HICUBE™

The modular pumping stations for all applications in high and ultra-high vacuum

PFEIFFER VACUUM

HICUBE™

The modular pumping stations for all applications in high and ultra-high vacuum

Ideal for any application

HiCube turbopumping stations are defined by their modular design. Turbopumps and backing pumps can be independently selected. This makes it possible to configure pumping stations which are adapted to all high and ultra-high vacuum requirements. The robust workmanship and the ready-to-connect, fully automated pump unit guarantee maximum reliability.

Intelligent efficiency

The turbopump and the backing pump form a single unit in the pumping station. If there is no gas load on the vacuum side, the pumping unit automatically reduces the output of the backing pump to achieve maximum energy savings.

Standard pressure indicator

All HiCube Eco pumping stations offer options for connecting a variety of pressure sensors digital and analog pressure sensors.

Accelerators

HiCube Eco with PrismaPro® for mass spectrometer

UHV applications

Easy data collection and analysis

The HiCube Eco can also be remotely controlled via a USB interface, if required, which is obtainable as an accessory. All operating parameters and the pressure values of the pressure sensors, which are also available as accessories, can be read out using this. For data collection and analysis, the TurboViewer software or the corresponding LabView drivers can be downloaded free of charge from our homepage.

Order number of the USB/RS-485 interface = **PM 061 207 -T**

HICUBE™

The modular pumping stations for all applications in high and ultra-high vacuum.

			
	HiCube Eco Compact table top unit, ideal for pumping of small volumes.	**HiCube Classic** Robust floor standing pumping station, for pumping of small and medium-sized volumes. Available with lockable wheels.	**HiCube Pro** Mobile floor standing pumping station with lockable wheels, ideal for pumping large volumes.
Pumping speed turbopump	22 – 260 l/s	35 – 665 l/s	35 – 665 l/s
Pumping speed backing pump	0.5 – 1.8 m^3/h	2.3 – 6 m^3/h	9 – 22 m^3/h
Backing pump types	■ Diaphragm pumps	■ Diaphragm pumps ■ Two-stage rotary vane pumps ■ Magnetically coupled two-stage rotary vane pumps	■ Two-stage rotary vane pumps ■ Magnetically coupled two-stage rotary vane pumps ■ Multi-stage Roots pumps
External gauge connectable	■	■	■
Rack slot for accessories e.g. TPG		■	■

High performance combination

In combination with the HiPace 300 H or HiPace 700 H turbopumps, which features particularly high compression, the pumping unit now achieves even faster final pressures in the UHV range. Previously unattainable, the HiPace H series opens an entire new application in the UHV range.

Customer benefits

- Modular turbopumping stations for all high vacuum and ultra-high vacuum applications
- Ideal adaption to all applications in high and ultra-high vacuum due to a modular design
- Powerful technology
- Maximum energy savings through intermittent operation of the backing pumps
- Connection option for pressure gauges
- Easy data collection and analysis

HICUBE™ ECO

The complete solution for high vacuum applications: modular pumping station for clean vacuum

Modular design

The HiCube Eco is a compact turbopumping station. It is ideally suited for pumping down small to medium-sized volumes.

The perfect package

In combination with the HiPace 300 H turbopump and a diaphragm backing pump, final pressures of $<10^{-10}$ hPa can be achieved.

Optimized and quiet

The performance of the backing pump can be maximized when needed and when the pumping performance is not required, automatically reduce the pumping speed to operate in ultra quiet mode.

Technical data

Pumping station		HiCube 30 Eco		
Flange (in)		DN 40 ISO-KF	DN 63 ISO-K	DN 63 CF-F
Pumping speed for Nitrogen N_2	l/s	22	32	32
MVP 015-2				
Ultimate pressure	hPa	$< 1 \cdot 10^{-7}$	$< 1 \cdot 10^{-7}$	$< 1 \cdot 10^{-8}$
Pumping speed backing pump at 50 Hz	m^3/h	1	1	1
Weight of pumping station[1)]	kg	12.1	12.1	13.3
Power consumption	W	170	170	170
MVP 015-4				
Ultimate pressure	hPa	$< 1 \cdot 10^{-7}$	$< 1 \cdot 10^{-7}$	$< 1 \cdot 10^{-8}$
Pumping speed backing pump at 50 Hz	m^3/h	0.75	0.75	0.75
Weight of pumping station[1)]	kg	13.8	13.8	15
Power consumption	W	170	170	170
MVP 030-3				
Ultimate pressure	hPa	$< 1 \cdot 10^{-7}$	$< 1 \cdot 10^{-7}$	$< 1 \cdot 10^{-8}$
Pumping speed backing pump at 50 Hz	m^3/h	1.8	1.8	1.8
Weight of pumping station[1)]	kg	13.7	13.7	14.9
Power consumption	W	270	270	270

