Agilent

Trusted Answers

Quiet, Oil-Free, Worry-Free: Vacuum Made Better

Agilent IDP Dry Scroll Pump Family

Worry-free for the user, safe for the environment

Agilent IDP dry scroll pumps are designed to deliver maximum uptime and operate continuously to meet your application challenges. They are quiet, low vibration, oil-free, and engineered to minimize energy consumption – worry-free for the user and for the environment. Robust and reliable, Agilent IDP scroll pumps require DIY maintenance only every few years, performed in about half an hour.

Agilent IDP dry scroll pump family: clean, reliable vacuum for a wide range of applications including:

- Helium recirculation
- Mass spectrometry
- Electron microscopy
- Thin film deposition
- Backing high vacuum pumps
- LED bulb manufacturing
- High energy physics
- Vacuum ovens
- Surface analysis instruments
- General laboratory and sample prep
- Battery production
- Medical physics

Clean, quiet, sustainable, and cost-efficient

Quiet and low vibration

The innovative scroll design reduces noise and vibration.

Increased efficiency and system performance

IDP dry pumps rapidly pump down to low base pressures, making them excellent as stand-alone pumps or backing pumps to maximize system performance and reliability.

A sustainable solution with no oil leaks, spills, or risk of contamination, and low-power consumption

IDP pumps deliver clean, low-power performance with a minimal environmental footprint. Designed for worry-free operation, they eliminate the risks and maintenance associated with oil. Operating completely oil-free, there are no leaks to manage, no vapors to contend with, and no hazardous waste disposal. The result is a cleaner workspace, simplified maintenance, and proven performance you can trust.

A cleaner work environment

No trays to control oil leaks, no hydrocarbon vapors, and no oil mist filter required.

Low cost of ownership

Dry scroll pumps eliminate the expense of frequent oil topping, oil changing, and waste disposal.

Simple, infrequent maintenance and long continuous life

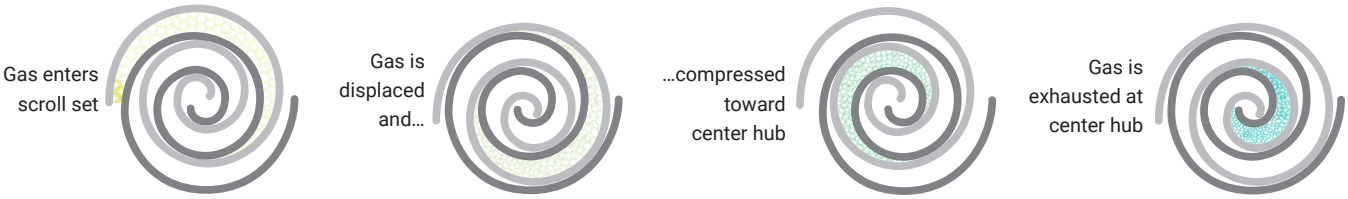
Unlike traditional pumps that demand hours of scheduled maintenance, or multi-roots pumps that require expensive and inconvenient service intervention, IDP scroll pumps only need a simple DIY, tip seal or pumping module replacement. This can be performed approximately every two to three years and requires about half an hour.

Easy installation and integration

With their small footprint, lighter weight, and minimal power requirements, IDP pumps accommodate any system design. They place litte burden on utilities, require no special voltage, and are suitable for use inside cabinet enclosures. Agilent IDP dry scroll pumps also use standard IEC power cords that are not hard-wired to the motor.

How does the scroll mechanism work?

Agilent IDP dry scroll pumps have a proven, clean, pumping mechanism. They generate vacuum using one or more pairs of two nested spiral scrolls, one fixed and one orbiting. As one scroll orbits within the other, gases are compressed and move along the path towards the center of the pump where they are exhausted. Watch our video **here** to learn more.



Innovative hermetic design

IDP pumps are hermetically sealed to prevent leakage and allow recovery of process gases

Tip seal replacement is fast, easy, and complete in about half and hour.

