

HiPace® 300

Compact yet powerful turbopumps with pumping speeds of up to 260 l/s for N₂

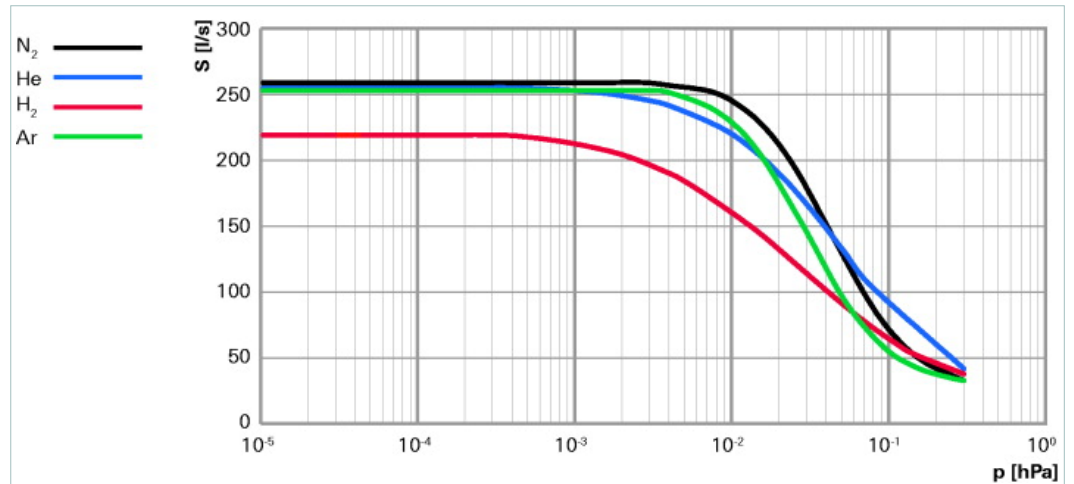


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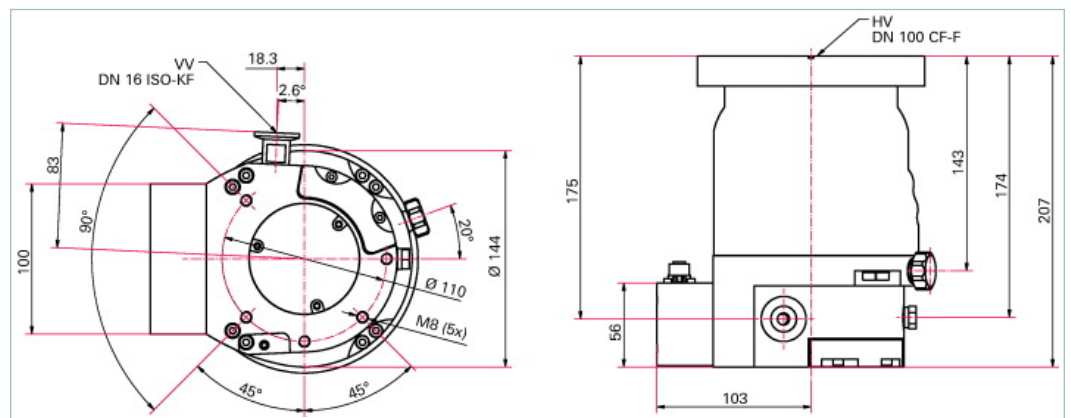
HiPace® 300 Plus with TC 110, DN 100 CF-F

- Compact yet powerful turbopump with a pumping speed of up to 260 l/s for N₂
- Integrated TC 110 drive electronics
- Low vibration and magnetic field - ideal for analytical systems with high requirements
- Extensive accessories expand the range of applications

C=Corrosive gas version



Dimensions



| Technical Data | HiPace® 300 Plus with TC 110, 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 | $> 1 \cdot 10^{11}$ |
| Cooling method, optional | Water |
| Cooling method, standard | Air |
| Cooling water consumption | 50 l/h |
| Cooling water temperature | 15-35 °C 59-95 °F 288-308 K |
| Electronic drive unit | with TC 110 |
| Flange (in) | DN 100 CF-F |
| Flange (out) | DN 16 ISO-KF / G 1/4" |
| Fore-vacuum max. for N ₂ | 15 hPa 11.25 Torr 15 mbar |
| Gas throughput at full rotational speed for Ar | 2 hPa l/s 1.5 Torr l/s 2 mbar l/s |

