

HiPace™ 80

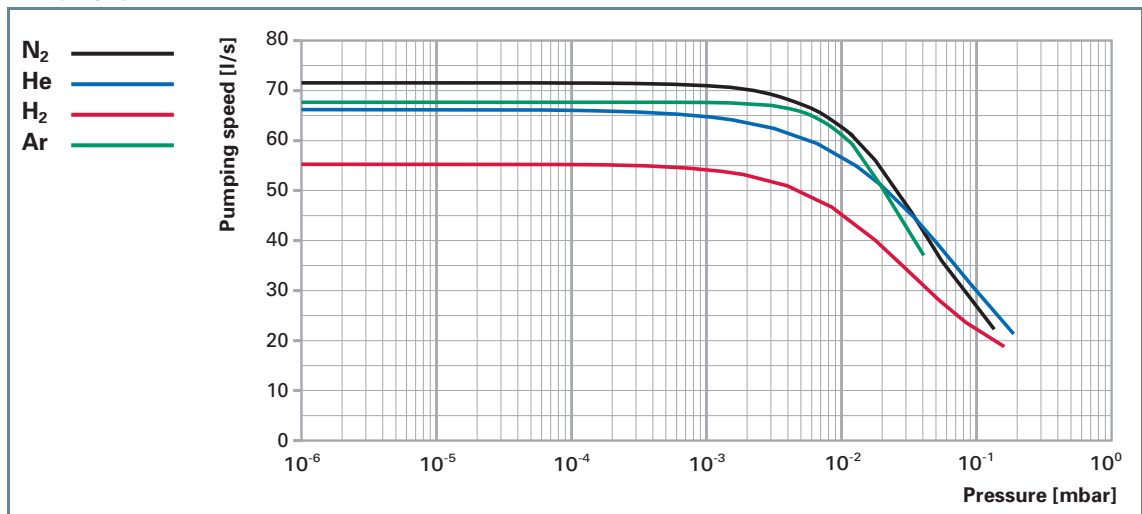
Compact yet powerful turbopumps with pumping speeds of up to 71 l/s for N₂

HiPace™ 80



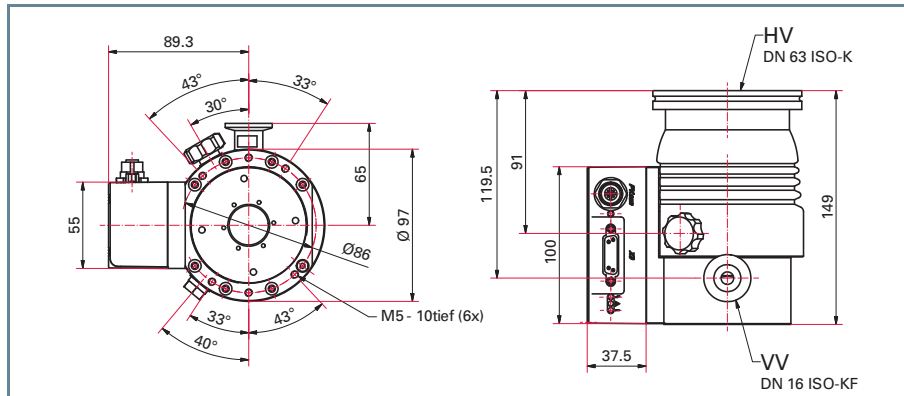
- ▶ Compact design makes for minimum footprint
- ▶ High pumping speed and maximum compression for all gases
- ▶ Integrated drive electronics, suitable for industrial environments - Protection class IP 54
- ▶ Semi S2 and UL/CSA certification
- ▶ Maximum reliability through monitoring of operating data

