AC centrifugal fan

backward-curved, single-intake

Limited partnership · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	**R4D500-AT01-05**
Motor	**M4D138-HF**

Phase		3~	3~
Nominal voltage	VAC	400	400
Wiring		Δ	Y
Frequency	Hz	50	50
Method of obtaining data		ml	ml
Valid for approval/standard		-	-
Speed (rpm)	min^{-1}	1380	1160
Power consumption	W	1450	1080
Current draw	A	2.8	1.8
Min. back pressure	Pa	0	0
Min. back pressure	in. wg	0	0
Min. ambient temperature	°C	-40	-40
Max. ambient temperature	°C	80	80
Starting current	A	14	4.5

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change

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Technical description

Weight	22 kg
Fan size	500 mm
Rotor surface	Cast in aluminum
Impeller material	Sheet aluminum
Number of blades	9
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	F3-1
Ambient temperature note	Occasional start-up between -40°C and -25°C is permissible. For continuous operation at temperatures below -25°C (e.g. refrigeration applications) we recommend our fan design with special low-temperature bearings.
Max. permitted ambient temp. for motor (transport/storage)	+ 80 °C
Min. permitted ambient temp. for motor (transport/storage)	- 40 °C
Installation position	Any
Condensation drainage holes	On rotor and stator sides
Mode	S1
Motor bearing	Ball bearing
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) with basic insulation
With cable	Lateral
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 61800-5-1; EN 60034
Approval	VDE; EAC

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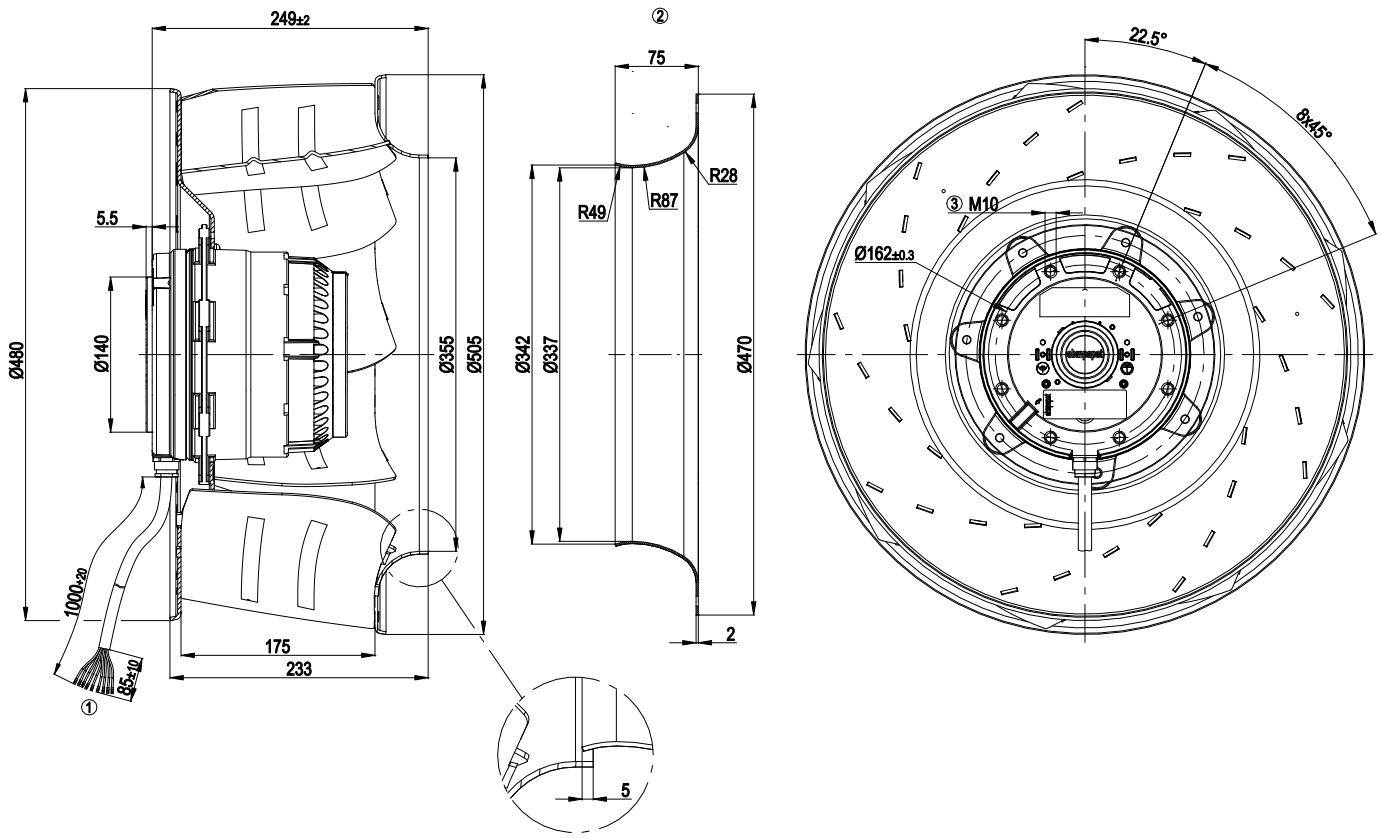
Product drawing



