Wall Ventilation Unit

Type FSL-W-ZUL

FassadenSystemLüftung
GmbH & Co KG

FSL

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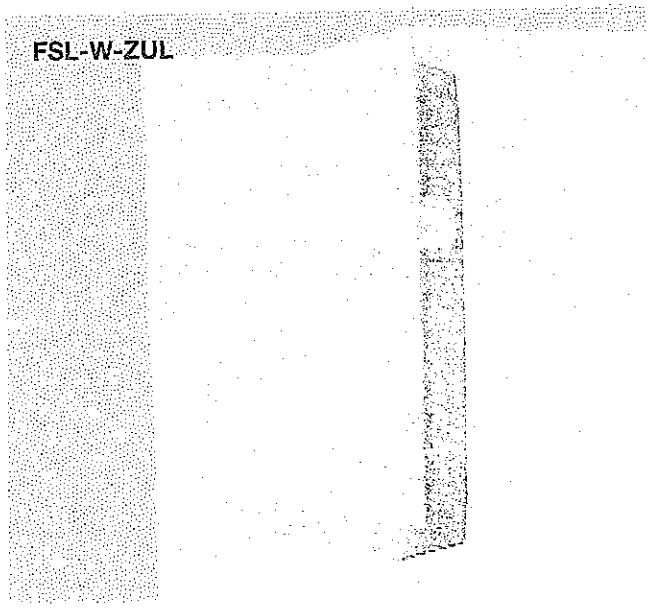
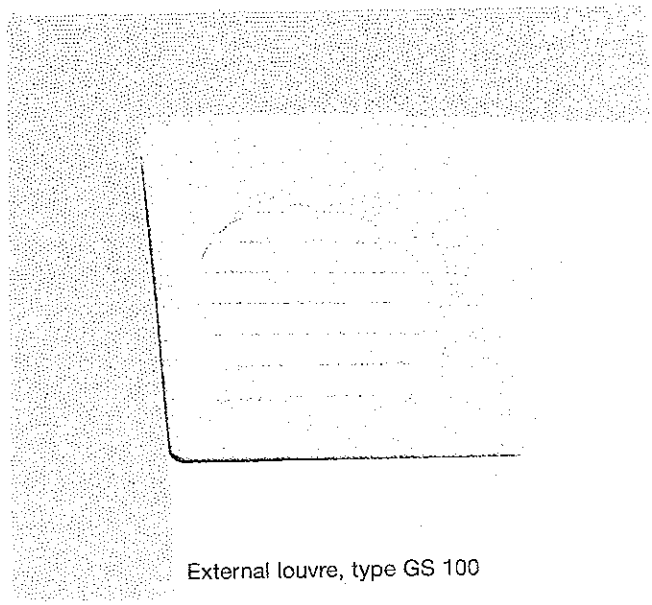
Description

Sound attenuated wall ventilation units type FSL-W-ZUL are decentralized ventilation units for the mechanical ventilation of mainly living and sleeping areas. The units are delivered with a connecting duct (PVC with an external diameter of 104 mm) and a type GS 100 external louvre. The radial flow fan of the unit draws in outside air through the external louvre and the connecting duct. Air passes through a filter cartridge and discharges into the room through the top of the equipment. The sound-absorbing lining reduces the ingress of external noise and the inherent noise of the fan by the values indicated in the technical data.

