



Pfeiffer TPH-520, TPU-520

Technical Specifications

		TPH 520	TPU 520	TPH 520	TPU 520
Nominal diameter					
Inlet		DN100 ISO-K	DN100 CF-F	DN160 ISO-K	DN160 CF-F
Outlet		DN25 ISO-KF	DN25 ISO-KF	DN25 ISO-KF	DN25 ISO-KF
Volume flow rate for					
Nitrogen N ₂	l/s	300	300	500	500
Helium He	l/s	400	400	500	500
Hydrogen H ₂	l/s	400	400	480	480
Recommended backing pump:					
Electronic drive unit, standard	m ³ /h	16	16	16	16
		TCP 310	TCP 310	TCP 310	TCP 310
Compression ratio for					
N ₂		1 · 10 ⁸	1 · 10 ⁸	1 · 10 ⁸	1 · 10 ⁸
He		2 · 10 ⁴	2 · 10 ⁴	2 · 10 ⁴	2 · 10 ⁴
H ₂		1 · 10 ³	1 · 10 ³	1 · 10 ³	1 · 10 ³
Ultimate op. pressure	mbar	10 ⁻¹¹	10 ⁻¹¹	10 ⁻¹¹	10 ⁻¹¹
Ultimate pressure 1 ²⁾	mbar	< 1 · 10 ⁻¹⁰	< 1 · 10 ⁻¹⁰	< 1 · 10 ⁻¹⁰	< 1 · 10 ⁻¹⁰
Ultimate pressure 2 ²⁾	mbar	< 1 · 10 ⁻⁹	< 1 · 10 ⁻⁹	< 1 · 10 ⁻⁹	< 1 · 10 ⁻⁹
Ultimate pressure 3 ²⁾	mbar	< 1 · 10 ⁻⁸	< 1 · 10 ⁻⁸	< 1 · 10 ⁻⁸	< 1 · 10 ⁻⁸
Speed	1/min	50 000	50 000	50 000	50 000
Speed stand-by	1/min	33 000	33 000	33 000	33 000
Start-up-time ¹⁾					
	min	5	5	5	5
lubricant filling	cm ³	8	8	8	8
Cooling water requirement at water temperature 15 °C					
	l/h	15	15	15	15
Water temperature	°C	5 – 25	5 – 25	5 – 25	5 – 25
Permissible ambient temperature for air cooling	°C	0 – 35	0 – 35	0 – 35	0 – 35
Permissible magnetic field ³⁾	mT	5,0	5,0	5,0	5,0
Weight	kg	12,5	13,0	12,5	13,0

¹⁾ to 90% of the rated speed with TCP 310/380

²⁾ Comments under 2.1

³⁾ Screening for stronger magnetic fields on request.



