



HiPace[®] 80

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

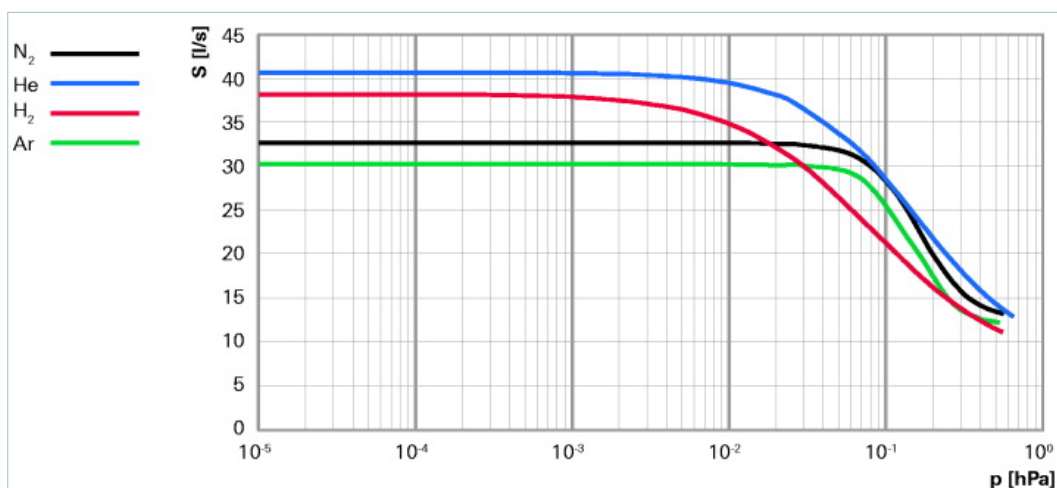




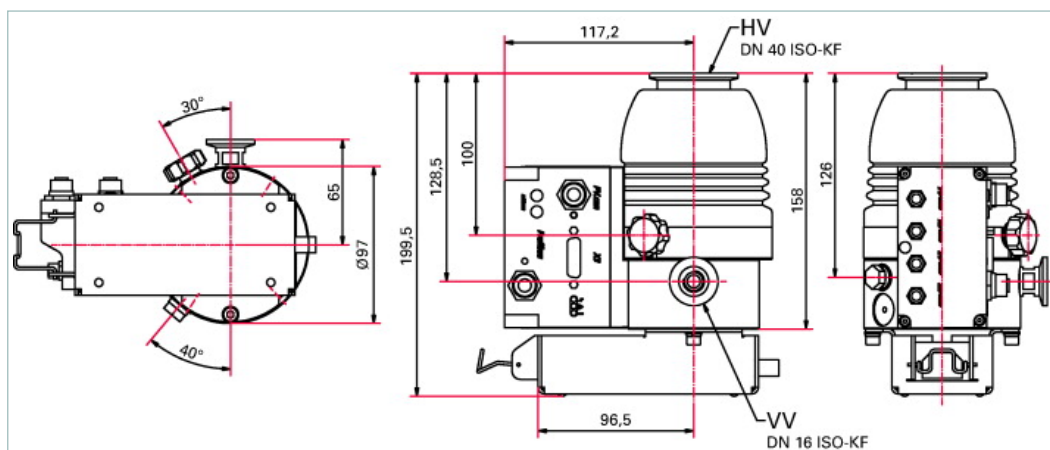
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HiPace® 80 with TC 110 and power supply OPS 70, Profibus, DN 40 ISO-KF

- Small yet powerful turbopump with a pumping speed of up to 35 l/s for N₂
- Integrated drive electronics TC 110 with Profibus and power supply OPS
- Y-Connector M12 for Profibus included in scope of delivery
- For installation in any orientation
- Ideal for dependable systems integration
- Extensive accessories expand the range of applications



