

Magnetic Rotor Suspension with integrated Frequency Converter, with Compound Stage

TURBOVAC MAG W 600/700 iP

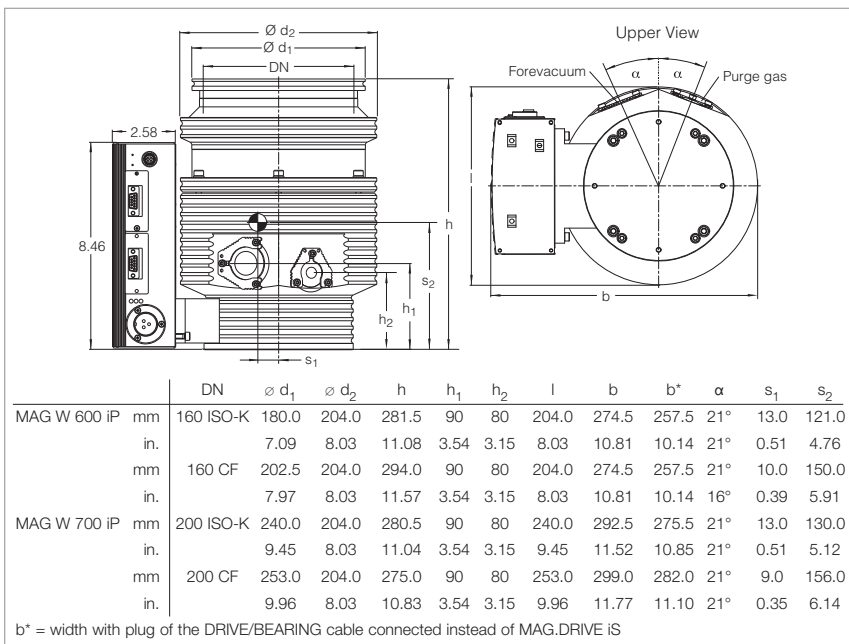


Typical Applications

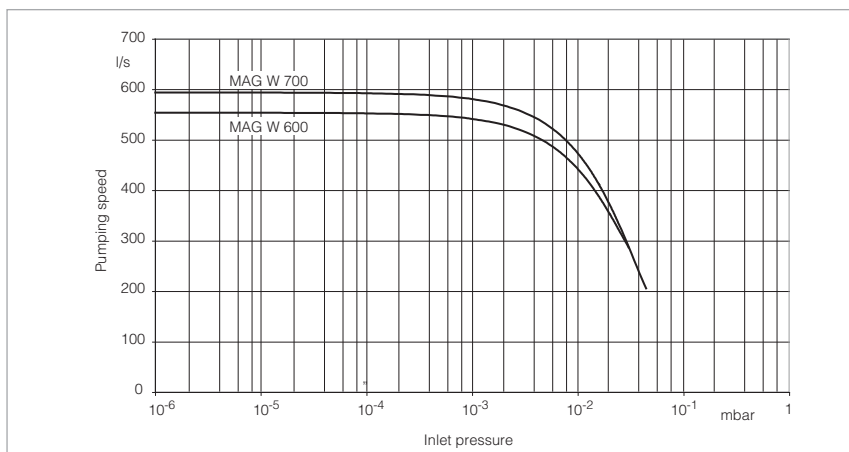
- Gas analysis systems
- Particle accelerators
- Electron microscopes
- Research
- Coating systems

Technical Features

- Installation in any orientation
- DN 160 or 200 ISO-K and/or CF high vacuum connection
- DN 25 KF with clamped forevacuum connection
- Purge gas/venting connection DN 16 KF with clamped connection (purge/vent)
- Water or air cooling optional
- CE and RoHS compliant; fulfilment of UL requirements
- 2 slots for industrial communications modules
 - Standard 9 pin 24 V SPS PLC-IO in Control Slot
 - RS 232 C in Service Slot
 - further interfaces can be fitted: Ethernet, Profibus, DeviceNet, RS 485 C



