R2E190-AO50-96

AC centrifugal fan

backward-curved, single-intake

R2E190-AO50-96 ebmpapst Datasheet
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Nominal data

Type	**R2E190-AO50-96**
Motor	**M2E068-BF**

Phase		1~	1~
Nominal voltage	VAC	115	115
Frequency	Hz	60	60
Method of obtaining data		fa	fa
Valid for approval/standard		CE	UL
Speed (rpm)	min^{-1}	2700	2700
Power consumption	W	75	81
Current draw	A	0.66	0.70
Capacitor	µF	8	8
Capacitor voltage	VDB	220	220
Min. back pressure	Pa	0	0
Min. back pressure	inH2O	0	0
Min. ambient temperature	°C	-25	-25
Max. ambient temperature	°C	60	60
Starting current	A	0.79	

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	1.2 kg
Fan size	190 mm
Rotor surface	Painted black
Impeller material	PA6 plastic, glass-fiber reinforced
Number of blades	7
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+
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

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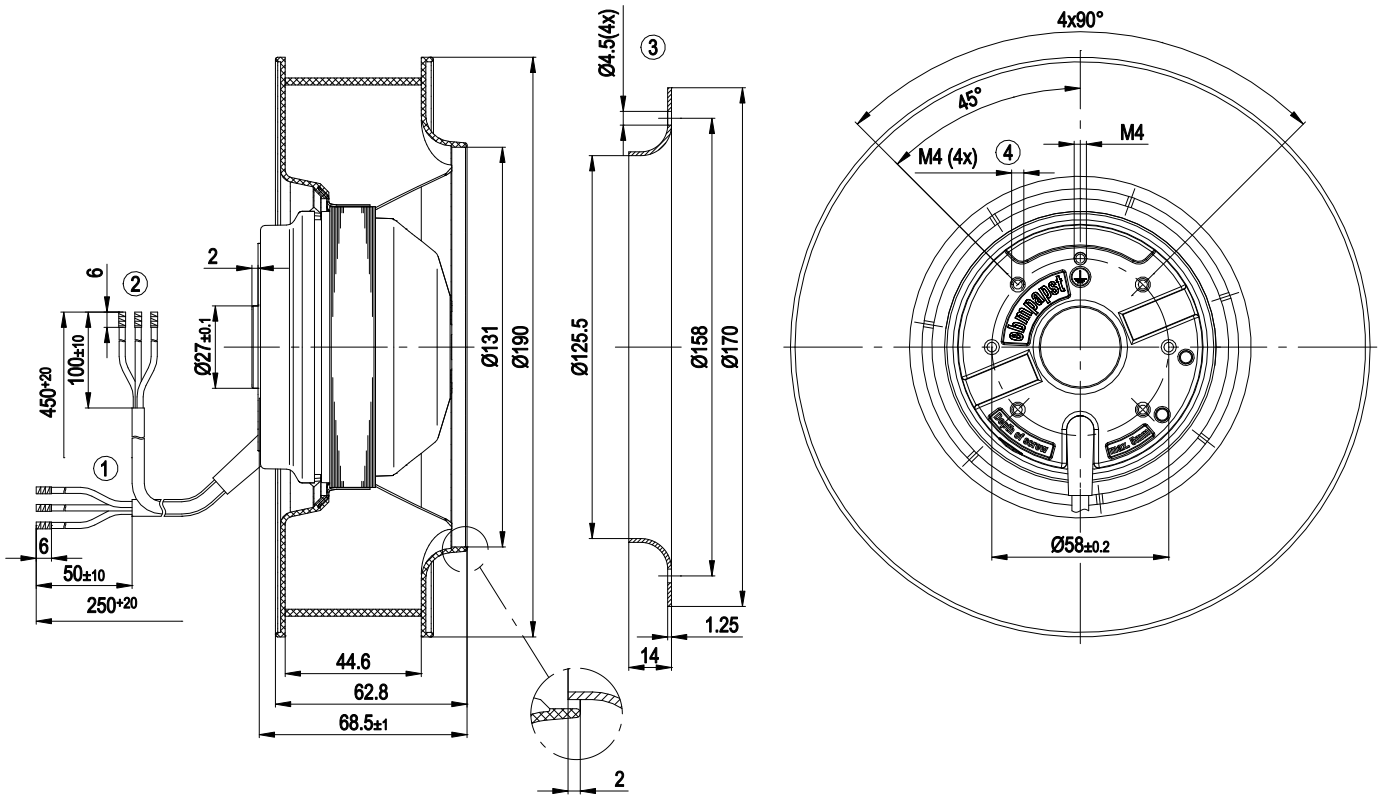
Product drawing



1	Cable PVC 3x AWG18, 3x crimped splices
2	Cable Raychem 3x AWG24 for Hall IC, 3x crimped splices
3	Accessory part: inlet ring 09576-2-4013, not included in scope of delivery
4	Max. clearance for screw 5 mm

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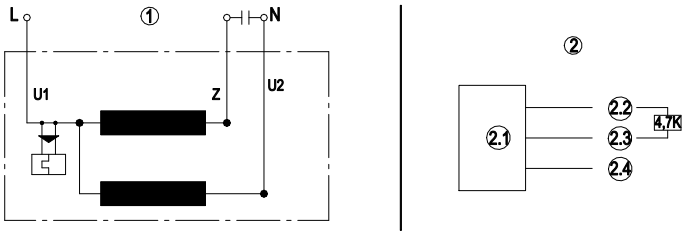
Connection diagram



