

HiPace® 700 M

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PFEIFFER VACUUM



Similar Image

HiPace® 700 M with TM 700 and power supply OPS 400, DN 160 CF-F

- 5-axis magnetically levitated turbopump with a pumping speed of 685 l/s for N_2
- Digital magnetic bearing controller TM 700 and power supply OPS 400 integrated
- Installation in any orientation; flexible through connectivity of up to 4 accessory parts
- With integrated water cooling for maximum gas throughput
- Interfaces: RS-485, Remote (Profibus/DeviceNet on request)
- The turbopump features extremely low vibration and is oil-free
- With patented In-field sensor calibration
- Including venting valve and patented "pulsed venting"
- Protection Class: IP 54
- Extensive accessories expand the range of applications

Technical Data	HiPace® 700 M with TM 700 and power supply OPS 400, DN 160 CF-F
Bearing	Magnetically Levitated
Compression ratio for Ar	> $1 \cdot 10^{11}$
Compression ratio for H_2	$2 \cdot 10^{5}$
Compression ratio for He	> $1 \cdot 10^{7}$
Compression ratio for N_2	> $1 \cdot 10^{11}$
Cooling method, optional	Air, convection
Cooling method, standard	Water
Cooling water consumption	80 l/h
Cooling water temperature	15-35 °C | 59-95 °F | 288-308 K
Electronic drive unit	with TM 700
Flange (in)	DN 160 CF-F
Flange (out)	DN 25 ISO-KF
Fore-vacuum max. for N_2	8 hPa | 6 Torr | 8 mbar
Gas throughput at 0.1 hPa HV for Ar	16 hPa l/s | 12 Torr l/s | 16 mbar l/s
Gas throughput at 0.1 hPa HV for H_2	9 hPa l/s | 6.75 Torr l/s | 9 mbar l/s
Gas throughput at 0.1 hPa HV for He	16 hPa l/s | 12 Torr l/s | 16 mbar l/s
Gas throughput at 0.1 hPa HV for N_2	16 hPa l/s | 12 Torr l/s | 16 mbar l/s
Gas throughput at full rotational speed for Ar	8 hPa l/s | 6 Torr l/s | 8 mbar l/s
Gas throughput at full rotational speed for N_2	13 hPa l/s | 9.75 Torr l/s | 13 mbar l/s
Integrated power supply	yes
Interfaces	RS-485, Remote
Low vibrations	yes
Mounting orientation	in any orientation
Operating voltage	48 (± 5 %) V DC
Permissible magnetic field max.	5 mT
Protection category	IP 54
Pumping speed for Ar	660 l/s
Pumping speed for H_2	480 l/s
Pumping speed for He	600 l/s
Pumping speed for N_2	685 l/s
Rotation speed ± 2 %	49200 min^{-1}
Rotation speed variable	20-100 %
Run-up time	4 min
Sound pressure level	≤ 45 dB (A)
Ultimate pressure according to PNEUROP	< $5 \cdot 10^{-10}$ hPa | < $3.75 \cdot 10^{-10}$ Torr | < $5 \cdot 10^{-10}$ mbar
Venting connection	G 1/8"
Weight	22.4 kg | 49.38 lb

Order number	
HiPace® 700 M	**PM P04 982**

Accessories	
Accessory for TC 400/1200 and TM 700	
Y-connector, shielded, M12 for accessories	**P 4723 013**
Adapter and control cables	
Control cable for pumping stations 0.7 m	**PM 061 675 AT**
HiPace - ACP connection cable	**PM 071 142 -X**
Air cooling	
Air cooling, shielded, for HiPace 400/700/800 and 300700/800 M with TC 400 PB/TM 700	**PM Z01 363**
CF-F, Mounting kit	
Set of hexagon screws for trough hole, DN 160 CF-F	**PM 016 691 -T**
Set of stud screws for trough hole, DN 160 CF-F	**PM 016 693 -T**
CF-F, Sealings, splinter shields, protection screens	
Protection screen for DN 160 CF-F	**PM 016 339**
Splinter shield for turbopumps, DN 160 CF-F	**PM 016 318**
Control and display units	
Accessories package for HPU 001/PC	**PM 061 005 -T**
DCU 002, Display Control Unit	**PM 061 348 -T**
HPU 001, Handheld Programming Unit	**PM 051 510 -T**
Fore-vacuum safety valves	
TVV 001 fore-vacuum safety valve, 115 V AC	**PM Z01 206**
TVV 001 fore-vacuum safety valve, 230 V AC	**PM Z01 205**
Interface and extension cables	
Interface cable, M12 m straight/M12 m straight, 3 m	**PM 061 283 -T**
Mains cables	
Mains cable 115 V AC, NEMA 5-15 to HAN 3A, 3 m	**PM 061 187 -X**
Mains cable 208 V AC, NEMA 6-15 to HAN 3A, 3 m	**P 4564 309 HB**
Mains cable 230 V AC, CEE 7/7 to HAN 3A, 3 m	**P 4564 309 HA**
Pressure Sensors	
IKT 010, Digital Cold Cathode Sensor, low current	**PTR 72 100**
IKT 011, Digital Cold Cathode Sensor, high current	**PT R73 100**
RPT 010, Digital Piezo/Pirani Sensor	**PT R71 100**
TIC 010, Adapter for two sensors	**PT R70 000**
Relay boxes	
Relay box, shielded, for backing pumps, 1-phase 20 A for TC 400/1200, TM 700 and TCP 350, M12	**PM 071 285 -X**
Relay box, shielded, for backing pumps, 1-phase 7 A for TC 400/1200, TM 700 and TCP 350, M12	**PM 071 284 -X**
RS-485	
Connector M12 to RS-485	**PM 061 270 -X**
Power separator for RS-485	**PT 348 132 -T**
Termination resistor for RS-485	**PT 348 105 -T**
USB converter to RS-485 interface	**PM 061 207 -T**
Y-Connector M12 to RS-485	**P 4723 010**
Sealing gas	
Sealing gas throttle for HiPace 300	**PM Z01 317**
Sealing gas valve, shielded for HiPace 300 with TC 400 and TM 700, TCP 350	**PM Z01 312**

Accessories	
Shielded heating suitable for TC 400 PB, TC 1200 and TM 700	
Heating jacket, shielded, for HiPace 400/700/800 with TC 400 PB/TM 700, 115 V AC, UL plug	**PM 071 271 -T**
Heating jacket, shielded, for HiPace 400/700/800 with TC 400 PB/TM 700, 208 V AC, UL plug	**PM 071 270 -T**
Heating jacket, shielded, for HiPace 400/700/800 with TC 400 PB/TM 700, 230 V AC, safety plug	**PM 071 269 -T**
Venting accessory with small flange, G 1/8", hoses, air drier	
TTV 001, dryer for venting turbopumps	**PM Z00 121**
Venting valve (normally closed)	
Venting valve, shielded, 24 V DC, G 1/8", for connection to TC 400/1200 and TM 700	**PM Z01 291**
Vibration damper	
Vibration damper for HiPace DN 160 CF-F	**PM 006 493 -X**

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