R2E160-AY50-25

AC centrifugal fan

forward-curved, single-intake

R2E160-AY50-25 ebmpapst Datasheet
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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	**R2E160-AY50-25**
Motor	**M2E068-EC**

Phase		1~	1~	1~
Nominal voltage	VAC	230	230	230
Frequency	Hz	50	60	60
Method of obtaining data		ml	ml	ml
Valid for approval/standard		CE	CE	UL 2111
Speed (rpm)	min^{-1}	2500	2550	2550
Power consumption	W	210	280	300
Current draw	A	0.93	1.22	1.26
Capacitor	µF	6	6	6
Capacitor voltage	VDB	400	400	400
Capacitor standard		S0 (CE)	S0 (CE)	UL
Min. back pressure	Pa	350	365	365
Min. back pressure	inH2O	1.41	1.47	1.47
Min. ambient temperature	°C	-25	-25	-25
Max. ambient temperature	°C	50	30	30
Starting current	A	1.73	1.63	

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

Data according to ErP Directive

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	32.6	32.6
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		44	44
05 Variable speed drive		No	

09 Power consumption P_e	kW	0.16
09 Air flow q_v	m^3/h	355
09 Pressure increase p_{fs}	Pa	525
10 Speed (rpm) n	min^{-1}	2685
11 Specific ratio*		1.01

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-152519

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Technical description

Weight	2.8 kg
Fan size	160 mm
Rotor surface	Painted black
Impeller material	Sheet steel, galvanized
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP44; installation- and position-dependent as per EN 60034-5
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H0 - dry environment
Max. permitted ambient temp. for motor (transport/storage)	+ 80 °C
Min. permitted ambient temp. for motor (transport/storage)	- 40 °C
Installation position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensation drainage holes	On rotor side
Mode	S1
Motor bearing	Ball bearing
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	< 0.75 mA
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; CE
Approval	UL 2111; CSA C22.2 No. 77; EAC

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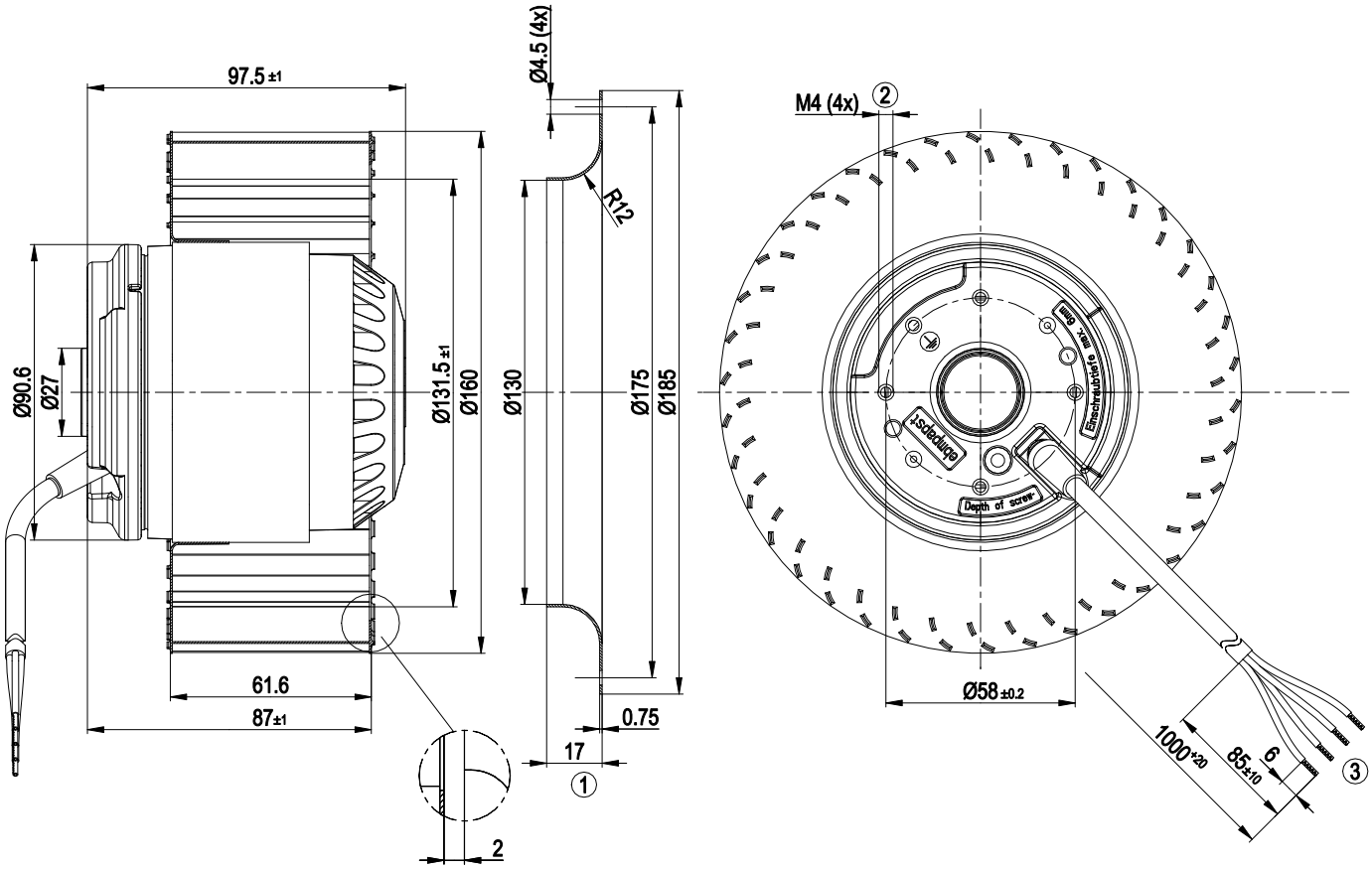
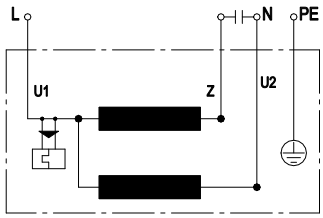
Product drawing



