PFEIFFER VACUUM

Hakuto 伯東



HiPace® 10

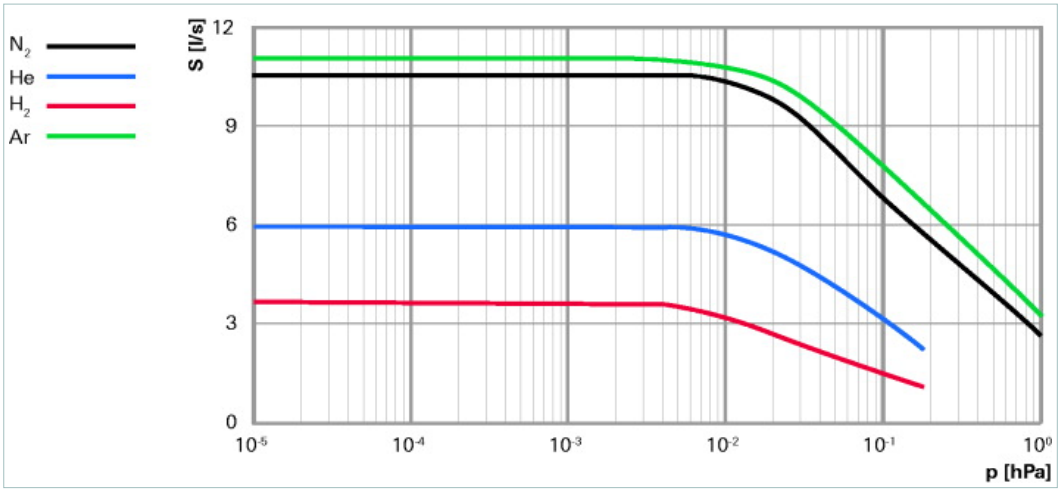
Small and robust turbopump with a pumping speed of 10 l/s for N_2



