



# HiPace®; 300

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

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PFEIFFER  VACUUM

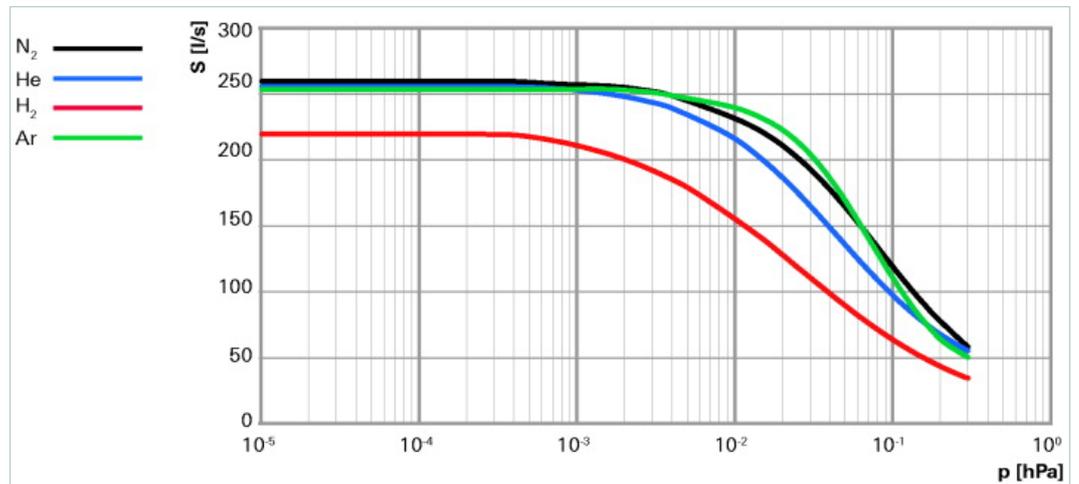


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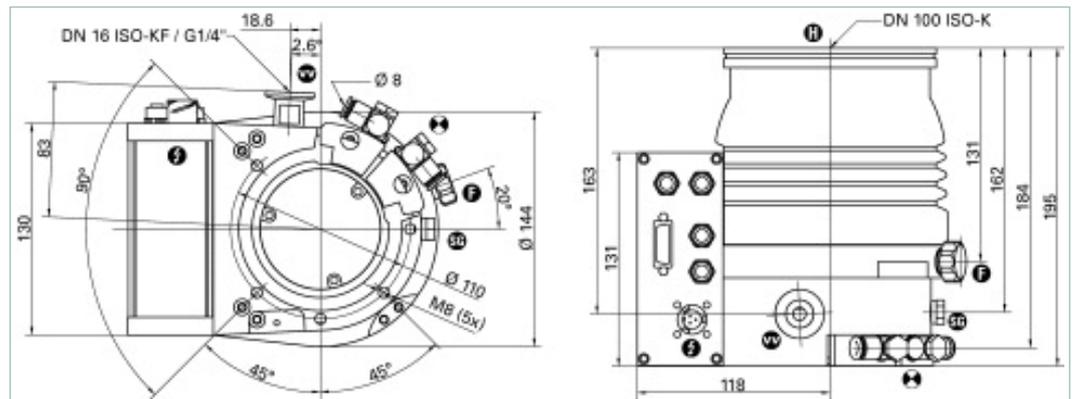
## HiPace® 300 with TC 400, Profibus, DN 100 ISO-K

- Rugged, powerful turbopump with a pumping speed of up to 260 l/s for N<sub>2</sub>
- Integrated drive electronics TC 400 with Profibus
- Ideal for analytical and industrial applications
- For installation in any orientation
- With integrated water cooling for maximum gas throughput
- Flexible through the ability to employ up to 4 accessories
- Profibus connection with M12-plug-in connector
- Ideal for fast cycles
- Extensive accessories expand the range of applications
- Corrosive gas version on request

