

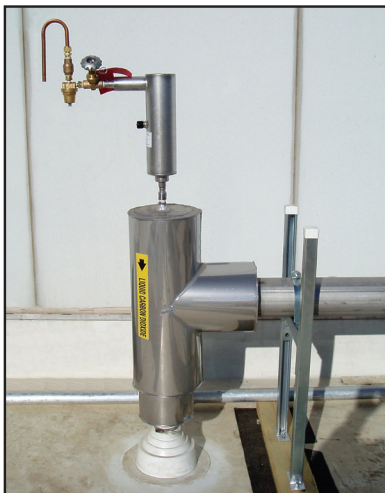
MVIP™ PYTHON®

MODULAR VACUUM INSULATED PIPE

Python® Vacuum Insulated Pipe products provide thermal performance that far exceeds conventional foam insulation materials, take only a fraction as much space, and require no additional protection against moisture or vapors. Python piping is adaptable, reusable and easy to install. Available in ½" Outer Diameter Tube (ODT), 1", 2" and 3" Nominal Pipe Sizes (NPS).

Installed costs are comparable to most conventional mechanical insulation systems. Typical delivery on small projects is next day from stock. Installation service can be provided from one of our many locations worldwide.

Python piping is designed for temperatures down to -350° F and pressures up to 500 psi. Python systems can be modified and adapted to many applications such as liquid nitrogen, liquid argon, liquefied natural gas (LNG) and liquid carbon dioxide. Python piping is ideal for highly temperature-sensitive piping systems found in the petrochemical, energy, manufacturing, and food and beverage industries around the world.



MVIP Python Cryovent Installation



Python ½" Tube
(No joint welding
required)

Python 1", 2" or 3" Pipe

RIGID BENEFITS

- MVIP Python rigid pipe is durable, easy to install and practically maintenance free
- Excellent flow characteristics make MVIP Python rigid ideal for pipe mains
- MVIP Python rigid can mate to MVIP Python flex's bendable pipe for inside drops
- Multilayer superinsulation and chemical gettering assures long term vacuum integrity
- Fabricated by an ASME B31.3 code shop by certified welders (TIG Welded)
- Rigid sections are less expensive, have better heat leak and less pressure drop than flexible vacuum insulated pipe
- Rigid section will not dip between hangers and will minimize gas traps
- Rigid sections have a long life and have been known to last as long as 30 years



Innovation. Experience. Performance.®

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MODULAR VACUUM INSULATED PIPE

Technical Specifications

Smart Number	Inner Pipe Size	Nominal Outside Jacket Diameter*	Actual Flow Diameter	Standard Overall Lengths**	Hole Required to Accommodate Pump Out	Outer Diameter with Braid	Weight / Length	MAWP (psi)
PY-08-PR	½" ODT	1 ¼" NPS	0.430"	2' - 20' in 1' increments, and 6' 6" length	2 ½"	1 13/16"	1.5 lb/ft	500
PY-16-PR	1" NPS	2" NPS	1.185"		4"	2 9/16"	3.0 lb/ft	400
PY-32-PR	2" NPS	3" NPS	2.245"		5"	5"	5.0 lb/ft	400
PY-48-PR	3" NPS	5" NPS	3.334"		7"	7 1/8"	11.0 lb/ft	400

* Not including pump out.

** Flex Section Lengths: ½" — 6'; 1" — 8' 6"; 2" — 9'; 3" — 9'

ODT: Outer Diameter Tube; NPS: Nominal Pipe Size

Performance Data

Smart Number	Vacuum Insulated Pipe					Insulation Kits					
	Cool Down			Static Heat Leak		Straight		Elbow		Tee	
	kJ/m	kg/m*	lb of LN ₂ /ft	BTU/hr/ft	Watt/m	BTU/hr	Watt	BTU/hr	Watt	BTU/hr	Watt
PY-08-PR	12	0.06	0.04	0.32	0.41	13	3.8	25	7.3	25	7.3
PY-16-PR	58	0.29	0.19	0.48	0.46	13	3.8	25	7.3	25	7.3
PY-32-PR	107	0.54	0.36	0.79	0.76	25	7.3	50	14.6	50	14.6
PY-48-PR	203	1.02	0.68	1.08	1.04	35	10.2	65	19.0	65	19.0

* LN₂ at one bar.

LN₂ Flow Guideline

Smart Number	Maximum Recommended Flow Rate*		
	gpm	lpm	kg/hr
PY-08-PR	1.5	5.7	274
PY-16-PR	18	68.1	3283
PY-32-PR	95	360	17328
PY-48-PR	255	965	46512

* Flow rate values are for a system with: 100 feet of pipe, 3 elbows, and 2 tees.

Chart recommends pressure drop be kept to 5 psi or less.

Pressure Drop (psi/ft)*

Smart Number	Flow (gal/min)							
	2	5	10	25	50	75	100	150
PY-08-PR	0.080	0.501						
PY-16-PR		0.003	0.011	0.063	0.262	0.570	1.014	
PY-32-PR				0.002	0.009	0.193	0.034	0.077
PY-48-PR					0.001	0.003	0.005	0.011

* Pressure drop numbers listed do not account for elevation changes. Chart recommends pressure drop be kept to 5 psi or less.

Your Local Representative



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U.S.: 1-888-877-3093

Worldwide: 1-952-758-4484

www.MVIPpro.com

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