| Technical Data | | HiPace® 300 Plus with TC 110, DN 100 CF-F | |
|--|--|---|--|
| Gas throughput at full rotational speed for H ₂ | | > 14 hPa l/s > 10.5 Torr l/s > 14 mbar l/s | |
| Gas throughput at full rotational speed for He | | 8 hPa l/s 6 Torr l/s 8 mbar l/s | |
| Gas throughput at full rotational speed for N ₂ | | 5 hPa l/s 3.75 Torr l/s 5 mbar l/s | |
| Interfaces | | RS-485, Remote | |
| Low vibrations | | yes | |
| Mounting orientation | | vertical, flange up | |
| Operating voltage | | 24 (± 5 %) V DC | |
| Permissible magnetic field max. | | 5.5 mT | |
| Protection category | | 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 % | | 60000 min ⁻¹ | |
| Rotation speed variable | | 35-100 % | |
| Run-up time | | 3.5 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 | | 7.8 kg 17.2 lb | |
| Order number | | | |
| HiPace® 300 | | PM P03 981 | |

| Accessories | |
|---|---------------|
| Accessory for TC 110 | |
| Enclosure for plug, spraywater-protected, 15-pole, D-sub | P 0998 016 |
| Mains power plug angled for TC 110/120 and mating plug for interface E74 | P 4723 111 |
| Mains power plug for TC 110/120 and mating plug for E74 interface, straight | P 4723 110 |
| TCS 11, adapter for TC 110/120 with RS-485 interface | PM 061 636 -U |
| TCS 12, adapter for TC 110/120 with interface RS-485, 4 accessory ports and coupling set | PM 061 638 -U |
| TCS 13, adapter for TC 110/120 with interface RS-485, 2 accessory ports and coupling set | PM 061 856 -U |
| Adapter and control cables | |
| Control cable for valve | PM 061 687 -T |
| 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 |
| 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 016 866 -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 110/120 | PM 061 543 -T |
| Connection cable incl. 2 accessory ports for TC 110/120 to power supply | PM 061 552 -T |
| Connection cable with RS-485 interface and 2 accessory ports for TC110/120 to power supply | PM 061 351 -T |
| Connection cable with RS-485 interface and 3 accessory ports for TC 110/120 to power supply | PM 061 512 -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 180, Display control unit incl. power supply | PM C01 821 |
| 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 110, 115 V AC, UL plug | PM 061 365 -T |
| Heating jacket for HiPace 300 with TC 110, 208 V AC, UL plug | PM 061 364 -T |
| Heating jacket for HiPace 300 with TC 110, 230 V AC, safety plug | PM 061 363 -T |

| Accessories | |
|--|---------------|
| Interface and extension cables | |
| Extension cable M8 on M8 | PM 061 783 -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) | |
| Shielded power failure venting unit, 24 V DC, G 1/8", for connection to TC 110/120 | PM Z01 330 |
| Relay boxes | |
| Relay box, shielded, for backing pumps, 1-phase 7A for TC 110/120 and TCP 350, plug M8 | PM 071 282 -X |
| Relay box for backing pump, single phase 20 A for TC 110/120 and TCP 350, M8 plug | PM 061 373 -T |
| 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 - 800 | PM Z01 317 |
| Sealing gas valve, shielded for HiPace 300/450 with TC 110/120 | PM Z01 311 |
| TPS-19" rack module | |
| Front panel kit for TPS 181 | PM 061 394 -T |
| TPS 181, mains pack 19" rack module 3HU | PM 061 345 -T |
| TPS wall rail fitting | |
| TPS 180, mains pack for wall/standard rail fitting | PM 061 341 -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 |
| Push-in fitting for 6 mm hose, G 1/8" | PM 016 781 -T |
| Push-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 connection to TC 110/120 | PM Z01 290 |
| Vibration damper | |
| Vibration damper for HiPace 300/400, DN 100 CF-F | PM 006 488 -X |
| Vibration isolator | |
| Vibration isolator for DN 100 CF-F | PM 016 715 -U |

| Accessories | |
|--|----------------------|
| Water cooling | |
| Water cooling for HiPace 300 with 6 mm push-in fitting | PM 016 636 -T |
| Water cooling for HiPace 300 with hose nozzle, 9.5 mm | PM 016 655 -T |
| Water cooling for HiPace 300 with push-in fitting 8 mm | PM 016 624 -T |
| Water cooling for HiPace 300 with tube fitting 1/4" | PM 016 637 -T |