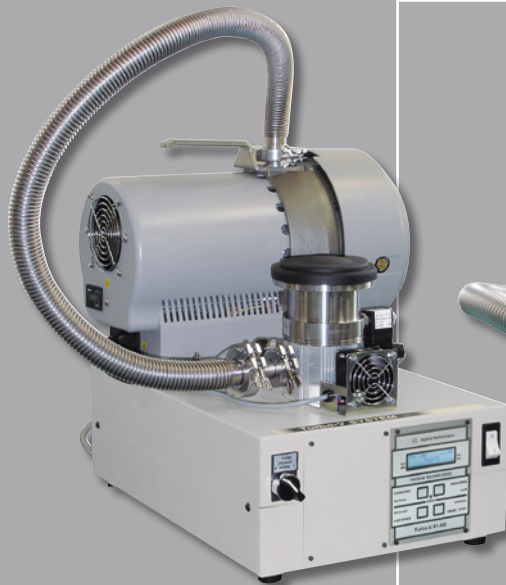




**Agilent  
Turbo Pumping Systems  
TPS-mobile and TPS-bench**  
Integrated Turbo Pumping Solutions



# Agilent TPS: Integrated Turbo Pumping Solutions

## Agilent TPS-mobile

- Roll-around cart, high capacity systems, with higher compression ratio and wide pumping speed range.
- 14 possible configurations, with Agilent Turbo-V 81 and 301 Navigator pumps, and the new Agilent Turbo-V 750 TwisTorr,
- Backed by Agilent Dry Scroll (Unique IDP-3, SH-110, TS 300/600) or DS Mechanical Pumps
- Wide choice of Gauges and accessories, custom solutions available
- T-Plus Navigator Software allows communication with your PC
- Voltage 110/230V
- CE, UL/CUL, CSA and Semi S2-0200 certified



## Agilent TPS-bench

- Bench-top, compact and reliable vacuum solutions
- 5 possible standard configurations with Turbo-V 81 or Turbo-V 301 Navigator,
- backed by SH-110 Dry Scroll, DS 42 or DS 102 Rotary Vane Pumps
- Gauges and accessories available
- T-Plus Navigator Software
- Isolation valve integrated/included
- Voltage 110/230V
- CE, UL/CUL, CSA and Semi S2-0200 certified.





## Dry Scroll Pumps

- No maintenance required, simple tip seal replacement
- CE, UL/CUL, CSA and Semi S2-0200 certified
- Isolation valve integrated/included
- IDP-3: the smallest scroll pump in the market; peak pumping speed 3.0 m<sup>3</sup>/h, and ultimate pressure 3.3 x 10<sup>-1</sup> mbar
- SH-110: peak pumping speed 5.4 m<sup>3</sup>/h
- TriScroll 300 and 600: pumping speed up to 30 m<sup>3</sup>/h (TS 600)



## Rotary Vane Pumps

- Wide Pumping speed range from 1.8 to 20.5 m<sup>3</sup>/h
- Dual Stage
- Forced Oil Circulation
- Gas Ballast Valve
- Anti-suckback valve and vent device



## Unique Agilent Turbo Pump Technology

- Innovative TwisTorr molecular-drag technology available.
- No maintenance required: Agilent Turbo Pumps don't need oil refills.
- Higher compression ratio and pumping speed.
- Wide pumping speed range from 46 to 700 l/sec.



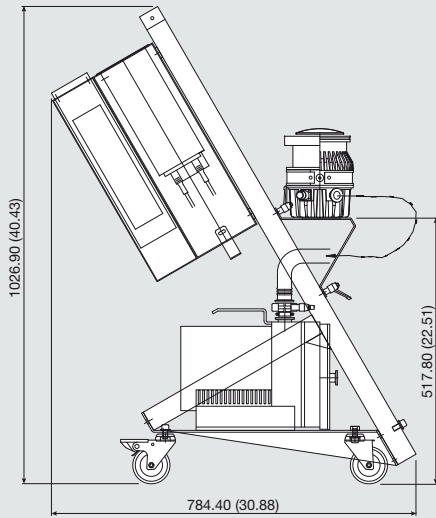
## Benefits

- Fast, clean, dry pump down from atmosphere to 10<sup>-10</sup> mbar
- Pressure monitor
- Portable and compact
- Agilent Turbo Pumps: no maintenance required
- Low cost of ownership

