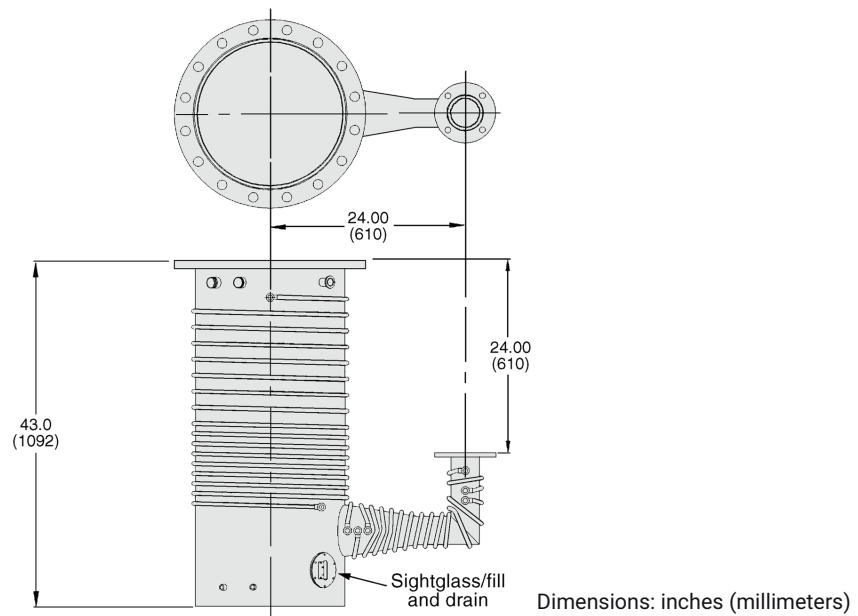


## HS-16 Oil Diffusion Pump



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.

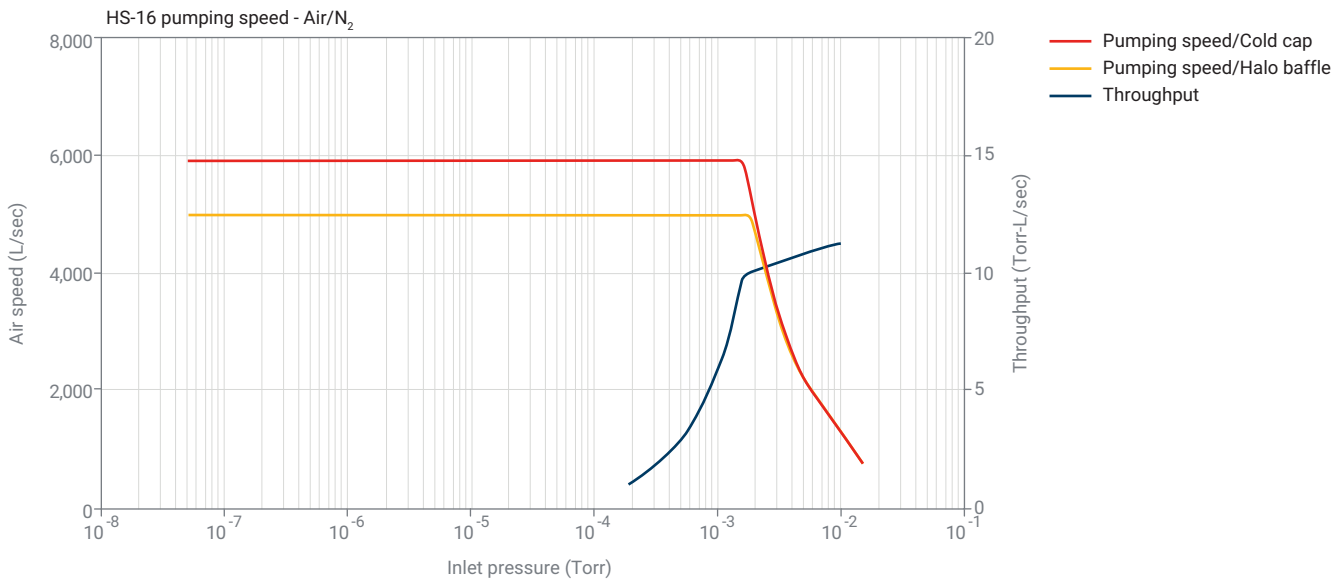
## Technical specifications

Pumping Speed, Operating Range	6,000 L/s air, 7,500 L/s He and H <sub>2</sub>
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 13.5 T-L/s (18.0 mbar-L/s) at 0.01 Torr 9,600 W – 12.0 T-L/s (16 mbar L/s) in operating range 11.5 T-L/s (15.3 mbar-L/s) at 0.01 Torr
Operating Range	$2 \times 10^{-3}$ to $< 5 \times 10^{-8}$ Torr at 9,600 W ( $1.3 \times 10^{-3}$ 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	$\geq 80$ cfm (136 m <sup>3</sup> /hr)
Backstreaming Rate, Standard Cold Cap	$< 1.5 \times 10^{-3}$ mg/cm <sup>2</sup> /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	
			ASA	ISO
<b>HS-16 Pump</b>				
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](mailto: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](mailto:vpt-customer@agilent.com)

### China

Toll free: 800 820 6778  
[Contacts.vacuum@agilent.com](mailto:Contacts.vacuum@agilent.com)

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



Description	Weight kg (lb)	Part Number
<b>Accessories</b>		
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
<b>Replacement Parts (Three Heaters Required Per Pump)</b>		
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](http://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  
 Printed in the USA, August 14, 2024  
 5994-3472EN