

HiPace® 450 with TC 400, DN 160 CF-F, 24 V DC



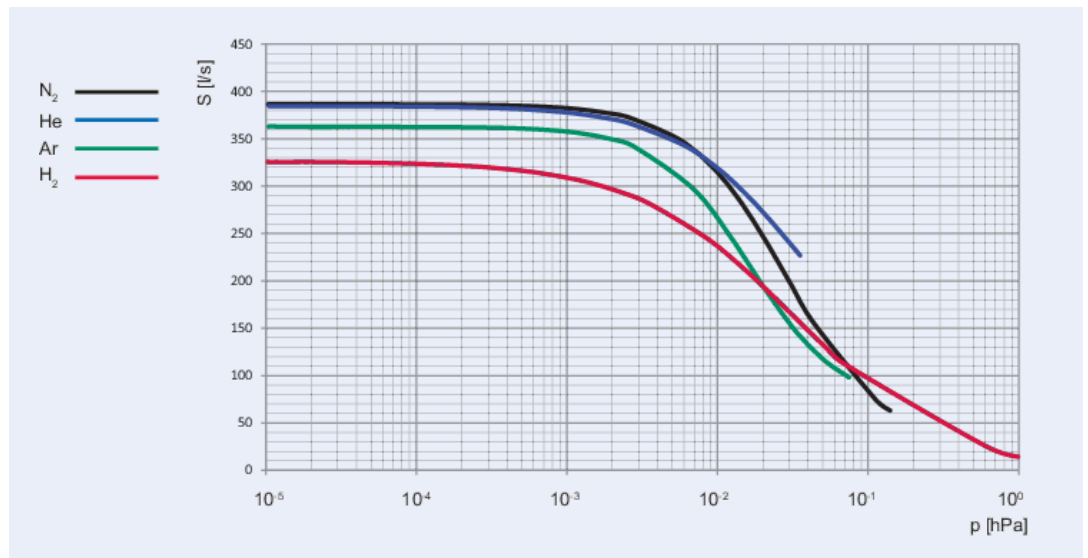


Illustration only

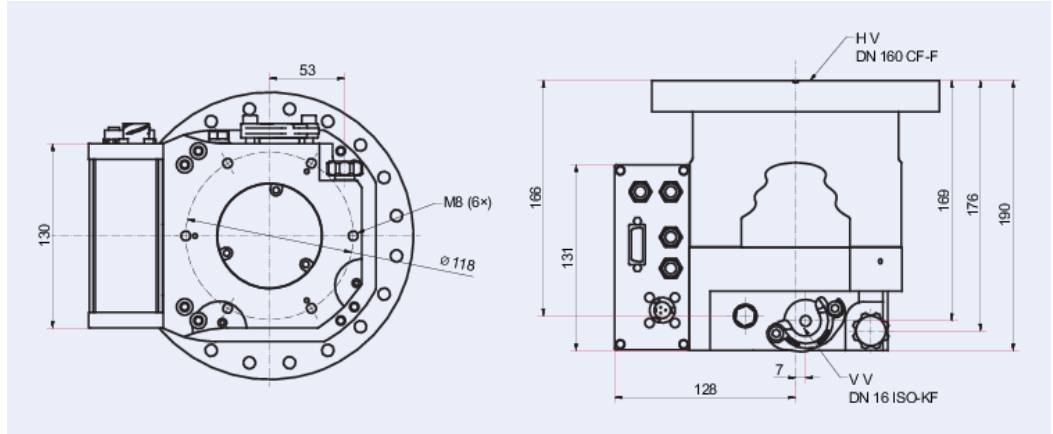
HiPace® 450 with TC 400, DN 160 CF-F, 24 V DC

- Robust, high-performance turbopump with a pumping speed of up to 380 l/s for N₂
- Compact and powerful
- Exceptional pumping speed for light gases
- Laser balancing technology
- For installation in any orientation
- TC 400 integrated electronic drive unit
- Extensive accessories expand the range of applications

Characteristics



Dimensions



Technical Data	HiPace® 450 with TC 400, DN 160 CF-F, 24 V DC
Electronic drive unit	TC 400
Type of electronic drive unit installation	Integrated electronic drive unit
Position of power supply pack	External power supply pack
Cooling method	Natural convection
Pumping speed	1188 – 1368 m ³ /h
Pumping speed for He	380 l/s
Pumping speed for N ₂	380 l/s
Vacuum range min	5 · 10 ⁻¹⁰ hPa
Vacuum range max	5 · 10 ⁻¹⁰ hPa
I/O interfaces	RS-485, Remote
Cooling water temperature	15 – 25 °C
Venting connection	G 1/8"
Bearing	Hybrid
Cooling method, optional	Air (forced convection) Water
Current max.	12.5 A
Mounting orientation	Arbitrary
Temperature: Storage, max	55 °C
Temperature: Storage, min	-20 °C
Pumping speed for Ar	350 l/s
Pumping speed for H ₂	330 l/s
Input voltage(s)	24 V DC (±10 %)
Emission sound pressure level (EN ISO 2151)	≤50 dB(A)
Permissible axial magnetic field max.	20 mT
Gas throughput at final rotation speed for H ₂	11 hPa·l/s 14.63 Torr l/s 11 mbar l/s
Gas throughput at final rotation speed for He	7 hPa·l/s 9.31 Torr l/s 7 mbar l/s
Run-up time	4 min
Compression ratio for Ar	>1 · 10 ¹¹
Compression ratio for H ₂	2 · 10 ⁶
Compression ratio for He	>1 · 10 ⁸
Compression ratio for N ₂	>1 · 10 ¹¹
Gas throughput at final rotation speed for N ₂	2 hPa·l/s 2.66 Torr l/s 2 mbar l/s
Gas throughput at final rotation speed for Ar	0.7 hPa·l/s 0.93 Torr l/s 0.7 mbar l/s
Fore-vacuum max. for N ₂	10 hPa 7.5 Torr 10 mbar
Pumping speed for He	380 l/s
Pumping speed for N ₂	380 l/s

Rotation speed $\pm 2\%$	66,000 rpm 66,000 min ⁻¹
Weight	11.5 kg 25.35 lb
Pumping speed for Ar	350 l/s
Pumping speed for H ₂	330 l/s
Compression ratio for N ₂	$>1 \cdot 10^{11}$
Compression ratio for H ₂	$2 \cdot 10^6$
Compression ratio for He	$>1 \cdot 10^8$
Compression ratio for Ar	$>1 \cdot 10^{11}$
Permissible radial magnetic field max.	4.5 mT
Fore-vacuum max. for N ₂	10 hPa
Cooling water flow	100 l/h
Power consumption max.	300 W
03 Vacuum range	High Vacuum Ultra-high Vacuum
Connection flange	DN 160 CF-F / DN 16 ISO-KF G 3/8" Thread
Rotation speed variable	60 – 100 %
Rotation speed $\pm 2\%$	66,000 rpm
Weight	11.5 kg
Compression ratio	$1 \cdot 10^{11}$
Connection flange (in)	DN 160 CF-F
Connection flange (out)	DN 16 ISO-KF G 3/8"

Order number	HiPace® 450 with TC 400, DN 160 CF-F, 24 V DC
HiPace® 450 with TC 400, DN 160 CF-F, 24 V DC	PM P070 511 40

Accessories	HiPace® 450 with TC 400, DN 160 CF-F, 24 V DC
Repair kit 1, bearing for HiPace 350/450	PM E11 118 -T
Operating fluid reservoir for HiPace 300 TL 022	PM 203 699 -T



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