

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 and cryogenics
- 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



The Agilent family is growing: Introducing the new IDP-35 and IDP-45 dry scroll pumps featuring smart, user-friendly technology for your higher capacity vacuum needs

Introducing the newest members of the Agilent dry scroll pump family, the IDP-35 and IDP-45 with new smart features, delivering clean, quiet, oil-free vacuum, for a wider range of applications.





Clean, quiet and lower cost of ownership

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

IDP dry scroll pumps operate without oil. No leaks to contain or clean up. You won't have to worry about oil vapors or hazardous waste disposal of used oil.

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

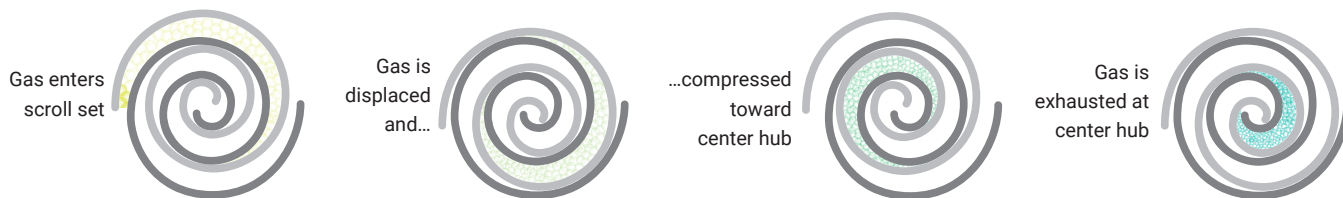
Unlike traditional pumps that demand hours of scheduled maintenance, or multi-roots pumps that require expensive and inconvenient service intervention, IDP scroll pumps only need a simple DIY, tip seal or pumping module replacement. This can be performed approximately every two to three years and requires 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 little 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 an hour.
See how simple replacing the tip seals can be [here](#).



Quiet



Easy DIY
maintenance



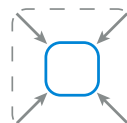
Oil-free



Low cost of
ownership



Clean and
sustainable



Compact



Energy efficient



Low vibration

Engineered to be quiet, reliable, and oil-free

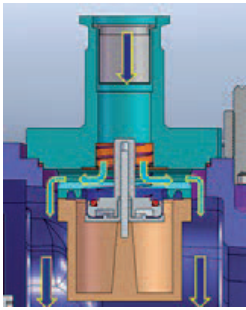
Key IDP scroll pump design features

Fail-safe, integral isolation valve prevents accidental contamination

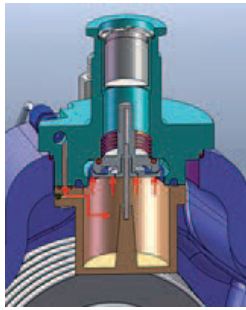
This optional valve protects against backwards migration and sudden venting.

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



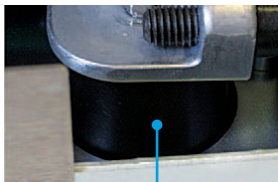
Pump vents,
inlet valve closes

Universal voltage

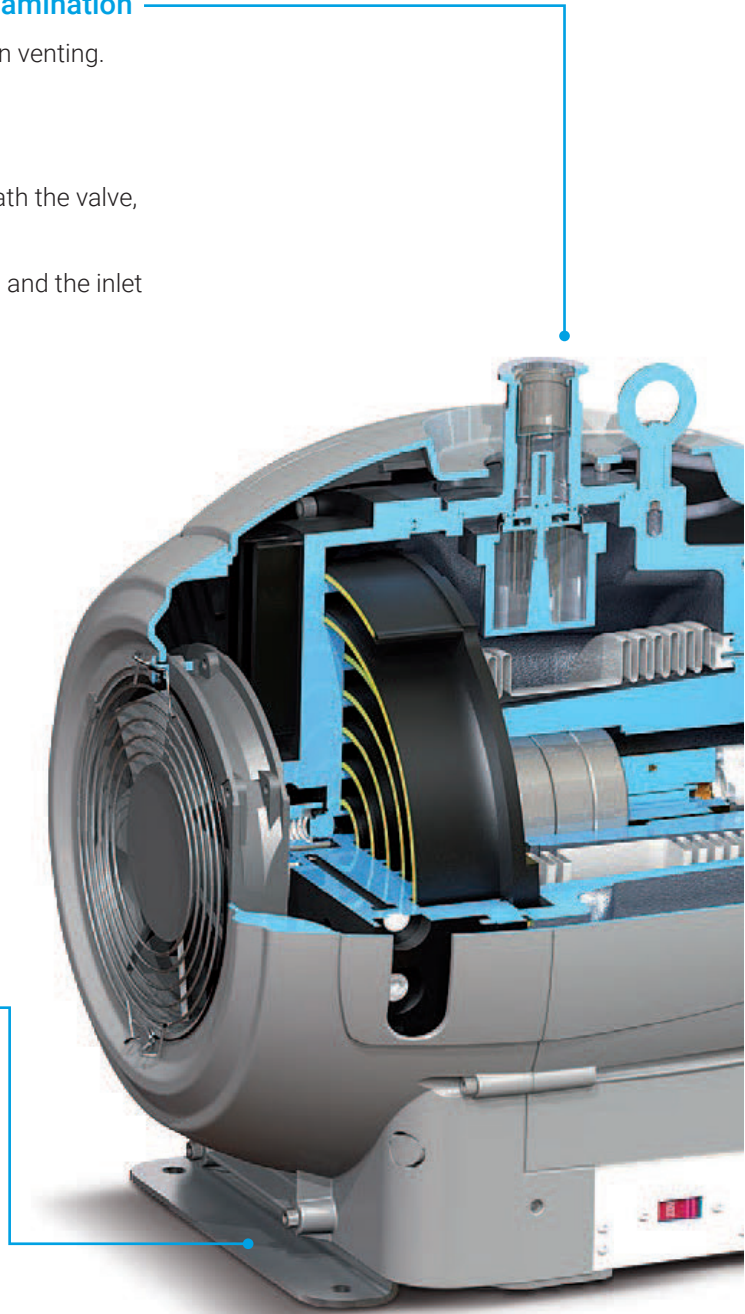
Can be used anywhere in the world.

