

MVIP™

MODULAR VACUUM INSULATED PIPE

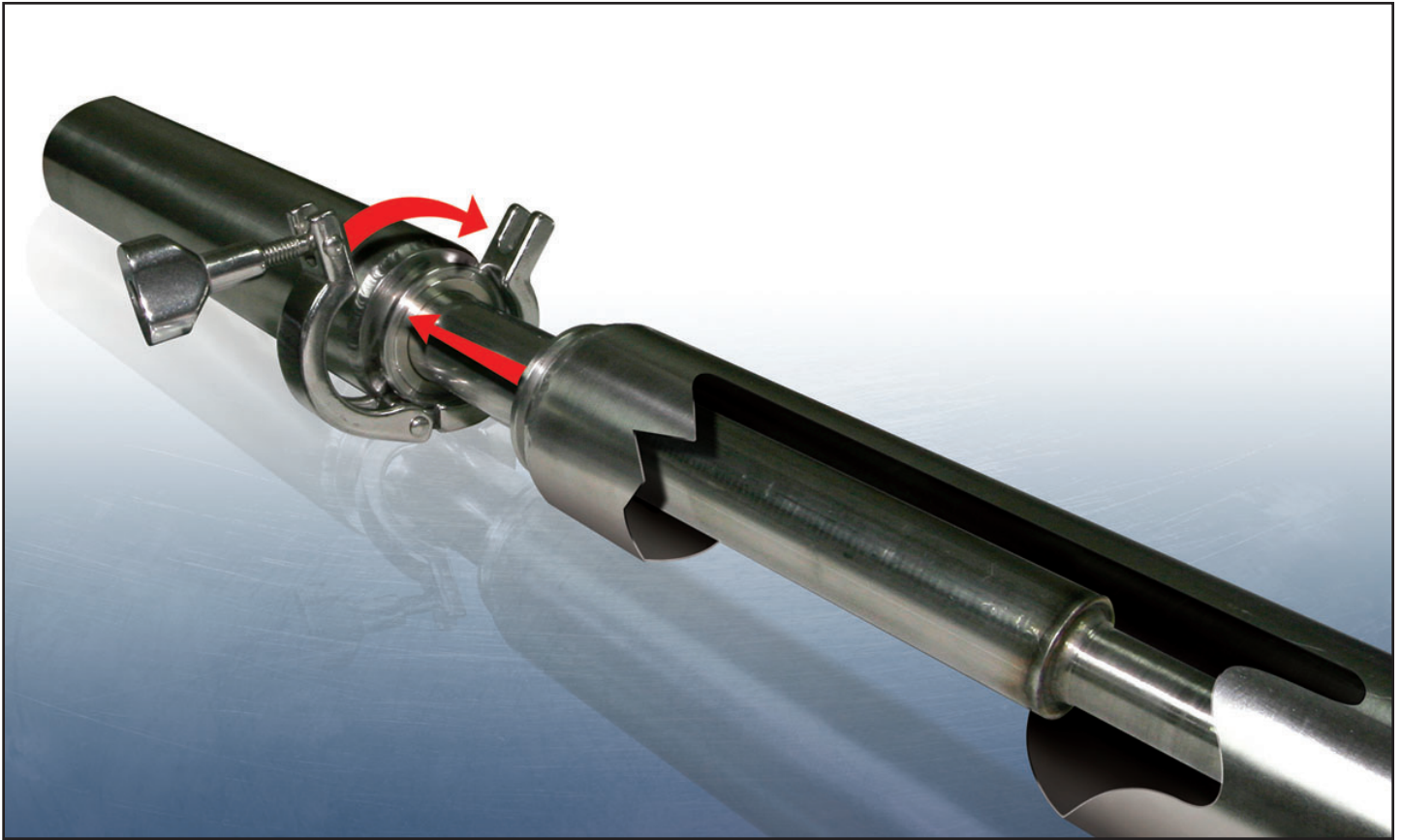


Chart Ferrox introduces the European version of the new innovation – Modular Vacuum Insulated Pipe (MVIP™), a prefabricated interlocking system for cryogenic liquid service. Piping modules are connected with vacuum insulated bayonets for a simple and flexible system installation. Standard modules allow for quick delivery and are reusable during equipment upgrades or facility layout changes.

