

## Turbo-V 1K-G Pump



### Product description

The high-throughput Agilent Turbo-V 1K-G turbomolecular pump is a dedicated vacuum pumping system offering 1,000 L/s pumping speed. The Turbo-V 1K-G is designed for industrial use, specifically as a turbo pump for thin film deposition equipment. Its pumping stages, and the entire pump structure, are optimized to work with very high flows of argon under high temperature load.

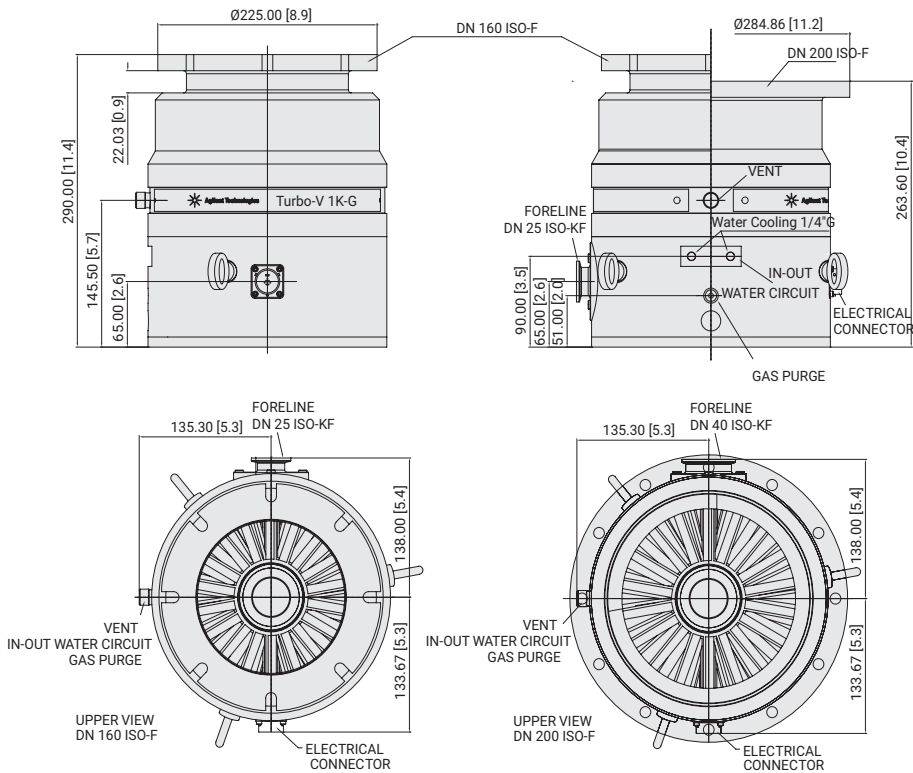
Typical industrial vacuum coating applications include solar and flat panel display manufacturing. The pump's robust design and its advanced electronics, rack type or onboard solution, make the Turbo-V 1K-G the optimum pumping solution for the vacuum coating industry.

### Features and benefits

- Application-specific pumping solution designed for thin film deposition equipment
- High pumping speed and high gas throughput
- Rugged design and highly efficient cooling system for continuous operation
- Gas Purge for bearings protection

### Advanced electronics

- Rack type or Navigator on board controllers
- Versatile electronics interface with easy to use control Software
- Analog I/O signals and RS232/RS485 interface as standard Agilent Profibus interface as option

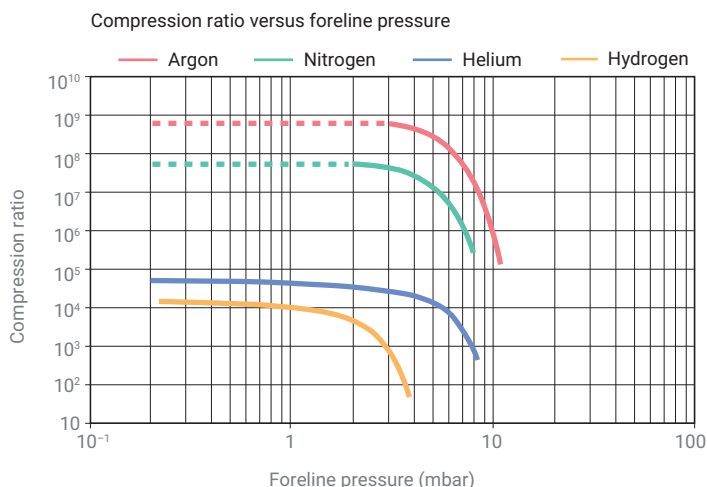
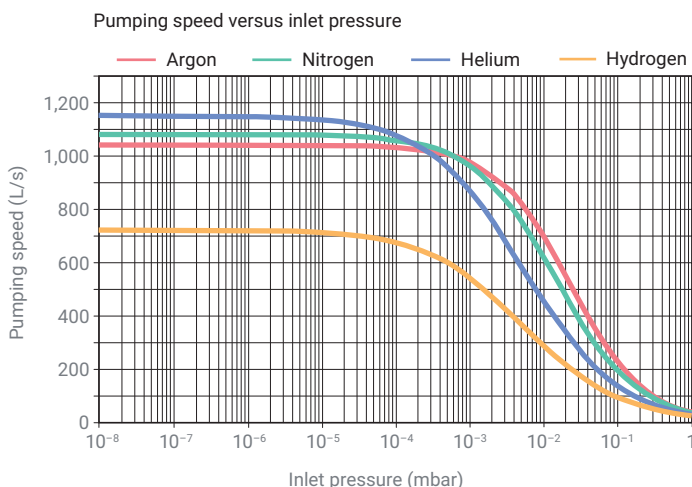


