

Protective solutions

Applications

The VIL-150 is used as a NBC- emergency ventilation unit in NBC hardened civil defence and military shelters. The VIL-150 can also be used in NBC-protected laboratories and field hospital facilities. The unit is installed in the wall to save floor space.

Specification

Manufacturer of VIL-150 emergency ventilation unit is Temet, Helsinki Finland.

The VIL-150 emergency ventilation unit comprises the following components: blast valve provided with gastight closing device, pre-filter, intake air pre-heater, NBC-filter and electrically and manually operated blower, air quantity meter and emergency light. The unit provides NBC-filtrated air flow of 150 m³/h, and by-pass air flow of 600 m³/h in electric and 500 m³/h in manual operation. Optional CWA (Chemical Warfare Agent) detection system can be connected to the unit.

Design Criteria

The VIL-150 emergency ventilation unit is made in accordance with specific provisions issued by the Finnish Ministry of Interior. The VIL-150 is type tested and certified for use by VTT, technical research centre of Finland, 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-150 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.

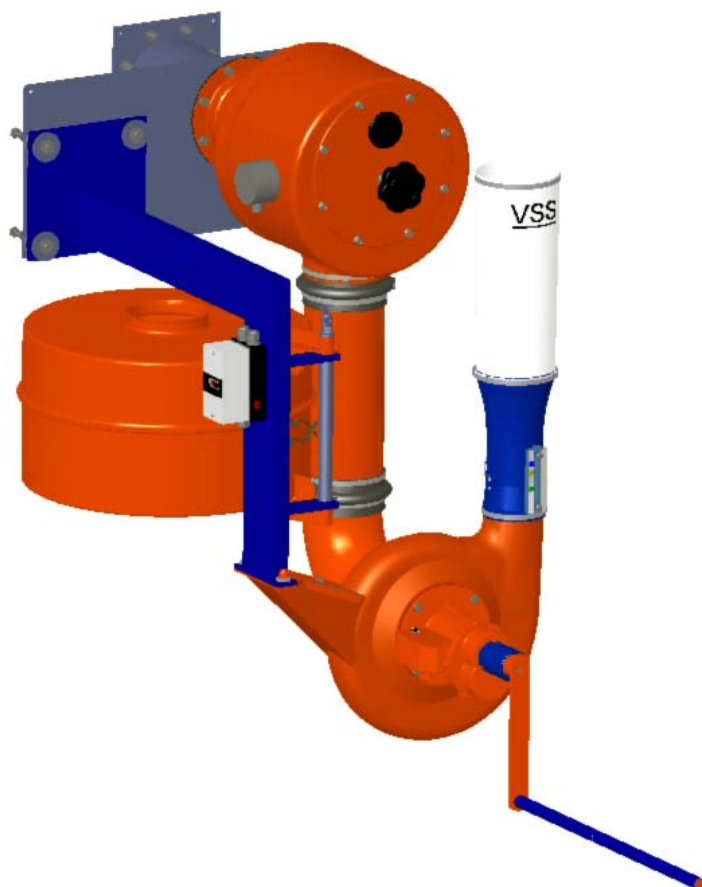
The NBC-filter of the VIL-150 unit is of type Temet ES-150 providing air filtration capacity of 150m³/h.

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-150 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 1.0 m/s.

Type test report and certificate

VTT type test report available upon request.



VIL-150 Emergency Ventilation Unit

Electrical Details:

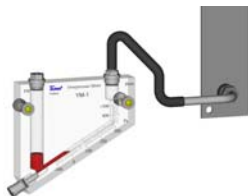
The VIL 150 emergency ventilation unit is designed for 400 VAC/50 Hz 3-phase power supply.

The intake air pre-heater is designed for 230 VAC/50 Hz 1-phase power. The standard unit does not include cabling, but cables can be delivered when clearly specified requirements are given.

Accessories and related items for VIL-Emergency Ventilation Units:

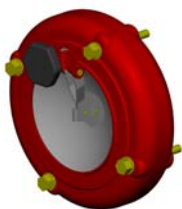
YM-1 Overpressure Meter

For indication of overpressure in the shelter.

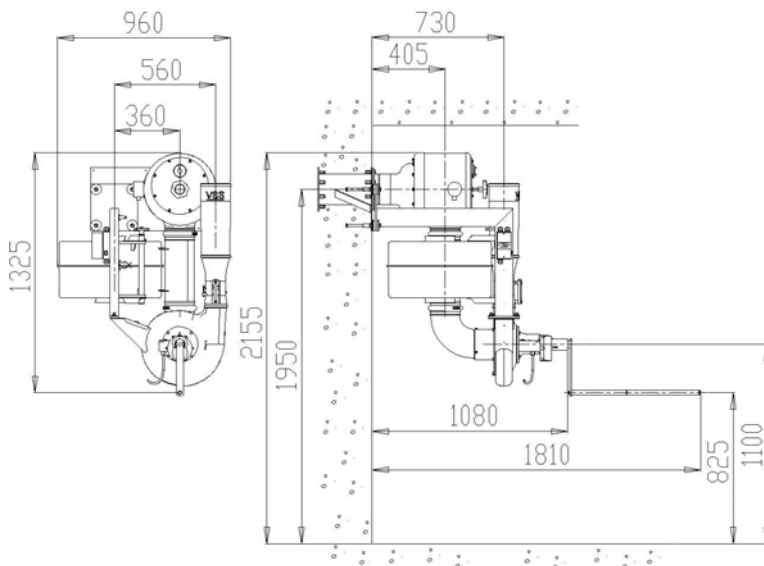


YV-1 Overpressure Blast Valve

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



Dimensions in millimeters:



Performance Data

Filtration mode

Bypass mode

Manual Operation

Air Flow

150 m³/h

500 m³/h

Pressure difference min

1100 Pa

500 Pa

Max. power required

110 W

130 W

Electric motor operation

Air Flow

150 m³/h

600 m³/h

Pressure difference min

1100 Pa

800 Pa

Electric motor

400 V 3p 50 Hz

280 W

Preheater

230 V 1p 50 Hz

333 W

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