



Advanced Test Equipment Corp.

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Data Sheet



Agilent TPS-mobile



These high-capacity systems feature a roll-around cart, high compression ratio, high throughput, and wide pumping speed range.

Best in class turbo pumps and easy maintenance are coupled with fast vacuum chamber roughing, while the mobile cart ensures high mobility in labs and plant areas.

The large number of available configurations includes TwisTorr 74 FS, 305 FS (high compression version), 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. The voltage is 110/230V, and all systems are CE certified. A wide range of options ensures coverage of most user needs.

A large selection of gauges and accessories are also available for customized solutions. The A-PLUS software allows fast and easy communication with the unit, while the integrated backing pump Isolation Valve protects the turbo pump.

Thanks to the open structure of the cart, which ensures easy access, all TPS-mobile units are easily serviceable, for an extended system life span.

Applications include UHV system pumpdown, ion pump roughing, lamp and tube processing, cryopump regeneration, High Vacuum systems operation, and High and Ultra-High Vacuum systems bake-out.

Turbomolecular Pumps - Pumping Speed*

	TwisTorr 74 FS KF 40, ISO 63, CFF 2¾", CFF 4½"	TwisTorr 305 FS or TwisTorr 305 FSQ ISO 100, CFF 6", ISO 160, CFF 8"	Turbo-V 551 Navigator CFF 6", ISO 160, CFF 8"
Pumping Speed	N ₂ : 48 L/s (with inlet screen)*	N ₂ : 200 L/s (with inlet screen)*	N ₂ : 550 L/s (with inlet screen)

* Pump nominal speed: TwisTorr 74 FS N₂: 60 L/s; TwisTorr 305 FS N₂: 250 L/s.

Base Pressure *

	TwisTorr 74 FS	TwisTorr 305 FS	Turbo-V 551 Navigator
With IDP-7 dry scroll pump or DS102 rotary vane pump	< 5 x 10 ⁻¹⁰ mbar (< 3.75 x 10 ⁻¹⁰ Torr)	< 1 x 10 ⁻¹⁰ mbar (< 1 x 10 ⁻¹⁰ Torr)	< 1 x 10 ⁻¹⁰ mbar (< 1 x 10 ⁻¹⁰ Torr)

* According to standard DIN 28 428

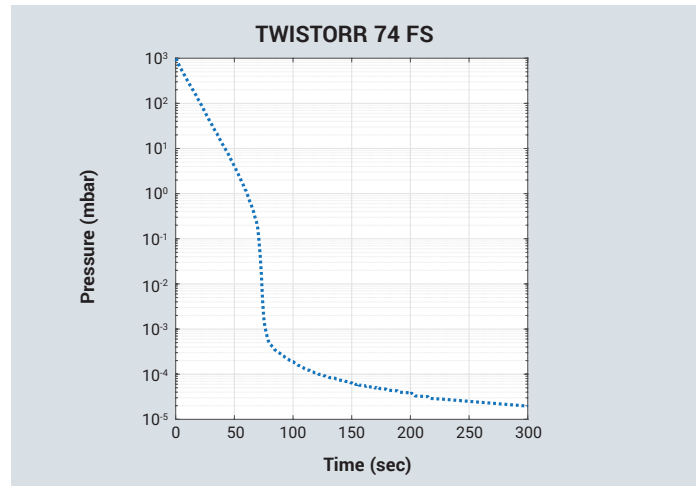
Pumpdown Time (15 liter volume)

TPS-mobile with TwisTorr 74 FS ISO 63 and IDP-7	
34 sec	(100 mbar)
76 sec	(1 mbar)
120 sec	(1 x 10 ⁻⁴ mbar)
160 sec	(5 x 10 ⁻⁵ mbar)
400 sec	(1 x 10 ⁻⁵ mbar)

TPS-mobile with TwisTorr 305 FS (CFF 6") or 305 FSQ (ISO 100) and IDP7	
40 sec	11 mbar
60 sec	0.8 mbar
80 sec	3.6E ⁻⁴ mbar (*)
100 sec	1.3E ⁻⁴ mbar (*)
130 sec	5.7E ⁻⁵ mbar (*)

(*) Measurement obtained using both capacitive and UHV gauges

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



TPS-mobile standard configurations

TPS-mobile	TwisTorr 74 FS KF 40	TwisTorr 74 FS ISO 63	TwisTorr 74 FS CFF 2¾"	TwisTorr 74 FS CFF 4½"	TwisTorr 305 FSQ ISO 100	TwisTorr 305 FS CFF 6"	TV551 CFF 6"	TV551 ISO 160	TV551 CFF 8"
DS 102 - 120 V	•	•	•	•					
DS 102 - 220 V	•	•	•	•					
DS 202 - 120 V	•	•	•	•					
DS 202 - 220 V	•	•	•	•					
DS 302 - 120 V					•	•	•	•	•
DS 302 - 220 V					•	•	•	•	•
DS 402 - 120 V							•	•	•
DS 402 - 220 V							•	•	•
DS 602 - 120 V					•	•	•	•	•
DS 602 - 220 V					•	•	•	•	•
IDP-3 - 120 V	•	•	•	•		•			
IDP-3 - 220 V	•	•	•	•		•			
IDP-7 - 120 V	•	•	•	•	•	•			
IDP-7 - 220 V	•	•	•	•	•	•			
IDP-15 - 120 V					•	•	•	•	•
IDP-15 - 220 V					•	•	•	•	•
TS 300 VPI - 120 V					•	•	•	•	•
TS 300 VPI - 220 V					•	•	•	•	•
TS 600 VPI - 120 V					•	•	•	•	•
TS 600 VPI - 220 V					•	•	•	•	•

