



## HS-Mobile Safety Filtration Unit



This product is a mobile, ready to plug-in safety filter system for exhaust or supply air filtration. It can be shut off securely by gas-tight dampers and offers contamination free filter exchange (safe change, Bi-Bo, Bag-In-Bag-Out). It contains a vent, air heater, and efficient filter elements for extracting gases and (toxic) dust particles. HS-Mobile Filter Units function as a mobile ventilation system for filtering radioactive, toxic, or pathological particles and gases in applications where systems are unavailable or insufficient. The entire standard unit is constructed to fit through any office door. The units are also ideal for part time use where appropriate ventilation systems are not available or for decontamination works. HS-Mobile Filter units should be on hand at fire departments or other emergency services.

They are of versatile use:

- ventilation of rooms and containers prior to or while maintenance work,
- environment-friendly cleansing of tanks, e.g. for extracting aerosols or odours,
- in laboratories,
- in facilities of chemical industries,
- in nuclear facilities,
- and in any applications where harmful contaminants are potentially set free unmonitored.

### Layout

The Mobile Filtrations Unit's duct and case are made of stainless steel (1.4301), that is welded gas-tight and glas-blasted on the surface. If requested the unit can also be fabricated out of superior grades of stainless steel or powder coated galvanised steel.

Type	F1	F2	F3	F4
air flow [m³/h]	1500	3000	3000	6000
prefilter cells [qty.] 610 x 610 x 50 mm	1	2	1	2
rec. pressure drop initial /final [Pa]	10/200	10/200	15/200	15/200
HEPA filter [qty.] Class E11 - H14 610 x 610 x 292 mm	1	2	1	2
rec. pressure drop initial /final [Pa]	200/750	200/750	250/750	250/750
Molecular filter [qty.] 610 x 610 x 292 mm	1	2	-	-
pressure drop (static) depending on carbon type [Pa]	200-550	200-550	-	-
fan performance [kW]	4	5,6	4	5,6
heater performance [kW]	3	6	-	-
voltage [V]	3 x 380 [V] – 50Hz			
base with wheels [qty.]	1	2	1	2
weight appx. [kg]	depening upon options & equipment			

Erfragen Sie bitte bei Bedarf weitere Abmessungen und Ausführungen.

**Mobile Base Rack** consisting of welded and painted steel profiles. Four load ring screws are fixed to the base frame. It is arranged with handles, and two guide rollers. The later consist of steel which are PU-covered, and are equipped with breaks / fasteners.

**Accessories** flexible hose NNW300, made from neoprene coated nylon fabric, will resist temperatures between -10 up to +140 degree Celsius length: five meter including quick-release coupling.

## Filterstages

Housing combinations may hold filters in accordance to the filtration task: prefilters, HEPA and molecular resp. gas filters.

Installable filtertypes	Filterproperties	
prefilter - coarse dust:	HS-Prefiltercell HS-Alpha Pak 55	G3 to M5 (EN 779) ISO coarse to ISO ePM10 (ISO 16890)
mainfilter HEPA:	HS-Mikro S max. 120°C, conforms ATEX HS-Mikro SF max. 65°C	E10 to H14 (EN 1822)
mainfilter molecular:	HS-A053 HS-A055	high security filter (radioisotopes) VOC's odours, haz-mat



The single units feature durable maintenance cover with profiled gasket and four star-headed screws. A guide bar helps to close the covers tightly and fixes the screws evenly. All openings are equipped with a two-groove maintenance board made out of aluminium, which ensures a contamination-free (Safe Change, Bi-Bo, Bag-In-Bag-Out) filter replacement.

