Agilent
Trusted Answers

Agilent
TPS-compact

A portable, fully Integrated, hydrocarbon-free pumping system powered by the innovative TwisTorr 74 FS and 304 FS turbo pumps, backed by the unique Agilent 60 L/min IDP-3 dry scroll primary pump: the fastest pumpdown in the market.

An all-in, ready to use dry pumping solution with large pressure display, active gauge reading option, worldwide voltage, CE/CSA certified.
Ideal for medium size chambers in university laboratories, industrial applications, and medical applications.

New Adaptive Scroll Pump Driving Firmware

The TPS-compact is now equipped with the Adaptive Scroll Pump Driving Firmware, enabling a smart management of scroll pump operation time to ensure the longest tip-seal lifetime.
The Firmware continuously monitors the turbo pump's absorbed power, to automatically set up the scroll backing pump operation, according to the pumped gas load.
The new feature reduces the overall scroll pump operation time up to 80%, resulting in a much longer scroll pump's tip-seal lifetime.

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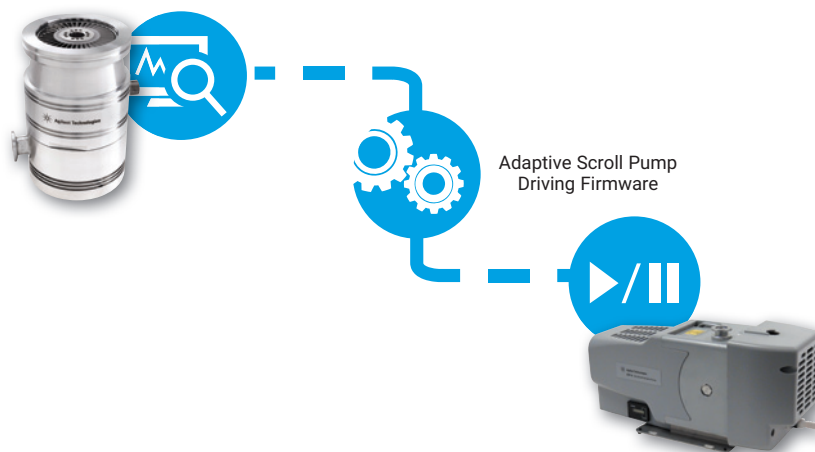
The TPS-compact includes a 70 or 300 L/s turbo with controller, and a dry scroll backing pump in the same package. The Firmware continuously monitors the turbo pump's absorbed power, and automatically sets up the scroll pump operation, according to the pumped gas load.

Technical Specifications

	Equipped with TwisTorr 74 FS	Equipped with TwisTorr 304 FS
Pumping speed	N_2: 48 L/s (ISO 63, with inlet screen)*	N_2: 180 L/s (with inlet screen)*
Base Pressure**	1×10^{-9} mbar [CFF Flanges] 1×10^{-8} mbar [ISO Flanges]	1×10^{-9} mbar [CFF Flanges] 1×10^{-8} mbar [ISO Flanges]
Pumpdown Time (15 L volume)	46 sec (100 mbar); 104 sec (1 mbar); 160 sec (1×10^{-4} mbar); 210 sec (5×10^{-5} mbar); 400 sec (1.3×10^{-5} mbar)	80 sec (16 mbar); 110 sec (3 mbar); 155 sec (6×10^{-5} mbar); 200 sec (1×10^{-5} mbar)
Turbo pump rotational speed	70.000 RPM	60.000 RPM
Start-up Time	144 sec	150 sec
Operating Ambient Temperature	5°C to 35°C	5°C to 35°C
Input Voltage and Frequency	115 Vac 60 Hz or 220-240 Vac 50/60 Hz or 100 Vac 50/60 Hz	115 Vac 60 Hz or 220-240 Vac 50/60 Hz or 100 Vac 50/60 Hz
Maximum Input Power	260 VA	310 VA
Bakeout Temperature	120°C at inlet [CFF Flanges] 80°C at inlet [KF/ISO Flanges]	120°C at inlet [CFF Flanges] 80°C at inlet [ISO Flanges]
Communication	RS-232 - Analogical I/O	RS-232 - Analogical I/O
Weight	16.7 Kg [36.8 lbs]	20.1 Kg [44.3 lbs]

