



HiPace[®] 700

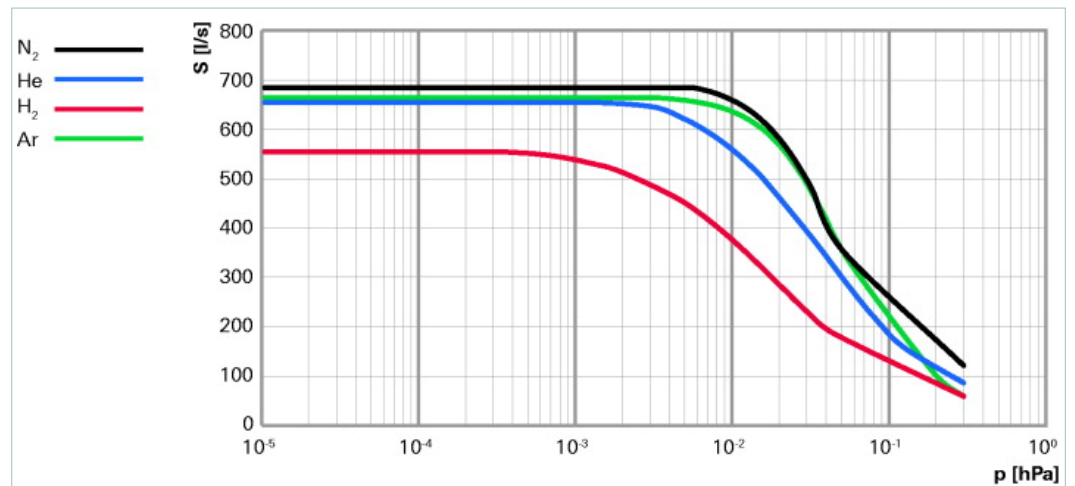
Maximum vacuum performance in a compact design with a pumping speed of 685 l/s for N₂



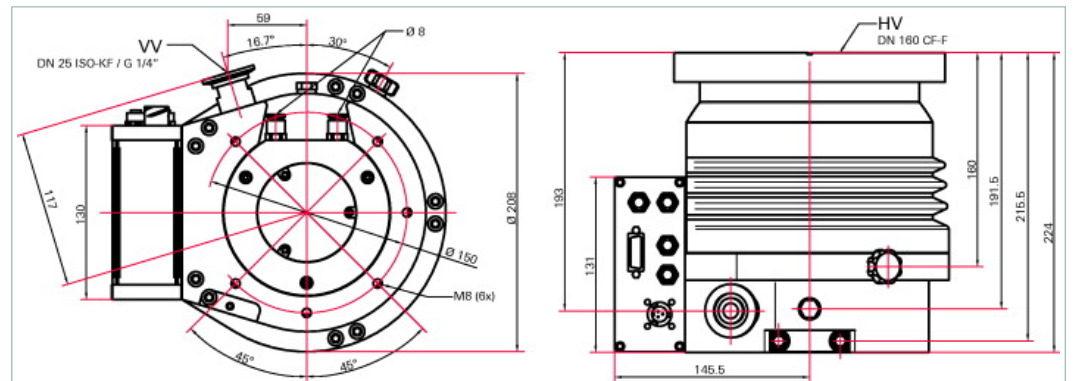
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HiPace® 700 Plus with TC 400, DN 160 CF-F

- Compact yet powerful turbopump with a pumping speed of up to 685 l/s for N₂
- Integrated TC 400 drive electronics
- Low vibration and magnetic field - ideal for analytical systems with high requirements
- Extensive accessories expand the range of applications



Dimensions



Technical Data	HiPace® 700 Plus with TC 400, DN 160 CF-F
Bearing	Hybrid
Compression ratio for Ar	$> 1 \cdot 10^{11}$
Compression ratio for H ₂	$4 \cdot 10^5$
Compression ratio for He	$3 \cdot 10^7$
Compression ratio for N ₂	$> 1 \cdot 10^{11}$
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 ₂	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 ₂	> 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 ₂	6.5 hPa l/s 4.88 Torr l/s 6.5 mbar l/s
Interfaces	RS-485, Remote

Technical Data		HiPace® 700 Plus with TC 400, DN 160 CF-F
Low vibrations		yes
Mounting orientation		vertikal, flange up
Operating voltage		24 (± 5 %) V DC
Permissible magnetic field max.		6 mT
Protection category		IP 54
Pumping speed for Ar		665 l/s
Pumping speed for H ₂		555 l/s
Pumping speed for He		655 l/s
Pumping speed for N ₂		685 l/s
Rotation speed ± 2 %		49200 min ⁻¹
Rotation speed variable		60-100 %
Run-up time		4 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		17.4 kg 38.36 lb

Order number	
HiPace® 700	PM P04 441

Accessories	
Accessory for TC 400/1200 and TM 700	
Y-connector, shielded, M12 for accessories	P 4723 013
Adapter and control cables	
Control cable for pumping stations 0.7 m	PM 061 675 AT
HiPace - ACP connection cable	PM 071 142 -X
Air cooling	
Air cooling for HiPace 400/700 and 800 with TC 400	PM Z01 303
CF-F, Mounting kit	
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
CF-F, Sealings, splinter shields, protection screens	
Protection screen for DN 160 CF-F	PM 016 339
Splinter shield for turbopumps, DN 160 CF-F	PM 016 318
Connection cables	
Connection cable for HiPace with TC 400/TM 700 to power supply TPS/DCU 310/311/400/401	PM 061 352 -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
DCU with integrated power supply	
DCU 310, Display control unit incl. power supply	PM C01 822
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 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
Interface and extension cables	
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
Relay boxes	
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
RS-485	
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 300/400/700 and 800 with TC 400 and TM 700	PM Z01 312
TPS-19" rack module	
Front panel kit for TPS 311	PM 061 395 -T
TPS 311, mains pack 19" rack module 3HU	PM 061 346 -T

Accessories	
TPS wall rail fitting	
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
Venting accessory with small flange, G 1/8", hoses, air drier	
TTV 001, dryer for venting turbopumps	PM Z00 121
Venting valve (normally closed)	
Venting valve, shielded, 24 V DC, G 1/8", for connection to TC 400/1200 and TM 700	PM Z01 291
Vibration damper	
Vibration damper for HiPace DN 160 CF-F	PM 006 493 -X