PFEIFFER VACUUM

Hakuto 伯東



HiPace® 300

Compact yet powerful turbopumps with pumping speeds of up to 260 l/s for N_2

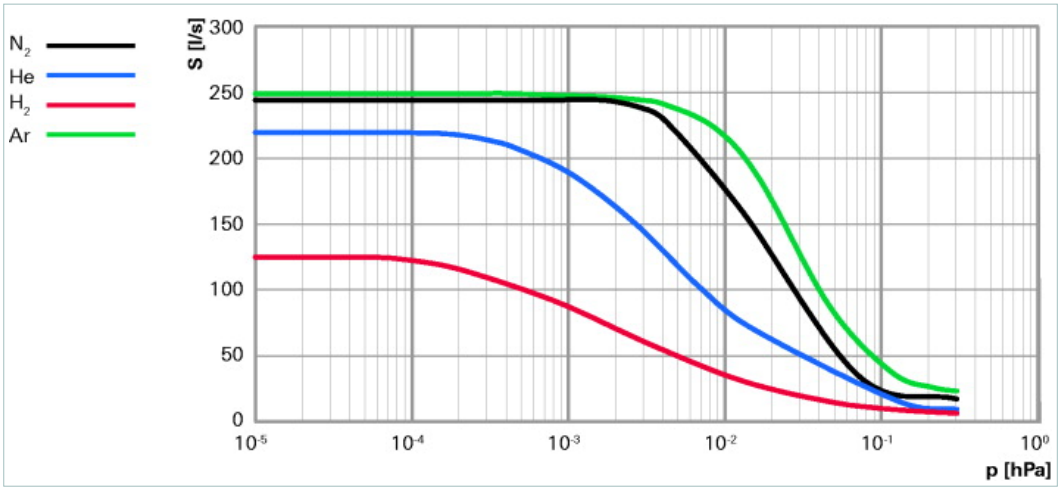


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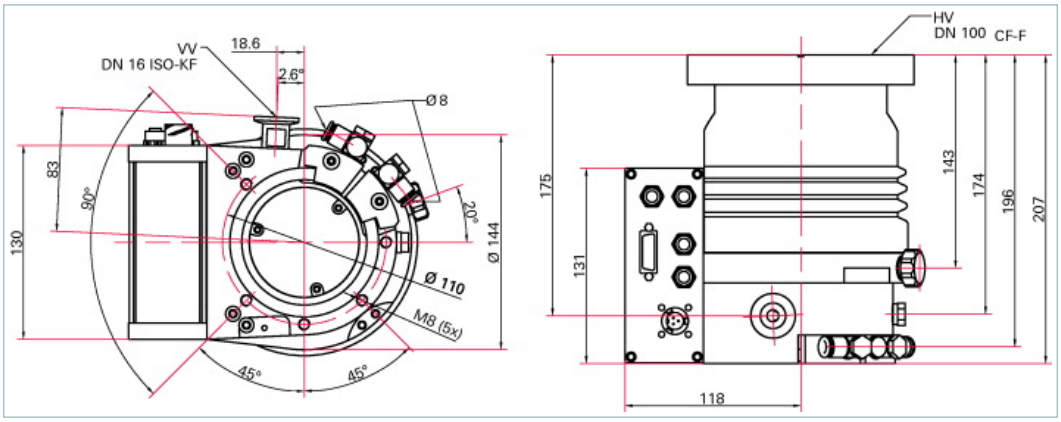
HiPace® 300 P with TC 400, DN 100 CF-F

- Rugged, powerful turbopump with a pumping speed of up to 245 l/s for N_2
- Integrated drive electronics TC 400
- Perfect solution for coating and semiconductor processes as well as for dusty industrial applications like electron-beam welding facilities
- For installation in any orientation
- With integrated water cooling for maximum gas throughput
- Flexible through the ability to employ up to 4 accessories
- Ideal for fast cycles
- Extensive accessories expand the range of applications
- Insensitive to dust

C=Corrosive gas version



Dimensions



Technical Data	HiPace® 300 P with TC 400, DN 100 CF-F
Bearing	Hybrid
Compression ratio for Ar	> $1 \cdot 10^7$
Compression ratio for H_2	$3 \cdot 10^2$
Compression ratio for He	$2 \cdot 10^3$
Compression ratio for N_2	> $1 \cdot 10^6$
Cooling method, optional	Air
Cooling method, standard	Water
Cooling water consumption	50 l/h
Cooling water temperature	15-35 °C | 59-95 °F | 288-308 K
Electronic drive unit	with TC 400