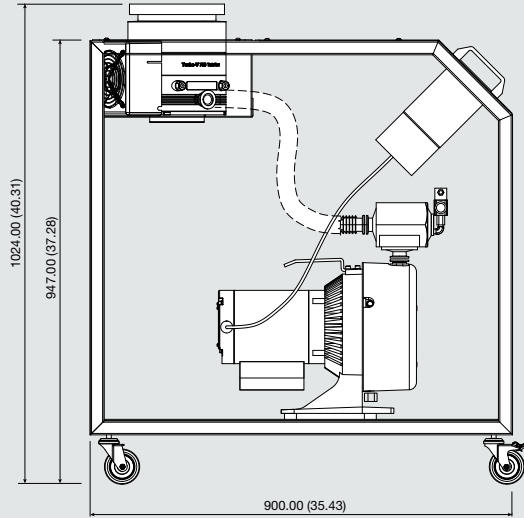


## Applications

- UHV System pump down
- Ion pump roughing
- Lamp and tube processing
- Cryopump regeneration
- High Vacuum Systems operation
- High and Ultra High Vacuum systems bake out

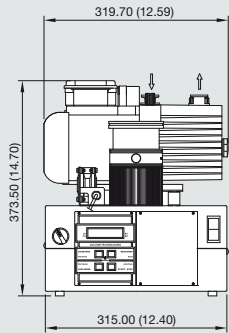


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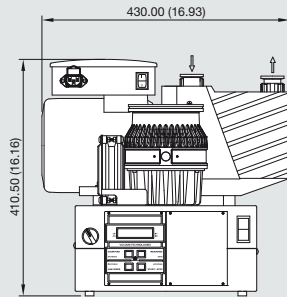


Width: 400 (15.75)

TPS-bench with TV 81M and DS 42

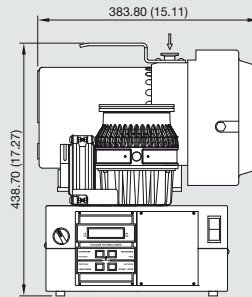


TPS-bench with TV 301 and DS 102



Depth: 453 (17.83)

TPS-bench with TV 301 and SH110



Dimensions: mm (inches)

## Turbomolecular Pumps

### Turbo Pump Model Inlet Flange

Turbo-V 81-M Pump ISO 63, KF 40°, CFF 4 1/2"\*

Turbo-V 301 Navigator Pump ISO 100, CFF 6"\*

Turbo-V 750 TwisTorr ISO CFF 8", 160°, CFF 6"\*

\*Configuration available on request.

## Primary Pumps

### Dry Scroll Pumps

### Peak Pumping Speed 50 Hz

IDP-3	3.0 m <sup>3</sup> /h
Single Phase Motor Scroll Pump SH110	90 l/min - 5.4 m <sup>3</sup> /h - 3.3 cfm
TriScroll 300, single phase, with Vacuum Pump Isolation Valve (VPI)	220 VAC 210 l/min 2.6 m <sup>3</sup> /h - 7.4 cfm
TriScroll 600, single phase, with Vacuum Pump Isolation Valve (VPI)	220 VAC 420 l/min 25.2 m <sup>3</sup> /h - 14.8 cfm

### Rotary Vane Dual Stage Pumps

### Pumping Speed 50 Hz

DS 42 - 1 phase worldwide motor	1.8 m <sup>3</sup> /h
DS 102 - 1 phase worldwide motor	5.0 m <sup>3</sup> /h
DS 302 - 1 phase worldwide motor	11.6 m <sup>3</sup> /h
DS 402 - 1 phase worldwide motor	17.4 m <sup>3</sup> /h

## TPS-mobile: 14 possible standard configurations

TMP	DS42	DS102	DS302	DS402	IDP3	SH110	TS300	TS600
TV 81M	•	•			•	•		
TV 301		•	•	•	•	•	•	
TV 750			•	•			•	•

## TPS-bench: 5 possible standard configurations

TMP	DS42	DS102	SH110
TV 81M	•	•	•
TV 301		•	•

## Turbomolecular Pumps - Pumping Speed l/sec

	TV 81M		TV 301 Nav		TV 750 TwisTorr	
	DN 40*	DN 63	DN 100	DN 160*	DN 100*	DN 160
Nitrogen	50	77	250	280	370	700
Helium	56	65	220	230	500	680
Hydrogen	46	50	200	210	470	580

\*Configuration available on request.

