



# HIPACE 300 H

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Maximum reliability with best performance.



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## **Highest level of compression**

With its new HiPace 300 H, Pfeiffer Vacuum presents a turbopump with the highest level of compression available in the 300 l/s pumping speed class. The pump has a compression ratio of  $10^7$  for hydrogen, making it ideal for generating high and ultra-high vacuum. The high compression ratio results in a low residual gas background in the chamber, which is desirable for mass spectrometry applications, for example.

## **High-performance technology**

Thanks to the sophisticated design of the rotor, the HiPace 300 H has an extraordinarily high max. fore-vacuum pressure of 30 hPa. This allows the pump to achieve ultra-high vacuum even when operated with a high fore-vacuum pressure, which occurs in combination with diaphragm pumps. The integrated "Intermittent mode" function ensures that a connected backing pump is switched on by the HiPace 300 H only when the fore-vacuum pressure is no longer adequate. This reduces the energy consumption of the overall vacuum system by more than 90 %.

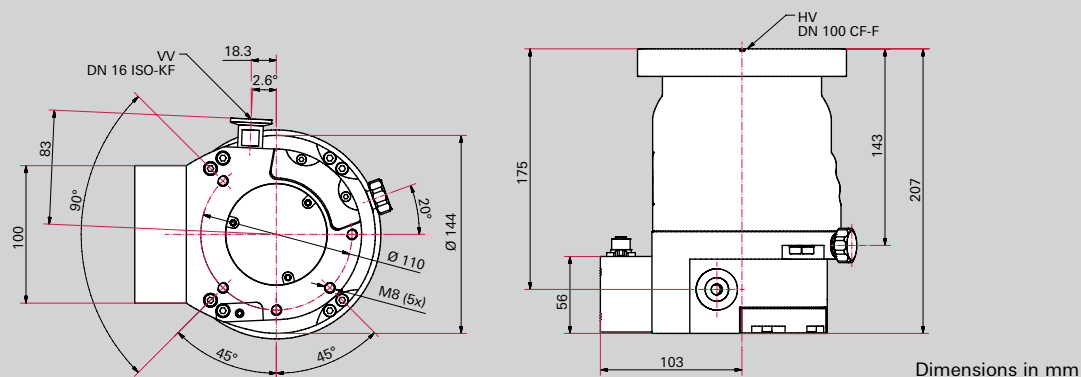
## **Highest reliability**

Based on a so-called hybrid bearing, a combination of ceramic ball bearings on the fore-vacuum side and permanently magnetic radial bearings on the high vacuum side, our HiPace turbopumps have a particularly robust bearing design. Therefore the pumps have a long life cycle with a maintenance interval of approximately 4 years.

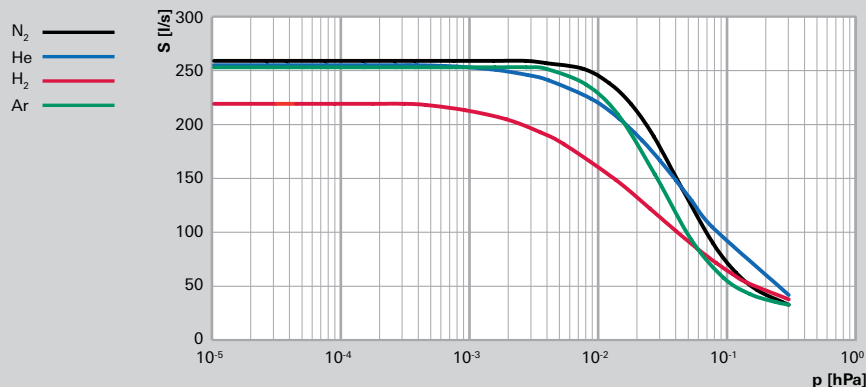
## **Customer benefits**

- The highest level of compression, especially for light gases
- Ideal for HV and UHV applications
- Best UHV pressures even in combination with diaphragm pumps
- Intermittent mode offers energy savings of more than 90 % without any reduction in performance

## Dimensions



## Pumping speed



## Technical data

HiPace 300 H	DN 100 ISO-K	DN 100 CF-F	DN 100 ISO-F
Flange (in)	DN 100 ISO-K	DN 100 CF-F	DN 100 ISO-F
Flange (out)	DN 16 ISO-KF / G 1/4"		
Venting connection	G 1/8"		
Pumping speed for Ar	255 l/s		
Pumping speed for H <sub>2</sub>	220 l/s		
Pumping speed for He	255 l/s		
Pumping speed for N <sub>2</sub>	260 l/s		
Rotation speed ±2%	60,000 min <sup>-1</sup>		
Run-up time	3 – 3.5 min.		
Gas throughput at full rotational speed for Ar	0.5 hPa l/s		
Gas throughput at full rotational speed for H <sub>2</sub>	10 hPa l/s		
Gas throughput at full rotational speed for He	3.5 hPa l/s		
Gas throughput at full rotational speed for N <sub>2</sub>	1.5 hPa l/s		
Compression ratio for Ar	> 1 · 10 <sup>13</sup>		
Compression ratio for H <sub>2</sub>	1 · 10 <sup>7</sup>		
Compression ratio for He	2.5 · 10 <sup>9</sup>		
Compression ratio for N <sub>2</sub>	> 1 · 10 <sup>13</sup>		
Fore-vacuum max for Ar	25 hPa		
Fore-vacuum max for H <sub>2</sub>	15 hPa		
Fore-vacuum max for He	28 hPa		
Fore-vacuum max for N <sub>2</sub>	30 hPa		
Ultimate pressure according to PNEUROP	< 1 · 10 <sup>-7</sup> hPa	< 1 · 10 <sup>-10</sup> hPa	< 1 · 10 <sup>-7</sup> hPa
Weight	5.8 – 6.2 kg	7.8 – 8.2 kg	6.1 – 6.5 kg
Cooling method, standard	Air		
Cooling method, optional	Water		
Cooling water consumption	50 l/h		
Cooling water temperature	15 – 35 °C		
Interfaces	RS-485, Remote		
Protection category	IP54		
Permissible magnetic field max.	5.5 mT		
Sound pressure level	≤ 50 dB (A)		
Mounting orientation	in any orientation		
Operating voltage	24 V DC		
HiPace 300 H	DN 100 ISO-K	DN 100 CF-F	DN 100 ISO-F
with TC 110	PM P05 540	PM P05 541	PM P05 542
for TCP 350	PM P05 543	PM P05 544	PM P05 545

## Order numbers

# 上海伯东--您理想的真空合作伙伴!

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perfect vacuum solution?  
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