R4E355-RM03-07

AC centrifugal fan - RadiCal

backward-curved, single-intake

R4E355-RM03-07 ebmpapst Datasheet

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Nominal data

Type	**R4E355-RM03-07**
Motor	**M4E094-EA**

Phase		1~	1~
Nominal voltage	VAC	230	230
Frequency	Hz	50	60
Method of obtaining data		ml	ml
Valid for approval/standard		CE	CE
Speed (rpm)	min^{-1}	1370	1520
Power consumption	W	280	400
Current draw	A	1.23	1.77
Capacitor	µF	8	8
Capacitor voltage	VDB	400	400
Capacitor standard		S0 (CE)	S0 (CE)
Min. back pressure	Pa	0	0
Min. back pressure	in. wg	0	0
Min. ambient temperature	°C	-40	-40
Max. ambient temperature	°C	55	60
Starting current	A	2.75	2.1

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

Data according to Commission Regulation (EU) 327/2011 (EN 17166)

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	46.7	45.7
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		63	62
05 Variable speed drive		No	

09 Power consumption P_e	kW	0.28
09 Air flow q_v	m^3/h	2005
09 Pressure increase p_{fs}	Pa	236
10 Speed (rpm) n	min^{-1}	1390
11 Specific ratio*		1.00

Data obtained at optimum efficiency level.
The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

* Specific ratio = 1 + p_{fs} / 100 000 Pa

LU-152841

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Technical description

Weight	5.859 kg
Size	355 mm
Motor size	94
Impeller material	PP plastic
Number of blades	6
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54; installation- and position-dependent as per EN 60034-1
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H2
Ambient temperature note	Occasional start-up at temperatures between -40°C and -25°C is permitted. For continuous operation at ambient temperatures below -25°C (such as refrigeration applications), use must be made of a 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	None
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) internally connected
With cable	Variable
Protection class	I (with customer connection of protective earth)
Motor capacitor according to EN 60252-1 in safety protection class	S0
Conformity with standards	EN 60034-1 (2010); CE
Approval	EAC; UL 1004-1

