

DVC Roof Fans

Centrifugal roof fan with vertical discharge and EC motor

- DVC is the non-insulated version
- DVC1 is the insulated version with acoustic and thermal insulation 50 mm
- DVC/DVC1-S: Potentiometer included for ease of commissioning
- DVC/DVC1-P: Integrated pressure regulator
- Extensive range of accessories
- Available with EC motors for 50 and 60Hz

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

Flexibility

The DVC/DVC1 fans are intended to use for **extract** air with **vertical discharge**.

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

DVC/DVC1-S are with stepless control via 0-10 V signal, integrated potentiometer for commissioning.

DVC/DVC1-P are with integrated pressure regulator unit for simple implementation of constant pressure control.

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

DVC/DVC1 fans can be selected together with variety types of **accessories** as roof sockets, tilting devices, dampers, etc.

Certifications



Ecodesign (ErP) compliant



Green Ventilation

Features

Construction

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

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

Impeller

The DVC/DVCI fans use **radial** impeller with **backward curved blades**. These are made out of polyamide (size 190 - 225) or polypropylen (from Size 315 up to 710), dynamically **balanced** and paired with corresponding **EC external rotor motors**.

Motor

DVC/DVCI fans are delivered with **EC motors**. Motors are suitable for **50Hz** and **60Hz**.

Motor protection

Fans with **EC** motors have an **integrated** electronic **thermal protection** including **locked-rotor protection** and **soft-start**.

Control

The **DVC/DVCI-S** fans are equipped with a potentiometer (0-10 V), installed in the terminal box. The speed can be easily adjusted should the installation require a different operation point.

DVC/DVCI-P with integrated pressure regulator unit for constant pressure control. Depending on the type, **EC motors** are also equipped by **ModBus** communication or **alarm signal**.

Installation

The DVC/DVCI are for **outside installation**.

Technical parameters

Nominal data		
Voltage (nominal)	400	V
Frequency	50; 60	Hz
Phases	3~	
Input power	3,330	W
Input power kW	3.33	kW
Input current	4.96	A
Impeller speed	1,678	rpm
Air flow	max 13,883	m³/h
Temperature of transported air	max 55	°C
Max temperature of transported air, when speed controlled	55	°C

Protection/Classification		
Enclosure class, motor	IP55	
Insulation class	F	

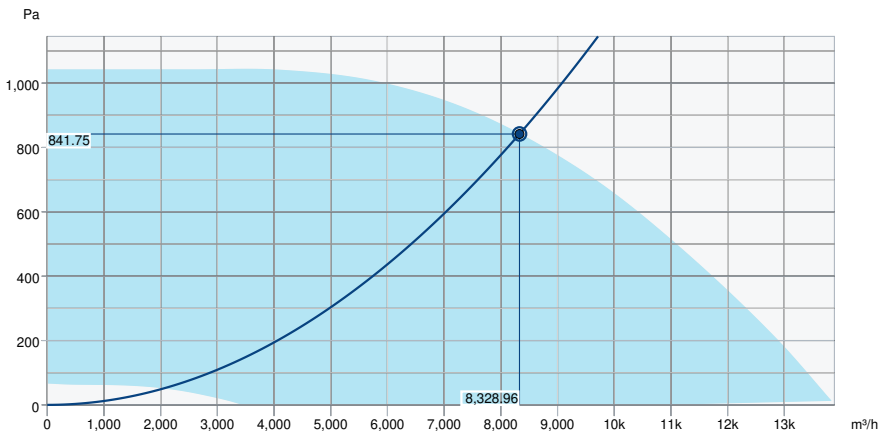
Data according to ErP		
ErP ready	ErP 2018	

Dimensions and weights		
Weight	85.6	kg

Others		
Motor type	EC	

Performance

Performance curve



Hydraulic data

Required air flow	8,330 m³/h
Required static pressure	842 Pa
Working air flow	8,329 m³/h
Working static pressure	842 Pa
Air density	1.204 kg/m³
Power	3,355.4 W
Fan control - RPM	1,678 rpm
Current	4.99 A
SFP	1.450 kW/m³/s
Control voltage	10.0 V
Supply voltage	400 V

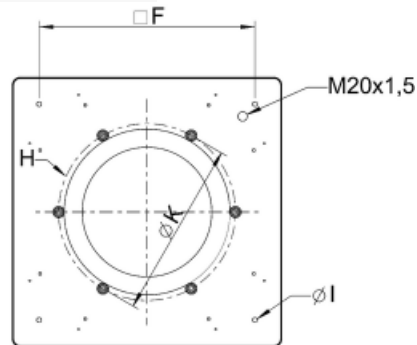
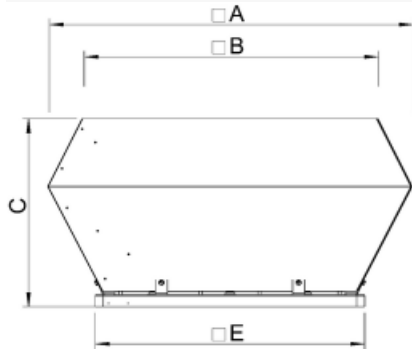
Sound power level		63	125	250	500	1k	2k	4k	8k	Total
Inlet	dB(A)	52	67	69	68	69	66	62	57	75
Outlet	dB(A)	54	68	70	70	70	68	63	59	77