See how simple replacing the tip seals can be **here**.

Quiet | **Easy DIY maintenance** | **Oil-free** | **Low cost of ownership** | **Clean and sustainable** | **Compact** | **Energy efficient** | **Low vibration**

Engineered to be quiet, reliable, and oil-free

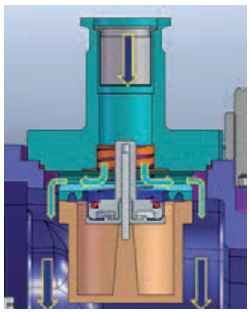
Key IDP scroll pump design features

Fail-safe, integral isolation valve prevents accidental contamination

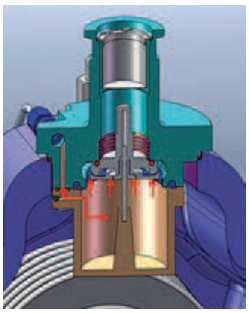
This optional valve protects against backwards migration and sudden venting.

How it works:

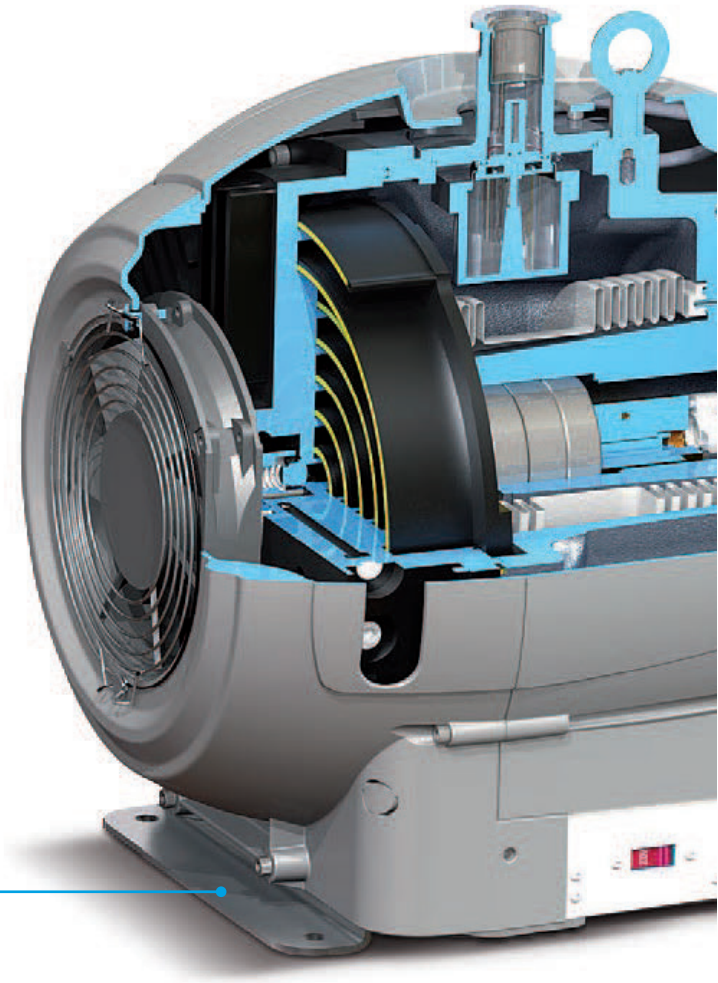
- Under normal conditions, a spring holds the inlet valve open.
- Upon power loss, the solenoid valve vents a small chamber beneath the valve, which closes the inlet valve (approximately 20 milliseconds).
- Once power is restored, the solenoid closes, the pump evacuates, and the inlet valve opens (approximately 10-30 seconds).