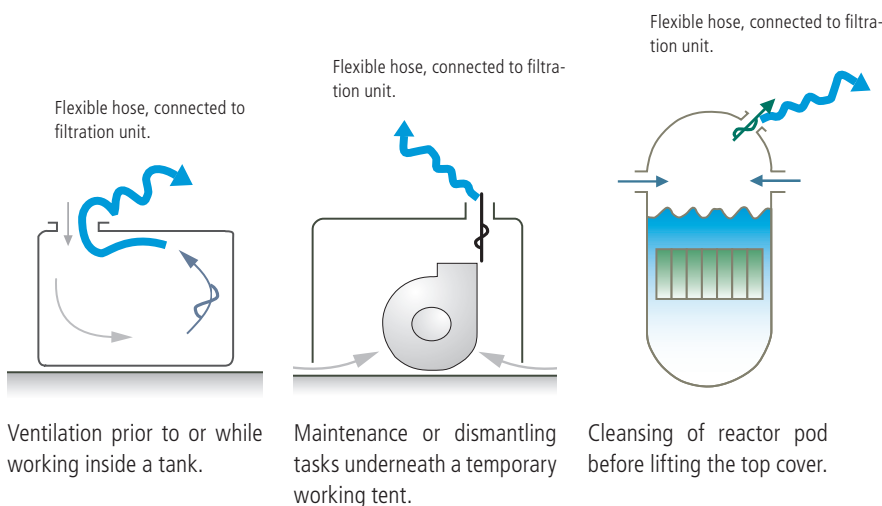
Due to the covers size it can also serve as placement area for replacement bags.

A heavy-duty stainless steel frame, outfitted with cam and flat spring, enables the filters to securely fasten themselves into place. That way, product-related differences in thickness as well as the gasket's decreasing resilience will automatically be evened out. This system can only work with exact fit of the filter. Due to reasons of security the maintenance covers may only be installed while the filters are fastened. Mistakes in mounting the covers are therefore impossible.

Since security plates are welded onto the unit's body, it is shockproof. In addition, the units for HEPA and activated carbon filters are fitted with an extra leak-tested gasket, according to DIN-1946/Part 4. This allows the operator to test the filters' gasket while operating the system. An inclined-tube manometer made of acryl (or any other preferred pressure guard) shows the filters' exact pressure drop. Stainless steel-tubes serve as instrument leads.



Safe Change, Bag-In-Bag-Out filter chamber with double-groove service board

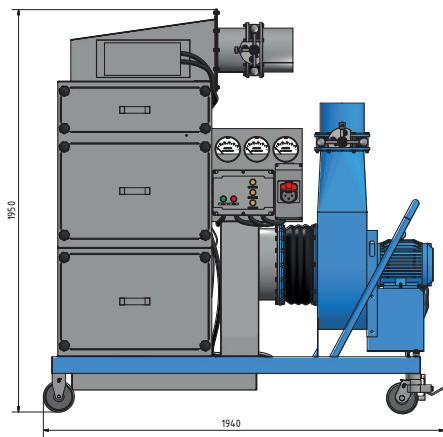


documents might be subject to change / issue Dec. 2019



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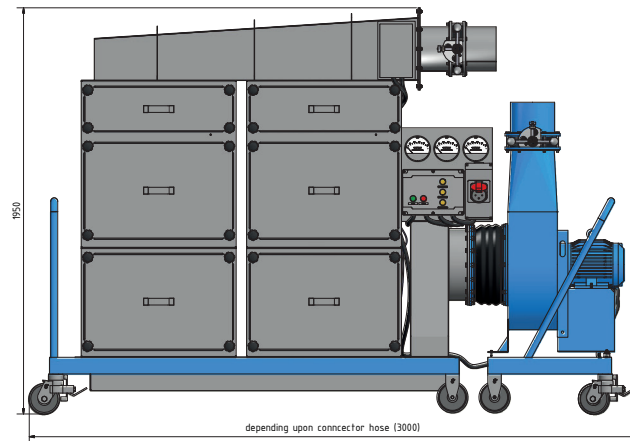
## Mobile Filtration Unit – Type 1



Flow velocity max. 1500 m<sup>3</sup>/h - adsorbs (radioactive) gaseous impurities and filters particles.

Equipped with two gas-tight dampers, an air heater, pre-filtration unit, HEPA filter as well as activated carbon filter. Dimensions: (including vent) 1.800 x 850 millimeter.

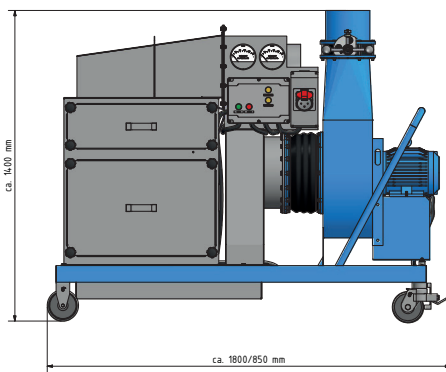
## Mobile Filtration Unit – Type



Flow velocity max. 3000 m<sup>3</sup>/h - adsorbs (radioactive) gaseous impurities and filters particles.

