

TurboDrag pumps with pumping speed up to 400 l/s

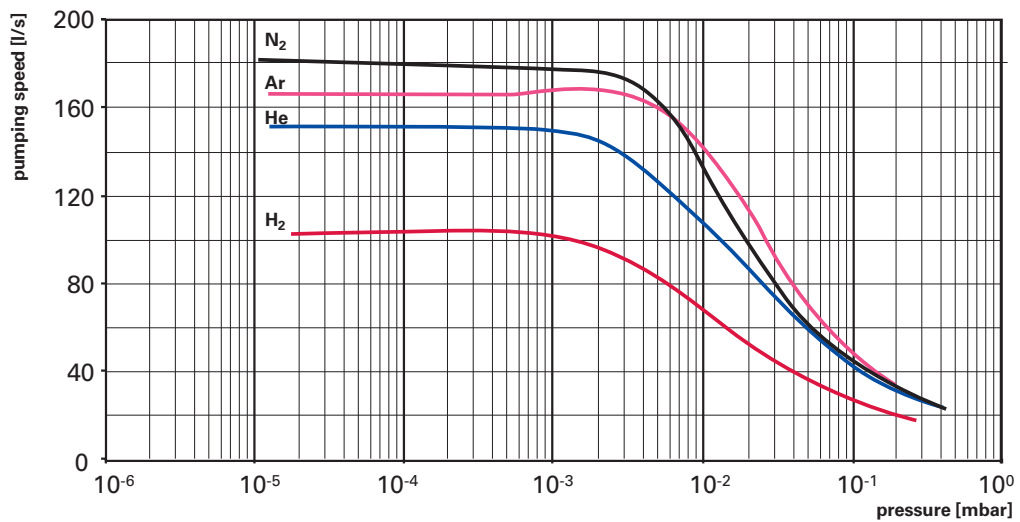
TMH/U 200 M / TMH/U 400 M



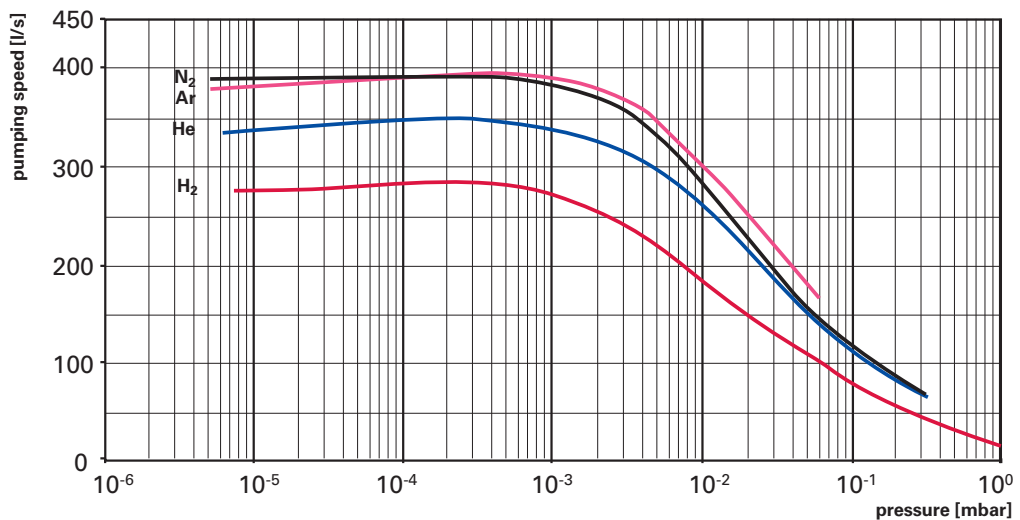
- ▶ Magnetic bearing system with 3 active and 2 passive axes, with the following benefits: maintenance-free, free of hydrocarbons, for installation in any orientation, low vibration and noise levels
- ▶ High gas throughput also in the case of low volume flow rates of the backing pump
- ▶ High critical backing pressure
- ▶ Short run-up time, fast and reliable venting through integrated and patented venting method
- ▶ Type of cooling: Air/water cooling



