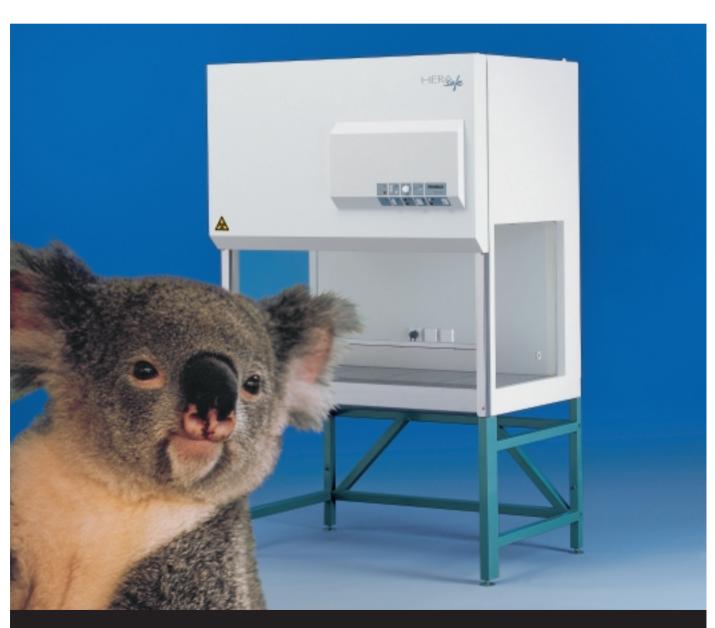
## Heraeus

## HERASAFE® HS/HSP SAFETY CABINETS

All you need for safety





# YOU CANNOT AFFORD TO COMPROMISE ON SAFETY

Heraeus® HERAsafe Safety Cabinets are used in environments where high levels of protection and safety are required. Whether in biotechnology, microbiology, genetics or research, whether in laboratories, pharmacies, clinics or hospitals – the carefully perfected overall concept of these safety cabinets pays off in practice. Safely.

### Unique: Aerosol tight front window

The patented, aerosol tight, motor-driven front window with laminated safety glass guarantees secure protection from contamination.

This innovative window offers many advantages:

### ■ Electrically powered:

Easy to operate.

#### ■ Safety lock:

Sample GUARD®: Personaland product protection of the work area during stand-by operation.

### ■ Exceptionally economical:

The aerosol tight front window enables contamination protected breaks in working without time intensive disinfection of the work area. Thanks to the energy saving mode, outstanding economy is guaranteed when the window is closed.

### ■ Maximum protection:

From contamination through mechanical damage, along with the best protection from UV light.

### ■ Further advantages:

High heat stability, easy to clean, no tarnishing or scratching.

### Leading the way: Practise orientated design

HERAsafe Safety Cabinets offer the optimum mix of quality, functionality and safety. Here are just some examples of the equipment concept, which has been perfected down to the very last detail:

### ■ Electrical monitoring system:

To monitor airflow, air speed and the filter system.

#### ■ Safety negative pressure:

All ducts and plenums which can be contaminated are surrounded by negative pressure. If, in fact, in any way a leak occurs, all contaminants are returned to the pressure chamber.

### **■** Ergonomic accessories:

For working in comfort and safety: patented arm rests, for instance.

### ■ H 14 – HEPA Filter in accordance to EN 1822:

For minium absorption of 99.999% (on 0.3 microns).

### ■ Modular equipment concept:

Tailor made solutions for your need.

### ■ Automatically stand-by:

The automatical stand-by secures

- energy saving
- keep cleanroom inside
- ensures aerosol tightness





## MEETING A HOST OF EXACTING REQUIREMENTS

HERAsafe Safety Cabinets comply with national and international safety regulations, offer optimum operator, product and environmental protection, are designed for daily practise and are easy to clean and to maintain.

All these factors add up to perfection that is available in three different versions:

### HERAsafe HS – the standard model

Class 2 Safety Cabinets in accordance with international standards. Ideal for microbiology, biotechnology and genetics applications within safety categories 1 to 3.

### HERAsafe HSP – for more exacting demands

The HERAsafe model HSP Safety Cabinet has been designed to meet more demanding safety requirements, and offers a further HEPA H 14 filter level in addition to the standard equipment – which ensures greater personal, product and environmental protection.

This model is particularly suited for example for production of cytostatics or other works in which hazardous toxic chemicals are involved, and for work in pharmaceutical or L 3 laboratories. Meets additionally DIN 12980 safety regulations.