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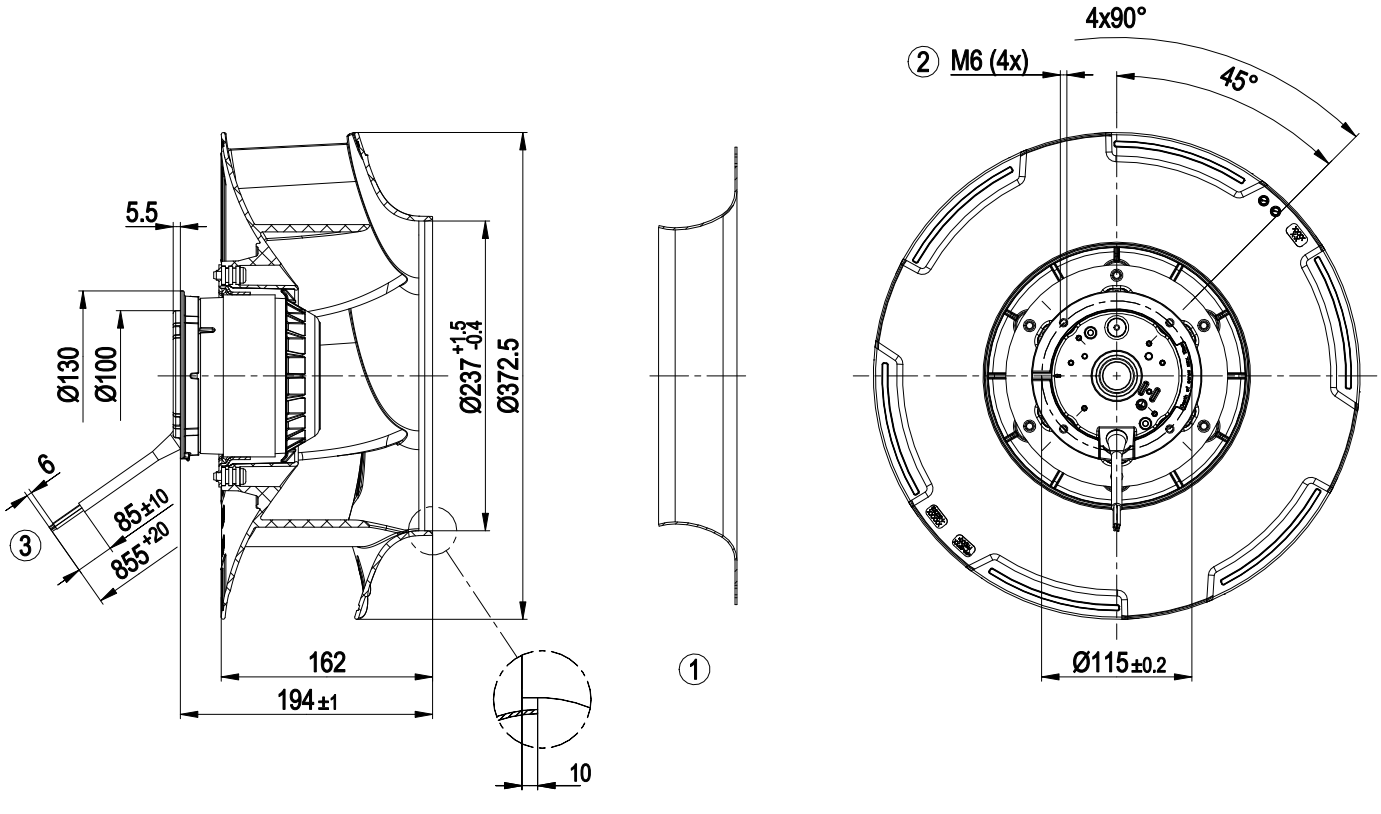
Product drawing



1	Accessory part: inlet ring 35500-2-4013 not included in scope of delivery
2	Max. clearance for screw 10 mm
3	Cable silicone 4G 0.5 mm², 4x crimped splices