1	Accessory part: inlet ring 09588-2-4013 not included in scope of delivery
2	Max. clearance for screw 6 mm
3	Cable PVC AWG20, 4x crimped splices

Connection diagram



U1	blue	Z	brown	U2	black
PE	green/yellow				

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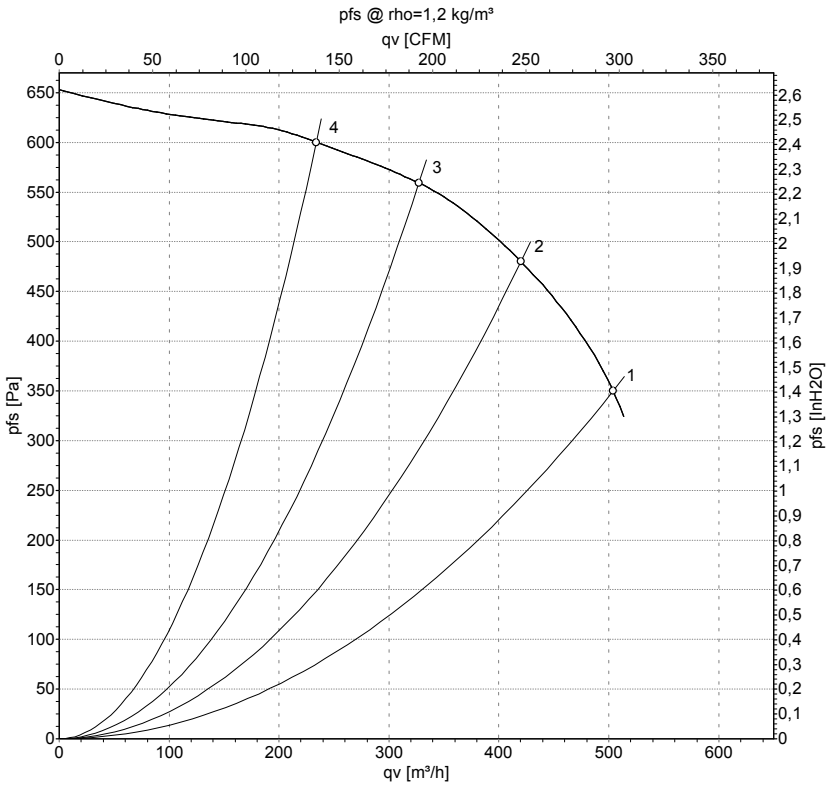
Curves: Air performance 50 Hz



Measurement: LU-152519-1

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	inH2O
1	230	50	2500	210	0.93	70	78	505	350	295	1.41
2	230	50	2615	182	0.79	70	77	420	480	245	1.93
3	230	50	2700	157	0.68	70	76	325	560	190	2.25
4	230	50	2770	137	0.59	71	78	235	600	140	2.41

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

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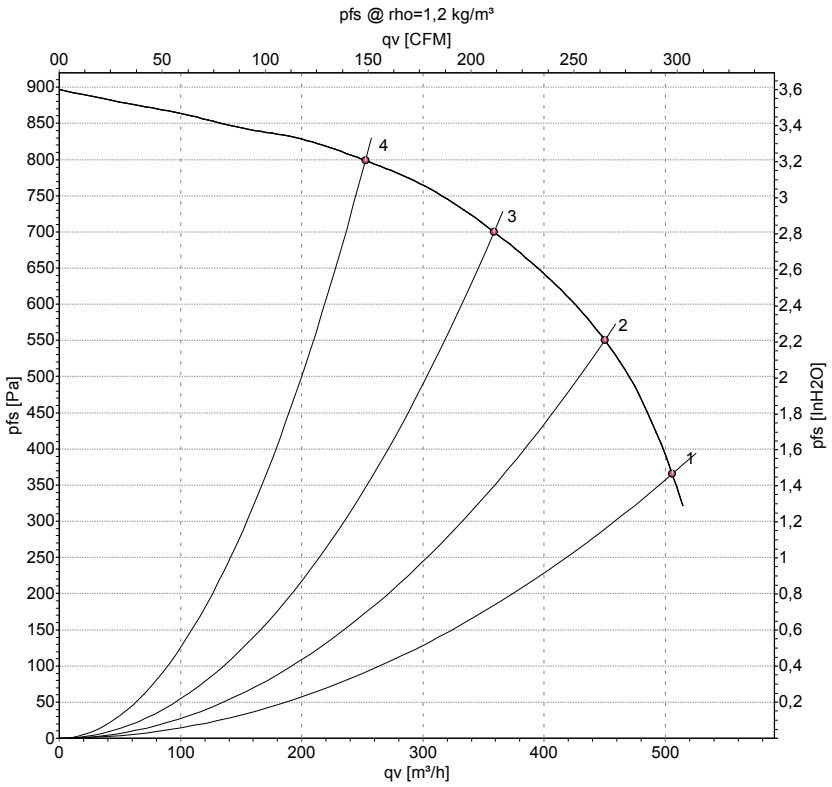
Curves: Air performance 60 Hz



Measurement: LU-153104-1

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	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	inH2O
1	230	60	2550	280	1.22	505	365	300	1.47
2	230	60	2805	254	1.11	450	550	265	2.21
3	230	60	3035	222	0.98	360	700	210	2.81
4	230	60	3205	189	0.86	255	800	150	3.21

U = Power supply · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase

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