

Agilent IDP-4 Dry Scroll Pump



Product description

The Agilent IDP-4 dry scroll pump is an oil-free, hermetic, and eco-friendly vacuum pump with the most compact footprint in the IDP family. Its inverter-driven architecture combines adjustable pumping speed with universal voltage capability. This supports optimal pumping performance and minimizes energy consumption. The pump design isolates the motor and bearings from the vacuum path, extending bearing life and ensuring a contaminant-free vacuum environment.

With excellent vacuum performance and ease of maintenance, the IDP-4 is well-suited for integration into analytical instruments and vacuum systems worldwide, including helium-based applications where minimized helium permeation and leakage are critically important.

Features and benefits

Compact and lightweight design

- Smallest footprint in the IDP family enables integration into space constrained systems
- Lightweight construction simplifies handling and installation

Low power consumption

- Efficient motor and control design help reduce energy use
- Lower operating cost over pump lifetime

Advanced inverter-driven performance

- Adjustable speed control allows tuning of pump performance to match specific application needs and extension of operational life
- Quieter operation at lower speeds improves usability in lab environments

Universal voltage compatibility

- Designed for global deployment with wide-range voltage support

Oil-free, clean vacuum performance

- Dry scroll technology delivers contaminant-free vacuum
- Ideal for sensitive analytical instruments and clean applications

High leak tightness

- Special pump model available to support applications using helium

Easy maintenance

- Simple and fast tip seal replacement using common hand tools
- Long service intervals reduce downtime

IDP-4 dry scroll pump outline drawing

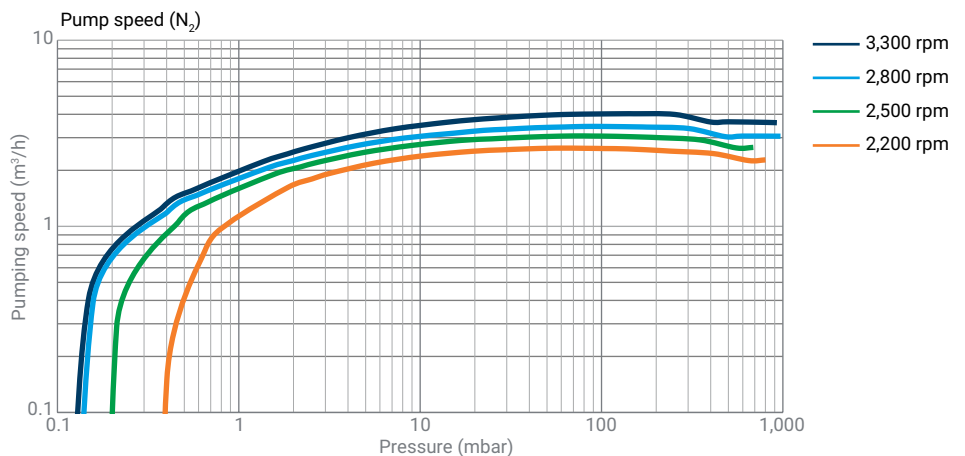
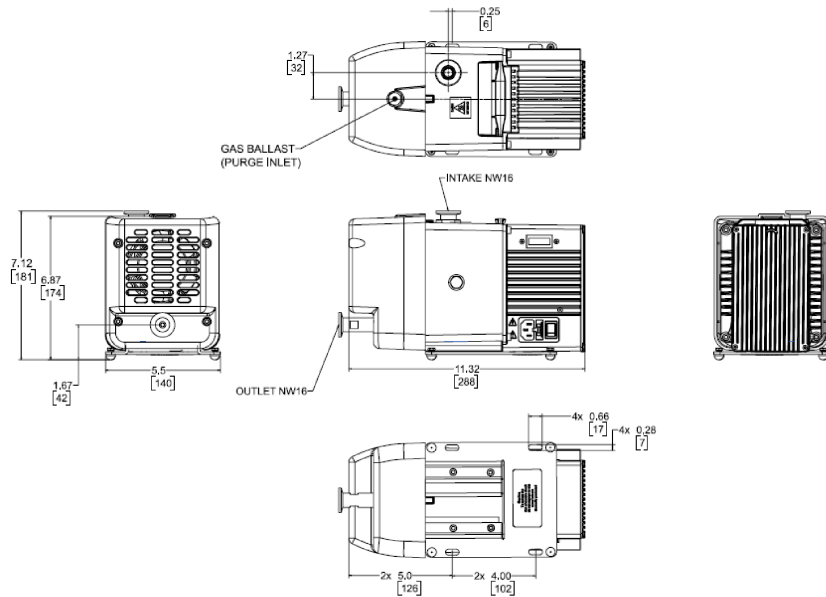


Figure 1. Agilent IDP-4 dry scroll pump pumping speed.

