



PROVAC
SALES

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Agilent HS-2, 16, 20, 32

Technical Specifications

	HS-2	HS-16	HS-20	HS-32
Previous model number	0160	0164	0165	0167
Pumping speed*, l/s (operating range)				
Air	160	6,000	10,000	17,300
Helium & hydrogen	200	7,500	12,500	21,625
Pumping speed AVS 4.1 (1963)*	285	10,000	17,500	32,000
Maximum forepressure, Torr (mbar)				
No load	0.55 (0.72)	0.65 (0.85)	0.65 (0.85)	0.50 (0.65)
Full load	0.40 (0.52)	0.55 (0.72)	0.55 (0.72)	0.35 (0.45)
Maximum throughput, T-l/s (mbar-l/s) In operating range @ 1×10^{-2} Torr (1.3×10^{-2} mbar)	0.60 (0.80) 0.70 (0.93)	9.5 (11.7) at 8100 W 11.5 (15.3) at 8100 W	12.5 (16.7) 18 (23.4)	30 (40) 35 (45.5)
Minimum recommended backing pump for maximum throughput, cfm (m ³ /hr)	5.0 (8.5)	80 (136)	100 (170)	300 (510)
Backstreaming rate at inlet flange mg/cm ² /min (standard cold cap)*	1×10^{-3}	1.5×10^{-3}	1.5×10^{-3}	7×10^{-4}
Warmup time, minutes	15	30	45	60
Cooldown time, minutes with quick cool coil, where applicable	10	30	45	60
Fluid charge	100 cc	3 U.S. qts. (2.8 liters)	5 U.S. gal. (4.7 liters)	3 U.S. gal. (11.3 liters)
Electrical requirements	1 ph 50/60 Hz 120/240 V	3 ph 50/60 Hz 240/415/480 V	3 ph 50/60 Hz 240/415/480 V	3 ph 50/60 Hz 240/415/480 V
Power, watts	450	8,100/9,600	12	24
Cooling water, U.S. gpm (l/hr) at 60-80 °F (15-26 °C)	0.1 (20)	1.5 (300)	1.5 (300)	4.0 (800)



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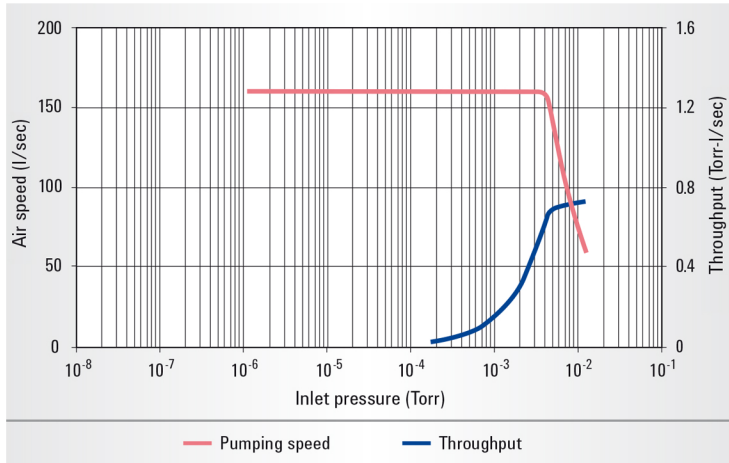
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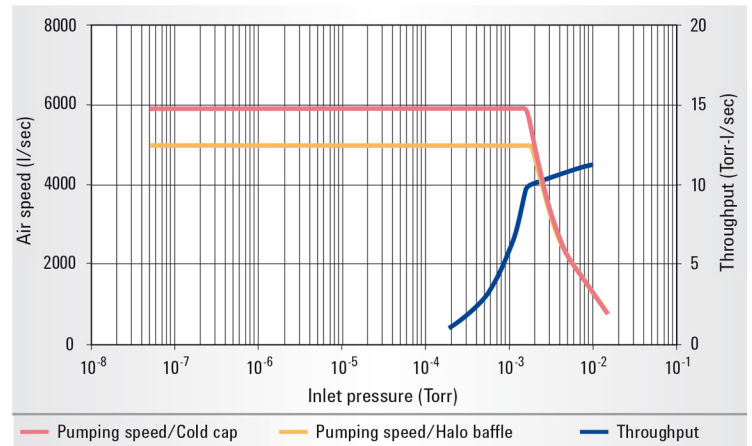
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Pumping Curves

