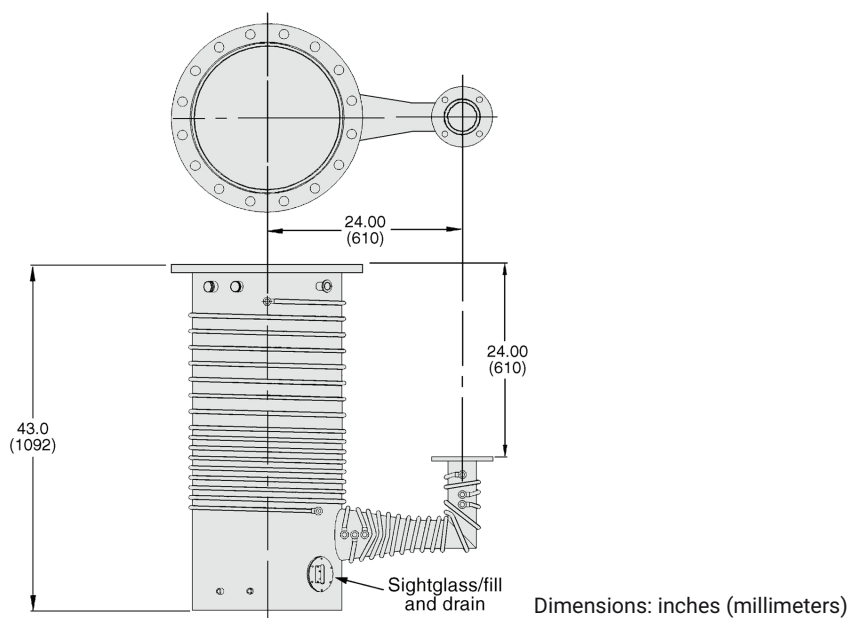


HS-16 Oil Diffusion Pump



Download 3d drawings [here](#).

The Agilent HS-16 oil diffusion pump is a pump with high throughput and high pumping speed of 6,000 L/s. With its fully optimized vapor jet, robust boiler design, and thermal protection switches, the pump will run without any maintenance for many years. This pump includes a standard sight glass and fill and drain assembly, and is available with 16 in ASA or DN 500 ISO-K inlet flange.

This diffusion pump is a perfect fit for industrial applications such as vacuum furnace, heat treatment, metallizing, and coating processes for optical lenses, electronics, and protective film layers.

