

# AC centrifugal fan - RadiCal

backward-curved, single-intake



R2E190-RB88-14 ebmpapst Datasheet

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## Nominal data

<b>Type</b>	<b>R2E190-RB88-14</b>		
<b>Motor</b>	<b>M2E068-CF</b>		
Phase		2~	2~
Nominal voltage	VAC	400	400
Frequency	Hz	50	60
Method of obtaining data		ml	ml
Valid for approval/standard		CE	CE
Speed (rpm)	min <sup>-1</sup>	2730	3150
Power consumption	W	80	100
Current draw	A	0.22	0.27
Capacitor	µF	1	1
Capacitor voltage	VDB	700	700
Capacitor standard		S0 (CE)	S0 (CE)
Min. back pressure	Pa	0	0
Min. back pressure	in. wg	0	0
Min. ambient temperature	°C	-25	-25
Max. ambient temperature	°C	30	55
Starting current	A	0.47	0.48

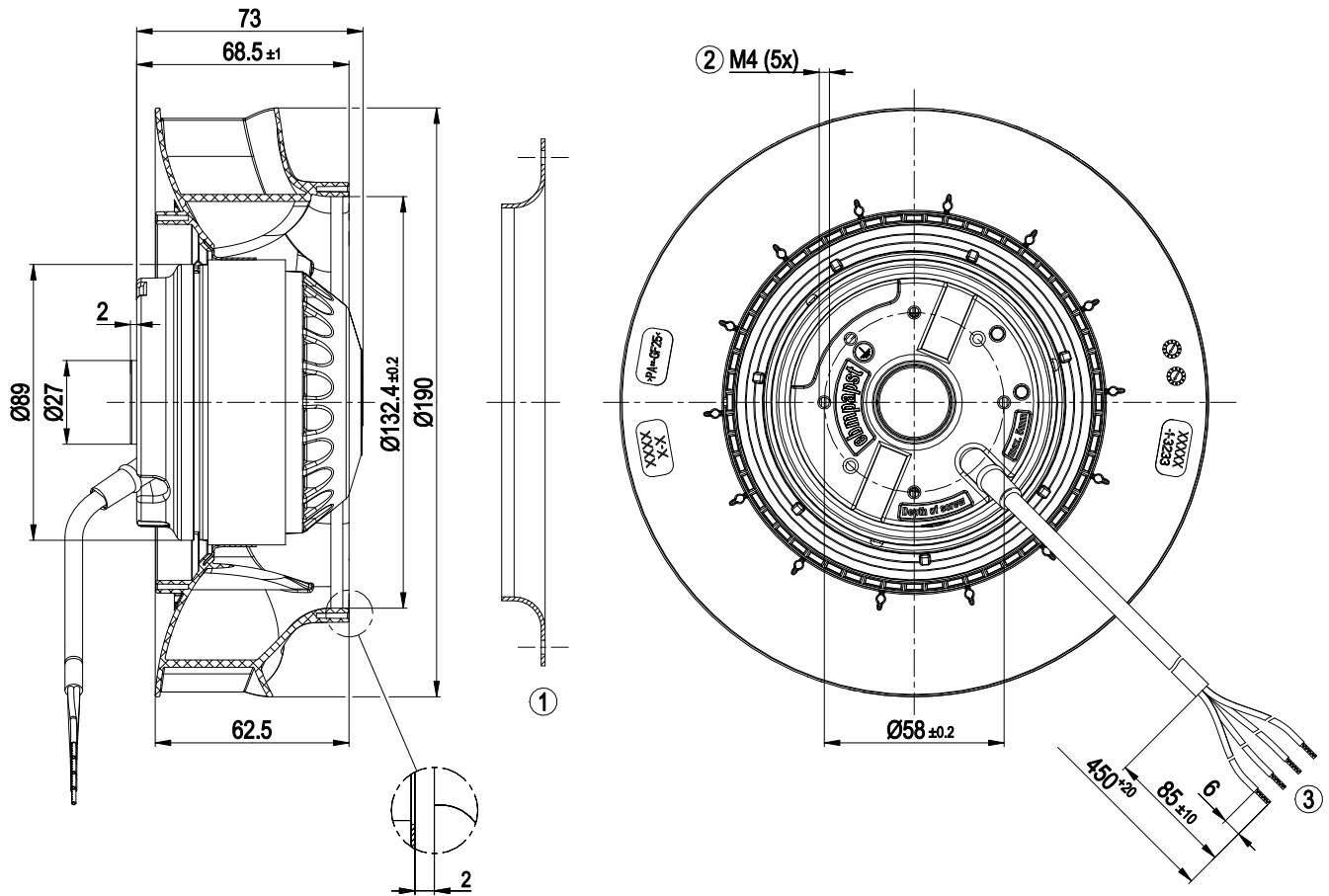
ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment  
 Subject to change



