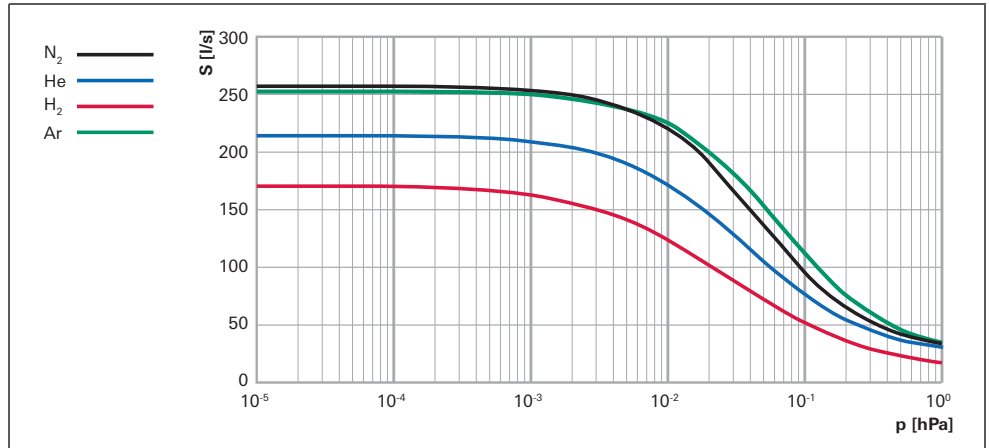


HiPace® 300 M



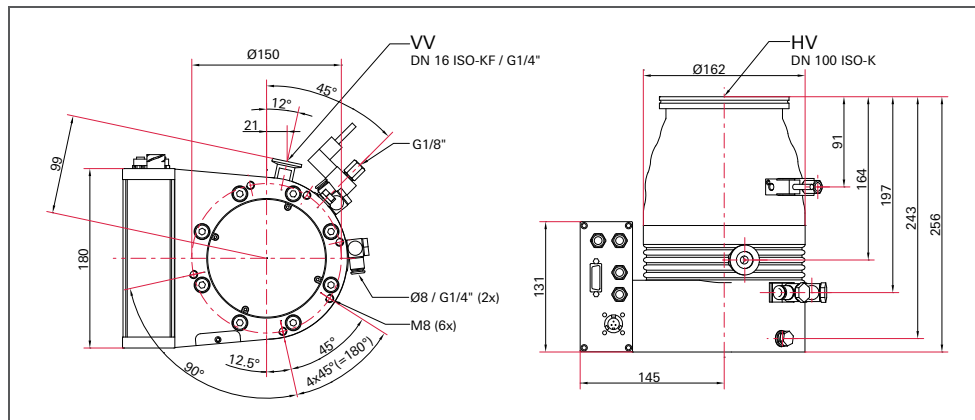
- 5-axis magnetically levitated turbopump with a pumping speed of 255 l/s for N₂
- Integrated digital magnetic bearing controller TM 700
- Installation in any orientation; flexible through connectivity of up to 4 accessory parts
- With integrated water cooling for maximum gas throughput
- Interfaces: RS-485, Remote (Profibus/DeviceNet on request)
- The turbopump features extremely low vibration and is oil-free
- With patented In-field sensor calibration
- Including venting valve and patented "pulsed venting"
- Protection Class: IP 54
- Extensive accessories expand the range of applications

