



# HiPace<sup>®</sup> 2800 IT

The turbopump for ion implantation systems

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## The turbopump for ion implantation systems

### Ideal for ion implanters

With the HiPace 2800 IT Pfeiffer Vacuum presents a turbopump especially dedicated for ion implantation systems. The sophisticated rotor design of the turbopump results in an optimized pumping speed for light gases. This ensures the best process adaption for ion implantation processes, where hydrogen pumping speed is very important. With 2,600 l/s pumping speed for hydrogen the new HiPace 2800 IT is the best turbopump in its class.

### Harsh processes resistant

The intelligent temperature management system reduces process condensation and deposition inside the pumping system. It allows setting the temperature individually. This ensures an optimal adaption of the turbopump to the needs of the process. The nickel coated rotor ensures robustness against the dopants applied in the process.

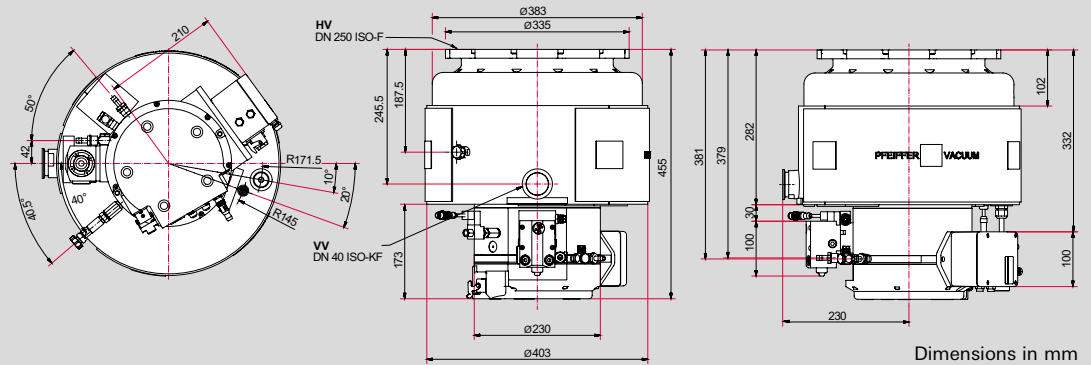
### Highest reliability

Being based on a so-called hybrid bearing, a combination of a ceramic ball bearing on the fore-vacuum side and permanent magnetic bearings on the high vacuum side, our HiPace turbopumps have a particularly robust bearing design. The pumps therefore have a long life cycle.

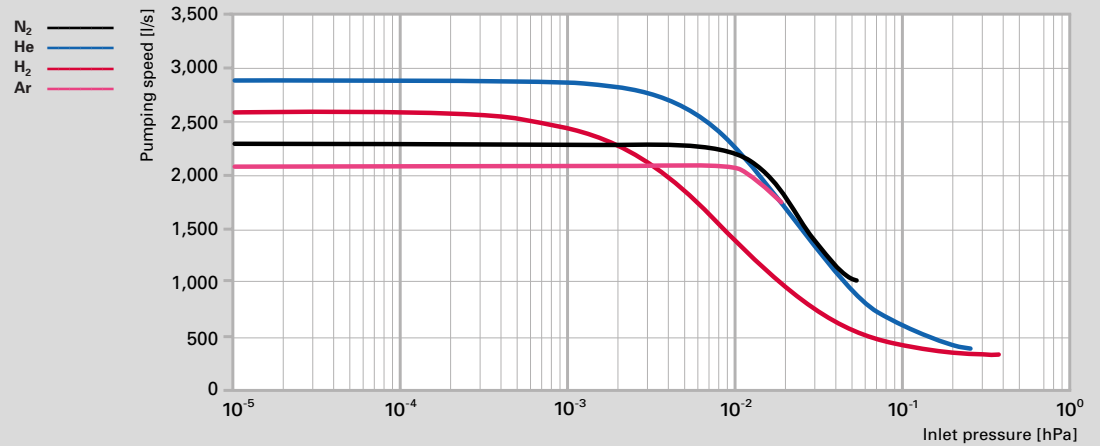
### Customer benefits

- Highest pumping speed for light gases
- Ideal for ion implantation
- Nickel coated rotor for harsh processes
- Adaption on the process due to intelligent temperature management system
- Less condensation inside the pump
- Rugged electronics
- Lowest cost of ownership thanks to reliable hybrid bearing design

## Dimensions



## Pumping speed



## Technical data

HiPace 2800 IT	
Flange (in)	DN 250 ISO-F
Flange (out)	DN 40 ISO-KF
Venting connection	G 1/8"
Pumping speed for N <sub>2</sub>	2,300 l/s
Pumping speed for Ar	2,100 l/s
Pumping speed for He	2,900 l/s
Pumping speed for H <sub>2</sub>	2,600 l/s
Rotation speed ± 2 %	27,300 rpm
Run-up time	8.6 min
Gas throughput at full rotational speed for N <sub>2</sub>	16 hPa l/s
Gas throughput at full rotational speed for Ar	11 hPa l/s
Gas throughput at full rotational speed for H <sub>2</sub>	50 hPa l/s
Gas throughput at full rotational speed for He	24 hPa l/s
Compression ratio for N <sub>2</sub>	> 1 · 10 <sup>8</sup>
Compression ratio for Ar	> 1 · 10 <sup>8</sup>
Compression ratio for He	6 · 10 <sup>4</sup>
Compression ratio for H <sub>2</sub>	4 · 10 <sup>3</sup>
Fore-vacuum max for N <sub>2</sub>	0.8 hPa
Ultimate pressure according to PNEUROP	< 1 · 10 <sup>-7</sup> hPa
Weight	62 kg
Cooling method	Water
Cooling water consumption	100 l/h
Cooling water temperature	15 – 25 °C
Interfaces	E74, RS-485
Max. permissible magnetic field	3.4 mT
Sound pressure level	< 50 dB(A)

## Order numbers

Order number	
HiPace 2800 IT	<b>PM P05 241</b>
HiPace 2800 IUT	<b>PM P05 246</b>

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