Ultimate pressure in a measuring dome 48 hours after bake-out, can be attained only with metallic seal of the high vacuum flange. Ultimate pressure with elastomer seal (standard, not bakeable): $< 1 \cdot 10^{-7}$ mbar; [1)] without fore-vacuum safety valve

Advantages at a glance

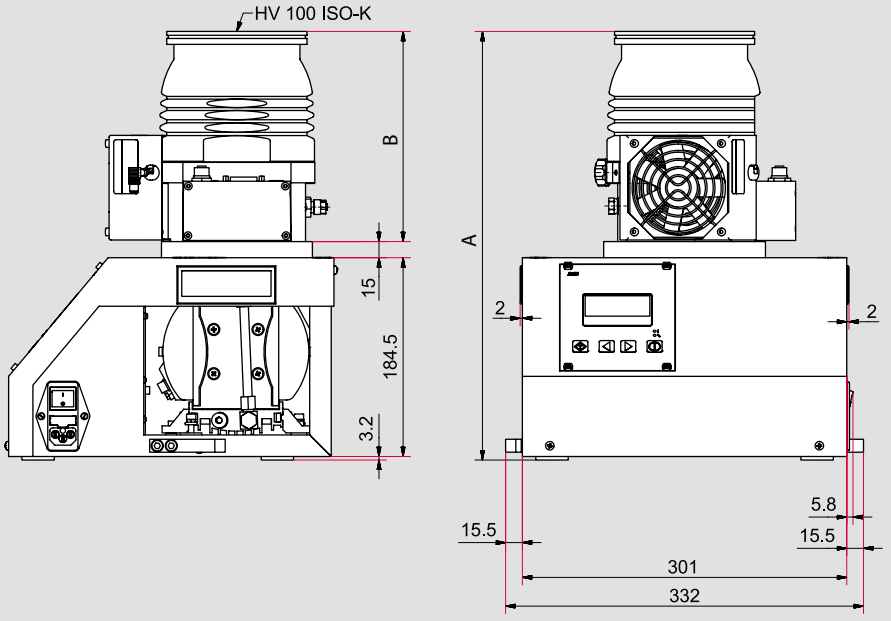
- Compact, robust, high performance
- Pressures <10^{-10} hPa in combination with HiPace 300 H

HiCube 80 Eco			HiCube 300 Eco		HiCube 300 H Eco	
DN 40 ISO-KF	DN 63 ISO-K	DN 63 CF-F	DN 100 ISO-K	DN 100 CF-F	DN 100 ISO-K	DN 100 CF-F
35	67	67	260	260	260	260
< $1 \cdot 10^{-7}$	< $1 \cdot 10^{-7}$	< $1 \cdot 10^{-8}$	< $1 \cdot 10^{-7}$	< $1 \cdot 10^{-8}$	< $1 \cdot 10^{-7}$	< $1 \cdot 10^{-10}$
1	1	1	1	1	1	1
12.5	13.9	12.5	16.3	18.8	16.3	18.3
170	170	170	270	270	270	270
< $1 \cdot 10^{-7}$	< $1 \cdot 10^{-7}$	< $1 \cdot 10^{-8}$	< $1 \cdot 10^{-7}$	< $1 \cdot 10^{-8}$	< $1 \cdot 10^{-7}$	< $1 \cdot 10^{-10}$
0.75	0.75	0.75	0.75	0.75	0.75	0.75
14.2	15.6	14.2	18	20.5	18	20
270	270	270	270	270	270	270
< $1 \cdot 10^{-7}$	< $1 \cdot 10^{-7}$	< $1 \cdot 10^{-8}$	< $1 \cdot 10^{-7}$	< $1 \cdot 10^{-8}$	< $1 \cdot 10^{-7}$	< $1 \cdot 10^{-10}$
1.8	1.8	1.8	1.8	1.8	1.8	1.8
14.1	15.5	14.1	17.9	20.4	17.9	19.9
270	270	270	270	270	270	270

HICUBE™ ECO

The complete dry solution for high vacuum applications: modular pumping station for clean vacuum

Dimensions



Turbopump		A	B
HiPace 30	DN 40 ISO-KF	312.7	115
HiPace 30	DN 63 ISO-K	307.7	110
HiPace 30	DN 63 CF-F	317.7	120
HiPace 80	DN 40 ISO-KF	355.7	158
HiPace 80	DN 63 ISO-K	346.7	149
HiPace 80	DN 63 CF-F	352.3	155
HiPace 300	DN 100 ISO-K	397.7	195
HiPace 300	DN 100 CF-F	409.7	207
HiPace 300 H	DN 100 ISO-K	397.7	195
HiPace 300 H	DN 100 CF-F	409.7	207