Dimensional drawing for the TURBOVAC MAG W 600/700 iP



Pumping speed for N₂ of the TURBOVAC MAG W 600/700 iP as a function of the inlet pressure

Advantages to the User

- Highest pumping speed from the smallest possible size
- New standard regarding maintenance free systems
- Suitability for vibration sensitive applications in the area of analytical engineering, thin-film technology, electron microscopes, research, development among others
- Flexibility due to the modular concept; the converter is optionally also available by way of a bench top unit

TURBOVAC MAG

Technical Data

W 600 iP

W 700 iP

Inlet flange	DN	160 ISO-K	160 CF	200 ISO-K	200 CF
Pumping speed					
N ₂	l x s ⁻¹	550	550	590	590
Ar	l x s ⁻¹	520	520	540	540
He	l x s ⁻¹	570	570	600	600
H ₂	l x s ⁻¹	410	410	430	430
Operating speed	min ⁻¹	48 000	48 000	48 000	48 000
Compression ratio					
N ₂		1.6 x 10 ¹⁰	1.6 x 10 ¹⁰	1.6 x 10 ¹⁰	1.6 x 10 ¹⁰
H ₂		3.4 x 10 ⁴	3.4 x 10 ⁴	3.4 x 10 ⁴	3.4 x 10 ⁴
He		1.7 x 10 ⁶	1.7 x 10 ⁶	1.7 x 10 ⁶	1.7 x 10 ⁶
Ultimate pressure	mbar (Torr)	< 10 ⁻⁸ (< 0.75 x 10 ⁻⁸)	< 10 ⁻¹⁰ (< 10 ⁻¹⁰)	< 10 ⁻⁸ (< 0.75 x 10 ⁻⁸)	< 10 ⁻¹⁰ (< 10 ⁻¹⁰)
Max. degassing temperature	°C (°F)	–	80 (176)	–	80 (176)
Max. foreline pressure for N ₂	mbar (Torr)	6.0 (4.5)	6.0 (4.5)	6.0 (4.5)	6.0 (4.5)
Recommended backing pump		TRIVAC D 2,5 E TRIVAC D 8 B	TRIVAC D 2,5 E TRIVAC D 8 B	TRIVAC D 2,5 E TRIVAC D 8 B	TRIVAC D 2,5 E TRIVAC D 8 B
Run-up time	min	< 6	< 6	< 6	< 6
Foreline flange (clamped)	DN	25 KF	25 KF	25 KF	25 KF
Purge / vent port (clamped)	DN	16 KF	16 KF	16 KF	16 KF
Water cooling connection (optional)	G	1/8"	1/8"	1/8"	1/8"
Weight, approx.	kg (lbs)	17 (37.5)	17 (37.5)	17 (37.5)	17 (37.5)