### HERAsafe HSPC with activated carbon prefilter

Equipment as HERAsafe HS, plus an additional activated carbon prefilter. This makes the HSPC model particularly suitable for working with chemical and toxic substances.

### **HERASAFE HS-**PERFECT FOR PRACTICAL WORK

Thanks to its modular design and the large range of accessories and options available,

the standard HERAsafe model is ideal for use within microbiological laboratories in categories 1 to 3.

A safety cabinet with convincing assets:

- **■** Especially designed for work with dangerous biological substances
- Optimum contamination protection
- High product and personal/operator protection from contamination
- Vertical laminar air flow and air intake (air curtain) across front opening
- Modular design for flexible, individually orientated use
- Safety tested in accordance with
- BS 5726 tested by CAMR (Porton Down)
- IEC 1010-1 tested by SEV
- DIN 12950 tested by TÜV PS
- NFX-44-201 tested by LNE
- NSF 49 tested by NSF













The aerosol tight, motor-driven front window

### Fully equipped

HERAsafe offers everything that's needed for safe, problemfree work with infectious and contamination-prone materials. Some performance examples:

#### Motor-driven front window

Optimum protection through hermetically sealing, aerosol tight lock. The effect: contamination cannot enter or leave.

#### Monitoring system

Permanent monitoring of all relevant safety functions via monitor control system.

### **User friendly**

Tailor made for daily work: straightforward control panels and a bright, well lit, glare free work area. All functions can easily be checked whilst remaining seated.

#### H 14 HEPA filter

HERAsafe is equipped with a High Efficiency Particle Air Filter (HEPA) which guarantees a minimum absorption of 99.999% on 0.3 micrones (99.995% on 12 micron MPPS).

### **Negative pressure** encapsulation

For optimum contamination protection: should a leak occur in the sealing system, all particles are returned to the pressure chamber and caught by the filters.



### Clean air in the work chamber supply

The air supply filter which is protected against heat or irradiation damage by laminator grid sheet, circulates clean air throughout the whole work area. Clean Room Class A (acc. to EC guide) or class 100 (acc. to Fed. Std. 209) are easily superseeded in safe work area inside.

### Ease of cleaning

With the HERAsafe, cleaning and disinfecting is a fast and easy task: all surface areas within the work space are made from smooth, easy to clean materials.

The side windows are made from scratch, acid and UV-light resistant safety glass, the work surfaces and the water tray from stainless steel. A further advantage: rounded corners inside the work chamber.

### Individual application options

HERAsafe HS models are also available with the following work chamber widths: 90, 120, 150 and 180 cm.

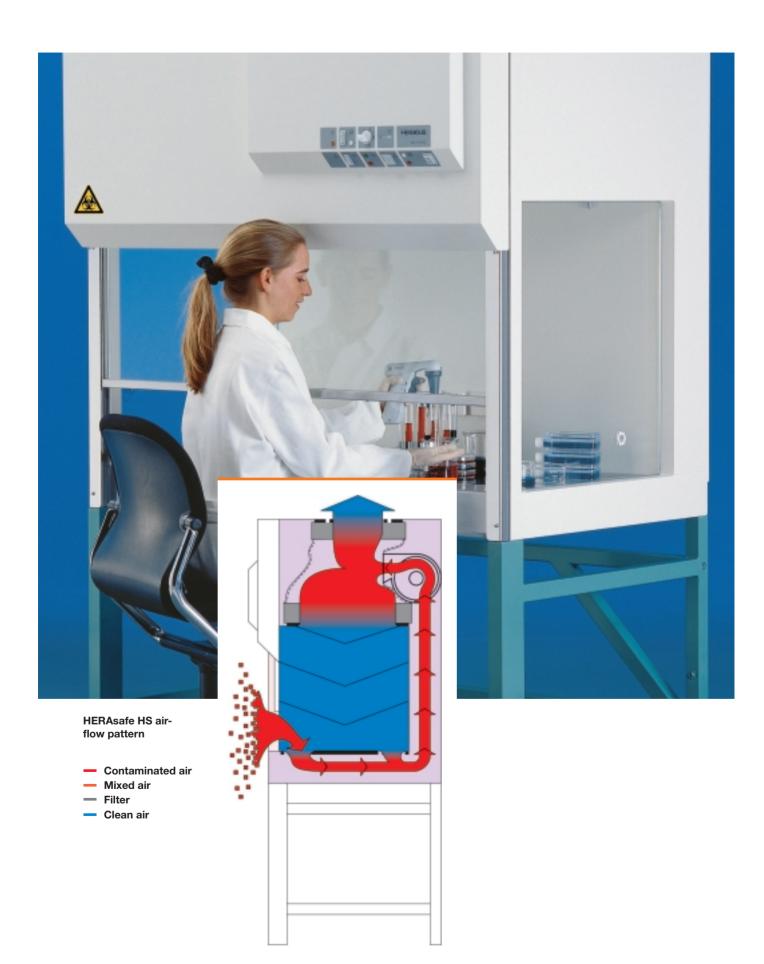
A variety of options extend our safety cabinets' possible applications.

