



HiPace[®] 10

Small and robust turbopump with a pumping speed of 10 l/s for N₂

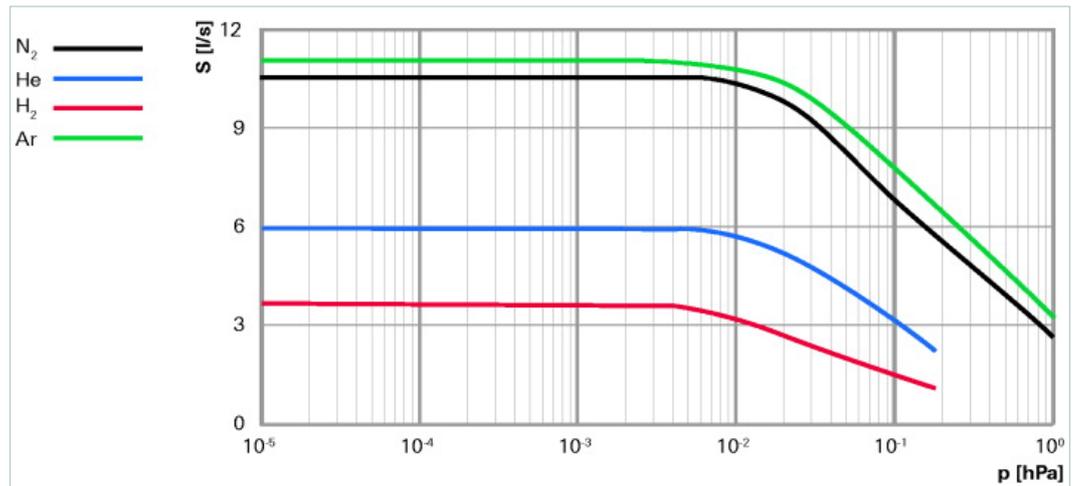




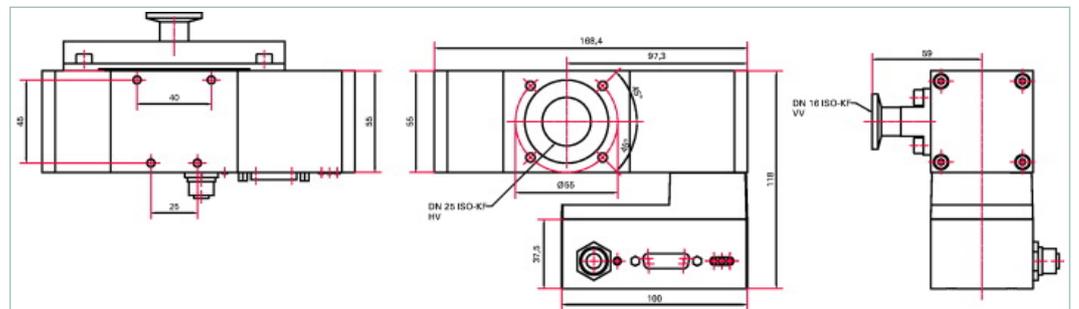
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HiPace® 10 with TC 110 and twisted connection, DN 25

- The world's smallest series-production turbopump
- A powerful, rugged turbopump with a pumping speed of 10 l/s for N₂
- DN 25 connection
- Integrated drive electronics with 24 V supply voltage
- Mobile usable
- Requires no additional cooling
- Electronic connection in direction of high-vacuum connection



Dimensions



Technical Data

HiPace® 10 with TC 110 and twisted connection, DN 25

Bearing	Hybrid
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

Technical Data	HiPace® 10 with TC 110 and twisted connection, DN 25
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 · 10 ⁻⁵ hPa < 3.75 · 10 ⁻⁵ Torr < 5 · 10 ⁻⁵ mbar
Weight	1.8 kg 3.97 lb

Order number	
HiPace® 10	PM P03 961

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