

Conforme à VDI 6022

## FSL-V-ZUS

SECONDARY AIR UNIT FOR SUPPLY AIR, WITH HEAT EXCHANGER, FOR VERTICAL INSTALLATION ON AN EXTERNAL WALL, E.G. ADJACENT TO A WINDOW

Ready-to-operate decentralised ventilation unit that provides good comfort levels, used for the ventilation of rooms

- Acoustically optimised EC fan with low specific fan powers, SFP = 1 according to EN 13779
- Heat exchanger for heating and cooling as 2-pipe or 4-pipe system
- Unit base of approx. 0.11 m<sup>2</sup>
- Reduction of fine dust and pollen contamination due to integral filters that conform to VDI 6022 – F7 fresh air filter
- Easy filter change, no tools required
- Condensate drip tray with or without condensate drain
- Motorised shut-off damper, normally closed (NC)
- Self-powered secondary air damper for adding secondary air to increase the thermal output

Optional equipment and accessories

- Modular control system X-AIRCONTROL, specially for decentralised ventilation systems
- Free cooling and night purge, depending on control strategy
- Various fixing systems to fix the unit to the floor or wall
- Powder coating in many different colours, e.g. RAL CLASSIC

## Application



Application

- Ventilation and extract ventilation of rooms, preferably rooms with a depth up to 6 m
- 2-pipe or 4-pipe heat exchangers enable good comfort levels
- Inducing displacement flow
- Energy-efficient solution since water is used as a medium for heating and cooling
- For new buildings and refurbishment projects
- Vertical installation on the façade or on an external wall
- Typical installation locations include offices and meeting rooms

Special characteristics

- Motorised shut-off dampers for fresh air and exhaust air, normally closed (NC) in order to prevent uncontrolled airflows
- 4 levelling feet
- Acoustically optimised EC fan
- Heat exchanger as 2-pipe or 4-pipe system, with G½" union nuts and flat seals
- Meets the hygiene requirements of VDI 6022
- Filter class: F7 for fresh air
- Easy filter change with quick release fasteners, no tools required
- Condensate drip tray with or without condensate drain
- Secondary air addition by means of TROX Compact controller
- Compact construction, hence particularly suitable for refurbishment projects
- Demand-based ventilation is possible by means of monitoring the room air quality and with dedicated control equipment

## Description



Variants

- Feldbergstraße project (Frankfurt, Germany)

Construction

- Powder-coated RAL 9005, black, gloss level 70 %
- P1: Powder-coated in any other RAL colour, gloss level 70 %

Useful additions

- Modular control system X-AIRCONTROL, specially for decentralised ventilation systems
- Connecting hoses

Construction features

- Energy-efficient EC fan with low specific fan powers, SFP = 1 according to EN 13779

- Mechanical self-powered volume flow controller to limit the fresh air flow rate and add secondary air if necessary
- Motorised shut-off dampers for fresh air and exhaust air, normally closed (NC) in order to prevent uncontrolled airflows
- The supply air is discharged to the room as an inducing displacement flow from the lower front part of the unit

Materials and surfaces

- Casing, filter chamber cover, fans and levelling feet are made of galvanised sheet steel
- Heat exchanger with copper tubes and aluminium fins
- Casing is powder-coated RAL 9005, black, or in any other RAL colour
- F7 filter medium made of moisture-resistant glass fibre paper (certified by Eurovent)
- Mineral wool lining to DIN 4102, fire rating class A, faced with glass fibre fabric as a protection against erosion, effective with airflow velocities up to 20 m/s
- Closed cell sealing strips

# TECHNICAL INFORMATION

Functional description

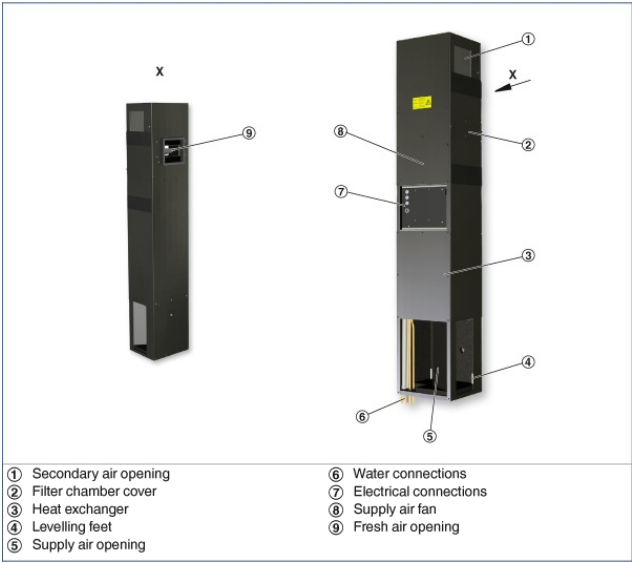
Decentralised supply air and secondary air units ventilate the room and dissipate cooling loads and heat loads.

