

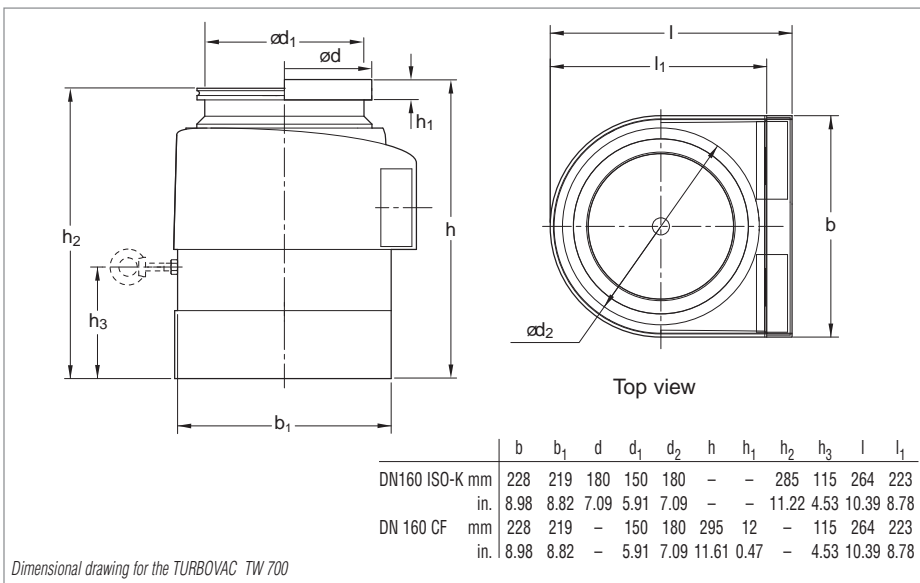
# TURBOVAC TW 701

## Typical Applications

- ◆ Mass spectrometers
- ◆ Data storage
- ◆ Flat panel displays
- ◆ R & D, e.g.
  - UHV systems
  - Particle accelerators
- ◆ Load locks and transfer chambers

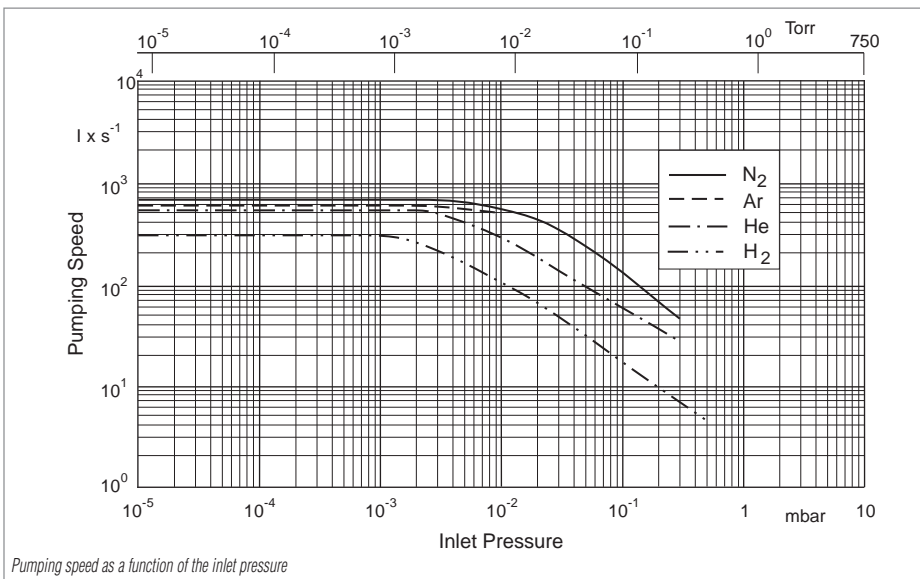
## Technical Features

- ◆ Integrated frequency converter
- ◆ Operation in any orientation
- ◆ Highest pumping speed and throughput for Nitrogen and Argon
- ◆ High foreline tolerance allows the use of downsized fore-vacuum pumps
- ◆ Highly effective air-cooling unit
- ◆ Oil-free pump for generating clean high- and ultrahigh-vacuum conditions



## Advantages to the User

- ◆ Space-saving
- ◆ Easy to integrate into complex vacuum systems
- ◆ High productivity
- ◆ Low operating costs
- ◆ Highly reliable operation



