



Pfeiffer TPH-060, TPU-060

Technical Specifications

Turbo molecular pump with small flange clamping flange CF flange

		TPH 060	TPH 060	TPU 060
Connection diameter				
Inlet		DN 40 ISO-KF	DN 63 ISO-K	DN 63 CF-F
Outlet		DN 16 ISO-KF	DN 16 ISO-KF	DN 16 ISO-KF
Volume flow rate for				
Nitrogen N ₂	l/s	30	56	56
Helium He	l/s	40	52	52
Hydrogen H ₂	l/s	34	45	45
Compression ratio for				
N ₂		10 ⁸	10 ⁸	10 ⁸
He		7 · 10 ³	7 · 10 ³	7 · 10 ³
H ₂		6 · 10 ²	6 · 10 ²	6 · 10 ²
Recomm. backing pump, min.	m ³ /h	1.5	1.5	1.5
Standard electronic drive unit		TCP 121	TCP 121	TCP 121
Theoretical ultimate pressure ¹⁾	mbar	10 ⁻¹¹	10 ⁻¹¹	10 ⁻¹¹
Ultimate pressure 1 ²⁾	mbar	<1 · 10 ⁻¹⁰	<1 · 10 ⁻¹⁰	<1 · 10 ⁻¹⁰
Ultimate pressure 2 ²⁾	mbar	<1 · 10 ⁻⁹	<1 · 10 ⁻⁹	<1 · 10 ⁻⁹
Ultimate pressure 3 ²⁾	mbar	<1 · 10 ⁻⁸	<1 · 10 ⁻⁸	<1 · 10 ⁻⁸
Rated speed	rpm	90000	90000	90000
Standby speed	rpm	60000	60000	60000
Run-up time ³⁾	min	2	2	2
Pump fluid				
Filling quantity	cm ³	4	4	4
Type		TL 011	TL 011	TL 011
Type of cooling				
Standard ⁴⁾		Convection ⁵⁾	Convection ⁵⁾	Conv. ⁵⁾ /water
Conversion kit for		Air	Air	Air
Cooling water requirement	l/h	—	—	—/15
Heating jacket included		No	No	Yes
Power input of heater	W	40	40	40
Weight	kg	3.6	3.6	3.8
Pump operated with				
TCP 310		PM P01 402	PM P01 400	PM P01 401
TCP 5000		—	—	—

¹⁾ 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 DIN 28 428)

²⁾ Pressure which is attained in the test dome after a maximum bake-out period of 48 hours.

For a definition, see page D 2.

³⁾ Up to 90% of rated speed.

⁴⁾ Up to an ambient temperature of 30 °C

⁵⁾ When a heater is used, ducted cooling is required.



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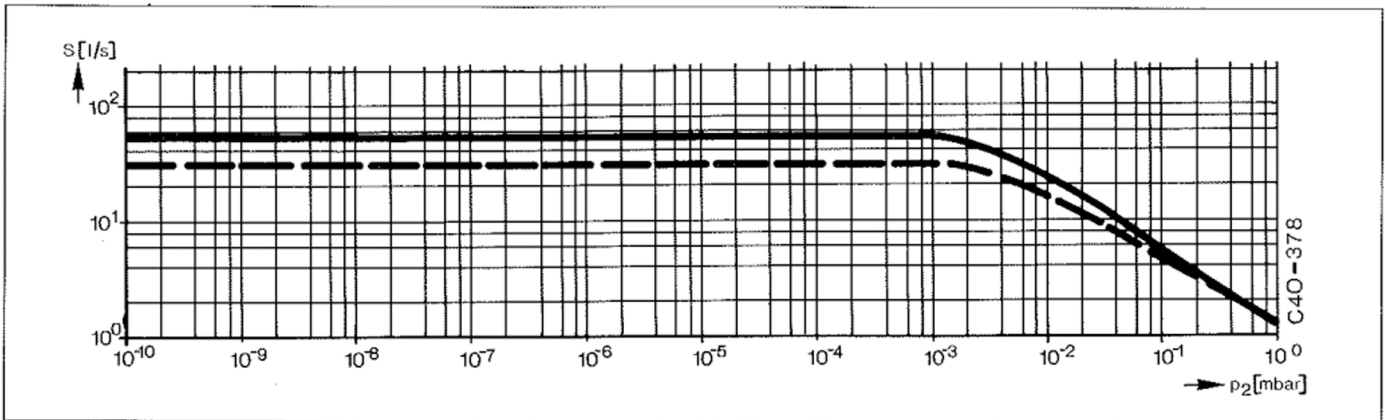
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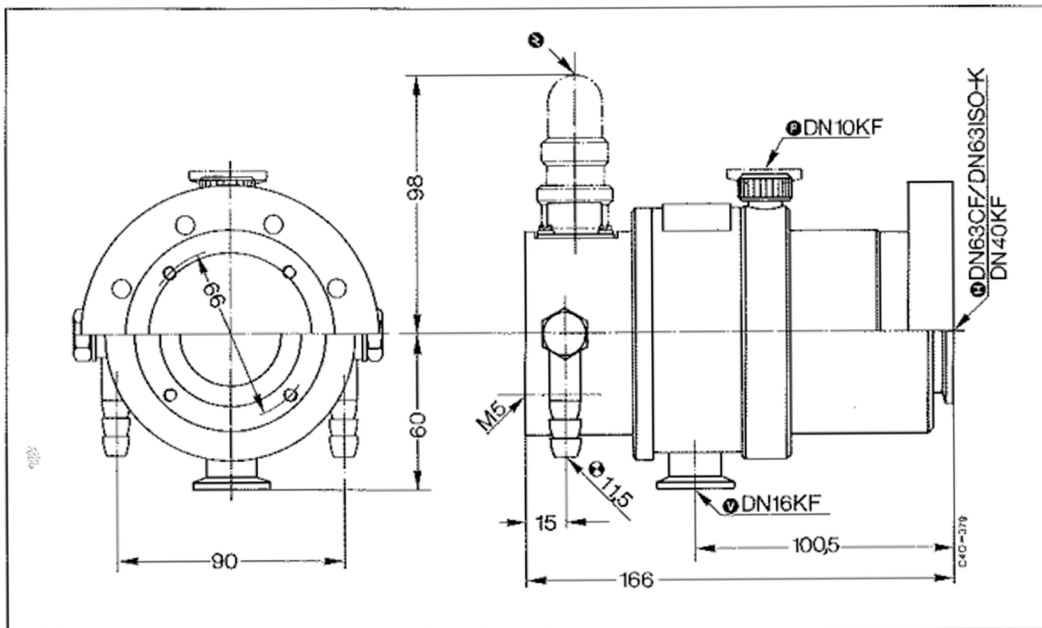
Pfeiffer TPH-060, TPU-060 Pumping Curves



Volume flow rate for N_2 funktion of the pressure

- TPH/TPU 060 with DN 63 ISO-K flange and TPH/TPU 060 with DN 63 CF-F flange
- TPH/TPU 060 with DN 40 ISO-K

Dimensions



- ① Cooling water connection
- ② High-vacuum connection
- ③ Backing pump connection
- ④ Venting connection
- ⑤ Electrical connection



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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

Recommended controller/backing pump

- Controllers: TCP-121 • TCP-380
- Backing pumps: DUO 1.5