Technical Data	HiPace® 300 P with TC 400, DN 100 CF-F
Flange (in)	DN 100 CF-F
Flange (out)	DN 16 ISO-KF / G 1/4"
Fore-vacuum max. for N_2	1 hPa | 0.75 Torr | 1 mbar
Gas throughput at full rotational speed for Ar	2.9 hPa l/s | 2.17 Torr l/s | 2.9 mbar l/s
Gas throughput at full rotational speed for H_2	> 20 hPa l/s | > 15 Torr l/s | > 20 mbar l/s
Gas throughput at full rotational speed for He	> 10 hPa l/s | > 7.5 Torr l/s | > 10 mbar l/s
Gas throughput at full rotational speed for N_2	14 hPa l/s | 10.5 Torr l/s | 14 mbar l/s
Interfaces	RS-485, Remote
Mounting orientation	in any orientation
Operating voltage	24 (± 5 %) V DC
Particulate matter	yes
Permissible magnetic field max.	5.5 mT
Protection category	IP54
Pumping speed for Ar	250 l/s
Pumping speed for H_2	125 l/s
Pumping speed for He	220 l/s
Pumping speed for N_2	245 l/s
Rotation speed ± 2 %	60000 min^{-1}
Rotation speed variable	35-100 %
Run-up time	1.2 min
Sound pressure level	≤ 50 dB (A)
Ultimate pressure according to PNEUROP	< 5 · 10^{-10} hPa | < 3.75 · 10^{-10} Torr | < 5 · 10^{-10} mbar
Venting connection	G 1/8"
Weight	8.4 kg | 18.52 lb

Order number	
HiPace® 300	**PM P04 711**

Accessories	
Accessory for TC 110	
Enclosure for plug, spraywater-protected, 15-pole, D-sub	**P 0998 016**
Accessory for TC 400/1200 and TM 700	
Mains power socket, angled, for TC 400/TM 700	**P 4723 101**
Mains power socket TC 400/TM 700, straight	**P 4723 100**
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 for HiPace 300/450, 115 V	**PM Z01 308**
Air cooling for HiPace 300/450, 230 V	**PM Z01 309**
Air cooling for HiPace 300 with TC 400	**PM Z01 302**
CF-F, Mounting kit	
Set of hexagon screws for through hole, DN 100 CF-F	**PM 016 690 -T**
Set of stud screws for tapped hole, DN 100 CF-F	**PM 016 692 -T**
Set of stud screws for through hole, DN 100 CF-F	**PM 016 734 -T**
CF-F, Sealings, splinter shields, protection screens	
Protection screen for DN 100 CF-F	**PM 016 336**
Splinter shield for turbopumps, DN 100 CF-F	**PM 016 315**
Connection cables	
Connection cable for HiPace with TC 400/TM 700 to power supply TPS/DCU 310/311/400/401	**PM 061 352 -T**
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**
RJ 45 interface cable on M12 for HiPace	**PM 051 726 -T**
DCU with integrated power supply	
DCU 310, Display control unit incl. power supply	**PM C01 822**
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**
Heating suitable for TC 110 and TC 400	
Heating jacket for HiPace 300 with TC 400, 115 V AC, UL plug	**PM 061 368 -T**
Heating jacket for HiPace 300 with TC 400, 208 V AC, UL plug	**PM 061 367 -T**
Heating jacket for HiPace 300 with TC 400, 230 V AC, safety plug	**PM 061 366 -T**
Interface and extension cables	
Extension cable M12 on M12	**PM 061 747 -T**
Interface cable, M12 m straight/ M12 m angled 0.7 m	**PM 061 791 -T**
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 C13, 3 m	**P 4564 309 ZE**
Mains cable 208 V AC, NEMA 6-15 to C13, 3 m	**P 4564 309 ZF**
Mains cable 230 V AC, CEE 7/7 to C13, 3 m	**P 4564 309 ZA**
Power failure venting units (normally open)	
Power failure venting valve, shielded, 24 V DC, G 1/8" for connection to TC 400, TM 700 and TC 1200	**PM Z01 331**

Accessories	
Relay boxes	
Backing pump relay box, single phase 20 A, for TC 400 and TCP 350, M12 plug	**PM 061 375 -T**
RS-485	
Connector M12 to RS-485	**PM 061 270 -X**
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 - 800	**PM Z01 317**
TPS-19" rack module	
Front panel kit for TPS 311	**PM 061 395 -T**
TPS 311, mains pack 19" rack module 3HU	**PM 061 346 -T**
TPS wall rail fitting	
TPS 310, mains pack for wall/standard rail fitting	**PM 061 342 -T**
Wall rail fitting for TPS 110/180/310/400	**PM 061 392 -T**
Venting accessory with small flange, G 1/8", hoses, air drier	
Banjo fitting	**PM 016 787 -T**
Banjo fitting, small	**PM 143 877 -T**
Hose nozzle for 9 mm hose, G 1/8"	**PM 016 783 -T**
Plug-in fitting for 6 mm hose, G 1/8"	**PM 016 781 -T**
Plug-in fitting for 8 mm hose, G 1/8"	**PM 016 782 -T**
Screw-in flange, DN 10 ISO-KF, G 1/8"	**PM 033 737 -T**
Screw-on flange, DN 16 ISO-KF, G 1/8"	**PM 016 780 -T**
TTV 001, dryer for venting turbopumps	**PM Z00 121**
Venting valve (normally closed)	
Venting valve, 24 V DC, G 1/8" without cable	**PM Z01 293**
Venting valve, shielded, 24 V DC, G 1/8", for connecting to TC 400,1200 and TM 700 with twisted plug 270°	**PM Z01 292**
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 300/400, DN 100 CF-F	**PM 006 488 -X**