### Technical description

Weight	1.7 kg
Size	190 mm
Motor size	68
Rotor surface	Unpainted
Impeller material	PA plastic
Number of blades	7
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP44; installation- and position-dependent
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	Any
Condensation drainage holes	None
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
Pollution degree	2
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; CE

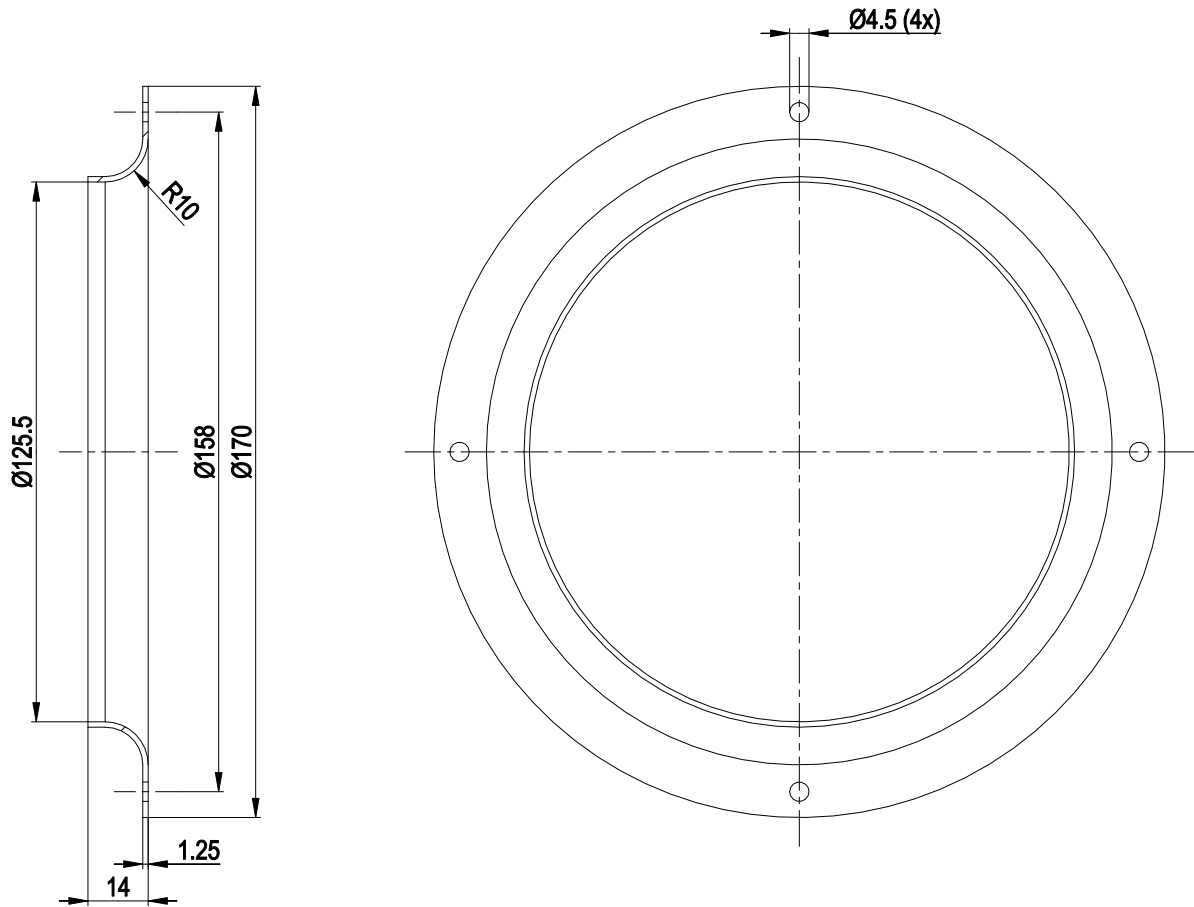
Product drawing