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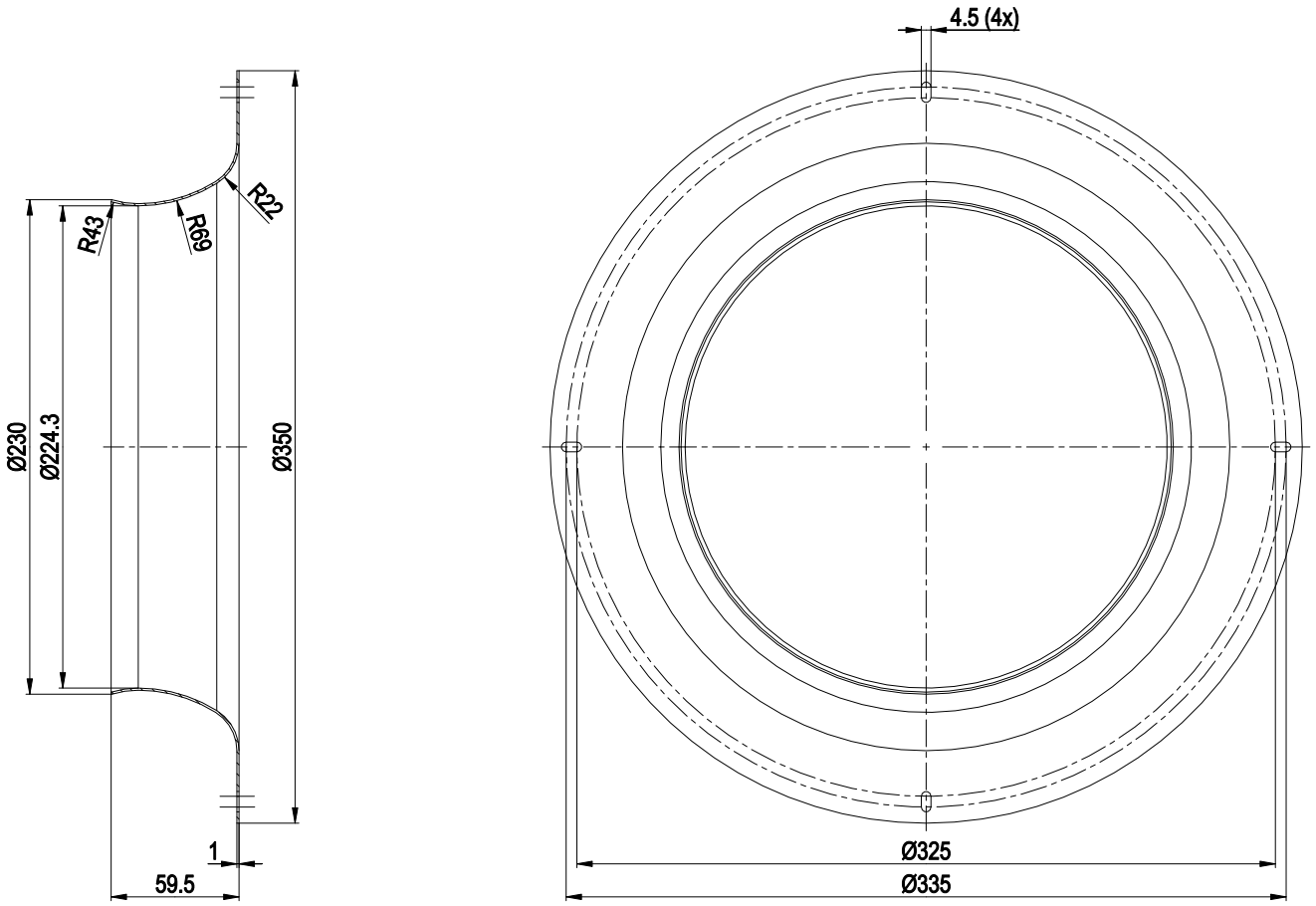
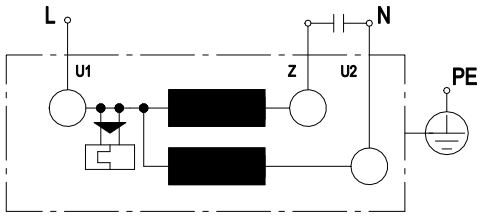
Accessory part



	Inlet ring 35500-2-4013

Connection diagram



U1	blue	Z	brown	U2	black
PE	green/yellow				

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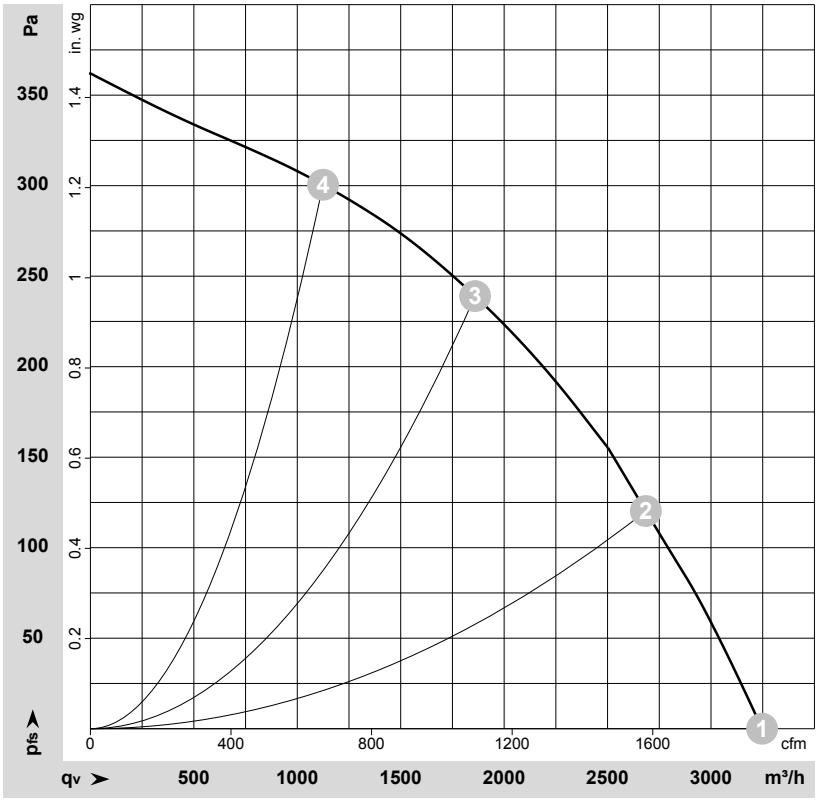
Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-144684-1

