

HiPace™ 300

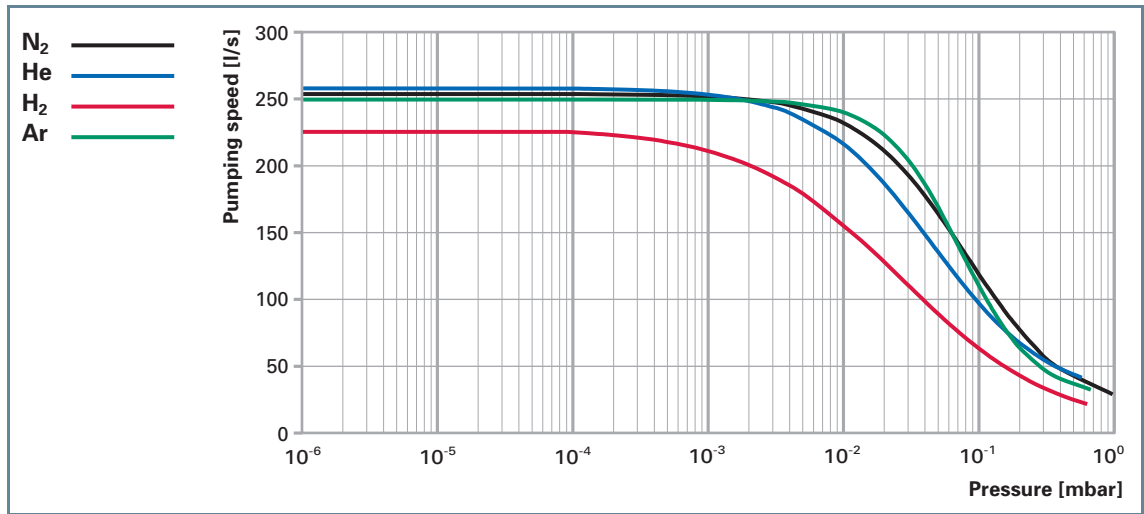
Compact yet powerful turbopumps with pumping speeds of up to 260 l/s for N₂

HiPace™ 300

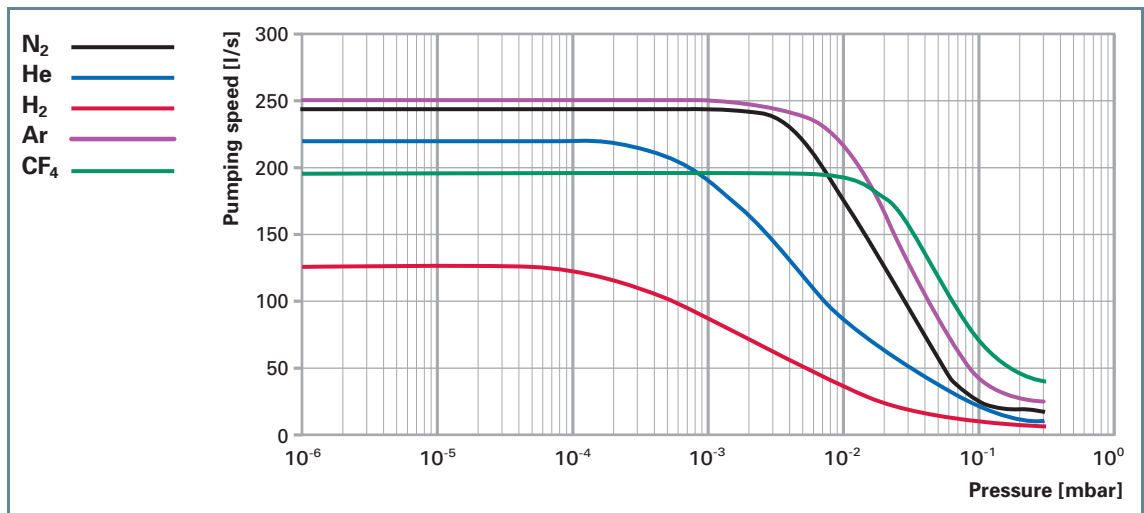


- ▶ Maximum reliability in a compact design
- ▶ High pumping speed and maximum compression for all gases
- ▶ Semi S2 and UL/CSA certification
- ▶ Ideal for industry and research
- ▶ Integrated drive electronics, suitable for industrial environments - Protection class IP 54
- ▶ Continuous monitoring of operating data