Possible combinations

Turbopumps


HiPace 30


HiPace 80


HiPace 300

Ideal for UHV applications


HiPace 300 H

Backing pumps

Diaphragm pumps

2-stage


MVP 015-2 DC

4-stage


MVP 015-4 DC

3-stage


MVP 030-3 DC

HiCube Eco

Order matrix HiCube Eco

Order number
PM Saa bbc de

Turbopumps		aa
HiPace 30	DN 40 ISO-KF	**70**
HiPace 30	DN 63 ISO-K	**71**
HiPace 30	DN 63 CF-F	**72**
HiPace 80	DN 40 ISO-KF	**73**
HiPace 80	DN 63 ISO-K	**74**
HiPace 80	DN 63 CF-F	**75**
HiPace 300	DN 100 ISO-K	**76**
HiPace 300	DN 100 CF-F	**77**
HiPace 300 H	DN 100 ISO-K	**84**
HiPace 300 H	DN 100 CF-F	**85**

Diaphragm pumps	bb
MVP 015-2 DC	**10**
MVP 015-4 DC	**15**
MVP 030-3 DC	**20**

Options		c/de
Venting valves	Without air venting valve	**0**
	With air venting valve	**1**
	With air venting valve and dryer TTV 001	**2**
Cooling	Standard air cooling	**00**
	Water cooling[1)]	**10**
	Water cooling and heating jacket 115 V AC[1)2)]	**20**
	Water cooling and heating jacket 230 V AC[1)2)]	**30**

[1)] not available in combination with HiPace 30
[2)] only in combination with CF flange

Accessories		Order number
	Extension kit cable and fore-vacuum line 3 m	**PM 071 477 -T**
	USB converter to RS-485 interface	**PM 061 207 -T**
Digital pressure sensors	TIC 010 adapter, necessary to connect max. two pressure sensors to the pumping station	**PT R70 000**
	RPT 010, digital Piezo/Pirani sensor, G1/8“	**PT R71 100**
	Screw-on flange, DN 16 ISO-KF to G 1/8“	**PM 016 780 -T**
	IKT 010, digital cold cathode sensor, low current, DN 25 ISO-KF[3)]	**PT R72 100**
	IKT 011, digital cold cathode sensor, high current, DN 25 ISO-KF[3)]	**PT R73 100**

[3)]other flanges available

HICUBE™ CLASSIC

The complete solution for high vacuum applications: the modular pumping station for clean vacuum

Compact

The HiCube Classic is a floor-standing, compact turbopumping station. It is ideal for pumping down small to medium volumes. Dry diaphragm pumps or rotary vane pumps are available as backing pumps also in a low-maintenance, magnetically coupled version.

The perfect package

In combination with HiPace 300 H, HiPace 700 H turbopumps and a diaphragm backing pump, final pressures of $<10^{-10}$ hPa can be achieved.

