



StatIRigid-P

Constructed in modular sections with smooth inner bore pipe size, StatIRigid-P comes with periodic internal bellows for thermal compensation and designed to minimize pressure drop and improve flow characteristics. It has the lowest heat leak and lowest cooldown loss in its class.

Suitable for use in a wide variety of industrial applications such as Electronic Assembly & Test, Food & Beverage, Petrochemical, Industrial Gas Plant, LNG etc.

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Engineered as modular sections, these stainless steel coaxial vacuum insulated piping spools are joined together with close tolerance bayonet connections, or welded connection forming a complete cryogenic transfer system.

Each section is evacuated, sealed and tested for vacuum integrity to ensure minimal heat gain. StatIRigid-P comes with internal bellows at required intervals to serve as thermal compensators with 10,000 fatigue cycles calculated based on EJMA standard. The pipe comes with smooth inner bore to minimize pressure drop and improve flow characteristics.

Installation for StatIRigid-P can be done easily both indoor and outdoor, by incorporating CryoFlex sections strategically to offset misalignments.

CSM offers a complete line of components including in-line venting devices, phase separators and gas traps to maximize the cryogenic system performance.

Features and Benefits

- StatIRigid-P pipe is easy and cost effective to install due to its modular design
- Greater thermal efficiency compared to foam insulated pipes by more than 40 times
- Excellent flow characteristics make StatIRigid-P an ideal as main supply pipe and as header pipe
- Super insulation and proprietary chemical getters ensures long lasting vacuum integrity
- Fabricated by mechanized welding system process ensuring consistent weld quality

All StatIRigid-P products come with CSM renowned customer service, from conceptual design to implementation, and are backed by a 5 year or optional extended 10 years vacuum warranty



StatIRigid-P with Ultraflex & Degasser to Semiconductor IC Test Handler

StatiRigid-P Specifications

Model	R5P	R10P	R15P	R20P	R30P	R40P
Process Pipe (Sch 5)	0.5" IPS	1" IPS	1.5" IPS	2" IPS	3" IPS	4" IPS
	(21.3mm OD)	(33.4mm OD)	(48.3mm OD)	(60.3mm OD)	(88.9mm OD)	(114.3mm OD)
Jacket Pipe (Sch 5)	2.0" IPS	3.0" IPS	3.5" IPS	3.5" IPS	5" IPS	6" IPS
	(60.3mm OD)	(88.9mm OD)	(101.6mm OD)	(101.6mm OD)	(141.3mm OD)	(168.3mm OD)
Steady State Heat Leak	0.45 btu/hr/ft	0.50 btu/hr/ft	0.52 btu/hr/ft	0.71 btu/hr/ft	1.25 btu/hr/ft	1.31 btu/hr/ft
	(0.43 watts/m)	(0.48 watts/m)	(0.50 watts/m)	(0.69 watts/m)	(1.20 watts/m)	(1.26 watts/m)
Bayonet Heat Leak	8.1 btu/hr	7.8 btu/hr	9.2 btu/hr	11.3 btu/hr	16.7 btu/hr	-
	(2.4 watts)	(2.3 watts)	(2.7 watts)	(3.3 watts)	(4.9 watts)	-
Welded Joint Vacuum Jacketed Heat Leak	-	5.46 btu/hr	5.76 btu/hr	9.21 btu/hr	13.09 btu/hr	18.48 btu/hr
	-	(1.60 watts)	(1.69 watts)	(2.70 watts)	(3.84 watts)	(5.42 watts)
Welded Joint PU Insulated Heat Leak	-	50.98 btu/hr	60.49 btu/hr	72.05 btu/hr	90.81 btu/hr	109.87 btu/hr
	-	(14.95 watts)	(17.74 watts)	(21.13 watts)	(26.63 watts)	(32.22 watts)
Maximum Operating Pressure (*Bayonet)	200 psig	150 psig	150 psig	150 psig	150 psig	150 psig
	(13.8 bar)	(10.3 bar)	(10.3 bar)	(10.3 bar)	(10.3 bar)	(10.3 bar)
Weight (exclude Bayonet)	2.2 lbs/ft	4.0 lbs/ft	4.9 lbs/ft	5.2 lbs/ft	9.7 lbs/ft	11.9 lbs/ft
	(3.3 kg/m)	(5.9 kg/m)	(7.3 kg/m)	(7.8 kg/m)	(14.4 kg/m)	(17.7 kg/m)
Maximum Length	Maximum spool length 40' (12.2 m)					
Material Construction	Stainless Steel Series 300					
Standard Testing	Dimensional check Helium leak test at 1.0×10^{-9} cc/s					
Optional	Pneumatic pressure test, Vacuum retention testing, LN2 cold shock, pre-material certs., X-ray, ASME B31.3 certification, CFOS cleaning for O2 services					

Options include TC vacuum gauge tubes on each section, Low Loss Gas Trap

Typical StatiRigid-P, Engineered Modular Piping System