Pumping speed

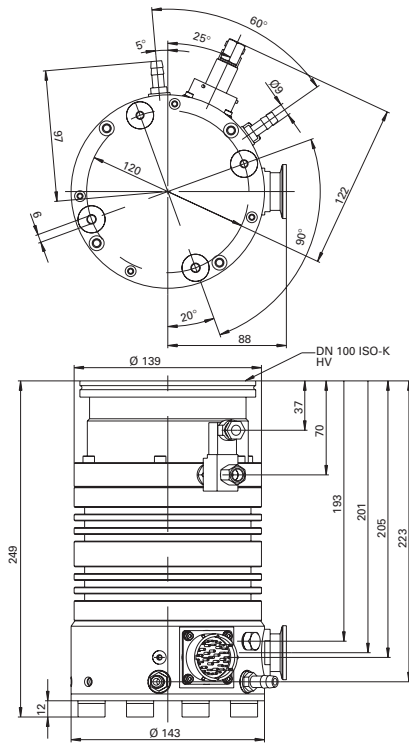


TMH 200 MP, DN 100

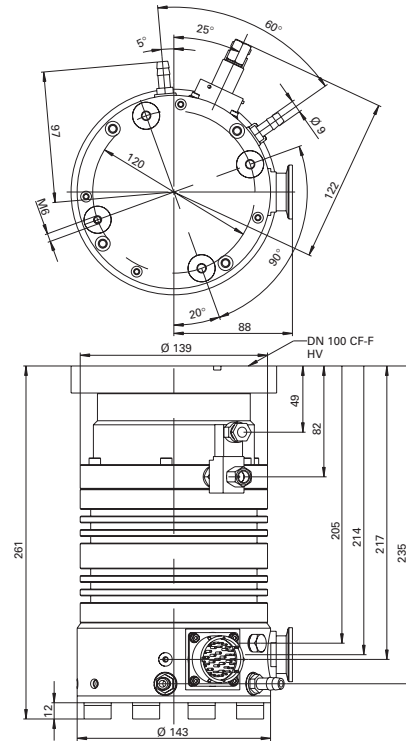


TMU 400 MP, DN 160

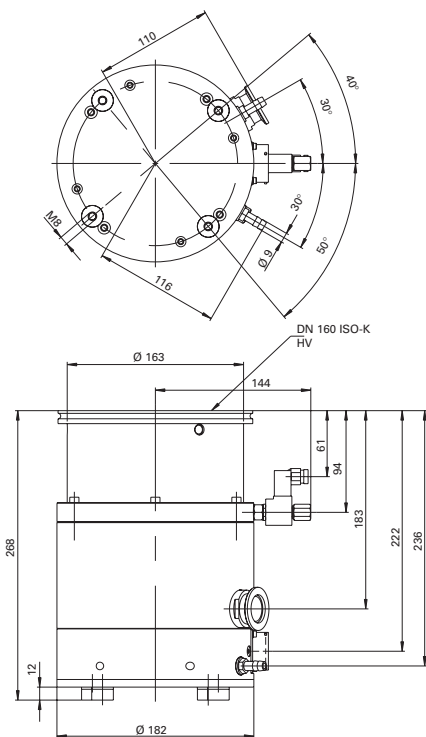
Dimensions (in mm)