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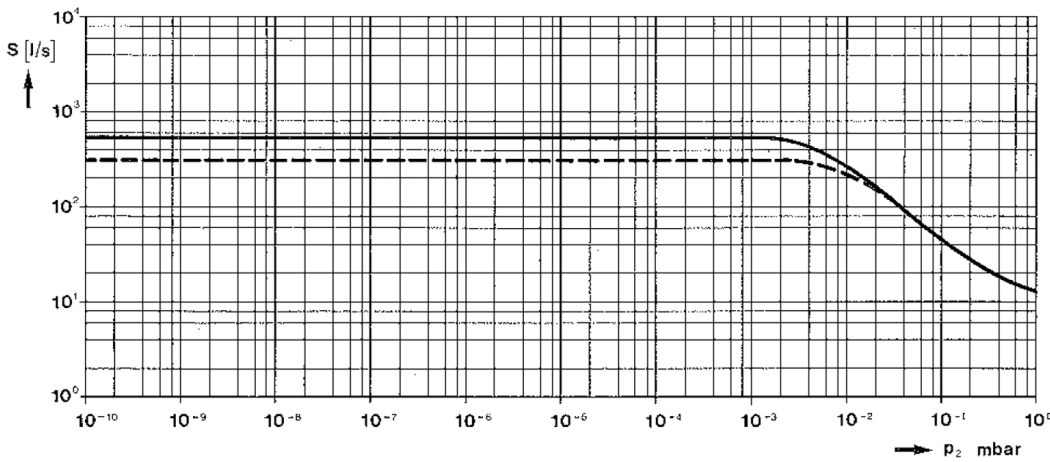
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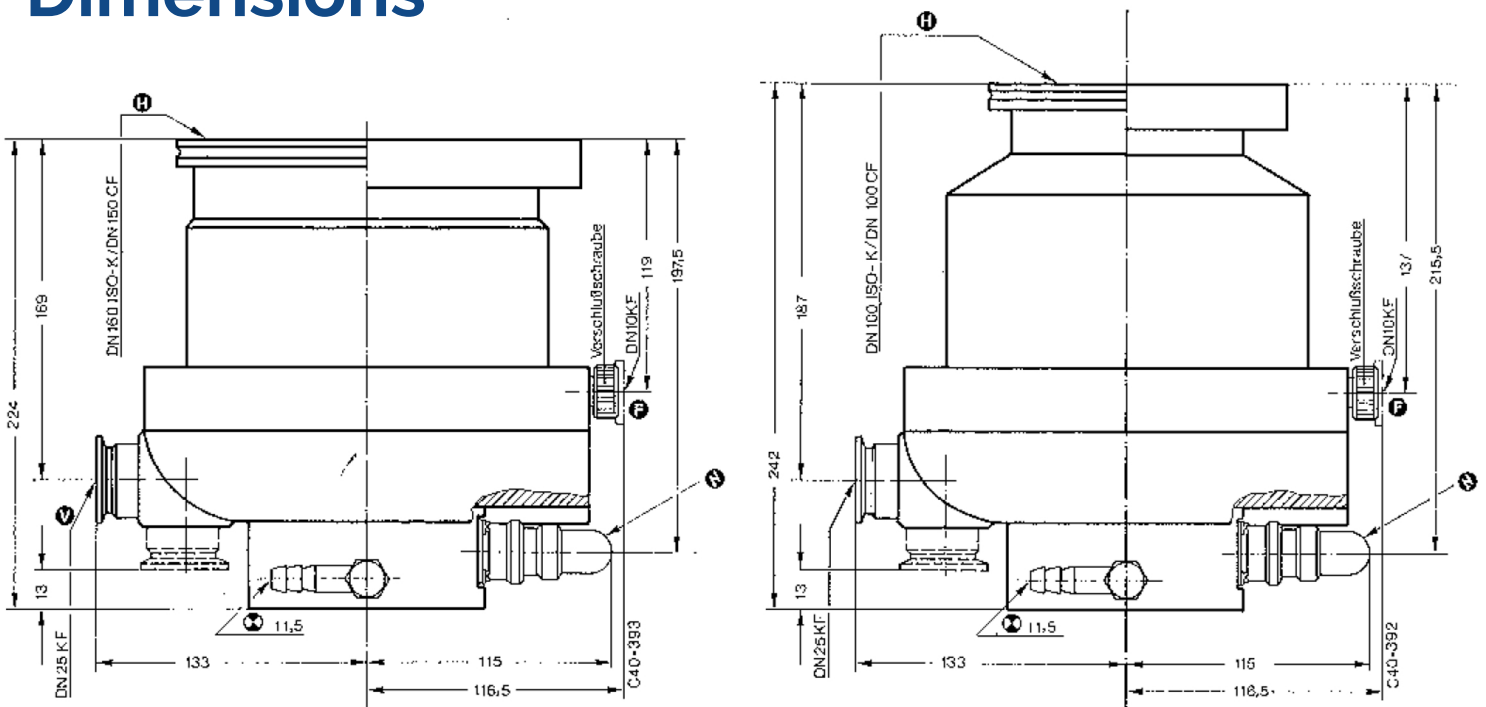
Pfeiffer TPH-520, TPU-520 Pumping Curves



Volume flow rate for N₂ as a function of the pressure p₂

- TPH 520 with DN 160 ISO-K flange and TPU 520 with DN 160 CF-F flange
- - - TPH 520 with DN 100 ISO-K flange and TPU 520 with DN 100 CF-F flange

Dimensions



- ⊗ Cooling water connection
- ⊕ High-vacuum connection
- ⊖ Backing pump connection
- ⊙ Venting connection
- ⊛ Electrical connection



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Pfeiffer TPH-520, TPU-520 Features & Benefits

- TPU model supplied with heating jacket as standard feature
- pump rotor is supported in bearings on both ends
- each ball bearing has its own oil-circulation lubrication system
- can be installed in any housing position with horizontal rotor shaft
- standard version is water cooled (can be easily converted to air cooled)
- thermally protected against excessive ambient temperatures

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

