

ScandSafe Airing filter



CLEAN
AIR



POWER
GENERATION



CLEAN
ROOM



INDUSTRIAL

ScandSafe airing filters provide efficient filtration of the inlet air to water reservoirs and similar applications.

With HEPA grade efficiency (H13 to EN 1822), ScandSafe removes all pollens, spores, combustion byproducts, etc, to provide a cost effective solution for keeping the water surface clean.

Installed in place of the air pipe, ScandSafe can be equipped with a locking device for protection against unauthorised access.

ScandSafe fulfils the demands of Swedish Standard SS-EN 1508 and is tested by the SP Swedish National Testing and Research Institute (report no ETv P3 02296).

KEY FACTS

- Airing filter for wter reservoirs, food containers, silos etc
- Air filter especially designed for humid environments
- High efficiency H13 HEPA filter



ScandSafe

THE PROBLEM

When the water level in the reservoir sinks, outside air is sucked into the tank and with it air pollutants. These pollutants soon cover the water surface and the inside walls of the reservoir. From a hygienic point of view, this layer of impurities is undesirable since it can spread through the water pipes to the users. The outdoor air holds many contaminants such as:

- Combustion products from car engines and incineration plants
- Heavy metals, lead, pollen, spores, fungus, etc.

Furthermore, recent terror events world-wide has created an awareness of the risks for sabotage in connection with easily accessible water reservoirs. In Switzerland, there has been a law since 1975 stating that all water reservoirs must be equipped with an airing protection system.

THE SOLUTION

To prevent contamination from entering the reservoir, an air filter housing complete with air filter is installed on the airing pipe. The microfilter is classified H13 according to the EN 1822 standard which means it filtrates 99.99% of all particles sized 0.3 μm or bigger. Using this type of filter ensures that most occurring types of contamination are filtrated. See Ultrafilter.



THE CLOSED AIRING SYSTEM

In order to achieve perfect function a closed airing system must be created, i.e. all air must pass through the filter. All other air valves must be closed and the air must only enter the reservoir through the microfilter in ScandSafe. As a precaution against possible filter clogging, ScandSafe WR-180 is equipped with two automatic, resettable vacuum valves. The valves open at 1,000 Pascal and automatically shut when the pressure decreases. This function makes it a maintenance free security system and guarantees that air passes through the filter when it is needed.

DIMENSIONING OF THE AIRING SYSTEM

The volume of the passing air defines the size of filter and filter housing. The maximum drawing off/refilling of water per unit of time = airflow, 1 litre of water \approx 1 litre of air.

ULTRAFILTER

The microfilters used in the airing system are made of moisture-repellent material. The filters have a large surface area that combines with the low airflow to ensure a long lifetime. The normal lifetime of these filters, based upon experience and tests, is 3-4 years, but normally the filters are changed every second year.

Additionally, this type of filter in grade H13 is frequently used as protection against radioactive contamination, chemical and biological substances at civil defence and military establishments.

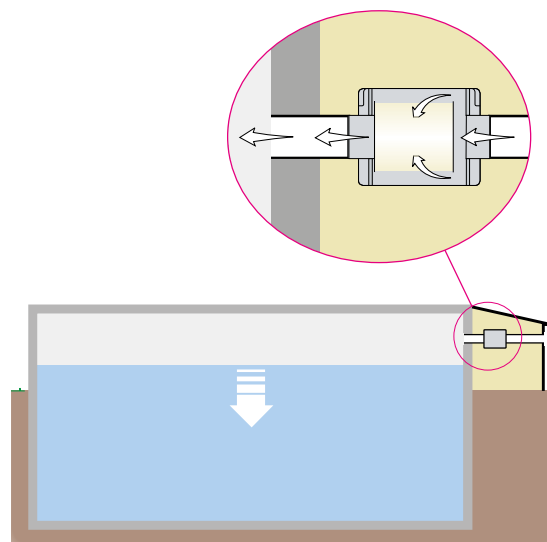


ScandSafe Functional Design



JKG-W

JKG-series is designed for indoor installations, horizontal on wall or in the ceiling. JKG-W-series is manufactured in welded PVC.

