Semi-Flex *Dynamic*

Pre-engineered modular Semi-Flex transfer hose has added advantage over the traditional rigid VJP, especially when system upgrade is frequently done. This option is cost saving as the flexibility of the pipe reduces the necessity for precise system layout measurements. It allows the whole system to be easily reused if use-point locations and plant layout are changed. Semi-Flex can be added if required to the existing system without major rework expenses.

Semi-Flex facilitate users to design and construct their own LN2 delivery system with minimum piping engineering experience or knowledge.

All Semi-Flex comes with CSM renowned customer service, from conceptual design to implementation, and are backed by a 5 year vacuum warranty; 1 year defect warranty

Semi-Flex Dynamic Transfer Hose

Semi-Flex, a semi-rigid bendable pipe with optimal flexibility is suitable for long distance piping system application, an alternative to traditional rigid piping. It's lightweight stainless steel construction reduces cool-down losses to an absolute minimum.

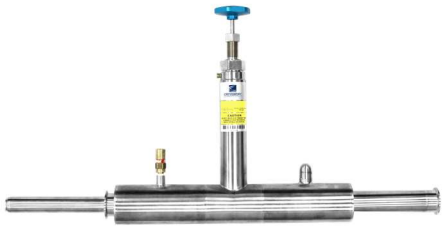
Semi-Flex hoses are protected by a high quality and wear resistant stainless steel braid outer covering. Typical hoses are manufactured with pipe thread ends or bayonet connection.

These hoses are used in a wide variety of applications as main transfer hose for LN2 such as food freezing, semiconductor test handlers, MBE and LN2 dosing applications.

Features and Benefits

- Tees, elbows, bayonets and valves can be incorporated with *Semi-Flex* transfer hose for a customized LN2 piping system
- Both flexible and rigid sections can be combined as one spool
- Select hoses are stocked for immediate delivery
- Special MLI system ensure fast pump down speed to < 10 -4 Torr
- Each hose is helium leak checked (1 x10 -9 std cc/sec) and liquid nitrogen cold shocked before shipping
- Vacuum insulation eliminates frost, ice and related safety hazards

Related Products:



Modular T- valve

Modular Tee with Jumper Hose & Zone Valve in dynamic vacuum set up

CSM CRYOGENIC SPECIALTY MANUFACTURING QUALITY WITH A DIFFERENCE

Semi-Flex Dynamic Specifications

Model	SF16	SF25
Inner Diameter	DN 16 ⅝" NB (16.2 mm)	DN 25 1" (25.1 mm)
Outer Diameter	DN 32 43.0 mm	DN 50 62.8 mm
Steady State Heat Leak	1.1 btu/hr/ft (1.05 watts/m)	1.8 btu/hr/ft (1.79 watts/m)
Bayonet Heat Leak	5.0 btu/hr (1.5 watts)	6.0 btu/hr (1.8 watts)
Max. Operating Pressure	200 psig (13.8 bar)	200 psig (13.8 bar)
Weight	1.0 lbs/ft (1.4 kg/m)	1.3 lbs/ft (1.9 kg/m)
Min. Flexible Bend Radius	16" (45 cm)	20" (55 cm)
Min. Static Bend Radius	8" (20 cm)	12" (30 cm)
Vacuum Insulation Type	Dynamic Vacuum with MLI	
Maximum Length (Single Spool)	100 ft (30.48 m)	
Protective Outer Cover	RFB Braided Flex	
Material Construction	Stainless Steel Series 300	
Standard Testing	Dimensional Check He leak checked 1 x 1 0 - 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	

Semi-Flex Dynamic, Pre-engineered & Modular Vacuum System