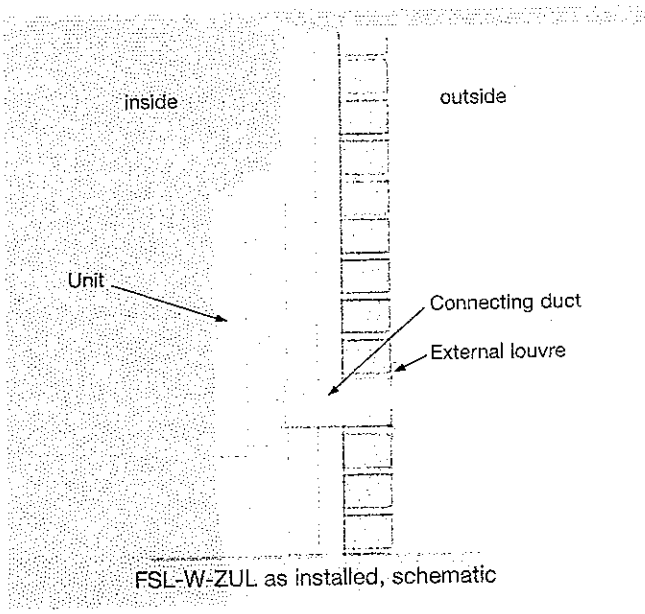




External louvre, type GS 100

The ventilation unit must be installed on the inside surface of an external wall. To provide the air supply a connecting duct must be fitted through the wall, this requires a core drilling. There is an external louvre which should be attached to the outside end of the connecting duct. The unit has a 1.80 m long connection cable for the 230 VAC electrical supply and must be connected to a mains outlet. Detailed instructions for the unit assembly are given in the Installation, Operating and Maintenance Manual MW/FSL/6/EN/...

The main parts of the unit are:
- Equipment casing made of aluminium and plastic with a sound-absorbing lining
- Openable face plate
- Easily changed filter
- Radial flow fan
- Electronics
- Connecting duct shut-off (at the duct entry)

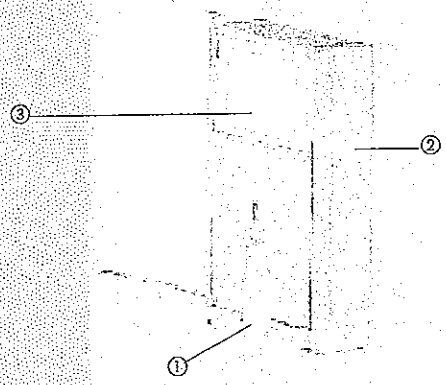


FSL-W-ZUL as installed, schematic

Application · Construction · Technical Data

Application/Construction

The unit can be operated by a rotary switch for the stepless adjustment of the supply air volume flow rate and a rotary isolation control switch as described below. You will find a detailed description of the unit operation in the Installation, Operating and Maintenance Manual MW/FSL/6/D/..



① Rotary switch for the adjustment to the recommended supply air volume flow rate
② Rotary isolation switch
③ Filter

Adjustment of the supply air volume flow rate

The circular rotary switch for the stepless adjustment of the air volume flow rate is located at the lower front of the unit. On the rotary switch, you will see five marked positions which will help you to find the recommended settings.

With this adjustment, a minimum basic ventilation is guaranteed (approx. 20 m³/h)

recommended setting for one person, for example nursery (approx. 30 m³/h)

recommended setting for two people, for example double bedroom (approx. 60 m³/h)

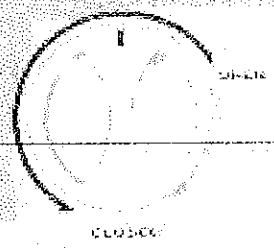
Max. maximum power for maximum room ventilation (approx. 170 m³/h)

OFF fan is switched off

These settings are based on the use of a standard filter cartridge G2. If you decide to use a high-quality filter, for example the F6 or F9 active filters which have a higher air resistance, refer to the revised recommendations for one or two people.

Open – Closed

If you want to close the FSL-W-ZUL wall ventilation unit at entry to the connecting duct, turn the rotary isolation switch anticlockwise. If you wish to open it, turn it clockwise. The "open" and "closed" settings are marked on the unit.



If you have adjusted the fan to "OFF" and the isolation switch to "open", then ventilation will be dependant on the pressure differential between inside and outside.

Supply air filtering

With the wall ventilation FSL-W-ZUL, you may use different grades of filter to provide various levels of supply air quality. As a standard, the G2 filter is provided.

FSL-W-ZUL with G2 filter cartridge (standard)

With this filter, particles of a size >10 µm are extracted with an efficiency of 50 to 70 %.

This relates, for example, to textile fibres and hair, sand, fly ash, bloom spores, pollen, cement-dust and insects up to the described order of magnitude to the extent mentioned.

FSL-W-ZUL with F6 filter cartridge (optional)

With this filter, pollutants, pollen or soot particles up to a size >10 µm are extracted with an efficiency of up to 99 %, >5 µm between 95 to 99 %.

This relates, for example, to bloom spores, pollen, cement-dust, bacteria and germs on host particles up to the described order of magnitude to the extent mentioned.

FSL-W-ZUL with F9 active filter cartridge (optional)

This filter class in combination with effective activated carbon filters extract pollutants up to a size of >1 µm with an efficiency of up to 98 %.

