

All Poly-Flex comes with CSM renowned customer service, from conceptual design to implementation, and are backed by a one year warranty



Poly-Flex application in PVD

Poly-Flex

for Polycold

Poly-Flex heralds a new era in *polycold* hose technology, offering minimal heat leaks, top-tier safety, and exceptional durability. Its robust spiral-wrapped jacket ensures resilience in rugged Polycold Cryochiller applications. This innovation operates with either self-contained static vacuum or dynamic vacuum using external process vacuum.

Poly-Flex Transfer Hose

The Poly-Flex transfer hose revolutionizes hose technology by addressing core problems in traditional polycold hoses. It eliminates icing through super insulation technology. Its lightweight stainless steel construction minimizes cool-down loss, cutting energy use and cryochiller stress during system start up. Exceptional flexibility eases installation and upkeep, boasting the industry's leading bend radius. Poly-Flex stays pliable in extreme cold, mitigating rupture risks at cold operating temperature. Safety is paramount, ensured by a robust stainless steel spiral wrap that neutralizes wire hazards in competitive wire braided polycold hose.

Typical hoses are manufactured with male/female seal-lok or HVCR or KF40 / KF50 clamp connection to PVD process chamber.

Available as single or twin refrigerant hose within a vacuum jacket.

Applications

These hoses are used in applications involve thin film deposition process such as CVD, PVD and ALD vacuum chamber operated with polycold cryochiller.

Features and Benefits

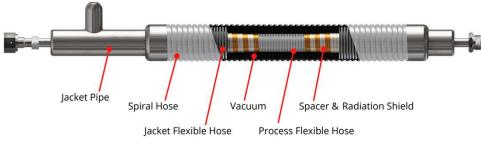
- Vacuum insulation eliminates condensation, frosting, ice and related safety hazards
- Super insulation and proprietary chemical getters ensures long lasting vacuum integrity
- Each hose is evacuated (10 -7 torr), helium leak checked (1 x10 -9 std cc/sec) and liquid nitrogen cold shocked tested before shipping
- Tees, elbows, bayonets and valves can be incorporated with Poly-Flex transfer hose for a customized application
- Both flexible and rigid sections can be combined as one spool
- Select hoses are stocked for immediate delivery



Poly-Flex Specifications

Model	PF8	PF12	PF8-Twin
Inner Diameter (I.D.)	DN 8	DN 12	DN 8
	5/16" (8.2 mm)	½" (12.1 mm)	5/16" (8.2 mm)
Outer Diameter (O.D.)	DN 25	DN 32	DN 50
	(39.0 mm)	(49 mm)	(39.0 mm)
Steady State Heat Leak	2.7 btu/hr/ft	3.2 btu/hr/ft	3.8 btu/hr/ft
	(2.6 watts/meter)	(3.0 watts/meter)	(3.6 watts/meter)
Chamber conn. Heat Leak	4.3 btu/hour	4.3 btu/hour	4.3 btu/hour
	(1.2 watts)	(1.2 watts)	(1.2 watts)
Max. Operating Pressure	450 psi	450 psi	450 psi
	(31.0 bar)	(31.0 bar)	(31.0 bar)
Weight	0.7 lbs/ft	0.8 lbs/ft	0.7 lbs/ft
	(1.1 kg/m)	(1.2 kg/m)	(2.1 kg/m)
Min. Flexible Bend Radius	8"	10"	15"
	(203 mm)	(254 mm)	(375 mm)
Min. Static Bend Radius	6"	8"	10"
	(152 mm)	(203 mm)	(250 mm)
Vacuum Insulation Type	Dynamic Vacuum or Static Vacuum with MLI, Absorbent and Getters		
Protective Outer Covering	SW - Spiral Wrap (Standard) RFB - Regular Flex Braid (Option)		
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		

Typical Poly-Flex Transfer Hose - Single

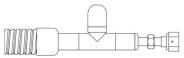




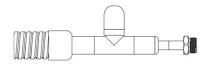
KF40 / KF50 Chamber conn, Female seal-lok ½" or ¼" HVCR



KF40 / KF50 Chamber conn, Male seal-lok ½" or ¼" HVCR



Cryochiller conn, Female seal-lok ½" or ¼" HVCR



Cryochiller conn, Male seal-lok ½" or ¼" HVCR

