

# Safety by Containment



## Skanaair® HFC-S family



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Our performance at your service

## Skanair® HFC-S Safety workbench



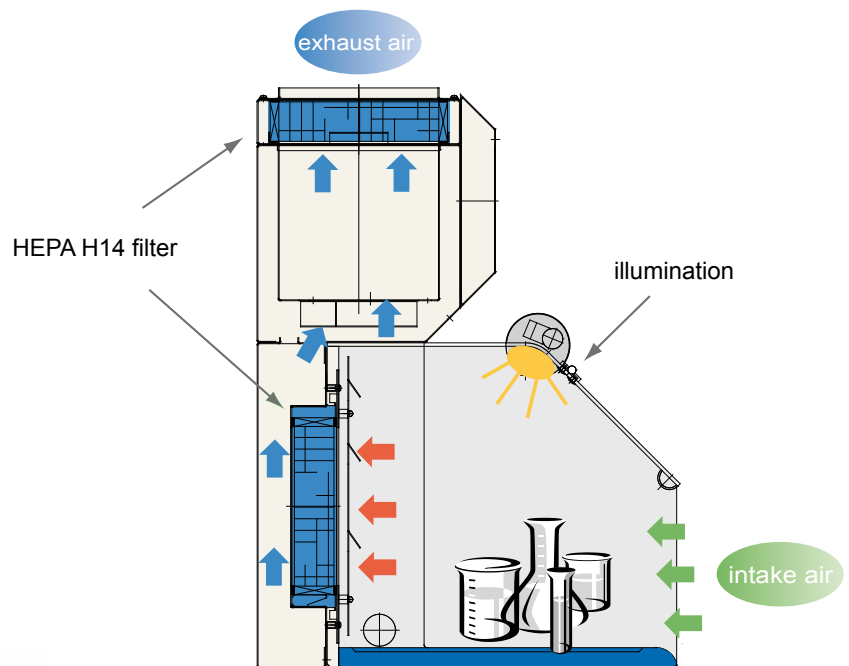
In the HFC-S safety workbench, personnel and the surrounding environment are protected effectively against contamination by the systematic use of filters and an optimized air flow. The bright and transparent working area and ergonomic design provide a comfortable working environment.

### APPLICATION

- Work with active and toxic powdered substances (active ingredients)
- Weighing work (micro and semi-micro balances according to USP requirements)
- Sampling
- Product transfer

### OPERATING MODE

In this containment, the air flows inwards through the filter. The air flow is guided towards the interior in order to prevent released particles and aerosols from leaving the controlled working area. The two consecutive HEPA H14 filters retain the particles effectively. The optimized air flow design ensures the highest possible level of safety and robustness.



*Why have hundreds of safety workbenches been installed in laboratories in the pharmaceutical industry in recent months? Nowadays, a sensible approach to dealing with active and unknown substances in laboratories within the chemical-pharmaceutical industry calls for safe workstations, in particular with regard to weighing work.*

## Features of HFC-SH 900 / 1200

### SILENT

Only 52 dB(A) !

### SAFE

- Protection from airborne particles and aerosols by the inward air flow
- Optimized air flow design ensures the highest possible level of safety and robustness
- Increased safety due to two consecutive filters (HEPA H14)
- In order to ensure the protection of the user over several hours of operation, the increasing pressure drop across the filters is adjusted automatically
- The innovative bag-out filter system facilitates low-contamination replacement of the pre-filter

### WELL CONCEIVED

- The main filter can be qualified in situ by means of DEHS filter scanning
- The positive pressure plenum ensures that the pre-filter is dynamically sealed and the contaminated air is fed exclusively through the particle filter
- The innovative bag-out filter change is carried out with low contamination risk within the work chamber during operation

### TESTED AND CERTIFIED

- Tested personal protection in accordance with EN 14175-3 for laboratory fume cupboards
- Escape of  $< 10 \mu\text{g}/\text{m}^3$  breathing air measured in an onsite test



*How much noise is generated by the safety workbench? Optimal air flow and sound-absorbing measures have enabled us to reduce the noise level to a minimum.*



*Bag-out system for low-contamination filter change*

## Features of HFC-SH 900 / 1200

### FLEXIBLE

The workbench can be adapted to meet your additional requirements:

- Active carbon kit → to adsorb solvent vapours
- Solvent sensor → to detect saturation of active carbon
- Anti-glare lighting → for good visibility
- Underframe → for maximum legroom and stability
- Disposal unit → waste disposal system for safe handling of waste and samples
- Ionization unit → for electrostatic discharge of powders and equipment, placed underneath the arm support and effective across the whole work surface (only in combination with underframe)
- Exhaust air connection → connection to the building exhaust air system
- Cable pass-through → sealable side openings for supply and data lines

### USER FRIENDLY / ERGONOMIC

- The robust work surface is made of glazed technical ceramic and is chemically resistant, highly scratch-resistant, shock-proof and easy to clean
- Spillage protection from lipped edges
- Excellent visibility from an ergonomic seating position thanks to sloping front cover
- Hinged front cover for easier insertion of larger objects



*Underframe*



*Anti-glare lighting*



*Ionization unit underneath arm support*



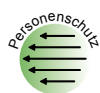
*Active carbon cassette with pre-filter*



*Robust work surface made of technical ceramic*



*Waste-disposal system and cable pass-through*



## HFC-SH 1200 MT: A symbiosis of precise weighing and personal protection while handling active and toxic substances.

In addition to the features of the HFC-S series, the MT version offers the following advantages for high-resolution scales:

### LOW VIBRATION

The scale table and working area are completely decoupled by a table-in-table solution. This prevents the transfer of vibrations and facilitates work with high-resolution scales such as Mettler Toledo XP56 as per USP requirements.

