KVK DUO Insulated duct fans

Run & Standby fan in one casing for non-stop operation

- Twin fan – Run & Standby
- Low noise level
- Suitable for External installation as standard
- Safe and maintenance free operation

Find more details in our online catalogue

Run & Standby

KVK DUO is intended to use for **supply** or **extract** air in a variety of **commercial** and **domestic** applications with high demand for **non-interruptive ventilation**, required according to regulation. For transportation of **clean** or **contaminated** air.

Reliability

Corrosion resistance casing, thermal insulation and external terminal box with high protection class permits **outdoor** and **indoor** use. The combination of reliable casing and motor construction ensures to minimize the need for maintenance of the fans and allows long **continuous operation.**

Low noise level

KVK DUO has **fully insulated casing**. That ensures a good acoustic insulation in terms of the radiated sound. A wide range of recommended silencers for inlet and outlet allows further noise reduction.

Easy maintainance

To ensure long lifecycle it is recommended to inspect the fan according to the manual. The detachable service lid simplify this process and makes the fan **easy to maintain.**

Certifications

Ecodesign (ErP) compliant

Green Ventilation

Features

Construction

Casing of **EC** models made of magnesium zinc plated sheet metal with corrosion **class C5.** Casing of **AC** models made of galvanized sheet steel, corrosion **class C3.**

Casing of all fans is completely acoustically/thermally insulated and has internal surface liner that prevents the migration of insulation fibers into the airstream.

All casings has circular connection **spigots** with **rubber seals. EC** models are also equipped with an external **terminal box** with protection class **IP65.**

Impeller

AC models use double inlet radial fans with forward-curved impellers made of sheet steel.

EC models use backward curved **radial** impellers. These are from lightweight, hard-wearing fiberglass reinforced **polyamide.**

All impellers dynamically **balanced** and paired with corresponding external rotor motors.

Motor

Depends on type, fans are equipped with **AC** or high efficient **EC** external rotor motors. All motors are suitable for **50Hz** and **60Hz.**

The input voltage for **EC motors** single phase can vary between 200 and 277V, for three phase between 380 and 480V.

Motor protection

Models with **AC** motors have prewired integral **thermal contacts TK** with leads to external **motor protection device.** Models with **EC** motors have an **integrated** electronic **thermal protection,** including **locked-rotor protection** and **soft-start.**

Control

EC motor with **built-in potentiometer** to adjust working point can be also controlled by external **signal 0-10V.**

AC motor can be controlled by **5-step** or **stepless** speed regulator

Fans can be **demand controlled** via additional accessories like sensors and controllers for CO_2, temperature, humidity, presence indication, etc.

Installation

KVK DUO fans can be installed in any position **indoor** and **outdoor.** Circular spigot with rubber seals is perfectly designed to connect to the circular ducts by using **fast clamps FK preventing vibration** to the duct. A service cover with screw connection and hinges with pins make cleaning and maintenance easy.

Technical parameters

Nominal data

Voltage (nominal)	400	V
Frequency	50	Hz
Phases	3~	
Input power	1,247	W
Input current	1.92	A
Impeller speed	1,993	rpm
Air flow	max 1.784	m³/s
Temperature of transported air	max 60	°C
Max temperature of transported air, when speed controlled	60	°C

Sound data

Sound pressure level at 3m (20m² Sabin)	62	dB(A)

Protection/Classification

Enclosure class, motor	IP54
Insulation class	F

Data according to ErP

ErP ready	ErP 2016; ErP 2018

Dimensions and weights

Duct dimension; Circular, inlet	500	mm
Duct dimension; Circular, outlet	500	mm
Weight	90	kg

Others

Duct connection type	Circular
Motor type	EC

Performance

Performance curve
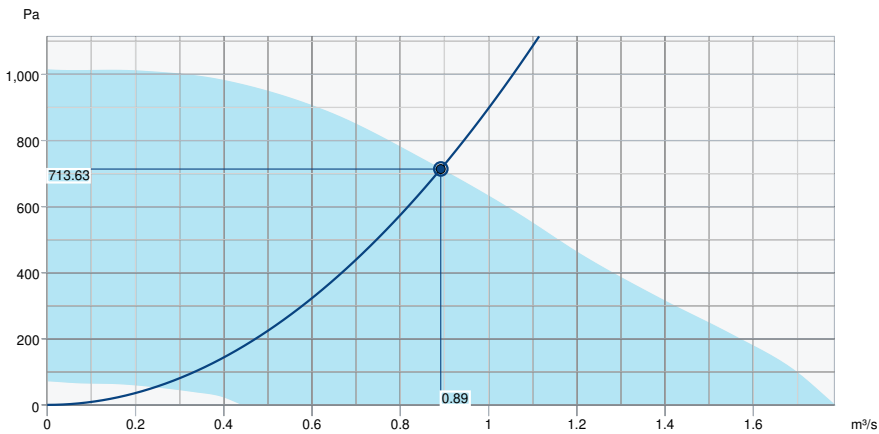
Hydraulic data

Required air flow	0.89 m³/s
Required static pressure	714 Pa
Working air flow	0.89 m³/s
Working static pressure	714 Pa
Air density	1.204 kg/m³
Power	1,189.7 W
Fan control - RPM	2,001 rpm
Current	1.81 A
SFP	1.334 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)	60	72	76	73	66	64	59	52	79
Outlet	dB(A)	60	74	77	73	74	70	65	58	81
Surrounding	dB(A)	49	59	66	63	56	50	45	34	69
Sound pressure level at 3m (20m² Sabine)	dB(A)	-	-	-	-	-	-	-	-	62
Sound pressure level at 3m free field	dB(A)	-	-	-	-	-	-	-	-	48

