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Agilent TwisTorr 74FS
Technical Specifications

Pumping speed	KF40	CFF 2.75"	ISO 63	CFF 4.5"
N_2	44 L/s	50 L/s	60 L/s	60 L/s
He	33 L/s	40 L/s	54 L/s	54 L/s
H_2	28 L/s	31 L/s	42 L/s	42 L/s
Ar	40 L/s	51 L/s	59 L/s	59 L/s
Max Gas Throughput (*)	Air Cooling (35°C ambient temperature)		Water Cooling (25°C water temp. / 35°C ambient temp.)	
N_2	130 SCCM		130 SCCM	
Ar	80 SCCM		80 SCCM	
(*) Backing pump 5 m^3/h				
Compression ratio and foreline tolerance (**)				
N_2	1.0×10^9		>12 mbar	
He	2.0×10^5		>10 mbar	
H_2	1.0×10^4		>04 mbar	
Ar	$> 1.0 \times 10^9$		>14 mbar	
(**) Foreline Tolerance defined as the pressure at which the turbopump still produces a compression of 100, estimated in water cooling mode				
Base pressure with recomm. forepump	$< 5 \times 10^{-10}$ mbar ($< 3.75 \times 10^{-10}$ Torr)			
Inlet flange	KF 40, ISO 63, CFF 4.5", CFF 2.75"			
Foreline flange	KF16 NW			
Rotational speed	70000 rpm (1167 Hz driving frequency)			
Start-up time	< 2 minutes			

Recommended forepump	Agilent DS 40M / DS 102 Rotary Vane Pump Agilent IDP-3/IDP-7 Dry Scroll Pump	
Operating position	Any	
Oper. ambient temp.	+5 °C to +35 °C	
Rel. humidity of air	0 - 90 % (not condensing)	
Bakeout temp.	80 °C for ISO (120 °C for CFF) at inlet flange	
Lubricant	Permanent lubrication	
Cooling requirements		
Air cooling	Forced air (5-35 °C ambient temp.) Air flow temperature +5° C to +35 °C	
Water cooling	Water temperature from +15°C to +25°C Water flow min. 65 L/h	
Noise Pressure level (at 1 mt at full speed)	40 dB(A)	
Storage temp.	-40 °C to +70 °C	
Max altitude	3000 m	
Weight kg (lbs)	ISO 63 CFF 4.5" CFF 2.75" KF 40	2.05 (4.50) 3.50 (7.70) 3.34 (7.35) 2.37 (5.22)