Pumping speed

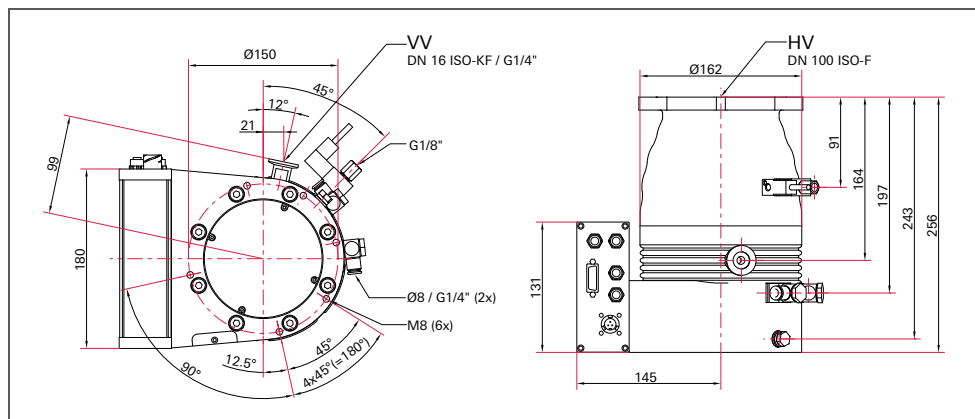


HiPace® 300 M

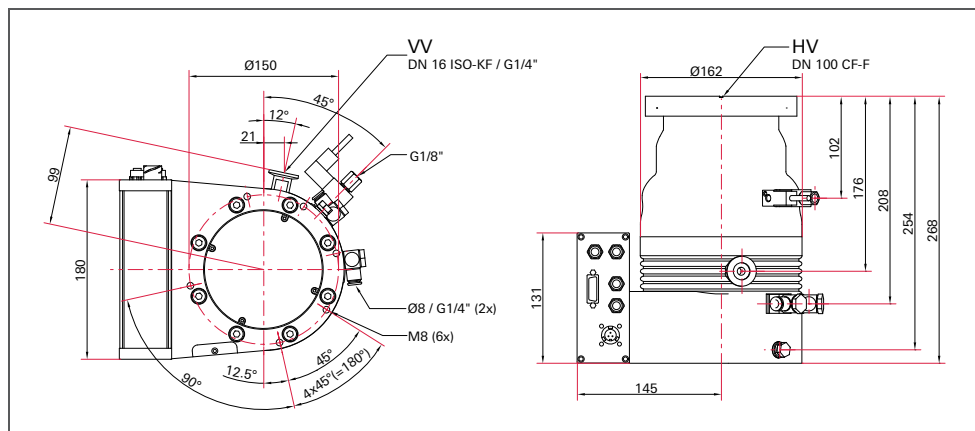
Dimensions (in mm)



HiPace® 300 M with TM 700, DN 100 ISO-K



HiPace® 300 M with TM 700, DN 100 ISO-F



HiPace® 300 M with TM 700, DN 100 CF-F

Technical data	HiPace® 300 M with TM 700, DN 100 ISO-K	HiPace® 300 M with TM 700, DN 100 CF-F	HiPace® 300 M with TM 700, DN 100 ISO-F
Connection nominal diameter			
Flange (out)	DN 16 ISO-KF	DN 16 ISO-KF	DN 16 ISO-KF
Flange (in)	DN 100 ISO-K	DN 100 CF-F	DN 100 ISO-F
Venting connection	G 1/8"	G 1/8"	G 1/8"
Pumping speed			
Pumping speed for Ar	250 l/s	250 l/s	250 l/s
Pumping speed for H ₂	170 l/s	170 l/s	170 l/s
Pumping speed for He	215 l/s	215 l/s	215 l/s
Pumping speed for N ₂	255 l/s	255 l/s	255 l/s
Compression			
Compression ratio for Ar	> 1 · 10 ¹¹	> 1 · 10 ¹¹	> 1 · 10 ¹¹
Compression ratio for H ₂	5 · 10 ⁵	5 · 10 ⁵	5 · 10 ⁵
Compression ratio for He	> 1 · 10 ⁸	> 1 · 10 ⁸	> 1 · 10 ⁸
Compression ratio for N ₂	> 1 · 10 ¹¹	> 1 · 10 ¹¹	> 1 · 10 ¹¹
Fore-vacuum max. for N₂			
	20 hPa	20 hPa	20 hPa
Gas throughput			
Gas throughput at 0.1 hPa HV for Ar	11 hPa l/s	11 hPa l/s	11 hPa l/s
Gas throughput at 0.1 hPa HV for H ₂	5 hPa l/s	5 hPa l/s	5 hPa l/s
Gas throughput at 0.1 hPa HV for He	8 hPa l/s	8 hPa l/s	8 hPa l/s
Gas throughput at 0.1 hPa HV for N ₂	10 hPa l/s	10 hPa l/s	10 hPa l/s
Gas throughput at full rotational speed for Ar	13 hPa l/s	13 hPa l/s	13 hPa l/s
Gas throughput at full rotational speed for N ₂	28 hPa l/s	28 hPa l/s	28 hPa l/s
Electronic drive unit	with TM 700	with TM 700	with TM 700
Operating voltage	48 (± 5 %) V DC	48 (± 5 %) V DC	48 (± 5 %) V DC
Rotation speed ± 2 %	60000 min ⁻¹	60000 min ⁻¹	60000 min ⁻¹
Rotation speed variable	20-100 %	20-100 %	20-100 %
Mounting orientation	in any orientation	in any orientation	in any orientation
Ultimate pressure*	< 1 · 10 ⁻⁷ hPa	< 5 · 10 ⁻¹⁰ hPa	< 1 · 10 ⁻⁷ hPa
Weight	13.1 kg	17.2 kg	13.4 kg
Run-up time	< 2 min	< 2 min	< 2 min
Cooling method, optional	Air, convection	Air, convection	Air, convection
Cooling method, standard	Water	Water	Water
Cooling water temperature	15-35 °C	15-35 °C	15-35 °C
Cooling water consumption	80 l/h	80 l/h	80 l/h
Bearing	Magnetically Levitated	Magnetically Levitated	Magnetically Levitated
Sound pressure level	≤ 45 dB (A)	≤ 45 dB (A)	≤ 45 dB (A)
Interfaces	RS-485, Remote	RS-485, Remote	RS-485, Remote
Protection category	IP 54	IP 54	IP 54
Low vibrations	YES	YES	YES
Permissible magnetic field max.	5 mT	5 mT	5 mT
Order number pump Pumpe	PM P03 950	PM P03 952	PM P03 951