1	Accessory part: Inlet ring 09576-2-4013, not included in scope of delivery
2	Max. clearance for screw 5 mm
3	Cable PVC 4G 0.5 mm <sup>2</sup>
	4x splice

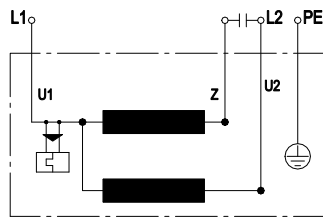


## Accessory part



1 Accessory part: inlet ring 09576-2-4013 not included in scope of delivery

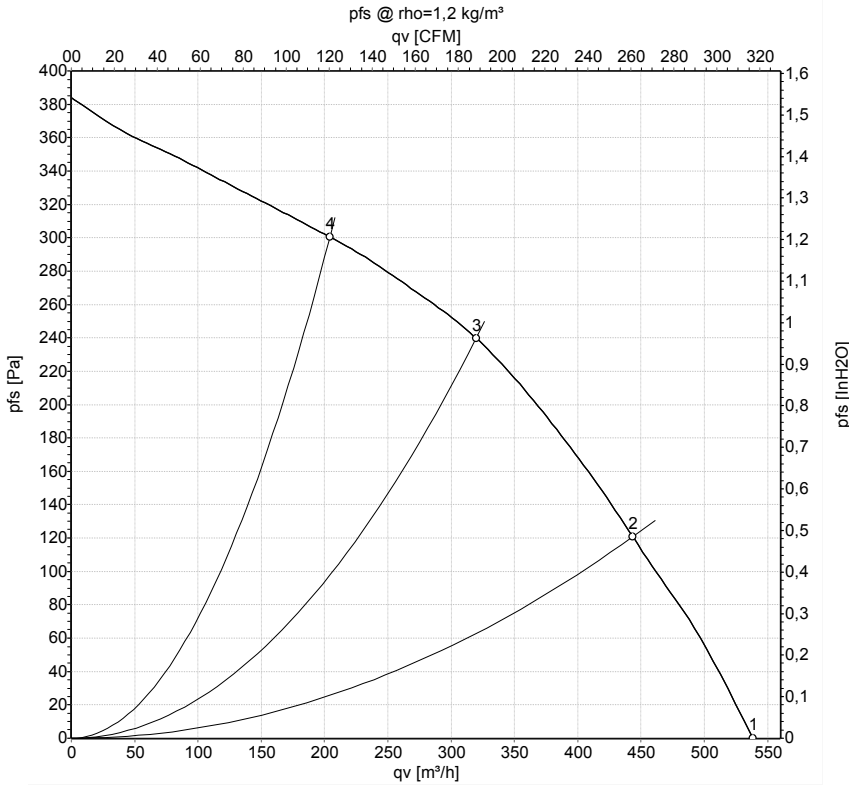
## Connection diagram



U1	blue	Z	brown	U2	black
PE	Green/yellow				



## Curves: Air performance 50 Hz



Measurement: LU-161864-1

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.

