



## HiPace<sup>®</sup> 80

Compact yet powerful turbopumps with  
pumping speeds of up to 71 l/s for N<sub>2</sub>

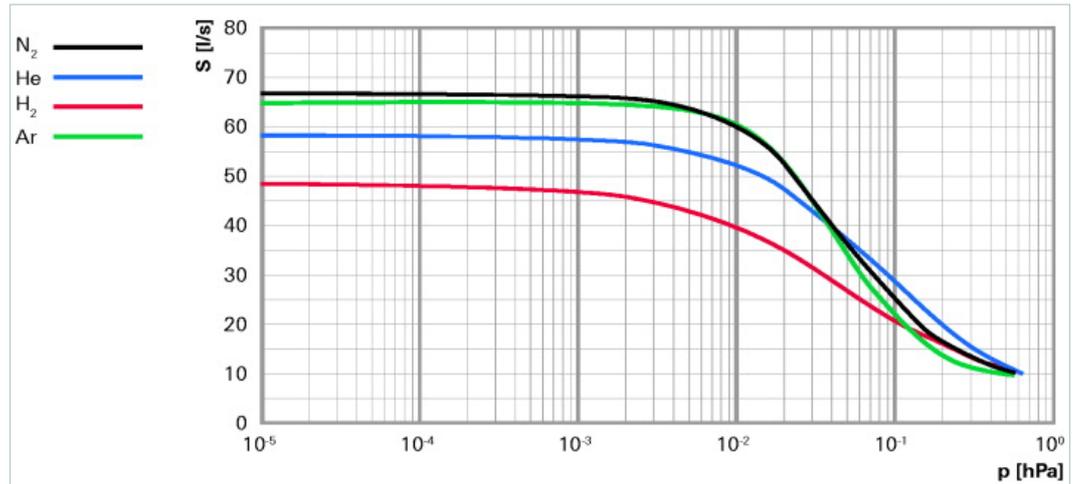




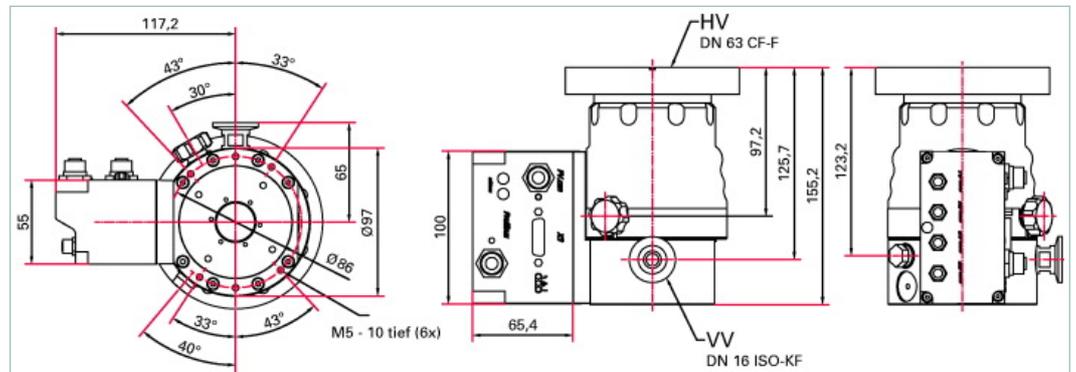
Similar Image

## HiPace® 80 with TC 110, Profibus, DN 63 CF-F

- Small yet powerful turbopump with a pumping speed of up to 67 l/s for N<sub>2</sub>
- Integrated drive electronics TC 110 with Profibus
- 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, Profibus, DN 63 CF-F

Bearing	Hybrid
Compression ratio for Ar	$> 1 \cdot 10^{11}$
Compression ratio for H <sub>2</sub>	$1.4 \cdot 10^5$
Compression ratio for He	$1.3 \cdot 10^7$
Compression ratio for N <sub>2</sub>	$> 1 \cdot 10^{11}$
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
Flange (out)	DN 16 ISO-KF / G 1/4"
Fore-vacuum max. for N <sub>2</sub>	22 hPa   16.5 Torr   22 mbar
Gas throughput at full rotational speed for Ar	0.54 hPa l/s   0.41 Torr l/s   0.54 mbar l/s
Gas throughput at full rotational speed for H <sub>2</sub>	15.3 hPa l/s   11.47 Torr l/s   15.3 mbar l/s

Technical Data	HiPace® 80 with TC 110, Profibus, DN 63 CF-F
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 <sub>2</sub>	1.3 hPa l/s   0.97 Torr l/s   1.3 mbar l/s
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 54
Pumping speed for Ar	66 l/s
Pumping speed for H <sub>2</sub>	48 l/s
Pumping speed for He	58 l/s
Pumping speed for N <sub>2</sub>	67 l/s
Rotation speed ± 2 %	90,000 min <sup>-1</sup>
Rotation speed variable	50-100 %
Run-up time	1.7 min
Sound pressure level	48 dB (A)
Ultimate pressure according to PNEUROP	< 5 · 10 <sup>-10</sup> hPa   < 3.75 · 10 <sup>-10</sup> Torr   < 5 · 10 <sup>-10</sup> mbar
Venting connection	G 1/8"
Weight	4 kg   8.82 lb
Order number	
HiPace® 80	PM P04 261