Vacuum in pump,
inlet valve opens



Pump vents,
inlet valve closes

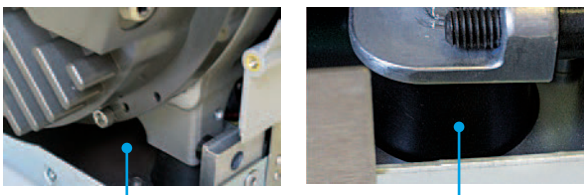


Universal voltage

Can be used anywhere in the world.

Protect your system from vibration

Integral vibration isolation feet or wheels, depending on the model, reduce vibrations by separating motor and scroll vibrations from the mounting brackets and support surface.



Vibration isolators

The New Agilent IDP-4: Compact, Reliable, and Helium Dilution

The Agilent IDP-4 dry scroll pump delivers clean, oil-free vacuum in the most compact footprint of the IDP family, combining inverter-driven performance, adjustable speed control, and universal voltage capability.

The IDP-4 offers an ideal balance of compact size, lightweight design, and performance, making it an excellent choice for research labs, industrial users, leak detection system integrators, analytical laboratories, and helium recirculation. Built on the proven legacy of the IDP-3, the IDP-4 is engineered for OEM integration, analytical instruments, and applications where size, efficiency, and reliability matter most.

Compact footprint and lightweight

- Smallest and lightest pump in the IDP family
- Ideal for space-constrained systems and portable instruments
- Designed for effortless integration and system mobility

Wide-range voltage compatibility

- Universal voltage for seamless global deployment
- Simplifies OEM qualification and regional standardization
- Enables fast, plug-and-play installation worldwide

Remote control and real time monitoring

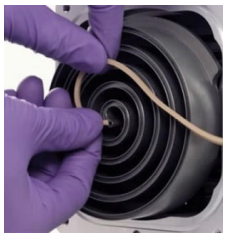
- Easy communication via RS-485 interface
- Compatible with Agilent A-PLUS software

Low power consumption

- Inverter-driven motor improves energy efficiency
- Reduced operating costs and lower total cost of ownership
- Supports sustainability goals without compromising performance

Speed control with advanced inverter technology

- Adjustable pumping speed to match application requirements
- Reduced noise and vibration for quiet lab environments
- Optimized wear and extended service intervals

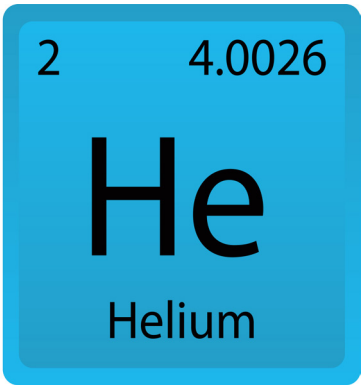


Maintenance made effortless

- Simple DIY tip-seal replacement every two to three years
- Maintenance completed in ~15–30 minutes using common tools
- Predictable service intervals minimize downtime

Vacuum system protection

- VPI valve protects the vacuum system and turbo pump during unexpected venting
- Prevents backflow of gas from inside the pump
- Fast and effective protection isolating the vacuum system in just 20 ms
- The VPI valve is available in selected IDP-4 models



IDP-4: Superior helium management

Recommended for applications involving helium use and designed to meet stringent market demands:

Unmatched reliability – Built on the legacy of IDP-3 and decades of expertise in dry scroll technology

Superior helium management – High pumping speed and proven long-term He tightness to protect costly Helium-3

Effortless integration – Compact footprint, light weight, universal voltage, for seamless integration and system upgrades

Performance metrics confirmation – Rigorous He permeation testing aligned with worldwide standards

Smart Features Available on the New Agilent IDP-35 and IDP-45

Advanced technology for higher-capacity vacuum applications

Adjustable gas ballast valve

The IDP-35 and IDP-45 models come standard with a simple (no tools), user-adjustable gas ballast knob. Select Hi, Low, or No Flow, depending on vapor handling requirements.

