

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**
- **C5 corrosion resistance**

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 **highly efficient** motors are designed to ensure high-level performance to **minimise power consumption** and **maximise efficiency**.

Noise

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

Certifications

AMCA Worldwide Certified Ratings: Sound and Air Performance

Systemair certifies that the model shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program. Check the AMCA Certified and Listed Product Search for our products.

Eco Platform: EPD Verified

This product comes with an Environmental Product Declaration (EPD), published by EPD Norway, a global EPD program operator and member of the ECO Platform. Compliant with ISO 14025 and EN 15804, Systemair EPDs support Life Cycle Assessments (LCAs) in all markets where the product is used. Scroll down to download the EPDs.

Green Ventilation

Our proprietary environmental performance benchmark guides you towards the most sustainable solutions within our portfolio. Only products that meet a clear set of verifiable minimum requirements—covering aspects such as energy efficiency, indoor air quality, and safety—are eligible to carry the Green Ventilation™ label.

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 galvanised** 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 aluminium, 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	50;60	Hz
Phases	3~	
Input power	3170	W
Input power kW	3.17	kW
Input current	5.1	A
Impeller speed	1347	rpm
Air flow	max. 4.9717	m^3/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	

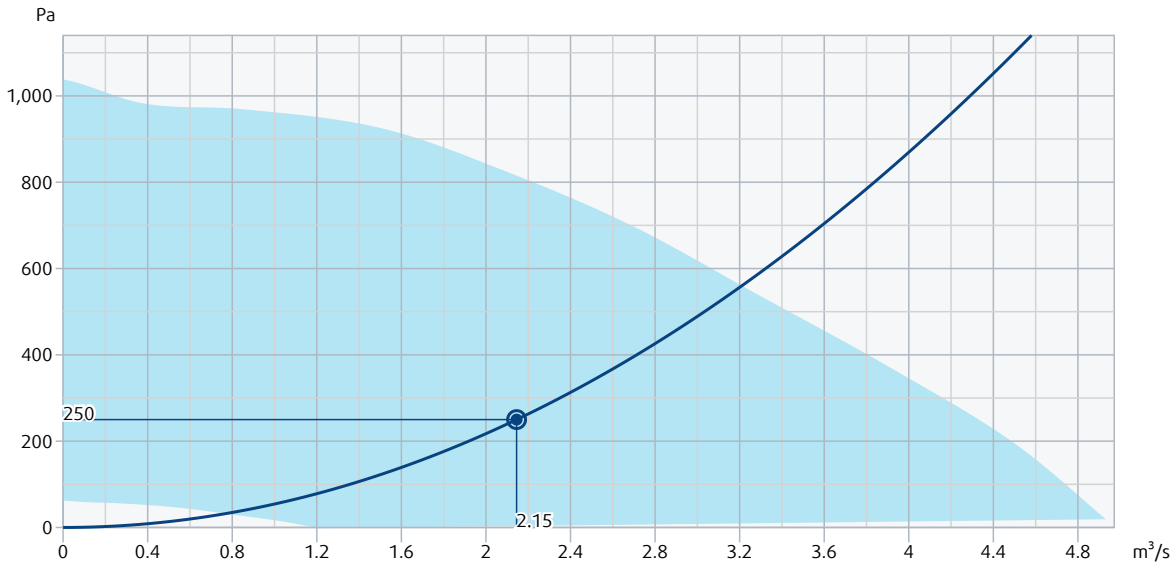
Data according to ErP		
ErP ready	ErP 2018	

Dimensions and weights		
Weight	135.5	kg

Others		
Motor type	EC	

Performance

Performance curve



Hydraulic data	
Required air flow	2.15 m^3/s
Required static pressure	250 Pa
Working air flow	2.15 m^3/s
Working static pressure	250 Pa
Air density	1.204 kg/m^3
Power	971.4 W
Fan control - RPM	887 rpm
Current	1.73 A
SFP	0.453 $kW/m^3/s$
Control voltage	6.7 V
Supply voltage	400 V

Sound power level		63	125	250	500	1k	2k	4k	8k	Total
Inlet	dB(A)	50	56	65	70	71	69	64	56	76
Outlet	dB(A)	51	58	67	72	72	71	66	58	77
Surrounding	dB(A)	29	37	37	37	39	39	31	20	45
Sound pressure level at 3m (20m^2 Sabine)	dB(A)	-	-	-	-	-	-	-	-	38
Sound pressure level at 3m free field	dB(A)	-	-	-	-	-	-	-	-	24

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.

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.