Ergonomic accessories such as the patented arm rests, which do not block the air slots, or balance inlays or UVirracliators in different variations ensure a fatique-free work environment.

### The right solution for every requirement

Do you have specific equipment needs? Are you thinking about individual extras? Would you like more accessories? Thanks to the many different equipment and accessory options available, we can offer you a solution tailored to your precise needs.

Please refer to page 13 for technical information on HERAsafe.



## HERASAFE HSP/HSPC WITH PREFILTER – EXCELLENT SAFETY

Every HERAsafe Safety Cabinet is a synonym for optimum safety and frequent testing to the highest standards.

The HERAsafe model HSP Safety Cabinet has been specifically designed for exacting safety demands.

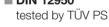
### Additionally certified in accordance with DIN 12980

■ Especially for work in which toxic chemicals are involved, e. g. cytotoxic drug preparation

#### High performance prefilter

- modular cartridge filter before supply and exhaust air filter
- filter exchange with a minimum contamination risk
- equivalent to class H 14
- contamination risk reduced by factor 100,000
- awarded with the 'Umweltpreis Klinik 1996' [1996 Environment Clinic Award]
- Safety tested in accordance with
- **BS 5726** tested by CAMR (Porton Down)
- IEC 1010-1 tested by SEV
- NSF 49 tested by NSF and TÜV
- tested by NSF and TU

  DIN 12980
- tested by TÜV PS
   DIN 12950















HERAsafe HSP prefilter element for contamination free exchange of filters

### **Fully equipped**

Naturally, the HERAsafe HSP/HSPC also offers all the features of the HERAsafe HS:

- Aerosol tight front window
- Monitoring system
- Exceptionally user friendly
- HEPA-filter
- Negative pressure encapsulation
- Pure air in the work area
- Ease of cleaning
- Ease of disinfection

### **Award winning**

The HERAsafe HSP range is additionally equipped with a H 14 prefilter which is equivalent to the safety cabinet class H 14. Accordingly, this safety cabinet is ideal for the preparation of cytostatics.

A modular cartridge filter is positioned in front of the supply and exhaust air filter. Re-contamination is practically impossible. The prefilter can be changed with a minimum contamination risk while the safety cabinet is in operation.



The award winning HERAsafe HSP Cytostatic Safety Cabinet

This high performance air circulation concept has been honoured with the 1996 Environment Clinic Award, which awards the prevention of large volume, dangerous filter waste.

The German Head of Federal Administration, Darmstadt, recommends the concept of HERAsafe for the operation with air recirculation in cytotoxic drug laboratories.

### Additional active carbon prefilter

The HERAsafe model HSPC offers an additional activated carbon prefilter instead of the H 14 prefilter, which makes it ideal for specialised applications requiring an active carbon filtrate either for recirculated air inside and exhaust.

### Individual application options

HERAsafe HSP and HSPC models are also available with the following work chamber widths: 90, 120, 150 and 180 cm.

A variety of options extend our safety cabinets' possible applications.

Ergonomic accessories such as the patented arm rests, which do not block the air slots, or balance inlays or UV-irracliators in different variations ensure a fatigue-free work environment.

Technical data for HERAsafe HSP/HSPC can be found on page 14.



# PERFECTED DOWN TO EVERY LAST DETAIL

Do you want to equip your HERAsafe Safety Cabinet with optimum operational and user comfort in mind? Are you thinking of the special arm rests, for example, flexible media connections or specialised work surface modules? Thanks to our large range of accessories and options we are well equipped for every special requirement. Some examples:



### Arm rests: Safe and comfortable:

Patented, ergonomic arm rests which are inter-connectable. Ideal for preventing blockage of the air slits whilst conducting experiments.



