

MUB 042 500D4 IE2 Multibox

Centrifugal box fan, insulated, flexible outlet

Item Number: [33542](#)

Variant: 400V 3~ 50Hz - Y (Star) - 90° air flow



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 controll 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

Norminal data

Voltage (Nominal)

400 V

Frequency	50	Hz
Phase(s)	3~	
Motor circuit connection	Y	
Input power	1,356	W
Starting current	23	A
Input current	2.87	A
Impeller speed	1,440	r.p.m.
Air flow	max 2.163	m³/s
Temperature of transported air	max 40	°C
Max temperature of transported air, when speed controlled	40	°C

Sound data

Sound pressure level at 3m (20m² Sabin)	55	dB(A)
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Protection/Classification

Enclosure class, motor	IP55	
Insulation class	F	

Data according to ErP

ErP ready	ErP 2016; ErP 2018	
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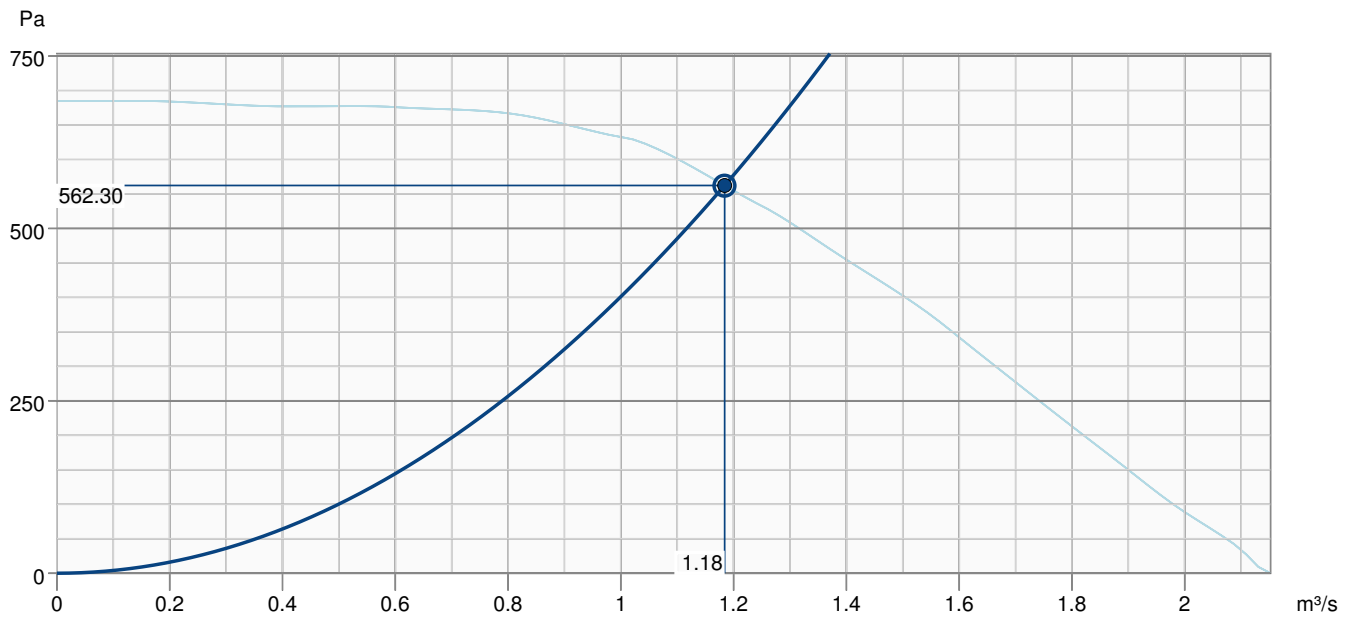
Dimensions and weights