Technical data

Pumping station		HiCube 80 Classic			HiCube 300 Classic	
Flange (in)		DN 40 ISO-KF	DN 63 ISO-K	DN 63 CF-F	DN 100 ISO-K	DN 100 CF-F
Pumping speed for nitrogen N_2	l/s	35	67	67	260	260
Rotary vane pump Duo 3						
Ultimate pressure	hPa	$< 1 \cdot 10^{-7}$	$< 1 \cdot 10^{-7}$	$< 5 \cdot 10^{-10}$	$< 1 \cdot 10^{-7}$	$< 5 \cdot 10^{-10}$
Pumping speed backing pump at 50 Hz	m^3/h	2.5	2.5	2.5	2.5	2.5
Weight of pumping station:[1)]	kg	42.8	42.8	44.2	47.1	49.1
Power consumption	W	310	310	310	520	520
Rotary vane pump Duo 3 M						
Ultimate pressure	hPa	$< 1 \cdot 10^{-7}$	$< 1 \cdot 10^{-7}$	$< 5 \cdot 10^{-10}$	$< 1 \cdot 10^{-7}$	$< 5 \cdot 10^{-10}$
Pumping speed backing pump at 50 Hz	m^3/h	2.5	2.5	2.5	2.5	2.5
Weight of pumping station:[1)]	kg	43.5	43.5	44.9	47.8	49.8
Power consumption	W	320	320	320	530	530
Rotary vane pump Duo 6						
Ultimate pressure	hPa	$< 1 \cdot 10^{-7}$	$< 1 \cdot 10^{-7}$	$< 5 \cdot 10^{-10}$	$< 1 \cdot 10^{-7}$	$< 5 \cdot 10^{-10}$
Pumping speed backing pump at 50 Hz	m^3/h	5	5	5	5	5
Weight of pumping station:[1)]	kg	46.8	46.8	48.2	51.1	53.1
Power consumption	W	370	370	370	580	580
Rotary vane pump Duo 6 M						
Ultimate pressure	hPa	$< 1 \cdot 10^{-7}$	$< 1 \cdot 10^{-7}$	$< 5 \cdot 10^{-10}$	$< 1 \cdot 10^{-7}$	$< 5 \cdot 10^{-10}$
Pumping speed backing pump at 50 Hz	m^3/h	2.5	2.5	2.5	2.5	2.5
Weight of pumping station:[1)]	kg	48.8	48.8	50.2	53.1	55.1
Power consumption	W	310	310	310	520	520
Diaphragm pump MVP 040-2						
Ultimate pressure	hPa	$< 1 \cdot 10^{-7}$	$< 1 \cdot 10^{-7}$	$< 1 \cdot 10^{-8}$	$< 1 \cdot 10^{-7}$	$< 1 \cdot 10^{-8}$
Pumping speed backing pump at 50 Hz	m^3/h	2.3	2.3	2.3	2.3	2.3
Weight pumping station:[1)]	kg	42.2	42.2	43.6	46.5	48.5
Power consumption	W	530	530	530	740	740
Diaphragm pump MVP 070-3						
Ultimate pressure	hPa	$< 1 \cdot 10^{-7}$	$< 1 \cdot 10^{-7}$	$< 1 \cdot 10^{-8}$	$< 1 \cdot 10^{-7}$	$< 1 \cdot 10^{-8}$
Pumping speed backing pump at 50 Hz	m^3/h	3.8	3.8	3.8	3.8	3.8
Weight of pumping station:[1)]	kg	47.2	47.2	48.6	51.5	53.5
Power consumption	W	790	790	790	1000	1000

Ultimate pressure in a measuring dome 48 hours after bake-out can be attained only with metallic seal of the high vacuum flange.

Quiet and flexible

The volume is reduced to a minimum by the targeted control of the backing pump. Thanks to its optional wheels, the HiCube Classic is ready for use quickly in a wide variety of fields.

Advantages at a glance

- Mobile, robust, high performance
- Pressures down to < 1 ·10^{-10} hPa
- Gauge controller slot
- Available with fore-vacuum safety valve

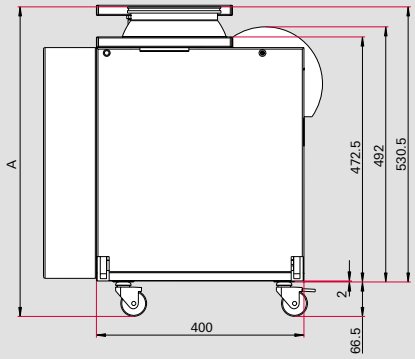
HiCube 300 H Classic		HiCube 400 Classic		HiCube 700 Classic		HiCube 700 H Classic	
DN 100 ISO-K	DN 100 CF-F	DN 100 ISO-K	DN 100 CF-F	DN 160 ISO-K	DN 160 CF-F	DN 160 ISO-K	DN 160 CF-F
260	260	355	355	685	685	685	685
< 1 · 10^{-7}	< 1 · 10^{-10}	< 1 · 10^{-7}	< 5 · 10^{-10}	< 1 · 10^{-7}	< 5 · 10^{-10}	< 1 · 10^{-7}	< 1 · 10^{-10}
2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
46.6	48.6	52	57.9	51.9	57.8	52.2	58.1
520	520	630	630	630	630	630	630
< 1 · 10^{-7}	< 1 · 10^{-10}	< 1 · 10^{-7}	< 5 · 10^{-10}	< 1 · 10^{-7}	< 5 · 10^{-10}	< 1 · 10^{-7}	< 1 · 10^{-10}
2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
47.3	49.3	52.7	58.6	52.6	58.5	52.9	58.8
530	530	640	640	640	640	640	640
< 1 · 10^{-7}	< 1 · 10^{-10}	< 1 · 10^{-7}	< 5 · 10^{-10}	< 1 · 10^{-7}	< 5 · 10^{-10}	< 1 · 10^{-7}	< 1 · 10^{-10}
5	5	5	5	5	5	5	5
50.6	52.6	56	61.9	55.9	61.8	56.2	62.1
580	580	690	690	690	690	690	690
< 1 · 10^{-7}	< 1 · 10^{-10}	< 1 · 10^{-7}	< 5 · 10^{-10}	< 1 · 10^{-7}	< 5 · 10^{-10}	< 1 · 10^{-7}	< 1 · 10^{-10}
2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
52.6	54.6	58	63.9	57.9	63.8	58.2	64.1
520	520	630	630	630	630	630	630
< 1 · 10^{-7}	< 1 · 10^{-10}	< 1 · 10^{-7}	< 1 · 10^{-8}	< 1 · 10^{-7}	< 1 · 10^{-8}	< 1 · 10^{-7}	< 1 · 10^{-10}
2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
46	48	51.4	57.3	51.3	57.2	51.6	57.5
740	740	850	850	850	850	850	850
< 1 · 10^{-7}	< 1 · 10^{-10}	< 1 · 10^{-7}	< 1 · 10^{-8}	< 1 · 10^{-7}	<1 · 10^{-8}	< 1 · 10^{-7}	< 1 · 10^{-10}
3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
51	53	56.4	62.3	56.3	62.2	56.6	62.5
1000	1000	1110	1110	1110	1110	1110	1110

