

Welch Vacuum Cold Trap Accessory Part Number 1420H-14

VACUUM ACCESSORIES

Exhaust Filter - Connects to pump's outlet. Filters oil mist from the pump's exhaust to keep your working area clean and air quality healthful. A second option is an exhaust line to a vapor hood or other outside exhaust vent. This requires an adapter and air tight connections (see p. 40).

Vacuum Oil - Use of high quality vacuum oil is necessary for both vacuum performance and pump lifetime. With lesser quality oil the vacuum is degraded and pump lifetime is shortened. Welch offers three grades of vacuum oil designed especially for use in DuoSeal and Direct-Drive vacuum pumps (see p. 46).

Foreline Trap - Protects the vacuum pump from harmful substances present in the vacuum system and/or formed during the vacuum process. Can also block vacuum pump oil from back streaming into the system and contaminating samples (see p. 40 for Trap Selection chart)*. Failure to use a foreline trap, when recommended, can result in serious damage to the vacuum pump. For trap selection advice, see your Welch-Ilmvac representative at www.welchvacuum.com. * Dry Ice/Isopropanol - Liquid Nitrogen trap recommended to protect pump from condensable vapors.

For more information, see Vacuum Gauges, p. 41.

DRY ICE / ISOPROPANOL TRAP (-79°C)

- Recommended for freeze dryers, vacuum manifolds, concentrators, etc.
- Uses dry ice or liquid nitrogen as refrigerant
- Removable center make trapping surface easy to clean



DryIce/Liquid Nitrogen Cold Trap is an effective foreline cold trap for vacuum manifolds or Schlenk Lines. The trap has a large 3 quart (2.8 liters) center well for the dry ice/isopropyl alcohol slurry or liquid nitrogen; traps up to 1.5 liter condensate. With dry ice cold temperature may be maintained for up to 12 hours depending upon the vapor load. With liquid nitrogen cold temperature can be maintained for up to 2 hours depending upon the vapor load.

See *Applications Notes*, p. 36 & 39 for configuration and usage information.

Tubing Needed	Diameter	Height	Diameter	In/Out Offset	CAT. No.
7/16" I.D.	10	8.25	10.75	3.5	1420H-14

Tubing CAT. No. 331040-5, gasket replacement kit 1420K-01

Application Note | Cold Traps

Cold traps employing a dry ice slurry or liquid nitrogen are effective as long as the refrigerant level is maintained. If the trap warms up while the pump is running, all of the trapped condensables will be ingested by the vacuum pump, contaminating the oil.

Cold traps must be cleaned out at the end of each day. If the pump is run overnight, the trapped condensables will ultimately be ingested by the pump as the trap warms up. Cleaning a Dry Ice Slurry/Liquid Nitrogen trap is easy. The steps are: 1. Turn off the pump. 2. Leak air into the trap from the application side. 3. Remove the center well and polypropylene ring to a hood. The center well can be washed off into a beaker or the condensables can be allowed to evaporate in the hood or added to the laboratory waste.