Pumping speed

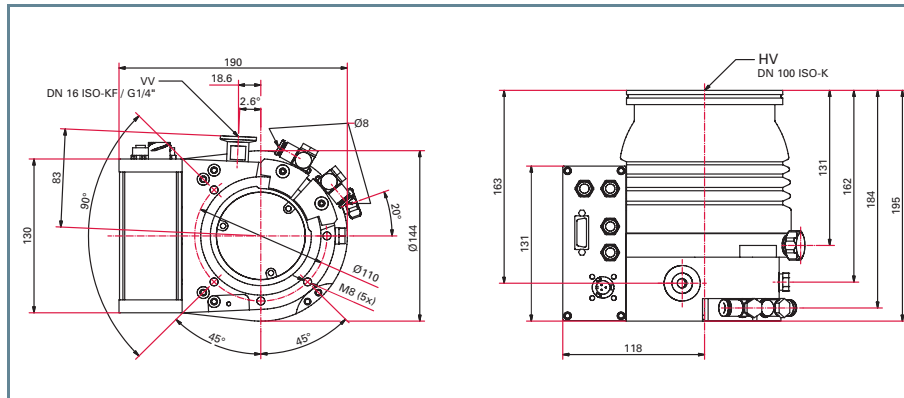


HiPace™ 300, with TC 400

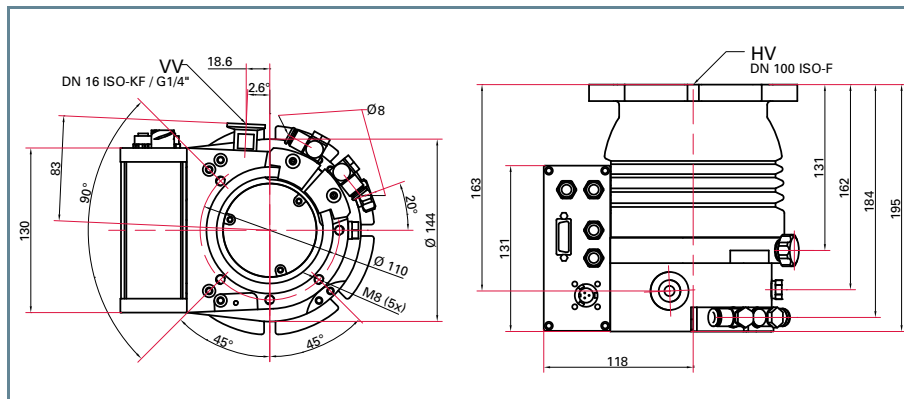


HiPace™ 300 C, with TC 400

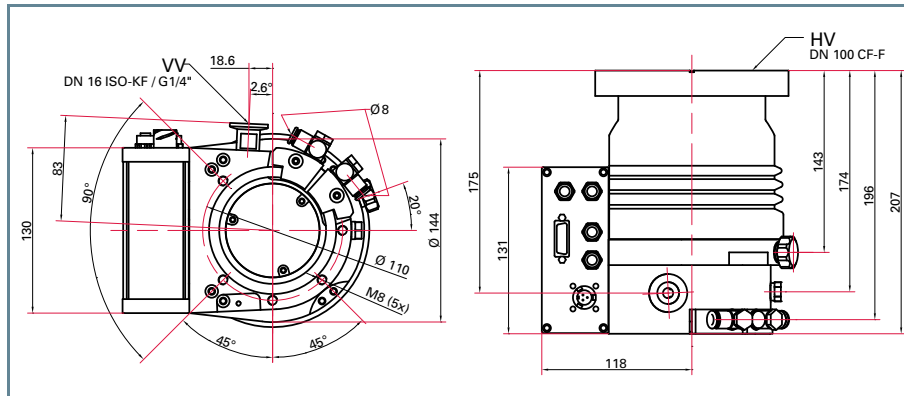
Dimensions



HiPace™ 300, with TC 400, DN 100 ISO-K



HiPace™ 300, with TC 400, DN 100 ISO-F



HiPace™ 300, with TC 400, DN 100 CF-F

Technical data	HiPace™ 300, with TC 110, DN 100 ISO-K	HiPace™ 300, with TC 110, DN 100 CF-F	HiPace™ 300, with TC 110, DN 100 ISO-F	HiPace™ 300, with TC 400, DN 100 ISO-K	HiPace™ 300, with TC 400, DN 100 CF-F
Connection nominal diameter					
Flange (in)	DN 100 ISO-K	DN 100 CF-F	DN 100 ISO-F	DN 100 ISO-K	DN 100 CF-F
Flange (out)	DN 16 ISO-KF	DN 16 ISO-KF	DN 16 ISO-KF	DN 16 ISO-KF	DN 16 ISO-KF
Venting connection	G 1/8"	G 1/8"	G 1/8"	G 1/8"	G 1/8"
Pumping speed					
Pumping speed for H ₂	220 l/s	220 l/s	220 l/s	220 l/s	220 l/s
Pumping speed for He	255 l/s	255 l/s	255 l/s	255 l/s	255 l/s
Pumping speed for N ₂	260 l/s	260 l/s	260 l/s	260 l/s	260 l/s
Pumping speed for Ar	255 l/s	255 l/s	255 l/s	255 l/s	255 l/s
Pumping speed for CF ₄	200 l/s	200 l/s	200 l/s	200 l/s	200 l/s
Compression					
Compression ratio for H ₂	9·10 ⁵	9·10 ⁵	9·10 ⁵	9·10 ⁵	9·10 ⁵
Compression ratio for He	> 1·10 ⁸	> 1·10 ⁸	> 1·10 ⁸	> 1·10 ⁸	> 1·10 ⁸
Compression ratio for N ₂	> 1·10 ¹¹	> 1·10 ¹¹	> 1·10 ¹¹	> 1·10 ¹¹	> 1·10 ¹¹
Compression ratio for Ar	> 1·10 ¹¹	> 1·10 ¹¹	> 1·10 ¹¹	> 1·10 ¹¹	> 1·10 ¹¹
Compression ratio for CF ₄	> 1·10 ¹¹	> 1·10 ¹¹	> 1·10 ¹¹	> 1·10 ¹¹	> 1·10 ¹¹
