

MUB Insulated duct fans

Efficient fans for supply or exhaust ventilation systems

- Acoustic and thermal insulation 30 mm
- Flexible airflow direction due to removable panels
- Indoor and outdoor installation
- Modular system of accessories
- Available with AC and EC motors for 50 and 60Hz

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



Flexibility

The MUB fans are intended to use for **supply** or **extract** air, designed to be installed in **any position**.

The MUB fans are designed for straight through airflow but can easily be rebuilt due to **removable panels** for 90° air discharge. The construction of the casing and thermal insulation permits **outdoor** and **indoor** use.

Modularity

Thanks to variety types of **accessories** as flexible connections, dampers, roof, base frame, etc. it is easy to design any ventilation system according to your demand.

By using special **modular systems**, where some accessories as **heaters, coolers, silencers, filters** or **carbon filters** are built-in in **the same type of casing**, you can even design a simple supply or exhaust **air handing unit**.

Performance

High performance impeller together with **high efficient** motors are designed to ensure high-level performance to **minimize power consumption** and **maximize efficiency**.

Noise

The **casing** of MUB fans have a perfect **acoustic** and **thermal** insulation capacity.

Certifications



Features

Construction

The casing consists of a corrosion-resistant **aluminium frame** with **fibreglass reinforced plastic corners of PA6**; highly shock-resistant. **Panels** made of **double skin galvanized** sheet steel with **30 mm acoustic** and **thermal** rockwool **insulation**.

The MUB fans are designed for straight through airflow but can easily be rebuilt due to **removable panels** for 90° air discharge.

Impeller

The MUB fans use **radial** impellers with **backward curved blades**. These are made out of high-performance composite material or aluminum, dynamically **balanced** and paired with corresponding **AC** or **EC external rotor motors**.

Motor

Depending on the type, MUB fans are equipped with **AC** or **EC** external rotor motor. 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**.

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

Control

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

EC motors, depending on the type are also equipped with **ModBus** communication **or alarm signal**.

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

Installation

The MUB fans can be installed in any position **indoor** and together **with weather protection roof** also **outdoor**. With mounted **base frame** the MUB fans can stand **on floor**. For **preventing vibration** to the duct it is recommended to use **flexible connections**.

Technical parameters

Nominal data

Voltage (nominal)	400	V
Frequency	60; 50	Hz
Phases	3~	
Input power	3,099	W
Input power kW	3.099	kW
Input current	5.01	A
Impeller speed	1,339	rpm
Air flow	max 5.3347	m³/s
Temperature of transported air	max 70	°C
Max temperature of transported air, when speed controlled	70	°C

Protection/Classification

Enclosure class, motor	IP55
Insulation class	F

Data according to ErP

ErP ready	ErP 2018
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Dimensions and weights

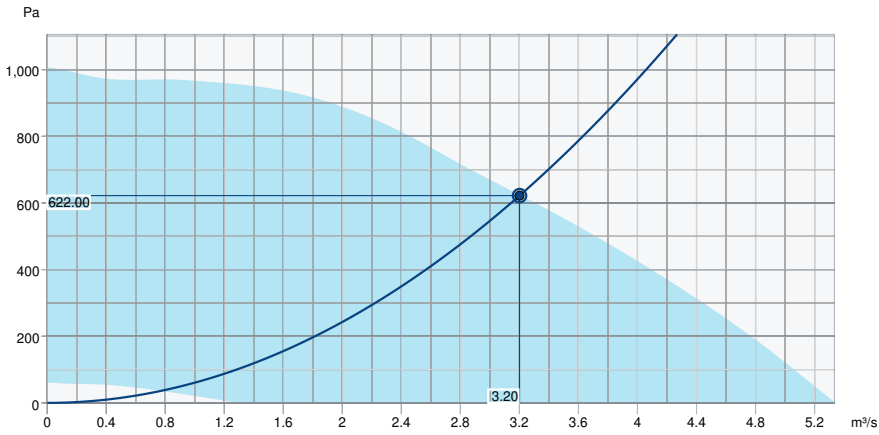
Weight	135.5	kg
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Others

