



## HiPace<sup>®</sup> 700

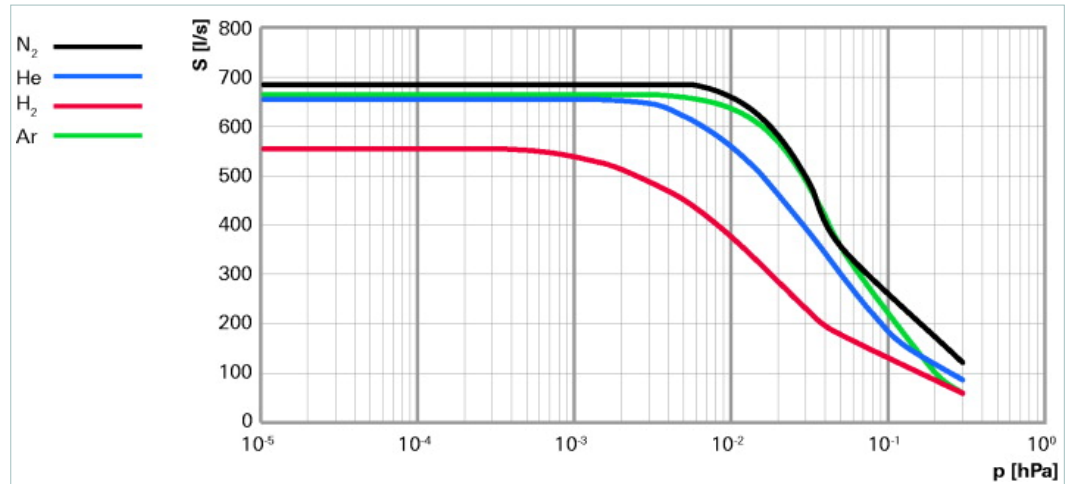
Maximum vacuum performance in a compact design with a pumping speed of 685 l/s for N<sub>2</sub>



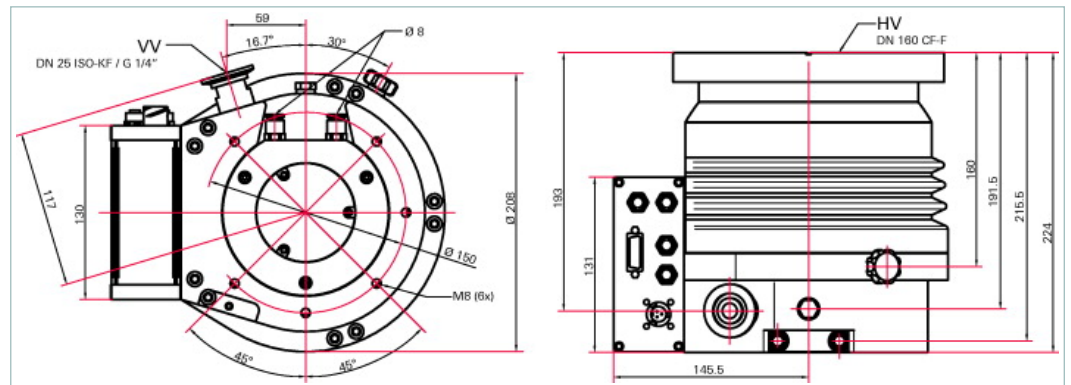
Similar Image

## HiPace® 700 with TC 400, DN 160 CF-F

- Compact yet powerful turbopump with a pumping speed of up to 685 l/s for N<sub>2</sub>
- Maximum vacuum performance with minimum power consumption
- Integrated TC 400 drive electronics
- For installation in any orientation
- Integrated, powerful cooling system
- DN 160 CF-F flange for demanding UHV applications



### Dimensions



Technical Data	HiPace® 700 with TC 400, DN 160 CF-F
Bearing	Hybrid
Compression ratio for Ar	$> 1 \cdot 10^{11}$
Compression ratio for H <sub>2</sub>	$4 \cdot 10^5$
Compression ratio for He	$3 \cdot 10^7$
Compression ratio for N <sub>2</sub>	$> 1 \cdot 10^{11}$
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 CF-F
Flange (out)	DN 25 ISO-KF / G 1/4"
Fore-vacuum max. for N <sub>2</sub>	11 hPa   8.25 Torr   11 mbar
Gas throughput at full rotational speed for Ar	3.5 hPa l/s   2.62 Torr l/s   3.5 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

