



# HiPace<sup>®</sup> 300

Compact yet powerful turbopumps with  
pumping speeds of up to 260 l/s for N<sub>2</sub>



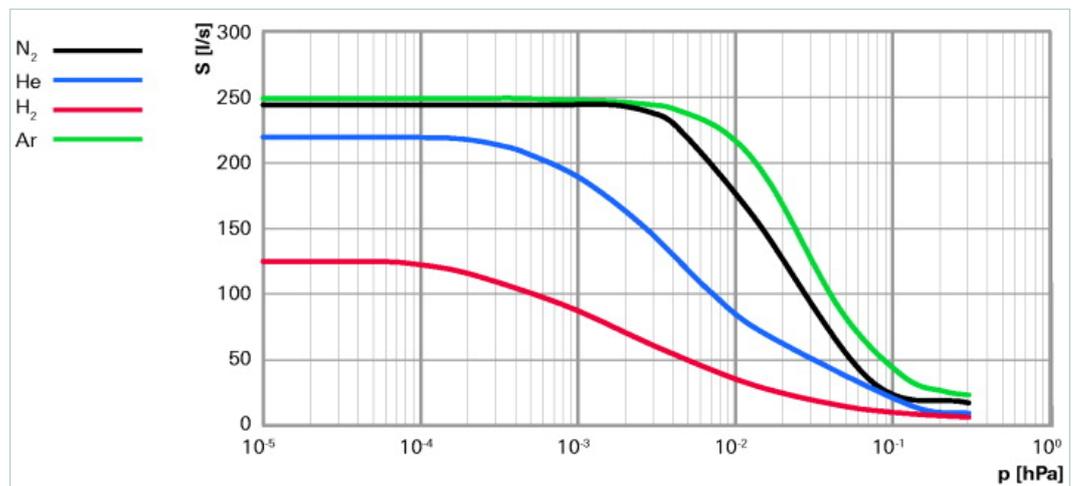


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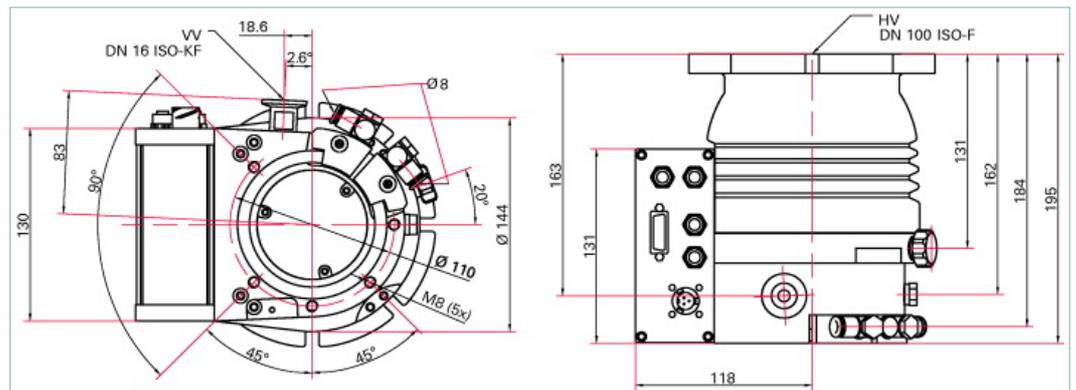
## HiPace® 300 P with TC 400, DN 100 ISO-F

- Rugged, powerful turbopump with a pumping speed of up to 245 l/s for N<sub>2</sub>
- 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 ISO-F

Bearing	Hybrid
Compression ratio for Ar	> 1 · 10 <sup>7</sup>
Compression ratio for H <sub>2</sub>	3 · 10 <sup>2</sup>
Compression ratio for He	2 · 10 <sup>3</sup>
Compression ratio for N <sub>2</sub>	> 1 · 10 <sup>6</sup>
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
Flange (in)	DN 100 ISO-F

Technical Data	HiPace® 300 P with TC 400, DN 100 ISO-F
Flange (out)	DN 16 ISO-KF / G 1/4"
Fore-vacuum max. for N <sub>2</sub>	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 <sub>2</sub>	> 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 <sub>2</sub>	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	IP 54
Pumping speed for Ar	250 l/s
Pumping speed for H <sub>2</sub>	125 l/s
Pumping speed for He	220 l/s
Pumping speed for N <sub>2</sub>	245 l/s
Rotation speed ± 2 %	60000 min <sup>-1</sup>
Rotation speed variable	35-100 %
Run-up time	1.2 min
Sound pressure level	50 dB (A)
Ultimate pressure according to PNEUROP	< 1 · 10 <sup>-7</sup> hPa   < 7.5 · 10 <sup>-8</sup> Torr   < 1 · 10 <sup>-7</sup> mbar
Venting connection	G 1/8"
Weight	6.7 kg   14.77 lb