*Ultimate pressure please find description on page 272

Accessories	HiPace® 300 M with TM 700, DN 100 ISO-K	HiPace® 300 M with TM 700, DN 100 CF-F	HiPace® 300 M with TM 700, DN 100 ISO-F
Order number pump Pompe	PM P03 950	PM P03 952	PM P03 951
Power supplies/power			
DCU - power supply with display control unit	PM C01 823	PM C01 823	PM C01 823
TPS - mains pack for wall/standard rail fitting	PM 061 343 -T	PM 061 343 -T	PM 061 343 -T
TPS - mains pack 19" rack module 3 RU	PM 061 347 -T	PM 061 347 -T	PM 061 347 -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			
Connection cable for HiPace with TC 400/TM 700 to power supply TPS/DCU 310/311/400/401	PM 061 352 -T	PM 061 352 -T	PM 061 352 -T
Venting accessories			
Venting valve	PM Z01 291	PM Z01 291	PM Z01 291
Air drier TTV 001	PM Z00 121	PM Z00 121	PM Z00 121
Cooling accessories			
Air cooling	PM Z01 363	PM Z01 363	PM Z01 363
Heating accessories			
Heating jacket 208 V AC, UL plug		PM 071 267 -T	
Heating jacket 115 V AC, UL plug		PM 071 268 -T	
Heating jacket 230 V AC, Euro-style safety plug		PM 071 266 -T	
Backing pump control			
Backing pump relay box, shielded, 1-phase 7 A	PM 071 284 -X	PM 071 284 -X	PM 071 284 -X
Backing pump relay box, shielded, 1-phase 20 A	PM 071 285 -X	PM 071 285 -X	PM 071 285 -X
Control cable for pumping stations 0.7 m	PM 061 675 -T	PM 061 675 -T	PM 061 675 -T
HiPace-ACP connection cable	PM 071 142 -X	PM 071 142 -X	PM 071 142 -X
TVV 001 backing pump safety valve, 230 V AC	PM Z01 205	PM Z01 205	PM Z01 205
TVV 001 backing pump safety valve, 115 V AC	PM Z01 206	PM Z01 206	PM Z01 206
General accessories			
Sealing gas valve	PM Z01 312	PM Z01 312	PM Z01 312
Sealing gas throttle	PM Z01 317	PM Z01 317	PM Z01 317
Centering ring coated	PM 016 210 -U		PM 016 210 -U
Centering ring coated with protection screen	PM 016 212 -U		PM 016 212 -U
Centering ring coated with splinter shield	PM 016 211 -U		PM 016 211 -U
Protection screen		PM 016 336	
Splinter shield		PM 016 315	
Vibration dampers	PM 006 459 -X	PM 006 488 -X	
USB/RS-485-Converter	PM 061 207 -T	PM 061 207 -T	PM 061 207 -T
Interface cable 3 m	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
Y-connector M12 for accessories	P 4723 013	P 4723 013	P 4723 013
Mounting materials			
Centering ring coated with splinter shield, hexagon bolts			PM 016 450 -T
Centering ring coated with protection screen, hexagon bolts			PM 016 452 -T
Centering ring coated with splinter shield, hexagon bolts			PM 016 451 -T
Centering ring coated with stud screws			PM 016 455 -T
Centering ring coated with protection screen with stud screws			PM 016 457 -T
Centering ring coated with splinter shield with stud screws			PM 016 456 -T
Set of hexagon screws for trough hole (CF-F)		PM 016 690 -T	
Set of stud screws for tapped hole (CF-F)		PM 016 692 -T	
Set of stud screws for trough hole (CF)		PM 016 734 -T	
Coated centering ring, bracket screws	PM 016 775 -T		
Centering ring coated with protection screen, bracket screws	PM 016 776 -T		
Centering ring coated with splinter shield, bracket screws	PM 016 777 -T		