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	1~	230	50	1410	225	1.02	64	71	3245	0	1910	0.00
2	1~	230	50	1385	255	1.13	59	66	2685	120	1580	0.48
3	1~	230	50	1370	280	1.23	57	63	1860	240	1095	0.96
4	1~	230	50	1385	257	1.14	58	65	1125	300	660	1.20

Wired = Wiring · U = Voltage · 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

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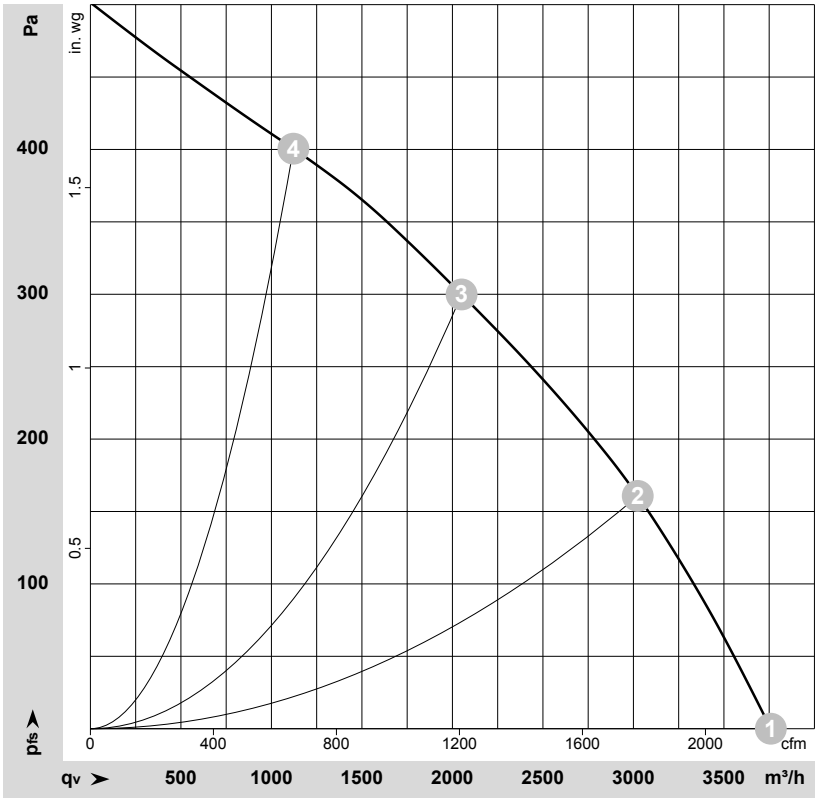
Curves: Air performance 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-144692-1

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

	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	230	60	1635	330	1.48	67	75	3760	0	2210	0.00
2	230	60	1570	378	1.67	62	69	3025	160	1780	0.64
3	230	60	1520	400	1.77	59	66	2050	300	1205	1.20
4	230	60	1585	368	1.63	64	71	1120	400	660	1.61

U = Voltage · 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