Pumping speed

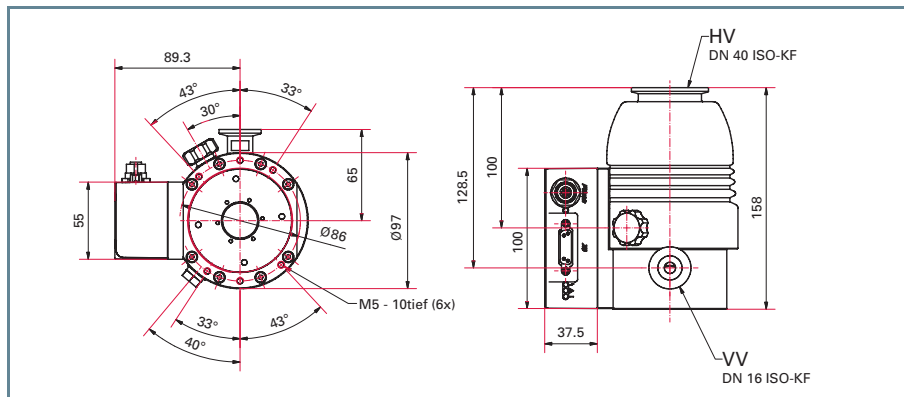


HiPace™ 80

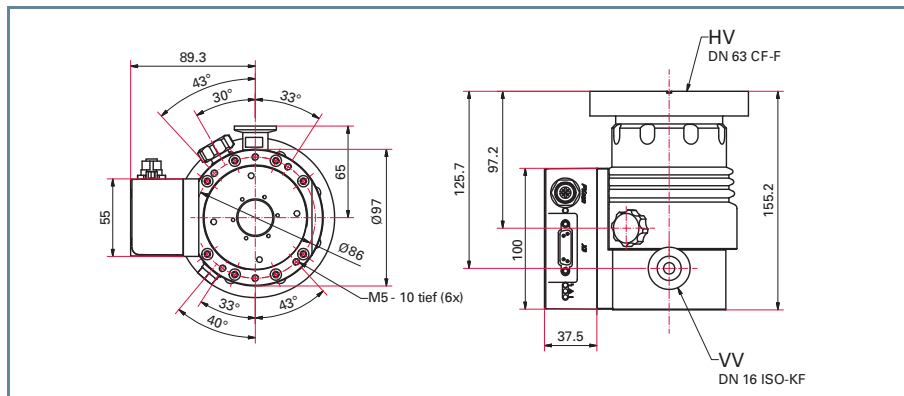
Dimensions



HiPace™ 80 with TC 110, DN 63 ISO-K



HiPace™ 80 with TC 110, DN 40 ISO-KF



HiPace™ 80 with TC 110, DN 63 CF-F

Technical data	HiPace™ 80 with TC 110, DN 63 ISO-K	HiPace™ 80 with TC 110, DN 63 CF-F	HiPace™ 80 with TC 110, DN 40 ISO-KF
Connection nominal diameter			
Flange (in)	DN 63 ISO-K	DN 63 CF-F	DN 40 ISO-KF
Flange (out)	DN 16 ISO-KF	DN 16 ISO-KF	DN 16 ISO-KF
Venting connection	G 1/8"	G 1/8"	G 1/8"
Pumping speed			
Pumping speed for H ₂	48 l/s	48 l/s	38 l/s
Pumping speed for He	58 l/s	58 l/s	41 l/s
Pumping speed for N ₂	67 l/s	67 l/s	35 l/s
Pumping speed for Ar	66 l/s	66 l/s	30 l/s
Compression			
Compression ratio for H ₂	1.4 · 10 ⁵	1.4 · 10 ⁵	1.4 · 10 ⁵
Compression ratio for He	1.3 · 10 ⁷	1.3 · 10 ⁷	1.3 · 10 ⁷
Compression ratio for N ₂	> 10 ¹¹	> 1 · 10 ¹¹	> 1 · 10 ¹¹
Compression ratio for Ar	> 10 ¹¹	> 1 · 10 ¹¹	> 1 · 10 ¹¹
Fore Vacuum max. for N₂	22 mbar	22 mbar	22 mbar
Gas throughput			
Gas throughput at full rotational speed for H ₂	15.3 mbar l/s	15.3 mbar l/s	15.3 mbar l/s
Gas throughput at full rotational speed for He	2.7 mbar l/s	2.7 mbar l/s	2.7 mbar l/s
Gas throughput at full rotational speed for N ₂	1.3 mbar l/s	1.3 mbar l/s	1.3 mbar l/s
Gas throughput at full rotational speed for Ar	0.54 mbar l/s	0.54 mbar l/s	0.54 mbar l/s
Ultimate pressure with OnTool™ DryPump	< 1 · 10 ⁻⁷ mbar	< 5 · 10 ⁻¹⁰	< 1 · 10 ⁻⁷ mbar
Rotation speed ±2%	90000 rpm	90000 rpm	90000 rpm
Run-up time	1.7 min	1.7 min	1.7 min
Cooling method, standard	Water	Water	Water
Cooling method, optional	Air	Air	Air
Cooling water consumption	75 l/h	75 l/h	75 l/h
Cooling water temperature	5-25 °C	5-25 °C	5-25 °C
Permissible magnetic field max.	3.3 mT	3.3 mT	3.3 mT
Sound pressure level	< 48 dB (A)	< 48 dB (A)	< 48 dB (A)
Protection category	IP 54	IP 54	IP 54
Interfaces	RS-485, Remote	RS-485, Remote	RS-485, Remote
Weight	2.4 kg	3.8 kg	2.4 kg
Order number pump	PM P03 940	PM P03 941	PM P03 942

