



# HiPace<sup>®</sup> 1500

Powerful turbopumps with pumping speeds of up to 1450 l/s.



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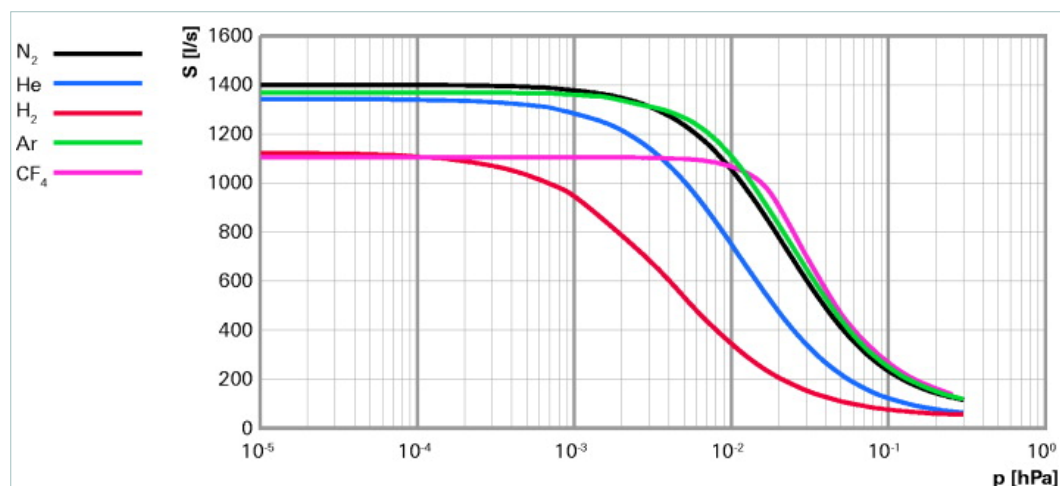
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## HiPace® 1500 U with TC 1200, DN 250 CF-F, upside down version

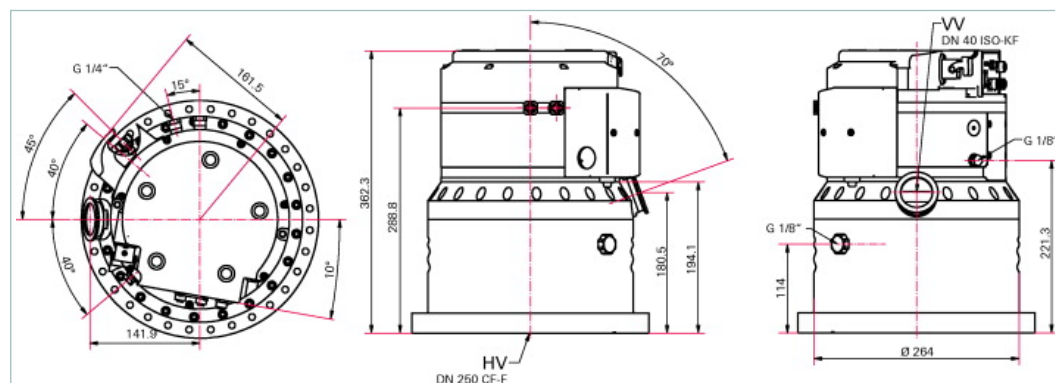
- Powerful turbopump with a pumping speed of up to 1450 l/s for N<sub>2</sub>
- DN 250 CF-F flange for demanding UHV applications
- Integrated TC 1200 drive electronics with power supply
- Integrated sealing gas system with electric sealing gas valve 24 V DC
- Cooling: Water cooling
- Installation orientation: Upside-down (90° - 180°)
- Protection Class: IP 54
- Interfaces: RS-485, Remote (Profibus/DeviceNet on request)
- Extensive accessories expand the range of applications

C = Corrosive gas version

U = Upside-down installation orientation



### Dimensions



### Technical Data

### HiPace® 1500 U with TC 1200, DN 250 CF-F, upside down version

Bearing	Hybrid
Compression ratio for Ar	$> 1 \cdot 10^8$
Compression ratio for H <sub>2</sub>	$6 \cdot 10^3$
Compression ratio for He	$2 \cdot 10^5$
Compression ratio for N <sub>2</sub>	$> 1 \cdot 10^8$
Cooling method, standard	Water
Cooling water consumption	100 l/h