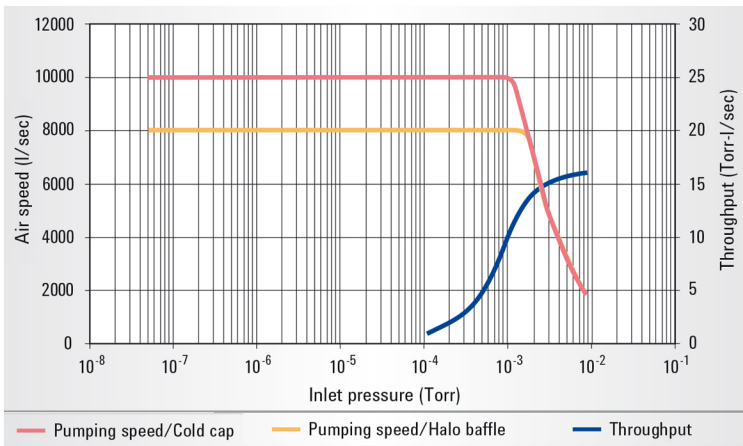
HS-2



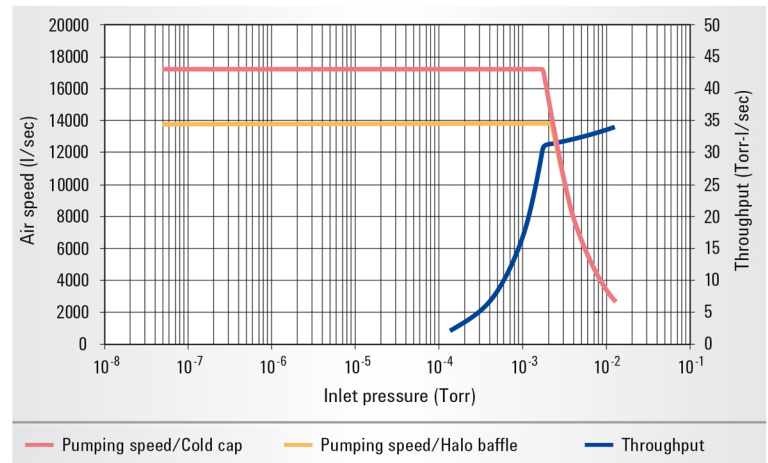
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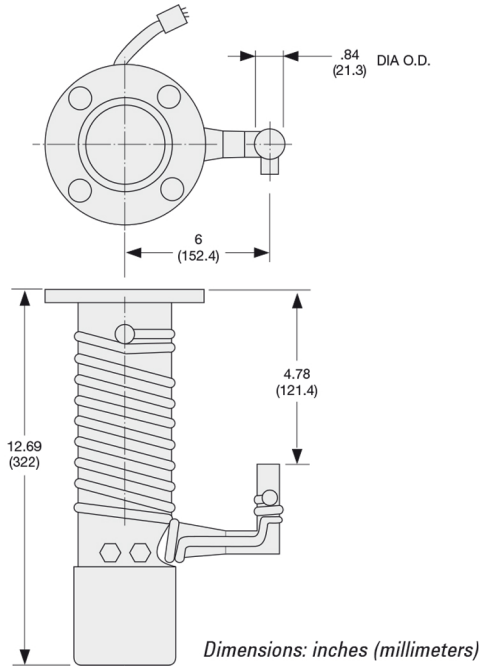
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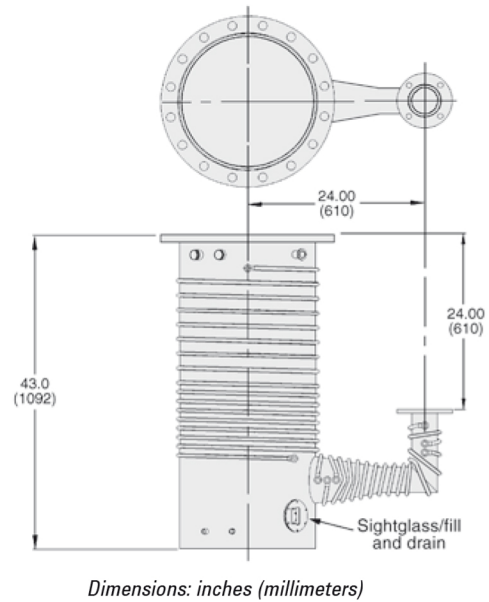
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Dimensions

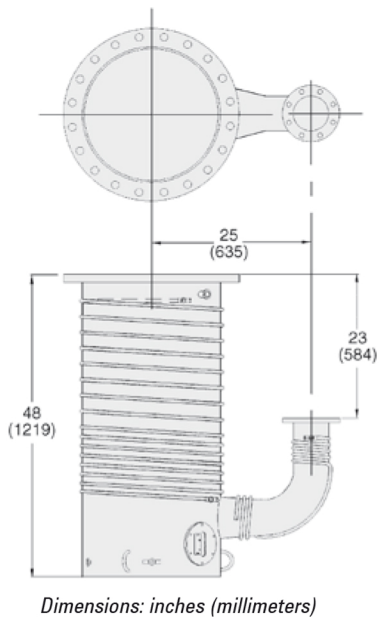
HS-2



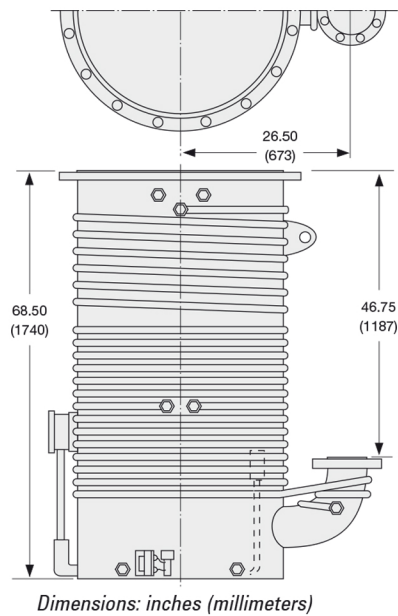
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Features & Benefits

- low cost of ownership
- fully optimized jet
- highest throughput
- high pumping speeds
- low ultimate pressure
- long-term reliability
- fluid-level sight glass provides quick indication of fluid status
- fractionating jet purifies pumping fluid
- stainless steel pump body and jet
- high tolerable forepressure
- excellent backstreaming
- built for production volumes
- robust boiler design
- easy to maintain

Applications

- vacuum furnaces • metallizing • large area coating • molecular beams • thin film deposition • optical/electronic/protective coating