	HiPace™ 80 for TCP 350, DN 63 ISO-K	HiPace™ 80 for TCP 350, DN 63 CF-F	HiPace™ 80 for TCP 350, DN 40 ISO-KF
	DN 63 ISO-K	DN 63 CF-F	DN 40 ISO-KF
	DN 16 ISO-KF	DN 16 ISO-KF	DN 16 ISO-KF
	G 1/8"	G 1/8"	G 1/8"
	48 l/s	48 l/s	38 l/s
	58 l/s	58 l/s	41 l/s
	67 l/s	67 l/s	35 l/s
	66 l/s	66 l/s	30 l/s
	1.4·10 ⁵	1.4·10 ⁵	1.4·10 ⁵
	1.3·10 ⁷	1.3·10 ⁷	1.3·10 ⁷
	> 1·10 ¹¹	> 1·10 ¹¹	> 1·10 ¹¹
	> 1·10 ¹¹	> 1·10 ¹¹	> 1·10 ¹¹
	22 mbar	22 mbar	22 mbar
	15.3 mbar l/s	15.3 mbar l/s	15.3 mbar l/s
	2.7 mbar l/s	2.7 mbar l/s	2.7 mbar l/s
	1.3 mbar l/s	1.3 mbar l/s	1.3 mbar l/s
	0.54 mbar l/s	0.54 mbar l/s	0.54 mbar l/s
	< 1·10 ⁻⁷ mbar	< 5·10 ⁻¹⁰ mbar	< 1·10 ⁻⁷ mbar
	90000 rpm	90000 rpm	90000 rpm
	1.7 min	1.7 min	1.7 min
	Water	Water	Water
	Air	Air	Air
	75 l/h	75 l/h	75 l/h
	5-25 °C	5-25 °C	5-25 °C
	3.3 mT	3.3 mT	3.3 mT
	< 48 dB (A)	< 48 dB (A)	< 48 dB (A)
	IP 54	IP 54	IP 54
	RS-485, Remote	RS-485, Remote	RS-485, Remote
	2.1 kg	3.5 kg	2.1 kg
	PM P03 943	PM P03 944	PM P03 945

Accessories	HiPace™ 80 with TC 110, DN 63 ISO-K	HiPace™ 80 with TC 110, DN 63 CF-F	HiPace™ 80 with TC 110, DN 40 ISO-KF
Order number pump	PM P03 940	PM P03 941	PM P03 942
Power supplies/power			
DCU - power supply with display control unit	PM C01 820	PM C01 820	PM C01 820
TPS - mains pack for wall/standard rail fitting	PM 061 340-T	PM 061 340-T	PM 061 340-T
TPS - mains pack 19" rack module 3 RU	PM 061 344-T	PM 061 344-T	PM 061 344-T
Control units			
DCU - Display Control Unit	PM 061 348-T	PM 061 348-T	PM 061 348-T
HPU - Handheld Programming Unit	PM 051 510-T	PM 051 510-T	PM 051 510-T
Accessories for HPU	PM 061 005-T	PM 061 005-T	PM 061 005-T
Mains cable DCU/TPS/TCP, 3 m			
230 V AC mains cable with Euro-style safety plug	P 4564 309 ZA	P 4564 309 ZA	P 4564 309 ZA
115 V AC mains cable with UL plug	P 4564 309 ZE	P 4564 309 ZE	P 4564 309 ZE
208 V AC mains cable with UL plug	P 4564 309 ZF	P 4564 309 ZF	P 4564 309 ZF
Connection cable, length 3 m between			
TC 110 / TPS/DCU 110/111/180/181 with accessory ports und RS-485,	PM 061 351-T	PM 061 351-T	PM 061 351-T
Connection cable for HiPace with TC 110 to power supply TPS/DCU 110/111/180/181 with bridges and RS-485	PM 061 350-T	PM 061 350-T	PM 061 350-T
TCP 350 - HiPace (for TC 400)			
External drive units			
TCP 350			
TCP 350 PB - Profibus			
TCP 350 DN - DeviceNet			
Venting accessories			
Venting valve	PM Z01 290	PM Z01 290	PM Z01 290
Air drier TTV 001	PM Z00 121	PM Z00 121	PM Z00 121
Cooling accessories			
Air cooling	PM Z01 300	PM Z01 300	PM Z01 300
Water cooling	PM 016 623-T	PM 016 623-T	PM 016 623-T
Heating accessories			
Heating jacket 230 V AC, Euro-style safety plug		PM 061 360-T	
Heating jacket 208 V AC, UL plug		PM 061 361-T	
Heating jacket 115 V AC, UL plug		PM 061 362-T	
Backing pump control			
Backing pump relay box, single phase 5 A	PM 061 372-T	PM 061 372-T	PM 061 372-T
Backing pump relay box, single phase 20 A	PM 061 373-T	PM 061 373-T	PM 061 373-T
Connection cable relaisbox - TCP 350			
TVV 001 backing vacuum safety valve, 230 V AC	PM Z01 205	PM Z01 205	PM Z01 205
TVV 001 backing vacuum safety valve, 115 V AC	PM Z01 206	PM Z01 206	PM Z01 206