Integrated Frequency Converter TURBO.DRIVE iS

Technical Data

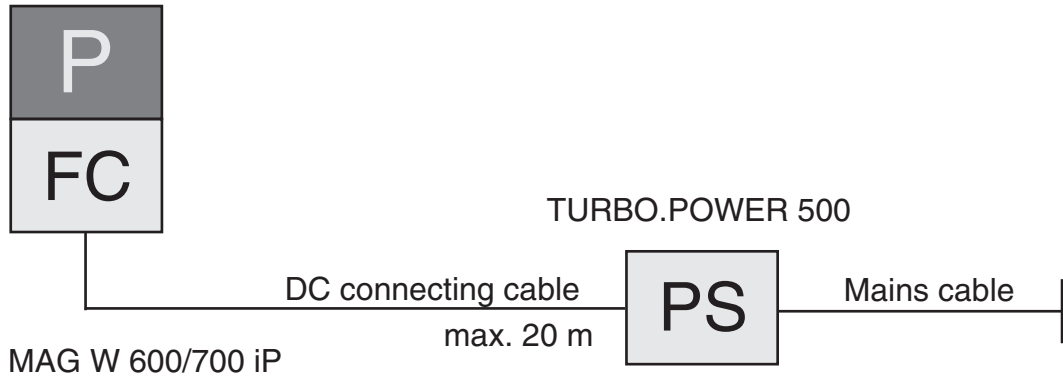
Power supply	V	48	48	48	48
Ripple	%	< 2	< 2	< 2	< 2
Power consumption					
Maximum	W	400	400	400	400
at ultimate pressure	W	259	259	259	259
DC current consumption, max.	A	7.5 to 9.3	7.5 to 9.3	7.5 to 9.3	7.5 to 9.3
DC power supply voltage range	V	43 to 53	43 to 53	43 to 53	43 to 53
Length of the DC connection cable, max.					
at 3 x 1.5 mm ²	m (ft)	5 (17.5)	5 (17.5)	5 (17.5)	5 (17.5)
at 3 x 2.5 mm ²	m (ft)	20 (70.0)	20 (70.0)	20 (70.0)	20 (70.0)
Contact rating for the relays, max.		32 V; 0,5 A	32 V; 0,5 A	32 V; 0,5 A	32 V; 0,5 A
Permissible ambient temperature during operation	°C	+10 to +40	+10 to +40	+10 to +40	+10 to +40
	(°F)	(+50 to +104)	(+50 to +104)	(+50 to +104)	(+50 to +104)
during storage	°C	0 to +60	0 to +60	0 to +60	0 to +60
	(°F)	(0 to +140)	(0 to +140)	(0 to +140)	(0 to +140)
Relative humidity of the air, non-condensing	%	5 to 85	5 to 85	5 to 85	5 to 85
Protection class	IP	30	30	30	30
Overvoltage category		II	II	II	II
Pollution category		2	2	2	2

Ordering Information

TURBOVAC MAG W 600/700 iP

TURBOVAC MAG W 600 iP with Integrated Frequency Converter and Seal Gas Connection	P FC	Part No.	
DN 160 ISO-K DN 160 CF		410600V0505 410600V0506	
TURBOVAC MAG W 700 iP with Integrated Frequency Converter and Seal Gas Connection	P FC		
DN 200 ISO-K DN 200 CF		410700V0505 410700V0506	
Mandatory Accessories		P FC	
Power supply TURBO.POWER 500		410300V0221	
DC cable frequency converter - power supply 1 m (3.5 ft) 3 m (10.5 ft) 5 m (17.5 ft) 10 m (35.0 ft) 20 m (70.0 ft)		410300V2001 410300V2003 410300V2005 410300V2010 410300V2020	
Mains cable, 3 m (10.5 ft) with EURO plug with US plug 5-15 P		800102V0002 800102V1002	
Forevacuum pump TRIVAC D 2,5 E 220-240 V, 50 Hz; 230 V, 60 Hz; earthed plug, EURO version 110-120 V, 50/60 Hz; NEMA plug, US version		140 000 140 002	
TRIVAC D 8 B 1 phase motor; 230 V, 50/60 Hz 3 phase motor; 230/400 V, 50 Hz; 250/440 V, 60 Hz		112 55 112 56	

With integrated Frequency Converter



Ordering Information

TURBOVAC MAG W 600/700 iP

Accessories, optional	P	Part No.
Inlet screen		
DN 160 ISO-K		E 200 00 307
DN 160 CF		200 17 247
DN 200 ISO-K		200 91 639
DN 200 CF		400 001 515
Flange heater		
160 CF, 230 V, 50 Hz		854 37
160 CF, 115 V, 60 Hz		854 38
Water cooling unit		410600V0101
Air cooling unit		410600V0102
START/STOP switch for manual operation of the turbomolecular pump		152 48
DC plug		800 001 694
Solenoid venting valve, normally closed		
24 V DC, DN 16 KF		800120V0011
Power failure venting valve, normally open		800120V0021
Included in the Delivery of the Pump	P	
Flanges for forevacuum, venting and purge gas are blank-flanged		
Centering ring with FPM sealing ring and a clamping yoke		