1	Cable halogen-free, 9 x 0.75 mm², 9 x crimped splices
2	Accessory part: Inlet ring 63072-2-4013 not included in scope of delivery.
3	Max. clearance for screw 18 mm

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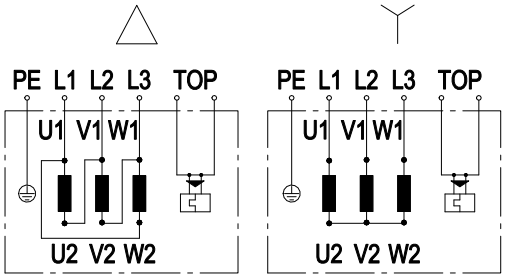
Connection diagram



Note: Change of rotation direction by reversing two phases

Δ	Delta connection	Y	Star connection	L1	black
L2	blue	L3	brown	U1	black
V1	blue	W1	brown	U2	green
V2	white	W2	yellow	TOP	2x gray
PE	green/yellow				

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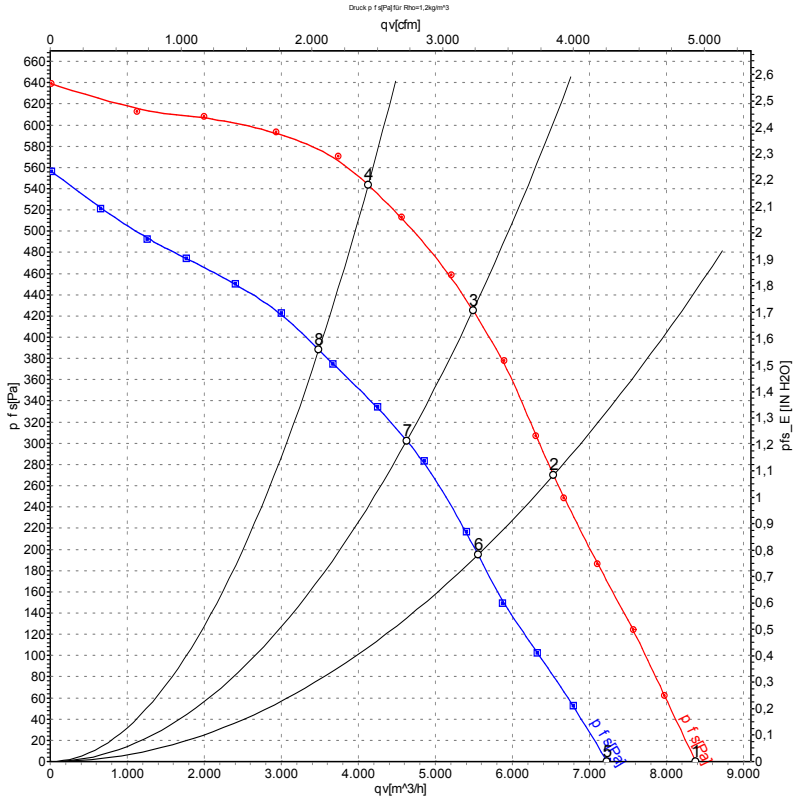
Curves: Air performance 50 Hz Δ



Measurement: LU-100733-1
Measurement: LU-100734-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. Intake sound level: Sound power level according to ISO 13347 / sound pressure level measured at 1 m distance from fan axis. The values given are valid under the specified measuring conditions and may vary due to conditions of installation. For deviations from the standard configuration, the parameters have to be checked on the installed unit.

Measured values

	Wired	U	f	n	P_e	I	LpA_{in}	LwA_{in}	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
1	Δ	400	50	1410	1148	2.33	78	85	8370	0	4925	0.00
2	Δ	400	50	1385	1347	2.54	73	80	6540	270	3850	1.08
3	Δ	400	50	1380	1450	2.80	71	78	5490	425	3230	1.71
4	Δ	400	50	1385	1336	2.54	70	77	4130	544	2430	2.18
5	Y	400	50	1230	900	1.48			7280	0	4285	0.00
6	Y	400	50	1175	1025	1.69			5555	195	3270	0.78
7	Y	400	50	1160	1080	1.80			4630	303	2725	1.22
8	Y	400	50	1175	1015	1.67			3490	388	2055	1.56

Wired = Wiring · U = Power supply · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
q_V = Air flow · p_{fs} = Pressure increase