PRODUCT DATA SHEET

POLYCOLD®
P-102 CRYOCOOLER

edwardsvacuum.com

Polycold® Cryocoolers provide compact, easy-to-use alternatives to liquid nitrogen in small vacuum systems. These cryogenerators use safe, non-flammable, non-toxic, HCFC-Free refrigerants in a closed-loop system. This means no moving of heavy dewars and no downtime due to running out of liquid nitrogen.

Installation is quick and easy. The cold trap is inserted into the housing, or the baffle is installed between the diffusion pump and the high-vacuum valve. Cold probes or chevron baffles (cryosurfaces) are integral to the refrigerant line and are not detachable from it without loss of refrigerant.

The P-102 can be used with a cold probe or chevron baffle

Applications

- Helium mass spectrometer leak detectors
- Mechanical pumps
- Chevron baffles for four-inch and six-inch diffusion pumps
- Small chamber cold/vapor trapping probes

Polycold® Portable Cryocoolers

- Replace liquid nitrogen in cold traps in high vacuum systems
- Provide high-speed pumping of water vapor to 10^{-8} torr
- Quick and easy installation
- Fast payback through savings on liquid nitrogen
- Effectively stop backstreaming
- Supply uninterrupted cooling of cryosurfaces

Features and Benefits

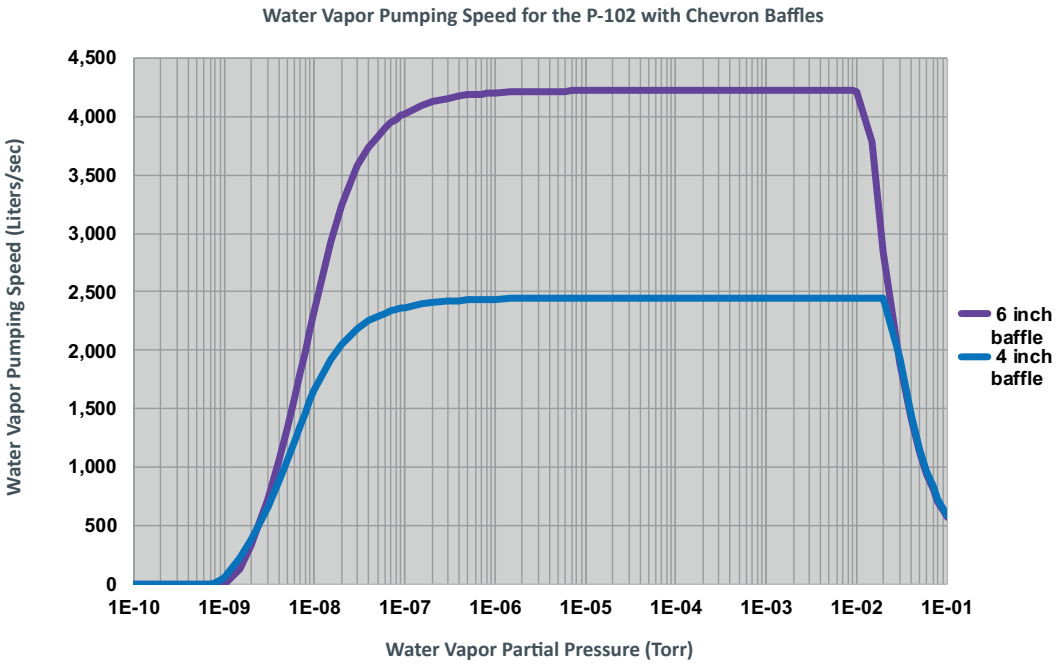
- Eliminate the cost, inconvenience and hazards of liquid nitrogen with comparable performance
- -110° to-135° C (163° K to 138° K)
- Continuous cooling
- Heat removal to 120 Watts
- Vacuum system cold trap cooling
- Mass spectrometer and leak detector cooling
- Cold traps
- Cooling of flange mounted cryocoils for turbomolecular pumps
- Parylene coating traps
- Compliant with european application refrigerants eC/1005/2009, The Montreal Protocol and The US EPA SNAP
- CE certified to Low Voltage and EMC Directive

Polycold® P-102 Cryocooler Specifications

Physical Data	
Initial Cooldown Time, hr.	1.5
Flex line length, in. (mm)	54 (1372)
Dimensions:	
Width, in. (mm)	20.5 (521)
Depth, in. (mm)	17.3 (440)
Height, in. (mm)	32.5 (826)
Weights, with lines, lb (kg)	180 (82)

Utilities	
Standard electrical, +/- 10%	208-230 /1 / 50-60
Current, amps	7.5
Cooling	Forced Air
Baffles and Cold Probes	
Chevron Baffles, opaque, low-profile, spool piece style	**Part number**
4 CB, nominal 4-inch chevron baffle	460514
6 CB, nominal 6-inch chevron baffle	460003
Cold Probes	
Trap housing for mechanical pump traps	461002
Cold probe, stainless steel, “Easy Clean”	462021

Polycold® P-102 Cryocooler Performance



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