Fore Vacuum max. for N₂					
	15 mbar	15 mbar	15 mbar	20 mbar	20 mbar
Gas throughput					
Gas throughput at full rotational speed for H ₂	> 14 mbar l/s	> 14 mbar l/s	> 14 mbar l/s	> 14 mbar l/s	> 14 mbar l/s
Gas throughput at full rotational speed for He	8 mbar l/s	8 mbar l/s	8 mbar l/s	20 mbar l/s	20 mbar l/s
Gas throughput at full rotational speed for N ₂	5 mbar l/s	5 mbar l/s	5 mbar l/s	14 mbar l/s	14 mbar l/s
Gas throughput at full rotational speed for Ar	2 mbar l/s	2 mbar l/s	2 mbar l/s	7 mbar l/s	7 mbar l/s
Gas throughput at full rotational speed for CF ₄	2 mbar l/s	2 mbar l/s	2 mbar l/s	8 mbar l/s	8 mbar l/s
Ultimate pressure with OnTool™ DryPump	< 1·10 ⁻⁷ mbar	< 5·10 ⁻¹⁰ mbar	< 1·10 ⁻⁷ mbar	< 1·10 ⁻⁷ mbar	< 5·10 ⁻¹⁰ mbar
Rotation speed ±2%	60000 rpm	60000 rpm	60000 rpm	60000 rpm	60000 rpm
Run-up time	3.5 min	3.5 min	3.5 min	1.8 min	1.8 min
Cooling method, standard	Air	Air	Air	Water	Water
Cooling method, optional	Water	Water	Water	Air	Air
Cooling water consumption	50 l/h	50 l/h	50 l/h	50 l/h	50 l/h
Cooling water temperature	15-35 °C	15-35 °C	15-35 °C	15-35 °C	15-35 °C
Permissible magnetic field max.	5.5 mT	5.5 mT	5.5 mT	5.5 mT	5.5 mT
Sound pressure level	≤ 50 dB (A)	≤ 50 dB (A)	≤ 50 dB (A)	≤ 50 dB (A)	≤ 50 dB (A)
Protection category	IP 54	IP 54	IP 54	IP 54	IP 54
Interfaces	RS-485, Remote	RS-485, Remote	RS-485, Remote	RS-485, Remote	RS-485, Remote
Weight	6.2 kg	8.2 kg	6.5 kg	6.7 kg	8.7 kg
Order number pump					
	PM P03 990	PM P03 991	PM P03 992	PM P03 900	PM P03 901

