

Civil defense ventilation unit IVL-1



IVL-1

The IVL-1 ventilation unit manufactured by JTK Power Oy is intended for S1 class civil protection. The purpose of the ventilation unit is to maintain overpressure in the civil protection during a crisis and filter harmful gases and particles from the air coming through the unit.

The product meets the requirements set for civil defense ventilation unit. The requirements are set out in Government Decree 409/2011.

The unit consists of the following main components: Pressure valve PV-1, special filter ES-1, protective fan SP-1, supply air valve TV-3. The unit and delivery also include an airflow meter, a stand, a spare lamp, a crank for manual operation, a silencer, connection and fastening parts, and a tool kit and installation instructions.

The IVL-1 unit has been tested by Eurofins Expert Services Oy.

Eurofins Expert Services Oy has granted the following certificates for the unit:

Ventilation unit	IVL-1	EUF129-19001930-C
Pressure valve	PV-1	EUF129-19001932-C
Special filter	ES-1	EUF129-19001934-C
Protection fan	SP-1	EUF129-19001935-C
Supply air valve	TV-3	EUF129-19001936-C

PV-1

The purpose of the pressure valve PV-1 is to dampen the pressure wave directed at the IVL device. The pressure resistance is max. 300 kPa.

The product includes a pressure and air inlet valve and a pre-filter. The air inlet valve allows the fresh air duct to be tightly closed.

ES-1

The special filter includes filters for retaining particles and gases.

Each filter is tested at JTK Power's premises, and the measured filtration/separation rate must be >99.99%. The activated carbon used in the filter filters toxic gases and radioactive particles from the air. The properties of the carbon are tested in an impartial laboratory.

The flow openings of the special filter are closed with protective rubber. The closure is ensured by seals that must not be broken until the authority gives permission.

SP-1

The protective fan is manually and electrically operated. The fan's power requirement in filtration mode is max. 120 W and in bypass mode max. 135 W.

The protective fan includes an air flow meter. The meter can be used to adjust the air flow of the system.

Electrical unit

The fan has a generator for the use of a backup lamp.

JTK Power tests each product in its own facilities. Eurofin Expert Services Oy and JTK Power Oy have a quality control agreement VTT-A-00095-17. The agreement guarantees that the products are constantly subject to impartial monitoring.

The ventilation system meets the following performance requirements:

Filter air flow	40 dm ³ /s
Bypass air flow	135 dm ³ /s (manual operation)
Bypass air flow	170 dm ³ /s (machine operation)
Sound power	<75 dB

Electrical values

Voltage	3~400V / 50 Hz
Nominal current	0,65 A
Rated power	250 W

Delivery, installation and maintenance

The unit is delivered packed on one pallet. The package also includes 2 pcs of pressure relief valves and 12 pcs of duct brackets. Pressure gauges are delivered 1 pc /shield and are also delivered with the IVL-1 machine.

We reserve the right to make changes.