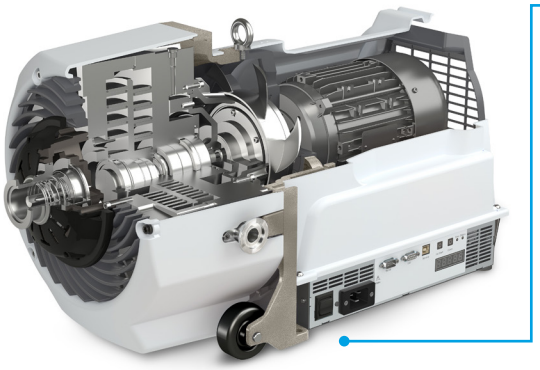
By setting the gas ballast knob, easily optimize pump performance based on the vapor load, ensuring efficient and reliable operation.

Integrated Pirani gauge head

The IDP-35 and IDP-45 pumps can be fitted with an integrated **Pirani gauge head** to measure pressures in the range of $1x10^{-4}$ to 1000 mbar, ensuring effective system monitoring.

Hermetic design

The IDP-35 and IDP-45 pumps ensure complete isolation of pumped gases from the external environment. This closed system from inlet to exhaust is particularly well suited for rare gas and helium recirculation applications.



Reduce vibration and make movement effortless

Integral vibration isolation system reduces vibrations from the support surface while wheels enable easy movement of the pump wherever reliable vacuum is required

Simplify connection

The IDP-35, and IDP-45 are equipped with a Variable Frequency Drive (VFD), providing universally equivalent pumping performance independent of supply voltage. Get consistent performance worldwide from 105 VAC to 240 VAC (50 Hz or 60 Hz). By setting the gas ballast knob, easily optimize pump performance based on the vapor load, ensuring efficient and reliable operation.

Plug and play: worry-free operation

With long life and simple tip seal replacement needed every two to three years, IDP dry scroll pumps truly are worry-free. The two-piece crankshaft design, unique to Agilent, eliminates the need for complex measuring, or specialized tools, and infrequent tip-seal replacement can be completed by an untrained technician in about half an hour.

Increase control, precision, and enable remote real-time monitoring of your vacuum system

Interface with a PC or programmable logic controller (PLC) for remote operation and seamless integration: The IDP-35 and IDP-45 dry scroll pumps can be used with RS-232 or RS-485 or with an analog interface. These serial interfaces not only enable your vacuum system to connect with a desktop or laptop PC but also allow for integration into complex systems controlled by PLCs.

Know what is happening within your vacuum system: Monitor the hour meter and rotational frequency on the easy-to-read digital display.

Enable precise vacuum control: The interface panel on the IDP-35 and IDP-45 scroll pumps enables precise control over the pump performance so it can be optimized to the needs of your specific application.

- Start the pump, initiating its operation.
- Modify the rotational speed, thereby controlling pumping speed, within a specified range. Decrease once vacuum pressure is reached to make the system even quieter and reduce energy consumption and wear.

How to select your Agilent IDP dry scroll vacuum pump

This at-a-glance guide will help you choose the Agilent IDP pump with the right pumping speed, base pressure, and motor specifications for your applications.