Dimensions



Technical Data

HiPace® 80 with TC 110 and power supply OPS 70, Profibus, DN 40 ISO-KF

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
Cooling method, standard	Convection
Electronic drive unit	with TC 110
Flange (in)	DN 40 ISO-KF
Flange (out)	DN 16 ISO-KF / G 1/4"
Fore-vacuum max. for N ₂	19 hPa 14.25 Torr 19 mbar
Gas throughput at full rotational speed for Ar	0.54 hPa l/s 0.41 Torr l/s 0.54 mbar l/s

Technical Data	HiPace® 80 with TC 110 and power supply OPS 70, Profibus, DN 40 ISO-KF
Gas throughput at full rotational speed for H ₂	15.3 hPa l/s 11.47 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 0.97 Torr l/s 1.3 mbar l/s
Integrated power supply	yes
Interface, extended	Profibus
Interfaces	RS-485, Remote, Profibus
Mounting orientation	in any orientation
Operating voltage	24 (± 5 %) V DC
Permissible magnetic field max.	3.3 mT
Protection category	IP 30
Pumping speed for Ar	30 l/s
Pumping speed for H ₂	38 l/s
Pumping speed for He	41 l/s
Pumping speed for N ₂	35 l/s
Rotation speed ± 2 %	90,000 min ⁻¹
Rotation speed variable	50-100 %
Run-up time	1.9 min
Sound pressure level	48 dB (A)
Ultimate pressure according to PNEUROP	< 1 · 10 ⁻⁷ hPa < 7.5 · 10 ⁻⁸ Torr < 1 · 10 ⁻⁷ mbar
Venting connection	G 1/8"
Weight	2.9 kg 6.39 lb

Order number	
HiPace® 80	PM P04 268

Accessories	
Accessory for TC 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
Air cooling	
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 110/120	PM Z01 300
Air cooling for HiPace 60 P and 80, SplitFlow 50/80, 115 V	PM Z01 344
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
DN ISO-KF, mounting kit	
Mounting kit for HiPace 60/80, DN 40 ISO-KF, including centering ring and clamping ring	PM 016 625 -T
Mounting kit for HiPace 60/80, DN 40 ISO-KF, splinter shield, clamping ring	PM 016 626-T
DN ISO-KF, sealings, splinter shields, protection screens	
Centering ring, FPM/aluminum, DN 40 ISO-KF	PF 110 140 -T
Centering ring with integrated mesh screen, DN 40 ISO-KF	PF 113 240 -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	
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
Power failure venting units (normally open)	
Shielded power failure venting unit, 24 V DC, G 1/8", for connection to TC 110/120	PM Z01 330
Profibus	
Line filter for cable fitting	PM 061 806
Plug and socket M12B for Profibus	PM 051 927 -T
T-Connector M12B to Profibus	P 4723 020
Termination resistor M12B for Profibus	P 4723 030
Y-Connector M12B to Profibus	P 4723 015
Y-Connector with cable M12B to Profibus, 0.5 m	P 4723 018
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
Sealing gas	
Sealing gas throttle for HiPace 60/80	PM Z01 316
Sealing gas valve, shielded for HiPace 60/80 with TC 110	PM Z01 310
TPS-19" rack module	
Front panel kit for TPS 111	PM 061 393 -T
Venting accessory with small flange, G 1/8", hoses, air drier	
Banjo fitting	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 fitting for 6 mm hose, G 1/8"	PM 016 781 -T
Plug-in fitting for 8 mm hose, G 1/8"	PM 016 782 -T
Screw-in flange, DN 10 ISO-KF, G 1/8"	PM 033 737 -T
Screw-on flange, DN 16 ISO-KF, G 1/8"	PM 016 780 -T
TTV 001, dryer for venting turbopumps	PM Z00 121
Venting valve (normally closed)	
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 110/120	PM Z01 290
Vibration damper	
Vibration damper for HiPace 60/80, DN 40 ISO-K	PM 006 799 -X