



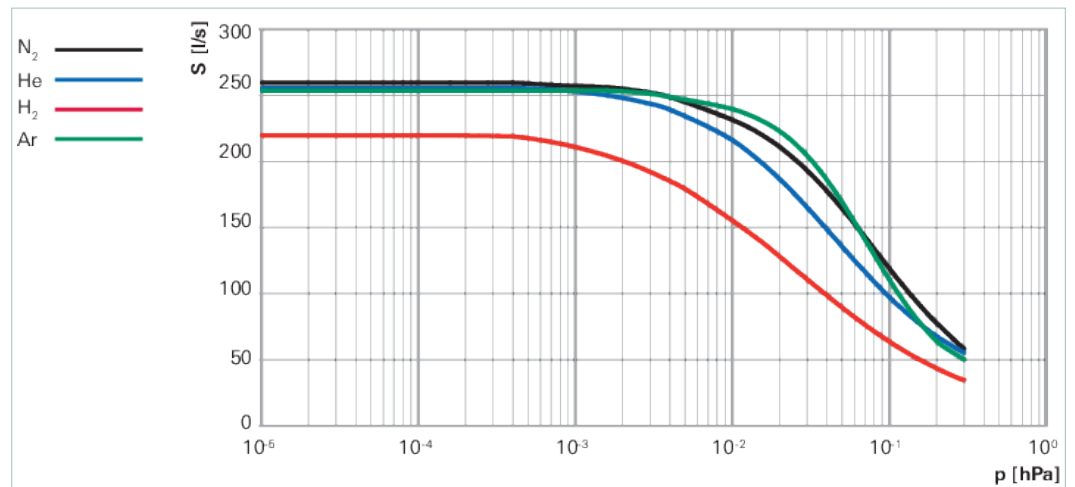
HiPace[®] 300 with TC 400, DN 100 CF-F



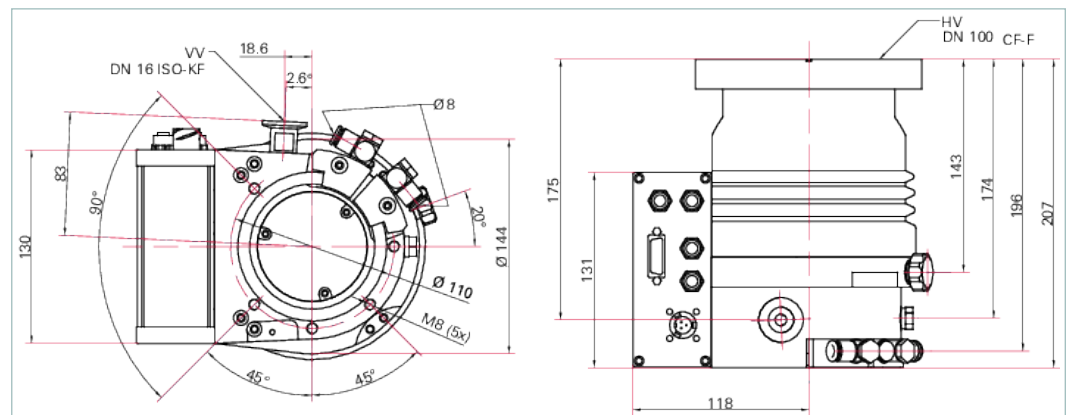
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HiPace® 300 with TC 400, DN 100 CF-F

- Rugged, powerful turbopump with a pumping speed of up to 260 l/s for N₂
- Integrated drive electronics TC 400
- Ideal for UHV applications
- 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



Dimensions



Technical Data	HiPace® 300 with TC 400, DN 100 CF-F
Bearing	Hybrid
Compression ratio for Ar	$> 1 \cdot 10^{11}$
Compression ratio for H ₂	$9 \cdot 10^5$
Compression ratio for He	$> 1 \cdot 10^8$
Compression ratio for N ₂	$> 1 \cdot 10^{11}$
Connection flange (in)	DN 100 CF-F
Connection flange (out)	DN 16 ISO-KF/G ¼"
Cooling method	Water
Cooling method, optional	Air (forced convection)
Cooling water flow	50 l/h
Cooling water temperature	15-35 °C 59-95 °F 288-308 K