* Pump nominal speed: TwisTorr 74FS N_2: 60 L/s; Twistorr 304FS N_2: 250 L/s

** According to standard DIN 28 428

Ordering Information

TPS-compact	TwisTorr 74FS KF40	TwisTorr 74FS CFF 2.75"	TwisTorr 74FS ISO 63	TwisTorr 74FS CFF 4.5"
120 V	X3580A#010#020#120	X3580A#010#027#120	X3580A#010#021#120	X3580A#010#022#120
220 V	X3580A#010#020#220	X3580A#010#027#220	X3580A#010#021#220	X3580A#010#022#220
105 V	X3580A#010#020#105	X3580A#010#027#105	X3580A#010#021#105	X3580A#010#022#105
Accessories				
Gauge Kit*	9699190	9699199	9699192	9699193
Inlet Screen	9699309	9699328	9699300	9699300

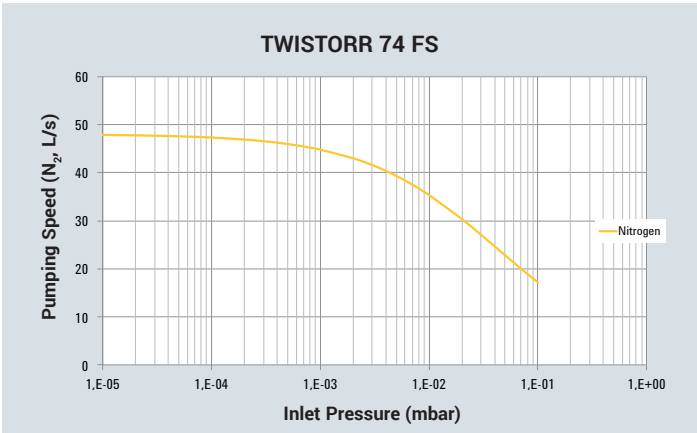NOTE Special Vent Valve available on request
* The DIY Full Range Gauge Kit can be ordered separately, and includes Full Range Gauge FRG-700, Cable for gauge connection, Vacuum Tee and Connecting Hardware (Flanges according to the System inlet flange)

TPS-compact	TwisTorr 304FS ISO 100	TwisTorr 304FS CFF 6"	TwisTorr 304FS ISO 160	TwisTorr 304FS CFF 8"
120 V	X3580A#011#023#120	X3580A#011#024#120	X3580A#011#025#120	X3580A#011#026#120
220 V	X3580A#011#023#220	X3580A#011#024#220	X3580A#011#025#220	X3580A#011#026#220
105 V	X3580A#011#023#105	X3580A#011#024#105	X3580A#011#025#105	X3580A#011#026#105
Accessories				
Gauge Kit*	9699194	9699201	9699195	9699202
Inlet Screen	9699302	9699302	9699304	9699304

NOTE Special Vent Valve available on request
* The DIY Full Range Gauge Kit can be ordered separately, and includes Full Range Gauge FRG-700, Cable for gauge connection, Vacuum Tee and Connecting Hardware (Flanges according to the System inlet flange)
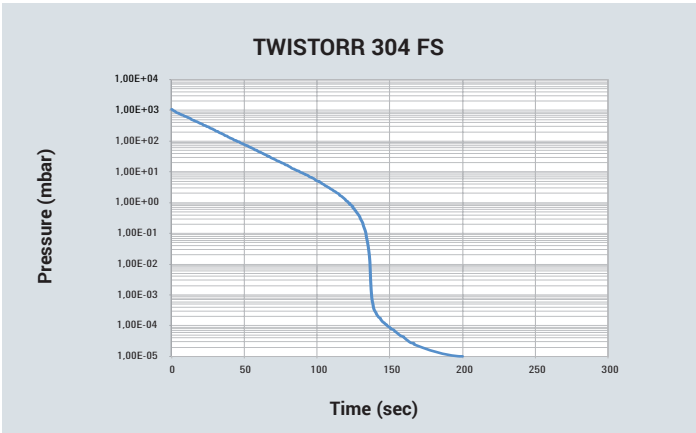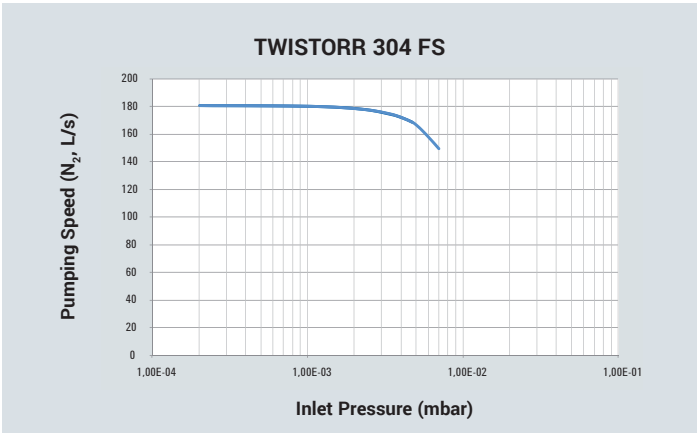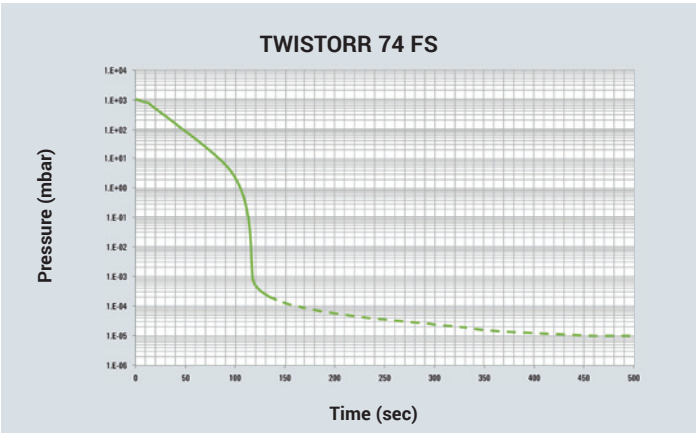
Other Accessories