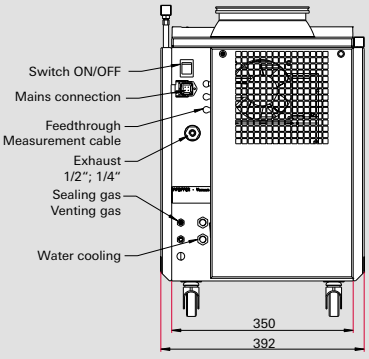
Ultimate pressure with elastomer seal (standard. not bakeable): < 1 · 10^{-7} mbar [1] without fore-vacuum safety valve

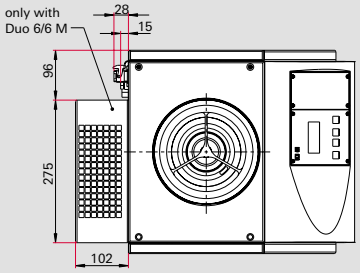
HICUBE™ CLASSIC

**The complete solution for high vacuum applications:
the modular pumping station for clean vacuum**

Dimensions







Turbopump		A
HiPace 80	DN 40 ISO-KF	590
HiPace 80	DN 63 ISO-K	581
HiPace 80	DN 63 CF-F	587
HiPace 300	DN 100 ISO-K	580
HiPace 300	DN 100 CF-F	592
HiPace 300 H	DN 100 ISO-K	580
HiPace 300 H	DN 100 CF-F	592
HiPace 400	DN 100 ISO-K	624
HiPace 400	DN 100 CF-F	624
HiPace 700	DN 160 ISO-K	597
HiPace 700	DN 160 CF-F	609
HiPace 700 H	DN 160 ISO-K	597
HiPace 700 H	DN 160 CF-F	609

Possible combinations

Turbopumps


HiPace 80


HiPace 300


HiPace 400


HiPace 700

Ideal for UHV applications


HiPace 300 H


HiPace 700 H

Backing pumps

Diaphragm pumps,
2-stage 3-stage


MVP 040-2


MVP 070-3

Rotary vane pumps –
standard, 2-stage


Duo 3


Duo 6

Rotary vane pumps –
magneticaly coupled, 2-stage


Duo 3 M


Duo 6 M


HiCube Classic

Order matrix HiCube Classic

Order number

PM S aa bb c d e

Turbopump			aa
HiPace 80	DN 40 ISO-KF		20
HiPace 80	DN 63 ISO-K		21
HiPace 80	DN 63 CF-F		22
HiPace 300	DN 100 ISO-K		23
HiPace 300	DN 100 CF-F		24
HiPace 300 H	DN 100 ISO-K		32
HiPace 300 H	DN 100 CF-F		33
HiPace 400	DN 100 ISO-K		25
HiPace 400	DN 100 CF-F		26
HiPace 700	DN 160 ISO-K		27
HiPace 700	DN 160 CF-F		28
HiPace 700 H	DN 160 ISO-K		36
HiPace 700 H	DN 160 CF-F		37