Weight	64	kg
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Others

Motor type	AC	
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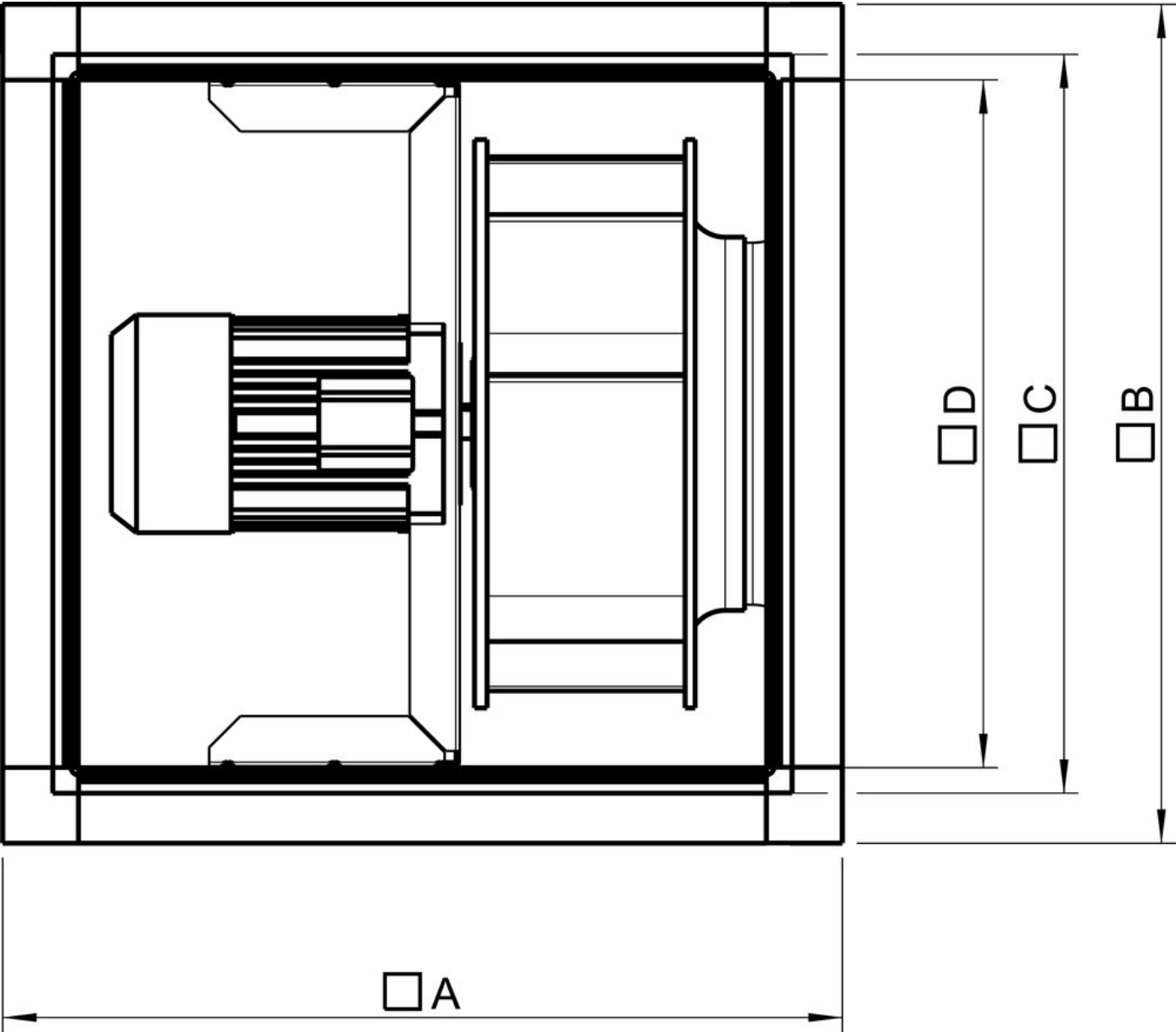
Performance curve



Hydraulic data

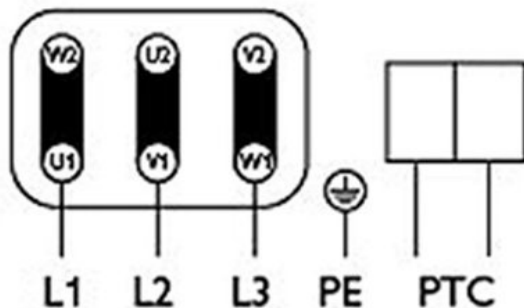
Required air flow	1.18 m³/s
Required static pressure	562 Pa
Working air flow	1.18 m³/s
Working static pressure	562 Pa
Air density	1.204 kg/m³
Power	1342.0 W
Fan control - RPM	1442 rpm
Current	2.87 A
SFP	1.133 kW/m³/s
Control voltage	400.0 V
Supply voltage	400 V

Dimension



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

Dreiphasenmotor mit Kaltleiter
Three phase motor with cold conductor
Moteur triphasé avec résistance PTC

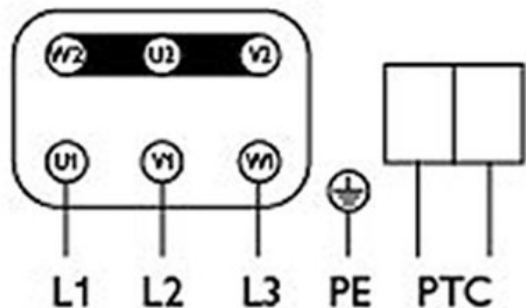


3 x 230V

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 plaque!

Acoustic

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

Ecodesign

Product			
Trade name		Systemair	
Product name		MUB 042 500D4-A2 IE2 Multibox	
Ecodesign			
ErP compliance		2018	
Unit category		NRVU	
Drive		External MSD or VSD	
Unit type		UVU	
Heat recovery type		None	
Temperature ratio (UVU)		Not applicable	
qv nom	1.19	m³/s	
P nom	1.355	kW	
Ps nom	564	Pa	
Fan efficiency	49	%	
External Leakage	5	%	
Sound power level LWA	62	dB(A)	

Accessories

- CCM inlet MUB042 d400 (311780)
- CCMI outlet 042 d400 insul KIT (313845)
- FGV 042/586-586 flex. conn. (4605)
- FRQ5S-4A+LED V2 (36233)
- REV-5POL/05 ON/OFF (33979)
- TUNE-AHU-DE007-042-588x588-M0 (79881)
- UGS 042/500 adapter flex. (4357)
- WSG 042 MUB complete (31485)
- CCM outlet MUB042 d500 (311683)
- FRQS-4A V2 (36231)
- SDM Service Door MUB 042 comp. (32572)
- RK-MUB-548x548-S (43680)
- CCM inlet MUB042 d500 (311781)
- CCMI outlet 042 d500 insul KIT (313846)
- FRQ5-4A+LED V2 (36229)
- FXDM5AM Frequency inv. IP54 (31387)
- SD-MUB Vibration pad set (37324)
- U-EK230E Motor protection (30199)
- WSD 042 (730x730x70) complete (31481)
- CCM outlet MUB042 d400 (311682)
- FRQ-4A V2 (36227)
- REV-5POL/05 incl. EMC KIT (34549)
- RK-MUB-548x548-R (43676)
- RKT-MUB-548x548-S (43684)

Documents

- IMO_MUB_141026_DE,EN,SE,DK,ES,RU_001_311722_WEB.PDF
- EU DECLARATION OF CONFORMITY_MUB_EN_[001].PDF
- COMMISSIONING REPORT_FANS_160628_EN_001.PDF

Specification

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.