IDP model	Pumping Speed		Base Pressure		Motor Rating/ operating voltage	Common Applications	Advantages
IDP-3	60 Hz/24 VDC 60 L/min 3.6 m^3/h	50 Hz 50 L/min 3.0 m^3/h	60 Hz/24 VDC 3.3 x 10^{-1} mbar 2.5 x 10^{-1} Torr	50 Hz 3.3 x 10^{-1} mbar 2.5 x 10^{-1} Torr	0.16 HP (120 W)/ 100-120; 200-240 VAC	- Leak detection - GC/MS - Helium recirculation	- Small and light primary pump - 24 V drive
IDP-4	55 Hz 65 L/min 4 m^3/h at full speed setting		55 Hz 2.4 x 10^{-1} mbar 1.8 x 10^{-1} Torr at full speed setting		0.16 HP (120 W)/100-127; 200-240 VAC	- Leak detection - GC/MS - Helium recirculation	- Lightest, most compact primary pump - Compact size for integrating the pump into your instrument - Universal pumping performance at all global frequencies and input voltages - Worldwide voltages compatibility
IDP-7	60 Hz 152 L/min 9.1 m^3/h	50 Hz 120 L/min 7.2 m^3/h	60 Hz 2.6 x 10^{-2} mbar 2.0 x 10^{-2} Torr	50 Hz 4.0 x 10^{-2} mbar 3.0 x 10^{-2} Torr	0.38 HP (300 W)/ 100-120; 200-240 VAC	- Vacuum ovens - Helium recirculation - Backing high vacuum pump - General laboratory vacuum	- More pumping speed in a compact, tabletop pump - Handles water vapor
IDP-10	50 Hz or 60 Hz at full rotational speed (factory setting) 170 L/min 10.2 m^3/h		50 Hz or 60 Hz at full rotational speed (factory setting) 2.0 x 10^{-2} mbar 1.5 x 10^{-2} Torr		0.5 HP (350 W)/ 100-127; 200-240 VAC	- Microscopy instruments - Surface analysis instruments - Mass Spectrometry - Helium recirculation - Thin film deposition	- Universal pumping performance at all input frequencies - Remote speed control or on/off capability
IDP-15	60 Hz 256 L/min 15.4 m^3/h	50 Hz 214 L/min 12.8 m^3/h	60 Hz 1.3 x 10^{-2} mbar 1.0 x 10^{-2} Torr	50 Hz 1.3 x 10^{-2} mbar 1.0 x 10^{-2} Torr	0.75 HP (560 W)/ 100-115; 220-230 VAC	- General laboratory vacuum - Thin film deposition - LED, bulb manufacturing *With inlet isolation valve* - GC/MS - Beam and particle physics - Backing a turbo pump	- Quietest pump available - Lowest vibration at inlet available - Good speed to evacuate a large chamber - Safegaurds your system and high vacuum pump in case of power loss - Isolates the pump inlet during turbulent stop and start
IDP-35	60 Hz 583 L/min 35 m^3/h		60 Hz 1.07 × 10^{-2} mbar 8 × 10^{-3} Torr		1.5 HP (1.1 KW)/ 100-127; 200-240 VAC	- Helium recirculation - Leak detection - LC/MS - Vacuum ovens - Dry roughing for backing turbo pumps - Beam and particle physics	- Hermetically sealed (magnetic torque coupling) - Precise vacuum control - Smart features-visibility and control - Communications/ Remote access and control (analog and digital) - Inverter for universal voltage, flexible and easy
IDP-45	60 Hz 750 L/min 45 m^3/h		60 Hz 1.07 × 10^{-2} mbar 8 × 10^{-3} Torr		1.5 HP (1.1 KW)/ 100-127; 200-240 VAC		

Ordering information

IDP-3	Description	Part number
	IDP-3, 1φ, 220 V, 50/60 Hz	IDP3A01
	IDP-3, 1φ, 115 V, 60 Hz	IDP3B01
	IDP-3, 1φ, 100 V, 50/60 Hz	IDP3C01
	IDP-3, 24 VDC	IDP3D01
	With inlet isolation valve	
	IDP-3, 1φ, 220 V, 50/60 Hz	IDP3A21
	IDP-3, 1φ, 115 V, 60 Hz	IDP3B21
	IDP-3, 1φ, 100 V, 50/60 Hz	IDP3C21
	IDP-3, 24 VDC	IDP3D21
	Service part numbers	
	Tip seal replacement kit	IDP3TS
	Accessory part numbers	
	Exhaust silencer kit	EXSLRIDP3
	Inlet trap	SCRINTRPNW16
	Breather vent and adapter kit	IDP3GBKIT
	Replacement filter element	REPLSLRFILTER2
	Vibration isolation kit	IDP3VIBISOKIT