Backing pump					bb
Diaphragm pump	MVP 040-2	110 V AC	60 Hz		22
	MVP 040-2	230 V AC	50/60 Hz		23
	MVP 070-3	110 V AC	60 Hz		24
	MVP 070-3	230 V AC	50/60 Hz		25
	MVP 040-2	110 V AC	60 Hz		28
	MVP 040-2	230 V AC	50/60 Hz	Fore-vacuum	29
	MVP 070-3	110 V AC	60 Hz	safety valve	30
	MVP 070-3	230 V AC	50/60 Hz		31
Rotary vane pump	Duo 3	110 V AC	50/60 Hz		32
	Duo 3	230 V AC	50/60 Hz		33
	Duo 6	110 V AC	50/60 Hz		40
	Duo 6	230 V AC	50/60 Hz		41
	Duo 3 M	110 V AC	50/60 Hz		42
	Duo 3 M	230 V AC	50/60 Hz		43
	Duo 6 M	110 V AC	50/60 Hz		34
	Duo 6 M	230 V AC	50/60 Hz		35
	Duo 3	110 V AC	50/60 Hz		36
	Duo 3	230 V AC	50/60 Hz	Fore-vacuum	37
	Duo 6	110 V AC	50/60 Hz	safety valve	44
	Duo 6	230 V AC	50/60 Hz		45
	Duo 3 M	110 V AC	50/60 Hz		46
	Duo 3 M	230 V AC	50/60 Hz	Fore-vacuum	47
	Duo 6 M	110 V AC	50/60 Hz	safety valve	38
	Duo 6 M	230 V AC	50/60 Hz		39

Options		c/d/e
General	Standard, on rubber feet	0
	On wheels, 4 guiding wheels, 2 brakes	1
	Air dryer TTV 001, with connection to the venting valve	2
	On wheels + air dryer TTV 001	3
Cable	Standard (without cable set for external use)	0
	Cable set and fore-vacuum line 3 m (for external use of the turbopump)	1
	Cable set and fore-vacuum line 5 m (for external use of the turbopump)	2
	Cable set and fore-vacuum line 10 m (for external use of the turbopump)	3
Cooling	Standard, air cooling	0
	Water cooling	1
	Water cooling + heating jacket (only in combination with CF flange)	2

HICUBE™ PRO

The complete solution for high vacuum applications: the modular pumping station for clean vacuum

Multifunctional

The HiCube Pro is a multifunctional turbopumping station. It is ideally suited for pumping down medium to large volumes. Dry multi-stage Roots pumps or rotary vane pumps are available as backing pumps with high pumping speeds also in a low-maintenance magnetically coupled version.

The perfect package

In combination with the HiPace 300 H, HiPace 700 H turbopumps and a diaphragm backing pump, final pressures of $<10^{-10}$ hPa can be achieved.

Technical data

Pumping station		HiCube 80 Pro			HiCube 300 Pro	
Flange (in)		DN 40 ISO-KF	DN 63 ISO-K	DN 63 CF-F	DN 100 ISO-K	DN 100 CF-F
Pumping speed for nitrogen N_2	l/s	35	67	67	260	260
Ultimate pressure						
with Multi-stage Roots pump ACP	hPa	$< 1 \cdot 10^{-7}$	$< 1 \cdot 10^{-7}$	$< 5 \cdot 10^{-10}$	$< 1 \cdot 10^{-7}$	$< 5 \cdot 10^{-10}$
with rotary vane pump DuoLine	hPa	$< 1 \cdot 10^{-7}$	$< 1 \cdot 10^{-7}$	$< 5 \cdot 10^{-10}$	$< 1 \cdot 10^{-7}$	$< 5 \cdot 10^{-10}$
with rotary vane pump Pascal	hPa	$< 1 \cdot 10^{-7}$	$< 1 \cdot 10^{-7}$	$< 5 \cdot 10^{-10}$	$< 1 \cdot 10^{-7}$	$< 5 \cdot 10^{-10}$
Rotary vane pump Duo 11 M						
Pumping speed backing pump at 50 Hz	m^3/h	9	9	9	9	9
Weight of puming station[1)]	kg	67.7	67.7	69.1	72	74
Power consumption	W	430	430	430	640	640
Rotary vane pump Duo 20 M						
Pumping speed backing pump at 50 Hz	m^3/h	20	20	20	20	20
Weight puming station[1)]	kg	92.7	92.7	94.1	97	99
Power consumption	W	1030	1030	1030	1240	1240
Rotary vane pump Pascal 2010						
Pumping speed backing pump at 50 Hz	m^3/h	9	9	9	9	9
Weight of puming station[1)]	kg	74.7	74.7	76.1	79	81
Power consumption	W	680	680	680	890	890
Rotary vane pump Pascal 2021						
Pumping speed backing pump at 50 Hz	m^3/h	18	18	18	18	18
Weight of puming station[1)]	kg	76.7	76.7	78.1	81	83
Power consumption	W	680	680	680	890	890
Multi-stage Roots pump ACP 15						
Pumping speed backing pump at 50 Hz	m^3/h	14	14	14	14	14
Weight of puming station[1)]	kg	73.6	73.6	75	77.9	79.9
Power consumption	W	590	590	590	800	800
Multi-stage Roots pump ACP 28						
Pumping speed backing pump at 50 Hz	m^3/h	27	27	27	27	27
Weight of puming station	kg	80.6	80.6	82	84.9	86.9
Power consumption	W	840	840	840	1050	1050

Ultimate pressure in a measuring dome 48 hours after bake-out, can be attained only with metallic seal of the high vacuum flange.

