VARIAN, HS-20 Description:

These Agilent Varian High Throughput models include the series HS-16, HS-20, HS-32 and NHS-35. This is the HS-20 diffusion high throughput vacuum pump. They are the primary industrial standard for high vacuum pumping mechanisms. The Agilent Varian HS-20 diffusion pumps have a high pumping speed for all gases and low cost per unit pumping speed when compared with other types of pumps used in the same vacuum range. The full fractionating design allows vaporized fluid to be fractionated in the boiler and jet assembly. Contamination and decomposition products are pumped away and only the purest vapor reaches the top jet, assuring highest speed and lowest backstreaming. The vacuum fluid heater is mounted at the bottom of the pump body. The HS pumps have a fill and drain assembly for easy maintenance of pump fluid and continuous monitoring with thermal protection switches. Finned boilers increase the surface area which prolongs fluid life. The inlet is at the top, and the exhaust is through the foreline.

Diffusion pumps use a high-speed jet of vapor to direct gas molecules in the pump throat down into the bottom of the pump and out the exhaust. The oil diffusion pump is operated with an oil that has low vapor pressure. Its purpose is to achieve higher vacuum (lower pressure) than possible by use of positive displacement pumps alone. Although its use has been mainly associated within the high vacuum range (down to 10-9 Torr), diffusion pumps today can produce pressures approaching 10-10 Torr when properly used with modern fluids and accessories. The features that make the diffusion pump attractive for high and ultra-high vacuum use are its high pumping speed for all gases and low cost per unit pumping speed when compared with other types of pump used in the same vacuum pressure range. Diffusion pumps have no motors and use only heaters to produce a vacuum. Diffusion pumps cannot discharge directly into the atmosphere, so a mechanical forepump is typically used to maintain an outlet pressure around 1 mTorr.

These Agilent Varian model HS-20 high vacuum, high throughput diffusion pumps are new and can be ordered with either a 3-phase 240, 415 or 480 VAC heaters. With a standard cold cap or halo baffle. When ordering please specify which voltage or cap your application will require. We stock and sell diffusion pumps oils, e.g. IVP 704 diffusion pump fluids along with vacuum fittings, adapters, and replacement parts for your Agilent Varian HS-20 diffusion pumps. This pump uses IVP 704 diffusion pump fluid and is designed for high vacuum and fast pumping of large volumes of gas or vapor in production operations

Highlights For This Agilent Varian HS-20 Diffusion Pump

- 20 Inch ASA Inlet Flange (20 bolt holes) 27.5 in. OD, hole size 1.25 in.
- ASA 4 in Outlet Flange (8 bolt holes) 9" OD, hole size 13/16 in.
- Recommended Roughing Backing Pump: ≥100 CFM
- Halo Baffle
- Maximum Pumping Speed 17,500 l/s air, 22,000 l/s helium
- 240 VAC @ 2000 Watt Heater (6 required)
- Designed To Be Used With IVP 704 Diffusion Pump Oil (5 Quarts)