### Media taps: Higher flexibility

Whether for vacuum, gas or other media – taps in the side or back panel offer more creative freedom whilst working.



Extra outlets: More possibilities

Additional sockets needed? Naturally!



Thimble Duct Connector: For good connections Ideal for connecting HERAsafe

on inhouse exhaust systems.





### UV-C lights: Very efficient

High performance UV-C lights with short irradiation duration. Optionally either securely fixed into the side panels or as a mobile light for flexible use (254 nm wave-length).



### Work tabel top modules: Designed for practical work

The lowered, smooth work surface firstly ensures a safe work area and secondly prevents small quantities of material from reaching the water tray. A low vibration granite stone is available as an optional extra – ideal for balances and working with microscopes.



### Support frames: Very adaptable

Offering different heights for standing or seated work, or with castors for cabinet mobility. With adjustable feet for the secure positioning of the safety cabinet.



### Safety burner: For every laboratory

The high performance vulcan Laboratory Safety Bunsen – ideal for measured heating up and problem free sterilization.



### **INDIVIDUAL AND PERSONAL**

#### **Tailor made**

Every product made by Kendro Laboratory Products offers top quality. Moreover, the custom options that are available ensure that the equipment fits in with your lab surroundings and meets your specific needs – a must for safe, efficient working.

### **Everything from one source**

Our expert advice is invaluable. We consider everything which is of importance to you today and which may become important to you tomorrow. Let us advise you on our extensive range of accessories and options, which offers you many different perspectives and possibilities. Some examples are shown on this page.

Just talk to us about your needs and individual requirements.



#### HERAsafe HS 1-12 Ex

Safety cabinet specifically for the processing of explosives. For personal/operator protection requirements similar to class 1 cabinetry.



### **HERAsafe DS**

Safety cabinet with two workstations and opposite work access which principally meets all requirements of a class 2 safety cabinet. After closing off one front access it can also be used as a single workstation.



### **Total exhaust**

Ideal for work with higher amounts of toxic materials. 100% exhaust air removal without recirculation into the room. Recontamination risk is reduced. Complies with the requirements of the American standards NSF– 49 type B2 cabinetry.



#### Fume bench

Clean bench with horizontal purified air flow and partial air suction through the front access. For specific work requiring limited personal/operator protection. Fulfils the requirement profile for product protection.



#### Clean air carrier

Mobile pure air station with a battery for transporting sensitive materials. Fulfils the requirements of product protection. Purified transport of materials in clean areas.



### **HERAguard HPH**

Clean bench with optimum product protection through horizontal airflow across the entire work surface.

### **MORE THAN YOU EXPECT**

#### One of the best addresses

We think of ourselves as your partner, offering you competent, safe, reliable solutions. Individual support and specialist advice is available from highly qualified sales and service staff, who will quickly and competently help you with any questions you may have.

But Kendro perfection begins with innovative equipment that incorporates a broad range of features – all designed to meet the many and diverse requirements of your daily work.

Kendro Laboratory Products helps you reliably. Safely.

### Examined with a close eye

Every piece of equipment undergoes strict quality control and extensive testing before it leaves our manufacturing sites. Delivery lorries only leave the yard when the experts in the test laboratory have given their thumbs up!

### Tried and tested in many areas

Whether in the field of genetics, biotechnology, microbiology or research, our safety cabinets perform valuable tasks, day in and day out.

### Setting the standard for quality

The most modern production methods and the highest quality components, in combination with careful finishing, guarantee that our safety cabinets are quality products, renowned for their long term reliability and safety.



