

A PASSION FOR PERFECTION



HiPace[®] 80

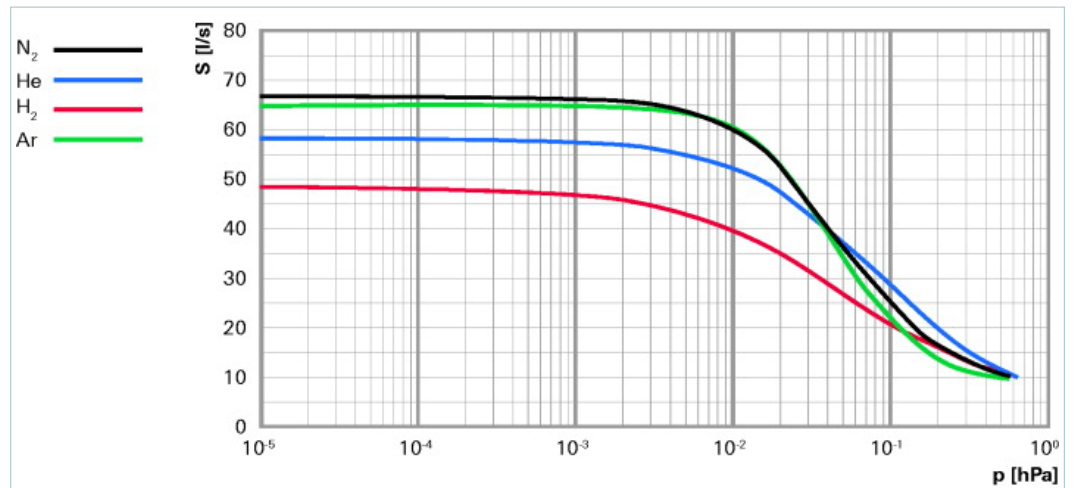
Compact yet powerful turbopumps with
pumping speeds of up to 71 l/s for N₂



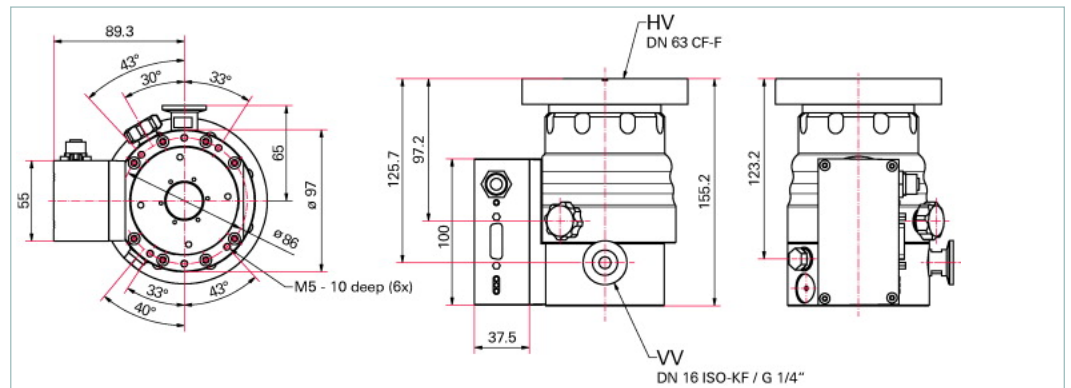
HiPace® 80 with TC 110, DN 63 CF-F

- Small yet powerful turbopump with a pumping speed of up to 67 l/s for N₂
- Integrated TC 110 drive electronics
- For installation in any orientation
- Ideal for dependable systems integration
- Extensive accessories expand the range of applications

Characteristics



Dimensions



Technical Data	HiPace® 80 with TC 110, DN 63 CF-F
Bearing	Hybrid
Compression ratio for Ar	$> 1 \cdot 10^{11}$
Compression ratio for H ₂	$1.4 \cdot 10^5$
Compression ratio for He	$1.3 \cdot 10^7$
Compression ratio for N ₂	$> 1 \cdot 10^{11}$
Cooling method, optional	Air/water
Cooling method, standard	Convection
Cooling water consumption	75 l/h
Cooling water temperature	5-25 °C 41-77 °F 278-298 K
Electronic drive unit	with TC 110
Flange (in)	DN 63 CF-F
Flange (out)	DN 16 ISO-KF / G 1/4"
Fore-vacuum max. for N ₂	22 hPa 16.5 Torr 22 mbar
Gas throughput at full rotational speed for Ar	0.54 hPa l/s 0.4 Torr l/s 0.54 mbar l/s
Gas throughput at full rotational speed for H ₂	15.3 hPa l/s 11.48 Torr l/s 15.3 mbar l/s
Gas throughput at full rotational speed for He	2.7 hPa l/s 2.02 Torr l/s 2.7 mbar l/s
Gas throughput at full rotational speed for N ₂	1.3 hPa l/s 0.98 Torr l/s 1.3 mbar l/s
Interfaces	RS-485, Remote
Mounting orientation	in any orientation
Operating voltage	24 (± 5 %) V DC
Permissible magnetic field max.	3.3 mT
Protection category	IP 54
Pumping speed for Ar	66 l/s
Pumping speed for H ₂	48 l/s
Pumping speed for He	58 l/s
Pumping speed for N ₂	67 l/s
Rotation speed ± 2 %	90000 min ⁻¹
Rotation speed variable	50-100 %
Run-up time	1.7 min
Sound pressure level	≤ 48 dB (A)
Ultimate pressure according to PNEUROP	$< 5 \cdot 10^{-10}$ hPa $< 3.75 \cdot 10^{-10}$ Torr $< 5 \cdot 10^{-10}$ mbar
Venting connection	G 1/8"
Weight	3.8 kg 8.38 lb
Order number	
HiPace® 80	PM P03 941

