



Pfeiffer TMH-1601P, 1601PCH

Technical Specifications

Feature	Unit	TMH 1601 P TMU 1601 P	TMH 1601 P TMU 1601 P	TMH 1601 P C H (T) TMU 1601 P C H (T)	TMH 1601 P C H (T) TMU 1601 P C H (T)
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-KF DN 250 CF-F
Outlet Venting connection		DN 40 ISO-KF G 1/8"		DN 40 ISO-KF G 1/8"	
Nominal rotation speed	Hz (1/min)	600 (36 000)		600 (36 000)	
Standby rotation speed	Hz (1/min)	400 (24 000)		400 (24 000)	
Start-up time (up to 90% of the nominal rotation speed fore-vacuum pressure ≤ 0,1 mbar)	min	6		6	
Noise level	dB (A)	47		47	
Final pressure, backing pump	mbar	≤ 5		≤ 2.5	
Maximum permissible rotor temperature	°C	120		120	
Permissible heat radiation power	W	35		35	
Volume flow rate for:					
Nitrogen N ₂	l/s	1000	1400	1000	1400
Helium He	l/s	1100	1200	1100	1210
Hydrogen H ₂	l/s	750	900	750	900
Compression ratio for:					
N ₂		10 ¹¹		> 10 ⁹	
He		2 · 10 ⁷		1 · 10 ⁵	
H ₂		2 · 10 ⁵		5 · 10 ³	
Maximum fore-vacuum pressure					
N ₂	mbar	14		5	
He	mbar	12		4,5	
H ₂	mbar	6		2	
Maximum gas throughput ^{1) 2) 3)} with HV pressure of 0.1 mbar					
N ₂	mbar/s	22		24	
Ar	mbar/s	—		27	
with nominal rotation speed (water cooling)					
N ₂	mbar/s	12		18	
Ar	mbar/s	7		12	
with voltage range 90 - 132 VAC					
N ₂	mbar/s	9		15	
Final pressure ⁵⁾ with diaphragm vacuum pump with rotary vane vacuum pump with UniDry™	mbar	< 5 · 10 ⁻¹⁰		< 1 · 10 ⁻⁸	
	mbar	< 5 · 10 ⁻¹⁰		< 1 · 10 ⁻⁸	
	mbar	< 5 · 10 ⁻¹⁰		< 1 · 10 ⁻⁸	
Lubricant Type ⁶⁾		F3		F3	
Filling volume	cm ³	65		65	
Cooling water consumption with water at 15 °C ⁷⁾	l/h	100		100	
Cooling water temperature	°C	5 - 25		5 - 25	
Permissible ambient temperature with air cooling	°C	0 - 35		—	
Power consumption: Casing heating unit TMS heating	W	170		170	
	W	—		1000	
Weight	kg	49/51	51/53	49/51	51/53
Permissible magnetic field	mT	3		3	
Connection voltage	VDC	140 ± 5%		140 ± 5%	
Current consumption	A	4.3		4.3	
Power	W	600		600	
Protection class ⁸⁾		IP 30		IP 30	
Relative humidity of air	%	5 - 85 non condensing		5 - 85 non condensing	



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Pfeiffer TMH-1601P, 1601PCH Applications

- freeze drying - packaging industry • degassing, casting, dry vacuum smelting (super-pure metals) • incandescent lamp manufacturing
- electronic tubes • thin film deposition • space simulation • cryogenic research • electron microscopy • nuclear/plasma/high energy physics
- particle accelerators - storage rings