Individual testing of the filter's efficiency in our quality laboratory



Visual testing and production of a test protocol



Testing of electrical safety



Sealing of components



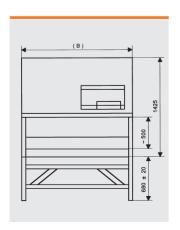
Assembly of mechanical components

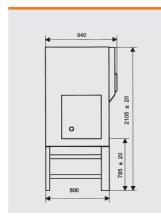


Final assembly of pre-fabricated assembly groups

## TECHNICAL DATA HERASAFE HS

Туре		Unit	HS 9	HS 12	HS 15	HS 18		
External dimensions HS <sup>1)</sup>	(w/h/d)	mm	1002/1425/940	1302/1425/940	1602/1425/940	1902/1425/940		
Internal dimensions	(w/h/d)	mm	900/650/630	1200/650/630	1500/650/630	1800/650/630		
Opening to work area	(w/h)	mm	900/~200	1200/~200	1500/~200	1800 /~200		
Lifting height of front window	, ,	mm	~500	~500	~500	~500		
Input dimensions <sup>4)</sup>	(w/h/d)	mm	1000/1425/940	1300/1425/940	1600/1425/940	1900/1425/940		
Minimum door opening	(d)	mm	770 (window frame and back panel dismantled)					
, ,	(d)	mm	810 (control unit dismantled)					
Adjustable support frame								
Dimensions of support frame <sup>3)</sup>	(w/h/d)	mm	1002/680 ± 20/800	1302/680±20/800	1602/680 ± 20/800	1902/680 ± 20/800		
working height		mm	785 ± 20	785 ± 20	785 ± 20	785 ± 20		
Weight	Equipment	kg	approx. 175	approx. 200	approx. 250	approx. 270		
Loading capacity of the work sur	face							
with continuous work surface		kg		50				
with segmented work surface		kg	25					
Technical verification								
Exhaust air/fresh air supply volume		m <sup>3</sup> /h	~360	~480	~590	~710		
Air circulation volume		m <sup>3</sup> /h	~840	~1100	~1380	~1660		
Total re-circulated air volume		m³/h	~1200	~1580	~1970	~2370		
Holding power								
at 25 °C room temperature		kW	~0.45	~0.45	~0.75	~0.75		
Heating up to approx. 10 K above ro	om temperatu	re with window clo	osed					
Filter technology								
Air circulation/exhaust air filter	type		Н	14 HEPA (in acc. EN 18	22)			
Additional AEF	filtering effic	iency	99.999% at 0.3 µm particles					
(most features, HS only)	Class (DIN 2	24 184) better than class S						
Noise (in accordance with DIN 12	950)							
Noise pressure level		dB (A)	<60	<60	<60	<60		
Lighting power		lx	> 1000	> 1000	> 1000	> 1000		
Electrical data								
Voltage <sup>2)</sup>		V	1/PE AC, 230	1/PE AC, 230	1/PE AC, 230	1/PE AC, 230		
Frequency		Hz	50	50	50	50		
Power consumption		kW	0.75	0.75	1.3	1.3		
Current		А	3.3	3.3	5.7	5.7		
Protection class			1	1	1	1		
Type of protection			CC	nductor connection				
Protection type			Р	20				
Indiv. precautions on customer side			Lead fuse (slow blow) T 16 A or circuit breaker B 16. The electrical regulations in the country of use as well as the relevant connection conditions must be observed.					
Droto atod algebries I - Hata in					ons must be observed.			
Protected electrical outlets in			230 V, T5A					
work chamber			Each outlet can bear up to 5A and is selectively protected with T 5 A fuses.					
Dadia interference			When all outlets are used simultaneously, they must not exceed the maximum total load of 5 A					
Radio interference			Circuit is interference free in accordance with EN 55 014					



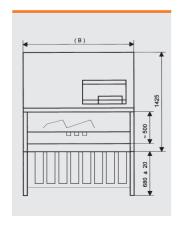


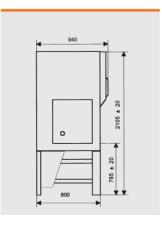
- 1) Further dimensions on request
- 2) Further voltages on request
- 3) Further support frames on request
- 4) Equipment and support frame are delivered individually. Installation and assembly on-site.