	HiPace™ 300, with TC 400, DN 100 ISO-F	HiPace™ 300 C, with TC 400, DN 100 ISO-K	HiPace™ 300 C, with TC 400, DN 100 ISO-F	HiPace™ 300 C, with TC 400, DN 100 CF-F	HiPace™ 300 for TCP 350, DN 100 ISO-K	HiPace™ 300 for TCP 350, DN 100 CF-F	HiPace™ 300 for TCP 350, DN 100 ISO-K
	DN 100 ISO-F	DN 100 ISO-K	DN 100 ISO-F	DN 100 CF-F	DN 100 ISO-K	DN 100 CF-F	DN 100 ISO-K
	DN 16 ISO-KF	DN 16 ISO-KF	DN 16 ISO-KF	DN 16 ISO-KF	DN 16 ISO-KF	DN 16 ISO-KF	DN 16 ISO-KF
	G 1/8"	G 1/8"	G 1/8" l/s	G 1/8"	G 1/8"	G 1/8"	G 1/8"
	220 l/s	125 l/s	125 l/s	125 l/s	220 l/s	220 l/s	220 l/s
	255 l/s	220 l/s	220 l/s	220 l/s	255 l/s	255 l/s	255 l/s
	260 l/s	245 l/s	245 l/s	245 l/s	260 l/s	260 l/s	260 l/s
	255 l/s	250 l/s	250 l/s	250 l/s	255 l/s	255 l/s	255 l/s
	200 l/s	195 l/s	195 l/s	195 l/s	200 l/s	200 l/s	200 l/s
	9·10 ⁵	3·10 ²	3·10 ²	3·10 ²	9·10 ⁵	9·10 ⁵	9·10 ⁵
	> 1·10 ⁸	2.2·10 ³	2.2·10 ³	2.2·10 ³	> 1·10 ⁸	> 1·10 ⁸	> 1·10 ⁸
	> 1·10 ¹¹	> 1·10 ⁶	> 1·10 ⁶	> 1·10 ⁶	> 1·10 ¹¹	> 1·10 ¹¹	> 1·10 ¹¹
	> 1·10 ¹¹	> 1·10 ⁷	> 1·10 ⁷	> 1·10 ⁷	> 1·10 ¹¹	> 1·10 ¹¹	> 1·10 ¹¹
	> 1·10 ¹¹	> 1·10 ⁷	> 1·10 ⁷	> 1·10 ⁷	> 1·10 ¹¹	> 1·10 ¹¹	> 1·10 ¹¹
	20 mbar	1 mbar	1 mbar	1 mbar	17 mbar	17 mbar	17 mbar
	> 14 mbar l/s	> 50 mbar l/s, with backing pump 20 m ³ /h	> 50 mbar l/s, with backing pump 20 m ³ /h	> 50 mbar l/s, with backing pump 20 m ³ /h	> 14 mbar l/s	> 14 mbar l/s	> 14 mbar l/s
	20 mbar l/s	> 20 mbar l/s, with backing pump 20 m ³ /h	> 20 mbar l/s, with backing pump 20 m ³ /h	> 20 mbar l/s, with backing pump 20 m ³ /h	11 mbar l/s	11 mbar l/s	11 mbar l/s
	14 mbar l/s	17 mbar l/s, with backing pump 20 m ³ /h	17 mbar l/s, with backing pump 20 m ³ /h	17 mbar l/s, with backing pump 20 m ³ /h	7 mbar l/s	7 mbar l/s	7 mbar l/s
	7 mbar l/s	4.4 mbar l/s, with backing pump 20 m ³ /h	4.4 mbar l/s, with backing pump 20 m ³ /h	4.4 mbar l/s, with backing pump 20 m ³ /h	4 mbar l/s	4 mbar l/s	4 mbar l/s
	8 mbar l/s	5.4 mbar l/s, with backing pump 20 m ³ /h	5.4 mbar l/s, with backing pump 20 m ³ /h	5.4 mbar l/s, with backing pump 20 m ³ /h	4 mbar l/s	4 mbar l/s	4 mbar l/s
	< 1·10 ⁻⁷ mbar	< 1·10 ⁻⁷ mbar	< 1·10 ⁻⁷ mbar	< 1·10 ⁻⁸ mbar	< 1·10 ⁻⁷ mbar	< 5·10 ⁻¹⁰ mbar	< 1·10 ⁻⁷ mbar
	60000 rpm	60000 rpm	60000 rpm	60000 rpm	60000 rpm	60000 rpm	60000 rpm
	1.8 min	1.2 min	1.2 min	1.2 min	2.5 min	2.5 min	2.5 min
	Water	Water	Water	Water	Water	Water	Water
	Air	Air	Air	Air	Air	Air	Air
	50 l/h	50 l/h	50 l/h	50 l/h	50 l/h	50 l/h	50 l/h
	15-35 °C	15-35 °C	15-35 °C	15-35 °C	15-35 °C	15-35 °C	15-35 °C
	5.5 mT	5.5 mT	5.5 mT	5.5 mT	5.5 mT	5.5 mT	5.5 mT
	≤ 50 dB (A)	≤ 50 dB (A)	≤ 50 dB (A)	≤ 50 dB (A)	≤ 50 dB (A)	≤ 50 dB (A)	≤ 50 dB (A)
	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54
	RS-485, Remote	RS-485, Remote	RS-485, Remote	RS-485, Remote	RS-485, Remote	RS-485, Remote	RS-485, Remote
	7 kg	6.4 kg	6.7 kg	8.4 kg	5.8 kg	7.8 kg	6.1 kg
	PM P03 902	PM P03 906	PM P03 907	PM P03 996	PM P03 993	PM P03 994	PM P03 995

