



# HiPace<sup>®</sup> 2300

Powerful turbopumps with pumping speeds of  
up to 2050 l/s.



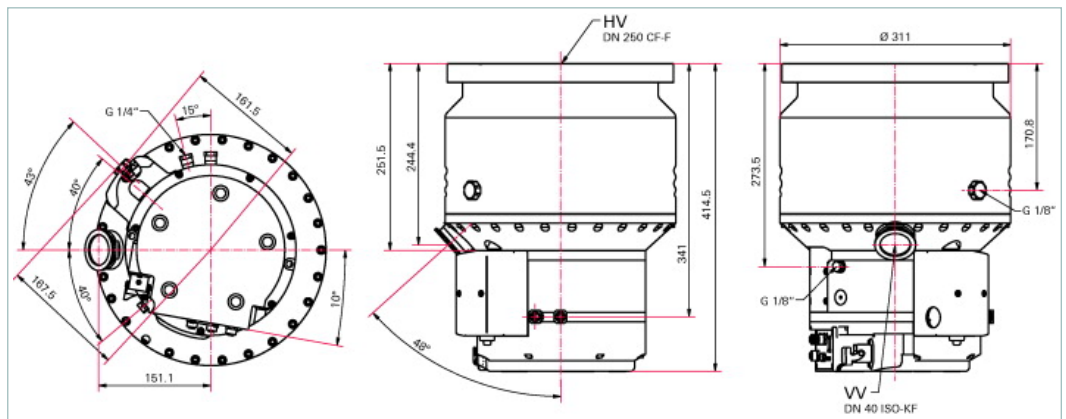
## HiPace® 2300 with TC 1200 Profibus, DN 250 CF-F

- Powerful turbopump with a pumping speed of up to 1900 l/s for N<sub>2</sub>
- DN 250 CF-F flange for demanding UHV applications
- Integrated TC 1200 drive electronics with Profibus and power supply
- Integrated sealing gas system with electric sealing gas valve 24 V DC
- Cooling: Water cooling
- Installation orientation: Standard (0° to 90°)
- Protection Class: IP 54
- Interfaces: Profibus, RS-485, Remote
- Extensive accessories expand the range of applications

C=Corrosive gas version

U=Upside-down installation orientation

### Dimensions



Technical Data	HiPace® 2300 with TC 1200 Profibus, DN 250 CF-F
Bearing	Hybrid
Compression ratio for Ar	$> 1 \cdot 10^8$
Compression ratio for H <sub>2</sub>	$2 \cdot 10^4$
Compression ratio for He	$3 \cdot 10^5$
Compression ratio for N <sub>2</sub>	$> 1 \cdot 10^8$
Cooling method, standard	Water
Cooling water consumption	100 l/h
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>	1.8 hPa   1.35 Torr   1.8 mbar
Gas throughput at full rotational speed for Ar	8 hPa l/s   6 Torr l/s   8 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	10 hPa l/s   7.5 Torr l/s   10 mbar l/s
Gas throughput at full rotational speed for N <sub>2</sub>	11 hPa l/s   8.25 Torr l/s   11 mbar l/s
Integrated power supply	yes
Interface, extended	Profibus
Interfaces	RS-485, Remote
Mounting orientation	Standard (0°-90°)
Operating voltage	100-120/200-240 V AC, 50/60 Hz
Particulate matter	yes
Permissible magnetic field max.	7 mT
Protection category	IP 54

Technical Data		HiPace® 2300 with TC 1200 Profibus, DN 250 CF-F	
Pumping speed for Ar		1800 l/s	
Pumping speed for H <sub>2</sub>		1850 l/s	
Pumping speed for He		2000 l/s	
Pumping speed for N <sub>2</sub>		1900 l/s	
Rotation speed ± 2 %		31500 min <sup>-1</sup>	
Rotation speed variable		50-100 %	
Run-up time		4 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		47 kg   103.62 lb	
Order number			
HiPace® 2300		PM P04 142	

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>Profibus</b>	
Line filter for cable fitting	PM 061 806
Plug and socket M12B for Profibus	PM 051 927 -T
T-Connector M12B to Profibus	P 4723 020
Termination resistor M12B for Profibus	P 4723 030
Y-Connector M12B to Profibus	P 4723 015
Y-Connector with cable M12B to Profibus, 0.5 m	P 4723 018
<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
Relay box, shielded, for backing pumps, 1-phase 7 A for TC 400/1200, TM 700 and TCP 350, M12	PM 071 284 -X
<b>RS-485</b>	
Connector M12 to RS-485	PM 061 270 -X
Power separator for RS-485	PT 348 132 -T
Termination resistor for RS-485	PT 348 105 -T
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 1200–2300, 52.5 ± 7.5 sccm	PM Z01 325
Sealing gas throttle for HiPace 1200 - 2300	PM Z01 319
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>Accessories</b>	
<b>Shielded heating suitable for TC 400 PB, TC 1200 and TM 700</b>	
Heating jacket, shielded, for HiPace 2300 with TC 1200, 115 V AC, UL plug	<b>PM 071 277 -T</b>
Heating jacket, shielded, for HiPace 2300 with TC 1200, 208 V AC, UL plug	<b>PM 071 276 -T</b>
Heating jacket, shielded, for HiPace 2300 with TC 1200, 230 V AC, safety plug	<b>PM 071 275 -T</b>
<b>Venting accessory with small flange, G 1/8", hoses, air drier</b>	
TTV 001, dryer for venting turbopumps	<b>PM Z00 121</b>
<b>Venting valve (normally closed)</b>	
Venting valve, shielded, 24 V DC, G 1/8", for connection to TC 400/1200 and TM 700	<b>PM Z01 291</b>
<b>Vibration damper</b>	
Vibration damper for HiPace 1500/2300, DN 250 CF-F	<b>PM 006 671 -X</b>