Motor type	EC
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Performance

Performance curve



Hydraulic data

Required air flow	3.20 m³/s
Required static pressure	622 Pa
Working air flow	3.20 m³/s
Working static pressure	622 Pa
Air density	1.204 kg/m³
Power	3,071.6 W
Fan control - RPM	1,342 rpm
Current	4.96 A
SFP	0.960 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)	57	73	75	81	81	79	76	66	86
Outlet	dB(A)	59	74	77	82	83	80	77	68	88
Surrounding	dB(A)	36	55	47	47	50	49	42	30	58
Sound pressure level at 3m (20m² Sabine)	dB(A)	-	-	-	-	-	-	-	-	51
Sound pressure level at 3m free field	dB(A)	-	-	-	-	-	-	-	-	37

**AMCA Certified Rating
statements**

• AMCA Worldwide Certified
Ratings: Sound and Air
Performance

• Catalogue Version: 2020-11

• Performance certified is for
installation type A – Free inlet, Free
outlet.

• The A-weighted sound power
ratings shown have been calculated
per AMCA Standard 301.

• Surrounding dB(A) is not licensed
by AMCA International.

• Values shown are for inlet dB(A)
sound power levels for Installation
Type A: free inlet, free outlet.

Ecodesign

Product			
Trade name	Systemair		
Product name	MUB 100 630EC		
Ecodesign			
ErP compliance	2018		
Unit category	NRVU		
Drive	Integrated VSD		
Unit type	UVU		
Heat recovery type	nan		
Temperature ratio (UVU)	Not applicable		
qv nom	3.2008	m³/s	
P nom	3.072	kW	
Ps nom	622	Pa	
Fan efficiency	64.8	%	
External Leakage	5	%	
Sound power (LWA)	58	dB(A)	

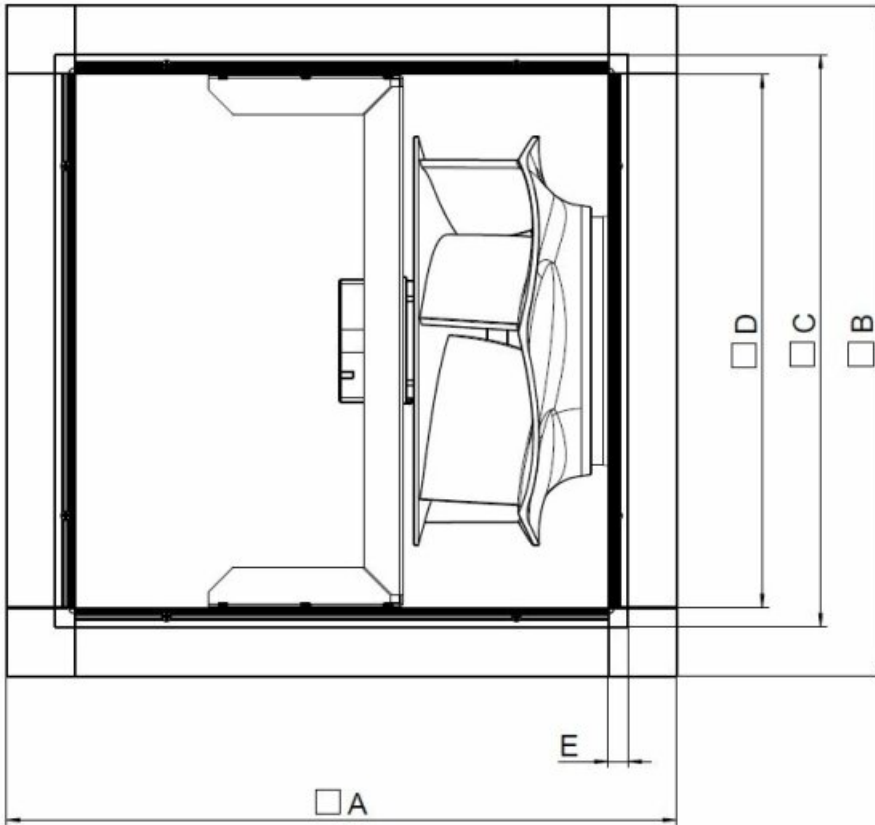
Acoustic

The Level of Casing-Breakout-Noise depends on the quality of shielding the acoustic inlet and outlet noises.