### WELL ORGANIZED

In order to conceal the cabling, it is fed out underneath the scale through the centre of the table. Supply and data lines can be fed out through the sides via additional openings.



HFC-SH 1200 MT with ionization unit

Are  
minimum weight  
certificates or test reports  
available to indicate possible minimum  
weights, and where can they be found?

The determination of minimum weights according to USP must be carried out onsite with the actual measurement setup and forms a part of the performance qualification (PQ) process. In collaboration with Mettler-Toledo, SKAN has determined generic minimum weights in the safety workbench. These values can be used in the design qualification (DQ) process, and SKAN is happy to make them available to its customers.



Example of a minimum weight according to USP

## Mettler Toledo Excellence Plus XP56

The highest-resolution micro balance with revolutionary weight capacity

- 52 g weighing capacity with a readability of 1  $\mu\text{g}$
- Unbeatable resolution of 52 million digits
- Smallest possible minimum weight according to USP even with large tare containers
- Direct weighing in tare containers such as volumetric flasks, test tubes, etc. possible
- Weighing without spillage – no substance loss, excellent sample and personal safety
- Rapid weighing thanks to the Smart Grid weighing pan and ergonomic protection against interior air turbulence



*Is the weighing chamber affected by air turbulence that could influence the weighing result?*

*Personal protection requires an inward air flow of approx. 0.3 – 0.4 m/s, which can affect the weighing results of balances without turbulence protection. It is therefore particularly important to ensure optimal turbulence protection and the correct installation of the balance.*

## Skanaair® HFC-S 1300



HFC-S 1300: More space for even safer working conditions.



HFC-S 1300 for greater space requirements

All features of the HFC-S series have been implemented in the 1300 version, together with a considerably larger interior.

### HIGH VOLUME

The working height of the interior has been increased from 500 mm to approx. 900 mm. Devices with a total height of approx. 830 mm can easily be inserted through the enlarged front opening. Typical usage includes decanting, sampling, weighing large quantities of substances and working with a sifting machine.

# Skanaair® HFC-S Toxibox



The smallest lab isolator is a closed containment for the safe handling of toxic powdered substances. Access to the interior is facilitated by ergonomically positioned gloves, which consistently separate the user and the surrounding environment from the process.

- Glove box with two gloves and a separate, ventilated airlock
- User access via gloves, with separation of user and process
- High process safety thanks to HEPA H14 filters

FEATURES



The controlled negative pressure and the HEPA filters that clean the intake and exhaust air ensure that no particles find their way in or out during operation.



*For which applications is the Toxibox suitable?  
For work with active or unknown substances where the highest possible safety requirements apply to protective equipment.*



*Spraying system for cleaning of work chamber*



*Multiple transfer plate for media*



*Ventilated air lock*



*Pass-through for process piping (flange, triclamp)*

# Technical description

		HFC-SH 900	HFC-SH 1200	HFC-S 1300	Toxibox
Outer dimensions (W × D × H) (H with active carbon kit)* (H with draught diverter)	[mm]	900 × 740 × 1075	1200 × 740 × 1075	1215 × 880 × 1460	1695 × 1030 × 1920
	[mm]	H + 160	H + 160	H + 355	–
	[mm]	H + 110	H + 110	H + 110	H + 110
Underframe (W × D × H)	[mm]	(850 × 710 × 760) Tolerance H: +40 / -10	(1150 × 710 × 760) Tolerance H: +40 / -10	(1150 × 850 × 760) Tolerance H: +40 / -10	(1080 × 900 × 760) Tolerance H: +40 / -10
Inner dimensions working area (W × D × H)	[mm]	835 × 545 × 600	1135 × 545 × 600	1136 × 655 × 900	1080 × 680 × 700
Height of work opening with: closed front cover open front cover	[mm]	270	270	545	Glove port: 2 × Ø 300
	[mm]	500	500	835	
Separation efficiency of HEPA H14 at	%	99.995	99.995	99.995	99.995
	µm	0.3	0.3	0.3	0.3
Intake/exhaust air volumetric flow rate	[m <sup>3</sup> /h]	280	380	880	Air change: > 60 / h
Air speed:	«LO» m/s	0.2	0.2	0.2	–
	«HI» m/s	0.35	0.35	0.35	
Weight incl. underframe approx.	kg	160	200	250	400
Electrical connection	V/Hz	230/50	230/50	230/50	230/50
Power consumption approx.	W	195	250	400	1300
Light intensity	Lux	> 700	> 700	> 700	> 700
Noise level	dB(A)	52	52	55	55

\* Required free height for exhaust: + 90 mm

All dimensions rounded to 5 mm. Subject to change due to technical developments.



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