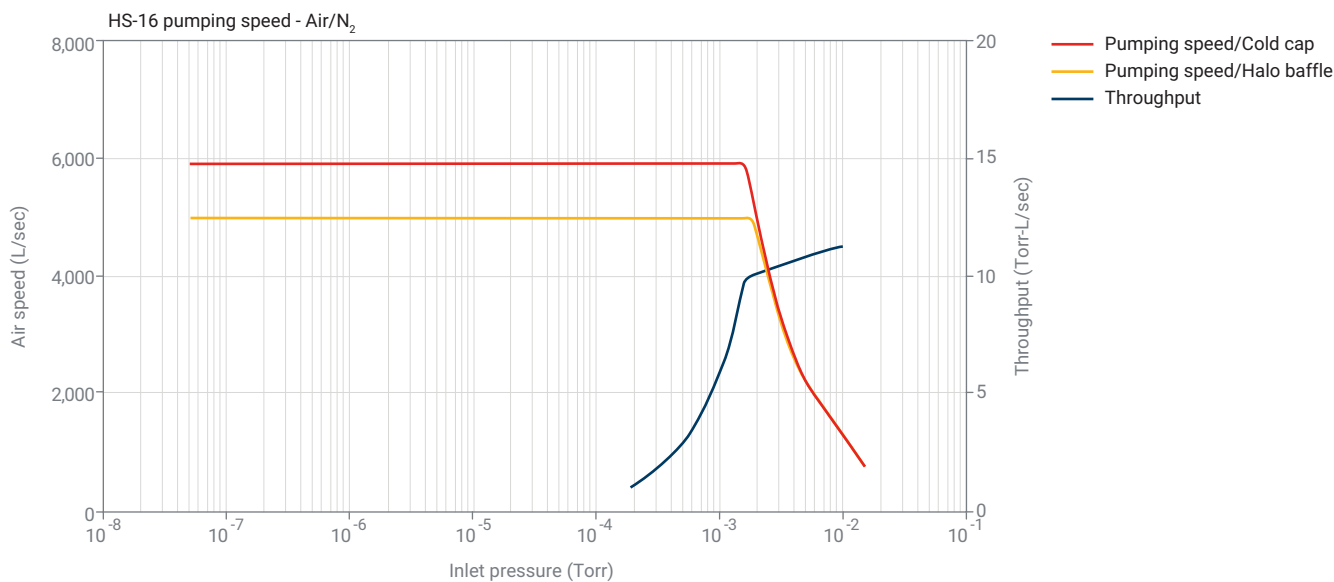
Technical specifications

Pumping Speed, Operating Range	6,000 L/s air, 7,500 L/s He and H ₂
Pumping Speed, AVS 4.1 (1963)	10,000 L/s air
Maximum Throughput	8,100 W – 9.5 T-L/s (12.7 mbar L/s) in operating range 11.5 T-L/s (15.3 mbar-L/s) at 0.01 Torr 9,600 W – 12.0 T-L/s (16 mbar L/s) in operating range 13.5 T-L/s (18.0 mbar-L/s) at 0.01 Torr
Operating Range	2×10^{-3} to $< 5 \times 10^{-8}$ Torr at 9,600 W (1.3×10^{-3} to $< 6.5 \times 10^{-8}$ mbar)
Maximum Forepressure	No load: 0.65 Torr (0.85 mbar) Full load: 0.55 Torr (0.72 mbar)
Recommended Backing Pump	≥ 80 cfm (136 m ³ /hr)
Backstreaming Rate, Standard Cold Cap	$< 1.5 \times 10^{-3}$ mg/cm ² /min
Warmup Time	30 minutes
Cooldown Time	48 minutes (30 minutes with optional quick cool coil)
Fluid Charge	3 quarts (2.8 L)
Electrical Requirements	3 ph, 50/60 Hz, 240/415/480 VAC
Pump Power	8,100/9,600 watts
Cooling Water Requirements	1.5 gpm (340 L/hr) at 60 to 80 °F (15 to 26 °C)
Water Connections	¼ in FPT Tee
Recommended Fluid	DC-704 or equivalent
Thermowell	ISO 228 G 1/2 thread (with adapter M8x1 thread)
Recommended Holding Pump*	DS202 Rotary Vane Pump

* Recommended holding pump sizes are based on estimates; assuming good vacuum practice in system design and operation.

Results may vary from system to system.

Performance specifications based on tests done with DC704.



Ordering information

Description	Voltage	Weight kg (lb)	Part Number	
			Flange Type	
HS-16 Pump			ASA	ISO
HS-16 with Standard Cold Cap	240 V	218.0 (480.0)	79292308	L5921308
HS-16 with Halo Baffle	240 V	218.0 (480.0)	79292318	L5921318
HS-16 with Standard Cold Cap	415 V	218.0 (480.0)	79292326	L5921326
HS-16 with Halo Baffle	415 V	218.0 (480.0)	79292336	L5921336
HS-16 with Standard Cold Cap	480 V	218.0 (480.0)	79292309	L5921309
HS-16 with Halo Baffle	480 V	218.0 (480.0)	79292319	L5921319

Note: The HS-16 can be ordered with 9,600 W heaters by increasing the middle number of the 3-digit suffix by two; e.g. 79292328.

Contact information

Americas

Toll free: +1 800 882 7426
vpl-customer@agilent.com

Europe, Middle East, Africa, India

Tel: +39 011 9979 111
Toll free: 00 800 234 234 00
vpt-customer@agilent.com

China

Toll free: 800 820 6778
Contacts.vacuum@agilent.com

For more information, please contact your Agilent representative or visit www.agilent.com/chem/vacuum where you can chat live with a vacuum expert.



Description	Weight kg (lb)	Part Number
Accessories		
Water-Cooled Halo Baffle	9.0 (20.0)	K0143316
Centering Ring for ISO Foreline Flange, 100K	0.5 (1.0)	IC100SV
Quick Cool Coil – Must Be Installed in the Factory		Factory Special
Adapter Kit, 1/4 FPT to ISO G 1/2 (qty 4) Water Fittings		X3900-68009
Replacement Parts (Three Heaters Required Per Pump)		
2700 W, 240 V/415 V with Leads	0.5 (1.0)	647316020
2700 W, 480 V with Leads	0.5 (1.0)	647316030
2700 W, 240 V/415 V no Leads – Used on Pumps Built Before May 1990	0.5 (1.0)	647316035
2700 W, 480 V no Leads – Used on Pumps Built Before May 1990	0.5 (1.0)	647316045
3200 W, 240 V/415 V with Leads	0.5 (1.0)	647316023
3200 W, 480 V with Leads	0.5 (1.0)	647316033
Heater Crush Plate (Replace One with Each New Heater)	0.5 (1.0)	K4919001
Heater Clamping Plate (Three Required Per Pump)	4.0 (8.0)	K4917001
HS-16/20 Heater Wire, 10 AWG, 120 Inches (Two Per Heater Required)	1.0 (0.4)	X3900-68000
Heater Insulator (One Required Per Pump)	0.5 (1.0)	79309001
Replacement O-Ring Kit for ASA Pumps (Kit Contains: 1 Inlet Flange O-Ring, 1 Foreline Flange O-Ring, Sight Glass O-Ring and Gasket, 8 Fill and Drain O-Rings)	0.5 (1.0)	K0377164
Sight Glass Service Kit (Pumps Built Before Oct. 1995)	1.5 (3.0)	F6097301
Sight Glass (Pumps Built After Oct. 1995)		K8475001
Upper (Water) Thermal Switch (Set at 185 °F/85 °C)	0.5 (1.0)	K9050001
Lower (Boiler) Thermal Switch (Set at 390 °F/199 °C)	0.5 (1.0)	K9050002
Cold Cap Gasket/Grommet (Kit of Four)	0.5 (1.0)	L8839301
Cold Cap Nut and Follower (Two Each)	0.5 (1.0)	L8840301

- Inlet flange 16 in ASA, foreline flange 3 in ASA.
- Inlet flange DN 500 ISO-K, foreline flange DN 100 ISO-K.
- Not recommended for use with Santovac 5.
- Pumps with ASA flanges include O-rings for inlet and foreline flanges.
- Pumps with ISO flanges do not include centering rings required for foreline and inlet flanges.

www.agilent.com/en/product/vacuum-technologies/diffusion-pumps/large-diffusion-pumps/hs-16-diffusion-pump

DE44326.5759027778

This information is subject to change without notice.

© Agilent Technologies, Inc. 2021, 2024, 2025
Printed in the USA, May 15, 2025
5994-3472EN