Equipped with two of each gas-tight dampers, air heater, pre-filtration unit, HEPA filter and activated carbon filter. Dimensions: 2.100 x 850 millimeter, plus separate vent 850 x 850 millimeter.

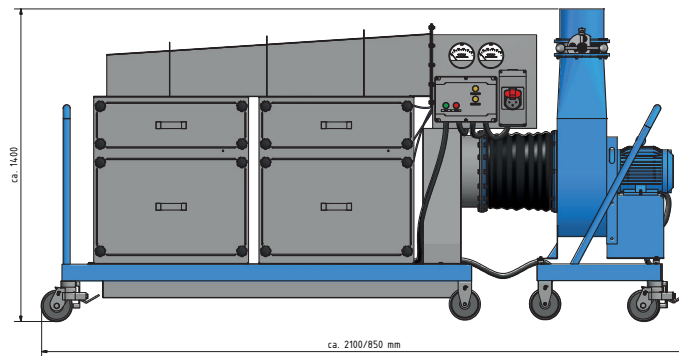
## Mobile Filtration Unit - Type 3



Flow velocity max. 3000 m<sup>3</sup>/h - extracts particles only.

Equipped with two gas-tight dampers, pre-filtration unit and HEPA filter. Dimensions: (including vent) 1.800 x 850 millimeter.

## Mobile Filtration Unit - Type 4

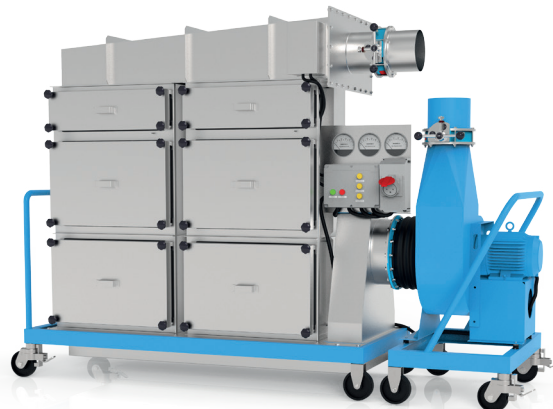


Flow velocity max. 6000 m<sup>3</sup>/h - extracts particles only.

Equipped with two of each gas-tight dampers, pre-filtration unit and HEPA filter. Dimensions: 2.100 x 850 millimeter, plus separate vent 850 x 850 millimeter.



Type: HS-Filtermobile F1



Type: HS-Filtermobile F2

## Air heater and fan



### Air heater

The air heater has a performance of 3 kW, a voltage of 3 x 380 V – 50 Hz, and is equipped with an excess temperature protection, safety thermostat and an integrated thermostat. This ensures that the heater switches itself on/off if the temperature falls below or exceeds a given mark. Its case is made from stainless steel. The heater is able to handle airflows above 500 m<sup>3</sup>/h.

### Fan

The body is made of steel and covered with a decontaminateable paint. For direct drive, the vent sucks in air on one side only. It features a blade wheel with backwards bend blades, which are statically and dynamically balanced according to VDI 2060 – grade Q6.3. A three-phase motor powers the vent and is gland sealed with a GACO-ring. The closed model also comes with an IEC-norm protective grid.

IP-class: IP44  
 voltage: 3x380 Volt - 50 Hz  
 power: 5,6 kW for Typ F2 & F4  
 4,0 kW for Typ F1 & F3



Type: HS-Mobile Filter F2  
 Special Variant with 100 mm carbon bed.

## Shut-off Dampers



### Shut-off dampers NW 300

The gas-tight dampers are placed at the air inlet and outlet. It may be locked manually with a handlebar. The gasket is fixed onto the dampers' disk. A leak-test device is also standard. The dampers may also be used for regulating the airflow.

## Switchboard



The box holds switches for vent and air heaters as well as indication lights for malfunction and flow of operation. The switchboard is connected to all switches and security elements. Terminal clamps for external malfunctions, mountings plugs and clutch CEE 5-poled with a performance oM5 x 63 [A] are also available. The unit is ready to use when picked up.

IP-class: IP55