

The Freedom to Choose: Agilent Turbo Pumping Systems

Vacuum pumping systems that really fit your needs



The freedom to choose. Vacuum pumping systems that really fit your needs.

From plug and pump systems to do-it-yourself pumping solutions and modular customized packages, easily find which turbo pumping system best matches your vacuum needs.

The Agilent TPS family features state of the art turbo and primary pumping technologies, to ensure that you get the best experience tailored to your specific application requirements.

Meet the TPS family: wide choice, ease-of-use and performance for your own vacuum system

Plug and pump solutions

- TPS-mini

A dry, ready to use vacuum system with a TwisTorr 70 L/s turbo pump backed by a 10 L/min dry pump. All in a single package, with the smallest footprint and lightest weight in its class.

- TPS-compact

An integrated system with a TwisTorr FS 70 or 300 L/s turbo pump and IDP-3 dry scroll pump included in a single package. For the best vacuum performance and fastest pumpdown times.

Do-It-Yourself solutions

- TPS-flexy

A flexible system with TwisTorr FS 70 or 300 L/s turbo pump, IDP-3 or IDP-7 dry scroll pump or MD-1 diaphragm backing pump, and gauge reading capability. Simply choose your TPS-flexy package, assemble the system yourself, using our easy to follow assembly instructions and video tutorial.

Customized and portable solutions

- TPS-mobile

A high capacity, roll-around cart system, featuring high compression ratios and a wide range of pumping speeds. Available with a choice of turbo pumps from 70 to 550 L/sec, with a choice of dry scroll pump or oil sealed primary pumps, and a broad choice of gauges and components.

Vacuum technology innovations in your TPS

- TwisTorr or MacroTorr stages
- FS floating suspension
- IDP dry scroll technology
- Active gauge capability
- Adaptive scroll pump driving firmware





Our mission

- Provide ready-to-use, portable vacuum devices
- Improve ease of use
- Offer the right solution for any requirement
- Guarantee flexibility and adaptability to every application
- Supply innovative vacuum technologies that increase your productivity



Your benefits

- Optimized combination of turbo and backing pumps, for the widest range of applications
- Modular design simplifies customization
- Agilent quality, for long service life and high reliability
- Service-friendly, easy access to components
- Plug and Pump: no installation or cabling required
- Onboard fore-vacuum safety valve prevents backstreaming in case of power failure
- Direct connection and reading of vacuum gauges and controllers

Vacuum made easy: the Agilent TPS family

Select your Agilent Turbo Pumping System configuration, also available online.



TPS-mini



Ideal for:

- Small volume chamber pump-down (<10 L)
- Laboratories
- Service purposes
- Medical applications
- SEM – MS applications
- Load lock chambers

Features	Benefits
Smallest footprint, lightest weight, compact, dry, clean, and robust system	Direct mounting on customer's system (no vacuum pipes needed / improved conductance / plug & pump operation)
Active gauge reading capability	Can drive a wide range vacuum gauge, no need for external gauge controller
Integrated large pressure data display	Easy system pressure monitoring
New generation turbomolecular pump TwisTorr 74 FS, backed by a dry 10 L/min diaphragm pump, inside the same case	Integrated plug and pump dry vacuum system. Cost-effective pumping solution for small volumes
Universal voltage (90 V-240 V) - CE/ CSA certified	Worldwide power configurations, complies with worldwide safety standards
RS-232 or analogical communication, pressure driven setpoint, analog setpoint	Easy to use, easy PLC and PC interfacing

