

Air filtrating ventilation system FIRBACH 100

Catalogue item KC 734 318

Valid from 07/2024

1. UTILIZATION

Air filtrating ventilation system FIRBACH 100 is designed for active air circulation and filtration in small-capacity civil defense shelters (max. 20 persons). It can ensure extraction of dust particles and air purification from chemical warfare substances (gases, fumes, dust and aerosols) as well as radioactive particles and protects from contamination with biological weapons (CBRN).



2. DESCRIPTION

This unit is equipped with 3-stage filtration and operates in 2 basic modes:

- 1 - Default air circulation mode** – ensures an active air circulation, gross dust particle extraction and fine filtration with bactericidal and virucidal outlet filter
- 2 - Active defense filtration mode** – ensures extraction and deactivation of chemical, biological and radioactive warfare substances in case of immediate attack danger

These 2 alternative modes can be set by the blower switch and corresponding setting of the gas tight dampers. In case of the power cut the unit can be propelled with a hand crank. The transmission belt of the gearbox can be detached in which case the crank drives the blower directly without extra vain resistance of the electric motor.

Air flow rate is indicated on the display of built-in air mass flow meter. A separate differential manometer indicating the extent of overpressure inside the shelter also supplied with this unit (desired span 50-60 Pa).

3. BASIC TECHNICAL DATA

UNIT TYPE			FIRBACH 100
Basic dimensions	Ground plan	[mm]	800x550
	Height	[mm]	1800
Inlet duct diameter		[mm]	D 125
Air mass flow		[m ³ /hour]	100
Power voltage		[V]	230
Input power		[W]	250
Frequency		[Hz]	50
Noise level		[dB]	60
Total weight		[kg]	240

4. SPARE PARTS

- Inlet dust filter (can be washed multiple times before replacement)
- CBRN adsorption filter (COLPRO 200)
- Crank handle
- Blower drive belt
- Outlet filter – auxiliary NANOPASARAN™ filter for entrapment and deactivation of bacteria and viruses

5. ACCESSORIES

- Inlet blast wave protection valve
- Outlet blast wave protection valve with damper (overpressure control)
- Interspatial valve
- Differential manometer (U-tube)

6. ASSEMBLY, OPERATION, MAINTANANCE

Installation of the device consists of placing it on a flat, reinforced base, connection to electrical power (230V) and connection to the input pipe D125mm. To increase stability, it is advisable to anchor the device to the floor with the feet.

Maintenance consists of regular inspection and replacement of filters. Filter clogging status is monitored using a manometer. Checking of fan operation and regular replacement of transmission oil in the gearbox.

7. DELIVERY, TRANSPORT AND STORAGE

FIRBACH 100 is supplied covered with foil, strapped to a transport pallet. Transport is carried out by normal means of transport and storage is carried out in dry covered areas, where the goods are secured against the effects of weather and mechanical damage.

It is recommended to fix the unit to the floor. The frequency of exchanging the disposable parts highly depends on the mode of use, density and character of filtered air pollution. Inlet dust filter can be easily cleaned by (pressurized) water, used adsorption filter needs to be replaced (only after intense use). Otherwise, this unit is practically maintenance free, robust and very durable.