

Protective solutions

Applications

The VIL-75 is used as a NBC- emergency ventilation unit in NBC hardened Civil Defence and military shelters. The VIL-75 can also be used in NBC-protected vehicles, laboratories and field hospital facilities. The unit is installed in the wall to save floor space.

Specification

Manufacturer of VIL-75 emergency ventilation unit is Temet, Helsinki Finland.

The VIL-75 emergency ventilation unit comprises the following components: blast valve provided with gastight closing device, pre-filter, NBC-filter and electrically and manually operated blower and air quantity meter. Intake air preheater and emergency light are optional accessories. The unit provides NBC-filtrated air flow of 75 m³/h, and by-pass air flow of 250 m³/h in electric and 200 m³/h in manual operation. Optional CWA (Chemical Warfare Agent) detection system can be connected to the unit.

Design Criteria

The VIL-75 emergency ventilation unit is made in accordance with specific provisions issued by the Finnish Ministry of Interior. The VIL-75 is type tested and approved for use by the Technical Research Centre of Finland / VTT Building Technology, an Independent Testing Authority mandated to perform type inspection for shelter equipment and systems by the Ministry of Interior.

Test and performance data

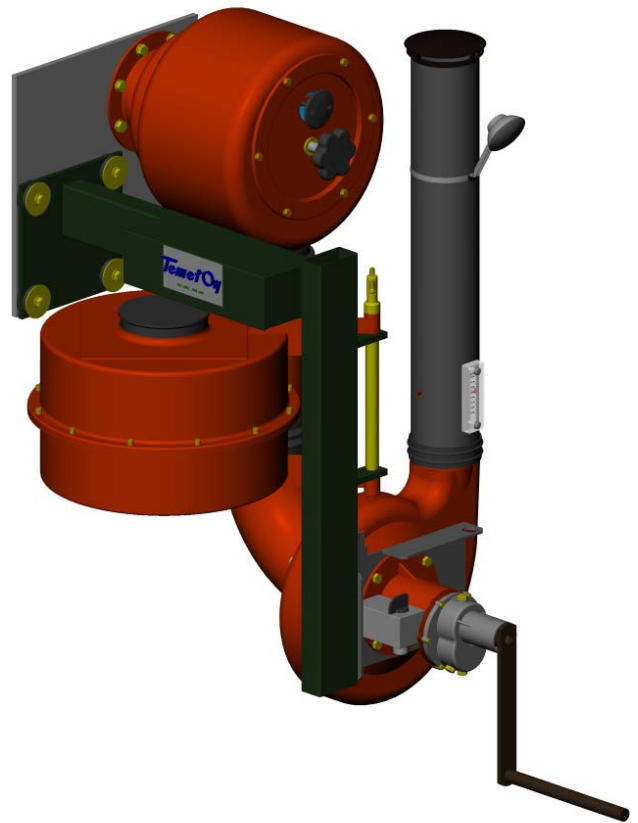
The VIL-75 emergency ventilation unit is tested to withstand multiple long duration (peak duration > 70 ms) blast loads having peak reflected overpressure of 3 bar measured at the air intake of the unit.

The NBC-filter of the VIL-75 unit is of type Temet ES-75 providing air filtration capacity of 75 m³/h. The NBC-filter consists of a HEPA filter and an activated carbon filter. The efficiency of the HEPA filter is at least 99.995% for particles of 0.3 µm. The activated carbon used in the ES-75 NBC-filter complies with the Finnish Civil Defence standards.

Shock isolation of the unit guarantees shock resistance up to 10 g with a rapid change in velocity of 0.5 m/s.

Type test report

VTT type test report available upon request.



VIL-75 Emergency Ventilation Unit

Electrical Details:

The models are available for 50Hz and 60Hz power supplies from 100VAC to 380VAC. Standard models:
 380VAC/50Hz 3-p
 230VAC/50Hz 1-p
 127VAC/60Hz 1-p.

The voltage and frequency of shelter must be specified when placing order. The standard unit does not include cabling, but can be delivered when clearly specified requirement of the cables are given.

Accessories and related items for VIL-Emergency Ventilation Units:

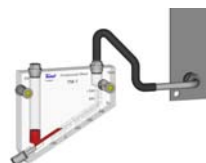
Emergency Light

The ventilation unit can be provided with an emergency light for lighting when network power is cut off.



Intake air preheater

The blast valve casing can be provided with intake air preheater to help decrease the relative humidity of the intake air thus extending the service life time of the NBC-filter.

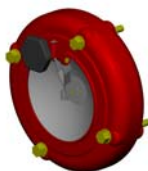


YM-1 Overpressure Meter

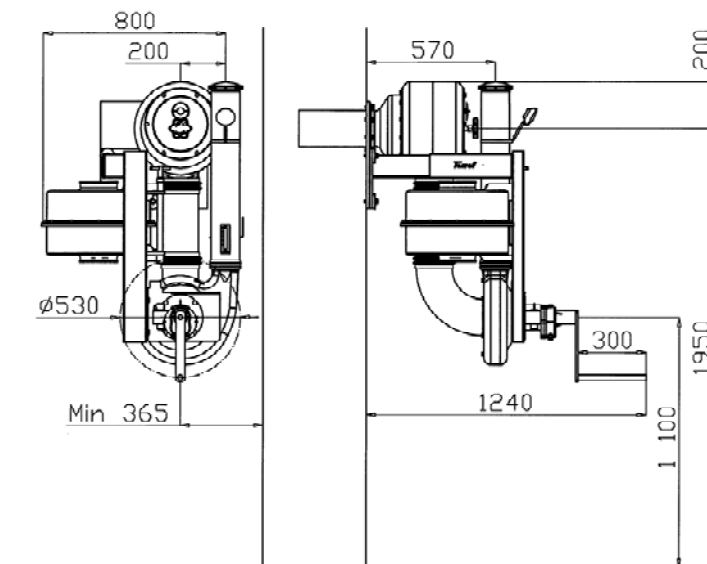
For indication pressurization of the shelter.

YV-1 Overpressure Blast Valve

For sustaining the overpressure in the shelter and for protection of the air outlet openings.



Space Reservation drawings:



Performance Data

Filtration mode

Bypass mode

Manual Operation

Air Flow

75 m³/h

200 m³/h

Pressure difference min

60 Pa

120 Pa

Max. power required

60 W

65 W

Electric motor operation

Air Flow

75 m³/h

250 m³/h

Pressure difference min

60 Pa

200 Pa

Electric motor

380V 3p 50Hz

190W

TEMET VIL- Emergency Ventilation Units

VIL-series Emergency Ventilation Units are used in small and medium sized shelters. The VIL-series comprises the following units:

Unit type	Filtration airflow	By-Pass airflow	Number of persons sheltered	Shelter area
VIL-75	75m ³ /h	250m ³ /h	20-36	36m ²
VIL-150	150m ³ /h	600m ³ /h	35-75	75m ²

Design - Production – Installation – Maintenance - Consultation