HERAsafe HS overview of dimensions

# TECHNICAL DATA HERASAFE HSP/HSPC

External dimensions         (w/h/d)         mm         900/650/630         1200/650/630         1500/650/630         1800/650/630           Opening to work area         (w/h)         mm         900/-200         1200/-200         1500/-200         1800/-200           Lifting height of front window         mm         ~500         ~500         ~500         ~500           Input dimensions <sup>4)</sup> (w/h/d)         mm         1000/1425/940         1300/1425/940         1600/1425/940         1900/1425/940           Minimum door opening         (d)         mm         770 (window frame and back panel dismantled)         770 (window frame and back panel dismantled) <th< th=""><th>Туре</th><th></th><th></th><th>HSP 9</th><th>HSP 12</th><th>HSP 15</th><th>HSP 18</th></th<>	Туре			HSP 9	HSP 12	HSP 15	HSP 18		
Opening to work area         (w/h)         mm         900/-200         1200/-200         1500/-200         1800/-200           Lifting height of front window         mm         -500         -500         -500         -500           Imput dimensions® (wh/d)         mm         1000/1425/940         1300/1425/940         1600/1425/940         1900/1425/940           Imput dimensions® (wh/d)         mm         1000/1425/940         1300/1425/940         1600/1425/940         1900/1425/940           Minimum door opening         (d)         mm         1000/1425/940         1300/1680±20/800         1600/1425/940         1900/1425/940           Adjustable support frame®         (w/h/d)         mm         1002/680±20/800         1300/680±20/800         1600/680±20/800         1902/680±20/800         4902/680±20/800         4902/680±20/80	Internal dimensions HSP <sup>1)</sup>	(w/h/d)	mm	1002/2105/940	1302/2105/940	1602/2105/940	1902/2105/940		
Minimum door opening   Minimum   Moor opening   Minimum   Minimum   Minimum   Moor opening   Minimum	External dimensions	(w/h/d)	mm	900/650/630	1200/650/630	1500/650/630	1800/650/630		
Input dimensions	Opening to work area	(w/h)	mm	900/~200	1200/~200	1500/~200	1800/~200		
Minimum door opening (d) mm 770 (window frame and back panel dismantled)  Adjustable support frame**  Dimensions of support frame**  Werking height (window frame and back panel dismantled)  Working height (window frame**)  Werking	Lifting height of front window		mm	~500	~500	~500	~500		
Majustable support frames	Input dimensions <sup>4)</sup>	(w/h/d)	mm	1000/1425/940	1300/1425/940	1600/1425/940	1900/1425/940		
### Adjustable support frame® (wh/d) mm 1002/680 ±20/800 1302/680 ±20/800 1602/680 ±20/800 1902/680 ±20/800	Minimum door opening	(d)	mm	770 (window frame and back panel dismantled)					
Dimensions of support frame <sup>(i)</sup> (w/h/d)         mm         1002/680±20/800         1302/680±20/800         1602/680±20/800         1902/680±20/800           Working height         mm         785 ± 20         300 <th< td=""><td></td><td>(d)</td><td>mm</td><td colspan="6">810 (control unit dismantled)</td></th<>		(d)	mm	810 (control unit dismantled)					
Working height         mm         785 ± 20         785 ± 20         785 ± 20         785 ± 20         approx. 300         approx. 320           Technical verification         Technical verification           Exhaust air/fresh air supply volume         m³/n         ~360         ~480         ~590         ~710           Air circulation volume         m³/n         ~360         ~480         ~590         ~710           Air circulation volume         m³/n         ~360         ~480         ~590         ~710           Total re-circulated air volume         m³/n         ~360         ~480         ~590         ~710           Bottlag power         at 25 °C room temperature         m³/n         ~1200         ~1580         ~1970         ~2370           Holding power         at 25 °C room temperature         with window closed           Filter technology           Value in power in temperature         with window closed           Filter technology         h 14 HEPA (in acc. EN 1822)           Action power in temperature         with window closed           Filter technology         h 14 H 14 HEPA (in acc. EN 1822)           Action power in te	Adjustable support frame <sup>5)</sup>								
Meight	Dimensions of support frame <sup>3)</sup>	(w/h/d)	mm	$1002/680 \pm 20/800$	1302/680 ± 20/800	1602/680±20/800	1902/680 ± 20/800		
Technical verification           Exhaust air/fresh air supply volume         m³/h         ~360         ~480         ~590         ~710           Air circulation volume         m³/h         ~840         ~1100         —1380         ~1660           Total re-circulated air volume         m³/h         ~1200         ~1580         ~970         ~2370           Holding power           at 25 °C room temperature         kW         ~0.45         ~0.45         ~0.75         ~0.75           Heating up to approx.10 K above room temperature with window closed           Filter technology           Air circulation/exhaust air filter         type         H 14 HEPA (in acc. EN 1822)           Addition/exhaust air filter         type         H 14 HEPA (in acc. EN 1822)           Additional AEF         filtering efficiency         99.999% at 0.3 μm particles           (multi features, HS only)         Class DIN 24 184         better than class S           Prefilter (HSP models only)         EN 1822         H 14         M 14         H 14         M 14         M 14         M 14         M 14         M 14	Working height		mm	$785 \pm 20$	$785 \pm 20$	$785 \pm 20$	$785 \pm 20$		
Exhaust air/fresh air supply volume         m³/n         -360         -480         -590         -710           Air circulation volume         m³/n         -840         -1100         -1380         -1660           Total re-circulated air volume         m³/n         -1200         -1580         -1970         -2370           Holding power           at 25 °C room temperature         kW         -0.45         -0.45         -0.75         -0.75           Heating up to approx.10 K above router with windows router wind	Weight	Unit	kg	approx. 225	approx. 250	approx. 300	approx. 320		
Air circulation volume	Technical verification								
Total re-circulated air volume	Exhaust air/fresh air supply volume		m <sup>3</sup> /h	~360	~480	~590	~710		
Holding power at 25 °C room temperature	Air circulation volume		m³/h	~840	~1100	~1380	~1660		
at 25 °C room temperature	Total re-circulated air volume		m³/h	~1200	~1580	~1970	~2370		