Accessories

Ecodesign

Product	
Trade name	Systemair
Product name	KV DUO 500 EC

Ecodesign		
ErP compliance	2018	
Unit category	NRVU	
Drive	Integrated VSD	
Unit type	UVU	
Heat recovery type	None	
Temperature ratio (UVU)	Not applicable	
qv nom	0.892	m³/s
P nom	1.19	kW
Ps nom	714	Pa
Fan efficiency	53.5	%
External Leakage	5	%
Sound power (LWA)	64	dB(A)

Dimension
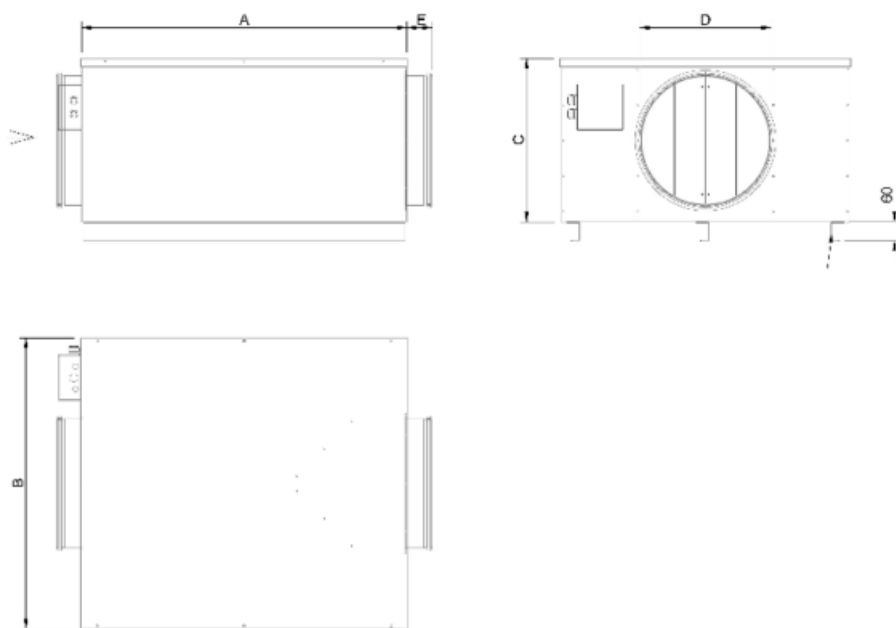
KV DUO	A	B	C	D	E
150	500	360	280	150	40
250	580	430	360	250	60
315	740	650	425	315	60
400	1000	895	505	400	65
500	1265	940	605	500	80
630	1383	1205	884	630	80

Mounting bracket is used on sizes 400 and 500

Wiring

400V 3~

External potentiometer
Optional

0-10V DC
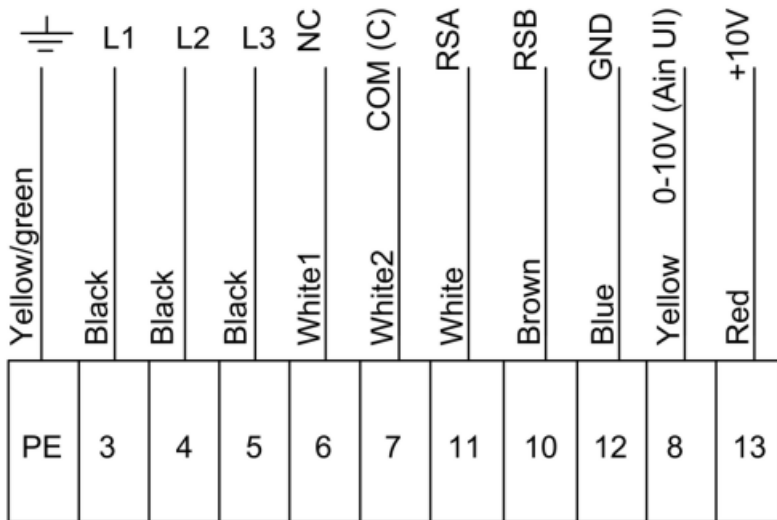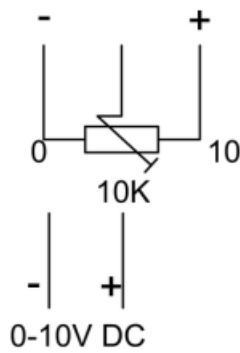
PE	Yellow/green
3	Black
4	Black
5	Black
6	White1
7	White2
11	White
10	Brown
12	Blue
8	Yellow
13	Red

External potentiometer optional

Accessories

- CXE/AVC Modbus (37256)
- EC-Basic-H humidity (24807)
- EC-Basic-U universal 0-10V (24806)
- EC-Vent control board (3115)
- MTP 10, 10K, Speed control (32731)
- Potentiometer MTP 20, 0-10V (310220)
- Step switch S-5EC, 0-10V (76738)
- HR1 Room Humidistat (215150)
- RT 0-30 Room Thermostat (5151)

- EC-Basic-CO2 and temperature (24808)
- EC-Basic-T temperature (24805)
- EC-Selector (9908)
- EC-Vent Room Unit (3018)
- MTV-1/010 Controller 0..10V+ (30650)
- Pressure controller PCA 1000D2 (76739)
- Step switch S-5EC-2, 0-10V (449084)
- Presence detector/IR24-P (6995)
- ACO8AC/EC ACO Panel IP40 (93042)

Documents

- INSTALLATION__OPERATION_AND_MAINTENANCE_INSTRUCTION_KV_DUO__KVK_DUO__KVK_003__EN.PDF
- COMMISSIONING_RECCORD_FANS__EN.PDF