C=Corrosive gas version



### Dimensions



### Technical Data

### HiPace® 300 with TC 400, Profibus, DN 100 ISO-K

|                                      |                     |
|--------------------------------------|---------------------|
| Bearing                              | Hybrid              |
| Compression ratio for Ar             | $> 1 \cdot 10^{11}$ |
| Compression ratio for H <sub>2</sub> | $9 \cdot 10^5$      |
| Compression ratio for He             | $> 1 \cdot 10^8$    |
| Compression ratio for N <sub>2</sub> | $> 1 \cdot 10^{11}$ |
| Cooling method, optional             | Air                 |
| Cooling method, standard             | Water               |
| Cooling water consumption            | 50 l/h              |

| Technical Data   |  | HiPace® 300 with TC 400, Profibus, DN 100 ISO-K  |
|--|--|--|
| Cooling water temperature                                  |  | 15-35 °C   59-95 °F   288-308 K  |
| Electronic drive unit                                      |  | with TC 400  |
| Flange (in)  |  | DN 100 ISO-K   |
| Flange (out)   |  | DN 16 ISO-KF / G 1/4"  |
| Fore-vacuum max. for N <sub>2</sub>                        |  | 20 hPa   15 Torr   20 mbar   |
| Gas throughput at full rotational speed for Ar             |  | 7 hPa l/s   5.25 Torr l/s   7 mbar l/s   |
| Gas throughput at full rotational speed for H <sub>2</sub> |  | > 14 hPa l/s   > 10.5 Torr l/s   > 14 mbar l/s   |
| Gas throughput at full rotational speed for He             |  | 20 hPa l/s   15 Torr l/s   20 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   |
| Interface, extended  |  | Profibus   |
| Interfaces   |  | RS-485, Remote, Profibus   |
| Mounting orientation                                       |  | in any orientation   |
| 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 <sub>2</sub>                           |  | 220 l/s  |
| Pumping speed for He                                       |  | 255 l/s  |
| Pumping speed for N <sub>2</sub>                           |  | 260 l/s  |
| Rotation speed ± 2 %                                       |  | 60000 min <sup>-1</sup>  |
| Rotation speed variable                                    |  | 35-100 %   |
| Run-up time  |  | 1.8 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 230   |

| <b>Accessories</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-K, Mounting kit, bracket screws</b>  |                      |
| Mounting kit for HiPace 300, DN 100 ISO-K, including coated centering ring, protection screen and bracket screws | <b>PM 016 367 -T</b> |
| Mounting kit for HiPace 300, DN 100 ISO-K, including coated centering ring, splinter shield and bracket screws   | <b>PM 016 366 -T</b> |
| Mounting kit for HiPace 300 with DN 100 ISO-K, including coated centering ring and bracket screws                | <b>PM 016 365 -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>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>Accessories</b>  |               |
|---|---------------|
| <b>Profibus</b>   |               |
| Line filter for cable fitting   | PM 061 806    |
| Plug and socket M12B for Profibus   | PM 051 927 -T |
| Remote adapter for RS-485   | PM 061 649 -X |
| T-Connector M12B to Profibus  | P 4723 020    |
| Termination resistor M12B for Profibus  | P 4723 030    |
| Y-Connector M12B to Profibus  | P 4723 015    |
| Y-Connector with cable M12B to Profibus, 0.5 m  | P 4723 018    |
| <b>Relay boxes</b>  |               |
| Backing pump relay box, single phase 20 A, for TC 400 and TCP 350, M12 plug                               | PM 061 375 -T |
| 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 |
| <b>RS-485</b>   |               |
| 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    |
| <b>Sealing gas</b>  |               |
| Sealing gas throttle for HiPace 300 - 800   | PM Z01 317    |
| Sealing gas valve, shielded for HiPace 300/400/700 and 800 with TC 400 and TM 700                         | PM Z01 312    |
| <b>TPS-19" rack module</b>  |               |
| Front panel kit for TPS 311   | PM 061 395 -T |
| TPS 311, mains pack 19" rack module 3HU   | PM 061 346 -T |
| <b>TPS wall rail fitting</b>  |               |
| 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 |
| <b>Venting accessory with small flange, G 1/8", hoses, air drier</b>                                      |               |
| 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    |
| <b>Venting valve (normally closed)</b>  |               |
| 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    |
| <b>Vibration damper</b>   |               |
| Vibration damper for HiPace 300/400, DN 100 ISO-K/F   | PM 006 459 -X |