IDP-4	Description	Part number
	IDP-4 dry scroll pump	X3802-64000
	IDP-4 dry scroll pump, with VPI	X3802-64010
	IDP-4 dry scroll pump, for helium use	X3802-64400
	Service part numbers	
	Tip seal replacement kit	IDP3TS
	Accesory part numbers	
	Exhaust silencer kit	EXSLRIDP3
	Inlet valve kit	VPI16IDP24DC
	Breather vent and adapter kit	IDP3GBKIT
	Vibration isolation kit	IDP3VIBISOKIT
	Replacement filter element	REPLSLRFILTER2

IDP-7	Description	Part number
	IDP-7	X3807-64000
	IDP-7 with inlet isolation valve	X3807-64010
	Service part numbers	
	IDP-7/10 tip seal replacement kit	X3807-67000
	Accesory part numbers	
	Exhaust silencer kit	X3807-68003
	Purge kit	X3807-68004
	Gas ballast kit	X3807-68008
	Inlet trap	SCRINTRPNW25
	Vibration isolation kit	SH110VIBISOKIT

Ordering information

IDP-10	Description	Part number
	IDP-10	X3810-64000
	IDP-10 with inlet isolation valve	X3810-64010
	Service part numbers	
	IDP-7/10 tip seal replacement kit	X3807-67000
	Accesory part numbers	
	Exhaust silencer kit	X3807-68003
	Purge kit	X3807-68004
	Gas ballast kit	X3807-68008
	Inlet trap	SCRINTRPNW25
	Vibration isolation kit	SH110VIBISOKIT

IDP-15	Description	Part number
	IDP-15	X3815-64000
	IDP-15 with inlet isolation valve	X3815-64010
	Service part numbers	
	IDP-15 tip seal replacement kit	X3815-67000
	Accesory part numbers	
	Exhaust silencer kit	EXSLRSH110
	Purge kit	X3807-68004
	Gas ballast kit	X3807-68008
	Inlet trap	SCRINTRPNW25

IDP-35	Description	Part number
	IDP-35	X3835-64011
	IDP-35 with Gauge	X3835-64010
	IDP-35 with Inlet Valve	X3835-64001
	IDP-35 with Inlet Valve and Gauge	X3835-64000
	Accesory part numbers	
	Inlet HEPA filter, NW40	SCRINTRPNW40
	HEPA filter, NW25	SCRINTRPNW25

IDP-45	Description	Part number
	IDP-45	X3845-64011
	IDP-45 with Gauge	X3845-64010
	IDP-45 with Inlet Valve	X3845-64001
	IDP-45 with Inlet Valve and Gauge	X3845-64000
	Accesory part numbers	
	Inlet HEPA filter, NW40	SCRINTRPNW40
	HEPA filter, NW25	SCRINTRPNW25

More than a part–a partnership

We recognize that to be successful you need more than just robust and reliable vacuum pumps and leak detection. You need someone with expertise who will listen and help you optimize your vacuum system. You need a partner who will be there for you to answer questions, troubleshoot, and provide training and operation advice. You need fast delivery and, when necessary, fast service to get you "back up and running" quickly–in days and not weeks. Contact us any time. Agilent is that partner and has been that partner for scroll pumps since 1995.

30+ Agilent Vacuum Years
of Dry Scroll Pump Innovation

Learn more about IDP dry scroll vacuum pumps
www.agilent.com/vacuum/idpscrollpumps

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Americas
Toll free: +1 800 882 7426
vpl-customercare@agilent.com

Europe, Middle East, and Africa
Tel: +39 011 9979 369
Toll free: Tel: 800 234 234 00
vpt-customercare@agilent.com

Asia Pacific
inquiry_lsca@agilent.com

China
Landline phone: 800 06 778
Mobile phone: 400 06 778
contacts.vacuum@agilent.com

Other countries
vpt-customercare@agilent.com

For more information, please contact your Agilent representative or visit **www.agilent.com/en/product/vacuum-technologies** to chat live with a vacuum expert.

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