Technical Data		TURBOVAC TW 701	
Inlet flange	DN	160 ISO-K	160 CF
Pumping speed			
N <sub>2</sub>	l x s <sup>-1</sup>		680
Ar	l x s <sup>-1</sup>		600
He	l x s <sup>-1</sup>		530
H <sub>2</sub>	l x s <sup>-1</sup>		330
Max. gas throughput			
N <sub>2</sub>	mbar x l x s <sup>-1</sup>		12
Ar	mbar x l x s <sup>-1</sup>		5 (water cooled)
He	mbar x l x s <sup>-1</sup>		7
H <sub>2</sub>	mbar x l x s <sup>-1</sup>		2.5
Compression ratio			
N <sub>2</sub>			8 x 10 <sup>8</sup>
Ar			1 x 10 <sup>8</sup>
He			1 x 10 <sup>6</sup>
H <sub>2</sub>			2 x 10 <sup>4</sup>
Ultimate pressure	mbar (Torr)	< 5.0 x 10 <sup>-9</sup> (< 3.75 x 10 <sup>-9</sup> )	< 1.5 x 10 <sup>-10</sup> (< 1.1 x 10 <sup>-10</sup> )
Max. foreline pressure for N <sub>2</sub>	mbar (Torr)		14 (10.5)
Recommended fore-vacuum pump		TRIVAC D 65 B, EcoDry M15, DIVAC 4.8 VT	
Run-up time to 95% speed	min		≈ 5
Purge port	DN		16 KF
Cooling water connections		2x G 1/8" (internal threads)	
Weight, approx.	kg (lbs)		19 (42)
Supply voltage, nominal	V DC		59
Max. power consumption	W		500

Ordering Information				TURBOVAC TW 701
Inlet flange	Foreline flange	Cooling method	Interface	Part No.
DN 160 ISO-K	DN 25 KF	Air-cooled	RS 232 C	800051V0021
DN 160 ISO-K	DN 25 KF	Water-cooled	RS 232 C	800051V0025
DN 160 ISO-K	DN 25 KF	Air-cooled	RS 485 C	800051V0024
DN 160 ISO-K	DN 25 KF	Water-cooled	RS 485 C	800051V0023
DN 160 CF	DN 25 KF	Air-cooled	RS 485 C	800051V0027
DN 160 CF	DN 25 KF	Water-cooled	RS 485 C	800051V0026
DN 200 CF (incl. splinter guard)	DN 25 KF	Water-cooled	RS 232 C	800051V0022
Power supply TURBO.CONTROL 700				see chapter "Turbomolecular Pumps with Mechanical Rotor Suspension" para. "Electronic Frequency Converter"
<b>Accessories, optional</b>				
Inlet screen				
DN 160 ISO-K				200 00 307
DN 160 CF				200 17 247
Flange heater 160 CF				
230 V AC				854 37
110 V AC				854 38
Vibration absorber				
DN 160 ISO-K				500 073
DN 160 CF				500 072
OEM power supply, 59 V DC				864 45
59 V DC cable				
3 m (10.5 ft)				200 12 729
5 m (17.5 ft)				200 12 730
10 m (35 ft)				200 12 731
20 m (70 ft)				200 15 064
Plug with integrated START/STOP switch				152 48
Purge gas and venting valve, 24 V DC, 0.6 mbar x l x s <sup>-1</sup> = 36 sccm (purge gas pressure, abs.; 1.5 to 6 bar)				121 33
Accessories for RS 232 C and RS 485 C interfaces				see chapter "Turbomolecular Pumps", para. "Accessories"
<b>Accessories, for the water connection</b>				
Adaptor G (BPS) 1/8" – G (BPS) 1/4" pipe (Swagelok *)				200 91 671 (2x required)
Gasket				224 01 207 (2x required)
Adaptor G (BPS) 1/8" – 10 mm (0.39 in.) hose nozzle				200 18 366 (2x required)
Gasket				230 02 106 (2x required)
Adaptor G (BPS) 1/8" – NPT 1/8"				200 12 742 (2x required)
Gasket				238 20 110 (2x required)

\*) Adapts German threads of water cooling to a more common English thread. The Part Number is for one each, but two are used for almost all installations