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Pfeiffer TPH, TPU-1600

Technical Specifications

		TPH/TPU 1600	TPH/TPU 1600
Nominal connection of diameter			
Inlet		DN 200 ISO-K/ DN 200 CF-F	DN 250 ISO-K/ DN 250 CF-F
Outlet		DN 40 ISO-KF	DN 40 ISO-KF
Volume flow rate for			
Nitrogen N_2	l/s	1100	1500
Helium He	l/s	1370	1500
Hydrogen H_2	l/s	1250	1400
Compression ratio for			
N_2		10^8	10^8
He		$3 \cdot 10^4$	$3 \cdot 10^4$
H_2		$2{,}2 \cdot 10^3$	$2{,}2 \cdot 10^3$
Max. throughput with rated rotation speed [2]	mbar l/s [1]	5	5
Max. throughput with stand-by rotation speed [8]	mbar l/s [1]	11	11
Theoretical ultimate pressure [3]	mbar	10^{-11}	10^{-11}
Ultimate pressure 1 [4]	mbar	$< 1 \cdot 10^{-10}$	$< 1 \cdot 10^{-10}$
Ultimate pressure 2 [4]	mbar	$< 1 \cdot 10^{-9}$	$< 1 \cdot 10^{-9}$
Ultimate pressure 3 [4]	mbar	$< 1 \cdot 10^{-8}$	$< 1 \cdot 10^{-8}$
Rated rotation speed	1/min	36000	36000
Stand-by rotation speed	1/min	24000	24000
Run-up time [5]	min	20/8	20/8
Pump fluid		F3	F3
Filling quantity	cm^3	65	65
Type of cooling: Standard		Wasser / Water / Eau	
Cooling water requirement [6]	l/h	20	20
Permissible cooling water temperature	°C	5 - 20	5 - 20
Permissible ambient temperature	°C	0 - 50	0 - 50
Heating jacket		TPU x	TPU x
Power input of heater	W	400	400
Sealing gas volume	mbar l/s[1], max.	0,5	0,5
Permissible magnetic field, max. [7]	mT	3	3
Weight	kg	49/51	51/53
Recommended backing pump, min.	m^3/h	120	120
Electronic drive unit		TCP 380/600	TCP 380/600

[1] 1 mbar l/s = 60 sccm.
[2] Measured with the recommended backing pump and TCP 600. If the gas throughput stated is exceeded, the pump rotation speed reduces. The set time is hereby longer (levelling out pressure-gas throughput). With > 5 mbar l/s gas throughput stand-by mode must be operated.
[3] Value to which the pressure in the test dome converges asymptotically. It is the lowest pressure which can be attained with the pump (according to German Industrial Standard 28 428).
[4] See Section 2.3 for explanation.
[5] Up to 90 % of the nominal rotation speed with the TCP 380/600.
[6] With maximum gas load up to 80 l/h cooling water is required.
[7] For more powerful magnetic fields, shielding is available on request.
[8] Measured with a backing pump of 120 m^3/h.