An EC centrifugal fan takes in the fresh air which then flows through the motorised shut-off damper, the volume flow limiter and the F7 filter.

If necessary, the air is heated or cooled by the heat exchanger before it is discharged to the room as an inducing displacement flow.

If necessary, secondary air is added to the fresh air in order to increase the thermal output.

Schematic illustration of FSL-V-ZUS



Width	352 mm
Height	1880 mm
Depth	301 mm
Fresh air flow rate	75 m³/h
Supply air flow rate	Up to 210 m³/h
Cooling capacity	Up to 660 W
Heating capacity	Up to 1980 W
Max. operating pressure, water side	6 bar
Max. operating temperature	75 °C
Sound power level	33 – 40 dB(A)
Supply voltage	230 V AC ±10 %, 50/60 Hz

#### FSL-V-ZUS

Supply air flow rate	m³/h	75	150	210
Fresh air flow rate	m³/h	75	75	75
Total cooling capacity	W	340	490	660
Internal cooling capacity	W	200	400	533
Temperature of the air in the unit	°C	32.0	29.0	28.1
Rel. humidity	%	40.0	44.7	46.3
Water content of the dry air	g/kg	11.9	11.2	11
Supply air temperature	°C	18	18	18.4
Condensation	g/h	0	0	0
Chilled water flow rate	l/h	75	210	300
Water temperature, inlet	°C	16	16	16
Water temperature, outlet	°C	19.9	18.0	17.9
Pressure drop, water side	kPa	<3	<9	<16
Total heating capacity	W	1330	1690	1980
Internal heating capacity	W	376	812	1136
Temperature of the air in the unit	°C	-12.0	4.0	8.6
Supply air temperature	°C	35	36.2	36.2
Hot water flow rate	l/h	100	150	200
Water temperature, inlet	°C	60	60	60
Water temperature, outlet	°C	48.4	50.1	51.3
Pressure drop, water side	kPa	<5	<9	<15
Sound power level L <sub>WA</sub>	dB (A)	33	37	40
Sound pressure level with 8 dB room attenuation	dB (A)	25	29	32

Decentralised supply air and secondary air units of Type FSL-V-ZUS, with heat exchanger, for vertical installation on an external wall, e.g. adjacent to a window.

#### Special characteristics

- Motorised shut-off dampers for fresh air and exhaust air, normally closed (NC) in order to prevent uncontrolled airflows
- 4 levelling feet
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- Meets the hygiene requirements of VDI 6022
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- Heat exchanger with copper tubes and aluminium fins
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- F7 filter medium made of moisture-resistant glass fibre paper (certified by Eurovent)
- Mineral wool lining to DIN 4102, fire rating class A, faced with glass fibre fabric as a protection against erosion, effective with airflow velocities up to 20 m/s
- Closed cell sealing strips

#### Construction

- Powder-coated RAL 9005, black, gloss level 70 %
- P1: Powder-coated in any other RAL colour, gloss level 70 %

#### Technical data

- Width: 352 mm
- Height: 1880 mm
- Depth: 301 mm
- Fresh air flow rate: 75 m³/h
- Supply air flow rate: up to 210 m³/h
- Cooling capacity: up to 660 W
- Heating capacity: up to 1980 W
- Max. operating pressure: 6 bar
- Max. operating temperature: 75 °C
- Sound power level: 33 - 40 dB(A)
- Supply voltage: 230 V AC ±10 %, 50/60 Hz
- Rating: 30 VA
- Power consumption: 18 W with boost level, 11 W with medium speed (nominal volume flow rate)

FSL-V-ZUS

FSL - V - ZUS - 4 / 352 x 301 x 1880 / R			
1	2	3	4

1 Type  
FSL-V-ZUS Vertical ventilation units

2 Heat exchanger  
2 2-pipe  
4 4-pipe

6 Dimensions [mm]  
B x H x T  
352 x 1880 x 301

3 Control  
No entry: none  
R With