

# MUB 042 500D4-A2 IE2 MULTIBOX

Item no. 33542

Version: 50 Hz; 90° airflow

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## Description

- High efficient motor IE2
- Speed-controllable via frequency converter
- Integral cold conductor (PTC)
- Low sound level
- Flexible airflow direction due to removable panels
- Installation in any mounting position
- Easy to maintain and reliable

The MUB fans size 500D4-A2 are equipped with high efficient IE2 motors. The MUB fans have an impeller with backward curved blades, manufactured from aluminum. Speed control is only possible by using a frequency converter. Motor protection is done by cold conductors (PTC), which have to be connected to an external motor protection device. The casing consists of an aluminum frame with fiberglass reinforced plastic corners of PA6; highly shock-resistant. The double skin panels are manufactured from galvanized steel with 20 mm mineral wool insulation. To avoid condensation the profile is provided with a separate chamber to fix screws. The Multibox fans are delivered for straight through airflow but can easily be rebuilt due to removable panels. This allows flexible ventilation solutions. The MUB can also be used as extract- or supply air unit in air handling units. Installation in any mounting position is possible.

MUB with additional modules (filters, heaters etc.) are available as air handling units "K025, K042 or K062" on request!



**Please note: Speed control by voltage, i.e. voltage transformers, is not possible!**

In accordance with Commission Regulation (EC) no 640/2009 of the European Parliament - eco-design requirements for electric motors - the new international efficiency classes are binding as of 16 June 2011. These guidelines defined by CEMEP and EPACT are regarded as international standard for energy-saving high-efficiency motors for frequencies of 50 or 60 Hz and make the use of IE2 motors mandatory.

With this new and more efficient technology we offer our customers many advantages such as environmentally friendly operation, reduced energy consumption and hence lower emissions. IE2 motors have a higher efficiency even in part load operation and allow optimum adjustment to the operating point. In addition, the IE2 motors generate less noise and develop less heat, which has a positive influence on the efficiency and the cooling requirement of the motor. Please note: IE2 motors cannot be speed controlled by voltage, i.e. voltage transformers.

## Technical parameters

Nominal data		
Voltage	400	V
Frequency	50	Hz
Phase	3	~
Input power (P1)	1356	W
Current	2,87	A
Max. airflow	7787	m <sup>3</sup> /h
Fan impeller speed	1440	r.p.m.
Weight	64	kg
Motor circuit connection	Y	
Starting current	23	A
Temperature data		

**Sound data**Sound pressure level at 3 m (20m<sup>2</sup> Sabin) 55 dB(A)**Protection / Classification**

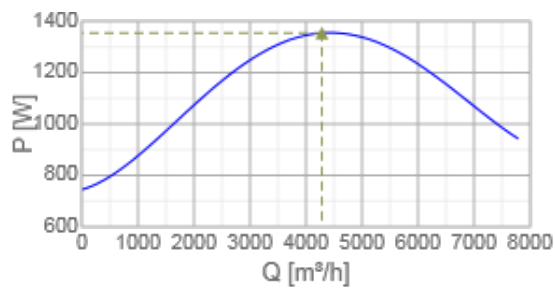
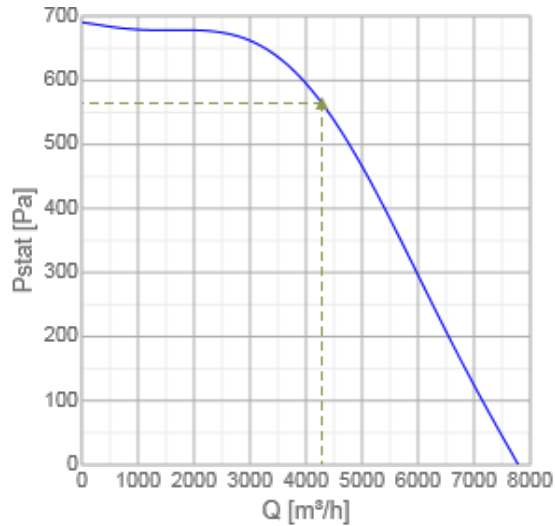
Insulation class F