This relates, for example, to oil smoke and agglomerated soot, tobacco smoke, metallic oxide smoke or materials such as kerosene or exhaust gases up to the described order of magnitude to the extent mentioned.

Once the face plate is opened, the filter cartridge can be replaced easily without any tools. Detailed instructions on how to replace the filter and how to clean and care for the equipment can be found in the Installation, Operating and Maintenance Manual MW/FSL/6/EN/...

Technical data

Dimensions: H x W x D approx. 485 x 335 x 135 mm

Supply air volume flow rate stepless adjustment (4 marked and measured positions):

Rotary switch setting	Air volume flow rate	Power consumption	Sound pressure level (with 8 dB room attenuation)	Sound power level
min.	19 m³/h*	11 watts*	–	< 20 dB(A)*
one person	31 m³/h*	11 watts*	–	< 20 dB(A)*
two people	60 m³/h*	13 watts*	20 dB(A)*	28 dB(A)*
max. setting	169 m³/h*	42 watts*	48 dB(A)*	56 dB(A)*

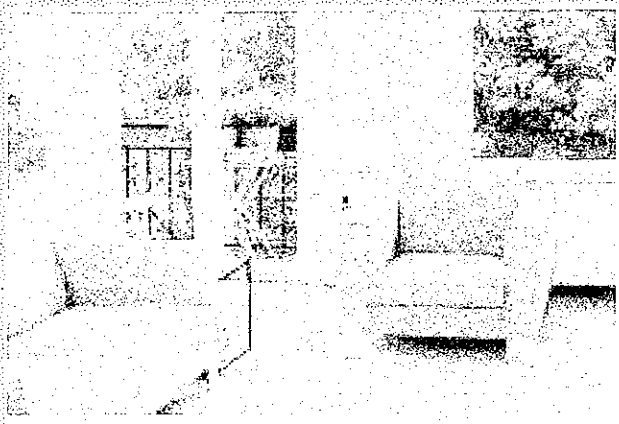
Electrical connection: 230 VAC, 50 Hz / safety class system II

Attenuation* (measured according to DIN ISO 140-10):
opened: $D_{n,e,w}$ = 49 (50) dB;
closed: $D_{n,e,w}$ = 57 (58) dB

(The sound attenuation values indicated in parentheses refer to the optionally available PVC duct with a 110 mm diameter and a 4 mm foam insert)

* The technical data refer to the unit with a G2 filter, connecting duct and a GS 100 external louvre

Installation Example · Order Details





Specification text

Wall ventilation unit – Type FSL-W-ZUL:

- Wall ventilation unit for mechanical ventilation of living areas, nurseries and bed rooms
- Casing made of aluminium and plastic
- Air outlet is on the top of the unit
- Integral G2 filter (filters particle sizes >10 µm to approx. 50–70 % efficiency)
- Filter replacement without tools, simply by opening of the face cover
- A rotary isolation switch shuts the inlet of the connecting duct
- Stepless adjustment of flow rate by means of the rotary switch (marked with recommended values) approx. 20 to 170 m³/h
- Load approx. 13 W with 60 m³/h (maximum capacity 42 W)
- Operating voltage 230 VAC, safety class system II, thermal protective circuit
- Standard sound level difference open/closed $D_{n,e,w}$ = 49 dB / 57 dB
- Self noise with 60 m³/h outside air with WS GS100 L_p = 20 dB(A) (with a room attenuation of 8 dB)
- Connection cable approx. 1.8 m
- With connecting duct to the external air inlet, suitable for wall thicknesses up to 500 mm
- With optimized flow system and a white GS 100 external louvre (installed without additional mechanical attachment or with optional screw fixing)

Dimensions: H x W x D: approx. 485 x 335 x 135 mm

Options:

- F6 fine dust filter
- F9 fine dust filter with activated carbon
- Connecting duct with foam insert for improved noise control $D_{n,e,w}$ = 50 dB / 58 dB
- Angled assembly

Order code

FSL	-	W	-	ZUL	-	G2
		Wall ventilation unit		Supply air		Filter

- 00 – no filter
- G2 – G2 coarse dust collector
- F6 – F6 fine dust filter
- F9 – F9 fine dust filter (with activated carbon)

Order example

Make: TROX / FSL

Type: FSL-W-ZUL G2

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