computer modeling. While other PVC fittings may not be up to the task, CycleTough fittings were designed for it, with the right amount of material in the right places. That is why CycleTough fittings look different from other PVC fittings on the market, they are made for tough applications.