Enclosure class, motor IP55 IP

**ErP**

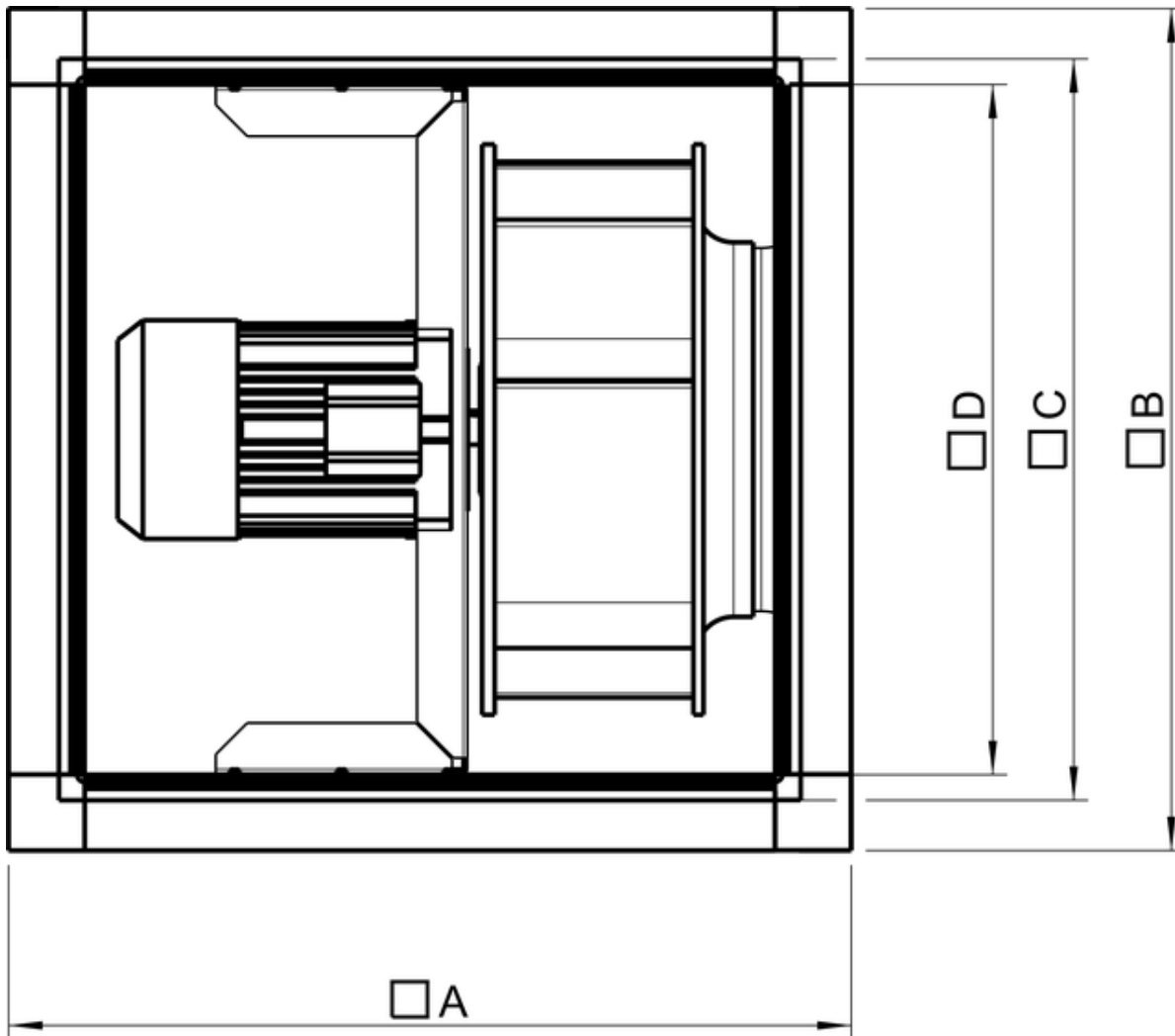
ErP ready

ErP 2018/ErP 2016

**EPS diagrams****Performance****Diagrams****Hydraulic data**

	Working point						
	Q [m <sup>3</sup> /h]	Ps [Pa]	P [W]	n [r.p.m.]	I [A]	SFP [kW/(m <sup>3</sup> /s)]	U [V]
Max efficiency	4283	564	1355	1441	2,87	1,14	400