Ultimate pressure with elastomer seal (standard, not bakeable): $< 1 \cdot 10^{-7}$ mbar; [1)] without fore-vacuum safety valve

Quiet and flexible

The volume is reduced to a minimum by the targeted control of the backing pump. Thanks to its wheels, the HiCube Pro is ready for use quickly in a wide variety of fields.

Advantages at a glance

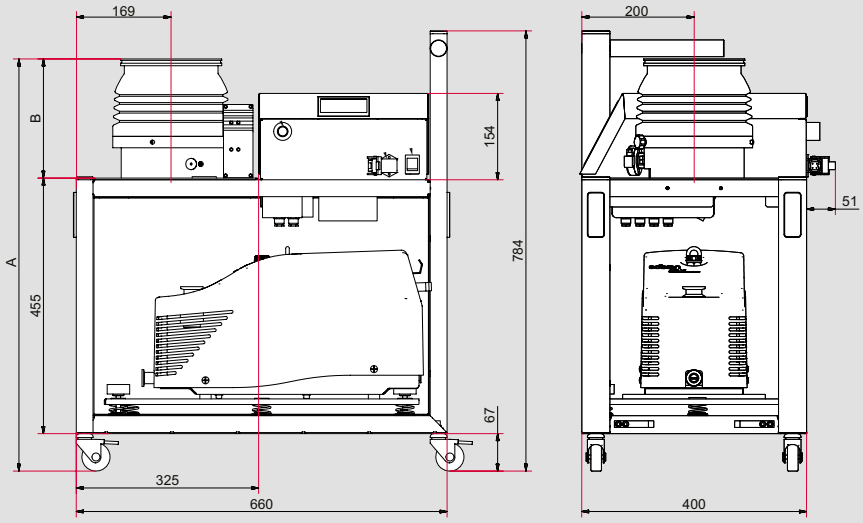
- Mobile, robust, high performance
- Pressures down to $< 1 \cdot 10^{-10}$ hPa
- Gauge controller slot
- Available with fore-vacuum safety valve

HiCube 300 H Pro		HiCube 400 Pro		HiCube 700 Pro		HiCube 700 H Pro	
DN 100 ISO-K	DN 100 CF-F	DN 100 ISO-K	DN 100 CF-F	DN 160 ISO-K	DN 160 CF-F	DN 160 ISO-K	DN 160 CF-F
260	260	355	355	685	685	685	685
$< 1 \cdot 10^{-7}$	$< 1 \cdot 10^{-10}$	$< 1 \cdot 10^{-7}$	$< 5 \cdot 10^{-10}$	$< 1 \cdot 10^{-7}$	$< 5 \cdot 10^{-10}$	$< 1 \cdot 10^{-7}$	$< 1 \cdot 10^{-10}$
$< 1 \cdot 10^{-7}$	$< 1 \cdot 10^{-10}$	$< 1 \cdot 10^{-7}$	$< 5 \cdot 10^{-10}$	$< 1 \cdot 10^{-7}$	$< 5 \cdot 10^{-10}$	$< 1 \cdot 10^{-7}$	$< 1 \cdot 10^{-10}$
$< 1 \cdot 10^{-7}$	$< 1 \cdot 10^{-10}$	$< 1 \cdot 10^{-7}$	$< 5 \cdot 10^{-10}$	$< 1 \cdot 10^{-7}$	$< 5 \cdot 10^{-10}$	$< 1 \cdot 10^{-7}$	$< 1 \cdot 10^{-10}$
9	9	9	9	9	9	9	9
71.5	73.5	76.9	82.8	76.8	82.7	77.1	83
640	640	750	750	750	750	750	750
20	20	20	20	20	20	20	20
96.5	98.5	101.9	107.8	101.8	107.7	102.1	108
1240	1240	1350	1350	1350	1350	1350	1350
9	9	9	9	9	9	9	9
78.5	80.5	83.9	89.8	83.8	89.7	84.1	90
890	890	1000	1000	1000	1000	1000	1000
18	18	18	18	18	18	18	18
80.5	82.5	85.9	91.8	85.8	91.7	86.1	92
890	890	1000	1000	1000	1000	1000	1000
14	14	14	14	14	14	14	14
77.4	79.4	82.8	88.7	82.7	88.6	83	88.9
800	800	910	910	910	910	910	910
27	27	27	27	27	27	27	27
84.4	86.4	89.8	95.7	89.7	95.6	90	95.9
1050	1050	1160	1160	1160	1160	1160	1160