### Heating up to approx.10 K above room temperature with window closed  #### Filter technology  Air circulation/exhaust air filter	Holding power								
Filter technology           Air circulation/exhaust air filter         type         H 14 HEPA (in acc. EN 1822)           Additional AEF         filtering efficiency         99.999% at 0.3 µm particles           (multi features, HS only)         Class DIN 24 184         better than class S           Prefiltern (HSP models only)         EN 1822         H 14         H 14         H 14         H 14           Noise (in accordance with DIN 12 950)           Noise (in accordance with DIN 12 950)         BB (A)         <60	at 25 °C room temperature		kW	~0.45	~0.45	~0.75	~0.75		
Air circulation/exhaust air filter  Additional AEF (multi features, HS only)  Class DIN 24 184  Prefiltern (HSP models only)  EN 1822  H 14  H	Heating up to approx.10 K above room	om temperat	ure with windo	w closed					
Additional AEF filtering efficiency (multi features, HS only) Class DIN 24 184 better than class S Prefiltern (HSP models only) EN 1822 H 14 H	Filter technology								
(multi features, HS only)         Class DIN 24 184         better than class S           Prefiltern (HSP models only)         EN 1822         H 14	Air circulation/exhaust air filter	type H 14 HEPA (in acc. EN 1822)							
Prefiltern (HSP models only)   EN 1822	Additional AEF	filtering effi	ciency	99.999% at 0.3 µm particles					
Noise (in accordance with DIN 12 950)   Noise pressure level   dB (A)   <60   <60   <60   <60   <60     Lighting power   lx   > 1000   > 1000   > 1000   > 1000     Detectrical data   Voltage²   Hz   50   50   50   50     Power consumption   kW   0.75   0.75   1.3   1.3     Current   A   3.3   3.3   5.7   5.7     Protection class   I   I   I   I     Type of protection   Protection type   IP 20     Indiv. precautions on customer side   Lead fuse (slow blow) T 16 A or circuit breaker B 16. The electrical regulations valid in the country of use as well as the relevant connection conditions must be observed.    Protected electrical outlets   230 V, T5A     In work chamber   Each outlet can bear a load up to 5 A and is selectively protected with T 5 A fuses. When all	(multi features, HS only)	Class DIN	24 184	be	better than class S				
Noise (in accordance with DIN 12 950)           Noise pressure level         dB (A)         <60         <60         <60         <60           Lighting power         ix         > 1000         > 1000         > 1000         > 1000           Electrical data         V         1/PE AC, 230         50	Prefiltern (HSP models only)	EN 1822		H 14	H 14	H 14	H 14		
Noise pressure level         dB (A)         <60         <60         <60         <60           Lighting power         lx         > 1000         > 1000         > 1000         > 1000           Electrical data           Voltage <sup>2)</sup> V         1/PE AC, 230         50 <t< td=""><td></td><td></td><td></td><td colspan="6">ULPA filter, Class H 14 in accordance with DIN 24 183-1</td></t<>				ULPA filter, Class H 14 in accordance with DIN 24 183-1					
Electrical data         V         1/PE AC, 230         50	Noise (in accordance with DIN 12	2 950)							
Selectrical data   Selectrical	Noise pressure level		dB (A)	<60	<60	<60	<60		
Voltage <sup>2</sup> ) V 1/PE AC, 230 Frequency Hz 50 50 50 50 50 Power consumption kW 0.75 0.75 1.3 1.3 Current A 3.3 3.3 5.7 5.7 Protection class I I I I I I I I I I I I I I I I I I I	Lighting power		lx	> 1000	> 1000	> 1000	> 1000		
Frequency Hz 50 50 50 50  Power consumption kW 0.75 0.75 1.3 1.3 1.3  Current A 3.3 3.3 5.7 5.7  Protection class I I I I I I I I I I I I I I I I I I	Electrical data								
Power consumption kW 0.75 0.75 1.3 1.3 1.3  Current A 3.3 3.3 5.7 5.7  Protection class I I I I I I I I I I I I I I I I I I	Voltage <sup>2)</sup>		V	1/PE AC, 230	1/PE AC, 230	1/PE AC, 230	1/PE AC, 230		
Current A 3.3 3.3 5.7 5.7  Protection class I I I I I I I I I I I I I I I I I I	Frequency		Hz	50	50	50	50		
Protection class  I I I I I I I  Type of protection  Protection type  IP 20  Indiv. precautions on customer side  Lead fuse (slow blow) T 16 A or circuit breaker B 16. The electrical regulations valid in the country of use as well as the relevant connection conditions must be observed.  Protected electrical outlets  230 V, T5A  in work chamber  Each outlet can bear a load up to 5 A and is selectively protected with T 5 A fuses. When all	Power consumption		kW	0.75	0.75	1.3	1.3		
Type of protection conductor connection  Protection type  IP 20  Indiv. precautions on customer side  Lead fuse (slow blow) T 16 A or circuit breaker B 16. The electrical regulations valid in the country of use as well as the relevant connection conditions must be observed.  Protected electrical outlets  230 V, T5A  in work chamber  Each outlet can bear a load up to 5 A and is selectively protected with T 5 A fuses. When all	Current		Α	3.3	3.3	5.7	5.7		
Protection type  IP 20  Indiv. precautions on customer side  Lead fuse (slow blow) T 16 A or circuit breaker B 16. The electrical regulations valid in the country of use as well as the relevant connection conditions must be observed.  Protected electrical outlets  230 V, T5A  in work chamber  Each outlet can bear a load up to 5 A and is selectively protected with T 5 A fuses. When all	Protection class			I	I	1	1		
Indiv. precautions on customer side  Lead fuse (slow blow) T 16 A or circuit breaker B 16. The electrical regulations valid in the country of use as well as the relevant connection conditions must be observed.  Protected electrical outlets 230 V, T5A  in work chamber  Each outlet can bear a load up to 5 A and is selectively protected with T 5 A fuses. When all	** '								
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Protected electrical outlets 230 V, T5A in work chamber Each outlet can bear a load up to 5 A and is selectively protected with T 5 A fuses. When all	Indiv. precautions on customer side	·							
in work chamber Each outlet can bear a load up to 5 A and is selectively protected with T 5 A fuses. When all				*		tion conditions must be	observed.		
outlets are used simultaneously, they must not exceed the maximum total load of 5 A.	in work chamber								
Radio interference Circuit is interference free in accordance with EN 55 014	Radio interference			Circuit is interference free in accordance with EN 55 014					





