



## HiPace<sup>®</sup> 700

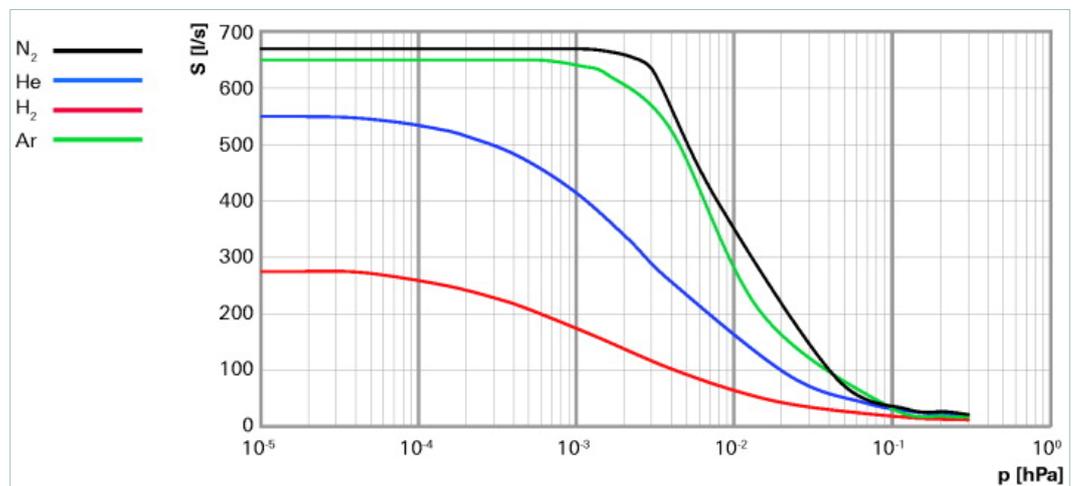
Maximum vacuum performance in a compact design with a pumping speed of 685 l/s for N<sub>2</sub>



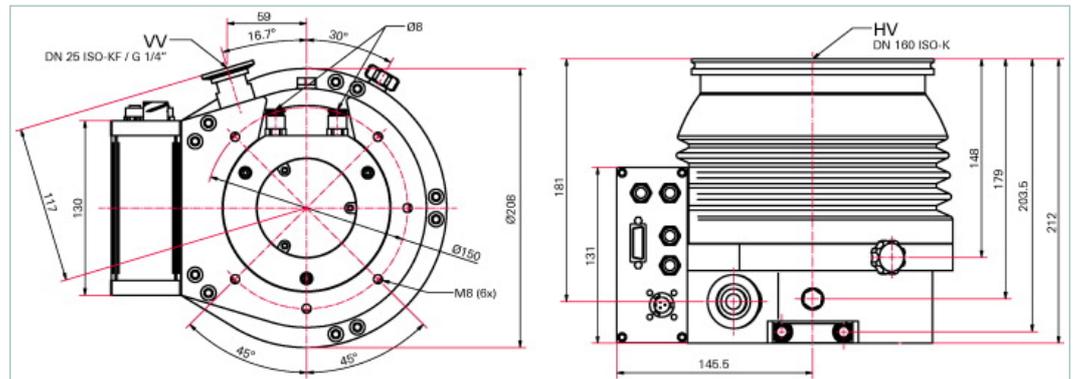
Similar Image

## HiPace® 700 P with TC 400, DN 160 ISO-K

- Rugged, powerful turbopump with a pumping speed of up to 670 l/s for N<sub>2</sub>
- Perfect solution for coating and semiconductor processes as well as for dusty industrial applications like electron-beam welding facilities
- Integrated drive electronics TC 400, 48 V DC
- Installation in any orientation: 360° installation
- 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



### Dimensions



### Technical Data

### HiPace® 700 P with TC 400, DN 160 ISO-K

|                                      |                                 |
|--------------------------------------|---------------------------------|
| Bearing                              | Hybrid                          |
| Compression ratio for Ar             | $> 1 \cdot 10^7$                |
| Compression ratio for H <sub>2</sub> | $4 \cdot 10^2$                  |
| Compression ratio for He             | $3 \cdot 10^3$                  |
| Compression ratio for N <sub>2</sub> | $> 1 \cdot 10^6$                |
| Cooling method, optional             | Air                             |
| Cooling method, standard             | Water                           |
| Cooling water consumption            | 100 l/h                         |
| Cooling water temperature            | 15-35 °C   59-95 °F   288-308 K |
| Electronic drive unit                | with TC 400                     |
| Flange (in)                          | DN 160 ISO-K                    |
| Flange (out)                         | DN 25 ISO-KF / G 1/4"           |