## Recommended Forepumps

	TV 81M	TV 301	TV 750 TwisTorr
Primary Pumps Dry	SH110, IDP-3	SH110, IDP-3, TS 300 VPI	TS 300 VPI, TS 600 VPI
Primary Pumps Mechanical	DS 42 - DS 102	DS 102, DS 302, DS 402	DS 302, DS 402

## Base Pressure with Recommended Forepump - Acc. to standard DIN 28 428

	TV 81M	TV 301	TV 750 TwisTorr
Primary Pumps Dry	$5 \times 10^{-9}$ mbar ( $3.8 \times 10^{-9}$ Torr)	$< 5 \times 10^{-9}$ mbar ( $< 3.75 \times 10^{-9}$ Torr)	$< 1 \times 10^{-10}$ mbar ( $< 7.5 \times 10^{-11}$ Torr)
Primary Pumps Mechanical	$5 \times 10^{-10}$ mbar ( $3.8 \times 10^{-10}$ Torr)	$< 5 \times 10^{-10}$ mbar ( $< 3.75 \times 10^{-10}$ Torr)	$< 1 \times 10^{-10}$ mbar ( $< 7.5 \times 10^{-11}$ Torr)

## Agilent TPS-mobile and TPS-bench - Ordering Information

### TPS-mobile 110 V

Turbo-V Pump	Flange	Forepump	Part Number
TV81M	ISO63	DS42	9698420
TV81M	ISO63	DS102	9698421
TV81M	ISO63	IDP3	9698422
TV81M	ISO63	SH110	9698423
TV301	ISO100	DS102	9698424
TV301	ISO100	DS302	9698425
TV301	ISO100	DS402	9698426
TV301	ISO100	IDP3	9698427
TV301	ISO100	SH110	9698428
TV301	ISO100	TS300VPI	9698429
TV750	CFF8	DS302	9698439
TV750	CFF8	DS402	9698440
TV750	CFF8	TS300VPI	9698441
TV750	CFF8	TS600VPI	9698442

Other configurations available on request.

### TPS-mobile 220 V

Turbo-V Pump	Flange	Forepump	Part Number
TV81M	ISO63	DS42	9698413
TV81M	ISO63	DS102	9698411
TV81M	ISO63	IDP3	9698416
TV81M	ISO63	SH110	9698412
TV301	ISO100	DS102	9698403
TV301	ISO100	DS302	9698400
TV301	ISO100	DS402	9698417
TV301	ISO100	IDP3	9698418
TV301	ISO100	SH110	9698402
TV301	ISO100	TS300VPI	9698401
TV750	CFF8	DS302	9698435
TV750	CFF8	DS402	9698436
TV750	CFF8	TS300VPI	9698437
TV750	CFF8	TS600VPI	9698438

Other configurations available on request.

### TPS-bench 110 V

Turbo-V Pump	Flange	Forepump	Part Number
TV301	ISO100	SH110	9698212
TV301	ISO100	DS102	9698213
TV81M	ISO63	DS102	9698214
TV81M	ISO63	SH110	9698215
TV81M	ISO63	DS42	9698216

Other configurations available on request.

### TPS-bench 220 V

Turbo-V Pump	Flange	Forepump	Part Number
TV301	ISO100	SH110	9698203
TV301	ISO100	DS102	9698208
TV81M	ISO63	DS102	9698204
TV81M	ISO63	SH110	9698202
TV81M	ISO63	DS42	9698200

Other configurations available on request.

## Managing Gauges

GAUGE KIT	Inlet Flange	DIY FRG-700 Full Range Gauge Kit (atmosphere to $3.8 \times 10^{-9}$ Torr)
TV 81M	KF 40	9699190
	ISO 63	9699192
	CFF 41/2"	9699193
TV 301	ISO 100	9699194
	CFF 6"	9699201
TV 750 TwisTorr	ISO 160 K	9699195
	CFF 6"	9699201
	CFF 8"	9699202

For other gauge configurations, please contact your local Agilent representative

## Cables

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

# Agilent TPS-mobile and TPS-bench

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