1	Fan connection diagram
U1	blue
Z	brown
U2	black
2	Hall IC circuit
2.1	Hall IC
2.2	red (+5 V)
2.3	white (out)
2.4	black (0 V)

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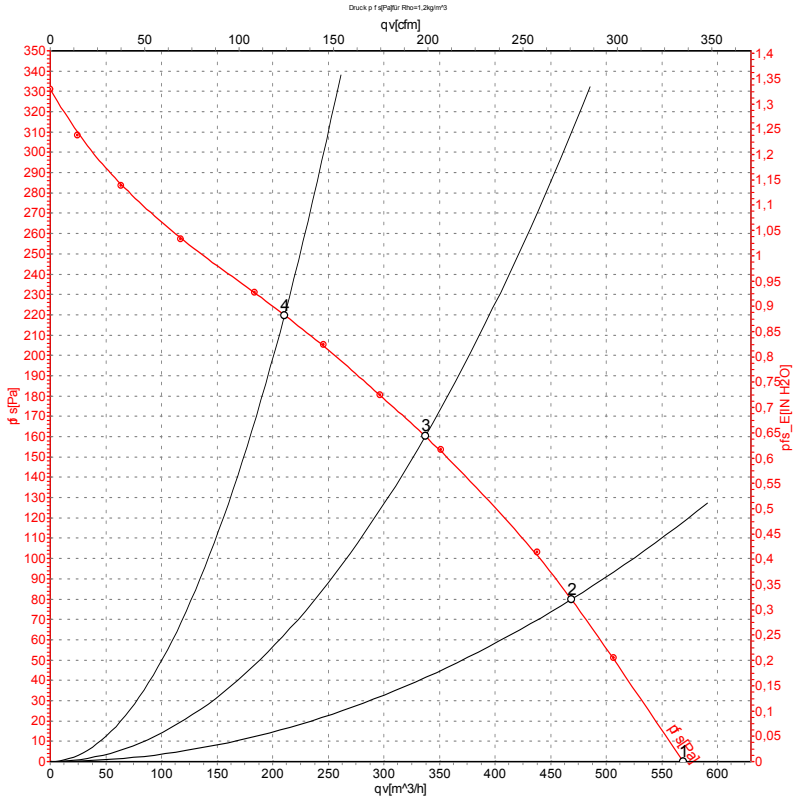
Curves: Air performance 50 Hz



Measurement: LU-50308-1

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	qv	p_{fs}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	CFM	inH2O
1	115	50	2500	57	0.50	570	0	335	0.00
2	115	50	2470	58	0.50	470	80	275	0.32
3	115	50	2415	60	0.52	335	160	200	0.64
4	115	50	2460	58	0.50	210	220	125	0.88

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

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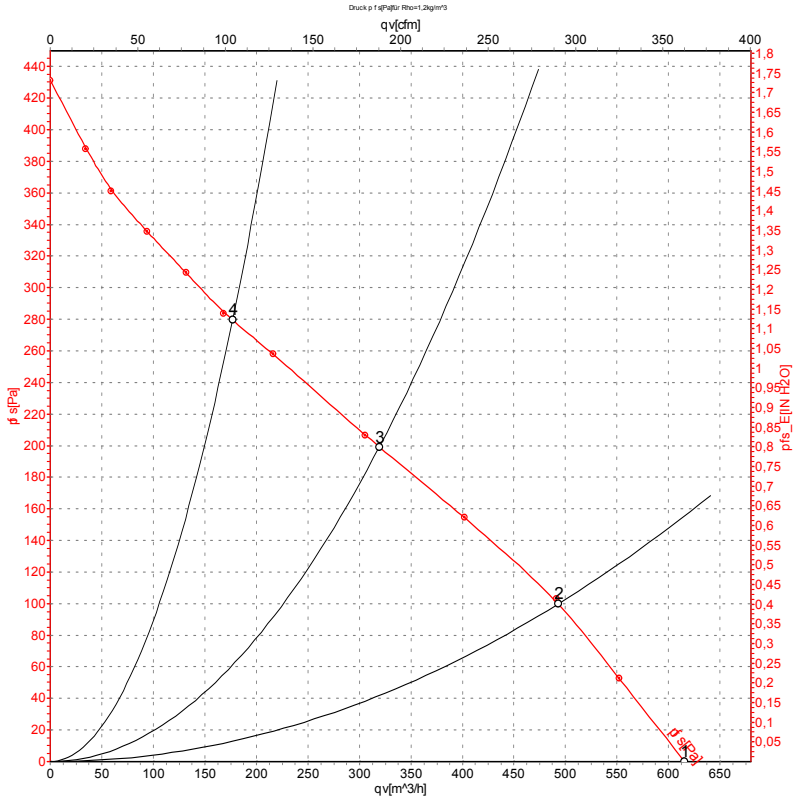
Curves: Air performance 60 Hz



Measurement: LU-50309-1

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	qv	p_{fs}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	CFM	inH2O
1	115	60	2700	75	0.66	615	0	365	0.00
2	115	60	2680	75	0.67	495	100	290	0.40
3	115	60	2560	78	0.69	320	200	190	0.80
4	115	60	2705	75	0.66	175	280	105	1.12

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