Technical Data	HiPace® 300 with TC 400, DN 100 CF-F
Current, max.	12.5 A
Electronic drive unit	TC 400
Final pressure	$< 5 \cdot 10^{-10}$ hPa $< 3.75 \cdot 10^{-10}$ Torr $< 5 \cdot 10^{-10}$ mbar
Fore-vacuum max. for N ₂	20 hPa 15 Torr 20 mbar
Gas throughput at final rotation speed for Ar	7 hPa·l/s
Gas throughput at final rotation speed for H ₂	> 14 hPa·l/s
Gas throughput at final rotation speed for He	20 hPa·l/s
Gas throughput at final rotation speed for N ₂	14 hPa·l/s
I/O interfaces	RS-485, Remote
Input voltage(s)	24 V DC
Integral leak rate	$< 1 \cdot 10^{-8}$ Pa m ³ /s $< 7.5 \cdot 10^{-8}$ Torr l/s $< 1 \cdot 10^{-7}$ mbar l/s
Interfaces, extended	Profibus DeviceNet E74
Mounting orientation	Arbitrary
Permissible radial magnetic field max.	5.5 mT
Position of power supply pack	External power supply pack
Power consumption max.	300 W
Protection degree	Type 12 IP54
Pumping speed for Ar	255 l/s
Pumping speed for H ₂	220 l/s
Pumping speed for He	255 l/s
Pumping speed for N ₂	260 l/s
Rotation speed ± 2 %	60,000 rpm 60,000 min ⁻¹
Rotation speed variable	35 – 100 %
Run-up time	1.8 min
Sound pressure level	≤ 50 dB(A)
Type of electronic drive unit installation	Integrated electronic drive unit
Venting connection	G 1/8"
Weight	8.7 kg 19.18 lb
Order number	
HiPace® 300	PM P03 901

Accessories	
Adapters (electrical) Profibus	
Remote adapter for RS-485	PM 061 649 -X
Adapters (electrical) Remote	
Y-Connector, shielded, M12 for accessories	P 4723 013
Supply socket TC 400/TM 700, straight	P 4723 100
Supply bushing, angled, for TC 400/TM 700	P 4723 101
Adapters (electrical) RS-232/485	
Y-connector M12 for RS-485	P 4723 010
USB RS-485 converter	PM 061 207 -T
Coupling M12 for RS-485	PM 061 270 -X
Terminal resistor for RS-485	PT 348 105 -T
Power separator for RS-485	PT 348 132 -T
Cables Backing pump control cables	
Control cable for pumping stations 0.7 m	PM 061 675 AT
HiPace – ACP connection cable	PM 071 142 -X
Cables Connection cable	
Connection cable for HiPace with TC 400/TM 700 to power supply pack TPS/DCU 310/311/400/401	PM 061 352 -T
Cables Extension cables	
Extension cable M12 on M12	PM 061 747 -T
Cables Mains cables / Power cords	
Mains cable 230 V AC, CEE 7/7 to C13, 3 m	P 4564 309 ZA
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
Cables RS-485 Interface cables	
Interface cable, M12 m straight / M12 m straight, 3 m	PM 061 283 -T
Interface cable, M12 m straight / M12 m angled, 0.7 m	PM 061 791 -T
CF, double acting, metric, reed switch, 24 V DC control valve	
UHV gate valve, DN 100 CF, metric, electro-pneumatic, PI (RS)/PV 24 V DC, SS/Cu/FKM	GVMP-S08542
Connections Connection kits for mounting of pumps	
Connection kit for mounting of pumps, DN 16 ISO-KF	120SWS016-1000
Control Devices Backing pump	
Relay box for backing pumps, 1-phase motor 20 A for TC 400 and TCP 350, M12 plug	PM 061 375 -T
Relay box, shielded, for backing pumps, 1-phase motor 7 A for TC 400/1200, TM 700 and TCP 350, M12	PM 071 284 -X
Control Devices Power supplies and control displays	
Accessories package for HPU 001/PC	PM 061 005 -T
TPS 310, power supply pack for wall/standard rail fitting	PM 061 342 -T
TPS 311, power supply pack 3HU 19" rack module	PM 061 346 -T
Front panel kit for TPS 311	PM 061 395 -T
OmniControl 001, rack unit without integrated power supply pack	PE D42 100 0
OmniControl 001 Mobile, control units	PE D22 000 0
OmniControl 300, rack unit with integrated power supply pack	PE D62 110 0
OmniControl 300, table unit with integrated power supply pack	PE E62 110 0

