



## HiPace<sup>®</sup> 80

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

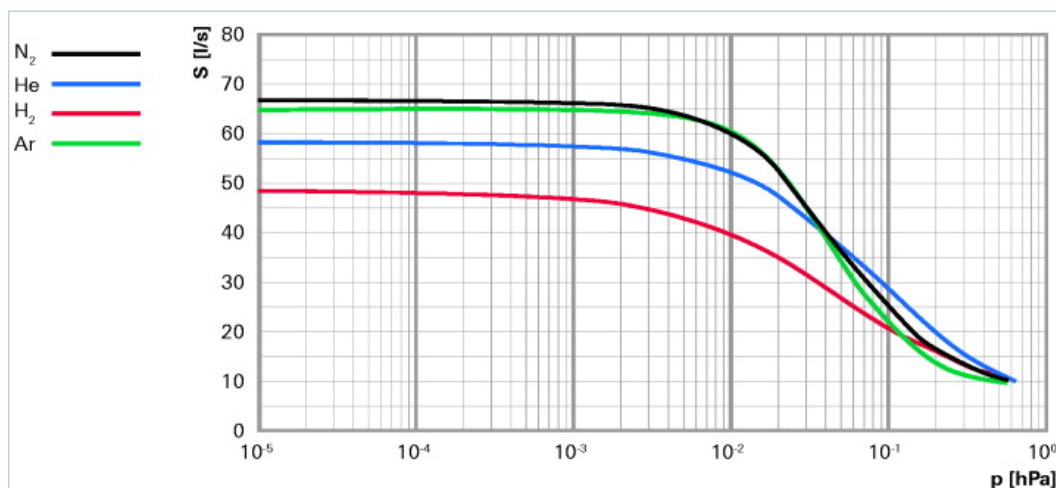




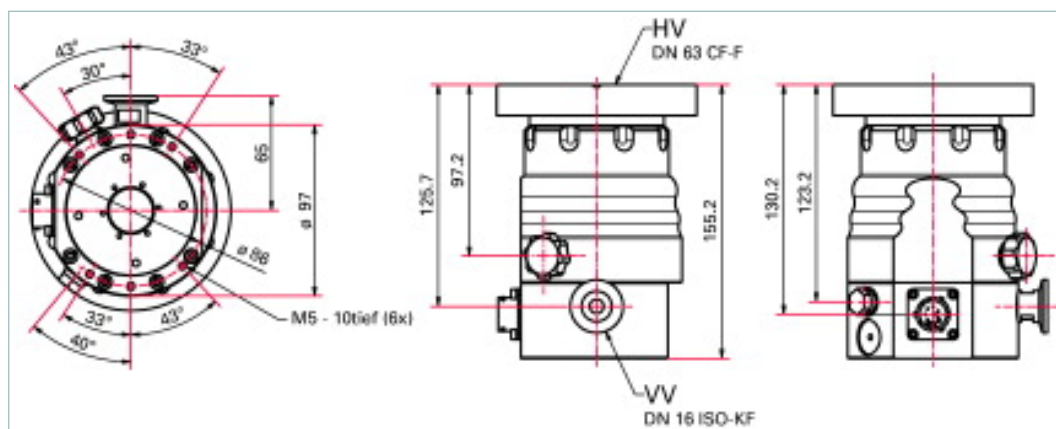
Similar Image

## HiPace® 80 for TCP 350, DN 63 CF-F

- Small yet powerful turbopump with a pumping speed of up to 67 l/s for N<sub>2</sub>
- External TCP 350 drive electronics
- For installation in any orientation
- Ideal for dependable systems integration
- Extensive accessories expand the range of applications



### Dimensions



Technical Data	HiPace® 80 for TCP 350, 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	for TCP 350
Flange (in)	DN 63 CF-F
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
Gas throughput at full rotational speed for He	2.7 hPa l/s   2.02 Torr l/s   2.7 mbar l/s

Technical Data		HiPace® 80 for TCP 350, DN 63 CF-F	
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	
Interfaces		RS-485, Remote	
Mounting orientation		in any orientation	
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		3 min	
Separate electronic drive unit		yes	
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		3.5 kg   7.72 lb	
Order number			
HiPace® 80		PM P03 944	

Accessories	
<b>Accessory external drive units</b>	
Adapter cable, TCP 350 - backing pump relay box, M8	PM 061 376 -T
<b>Air cooling</b>	
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
<b>CF-F, Mounting kit</b>	
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
<b>CF-F, Sealings, splinter shields, protection screens</b>	
Protection screen for DN 63 CF-F	PM 016 333
Splinter shield for turbopumps, DN 63 CF-F	PM 016 312
<b>Connection cables</b>	
Connection cable from TCP 350 to HiPace with 2 accessory ports M8, 3 m	PM 061 353 -T
<b>Control and display units</b>	
RJ 45 interface cable on M12 for HiPace	PM 051 726 -T
<b>External drive units</b>	
TCP 350 DN, drive electronics, DeviceNet	PM C01 742
TCP 350 electronic drive unit	PM C01 740
TCP 350 PB, drive electronics, Profibus	PM C01 741
<b>Fore-vacuum safety valves</b>	
TVV 001 fore-vacuum safety valve, 115 V AC	PM Z01 206
TVV 001 fore-vacuum safety valve, 230 V AC	PM Z01 205
<b>Heating suitable for TC 110 and TC 400</b>	
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
<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>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>Accessories</b>	
<b>RS-485</b>	
Connector M12 to RS-485	<b>PM 061 270 -X</b>
Power separator for RS-485	<b>PT 348 132 -T</b>
Termination resistor for RS-485	<b>PT 348 105 -T</b>
USB converter to RS-485 interface	<b>PM 061 207 -T</b>
Y-Connector M12 to RS-485	<b>P 4723 010</b>
<b>Sealing gas</b>	
Sealing gas throttle for HiPace 60/80	<b>PM Z01 316</b>
Sealing gas valve, shielded for HiPace 60/80 with TC 110	<b>PM Z01 310</b>
<b>Venting accessory with small flange, G 1/8", hoses, air drier</b>	
Banjo fitting	<b>PM 016 787 -T</b>
Banjo fitting, small	<b>PM 143 877 -T</b>
Hose nozzle for 9 mm hose, G 1/8"	<b>PM 016 783 -T</b>
Plug-in fitting for 6 mm hose, G 1/8"	<b>PM 016 781 -T</b>
Plug-in fitting for 8 mm hose, G 1/8"	<b>PM 016 782 -T</b>
Screw-in flange, DN 10 ISO-KF, G 1/8"	<b>PM 033 737 -T</b>
Screw-on flange, DN 16 ISO-KF, G 1/8"	<b>PM 016 780 -T</b>
TTV 001, dryer for venting turbopumps	<b>PM Z00 121</b>
<b>Venting valve (normally closed)</b>	
Venting valve, 24 V DC, G 1/8" without cable	<b>PM Z01 293</b>
Venting valve, shielded, 24 V DC, G 1/8", for connection to TC 110/120	<b>PM Z01 290</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>