



DVS Roof Fans

Centrifugal roof fan with vertical discharge



- DVS is the non-insulated version
- DVSI is the insulated version with acoustic and thermal insulation 50 mm
- Extensive range of accessories
- Available with AC motors for 50 and 60Hz

[Find more details in our online catalogue](#)

Flexibility

The DVS/DVSI fans are intended to use for **extract** air with **vertical discharge**.

The fans are designed to handle high air volumes at medium pressure without generating excessive noise.

Reliability

The casing made out of **seawater resistant aluminium** with an inside **galvanised steel frame** is hard-wearing. This makes the fan also suitable for coastal applications.

The combination of casing and motor construction ensures to minimize the need for maintenance of the fans and allows long **continuous operation**.

Performance

The **sound optimized** impellers together with **high efficient** external rotor motors are designed to ensure high-level performance to **minimize power consumption** and **maximize efficiency**.

Accessories

DVS/DVSI fans can be selected together with variety types of **accessories** as roof sockets, tilting devices, dampers, etc.

Features

Construction

The **Casing** is made out of **sea water resistant aluminium**. **Base frame** manufactured from **galvanised steel** with integrated inlet cone. Integrated bird guard manufactured from powder coated, galvanised steel.

DVSI is with **50 mm mineral wool acoustic and thermal insulation**.

Impeller

The DVS/DVSI fans use **radial** impeller with **backward curved blades**. These are out of high-performance composite material or aluminum (from Size 710), dynamically **balanced** and paired with corresponding **AC external rotor** motors.

Motor

DVS/DVSI fans are designed with **AC motors**. Motors are suitable for **50Hz** and **60Hz**.

Motor protection

Depending on the type, **AC** motors have an **integrated** thermal protection with manual (electrical) reset, prewired integral **thermocontact TK** or **thermistor PTC** with leads to a **motor protection device**.

Control

The **AC motors** can be controlled by **5-step, stepless** speed regulator, **D/Y** switch or **frequency converter**.

Installation

The DVS/DVSI are for **outside installation**.

Technical parameters

Nominal data

Voltage (nominal)	400	V
Frequency	50	Hz
Phases	3~	
Motor circuit connection	D; Y	
Input power	807	W
Input current	1.53	A
Impeller speed	1,363	rpm
Air flow	max 5,605	m³/h
Temperature of transported air	max 60	°C
Max temperature of transported air, when speed controlled	60	°C

Protection/Classification

Enclosure class, motor	IP54
Insulation class	F

Data according to ErP

ErP ready	ErP 2018
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Dimensions and weights

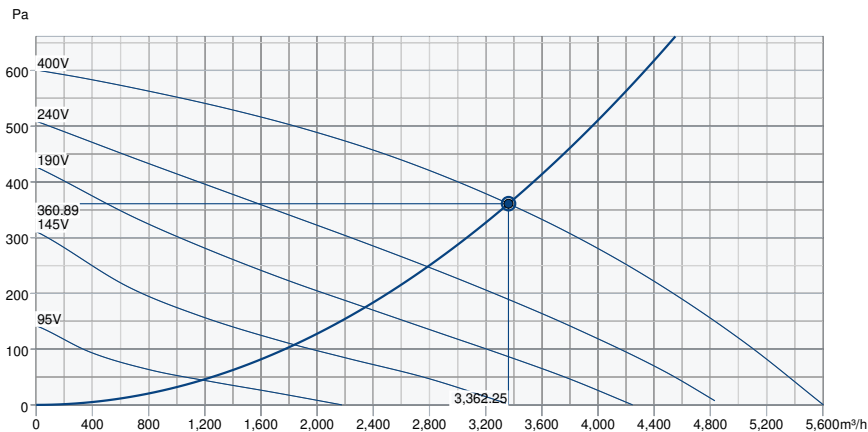
Weight	36.05	kg
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Others

Motor type	AC
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Performance

Performance curve



Hydraulic data

Required air flow	3,363 m³/h
Required static pressure	361 Pa
Working air flow	3,362 m³/h
Working static pressure	361 Pa
Air density	1.204 kg/m³
Power	808.8 W
Fan control - RPM	1,363 rpm
Current	1.50 A
SFP	0.866 kW/m³/s
Control voltage	400.0 V
Supply voltage	400 V

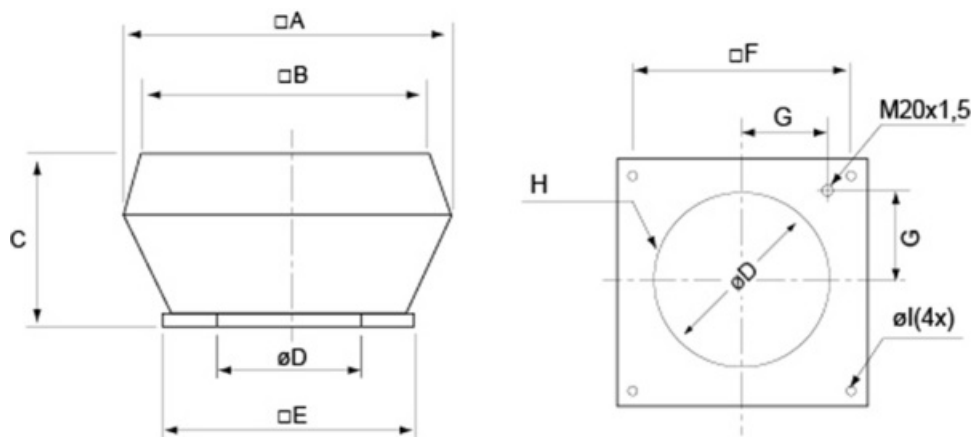
Sound power level		63	125	250	500	1k	2k	4k	8k	Total
Inlet	dB(A)	44	57	65	68	68	63	57	50	73
Outlet	dB(A)	45	58	66	69	69	64	58	51	74