**Dimensions**



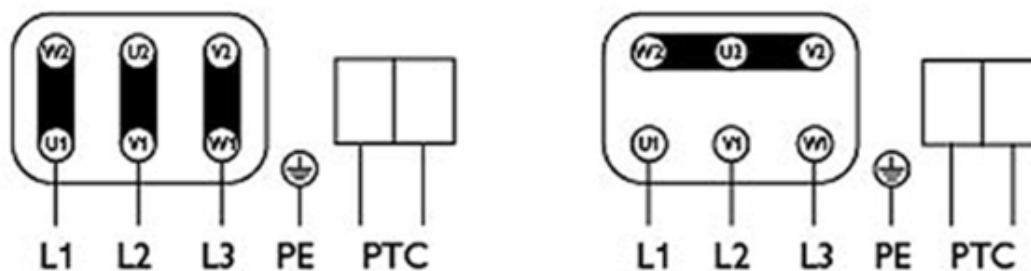
□A	□B	□C	□D
MUB 042 500	670	670	590
		590	548

### Wiring

# Dreiphasenmotor mit Kaltleiter

## Three phase motor with cold conductor

### Moteur triphasé avec résistance PTC



3 x 230V  
D Schaltung  
Delta connection  
Branchement en triangle

3 x 400V  
Y Schaltung  
Star connection  
Branchement en étoile

Drehrichtungsänderung durch Vertauschen von 2 Phasen  
Changing of direction of rotation by interchanging of two phases  
Changement de sens de rotation par inversion de deux phases

Typenschild beachten! See label! Voir plaquette!

## Accessories

### Electric accessories

REV-5POL/05 ON/OFF (33979)  
FRQ-4A V2 (36227)  
FRQ5-4A+LED V2 (36229)  
FRQS-4A V2 (36231)  
FRQ5S-4A+LED V2 (36233)  
FXDM5AM Frequency inv. IP54 (31387)  
U-EK230E EX Motorprotec. (30199)  
REV-5POL/05 incl. EMC KIT (34549)

### Accessories

CCM outlet MUB042 d400 (311682)  
CCM outlet MUB042 d500 (311683)  
UGS 042/500 adapter flex. (4357)  
FGV 042/586-586 flex. conn. (4605)  
SDM Service Door MUB 042 comp. (32572)  
WSD 042 (730x730x70) complete (31481)  
CCM inlet MUB042 d400 (311780)  
CCM inlet MUB042 d500 (311781)  
SD-MUB Vibration pad set (37324)  
CCMI outlet 042 d400 insul KIT (313845)  
CCMI outlet 042 d500 insul KIT (313846)

## Documentation

 IMO\_MUB\_160427\_DE,EN,SE,DK,ES,RU\_002\_311722\_web.pdf (2,69MB)

 ec-dec\_mub\_160414\_DE,GB\_002\_ab 20. April.pdf (549,53kB)

## Acoustics

Mid-frequency band, Hz

500D4	Hz	Tot	63	125	250	500	1k	2k	4k	8k
LwA Inlet	dB(A)	77	64	66	70	72	71	68	63	56
LwA Outlet	dB(A)	79	66	68	72	74	73	70	65	58
LwA Surrounding	dB(A)	62	49	51	55	57	56	53	48	41

Measuring point:  $q_v = 1,19 \text{ m}^3/\text{s}$ ,  $P_s = 564 \text{ Pa}$

## Specification text

Multibox duct fan for easy and direct installation in duct systems.

Casing frame construction made of aluminium hollow profiles and plastic corners for highest impact resistance. Double skin galvanised steel panels, thermally and sound insulated with a 20 mm layer of mineral wool, smooth inner sides.

Free-running, backward curved circular impeller made of aluminium.

Impeller acc. to VDI 2060, balancing quality G 6.3, dynamically balanced in two planes.

Voltage controllable external rotor motor,

Standard motor IE2 (IP55), maintenance-free, the motor is placed inside the air flow for cooling. Integral thermal contacts (PTC) with leads to a motor protection device.

Terminal box fitted on the motor.

Multifunctional use, variable outlet direction, can be modified on site.

For extract and supply air.

Installation in any mounting position.

For indoor installation.

For outdoor installation with corresponding accessories.