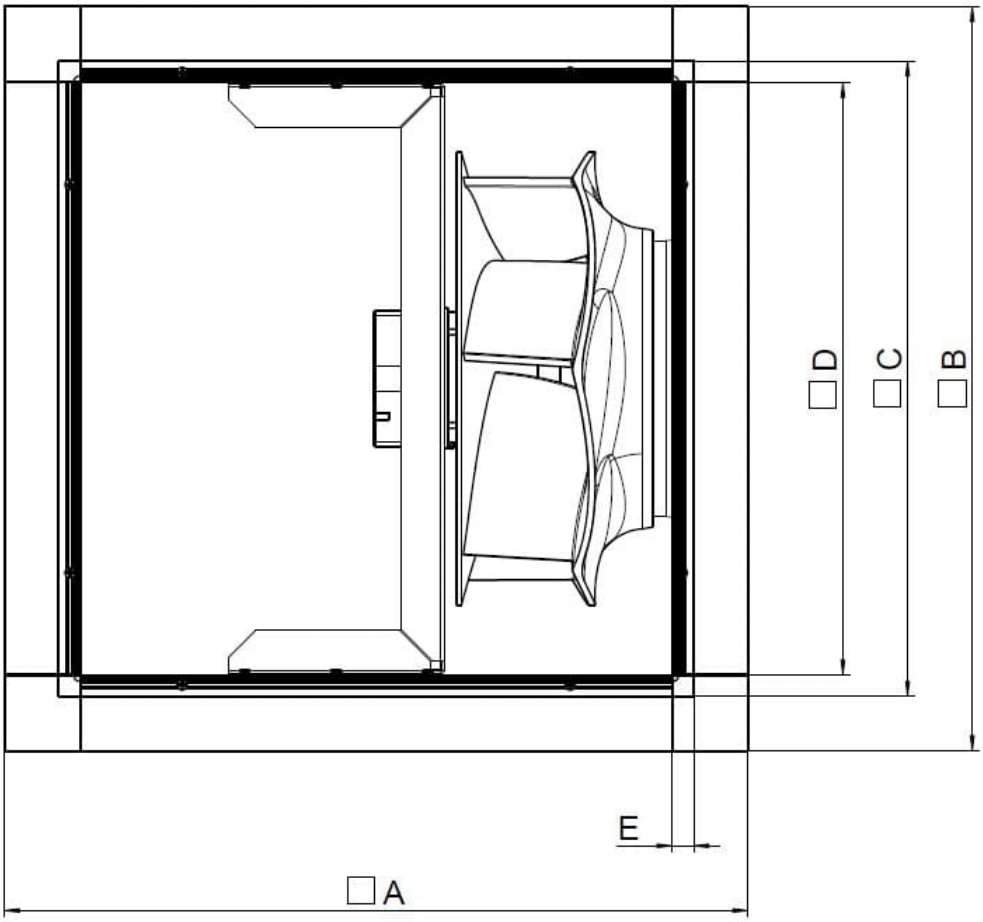
Ecodesign

Product		
Trade name	Systemair	
Product name	MUB 100 630EC	

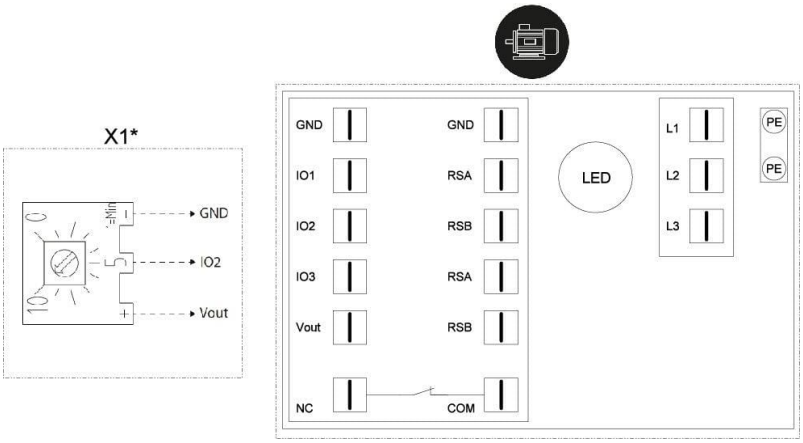
Ecodesign		
ErP compliance	2018	
Unit category	NRVU	
Drive	Integrated VSD	
Unit type	UVU	
Heat recovery type	nan	
Temperature ratio (UVU)	Not applicable	
qv nom	2.7344	m^3/s
P nom	3.168	kW
Ps nom	686	Pa
Fan efficiency	59.2	%
External Leakage	5	%
Sound power (LWA)	54	dB(A)

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 runds 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.

AHU Acceessories

- BMS Trickle & Boost Switch (120363)
- DMD-C Pressure controller (15793)
- EC-Basic-H humidity (24807)
- EC-Basic-U universal 0-10V (24806)
- FGV 100/916-916 flex. conn. (4199)
- HR1 Room Humidistat (215150)
- KKC-DX-R 100 cooling section (277267)
- KKC-W-L 100 cooling section (277271)
- KKC-W-R 100 cooling section (277275)
- KKH-HW 100 heater-section (93341)
- KKS 100 silencer-section (276853)
- MTV-1/010 Controller 0..10V+ (30650)
- Presence detector/IR24-P (6995)
- REV-5POL/05-7,5kW R/Y (35757)
- SD-MUB Vibration pad set (37324)
- Step switch S-5EC, 0-10V (76738)
- WSD 100 (1060x1060x70) compl. (31483)
- CXE/AVC Modbus (37256)
- EC-Basic-CO2 and temperature (24808)
- EC-Basic-T temperature (24805)
- EC-Selector (9908)
- GRU 100-1020/100 (276663)
- KKC-DX-L 100 cooling section (277263)
- KKC-W-L 100 cooling section (277271)
- KKC-W-R 100 cooling section (277275)
- KKF 30 100-filter-section (93313)
- KKH-HW 100 heater-section (93341)
- MTP 10, 10K, Speed control (32731)
- Potentiometer MTP 20, 0-10V (310220)
- REV-5POL/05-7,5kW B/G (281745)
- RT 0-30 Room Thermostat (5151)
- Step switch S-5EC-2, 0-10V (449084)
- TUNE-AHU-DE009-100-918x918-M0 (79883)
- WSG 100 MUB complete (31487)

Documents

- Commissioning Report
- EBM MODBUS Version 6.3 EN
- Installation, Operation and Maintenance instruction_003
- MLR Manual
- MUB_EC_AMCA_CERTIFICATE.PDF
- UKCA DECLARATION OF CONFORMITY_MUB_EN_002.PDF