HiPace™ 80 for TCP 350, DN 63 ISO-K	HiPace™ 80 for TCP 350, DN 63 CF-F	HiPace™ 80 for TCP 350, DN 40 ISO-KF
PM P03 943	PM P03 944	PM P03 945
PM 061 348-T	PM 061 348-T	PM 061 348-T
PM 051 510-T	PM 051 510-T	PM 051 510-T
PM 061 005-T	PM 061 005-T	PM 061 005-T
P 4564 309 ZA	P 4564 309 ZA	P 4564 309 ZA
P 4564 309 ZE	P 4564 309 ZE	P 4564 309 ZE
P 4564 309 ZF	P 4564 309 ZF	P 4564 309 ZF
PM 061 353-T	PM 061 353-T	PM 061 353-T
PM C01 740	PM C01 740	PM C01 740
PM C01 741	PM C01 741	PM C01 741
PM C01 742	PM C01 742	PM C01 742
PM Z01 290	PM Z01 290	PM Z01 290
PM Z00 121	PM Z00 121	PM Z00 121
PM Z01 300	PM Z01 300	PM Z01 300
PM 016 623-T	PM 016 623-T	PM 016 623-T
	PM 061 360-T	
	PM 061 361-T	
	PM 061 362-T	
PM 061 372-T	PM 061 372-T	PM 061 372-T
PM 061 373-T	PM 061 373-T	PM 061 373-T
PM 061 376-T	PM 061 376-T	PM 061 376-T
PM Z01 205	PM Z01 205	PM Z01 205
PM Z01 206	PM Z01 206	PM Z01 206

Accessories	HiPace™ 80 with TC 110, DN 63 ISO-K	HiPace™ 80 with TC 110, DN 63 CF-F	HiPace™ 80 with TC 110, DN 40 ISO-KF
Order number pump	PM P03 940	PM P03 941	PM P03 942
General accessories			
Sealing gas	PM Z01 310	PM Z01 310	PM Z01 310
Sealing gas throttle	PM Z01 316	PM Z01 316	PM Z01 316
Centering ring			PF 110 140-T
Centering ring, with integrated mesh screen			PF 113 240-T
Coated centering ring	PM 016 206-U		
Coated centering ring with protection screen	PM 016 208-U		
Coated centering ring with integrated splinter shield	PM 016 207-U		PM 006 375-X
Protection screen		PM 016 333	
Splinter shield		PM 016 312	
Vibration dampers	PM 006 800-X	PM 006 801-X	PM 006 799-X
USB converter	PM 061 207-T	PM 061 207-T	PM 061 207-T
Interface cable, 3 m, M 12	PM 061 283-T	PM 061 283-T	PM 061 283-T
Y-connector, M12, for RS-485	P 4723 010	P 4723 010	P 4723 010
Connection cable, RJ 45 on M12			
Mounting materials			
Mounting kit including coated centering ring, bracket screws	PM 016 360-T		
Coated centering ring, with protection screen, clamping screws	PM 016 362-T		
Coated centering ring with splinter shield, bracket screws	PM 016 361-T		
Set of hexagon bolts		PM 016 683-T	
Set of stud screws		PM 016 684-T	
Clamping ring with centering ring			PM 016 625-T
Clamping ring with centering ring with splinter shield			PM 016 626-T
Coated centering ring DN 63 ISO-K, 4 claws M8	PM 016 510-T		
Coated centering ring DN 63 ISO-K, 4 claws M8, protection screen	PM 016 512-T		
Coated centering ring DN 63 ISO-K, 4 claws M8, splinter shield	PM 016 511-T		

HiPace™ 80 for TCP 350, DN 63 ISO-K	HiPace™ 80 for TCP 350, DN 63 CF-F	HiPace™ 80 for TCP 350, DN 40 ISO-KF
PM P03 943	PM P03 944	PM P03 945
PM Z01 310	PM Z01 310	PM Z01 310
PM Z01 316	PM Z01 316	PM Z01 316
		PF 110 140-T
		PF 113 240-T
PM 016 206-U		
PM 016 208-U		
PM 016 207-U		PM 006 375-X
	PM 016 333	
	PM 016 312	
PM 006 800-X	PM 006 801-X	PM 006 799-X
PM 061 207-T	PM 061 207-T	PM 061 207-T
PM 051 726-T	PM 051 726-T	PM 051 726-T
PM 016 360-T		
PM 016 362-T		
PM 016 361-T		
	PM 016 683-T	
	PM 016 684-T	
		PM 016 625-T
		PM 016 626-T
PM 016 510-T		
PM 016 512-T		
PM 016 511-T		