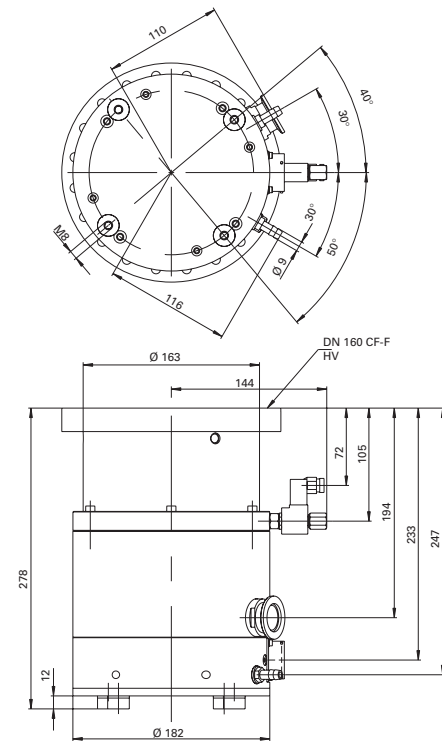
TMH 200 MP, DN 100 ISO-K



TMU 200 MP, DN 100 CF-F



TMH 400 MP, DN 160 ISO-K



TMU 400 MP, DN 160 CF-F

Technical data - TMH/U 200 M / TMH/U 400 M

	TMH/U 200 MP DN 100 ISO-K/ CF-F	TMH/U 400 MP DN 160 ISO-K/ CF-F	
Connection nominal diameter			
Flange (in)	DN 100 ISO-K	DN 160 ISO-K	
Flange (out)	DN 25 ISO-KF	DN 25 ISO-KF	
Venting connection at integrated venting valve	G 1/8"	G 1/8"	
Pumping speed [l/s]			
Hydrogen H ₂	105	280	
Helium He	150	350	
Nitrogen N ₂	180	400	
Argon Ar	170	390	
Compression ratio			
Hydrogen H ₂	5·10 ⁵	5·10 ⁴	
Helium He	3·10 ⁷	3·10 ⁶	
Nitrogen N ₂	>1·10 ¹⁰	>1·10 ¹⁰	
Argon Ar	>2·10 ⁹	>1·10 ¹⁰	
Max. fore vacuum pressure for N₂ [mbar]			
	12	13	
Max. gas throughput at 0.1 mbar HV [mbar l/s]			
Hydrogen H ₂	3	8	
Helium He	4	12	
Nitrogen N ₂	4	13	
Argon Ar	5	11	
Max. gas throughput at nom. rotation speed [mbar l/s]			
Pumping speed of used backing pump	7 m ³ /h	30 m ³ /h	
Hydrogen H ₂	> 32	20	
Helium He	32	15	
Nitrogen N ₂	17	10	
Argon Ar	5	5	
Ultimate pressure (see page 144) [mbar]	<5·10 ⁻¹⁰	<5·10 ⁻¹⁰	
Rotational speed [1/min]	50000	39600	
Run-up time [min]	1.5	2.5	
Cooling method, standard	Water	Water	
Cooling water consumption [l/h]	120	50	
Max. cooling water temperature [°C]	25	25	
Weight [kg]	12.6	21	
Ordering number pump			
	ISO-K	PM P03 400	PM P02 740
	CF-F	PM P03 405	PM P02 745

Ordering numbers power supplies, cables - TMH/U 200 M / TMH/U 400 M

	TMH/U 200 MP		TMH/U 400 MP	
	DN 100 ISO-K	DN 100 CF-F	DN 160 ISO-K	DN 160 CF-F
Ordering number pump				
	PM P03 400	PM P03 405	PM P02 740	PM P02 745
Magnetic drive electronic				
TCM 1601 magnetic drive electronic	PM C01 677	PM C01 677	PM C01 677	PM C01 677
Control units				
HPU 001 Handheld Programming Unit	PM 051 510-T	PM 051 510-T	PM 051 510-T	PM 051 510-T
Accessorie for HPU (Power supply, software, PC-cable)	PM 061 005-T	PM 061 005-T	PM 061 005-T	PM 061 005-T
Mains cable, length 3 m				
for TCM 1601 with safety plug (230 V AC)	P 4564 309 ZA	P 4564 309 ZA	P 4564 309 ZA	P 4564 309 ZA
for TCM 1601 with UL plug (208 V AC)	P 4564 309 ZF	P 4564 309 ZF	P 4564 309 ZF	P 4564 309 ZF
for TCM 1601 with UL plug (115 V AC)	P 4564 309 ZE	P 4564 309 ZE	P 4564 309 ZE	P 4564 309 ZE
Connection cable, length 3 m for				
Turbo - TCM 1601	PM 041 816-T	PM 041 816-T	PM 041 816-T	PM 041 816-T



