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Pfeiffer TMH-1600, TMH-1600C, TMU-1600, TMU-1600C

Technical Specifications

		TMH 1600 TMU 1600		TMH 1600 C TMU 1600 C	
Connection nominal diameter					
Inlet		DN 200 ISO-K DN 200 CF-F	DN 250 ISO-K DN 250 CF-F	DN 200 ISO-K DN 200 CF-F	DN 250 ISO-K DN 250 CF-F
Outlet		DN 40 ISO-KF/G 1/4"		DN 40 ISO-K/G 1/4"F	
Venting connection		G 1/8"		G 1/8"	
Electronic Drive Unit		TCP 380/TCP 600		TCP 600	
Nominal rotation speed	1/min	36 000		36 000	
Stand-by rotation speed	1/min	24 000		24 000	
Run-up time (up to 90% of the nominal rotation speed, fore-vacuum pressure ≤ 0.1 mbar)	min	21/7		7	
Volum flow rate for					
Nitrogen N_2	l/s	1100	1500	1100	1500
Helium He	l/s	1320	1450	1320	1450
Hydrogen H_2	l/s	1050	1150	1050	1150
Argon Ar	l/s	-	-	1050	1400
Tetraflourmethan CF_4	l/s	-	-	850	1100
Compression ratio for					
N_2		$>10^{12}$		$>10^{12}$	
He		$>1 \cdot 10^{8}$		$>1 \cdot 10^{8}$	
H_2		$3 \cdot 10^{6}$		$3 \cdot 10^{6}$	
Ar		$>10^{12}$		$>10^{12}$	
CF_4		$>10^{12}$		$>10^{12}$	
Maximum fore-vacuum pressure					
N_2	mbar l/s	12		12	
He	mbar l/s	10		10	
H_2	mbar l/s	4		4	
Ar	mbar l/s	12		12	
CF_4	mbar l/s	12		12	
Max. gas throughput					
N_2	mbar l/s	5[1] (10)		17[2] (10)	
He	mbar l/s	5[1] (14)		-	
H_2	mbar l/s	4[1] (17)		-	
Ar	mbar l/s	-		14,5[2] (5,5)	
CF_4	mbar l/s	-		15[2] (8)	
Recommended backing pump					
Rotary vane pump		DUO 010 M		DUO 010 M	
Diaphragm vacuum pump		MD 4T		MD 4TC	
Dry three stage backing pump		UniDry™		UniDry™	
Final pressure with					
DUO 010 M	mbar	$<1 \cdot 10^{-10}$		$<1 \cdot 10^{-10}$	
MD 4T/MD 4TC	mbar	$<1 \cdot 10^{-10}$		$<1 \cdot 10^{-10}$	
UniDry™	mbar	$<1 \cdot 10^{-10}$		$<1 \cdot 10^{-10}$	
Max. cooling water consumption with water at 15°C[4]	l/h	100		100	
Cooling water temperature	°C	5 - 25		5 - 25	
Permissible ambient temperature with air cooling	°C	0 - 35		not permissible	
Permissible magnetic field	mT	3		3	
Heating power consumption	W	170		170	
Weight	kg	49/51	51/53	51	51/53
Noise level	dB (A)	< 47		< 47	