TPS-compact



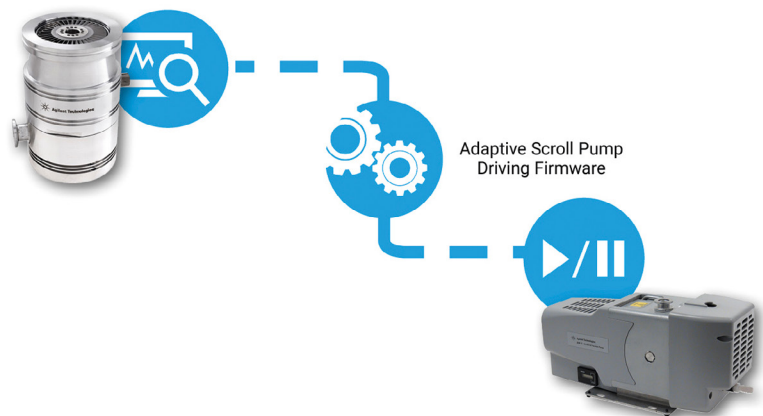
Ideal for:

- Laboratories
- Universities
- Medium chamber fast pump-down
- Industrial applications
- Electron microscopy and mass spectrometry

Features	Benefits
Integrated IDP-3 dry scroll backing pump	Very fast pumpdown time. Easy scroll tip seal replacement (15 min)
Adaptive scroll pump driving system	Extended scroll pump tip seal life
Gas Ballast	Reduced humidity, for system performance optimization
Active gauge reading capability	Can drive a wide range vacuum gauge, no need for external gauge controller
Integrated large pressure data display	Easy system pressure monitoring
New generation TwisTorr 74 FS or 305 FS turbomolecular pumps	Excellent base pressure, down to 10^{-10} mbar
Compact, light, dry, clean, and robust bench top system	Plug and pump system, all-in-one, very simple use. Portable, fully integrated, hydrocarbon-free
Nominal voltage (90–240 V) - CE/CSA certified	Worldwide power configurations, complies with worldwide safety standards
RS-232 or analog communication, pressure driven setpoint, analog setpoint	Easy to use: easy PLC and PC interfacing through A-PLUS software.
Wheels option available	Easy maneuverability in small space

TPS-compact Adaptive Scroll Pump Driving Firmware

Smart management of scroll pump operation time is controlled via firmware, allowing the longest tip seal life span. The firmware continuously monitors the power absorbed by the turbo pump, and automatically sets up the scroll backing pump operation, according to the pumped gas load. This algorithm reduces the overall scroll pump operation time up to 80%, resulting in a much longer scroll pump's tip seal life span.



The TPS-compact includes a 70 or 300 L/s turbo pump with a controller, and a dry scroll backing pump in the same package. The firmware continuously monitors the turbo pump's absorbed power, and automatically sets up the scroll pump operation, according to the pumped gas load.

TPS-mobile™



Ideal for:

- UHV system pump down
- Ion pump roughing
- Lamp and tube processing
- High vacuum system operation
- System bake-out

Features	Benefits
Roll-around cart with open structure	Easy mobility and serviceability
High capacity systems	Wide pumping speed range Very fast pump-down
Wide choice of possible configurations, with TwisTorr 74 FS, 305 FS (high compression version) and 305 FSQ (high throughput version), and Turbo-V 551 turbo pumps, backed by Agilent dry scroll pumps (IDP or TriScroll series) or DS rotary vane pumps	Best vacuum performance and base pressure for light gases. The system can be tailored to satisfy any application
Large selection of gauges and accessories	Gauge reading capability for any pressure range. Easy customization
RS-232 or analog communication, pressure driven setpoint, analog setpoint	Easy to use: easy PLC and PC interfacing through A-PLUS software
Onboard fore-vacuum safety valve	Full system protection against backstreaming in case of power failure.
Voltage 110/230V. All systems are CE certified.	Worldwide power configurations, complies with worldwide safety standards
Customization Service available	Maximum flexibility to build custom configuration optimized for your need

