

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.

Remark: LCO, application must be moisture-free to prevent vacuum degradation

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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.

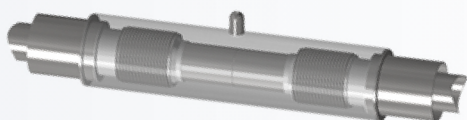
Features and Benefits

- Easy and cost-effective installation due to its modular design
- 100 times greater thermal efficiency compared to competitive insulation technology
- Excellent flow characteristics make StatiRigid-Pan 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 10-years Vacuum Warranty, & 1-year Defect Warranty.



Bayonet Connection



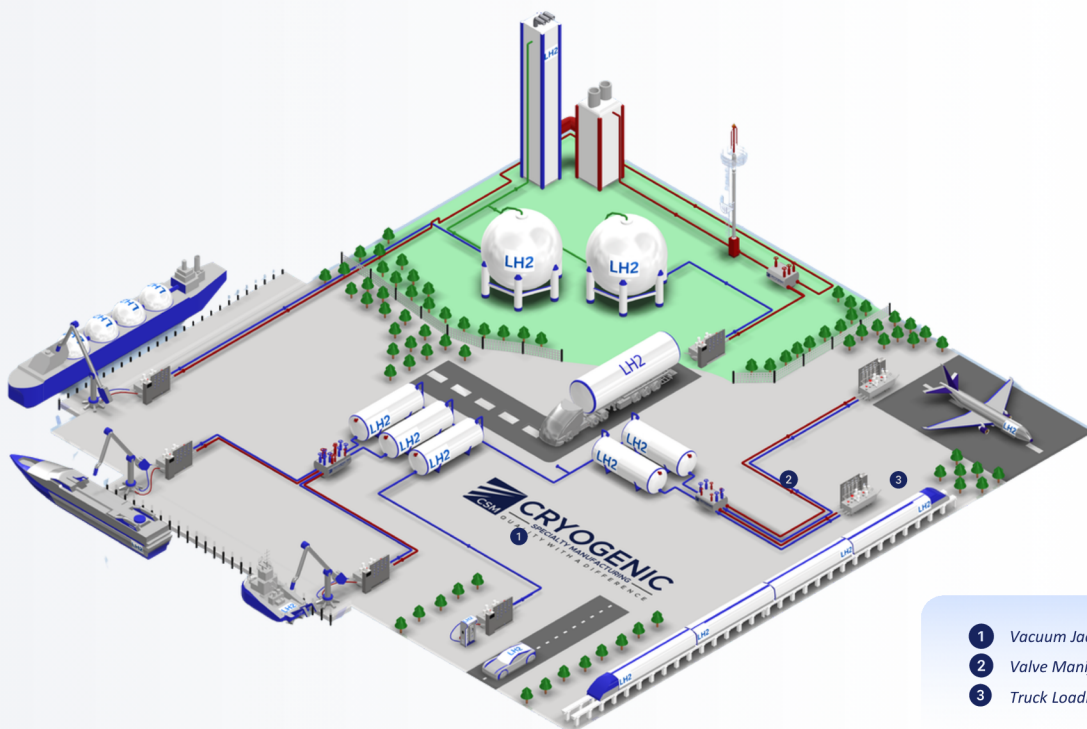
Welded Connection

StatiRigid-P Performance Specifications

Model	R5P	R10P	R15P	R20P	R30P	R40P
Process Pipe (Sch 5)	0.5" IPS (21.3 mm OD)	1.0" IPS (33.4 mm OD)	1.5" IPS (48.3 mm OD)	2.0" IPS (60.3 mm OD)	3.0" IPS (88.9 mm OD)	4.0" IPS (114.3 mm OD)
Jacket Pipe (Sch 5)	2.0" IPS (60.3 mm OD)	3.0" IPS (88.9 mm OD)	3.5" IPS (101.6 mm OD)	3.5" IPS (101.6 mm OD)	5.0" IPS (141.3 mm OD)	6.0" IPS (168.3 mm OD)
Steady State Heat Leak	0.45 BTU/hr/ft (0.43 W/m)	0.50 BTU/hr/ft (0.48 W/m)	0.52 BTU/hr/ft (0.50 W/m)	0.71 BTU/hr/ft (0.69 W/m)	1.25 BTU/hr/ft (1.20 W/m)	1.31 BTU/hr/ft (1.26 W/m)
Bayonet Heat Leak	8.1 BTU/hr (2.4 W)	7.8 BTU/hr (2.3 W)	9.2 BTU/hr (2.7 W)	11.3 BTU/hr (3.3 W)	16.7 BTU/hr (4.9 W)	-
Welded Joint Vacuum Jacketed Heat Leak	-	5.46 BTU/hr (1.60 W)	5.76 BTU/hr (1.69 W)	9.21 BTU/hr (2.70 W)	13.09 BTU/hr (3.84 W)	18.48 BTU/hr (5.42 W)
Welded Joint Vacuum Jacketed Heat Leak	-	50.98 BTU/hr (14.95 W)	60.49 BTU/hr (17.74 W)	72.05 BTU/hr (21.13 W)	90.81 BTU/hr (26.63 W)	109.87 BTU/hr (32.22 W)
Max. Operating Pressure (Bayonet)	200 psi (13.8 bar)	150 psi (10.3 bar)	150 psi (10.3 bar)	150 psi (10.3 bar)	150 psi (10.3 bar)	150 psi (10.3 bar)
Weight (exclude Bayonet)	2.2 lb/ft (3.3 kg/m)	4.0 lb/ft (5.9 kg/m)	4.9 lb/ft (7.3 kg/m)	5.2 lb/ft (7.8 kg/m)	9.7 lb/ft (14.4 kg/m)	11.9 lb/ft (17.7 kg/m)
Max. Length	Max. Spool Length 40' (12.2 m)					
Material Construction	Stainless Steel Series 300					
Vacuum Insulation Type	Static or Dynamic Vacuum					
Standard Testing	Dimensional Check He 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, RPTSTD-8070-0001					

- Larger pipe sizes such as 6" to 14" available. Please contact factory for details.
- Options include TC vacuum gauge tubes on each section, Low Loss Gas Trap

Typical StatiRigid-P, Engineered Modular Piping System



- 1 Vacuum Jacketed Pipe (VJP)
- 2 Valve Manifold Box (VMB)
- 3 Truck Loading / Bunkering Station