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



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 1×10^{-4} to 1000 mbar, ensuring effective system monitoring.

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.

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:

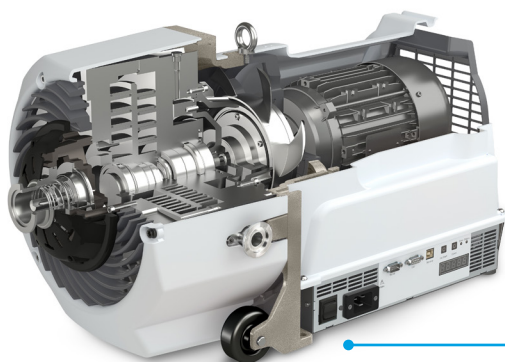
The IDP-35 and IDP-45 dry scroll pumps can be used with RS-232 or RS-485 or with an analog interface. These serial interfaces not only enable your vacuum system to connect with a desktop or laptop PC but also allow for integration into complex systems controlled by PLCs.

Know what is happening within your vacuum system:

Monitor the hour meter and rotational frequency on the easy-to-read digital display.

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 such as in cryostats.



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

Set it and forget it: 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.

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 m³/h	50 Hz 50 L/min 3.0 m³/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	<ul style="list-style-type: none"> - Leak detection - GC/MS - Helium recirculation 	<ul style="list-style-type: none"> - Lightest, most compact primary pump - Compact size for integrating the pump into your instrument - 24 V drive
IDP-7	60 Hz 152 L/min 9.1 m³/h	50 Hz 120 L/min 7.2 m³/h	60 Hz 2.6 x 10 ⁻² mbar x 10 ⁻² Torr	50 Hz 4.0 x 10 ⁻² mbar 10 ⁻² Torr	0.38 HP (300 W)/ 100-120; 200-240 VAC	<ul style="list-style-type: none"> - Vacuum ovens - Helium recirculation - Backing high vacuum pump - General laboratory vacuum 	<ul style="list-style-type: none"> - 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 m³/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	<ul style="list-style-type: none"> - Microscopy instruments - Surface analysis instruments - Mass Spectrometry - Helium recirculation - Thin film deposition 	<ul style="list-style-type: none"> - Universal pumping performance at all input frequencies - Remote speed control or on/off capability
IDP-15	60 Hz 256 L/min 15.4 m³/h	50 Hz 214 L/min 12.8 m³/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	<ul style="list-style-type: none"> - General laboratory vacuum - Thin film deposition - LED, bulb manufacturing <i>With inlet isolation valve</i> - GC/MS - Beam and particle physics - Backing a turbo pump 	<ul style="list-style-type: none"> - Quietest pump available - Lowest vibration at inlet available - Good speed to evacuate a large chamber - Safeguards 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 m³/h		60 Hz 1.07 x 10 ⁻² mbar 8 x 10 ⁻³ Torr		1.5 HP (1.1 KW)/ 100-127; 200-240 VAC	<ul style="list-style-type: none"> - Cryogenics - Leak detection - LC/MS 	<ul style="list-style-type: none"> - Hermetically sealed (magnetic torque coupling) - Precise vacuum control
IDP-45	60 Hz 750 L/min 45 m³/h		60 Hz 1.07 x 10 ⁻² mbar 8 x 10 ⁻³ Torr		1.5 HP (1.1 KW)/ 100-127; 200-240 VAC	<ul style="list-style-type: none"> - Vacuum ovens - Dry roughing for backing turbo pumps - Beam and particle physics 	<ul style="list-style-type: none"> - Smart features-visibility and control - Communications/ Remote access and control (analog and digital) - Inverter for universal voltage, flexible and easy


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	
	IDP-3 tip seal replacement kit	IDP3TS
	Accessory part numbers	
	Exhaust silencer kit	EXSLRIDP3
	Inlet trap	SCRINTRPNW16
	Vibration isolation kit	IDP3VIBISOKIT


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
	Accessory part numbers	
	Exhaust silencer kit	X3807-68003
	Purge kit	X3807-68004
	Gas ballast kit	X3807-68008
	Inlet trap	SCRINTRPNW25
	Vibration isolation kit	SH110VIBISOKIT

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
	Accessory 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-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
	Accessory 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 dry scroll pump	X3835-64000
	IDP-35 dry scroll pump with gauge	X3835-64001
	IDP-35 dry scroll pump with VPI	X3835-64010
	IDP-35 dry scroll pump with VPI and gauge	X3835-64011
	Accessory part numbers	
	Inlet HEPA filter, NW40	SCRINTRPNW40
	HEPA filter, NW25	SCRINTRPNW25

IDP-45	Description	Part number
	IDP-45 dry scroll pump	X3845-64000
	IDP-45 dry scroll pump with gauge	X3845-64001
	IDP-45 dry scroll pump with VPI	X3845-64010
	IDP-45 dry scroll pump with VPI and gauge	X3845-64011
	Accessory 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.



Learn more about IDP dry scroll vacuum pumps

www.agilent.com/vacuum/idpscrollpumps

Learn how the Agilent Vacuum Products Division
is supporting customer's sustainability goals

www.agilent.com/vacuum/green-solutions

Find a local Agilent customer center

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