PRODUCT HIGHLIGHTS

- Proven MVE bayonet technology and vacuum integrity
- No cutting, welding, brazing or foaming during installation
- Standard module designs drive short lead-times and competitive pricing
- Available in ½", 1" and 2" inner pipe sizes
- Design your own system on-line at www.chart-ind.com/mvipmodulator

BENEFITS OF MVIP vs. FOAM INSULATED PIPE

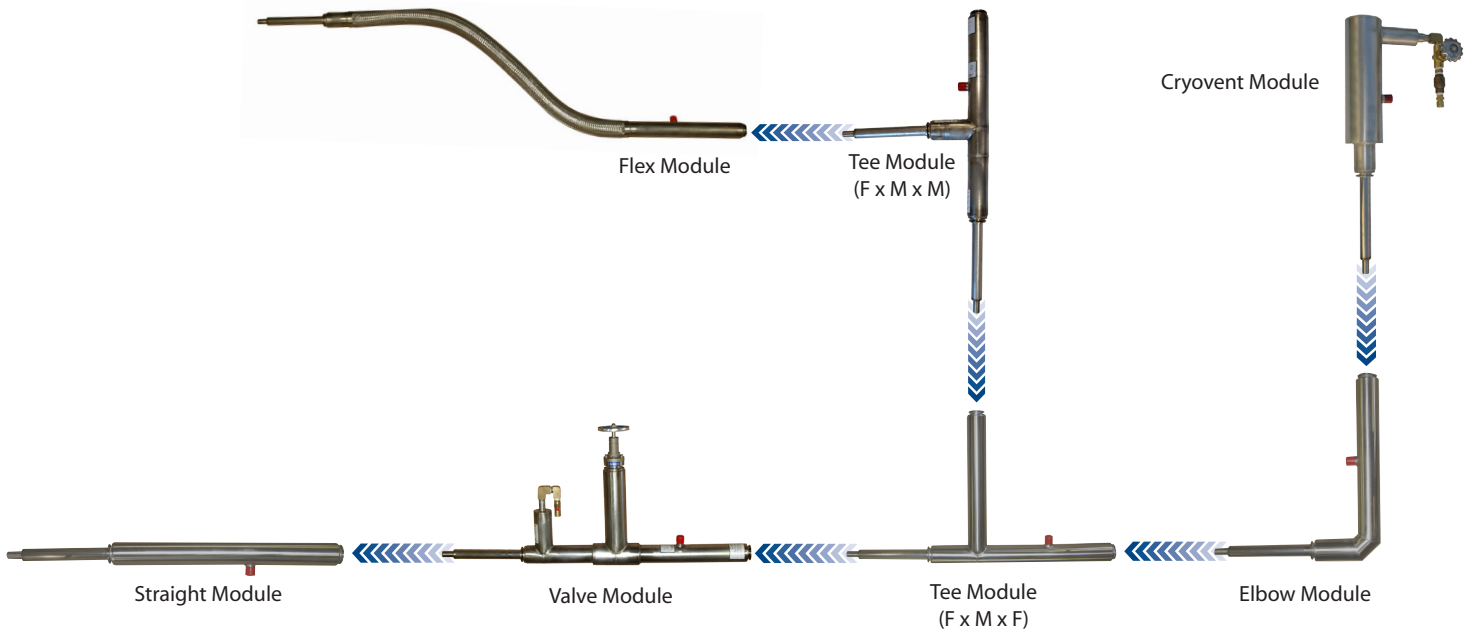
- Reduces LN₂ use by up to 10 times
- Improves system safety
- Reusable, modular design
- Moisture resistant permanent insulation system
- Long-term, maintenance-free reliability
- Smaller outer diameter requires less space
- Stainless steel inner and outer provides system cleanliness



Innovation. Experience. Performance.®

Modules Available

- » Straight lengths of 1-2m, 3m, 4.5m, 6m, 9m
- » Vacuum Insulated Flexible modules
- » Vacuum Insulated Valve module
- » Drop module with Internal Liquid Trap
- » Cryovent module
- » Elbow module
- » (2) Tee modules (F x M x M) and (F x M x F)
- » Bayonet adapters to adapt to MVE VIP design, or MPT



Materials	
Inner pipe	T304 Stainless Steel
Outer jacket	T304 Stainless Steel
Design Code	Built in accordance with EN 13480 under PED module A/A1 ⁽¹⁾
MAWP⁽²⁾	10 barg
Service	LN ₂ , LAR
Nominal Pipe Sizes	
½" Inner	2" Outer Jacket
1" Inner	3" Outer Jacket
2" Inner	3½" Outer Jacket

(1) Pneumatic pressure tests are optional.

(2) MAWP = Maximum Allowable Working Pressure.