Accessories	HiPace™ 300, with TC 110, DN 100 ISO-K	HiPace™ 300, with TC 110, DN 100 CF-F	HiPace™ 300, with TC 110, DN 100 ISO-F	HiPace™ 300, with TC 400, DN 100 ISO-K	HiPace™ 300, with TC 400, DN 100 CF-F
Order number pump	PM P03 990	PM P03 991	PM P03 992	PM P03 900	PM P03 901
Power supplies/power					
DCU - power supply with display control unit	PM C01 821	PM C01 821	PM C01 821	PM C01 822	PM C01 822
TPS - mains pack for wall/standard rail fitting	PM 061 341-T	PM 061 341-T	PM 061 341-T	PM 061 342-T	PM 061 342-T
TPS - mains pack 19" rack module 3 RU	PM 061 345-T	PM 061 345-T	PM 061 345-T	PM 061 346-T	PM 061 346-T
Control units					
DCU - Display Control Unit	PM 061 348-T	PM 061 348-T	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	PM 051 510-T	PM 051 510-T
Accessories for HPU	PM 061 005-T	PM 061 005-T	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	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	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	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		
TC 400 / TPS/DCU 310/311/400/401				PM 061 352-T	PM 061 352-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	PM Z01 291	PM Z01 291
Air drier TTV 001	PM Z00 121	PM Z00 121	PM Z00 121	PM Z00 121	PM Z00 121
Cooling accessories					
Air cooling	PM Z01 301	PM Z01 301	PM Z01 301	PM Z01 302	PM Z01 302
Water cooling	PM 016 624-T	PM 016 624-T	PM 016 624-T		
Heating accessories					
Heating jacket 230 V AC, Euro-style safety plug		PM 061 363-T			PM 061 366-T
Heating jacket 208 V AC, UL plug		PM 061 364-T			PM 061 367-T
Heating jacket 115 V AC, UL plug		PM 061 365-T			PM 061 368-T
Backing pump control					
Backing pump relay box, single phase 5 A	PM 061 372-T	PM 061 372-T	PM 061 372-T	PM 061 374-T	PM 061 374-T
Backing pump relay box, single phase 20 A	PM 061 373-T	PM 061 373-T	PM 061 373-T	PM 061 375-T	PM 061 375-T
Connection cable relaisbox - TCP 350					
TVV 001 backing vacuum safety valve, 230 V AC	PM Z01 205	PM Z01 205	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	PM Z01 206	PM Z01 206