Accessories

Ecodesign

Product		
Trade name	Systemair	
Product name	DVS 450DV	
Ecodesign		
ErP compliance	2018	
Unit category	NRVU	
Drive	External MSD or VSD	
Unit type	UVU	
Heat recovery type	None	
Temperature ratio (UVU)	Not applicable	
qv nom	0.9339	m³/s
P nom	0.809	kW
Ps nom	361	Pa
Fan efficiency	41.7	%
External Leakage	0	%
Sound power (LWA)	74	dB(A)

Dimension

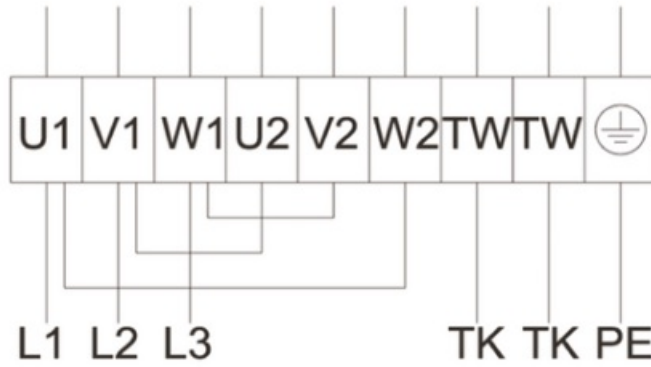


* diameter D refers to scREW-hole-circuit H

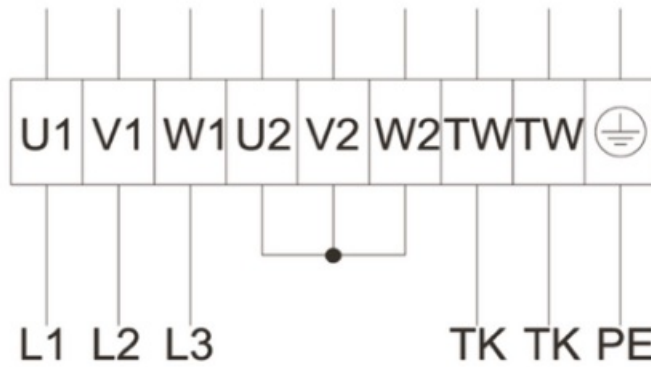
DVS/DVS sileo	□A	□B	C	∅D	□E	□F	G	H	∅I
450-500	900	730	465	438	665	535	237	6xM8	12(4x)

Wiring

Delta connection



Star connection



Accessories

- ASF 355-500 inlet flange DVS (9569)
- ASS 355-500 flex. con. DVS (9576)
- Frequency converter FRQS-4A (36231)
- Motor protect. switch S-DT 16E (161207)
- REV-9POL/12-7,5kW R/Y (33981)
- RTRDU 2 Speed contr. Systemair (5945)
- STDT 16E Motor Protection (5153)
- TDA DV 450-500 Adapter (301394)
- DTV500A (96807)
- MicroREX D21 Plus Time Switch (17822)
- RT 0-30 Room Thermostat (5151)
- SSS 450 slant. socket silencer (30078)
- FDS 450/500 flat roof socket (9551)
- FTG 450/499/500 Tilting device (30248)
- TG 640-800 Roof curb (1729)
- VKS 355-500 Back draft damper (9544)
- REV-9POL/12-7,5kW B/G (281743)
- ASK 450/500 inflow box SSD (300907)
- Frequency converter FRQ5S-4A (36233)
- Motor protect. switch S-DT 16 (161206)
- REV-5POL/07-7,5kW R/Y (33980)
- RTRD 2 Speed Cont. Systemair (5941)
- SSD 450-500 socket silencer (9563)
- Step switch S-DT2SKT, Y/D (2697)
- CO2RT-R-D Transmitter (6993)
- HR1 Room Humidistat (215150)
- Presence detector/IR24-P (6995)
- SDS 450-500 slant. roof socket (3786)
- T 120 Timer (5165)
- FDS-L 450/500 flat roof socket (95282)
- SSD 450/500 ZM socket sil (95060)
- VKM 355-500 Back draft damper (9556)
- REV-5POL/07-7,5kW B/G (281742)
- Room hygrostat HR-S (286251)

Documents

- [MANUAL_ROOF_FANS_EN_001_.PDF](#)
- [EU DECLARATION OF CONFORMITY_ROOF FANS_EN_004.PDF](#)

Specification

The box is made out of saltwater- proofed aluminium. The underframe has a deep- drawn inlet cone and a grill made up of electroplated, powder- coated steel- plate. Freewheeling radial impeller consists of polyamide PA6 with backward- curved impeller vanes. The actuation is carried out by a maintenance- free, speed- controlled external rotor motor, for the operation with frequency converter a sinusoidal filter is needed. The motor is hang up vibration- free. For protecting the motor, the production run has built in thermal contacts with completed lines to a motor protection device. For annealing the engine is designed inside the air flow. Impeller according to VDI 2060, quality category Q6,3 and dynamically weigh heavy in two levels.

DVS/DHS/DVSI ...EZ / EV / ES:

1~allows an 2- stepped operation.