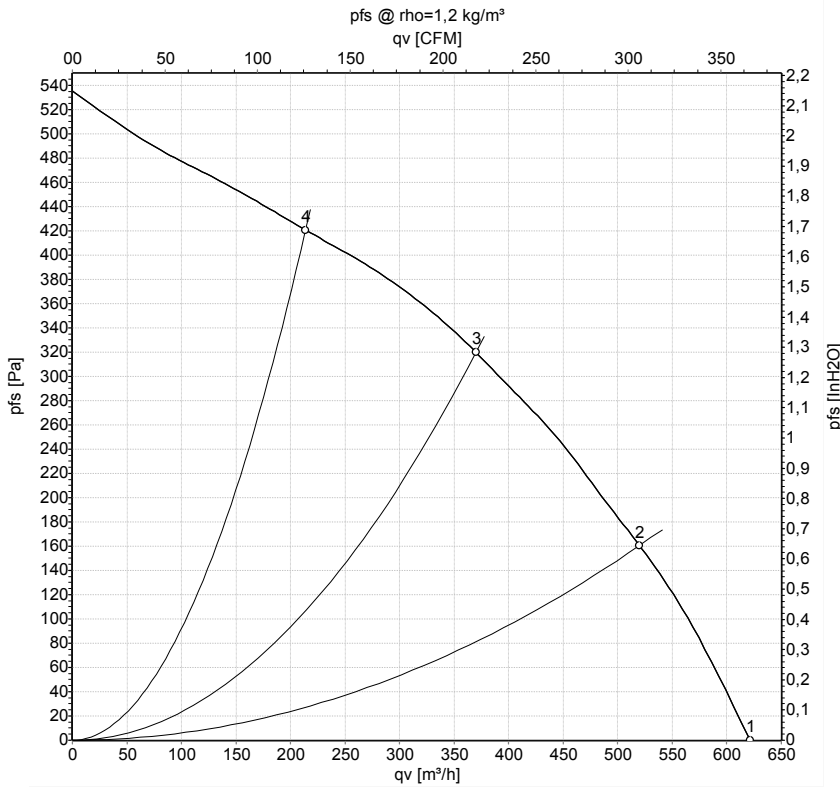
## Measured values

	U	f	n	P <sub>e</sub>	I	q <sub>v</sub>	p <sub>fs</sub>	q <sub>v</sub>	p <sub>fs</sub>
	V	Hz	min <sup>-1</sup>	W	A	m <sup>3</sup> /h	Pa	cfm	in. wg
1	400	50	2775	75	0.20	540	0	315	0.00
2	400	50	2760	77	0.20	445	120	260	0.48
3	400	50	2730	80	0.22	320	240	190	0.96
4	400	50	2750	78	0.20	205	300	120	1.20

U = Voltage · f = Frequency · n = Speed (rpm) · P<sub>e</sub> = Power consumption · I = Current draw · q<sub>v</sub> = Air flow · p<sub>fs</sub> = Pressure increase



## Curves: Air performance 60 Hz



Measurement: LU-162028-1

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 <sub>e</sub>	I	q <sub>v</sub>	p <sub>fs</sub>	q <sub>v</sub>	p <sub>fs</sub>
	V	Hz	min <sup>-1</sup>	W	A	m <sup>3</sup> /h	Pa	cfm	in. wg
1	400	60	3235	92	0.24	620	0	365	0.00
2	400	60	3205	95	0.25	520	160	305	0.64
3	400	60	3150	100	0.27	370	320	220	1.28
4	400	60	3210	95	0.24	215	420	125	1.69

U = Voltage · f = Frequency · n = Speed (rpm) · P<sub>e</sub> = Power consumption · I = Current draw · q<sub>v</sub> = Air flow · p<sub>fs</sub> = Pressure increase