HiPace™ 300, with TC 400, DN 100 ISO-F	HiPace™ 300 C, with TC 400, DN 100 ISO-K	HiPace™ 300 C, with TC 400, DN 100 ISO-F	HiPace™ 300 C, with TC 400, DN 100 CF-F	HiPace™ 300 for TCP 350, DN 100 ISO-K	HiPace™ 300 for TCP 350, DN 100 CF-F	HiPace™ 300 for TCP 350, DN 100 ISO-K
PM P03 902	PM P03 906	PM P03 907	PM P03 996	PM P03 993	PM P03 994	PM P03 995
PM C01 822	PM C01 822	PM C01 822	PM C01 822			
PM 061 342-T	PM 061 342-T	PM 061 342-T	PM 061 342-T			
PM 061 346-T	PM 061 346-T	PM 061 346-T	PM 061 346-T			
PM 061 348-T	PM 061 348-T	PM 061 348-T	PM 061 348-T	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 051 510-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	PM 061 005-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 ZA	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 ZE	P 4564 309 ZE	P 4564 309 ZE	P 4564 309 ZE
P 4564 309 ZF	P 4564 309 ZF	P 4564 309 ZF	P 4564 309 ZF	P 4564 309 ZF	P 4564 309 ZF	P 4564 309 ZF
PM 061 352-T	PM 061 352-T	PM 061 352-T	PM 061 352-T	PM 061 356-T	PM 061 356-T	PM 061 356-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 291	PM Z01 291	PM Z01 291	PM Z01 291	PM Z01 291	PM Z01 291	PM Z01 291
PM Z00 121	PM Z00 121	PM Z00 121	PM Z00 121	PM Z00 121	PM Z00 121	PM Z00 121
PM Z01 302	PM Z01 302	PM Z01 302	PM Z01 302	PM Z01 302	PM Z01 302	PM Z01 302
			PM 061 366-T		PM 061 366-T	
			PM 061 367-T		PM 061 367-T	
			PM 061 368-T		PM 061 368-T	
PM 061 374-T	PM 061 374-T	PM 061 374-T	PM 061 374-T	PM 061 374-T	PM 061 374-T	PM 061 374-T
PM 061 375-T	PM 061 375-T	PM 061 375-T	PM 061 375-T	PM 061 375-T	PM 061 375-T	PM 061 375-T
				PM 061 377-T	PM 061 377-T	PM 061 377-T
PM Z01 205	PM Z01 205	PM Z01 205	PM Z01 205	PM Z01 205	PM Z01 205	PM Z01 205
PM Z01 206	PM Z01 206	PM Z01 206	PM Z01 206	PM Z01 206	PM Z01 206	PM Z01 206