<b>Accessories</b>	
<b>Accessory for TC 110</b>	
Enclosure for plug, spraywater-protected, 15-pole, D-sub	<b>P 0998 016</b>
Mains power plug angled for TC 110/120 and mating plug for interface E74	<b>P 4723 111</b>
Mains power plug for TC 110/120 and mating plug for E74 interface, straight	<b>P 4723 110</b>
TCS 11, adapter for TC 110/120 with RS-485 interface	<b>PM 061 636 -U</b>
TCS 12, adapter for TC 110/120 with interface RS-485, 4 accessory ports and coupling set	<b>PM 061 638 -U</b>
TCS 13, adapter for TC 110/120 with interface RS-485, 2 accessory ports and coupling set	<b>PM 061 856 -U</b>
<b>Adapter and control cables</b>	
Control cable for valve	<b>PM 061 687 -T</b>
HiPace - ACP connection cable	<b>PM 071 142 -X</b>
<b>Air cooling</b>	
Air cooling for HiPace 60/80, SplitFlow 50/80, 230 V	<b>PM Z01 343</b>
Air cooling for HiPace 60 P, HiPace 80 and SplitFlow 50/80 with TC 110/120	<b>PM Z01 300</b>
Air cooling for HiPace 60 P and 80, SplitFlow 50/80, 115 V	<b>PM Z01 344</b>
<b>CF-F, Mounting kit</b>	
Set of hexagon screws for trough hole, DN 63 CF-F	<b>PM 016 683 -T</b>
Set of stud screws for tapped hole, 8 count M8, DN 63 CF-F	<b>PM 016 684 -T</b>
Set of stud screws for trough hole, DN 63 CF-F	<b>PM 016 733 -T</b>
<b>CF-F, Sealings, splinter shields, protection screens</b>	
Protection screen for DN 63 CF-F	<b>PM 016 333</b>
Splinter shield for turbopumps, DN 63 CF-F	<b>PM 016 312</b>
<b>Connection cables</b>	
Connection cable for HiPace with TC 110/120	<b>PM 061 543 -T</b>
Connection cable incl. 2 accessory ports for TC 110/120 to power supply	<b>PM 061 552 -T</b>
Connection cable with RS-485 interface and 2 accessory ports for TC110/120 to power supply	<b>PM 061 351 -T</b>
Connection cable with RS-485 interface and 3 accessory ports for TC 110/120 to power supply	<b>PM 061 512 -T</b>
Connection cable with RS-485 interface for TC 110/120 to power supply	<b>PM 061 350 -T</b>
<b>Control and display units</b>	
Accessories package for HPU 001/PC	<b>PM 061 005 -T</b>
DCU 002, Display Control Unit	<b>PM 061 348 -T</b>
HPU 001, Handheld Programming Unit	<b>PM 051 510 -T</b>
RJ 45 interface cable on M12 for HiPace	<b>PM 051 726 -T</b>
<b>DCU with integrated power supply</b>	
DCU 110, Display control unit incl. power supply	<b>PM C01 820</b>
DCU 180, Display control unit incl. power supply	<b>PM C01 821</b>
<b>Fore-vacuum safety valves</b>	
TVV 001 fore-vacuum safety valve, 115 V AC	<b>PM Z01 206</b>
TVV 001 fore-vacuum safety valve, 230 V AC	<b>PM Z01 205</b>
<b>Heating suitable for TC 110 and TC 400</b>	
Heating jacket for HiPace 80 with TC 110, 115 V AC, UL plug	<b>PM 061 362 -T</b>
Heating jacket for HiPace 80 with TC 110, 208 V AC, UL plug	<b>PM 061 361 -T</b>
Heating sleeve for HiPace 80 with TC 110, 230 V AC, safety plug	<b>PM 061 360 -T</b>

<b>Accessories</b>	
<b>Interface and extension cables</b>	
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
<b>Mains cables</b>	
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
<b>Power failure venting units (normally open)</b>	
Shielded power failure venting unit, 24 V DC, G 1/8", for connection to TC 110/120	PM Z01 330
<b>Profibus</b>	
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
<b>Relay boxes</b>	
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
<b>RS-485</b>	
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
<b>Sealing gas</b>	
Sealing gas throttle for HiPace 60/80	PM Z01 316
Sealing gas valve, shielded for HiPace 60/80 with TC 110	PM Z01 310
<b>TPS-19" rack module</b>	
Front panel kit for TPS 111	PM 061 393 -T
Front panel kit for TPS 181	PM 061 394 -T
TPS 111, mains pack 19" rack module 3HU	PM 061 344 -T
TPS 181, mains pack 19" rack module 3HU	PM 061 345 -T
<b>TPS wall rail fitting</b>	
TPS 110, mains pack for wall/standard rail fitting	PM 061 340 -T
TPS 180, mains pack for wall/standard rail fitting	PM 061 341 -T
Wall rail fitting for TPS 110/180/310/400	PM 061 392 -T
<b>Venting accessory with small flange, G 1/8", hoses, air drier</b>	
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
<b>Venting valve (normally closed)</b>	
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

<b>Accessories</b>	
<b>Vibration damper</b>	
Vibration damper for HiPace 60/80, DN 63 CF-F	<b>PM 006 801 -X</b>
<b>Water cooling</b>	
Water cooling for HiPace 60 P, HiPace 80 and for SplitFlow 50/80 with plug-in connection, 8 mm	<b>PM 016 623 -T</b>