Ordering Information available on request: call Agilent for details

Turbomolecular Pumps

Turbo Pump Model	Inlet Flange
TwisTorr 74 FS	ISO 63K, KF 40*, CFF 2 3/4", CFF 4 1/2"*
TwisTorr 305 FSQ / TwisTorr 305 FS	ISO 100K, CFF 6"
Turbo-V 551 Navigator	ISO 160K, CFF 6", CFF 8"*

*Configuration available on request

Primary Pumps

Dry Scroll Pumps	Peak Pumping Speed 50 Hz
IDP-3, single phase	50 L/min - 3.0 m ³ /h - 1.8 cfm
IDP-7, single phase	90 L/min - 5.4 m ³ /h - 3.3 cfm
IDP-15, single phase	214 L/min - 12.8 m ³ /h - 7.5 cfm
TriScroll 300, single phase, with Vacuum Pump Isolation Valve (VPI)	10 L/min - 12.6 m ³ /h - 7.4 cfm
TriScroll 600, single phase, with Vacuum Pump Isolation Valve (VPI)	420 L/min - 25.2 m ³ /h - 14.8 cfm
Rotary Vane Dual Stage Pumps	Pumping Speed 50 Hz
DS 102 - 1 phase worldwide motor	5.0 m ³ /h
DS 202 - 1 phase worldwide motor	8.3 m ³ /h
DS 302 - 1 phase worldwide motor	11.6 m ³ /h
DS 402 - 1 phase worldwide motor	17.4 m ³ /h
DS 602 - 1 phase worldwide motor	25.0 m ³ /h

Managing Gauges

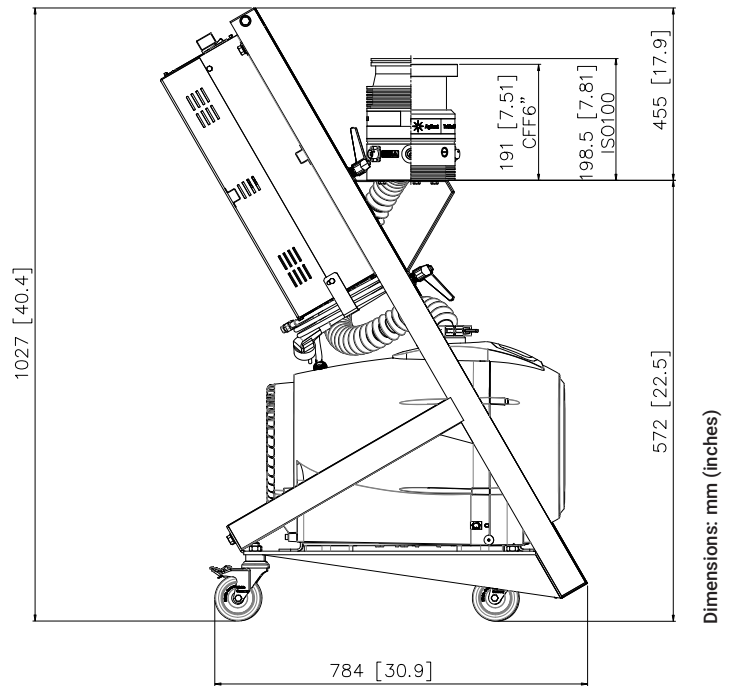
Turbo Pump	Gauge Configuration	Measurement range
TwisTorr 74 FS TwisTorr 305 FS	Turbo pump controller driving: - FRG-700 Full Range Gauge	Atmosphere to 3.8 x 10 ⁻⁹ Torr (mbar)
TwisTorr 74 FS TwisTorr 305 FS Turbo-V 551 Navigator	XGS-600 Gauge Controller driving:	
	- ConvecTorr Rough Vacuum gauge	1 x 10 ⁻⁴ Torr (mbar) to atmosphere
	- IMG-100 High Vacuum gauge	1 x 10 ⁻³ Torr (mbar) to 5 x 10 ⁻⁹ Torr (mbar)

For other gauge configurations, please contact your local Agilent representative

Cables

Power cords are included free of charge in all TPS-mobile models, with US or EU plug.

TPS-mobile with TwisTorr 305 FS and IDP-15



Width: 422 (16.61)

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