HICUBE™ PRO

**The complete solution for high vacuum applications:
the modular pumping station for clean vacuum**

Dimensions



Turbopumps		A	B
HiPace 80	DN 40 ISO-KF	679.5	158
HiPace 80	DN 63 ISO-K	670.5	149
HiPace 80	DN 63 CF-F	676.5	155
HiPace 300	DN 100 ISO-K	716.5	195
HiPace 300	DN 100 CF-F	728.5	207
HiPace 300 H	DN 100 ISO-K	716.5	195
HiPace 300 H	DN 100 CF-F	728.5	207
HiPace 400	DN 100 ISO-K	760.5	239
HiPace 400	DN 100 CF-F	760.5	239
HiPace 700	DN 160 ISO-K	733.5	212
HiPace 700	DN 160 CF-F	745.5	224
HiPace 700 H	DN 160 ISO-K	733.5	212
HiPace 700 H	DN 160 CF-F	745.5	224

Possible combinations

Turbopumps


HiPace 80


HiPace 300


HiPace 400


HiPace 700

Ideal for UHV applications


HiPace 300 H


HiPace 700 H

Backing pumps

Multi-stage Roots pumps


ACP 15


ACP 28

Rotary vane pumps
Standard, 2-stage


Pascal 2010 SD


Pascal 2021 SD

Rotary vane pumps
magnetically coupled, 2-stage


Duo 11 M


Duo 20 M


HiCube Pro

Order matrix HiCube Pro

Order number

PM S aa bb c d e

Turbopump			aa
	HiPace 80	DN 40 ISO-KF	40
	HiPace 80	DN 63 ISO-K	41
	HiPace 80	DN 63 CF-F	42
	HiPace 300	DN 100 ISO-K	43
	HiPace 300	DN 100 CF-F	44
	HiPace 300 H	DN 100 ISO-K	52
	HiPace 300 H	DN 100 CF-F	53
	HiPace 400	DN 100 ISO-K	45
	HiPace 400	DN 100 CF-F	46
	HiPace 700	DN 160 ISO-K	47
	HiPace 700	DN 160 CF-F	48
	HiPace 700 H	DN 160 ISO-K	56
	HiPace 700 H	DN 160 CF-F	57

Backing pump					bb
Multi-stage Roots pumps	ACP 15	230 V AC	50/60 Hz	Fore-vacuum safety valve	58
	ACP 15	110 V AC	50/60 Hz		59
	ACP 28	230 V AC	50/60 Hz		60
	ACP 28	110 V AC	50/60 Hz		61
Rotary vane pumps	Duo 11 M	230 V AC	50/60 Hz		62
	Duo 11 M	110 V AC	50/60 Hz		63
	Duo 20 M	230 V AC	50/60 Hz		64
	Duo 20 M	110 V AC	50/60 Hz		65
	Pascal 2010 SD	230 V AC	50/60 Hz		66
	Pascal 2010 SD	110 V AC	50/60 Hz		67
	Pascal 2021 SD	230 V AC	50/60 Hz		68
	Pascal 2021 SD	110 V AC	50/60 Hz		69
	Duo 11 M	230 V AC	50/60 Hz		70
	Duo 11 M	110 V AC	50/60 Hz	Fore-vacuum safety valve	71
	Duo 20 M	230 V AC	50/60 Hz		72
	Duo 20 M	110 V AC	50/60 Hz		73
	Pascal 2010 SD	230 V AC	50/60 Hz		74
	Pascal 2010 SD	110 V AC	50/60 Hz	Fore-vacuum safety valve	75
	Pascal 2021 SD	230 V AC	50/60 Hz		76
	Pascal 2021 SD	110 V AC	50/60 Hz		77

Options		c/d/e
General	Standard, 4 wheels	0
	4 wheels, venting valve	1
	4 wheels, venting valve, air drier TTV 001, with connection to the venting valve	2
	4 wheels, oil mist filter (ONF)	3
	4 wheels, venting valve, oil mist filter (ONF)	4
	4 wheels, venting valve, air drier TTV 001, with connection to the venting valve, oil mist filter (ONF)	5
Cable	Standard (without cable set for external use)	0
	Cable set and fore-vacuum line 3 m (for external use of the turbopump)	1
	Cable set and fore-vacuum line 5 m (for external use of the turbopump)	2
	Cable set and fore-vacuum line 10 m (for external use of the turbopump)	3
Cooling	Standard, air cooling	0
	Water cooling	1
	Water cooling + heating jacket (only in combination with CF flange)	2

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