TPS-flexy



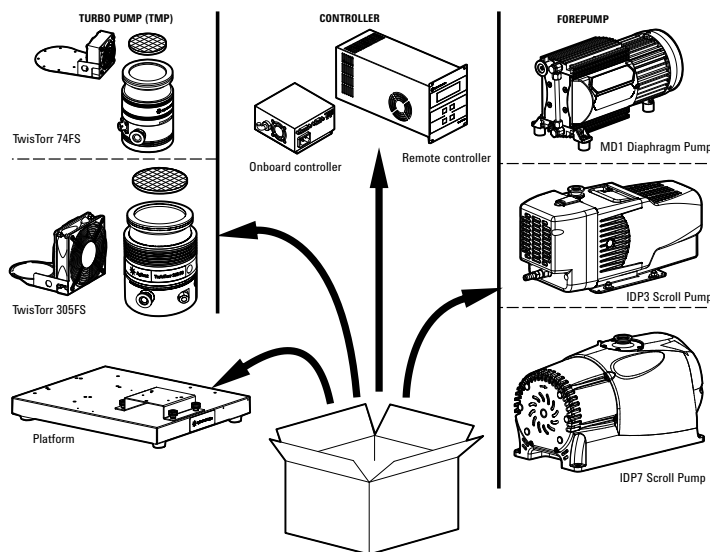
Ideal for:

- UHV system pump-down
- Laboratories
- Academic experiments
- Industrial applications

Features	Benefits
Flexible, dry, do-it-yourself solution	Adaptable, versatile oil-free solutions. Multiple options for every application need
Only Agilent standard catalog components	Fast availability and delivery
Modular assembling (any component can be replaced separately).	Easy and fast field serviceability. Turbo pump is easily detached to mount directly to your chamber
Easy upgrade	Simple configuration upgrade in case of change in requirements
Active gauge reading capability through rack control unit	Can drive a wide range vacuum gauge, no need for external gauge controller

TPS-flexy: Do-it-yourself vacuum!

Create your own dry TPS-flexy turbo pumping system with TwisTorr 74 FS or 305 FS turbo pump, onboard or rack controller with gauge reading capability, and IDP-3 or IDP-7 dry scroll pump or MD1 diaphragm pump.



TPS-flexy Video Tutorial

Order the TPS-flexy package, receive all the items then follow our easy assembly instructions and video tutorial to get your system up and running in a few minutes!

[TPS-flexy Assembly Guide](#)

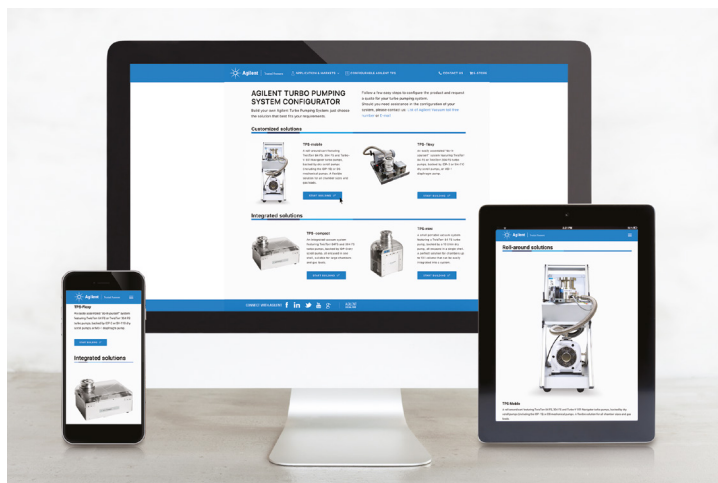
[TPS-flexy Video Tutorial](#)



Configure your TPS online

You can also configure your Turbo Pumping System using the web app at the following link:

[TPS Configurator](#) 



Learn more:

www.agilent.com/chem/TurboPumpingSystems

Buy online:

www.agilent.com/store/orderCenter.jsp#quickOrder

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For more information, please contact your Agilent representative, or visit: www.agilent.com/chem/vacuum where you can chat live with a vacuum expert.



www.agilent.com/en/product/vacuum-technologies/turbo-pumping-systems-tps

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