Technical Data		HiPace® 1500 U with TC 1200, DN 250 CF-F, upside down version
Cooling water temperature		15-35 °C   59-95 °F   288-308 K
Electronic drive unit		with TC 1200
Flange (in)		DN 250 CF-F
Flange (out)		DN 40 ISO-KF
Fore-vacuum max. for N <sub>2</sub>		2 hPa   1.5 Torr   2 mbar
Gas throughput at full rotational speed for Ar		6 hPa l/s   4.5 Torr l/s   6 mbar l/s
Gas throughput at full rotational speed for H <sub>2</sub>		> 30 hPa l/s   > 22.5 Torr l/s   > 30 mbar l/s
Gas throughput at full rotational speed for He		16 hPa l/s   12 Torr l/s   16 mbar l/s
Gas throughput at full rotational speed for N <sub>2</sub>		16 hPa l/s   12 Torr l/s   16 mbar l/s
Integrated power supply		yes
Interfaces		RS-485, Remote
Mounting orientation		Upside down (90°-180°)
Operating voltage		100-120/200-240 V AC, 50/60 Hz
Particulate matter		yes
Permissible magnetic field max.		6 mT
Protection category		IP 54
Pumping speed for Ar		1350 l/s
Pumping speed for H <sub>2</sub>		1150 l/s
Pumping speed for He		1350 l/s
Pumping speed for N <sub>2</sub>		1400 l/s
Rotation speed ± 2 %		37800 min <sup>-1</sup>
Rotation speed variable		50-100 %
Run-up time		2.5 min
Sound pressure level		≤ 50 dB (A)
Ultimate pressure according to PNEUROP		< 5 · 10 <sup>-10</sup> hPa   < 3.75 · 10 <sup>-10</sup> Torr   < 5 · 10 <sup>-10</sup> mbar
Venting connection		G 1/8"
Weight		41 kg   90.39 lb
Order number		
HiPace® 1500		PM P04 065

Accessories	
<b>Accessory for TC 400/1200 and TM 700</b>	
Y-connector, shielded, M12 for accessories	P 4723 013
<b>Adapter and control cables</b>	
Control cable for pumping stations 0.7 m	PM 061 675 AT
HiPace - ACP connection cable	PM 071 142 -X
<b>CF-F, Mounting kit</b>	
Set of hexagon screws for trough hole, DN 250 CF-F	PM 016 694 -T
Set of stud screws for threaded hole, DN 250 CF-F	PM 016 695 -T
Set of stud screws for trough hole, DN 250 CF-F	PM 016 737 -T
<b>CF-F, Sealings, splinter shields, protection screens</b>	
Protection screen for DN 250 CF-F	PM 016 345
Splinter shield for turbopumps, DN 250 CF-F	PM 016 324
<b>Control and display units</b>	
Accessories package for HPU 001/PC	PM 061 005 -T
DCU 002, Display Control Unit	PM 061 348 -T
HPU 001, Handheld Programming Unit	PM 051 510 -T
<b>Fore-vacuum safety valves</b>	
TVV 001 fore-vacuum safety valve, 115 V AC	PM Z01 206
TVV 001 fore-vacuum safety valve, 230 V AC	PM Z01 205
<b>Interface and extension cables</b>	
Interface cable, M12 m straight/M12 m straight, 3 m	PM 061 283 -T
<b>Mains cables</b>	
Mains cable 115 V AC, NEMA 5-15 to HAN 3A, 3 m	PM 061 187 -X
Mains cable 208 V AC, NEMA 6-15 to HAN 3A, 3 m	P 4564 309 HB
Mains cable 230 V AC, CEE 7/7 to HAN 3A, 3 m	P 4564 309 HA
<b>Relay boxes</b>	
Relay box, shielded, for backing pumps, 1-phase 20 A for TC 400/1200, TM 700 and TCP 350, M12	PM 071 285 -X
<b>RS-485</b>	
USB converter to RS-485 interface	PM 061 207 -T
Y-Connector M12 to RS-485	P 4723 010
<b>Sealing gas</b>	
Sealing gas throttle for HiPace 400/700/800 P and C version and HiPace 1200 - 2300	PM Z01 318
Sealing gas valve, shielded, HiPace 400/700/800 P and C with TC 400 and HiPace 1200 - 2300 with TC 1200	PM Z01 313
<b>Shielded heating suitable for TC 400 PB, TC 1200 and TM 700</b>	
Heating jacket, shielded, for HiPace 1200/1500 with TC 1200, 115 V AC, UL plug	PM 071 274 -T
Heating jacket, shielded, for HiPace 1200/1500 with TC 1200, 208 V AC, UL plug	PM 071 273 -T
Heating jacket, shielded, for HiPace 1200/1500 with TC 1200, 230 V AC, safety plug	PM 071 272 -T
<b>Venting accessory with small flange, G 1/8", hoses, air drier</b>	
TTV 001, dryer for venting turbopumps	PM Z00 121
<b>Venting valve (normally closed)</b>	
Venting valve, shielded, 24 V DC, G 1/8", for connection to TC 400/1200 and TM 700	PM Z01 291

Accessories	
<b>Vibration damper</b>	
Vibration damper for HiPace 1500/2300, DN 250 CF-F	<b>PM 006 671 -X</b>