Accessories	
Cooling Air cooling	
Air cooling for HiPace 300 with TC 400	PM Z01 302
Air cooling for HiPace 300, 115 V	PM Z01 308
Air cooling for HiPace 300, 230 V	PM Z01 309
FKM cut from sheet material	
Elastomer seal, FKM, DN 100 CF	402DFL100-S2
FKM with centering lip; heat-molded	
Elastomer seal, FKM, DN 100 CF	402DFL100-Z
Heating Heating jackets	
Heating sleeve for HiPace® 300 with TC 400, 230 V AC, safety plug	PM 061 366 -T
Heating sleeve for HiPace® 300 with TC 400, 208 V AC, ul plug	PM 061 367 -T
Heating sleeve for HiPace® 300 with TC 400, 115 V AC, ul plug	PM 061 368 -T
Monitoring Pressure Sensors	
OmniControl 200 with PKR 361, 25 KF	PT 440 955 -T
OmniControl 200 with TPR 270	PT 440 950 -T
Monitoring Sealing gas monitoring units	
Sealing gas monitoring unit G 1/8"	PM 016 911 -U
Mounting CF-F, Mounting kits	
Hexagon screw set for flanges with through holes, DN 100 CF-F	PM 016 690 -T
Set of stud screws for flanges with through-hole, DN 100 CF-F	PM 016 734 -T
Set of stud screws for flanges with a threaded hole, DN 100 CF-F	PM 016 866 -T
OFHC Copper (Oxygen Free)	
Copper gasket, OFHC copper, DN 100 CF	490DFL100-S10
OFHC Copper (Oxygen Free), Silver-plated	
Copper gasket, silver-plated, DN 100 CF	490DFL100-S-S5
OFHC Copper (Oxygen Free), Silver-plated, Vacuum-annealed	
Copper gasket, silver-plated, vacuum-annealed, DN 100 CF	490DFL100-S-G-S5
OFHC Copper (Oxygen Free), Vacuum-annealed	
Copper gasket, vacuum-annealed, DN 100 CF	490DFL100-G-S5
Protection CF-F, splinter shields, protection screens	
Splinter shield for turbopumps, DN 100 CF-F	PM 016 315
Protection screen for DN 100 CF-F	PM 016 336
Protection Sealing gas throttles	
Sealing gas throttle for HiPace 300	PM Z01 317
Valves Fore-vacuum safety valves	
TVV 001, fore-vacuum safety valve, 230 V AC	PM Z01 205
TVV 001, fore-vacuum safety valve, 115 V AC	PM Z01 206
Valves Sealing gas valves, shielded (normally closed)	
Sealing gas valve, shielded for HiPace 300 with TC 400 and TM 700, TCP 350	PM Z01 312
Venting 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	
Venting Venting accessories	
Flange with pipe thread, DN 16 ISO-KF, G 1/8"	PM 016 780 -T
Push-in fitting for 6 mm tube, G 1/8"	PM 016 781 -T
Push-in fitting for 8 mm tube, G 1/8"	PM 016 782 -T
Hose nozzle for 9 mm hose, G 1/8"	PM 016 783 -T
Banjo fitting	PM 016 787 -T
Screw-in flange, DN 10 ISO-KF, G 1/8"	PM 033 737 -T
Banjo fitting, small	PM 143 877 -T
TTV 001, Drier for venting turbopumps	PM Z00 121
Venting Venting valves (normally closed)	
Venting valve, shielded, 24 V DC, G 1/8", for connection to TC 400/1200 and TM 700	PM Z01 291
Venting valve, shielded, 24 V DC, G1/8" for connecting to TC 400, 1200 as well as TM 700 with an 270° angled plug	PM Z01 292
Vibration Reduction Vibration dampers	
Vibration damper for HiPace 300/400, DN 100 CF-F	PM 006 488 -X

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