Ecodesign

Product	
Trade name	Systemair
Product name	DVCI 630-S (3Ph/400V)
Ecodesign	
ErP compliance	2018
Unit category	NRVU
Drive	Integrated VSD
Unit type	UVU
Heat recovery type	None
Temperature ratio (UVU)	Not applicable
qv nom	2.3136 m ³ /s
P nom	3.355 kW
Ps nom	842 Pa
Fan efficiency	58.1 %
External Leakage	0 %
Sound power (LWA)	77 dB(A)

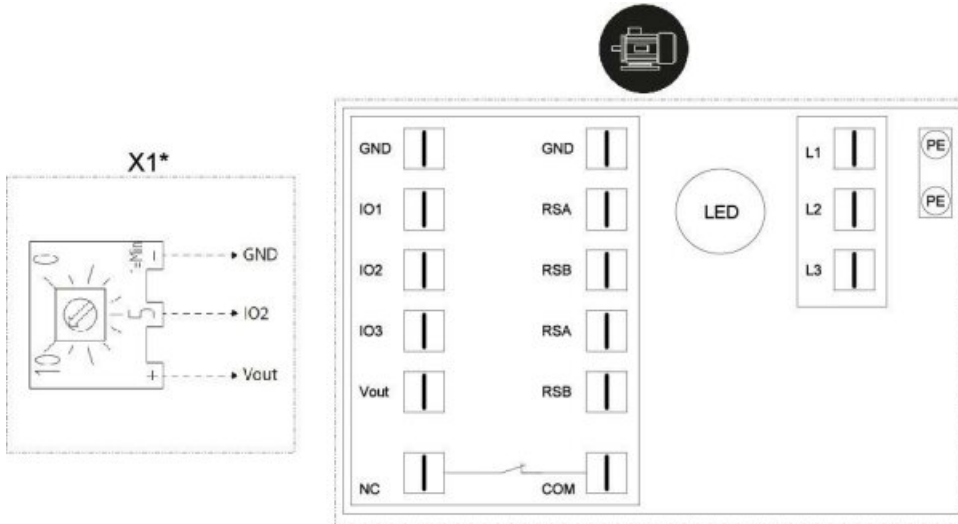
Dimension

DVCI-S	□A	□B	C	□E	□F	H	øK	øI
630	1315	1130	600	939	750	8xM8	605	14(4x)



*vertical panel covers controller protection plate

Wiring



Function / assignment

L1, L2, L3	Power, supply, see name plate
PE	Protective earth
RSA	RS485 interface for MODBUS, RSA
RSB	RS485 interface for MODBUS, RSB
GND	Reference ground for control interface
IO1	Function: Disable-Input Digital Input - Inactive: Pin open or applied voltage < 1,5 VDC -> fan runs according to the set 0-10 V- setpoint (IO2) - Active: applied voltage 3,5-50 VDC -> fan stops - Reset- Function: Error - reset when the status changes from "inactive" to "active"
IO2	Function: Setpoint Analog input 0-10 V / PWM, Ri = 100kΩ
IO3	Function: Actual speed Analog output 0-10 V, max.5 mA Output is a speed proportional voltage. - 10 V corresponds max. rpm - 5 V corresponds max. rpm / 2 (n = 1.02 * nMax)
Vout	Function: Voltage output 10 VDC, short-circuit-proof (Pmax = 800 mW)
COM	Function: Status relay Status relay, floating status contact, contact rating 250 VAC / 2 A; min. 10mA
NC	Function: Status relay Status relay, floating status contact, open in the event of an error and in the de-energized state
LED	Function: Status reports - green = operational readiness - orange = warning - red = error
X1	Terminal box with connected potentiometer * Included in the scope of delivery for fans with EC motor without external control.

Accessories

- ASF 560/630 inlet flange DVS (9570)
- ASS 560/630 flex. inl.con. DVS (9577)
- EC-Basic-CO2 and temperature (24808)
- EC-Basic-T temperature (24805)
- EC-Vent control board (3115)
- MTP 10, 10K, Speed control (32731)
- Potentiometer MTP 20, 0-10V (310220)
- SSD 560/630 socket silencer (9564)
- TDA DV 560/630 Adapter (304815)
- RT 0-30 Room Thermostat (5151)
- SSS 560 slant. socket silencer (30079)
- FDS 560/630 flat roof socket (9552)
- FTG 560/630 Tilting device (30509)
- VKM 560/630 Back draft damper (9557)
- REV-5POL/05-7,5kW B/G (281745)
- ASK 560/630 inflow box SSD (300908)
- CXE/AVC Modbus (37256)
- EC-Basic-H humidity (24807)
- EC-Basic-U universal 0-10V (24806)
- EC-Vent Room Unit (3018)
- MTV-1/010 Controller 0..10V+ (30650)
- REV-5POL/05-7,5kW R/Y (35757)
- Step switch S-5EC-2, 0-10V (449084)
- Presence detector/IR24-P (6995)
- SDS 560/630 slant. roof socket (3781)
- TFR Temp. Sensor (5158)
- FDS-L 560/630 flat roof socket (95283)
- TG 940-1200 Roof Curb (5090)
- VKS 560/630 Back draft damper (9545)
- TCA 150D2 (156671)

Documents

- [MANUAL_ROOF_FANS_EN_003_.PDF](#)
- [EU DECLARATION OF CONFORMITY_ROOF FANS_EN_004.PDF](#)