Conformity to norms
CE, C-CSA-US, RoHS compliant as per 2011/65/UE

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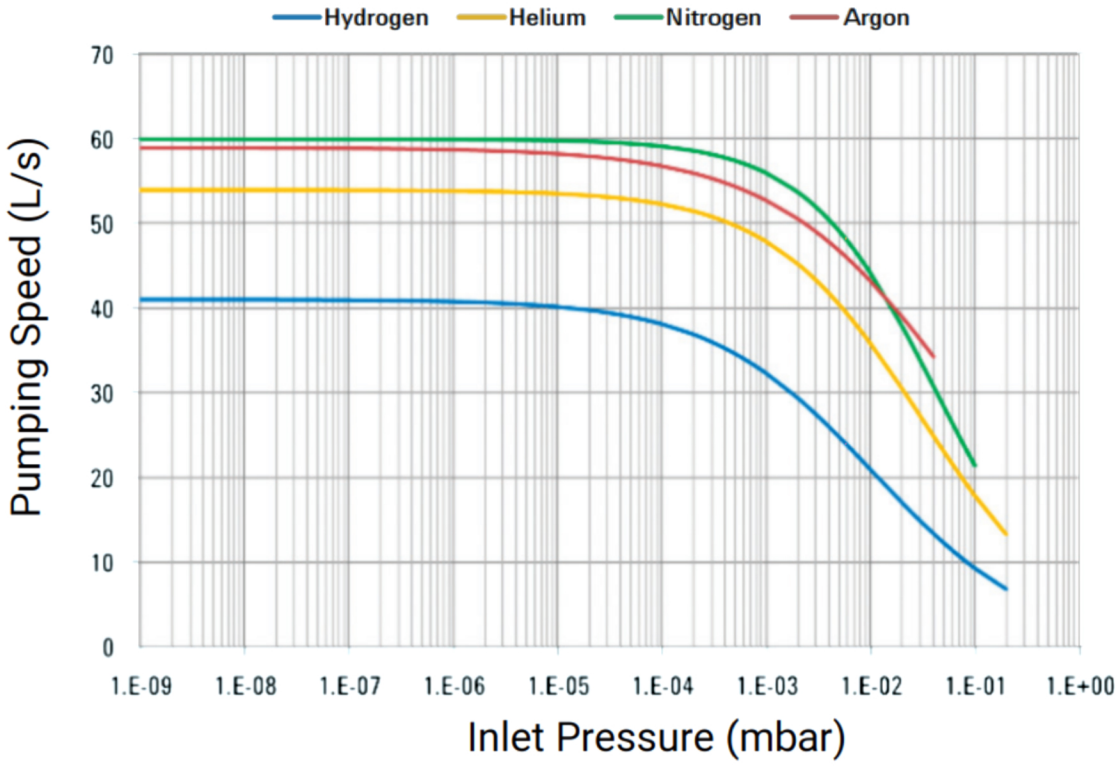
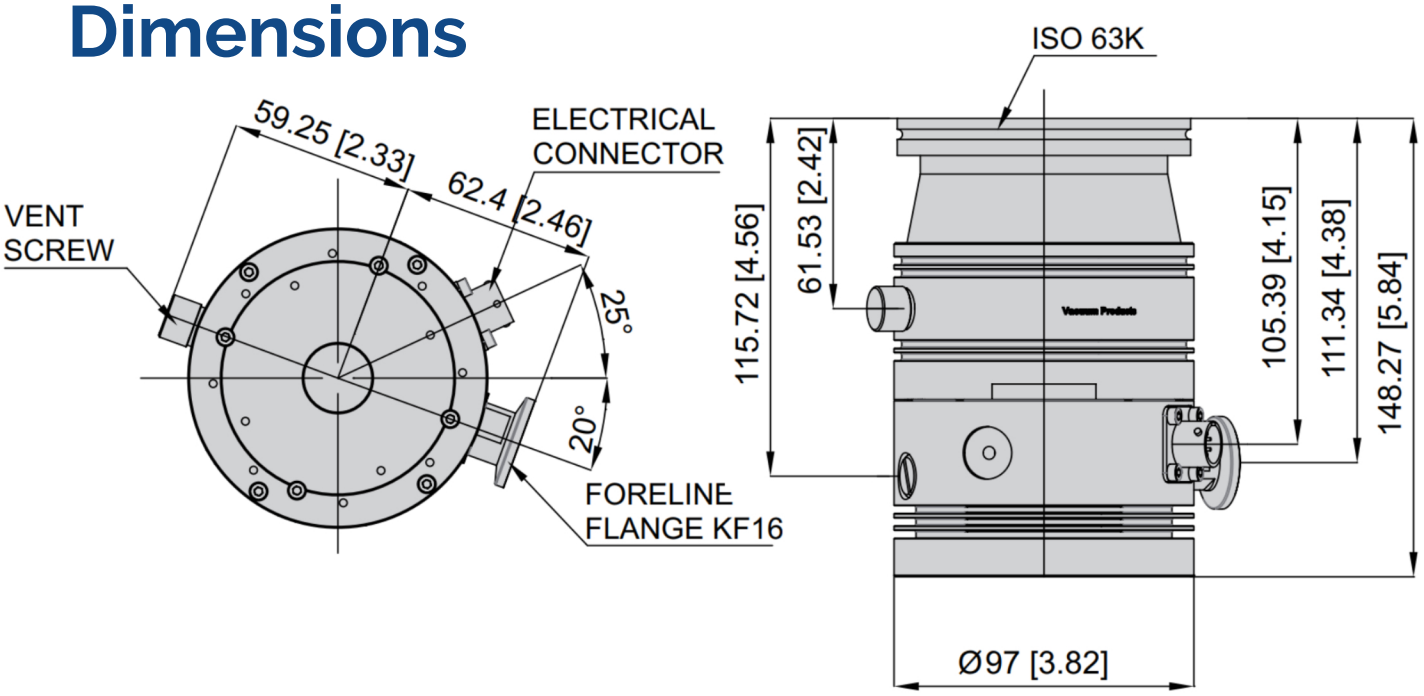
Pumping Curves



Dimensions



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Features & Benefits

- provides high performance. reliability & economic advantages
- high compression ratios for light gases
- high throughput & high tolerance of foreline pressure
- compact rotor design
- energy-efficient
- low operating temperature
- reduced noise & vibration
- unique bearing & dry lubrication
- no oil contamination
- can operate in any orientation

Applications

- academic research • electron microscopes • analytical instruments
- industrial • semiconductor • mass spectrometry • thin film deposition
- device processing