Order number	
HiPace® 300	PM P04 712

<b>Accessories</b>	
<b>Accessory for TC 110</b>	
Enclosure for plug, spraywater-protected, 15-pole, D-sub	<b>P 0998 016</b>
<b>Accessory for TC 400/1200 and TM 700</b>	
Mains power socket, angled, for TC 400/TM 700	<b>P 4723 101</b>
Mains power socket TC 400/TM 700, straight	<b>P 4723 100</b>
Y-connector, shielded, M12 for accessories	<b>P 4723 013</b>
<b>Adapter and control cables</b>	
Control cable for pumping stations 0.7 m	<b>PM 061 675 AT</b>
HiPace - ACP connection cable	<b>PM 071 142 -X</b>
<b>Air cooling</b>	
Air cooling for HiPace 300/450, 115 V	<b>PM Z01 308</b>
Air cooling for HiPace 300/450, 230 V	<b>PM Z01 309</b>
Air cooling for HiPace 300 with TC 400	<b>PM Z01 302</b>
<b>Connection cables</b>	
Connection cable for HiPace with TC 400/TM 700 to power supply TPS/DCU 310/311/400/401	<b>PM 061 352 -T</b>
<b>Control and display units</b>	
Accessories package for HPU 001/PC	<b>PM 061 005 -T</b>
DCU 002, Display Control Unit	<b>PM 061 348 -T</b>
HPU 001, Handheld Programming Unit	<b>PM 051 510 -T</b>
RJ 45 interface cable on M12 for HiPace	<b>PM 051 726 -T</b>
<b>DCU with integrated power supply</b>	
DCU 310, Display control unit incl. power supply	<b>PM C01 822</b>
<b>DN ISO-F, Mounting kit</b>	
Mounting kit for DN 100 ISO-F, including coated centering ring, hexagon screws	<b>PM 016 450 -T</b>
Mounting kit for DN 100 ISO-F, including coated centering ring, protection screen, stud screws	<b>PM 016 457 -T</b>
Mounting kit for DN 100 ISO-F, including coated centering ring, protective screen, hexagon screws	<b>PM 016 452 -T</b>
Mounting kit for DN 100 ISO-F, including coated centering ring, splinter shield, hexagon screws	<b>PM 016 451 -T</b>
Mounting kit for DN 100 ISO-F, including coated centering ring, splinter shield, stud screws	<b>PM 016 456 -T</b>
Mounting kit for DN 100 ISO-F, including coated centering ring, stud screws	<b>PM 016 455 -T</b>
<b>DN ISO-K / -F, sealings, splinter shields, protection screens</b>	
Centering ring with multifunction coating, DN 100 ISO-K/-F	<b>PM 016 210 -U</b>
Centering ring with multifunction coating and integrated protection screen, DN 100 ISO-K/-F	<b>PM 016 212 -U</b>
Centering ring with multifunction coating and integrated splinter shield, DN 100 ISO-K/-F	<b>PM 016 211 -U</b>
<b>Fore-vacuum safety valves</b>	
TVV 001 fore-vacuum safety valve, 115 V AC	<b>PM Z01 206</b>
TVV 001 fore-vacuum safety valve, 230 V AC	<b>PM Z01 205</b>
<b>Interface and extension cables</b>	
Extension cable M12 on M12	<b>PM 061 747 -T</b>
Interface cable, M12 m straight/ M12 m angled 0.7 m	<b>PM 061 791 -T</b>
Interface cable, M12 m straight / M12 m straight, 3 m	<b>PM 061 283 -T</b>
<b>Mains cables</b>	
Mains cable 115 V AC, NEMA 5-15 to C13, 3 m	<b>P 4564 309 ZE</b>
Mains cable 208 V AC, NEMA 6-15 to C13, 3 m	<b>P 4564 309 ZF</b>
Mains cable 230 V AC, CEE 7/7 to C13, 3 m	<b>P 4564 309 ZA</b>

<b>Accessories</b>	
<b>Power failure venting units (normally open)</b>	
Power failure venting valve, shielded, 24 V DC, G 1/8" for connection to TC 400, TM 700 and TC 1200	<b>PM Z01 331</b>
<b>Relay boxes</b>	
Backing pump relay box, single phase 20 A, for TC 400 and TCP 350, M12 plug	<b>PM 061 375 -T</b>
<b>RS-485</b>	
Connector M12 to RS-485	<b>PM 061 270 -X</b>
USB converter to RS-485 interface	<b>PM 061 207 -T</b>
Y-Connector M12 to RS-485	<b>P 4723 010</b>
<b>Sealing gas</b>	
Sealing gas throttle for HiPace 300 - 800	<b>PM Z01 317</b>
<b>TPS-19" rack module</b>	
Front panel kit for TPS 311	<b>PM 061 395 -T</b>
TPS 311, mains pack 19" rack module 3HU	<b>PM 061 346 -T</b>
<b>TPS wall rail fitting</b>	
TPS 310, mains pack for wall/standard rail fitting	<b>PM 061 342 -T</b>
Wall rail fitting for TPS 110/180/310/400	<b>PM 061 392 -T</b>
<b>Venting accessory with small flange, G 1/8", hoses, air drier</b>	
Banjo fitting	<b>PM 016 787 -T</b>
Banjo fitting, small	<b>PM 143 877 -T</b>
Hose nozzle for 9 mm hose, G 1/8"	<b>PM 016 783 -T</b>
Plug-in fitting for 6 mm hose, G 1/8"	<b>PM 016 781 -T</b>
Plug-in fitting for 8 mm hose, G 1/8"	<b>PM 016 782 -T</b>
Screw-in flange, DN 10 ISO-KF, G 1/8"	<b>PM 033 737 -T</b>
Screw-on flange, DN 16 ISO-KF, G 1/8"	<b>PM 016 780 -T</b>
TTV 001, dryer for venting turbopumps	<b>PM Z00 121</b>
<b>Venting valve (normally closed)</b>	
Venting valve, 24 V DC, G 1/8" without cable	<b>PM Z01 293</b>
Venting valve, shielded, 24 V DC, G 1/8", for connecting to TC 400, 1200 and TM 700 with twisted plug 270°	<b>PM Z01 292</b>
Venting valve, shielded, 24 V DC, G 1/8", for connection to TC 400/1200 and TM 700	<b>PM Z01 291</b>
<b>Vibration damper</b>	
Vibration damper for HiPace 300/400, DN 100 ISO-K/F	<b>PM 006 459 -X</b>