Technical Data	HiPace® 700 with TC 400, DN 160 CF-F
Gas throughput at full rotational speed for N <sub>2</sub>	6.5 hPa l/s   4.88 Torr l/s   6.5 mbar l/s
Interfaces	RS-485, Remote
Mounting orientation	in any orientation
Operating voltage	48 (± 5 %) V DC
Permissible magnetic field max.	6 mT
Protection category	IP 54
Pumping speed for Ar	665 l/s
Pumping speed for H <sub>2</sub>	555 l/s
Pumping speed for He	655 l/s
Pumping speed for N <sub>2</sub>	685 l/s
Rotation speed ± 2 %	49200 min <sup>-1</sup>
Rotation speed variable	60-100 %
Run-up time	2 min
Sound pressure level	50 dB (A)
Ultimate pressure according to PNEUROP	< 5 · 10 <sup>-10</sup> hPa   < 3.75 · 10 <sup>-10</sup> Torr   < 5 · 10 <sup>-10</sup> mbar
Venting connection	G 1/8"
Weight	17.4 kg   38.36 lb

Order number	
HiPace® 700	PM P03 934

Accessories	
<b>Accessory for TC 400/1200 and TM 700</b>	
Y-connector, shielded, M12 for accessories	P 4723 013
<b>Adapter and control cables</b>	
Control cable for pumping stations 0.7 m	PM 061 675 AT
HiPace - ACP connection cable	PM 071 142 -X
<b>Air cooling</b>	
Air cooling for HiPace 400/700 and 800 with TC 400	PM Z01 303
<b>CF-F, Mounting kit</b>	
Set of hexagon screws for trough hole, DN 160 CF-F	PM 016 691 -T
Set of stud screws for trough hole, DN 160 CF-F	PM 016 693 -T
<b>CF-F, Sealings, splinter shields, protection screens</b>	
Protection screen for DN 160 CF-F	PM 016 339
Splinter shield for turbopumps, DN 160 CF-F	PM 016 318
<b>Connection cables</b>	
Connection cable for HiPace with TC 400/TM 700 to power supply TPS/DCU 310/311/400/401	PM 061 352 -T
<b>Control and display units</b>	
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
<b>DCU with integrated power supply</b>	
DCU 400, Display control unit incl. power supply	PM C01 823
<b>Fore-vacuum safety valves</b>	
TVV 001 fore-vacuum safety valve, 115 V AC	PM Z01 206
TVV 001 fore-vacuum safety valve, 230 V AC	PM Z01 205
<b>Heating suitable for TC 110 and TC 400</b>	
Heating jacket for HiPace 400/700/800 with TC 400, 115 V AC, UL plug	PM 061 371 -T
Heating jacket for HiPace 400/700/800 with TC 400, 208 V AC, UL plug	PM 061 370 -T
Heating jacket for HiPace 400/700/800 with TC 400, 230 V AC, safety plug	PM 061 369 -T
<b>Interface and extension cables</b>	
Interface cable, M12 m straight / M12 m straight, 3 m	PM 061 283 -T
<b>Mains cables</b>	
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
<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 7 A for TC 400/1200, TM 700 and TCP 350, M12	PM 071 284 -X
<b>RS-485</b>	
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

Accessories	
<b>TPS-19" rack module</b>	
Front panel kit for TPS 401	PM 061 396 -T
TPS 401, power supply 48 V DC, 19" partial plug-in 3HU	PM 061 347 -T
<b>TPS wall rail fitting</b>	
TPS 400, power supply 48 V DC, for wall/standard rail fitting	PM 061 343 -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>	
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 connection to TC 400/1200 and TM 700	PM Z01 291
<b>Vibration damper</b>	
Vibration damper for HiPace DN 160 CF-F	PM 006 493 -X