Accessories	HiPace™ 300, with TC 110, DN 100 ISO-K	HiPace™ 300, with TC 110, DN 100 CF-F	HiPace™ 300, with TC 110, DN 100 ISO-F	HiPace™ 300, with TC 400, DN 100 ISO-K	HiPace™ 300, with TC 400, DN 100 CF-F
Order number pump	PM P03 990	PM P03 991	PM P03 992	PM P03 900	PM P03 901
General accessories					
Sealing gas	PM Z01 311	PM Z01 311	PM Z01 311	PM Z01 312	PM Z01 312
Sealing gas throttle	PM Z01 317	PM Z01 317	PM Z01 317	PM Z01 317	PM Z01 317
Coated centering ring	PM 016 210-U		PM 016 210-U	PM 016 210-U	
Coated centering ring with protection screen	PM 016 212-U		PM 016 212-U	PM 016 212-U	
Coated centering ring with integrated splinter shield	PM 016 211-U		PM 016 211-U	PM 016 211-U	
Protection screen		PM 016 336			PM 016 336
Splinter shield		PM 016 315			PM 016 315
Vibration dampers	PM 006 459-X	PM 006 488-X		PM 006 459-X	PM 006 488-X
USB converter	PM 061 207-T	PM 061 207-T	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	PM 061 283-T	PM 061 283-T
Y-connector, M12, for RS-485	P 4723 010	P 4723 010	P 4723 010	P 4723 010	P 4723 010
Y-connector, M12 for accessories				P 4723 012	P 4723 012
Connection cable, RJ 45 on M12					
Mounting materials					
Mounting kit including coated centering ring, bracket screws	PM 016 365-T			PM 016 365-T	
Coated centering ring, with protection screen, clamping screws	PM 016 367-T			PM 016 367-T	
Coated centering ring with splinter shield, bracket screws	PM 016 366-T			PM 016 366-T	
Coated centering ring, hexagon bolts			PM 016 450-T		
Coated centering ring with protection screen, hexagon bolts			PM 016 452-T		
Coated centering ring with splinter shield, hexagon bolts			PM 016 451-T		
Coated centering ring, stud screws			PM 016 455-T		
Coated centering ring with protection screen, stud screws			PM 016 457-T		
Coated centering ring with splinter shield, stud screws			PM 016 456-T		
Set of hexagon bolts		PM 016 690-T			PM 016 690-T
Set of stud screws		PM 016 692 -T			PM 016 692 -T

HiPace™ 300, with TC 400, DN 100 ISO-F	HiPace™ 300 C, with TC 400, DN 100 ISO-K	HiPace™ 300 C, with TC 400, DN 100 ISO-F	HiPace™ 300 C, with TC 400, DN 100 CF-F	HiPace™ 300 for TCP 350, DN 100 ISO-K	HiPace™ 300 for TCP 350, DN 100 CF-F	HiPace™ 300 for TCP 350, DN 100 ISO-K
PM P03 902	PM P03 906	PM P03 907	PM P03 996	PM P03 993	PM P03 994	PM P03 995
PM Z01 312	PM Z01 312	PM Z01 312	PM Z01 312	PM Z01 312	PM Z01 312	PM Z01 312
PM Z01 317	PM Z01 317	PM Z01 317	PM Z01 317	PM Z01 317	PM Z01 317	PM Z01 317
PM 016 210-U	PM 016 210-U	PM 016 210-U		PM 016 210-U		PM 016 210-U
PM 016 212-U	PM 016 212-U	PM 016 212-U		PM 016 212-U		PM 016 212-U
PM 016 211-U	PM 016 211-U	PM 016 211-U		PM 016 211-U		PM 016 211-U
			PM 016 336		PM 016 336	
			PM 016 315		PM 016 315	
	PM 006 459-X		PM 006 488-X	PM 006 459-X	PM 006 488-X	
PM 061 207-T	PM 061 207-T	PM 061 207-T	PM 061 207-T	PM 061 207-T	PM 061 207-T	PM 061 207-T
PM 061 283-T	PM 061 283-T	PM 061 283-T	PM 061 283-T	PM 061 283-T	PM 061 283-T	PM 061 283-T
P 4723 010	P 4723 010	P 4723 010	P 4723 010			
P 4723 012	P 4723 012	P 4723 012	P 4723 012			
				PM 051 726-T	PM 051 726-T	PM 051 726-T
	PM 016 365-T			PM 016 365-T		
	PM 016 367-T			PM 016 367-T		
	PM 016 366-T			PM 016 366-T		
PM 016 450-T		PM 016 450-T				PM 016 450-T
PM 016 452-T		PM 016 452-T				PM 016 452-T
PM 016 451-T		PM 016 451-T				PM 016 451-T
PM 016 455-T		PM 016 455-T				PM 016 455-T
PM 016 457-T		PM 016 457-T				PM 016 457-T
PM 016 456-T		PM 016 456-T				PM 016 456-T
			PM 016 690-T		PM 016 690-T	
			PM 016 692 -T		PM 016 692 -T	