- 1) Further dimensions on request
- 2) Further voltages on request
- 3) Further support frames on request
- 4) Equipment, prefilter unit and support frame are delivered individually. Installation and assembly on-site.
- 5) Standard type FS 12

HERAsafe HSP/HSPC overview of dimensions

### WE ARE ONLY SATISFIED **IF YOU ARE**



Our service: a reassuring feeling

### Above average

Kendro provides quick responses to customer needs and competent solutions to problems - wherever in the world you are. Our extensive range of services encompasses far more than just repairs and maintenance work.

#### Individual

You will notice this, for example, in the quality of our advice - which is individually geared towards customer requirements and problem solving. Our convincing solutions are tailored to guarantee efficient working conditions.

#### Around the clock

Experienced safety cabinet specialists will quickly and competently help you within the bounds of our wide ranging service network. For instance, via a maintenance agreement with a 24-hour service contract - even at weekends and during bank holidays.

#### **Perfect logistics**

On request, all HERAsafe equipment will be delivered where it is needed: directly to your place of work. This service includes, of course, competent set-up and installation.

#### Comprehensive

Whether it is calibration. reference measurement, application advice, the exchange of spare parts or repairs - our service engineer in your area will be on his way to help you as soon as he receives your call. Fast, committed and without red tape.

All things considered: It's a good feeling to know that Kendro is by your side working in your interest, and for your benefit.

#### **Your Sales Contact**

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Heraeus