



# Ultra-Flex

U-flex transfer hose offers high flexibility, sturdy & kink-resistant spiral wrap outer jacket, suitable for rough handling usage such as cryogenic liquid cylinder (LGC / dewar) refilling; and liquid withdrawal from pressurized dewar to test handler.

Smooth spiral wrap design ensures zero risk of hand injury due to wire piercing commonly occur in traditional wire braided hose

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

## Ultra-Flex Transfer Hose

Ultra-Flex *transfer* hose is a ultra-flexible, vacuum insulated LN2 transfer hose with high flexibility. It has the lowest dynamic bend radius among all cryogenic hoses in the market.

Due to its lightweight stainless steel construction, cool-down loss can be reduced to an absolute minimum.

Ultra-Flex hoses are protected by a tough and anti-kink stainless steel spiral wrap outer covering, its non wire braid prevent potential operator injury due to sharp wire found in traditional braided sleeve.

Typical hoses are manufactured with pipe thread ends or female flare 1/2" JIC/CGA fittings or C5 bayonet. These hoses are used in a wide variety of applications including tool connections with portable dewars supplying LN2 to test handlers, LN2 doser, or any moving reservoirs and custom OEM applications.



Ultra-Flex application in Test Handlers

## Features and Benefits

- Tees, elbows, bayonets and valves can be incorporated with Ultra-Flex transfer hose for a customized LN2 piping system application
- Both flexible and rigid sections can be combined as one spool
- Select hoses are stocked for immediate delivery
- Super insulation and proprietary chemical getters ensures long lasting vacuum integrity
- Each hose is evacuated (10<sup>-6</sup> torr), helium leak checked (1 x10<sup>-9</sup> std cc/sec) and liquid nitrogen cold shocked before shipping
- Vacuum insulation eliminates frost, ice and related safety hazards

# Ultra-Flex Specifications

Model	UF8	UF12
Inner Diameter (I.D.)	DN 8 5/16" (8.2 mm)	DN 12 ½" (12.1 mm)
Outer Diameter (O.D.)	DN 25 (39.0 mm)	DN 32 (49 mm)
Steady State Heat Leak	2.7 btu/hr/ft (2.6 watts/meter)	3.2 btu/hr/ft (3.0 watts/meter)
Bayonet Heat Leak	4.3 btu/hour (1.2 watts)	4.3 btu/hour (1.2 watts)
Max. Operating Pressure	150 psi (10.3 bar)	150 psi (10.3 bar)
Weight	0.7 lbs/ft (1.1 kg/m)	0.8 lbs/ft (1.2 kg/m)
Min. Flexible Bend Radius	8" (203 mm)	10" (254 mm)
Min. Static Bend Radius	6" (152 mm)	8" (203 mm)
Vacuum Insulation Type	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 Ultra-Flex Transfer Hose