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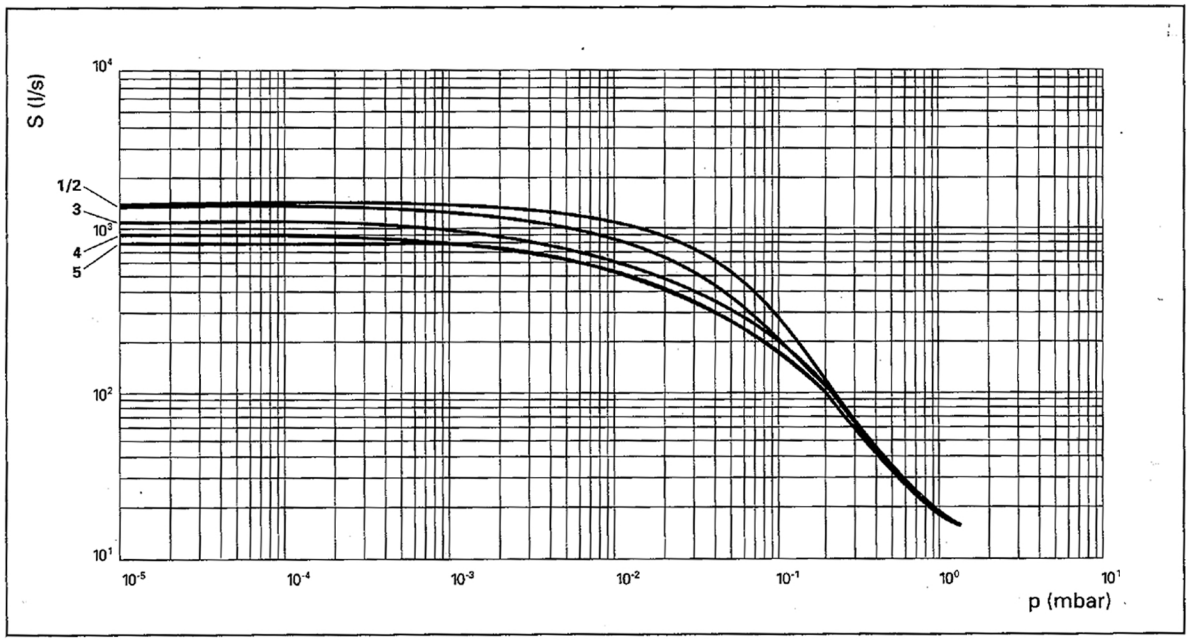
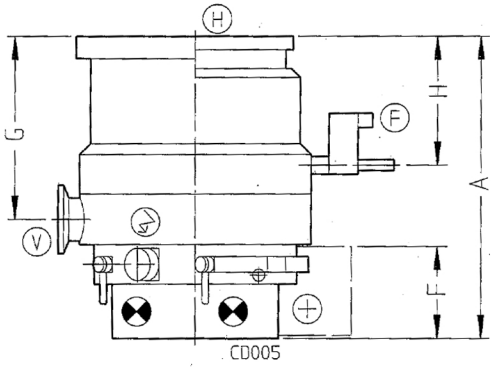
Pumping Curves

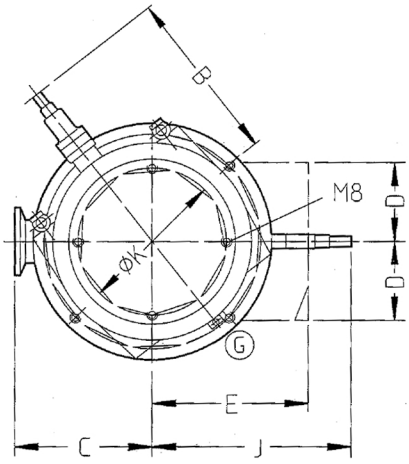


Pumping speed

1 TMH/U 1600: N_2
2 TMH/U 1600: He
3 TMH/U 1600: H_2
4 TMH/U 1000: He
5 TMH/U 1000: N_2, H_2

Dimensions





	A	B	C	D	E	F	G	H	J	K
TMH/U 1000/C	333	214	141	67.2	187.5	130	182	117.2	206	190
TMH/U 1600/C	377	220	163.5	67.2	187.5	130	228.5	159	228.5	190

- H High vacuum connection
- V Fore-vacuum connection
- F Venting connection
- Power connection
- Water connection
- Air cooling
- G Gas inlet

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Features & Benefits

- pump and drive form single unit
- simple and economical system solution
- modular design for maximum flexibility
- all components connects on the plug & play principle
- minimal space requirements for the entire system
- integrated serial interface provides additional versatility
- low vibration and noise level
- low system costs

Applications

- research and development • basic physical research • HV technology
- vacuum processing • accelerators • fusion technology

Recommended controller/backing pump

- Diaphgragm pumps: MD-4T
- Vane pumps; DUO 010M
- Dry pumps; UniDry
- Controllers; TCP-380 • TCP-600