

# Modular Fitting

Pre-engineered Modular Fittings has added advantage over the traditional rigid VJP, especially when use with Semi-Flex system. This option provide simplicity and cost saving as it reduces the necessity for precise system layout measurements. It also allows the fitting to be easily reused if use-point locations and plant layout are changed.

Modular Fittings facilitate users to design and construct their own LN<sub>2</sub> delivery system with minimum piping engineering experience or knowledge.

## Vacuum Insulated Fitting Module

CSM vacuum insulated fitting module are recommended when system efficiency and elimination of frost, ice and moisture are essential. The initial cost is greater for the vacuum insulated option, but the savings outweigh the investment in less than a year.

The vacuum insulated fitting module guarantees extremely low heat leak for minimum gas boil-off compared to foam-insulated fitting by at least 20 times. Thus, not only can liquid loss be reduced but the quality of liquid can be maintained at the same time.

Modular Fittings are commonly used in both rigid and flexible types of vacuum jacketed piping systems, whether in Dynamic or Static vacuum technology.

All Modular Fitting come with CSM renowned customer service, from conceptual design to implementation, and are backed by by a 5-years Vacuum Warranty, and 1-year Defect Warranty

## Related Products:



Valve Module

## Features and Benefits

- Readily available in stock for immediate delivery
- Available in Tee, Elbow and other configurations for ease of selection
- Ease of installation, no welding or field cutting required
- Vacuum insulated modular fittings are maintenance free up to 10 years with no performance deterioration over that period
- 5 years vacuum warranty for static vacuum

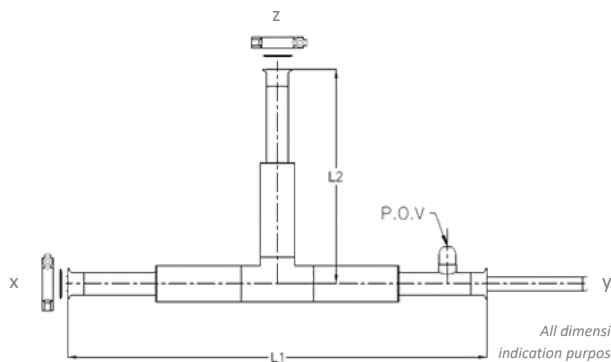
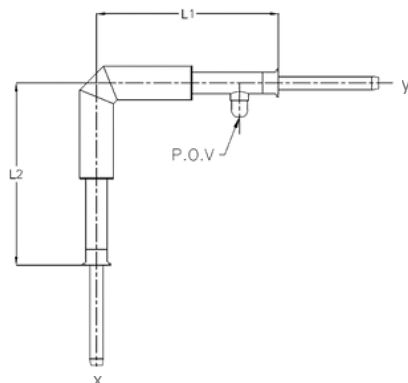
# Fitting Module Specifications

Model	C5	C10
Process Tube	0.75" ODT (19.05 mm OD)	1.125" ODT (29 mm OD)
Jacket Pipe	1.5" IPS (48.3 mm OD)	2.0" IPS (60.3 mm OD)
Steady State Heat Leak	0.32 Btu/hr/ft (0.31 W/m)	0.47 Btu/hr/ft (0.45 W/m)
Bayonet Heat Leak	4.0 Btu/hr (1.2 W)	8.1 Btu/hr (2.4 W)
Max. Operating Pressure	150 psi (10.3 bar)	150 psi (10.3 bar)
Vacuum Insulation Type	Static / Dynamic Vacuum	
Material Construction	Stainless Steel Series 300	
Standard Testing	Dimensional Check He Leak Checked @ $1 \times 10^{-9}$ cc/s	
Optional	Pneumatic Pressure Test, Vacuum Retention Testing, LN <sub>2</sub> Cold Shock, Pre-Material Certs., X-ray Inspection, ASME B31.3 Certification, CFOS Cleaning for O <sub>2</sub> Services	

## Fitting Module Dimensions

Configuration *		C5		C10	
Item	x - y	L1	L2	L1	L2
Elbow	F x F	12.8" (326 mm)	12.8" (326 mm)	13.4" (340 mm)	13.4" (340 mm)
	F x M				
	M x M				
Item	x - y - z	L1	L2	L1	L2
TEE	F x F x F	28.8" (732 mm)	13.9" (353 mm)	30.0" (764 mm)	14.0" (355 mm)
	F x F x M				
	F x M x F				
	F x M x M				
	M x M x F				
	M x M x M				
	F x F x NPT		9.8" (250 mm)		9.8" (250 mm)
	F x M x NPT				
	M x M x NPT				

\*Other configurations are available please contact us for more inquiries



All dimensions provided are for indication purposes only and may not accurately represent the actual product dimensions. Please contact us for updated and actual measurements.