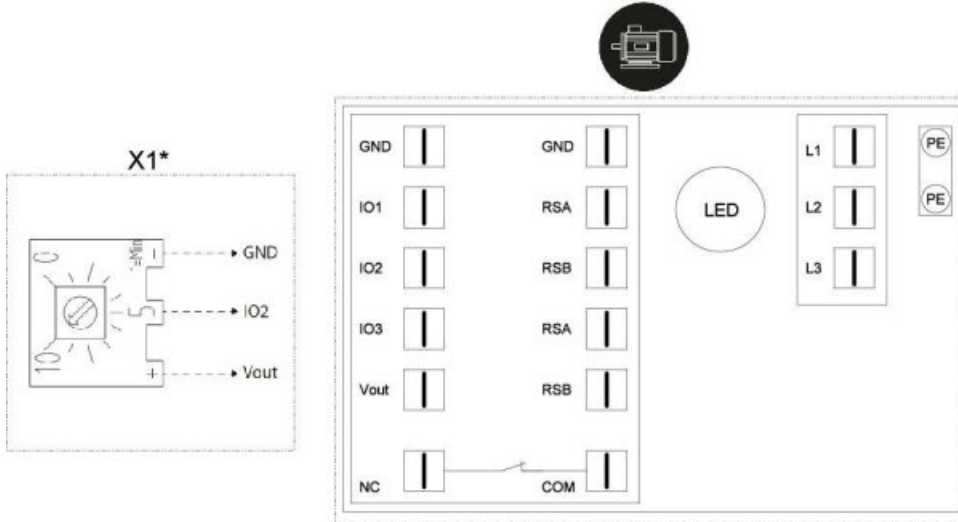
The shown Level of Casing-Breakout-Noise will be reached only in case of 100 % shielding the acoustic inlet and outlet noise and a correspondingly low environment noise.

Dimension

MUB 100	□A	□B	□C	□D	E
630/710	1020	1020	920	878	21



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

- CXE/AVC Modbus (37256)
- EC-Basic-CO2 and temperature (24808)
- EC-Basic-T temperature (24805)
- EC-Vent control board (3115)
- FGV 100/916-916 flex. conn. (4199)
- MTV-1/010 Controller 0..10V+ (30650)
- REV-5POL/05-7,5kW R/Y (35757)
- Step switch S-5EC, 0-10V (76738)
- TUNE-AHU-DE009-100-918x918-M0 (79883)
- WSG 100 MUB complete (31487)
- Presence detector/IR24-P (6995)
- BMS Trickle & Boost Switch (120363)
- KKC-DX-L 100 cooling section (277263)
- KKC-W-L 100 cooling section (277271)
- KKF 30 100-filter-section (93313)
- KKS 100 silencer-section (276853)
- DMD-C Pressure controller (15793)
- EC-Basic-H humidity (24807)
- EC-Basic-U universal 0-10V (24806)
- EC-Vent Room Unit (3018)
- MTP 10, 10K, Speed control (32731)
- Potentiometer MTP 20, 0-10V (310220)
- SD-MUB Vibration pad set (37324)
- Step switch S-5EC-2, 0-10V (449084)
- WSD 100 (1060x1060x70) compl. (31483)
- HR1 Room Humidistat (215150)
- RT 0-30 Room Thermostat (5151)
- GRU 100-1020/100 (276663)
- KKC-DX-R 100 cooling section (277267)
- KKC-W-R 100 cooling section (277275)
- KKH-HW 100 heater-section (93341)

Documents

- Installation, Operation and Maintenance instruction_001
- MUB_EC_AMCA_CERTIFICATE.PDF
- COMMISSIONING REPORT_FANS_160628_EN_001.PDF