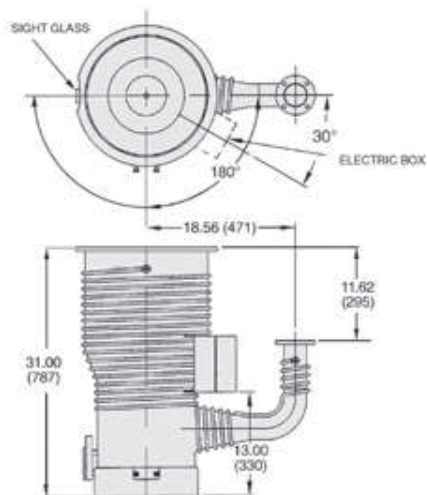


PUMP MODELS

▶ Agilent VHS-400



Dimensions: inches (millimeters)

Technical Specifications

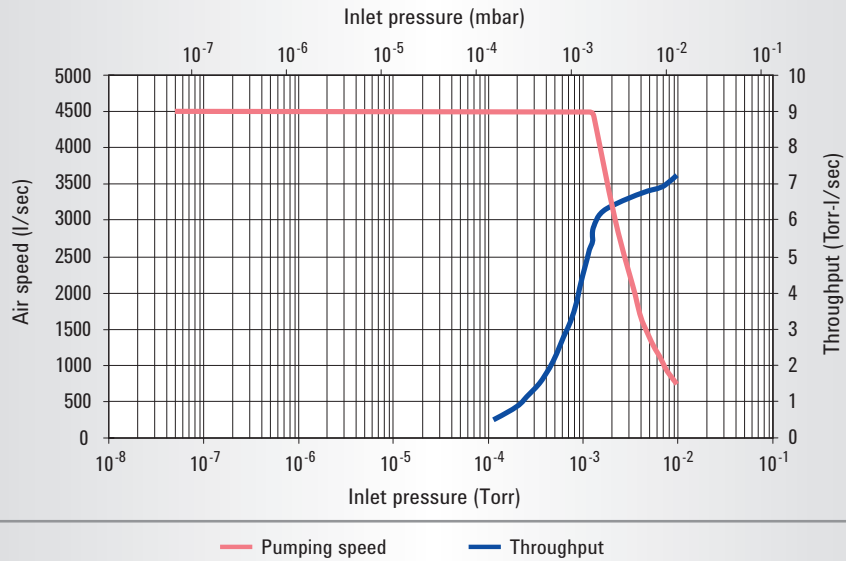
Pumping speed, operating range	4,500 l/s air, 5,625 l/s He/H ₂
Pumping speed*, AVS 4.1 (1963)	8,000 l/s air
Maximum throughput	6.3 T-l/s (8.4 mbar l/s) in operating range, 7.5 T-l/s (10.0 mbar l/s) @ 0.01 Torr
Operating range	1.4 x 10 ⁻³ to <5 x 10 ⁻⁹ Torr (1.9 x 10 ⁻³ to <6.5 x 10 ⁻⁹ mbar)
Maximum forepressure	No load: 0.65 Torr (0.85 mbar) Full load: 0.55 Torr (0.72 mbar)
Recommended backing pump	≥30 cfm (51 m ³ /hr)
Backstreaming rate**, standard cold cap	<1.0 x 10 ⁻³ mg/cm ² /min
Warmup time	15 minutes
Cooldown time	25 minutes
Fluid charge	1,000 cc
Electrical requirements	3 ph, 50/60 Hz, 208/380/480 VAC
Pump power	4400 watts
Cooling water requirements	0.40 gpm (80 l/hr)
Water connections	½ in. FPT Tee

* For an explanation of pumping speed measurements, please see page 160.

** Refer to page 158 for a description of test methods.

DIFFUSION PUMPS

VHS-400 Pumping Speed - Air/N₂



Ordering Information

Description	Voltage	Weight kg (lbs)	Part Number	
			Flange Type ASA	ISO
VHS-400 Pump				
VHS-400 with standard cold cap	208 V	75.0 (180.0)	K4816307	L9767307
VHS-400 with standard cold cap	380 V	75.0 (180.0)	K4816326	L9767326
VHS-400 with standard cold cap	480 V	75.0 (180.0)	K4816309	L9767309
VHS-400 with standard cold cap	240 V	75.0 (180.0)	K4816308	L9767308

Accessories	Page	Weight kg (lbs)	Part Number
Centering ring for ISO Inlet flange, 400K		0.5 (1.0)	IC400SV
Centering ring for ISO foreline flange, 63K		0.5 (1.0)	IC063SV
Installation and Operation Manual (download from www.agilent.com/chem/vacuum)			699901023

Replacement Parts (two heaters required per pump)

2200 W, 208 V heater		1.0 (0.5)	647310140
2200 W, 240 V heater		1.0 (0.5)	647310150
2200 W, 380 V heater		1.0 (0.5)	647310160
2200 W, 480 V heater		1.0 (0.5)	647310170
2550 W, 208 V heater		1.0 (0.5)	647310145
2550 W, 240 V heater		1.0 (0.5)	647310155
2550 W, 380 V heater		1.0 (0.5)	647310165
2550 W, 480 V heater		1.0 (0.5)	647310175
Heater crush plate (one required per pump; replace when either heater is replaced)		2.0 (1.0)	K7667001
Heater clamping plate (one required per pump)		1.0 (0.5)	R2667301
VHS-10/400 heater wire, 10 AWG, 42 inches (3 per pump required)		1.0 (0.4)	X3901-68003
Replacement o-ring kit (kit contains: 1 inlet flange o-ring (butyl 2-385), foreline flange o-ring (butyl 2-338), sight glass o-ring and gasket, 10 fill and drain o-rings (Viton 2-113))		1.0 (0.5)	K0377189
Thermal switch (set at 300 °F – 147 °C)		1.0 (0.5)	642906025

- NOTE**
- Inlet flange ISO 400K, foreline flange ISO 63-K.
 - Inlet flange non-standard ASA, foreline flange 2 in. ASA.
 - Pumps with ASA flanges include O-Rings for inlet and foreline flanges
 - Pumps with ISO flanges do not include centering rings required for inlet and foreline flanges.