Accessories	
Adapter and power switching components	
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
Backing pump control	
HiPace - ACP connection cable	PM 071 142 -X
Relay box, shielded, for backing pumps, 1-phase 7A for TC 110 and TCP 350, M8	PM 071 282 -X
Relay box for backing pump, single phase 20 A for TC 110 and TCP 350, M8 plug	PM 061 373 -T
TCS 15 for controlling backing pumps	PM 061 685 -X
TVV 001 fore-vacuum safety valve, 115 V AC	PM Z01 206
TVV 001 fore-vacuum safety valve, 230 V AC	PM Z01 205
Cooling accessories	
Air cooling for HiPace 60/80, Splitflow 50/80, 230 V	PM Z01 343
Air cooling for HiPace 60 P, HiPace 80 and SplitFlow 50/80 with TC 110	PM Z01 300
Air cooling for HiPace 60 P and 80, Splitflow 50/80, 115 V	PM Z01 344
Water cooling for HiPace 60 P, HiPace 80 and for SplitFlow 50/80 with plug-in connection, 8 mm	PM 016 623 -T
General accessories	
Enclosure for plug, spraywater-protected, 15-pole, D-sub	P 0998 016
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
Interface cable, plug M12, RJ 45, 3 m	PM 051 726 -T
Power supply plug, angled for TC 110 and mating plug for interface E74	P 4723 111
Power supply plug for TC 110 and mating plug for E74 interface, straight	P 4723 110
Protection screen for DN 63 CF-F	PM 016 333
Sealing gas throttle for HiPace 60/80	PM Z01 316
Sealing gas valve, shielded for HiPace 60/80 with TC 110	PM Z01 310
Splinter shield for turbopumps, DN 63 CF-F	PM 016 312
TCS 11, adapter for TC 110 with interface RS-485	PM 061 636 -U
TCS 12, adapter for TC 110 with interface RS-485, 4 accessory ports and coupling set	PM 061 638 -U
TCS 13, adapter for TC 110 with interface RS-485 and 2 accessory ports and coupling set	PM 061 856 -U
TIC 001, Interface converter RS-232/RS-485	PM 051 054 -T
USB converter to RS-485 interface	PM 061 207 -T
Vibration damper for HiPace 60/80, DN 63 CF-F	PM 006 801 -X
Y-Connector M12 to RS-485	P 4723 010
Heating accessories	
Heating jacket for HiPace 80 with TC 110, 115 V AC, UL plug	PM 061 362 -T
Heating jacket for HiPace 80 with TC 110, 208 V AC, UL plug	PM 061 361 -T
Heating sleeve for HiPace 80 with TC 110, 230 V AC, safety plug	PM 061 360 -T

Accessories	
Mains cables and connection cables	
Connection cable for HiPace and TC 110 with 2 accessory ports to power supply TPS/DCU 110/111/180/181	PM 061 552 -T
Connection cable for HiPace and TC 110 with RS-485 interface and 3 accessory ports to power supply TPS/DCU 110/111/180/181	PM 061 512 -T
Connection cable for HiPace with TC 110, 3 m	PM 061 543 -T
Connection cable for HiPace with TC 110 and RS-485 interface and 2 accessory ports to power supply TPS/DCU 110/111/180/181	PM 061 351 -T
Connection cable for HiPace with TC 110 and RS-485 interface to power supply TPS/DCU 110/111/180/181	PM 061 350 -T
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
Mounting materials	
Set of hexagon screws for trough hole, DN 63 CF-F	PM 016 683 -T
Set of stud screws for tapped hole, 8 count M8, DN 63 CF-F	PM 016 684 -T
Set of stud screws for trough hole, DN 63 CF-F	PM 016 733 -T
Power supplies and control displays	
Accessories package for HPU - Power supply, software and PC cable	PM 061 005 -T
DCU 002, Display control unit	PM 061 348 -T
DCU 110, Display control unit incl. power supply	PM C01 820
DCU 180, Display control unit incl. power supply	PM C01 821
Front panel kit for TPS 111	PM 061 393 -T
Front panel kit for TPS 181	PM 061 394 -T
HPU 001, handheld programming unit	PM 051 510 -T
TPS 110, mains pack for wall/standard rail fitting	PM 061 340 -T
TPS 111, mains pack 19" rack module 3HU	PM 061 344 -T
TPS 180, mains pack for wall/standard rail fitting	PM 061 341 -T
TPS 181, mains pack 19" rack module 3HU	PM 061 345 -T
Wall rail fitting TPS 110/180/310/400	PM 061 392 -T
Venting accessories	
Banjo fitting, big	PM 016 787 -T
Banjo fitting, small	PM 143 877 -T
Hose nozzle for 9 mm hose, G 1/8"	PM 016 783 -T
Plug-in connection for 6 mm hose, G 1/8"	PM 016 781 -T
Plug-in connection for 8 mm hose, G 1/8"	PM 016 782 -T
Power failure venting valve, shielded, 24 V DC, G 1/8" for connection with TC 110	PM Z01 330
Screw-in flange, DN 10 KF, G 1/8"	PM 033 737 -T
Screw-on flange, DN 16 ISO-KF, G 1/8"	PM 016 780 -T
TTV 001, air drier for venting turbopumps	PM Z00 121
Venting valve, 24 V DC, G 1/8" without cable	PM Z01 293
Venting valve, shielded, 24 V DC, G 1/8", for connection to TC 110	PM Z01 290