Wheels accessory kit	9698233	Mains cable NEMA plug**, 3 meters	9699958
Mains cable EU plug**, 3 meters	9699957	Serial Cable and T-Plus Software	9699883

** Power cord to be ordered separately
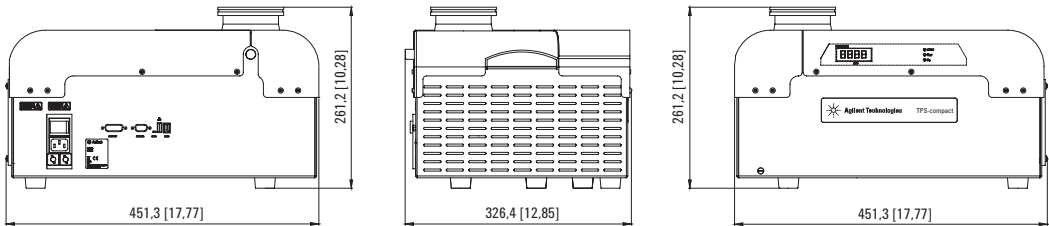
Pumping Speed vs Inlet Pressure

TWISTORR 74 FS

Pumping Speed (N_2, L/s) vs Inlet Pressure (mbar)

— Nitrogen

Pressure vs Time (with a pump down vol. of 15 L)

TWISTORR 74 FS

Pressure (mbar) vs Time (sec)

TWISTORR 304 FS

Pumping Speed (N_2, L/s) vs Inlet Pressure (mbar)

TWISTORR 304 FS

Pressure (mbar) vs Time (sec)

Outline Drawings

TPS-compact with TwisTorr 74 FS ISO 63

261,2 [10,28]

451,3 [17,77]   326,4 [12,85]   451,3 [17,77]

261,2 [10,28]

Agilent Technologies   TPS-compact

TPS-compact with TwisTorr 304 FS ISO 100

292,7 [11,52]

451,3 [17,77]   329,5 [12,97]   451,3 [17,77]

292,7 [11,52]

Agilent Technologies   TPS-compact
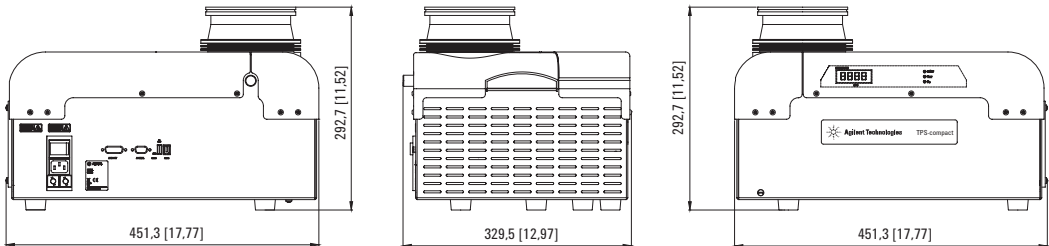
Dimensions: millimeters [inches]

Agilent

Trusted Answers