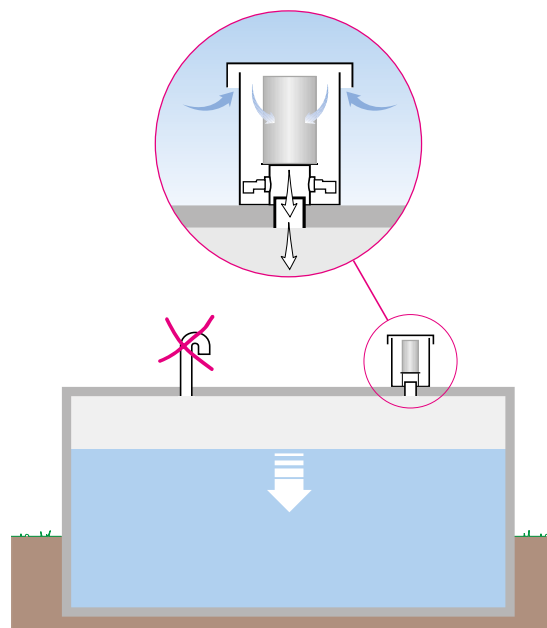


Functional design for JKG airing filter



SCANDSAFE WR

WR-series is designed for installations outdoors, on the reservoir roof and as replacement for the standard air intake pipe. WR-series is manufactured in acid proof stainless steel, AISI 316.

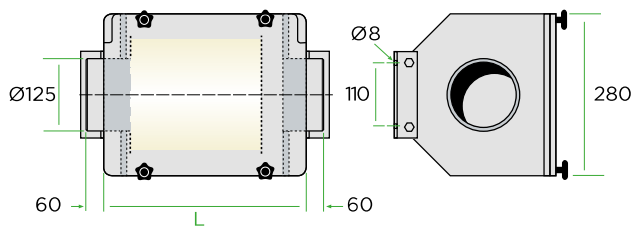


Functional design for ScandSafe WR airing filter

ScandSafe

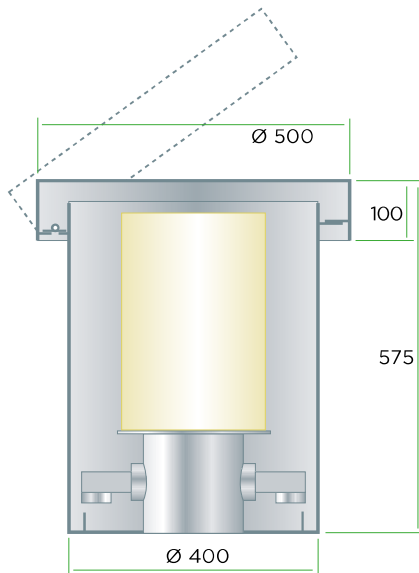
Technical Data

JKG-W

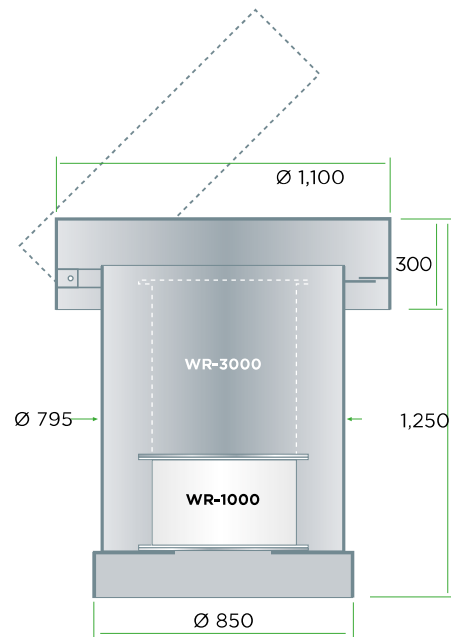


Type	JKG-W 19/20	JKG-W 19/30	JKG-W 19/40
Max. Air Flow (m ³ /h)	90	120	180
Transition (\varnothing mm)	125	125	125
L (mm)	291	391	491
Weight (kg)	6	8	10

SCANDSAFE WR



Type	WR-180
Max. Air Flow (m ³ /h)	180
Transition (\varnothing mm)	100-160
Weight (kg)	28



Type	WR-1000	WR-3000
Max. Air Flow (m ³ /h)	1,000	3,000
Transition (\varnothing mm)	max. 700	max. 700
Weight (kg)	135	150

In case of bigger air flows/reservoirs, please contact MANN+HUMMEL for tailor-made solutions.