Ordering numbers accessories - TMH/U 200 M / TMH/U 400 M

	TMH/U 200 MP		TMH/U 400 MP	
	DN 100 ISO-K	DN 100 CF-F	DN 160 ISO-K	DN 160 CF-F
Ordering number pump				
	PM P03 400	PM P03 405	PM P02 740	PM P02 745
Cooling accessories				
Air cooling unit with safety plug (230/208 V)	PM Z01 280	PM Z01 280	PM Z01 260	PM Z01 260
Air cooling unit with UL plug (115 V)	PM Z01 282	PM Z01 282	PM Z01 261	PM Z01 261
Water cooling unit TZK 400 230V/50Hz	PM Z01 245	PM Z01 245	PM Z01 245	PM Z01 245
Heating accessories				
Heating jacket 230 V AC, safety plug	PM 041 903-T	PM 041 903-T	PM 051 096-T	PM 051 096-T
Heating jacket 208 V AC, UL plug	PM 041 904-T	PM 041 904-T	PM 051 097-T	PM 051 097-T
Heating jacket 115 V AC, UL plug	PM 041 905-T	PM 041 905-T	PM 051 098-T	PM 051 098-T
Backing pump control				
Pumping station control TCS 180	PM C01 655	PM C01 655	PM C01 655	PM C01 655
Fore vacuum safety valve TVV 001, DN 16 ISO-KF 230 V AC	PM Z01 205	PM Z01 205	PM Z01 205	PM Z01 205
Fore vacuum safety valve TVV 001, DN 16 ISO-KF 115 V AC	PM Z01 206	PM Z01 206	PM Z01 206	PM Z01 206
General accessories				
Air drier TTV 001	PM Z00 121	PM Z00 121	PM Z00 121	PM Z00 121
Sealing gas valve	PM Z01 142	PM Z01 142	PM Z01 142	PM Z01 142
Coated centering ring	PM 016 210-U	-	PM 016 216-U	-
Coated centering ring with protection screen	PM 016 212-U	-	PM 016 218-U	-
Protection screen	-	PM 016 336	-	PM 016 339
Coated centering ring with integrated splinter shield	PM 016 211-U	PM 016 211-U	PM 016 211-U	PM 016 211-U
Splinter shield	-	PM 016 315	-	PM 016 318
Vibration damper	PM 006 459-X	PM 006 488-X	PM 006 492-X	PM 006 493-X
PWM-box, pre-switching unit for rotation speed control	PM 051 028-U	PM 051 028-U	PM 051 028-U	PM 051 028-U
Battery box TBB 001	PM K01 712	PM K01 712	PM K01 712	PM K01 712
Serial Interface Converter RS-232-485	PM 051 054-T	PM 051 054-T	PM 051 054-T	PM 051 054-T
Profibus - Gateway TIC 250	PM 051 257-T	PM 051 257-T	PM 051 257-T	PM 051 257-T
Mounting materials				
Coated centering ring, bracket screws	PM 016 365-T	-	PM 016 375-T	-
Coated centering ring with protect. screen, bracket screws	PM 016 367-T	-	PM 016 377-T	-
Coated centering ring with splinter shield, bracket screws	PM 016 366-T	-	PM 016 376-T	-
Coated centering ring, hexagonal bolts	-	-	-	-
Coated centering ring with protect. screen, hexagonal bolts	-	-	-	-
Coated centering ring with splinter shield, hexagonal bolts	-	-	-	-
Coated centering ring, stud screws	-	-	-	-
Coated centering ring with protection screen, stud screws	-	-	-	-
Coated centering ring with splinter shield, stud screws	-	-	-	-
Set of hexagonal bolts for CF-flanges	-	PF 505 003-T	-	PF 505 003-T
Set of stud screws for CF-flanges	-	PF 507 003-T	-	PF 507 003-T