Dimensions: millimeters (inches)

## Technical specifications

Pumping Speed	DN 160 Ar: 750 L/s N <sub>2</sub> : 810 L/s He: 950 L/s H <sub>2</sub> : 680 L/s DN 200 Ar: 1,040 L/s N <sub>2</sub> : 1,080 L/s He: 1,150 L/s H <sub>2</sub> : 730 L/s
Compression Ratio	Ar: >5 × 10 <sup>8</sup> N <sub>2</sub> : >5 × 10 <sup>7</sup> He: >4 × 10 <sup>4</sup> H <sub>2</sub> : 1.5 × 10 <sup>4</sup>
Base Pressure* (with Recommended Forepump)	<1 × 10 <sup>-10</sup> mbar
Inlet Flange	DN 160 ISO-F, DN 200 ISO-F
Foreline Flange	DN 160: DN 25 ISO-KF DN 200: DN 40 ISO-KF
Nominal Rotational Speed	45,500 rpm
Start-Up Time	<5 minutes
Minimum Recommended Forepump	>20 m <sup>3</sup> /h (TriScroll 600, DS 602)
Operating Position	Any
Operating Ambient Temperature	5 to 35 °C
Bakeout Temperature	80 °C at inlet flange max (ISO flange)
Vibration Level (Displacement)	<0.01 µm at inlet flange
Cooling Requirements	Water
Power Supply	Input voltage: 100 to 240 Vac Input frequency: 50 to 60 Hz Max input power: 600 VA Stand-by power: 30 to 35 W Max operating power: 400 W using nitrogen and lighter gases (water cooling setting) 260 W using Argon (air cooling setting)
Protection Fuse (Navigator Controller)	1 × 6.3 A
Serial Communication (Navigator Kit)	RS232 cable with a 9-pin D-type male connector and a 9-pin D-type female connector, and Navigator software (optional)
Storage Temperature	-20 to 70 °C
Weight	26.8 kg (59.1 lb)

\* According to standard DIN 28 428.



## Ordering information

Description	Part Number
<b>Pumping Systems</b>	
Turbo-V 1K-G DN 160 ISO-F	8698961R002
Turbo-V 1K-G DN 200 ISO-F	8698962R001
Turbo-V 1K-G DN 200 CF-F (10 in CFF)	8698962R004
<b>Controllers</b>	
Turbo-V 1K-G Navigator Controller, 120 to 220 V	9698978M005
Turbo-V 1K-G Rack Controller, 100 to 240 V	X3501-64005
<b>Accessories</b>	
Mains Cable NEMA Plug, 3 m Long	9699958
Mains Cable European Plug, 3 m Long	9699957
RS232 – Serial Cable	9699883
Inlet Screen DN 160	9699304
Inlet Screen DN 200	9699316
Water Cooling Kit Straight Hose Barb for 9 mm id Hose	9699825
Water Cooling Kit 90 Degree Fitting for 9 mm id Hose	9699826
Vent Flange, DN 10 ISO-KF/M8	9699108
Vent Device with Adjustable Delay Time for Standard Rack Controller	9699831
Vent Valve for Standard Rack Controller	X3501-68002
Vent Valve for Navigator Controller	9699834
Purge Valve DN 16 ISO-KF-M12 20 SCCM	9699241
Purge Valve 7/16-M12 20 SCCM	9699242

Recommended Forepump	
Rotary Vane Pump DS 602, with 1 ph, Worldwide Motor	9499335
Rotary Vane Pump DS 602, with 3 ph, Worldwide Motor	9499336
Dry pump TriScroll 600, with 1 ph, Worldwide Motor	PTS06001UNIV
Dry pump TriScroll 600, with 3 ph, Worldwide Motor	PTS06003UNIV
Dry pump TriScroll 600 Inverter, with 1 ph, Worldwide Motor	PTS06001INV

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