| Technical Data   | HiPace® 700 P with TC 400, DN 160 ISO-K  |
|--|--|
| Fore-vacuum max. for N <sub>2</sub>                        | 1.1 hPa   0.82 Torr   1.1 mbar   |
| Gas throughput at full rotational speed for Ar             | 1 hPa l/s   0.75 Torr l/s   1 mbar l/s   |
| Gas throughput at full rotational speed for H <sub>2</sub> | 6 hPa l/s   4.5 Torr l/s   6 mbar l/s  |
| Gas throughput at full rotational speed for He             | 4 hPa l/s   3 Torr l/s   4 mbar l/s  |
| Gas throughput at full rotational speed for N <sub>2</sub> | 2 hPa l/s   1.5 Torr l/s   2 mbar l/s  |
| Interfaces   | RS-485, Remote   |
| Mounting orientation                                       | in any orientation   |
| Operating voltage  | 48 (± 5 %) V DC  |
| Particulate matter   | yes  |
| Permissible magnetic field max.                            | 6 mT   |
| Protection category  | IP 54  |
| Pumping speed for Ar                                       | 650 l/s  |
| Pumping speed for H <sub>2</sub>                           | 275 l/s  |
| Pumping speed for He                                       | 550 l/s  |
| Pumping speed for N <sub>2</sub>                           | 670 l/s  |
| Rotation speed ± 2 %                                       | 49200 min <sup>-1</sup>  |
| Rotation speed variable                                    | 60-100 %   |
| Run-up time  | 1.6 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   | 10.8 kg   23.81 lb   |

| Order number |            |
|--------------|------------|
| HiPace® 700  | PM P04 275 |

| <b>Accessories</b>   |                      |
|--|----------------------|
| <b>Accessory for TC 400/1200 and TM 700</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 400/700 and 800 with TC 400   | <b>PM Z01 303</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> |
| <b>DCU with integrated power supply</b>  |                      |
| DCU 400, Display control unit incl. power supply   | <b>PM C01 823</b>    |
| <b>DN ISO-K, Mounting kit, bracket screws</b>  |                      |
| Mounting kit for HiPace with DN 160 ISO-K, including coated centering ring, protection screen, bracket screws  | <b>PM 016 377 -T</b> |
| Mounting kit for HiPace with DN 160 ISO-K, including coated centering ring, splinter shield and bracket screws | <b>PM 016 376 -T</b> |
| Mounting kit for HiPace with DN 160 ISO-K, including coated centering ring and bracket screws                  | <b>PM 016 375 -T</b> |
| <b>DN ISO-K / -F, sealings, splinter shields, protection screens</b>   |                      |
| Centering ring with multifunction coating, DN 160 ISO-K/-F   | <b>PM 016 216 -U</b> |
| Centering ring with multifunction coating and integrated protection screen, DN 160 ISO-K/-F                    | <b>PM 016 218 -U</b> |
| Centering ring with multifunction coating and integrated splinter shield, DN 160 ISO-K/-F                      | <b>PM 016 217 -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>  |                      |
| 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>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> |
| Relay box, shielded, for backing pumps, 1-phase 7 A for TC 400/1200, TM 700 and TCP 350, M12                   | <b>PM 071 284 -X</b> |
| <b>RS-485</b>  |                      |
| Power separator for RS-485   | <b>PT 348 132 -T</b> |
| Termination resistor for RS-485  | <b>PT 348 105 -T</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>Accessories</b>  |                      |
|---|----------------------|
| <b>Sealing gas</b>  |                      |
| Sealing gas throttle for HiPace 400/700/800 P and C version and HiPace 1200 - 2300                      | <b>PM Z01 318</b>    |
| Sealing gas valve, shielded, HiPace 400/700/800 P and C with TC 400 and HiPace 1200 - 2300 with TC 1200 | <b>PM Z01 313</b>    |
| <b>TPS-19" rack module</b>  |                      |
| Front panel kit for TPS 401   | <b>PM 061 396 -T</b> |
| TPS 401, power supply 48 V DC, 19" partial plug-in 3HU  | <b>PM 061 347 -T</b> |
| <b>TPS wall rail fitting</b>  |                      |
| TPS 400, power supply 48 V DC, for wall/standard rail fitting   | <b>PM 061 343 -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>                                    |                      |
| TTV 001, dryer for venting turbopumps   | <b>PM Z00 121</b>    |
| <b>Venting valve (normally closed)</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 with DN 160 ISO-K/F   | <b>PM 006 492 -X</b> |