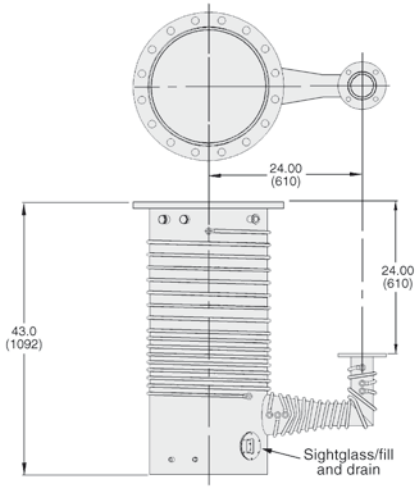
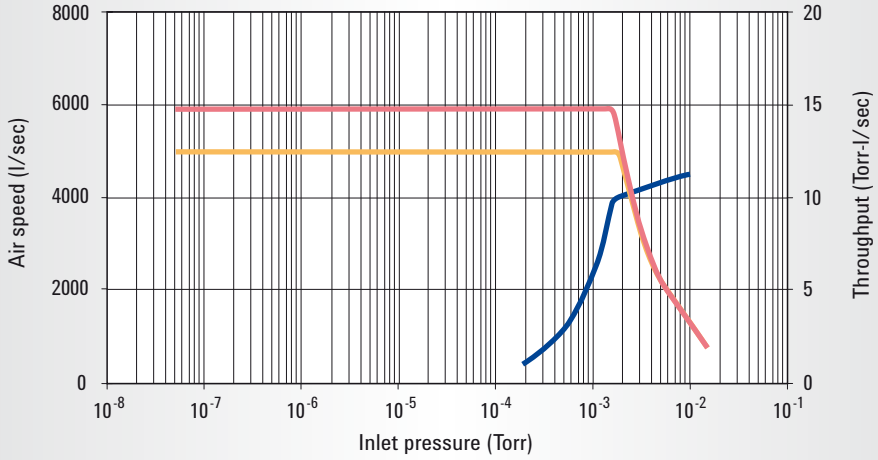
Agilent HS-16





Dimensions: inches (millimeters)

HS-16 Pumping Speed - Air/N_2



Technical Specifications

Pumping speed, operating range **Pumping speed*, AVS 4.1** (1963)	6,000 l/s air, 7,500 l/s He and H_2 10,000 l/s air
Maximum throughput	8,100 W – 9.5 T-l/s (12.7 mbar l/s) in operating range13.5 T-l/s (18.0 mbar-l/s) @ 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) @ 0.01 Torr
Operating range	2 x 10^{-3} to <5 x 10^{-8} Torr at 9,600 W (1.3 x 10^{-3} to <6.5 x 10^{-8} mbar)
Maximum forepressure	No load – 0.65 Torr (0.85 mbar), Full Load – 0.55 Torr (0.72 mbar)
Pump power	8100/9600 watts
Recommended backing pump	≥ 80 cfm (136 m^3/hr)
Backstreaming rate, standard cold cap**	<1.5 x 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 liters)
Electrical requirements	3 ph, 50/60 Hz, 240/415/480 VAC
Cooling water requirements	1.5 gpm (300 l/hr) at 60-80 °F (15-26 °C)
Water connections	¼ in. FPT Tee
Recommended fluid	DC-704 or equivalent (see page 30)

* *For an explanation of pumping speed measurements, please see page 34.*
** *Refer to page 32 for a description of test methods.*

Ordering Information

Description	Voltage	Weight kg (lbs)	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 9600 W heaters by increasing the middle number of the 3-digit suffix by two; eg 79292328*

Accessories	Page	Weight kg (lbs)	Part Number
Water-cooled halo baffle	31	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
Installation and Operation Manual (download from www.agilent.com/chem/vacuum)			699901140
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 '90		0.5 (1.0)	647316035
2700 W, 480 V no leads – used on pumps built before May '90		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 insulator (three required per pump)		0.5 (1.0)	79309001
Heater clamping plate (three required per pump)		4.0 (8.0)	K4917001
HS-16/20/Dalton heater wire, 10 AWG, 120 inches (2 per heater required)		1.0 (0.4)	X3900-68000
Replacement o-ring kit for ASA pumps (kit contains: 1 inlet flange o-ring (buna 48214001), 1 foreline flange o-ring (buna 2-348), sight glass o-ring and gasket, 8 fill and drain o-rings (Viton 2-213))		0.5 (1.0)	K0377164
Sight glass service kit (pumps built before Oct. '95)		1.5 (3.0)	F6097301
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 4)		0.5 (1.0)	L8839301
Cold cap nut and follower (2 each)		0.5 (1.0)	L8840301

NOTE
- *Inlet flange 16 in. ASA, foreline flange 3 in. ASA*
- *Inlet flange ISO 500K, foreline flange ISO 100K*
- *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*