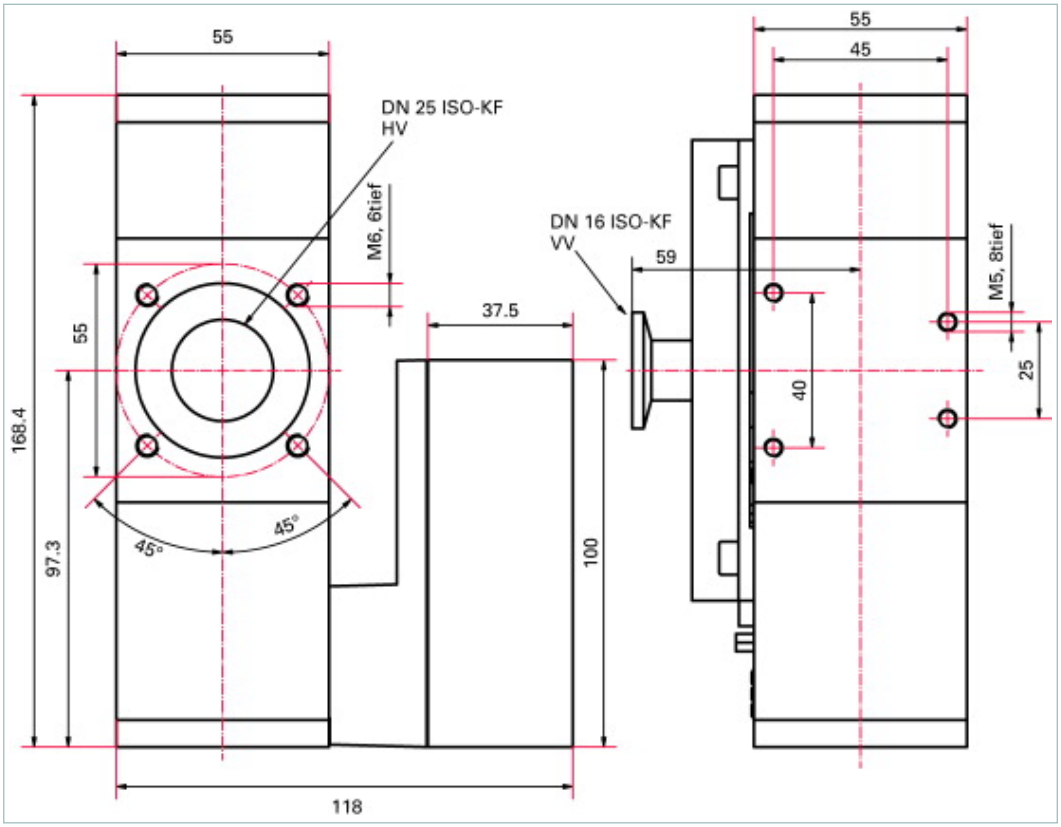
Similar Image

HiPace® 10 with TC 110, DN 25

- The world's smallest series-production turbopump
- A powerful, rugged turbopump with a pumping speed of 10 l/s for N_2
- DN 25 connection
- Integrated drive electronics with 24 V supply voltage
- Mobile usable
- Requires no additional cooling
- Electronic connection in direction of fore-vacuum connection



Dimensions



Technical Data	HiPace® 10 with TC 110, DN 25
Bearing	Ball bearing

Technical Data	HiPace® 10 with TC 110, DN 25
Compression ratio for Ar	$2.5 \cdot 10^7$
Compression ratio for H_2	$3 \cdot 10^2$
Compression ratio for He	$3 \cdot 10^3$
Compression ratio for N_2	$3 \cdot 10^6$
Cooling method, standard	Convection
Electronic drive unit	with TC 110
Flange (in)	DN 25
Flange (out)	DN 16 ISO-KF / G 1/8"
Fore-vacuum max. for N_2	25 hPa | 18.75 Torr | 25 mbar
Gas throughput at full rotational speed for Ar	0.37 hPa l/s | 0.28 Torr l/s | 0.37 mbar l/s
Gas throughput at full rotational speed for H_2	2.78 hPa l/s | 2.08 Torr l/s | 2.78 mbar l/s
Gas throughput at full rotational speed for He	0.48 hPa l/s | 0.36 Torr l/s | 0.48 mbar l/s
Gas throughput at full rotational speed for N_2	0.37 hPa l/s | 0.28 Torr l/s | 0.37 mbar l/s
Interfaces	RS-485, Remote
Mounting orientation	in any orientation
Operating voltage	24 (± 5 %) V DC
Particulate matter	yes
Permissible magnetic field max.	3 mT
Protection category	IP 54
Pumping speed for Ar	11.5 l/s
Pumping speed for H_2	3.7 l/s
Pumping speed for He	6 l/s
Pumping speed for N_2	10 l/s
Rotation speed ± 2 %	90,000 min^{-1}
Rotation speed variable	50-100 %
Run-up time	0.9 min
Sound pressure level	< 50 dB (A)
Ultimate pressure according to PNEUROP	$< 5 \cdot 10^{-5}$ hPa | $< 3.75 \cdot 10^{-5}$ Torr | $< 5 \cdot 10^{-5}$ mbar
Weight	1.8 kg | 3.97 lb

Order number	
HiPace® 10	**PM P03 960**

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**
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 for TC 110/120 to power supply	**PM 061 350 -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 110, Display control unit incl. power supply	**PM C01 820**
DN ISO-KF, mounting kit	
Connection adapter DN 25 ISO-KF	**PM 093 315 -T**
Mounting kit for HiPace 10, DN 25 ISO-K and claws	**PF 104 000 -T**
Mounting kit for HiPace 10, DN 25 ISO-KF, including centering ring with claws	**PM 016 627 -T**
DN ISO-KF, sealings, splinter shields, protection screens	
Centering ring, FPM/Aluminum, DN 25 ISO-KF	**PF 110 125 -T**
Centering ring with integrated mesh screen, DN 25 ISO-KF	**PF 113 225 -T**
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**
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**
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**

Accessories	
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**
TPS-19" rack module	
Front panel kit for TPS 111	**PM 061 393 -T**
TPS 111, mains pack 19" rack module 3HU	**PM 061 344 -T**
TPS wall rail fitting	
TPS 110, mains pack for wall/standard rail fitting	**PM 061 340 -T**
Wall rail fitting for TPS 110/180/310/400	**PM 061 392 -T**