IDP-4 dry scroll pump technical specifications

Parameter	Value
Dimensions (H × W × L)	181 mm × 139 mm × 288 mm (7.1" × 5.5" × 11.3") (standard pump) 237 mm × 139 mm × 288 mm (9.3" × 5.5" × 11.3") (with VPI Valve)
Peak Pumping Speed: (ISO 21360-1:2020) (ISO 21360-2:2020)	65 L/min (4 m ³ /h, 2.35 cfm)* (N ₂) 65 L/min (4 m ³ /h, 2.35 cfm)* (He)
Media	No corrosive, explosive, or particulate-forming gases
Ultimate Pressure: (ISO 21360-1:2020) (ISO 21360-2:2020)	1.8 × 10 ⁻¹ Torr (2.4 × 10 ⁻¹ mbar)*
Maximum Recommended Continuous Inlet Pressure	1 atm (0 psig, 760 Torr, 1,013 mbar)
Maximum Inlet Pressure	1 atm (0 psig, 760 Torr, 1,013 mbar)
Maximum Outlet Pressure	0.45 atm (6.5 psig)
Inlet Connection	NW16
Exhaust Connection	NW16
Gas Ballast	Female 1/8 in NPT (included breather vent and adapter kit p/n IDP3GBKIT)
Water Vapor Handling: (PNEURO P 6602:1979)	≤ 10 g/h at 55 Hz (gas ballast accessory p/n X3802-60074 installed)
Ambient Operating Temperature	5 to 40 °C (41 to 104 °F)
Storage Temperature	-20 to 60 °C (-4 to 140 °F)
Power Consumption	95 W (at 2,200 rpm)** 160 W (at 3,300 rpm)**
Operating Voltages	Single Phase 100 to 127 VAC 50/60 Hz, Single Phase 200 to 240 VAC 50/60 Hz
Motor Thermal Protection	Auto-restarting thermal shutdown and fuse-based overcurrent protection (fuse does not automatically reset)
Operating Speed	36 to 55 Hz (2,200 to 3,300 rpm) Default Speed 55 Hz (3,300 rpm)
Cooling System	Air-cooling
Weight	7.7 kg (16.9 lbs)
Shipping Weight	9.8 kg (21.6 lbs)
Sound Pressure Levels: (EN ISO 2151:2008) (ISO 4871:1996) (ISO 11201:2010)	50 ± 2.5 dB(A) without gas ballast (at 2,200 rpm) 55 ± 2.5 dB(A) without gas ballast (at 3,300 rpm)
Leak Rate	< 1 × 10 ⁻⁶ atm·cc/s (He)
Hour Meter	Hour meter available via visual display and serial interface
IP Rating	IP20
Safety	Machinery Directive 2006/42/EC:2006 1. EN 1012-2:1996+A1:2010 2. EN ISO 12100:2012 Low Voltage Directive 2006/95/EC:2007 1. IEC 61010-1 Ed. 3.1 b:2018 - CSA-certified for U.S.A. and Canada - CE marked - RoHS market
Emissions and Immunity	Electromagnetic Compatibility 2014/30/EU:2014 - EN 61326-1:2013 Class A - EN 61000-3-2:2019 Class A - EN 61000-3-3:2014/A2:2022 Class A - EN 61000-6-2:2020
Electromagnetic Compatibility	Electromagnetic Compatibility 2014/30/EU:2014

* At 55 Hz pump rotational frequency (3,300 rpm)

** Power usage without VPI valve

Ordering information

Part Number	Description
X3802-64000	IDP-4 dry scroll pump
X3802-64010	IDP-4 dry scroll pump, with VPI
X3802-64400	IDP-4 dry scroll pump, for helium use
Accessory Parts	
X3802-67120	Exhaust flange kit, for IDP-4 dry scroll pump
X3802-67300	Fan and cowling kit, for IDP-4 dry scroll pump
X3802-68001	Serial communication cable kit, USB-RS485
EXSLRIDP3	Exhaust silencer kit, for IDP-3 and IDP-4 dry scroll pumps
VPI16IDP24DC	Inlet valve kit, VDC, for IDP-3 and IDP-4 dry scroll pumps
IDP3GBKIT	Breather vent and adapter kit, for IDP-3 and IDP-4 dry scroll pumps
IDP3VIBISOKIT	Vibration isolation kit, for IDP-3 and IDP-4 dry scroll pumps
REPLSLRFILTER2	Replacement filter element, for IDP-3 and IDP-4 dry scroll pumps exhaust silencer
Service Parts	
IDP3TS	Tip seal replacement kit, for IDP-3 and IDP-4 dry scroll pumps

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