

# AC centrifugal fan

backward-curved, single-intake

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## Nominal data

<b>Type</b>	<b>R2E190-AO84-22</b>		
<b>Motor</b>	<b>M2E068-BF</b>		
Phase		2~	2~
Nominal voltage	VAC	400	400
Frequency	Hz	50	60
Method of obtaining data		fa	fa
Valid for approval/standard		-	-
Speed (rpm)	min <sup>-1</sup>	2500	2750
Power consumption	W	52	62
Current draw	A	0.14	0.16
Capacitor	µF	0.5	0.5
Capacitor voltage	VDB	700	700
Min. back pressure	Pa	0	0
Min. back pressure	inH <sub>2</sub> O	0	0
Max. ambient temperature	°C	55	55
Starting current	A	0.25	0.24

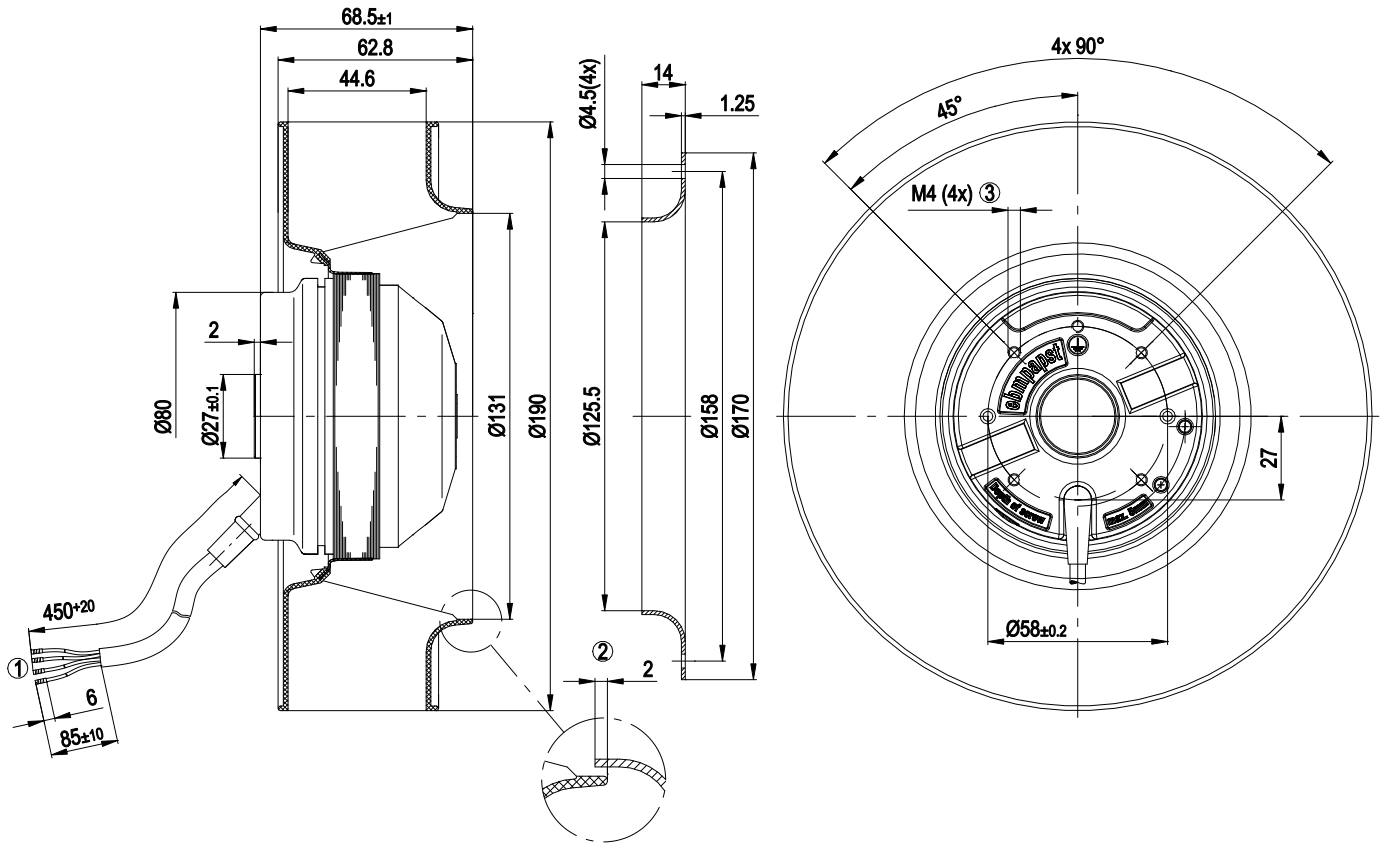
ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment  
Subject to change



### Technical description

<b>Weight</b>	1.23 kg
<b>Fan size</b>	190 mm
<b>Rotor surface</b>	Painted black
<b>Impeller material</b>	PA6 plastic, glass-fiber reinforced
<b>Number of blades</b>	7
<b>Direction of rotation</b>	Clockwise, viewed toward rotor
<b>Degree of protection</b>	IP54
<b>Insulation class</b>	"F"
<b>Moisture (F) / Environmental (H) protection class</b>	F3-1
<b>Max. permitted ambient temp. for motor (transport/storage)</b>	+ 80 °C
<b>Min. permitted ambient temp. for motor (transport/storage)</b>	- 40 °C
<b>Installation position</b>	Shaft horizontal or rotor on bottom; rotor on top on request
<b>Condensation drainage holes</b>	On rotor side
<b>Mode</b>	S1
<b>Motor bearing</b>	Ball bearing
<b>Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)</b>	< 0.75 mA
<b>Motor protection</b>	Thermal overload protector (TOP) internally connected
<b>With cable</b>	Variable
<b>Protection class</b>	I (with customer connection of protective earth)
<b>Conformity with standards</b>	EN 60335-1; CE
<b>Approval</b>	EAC

## Product drawing



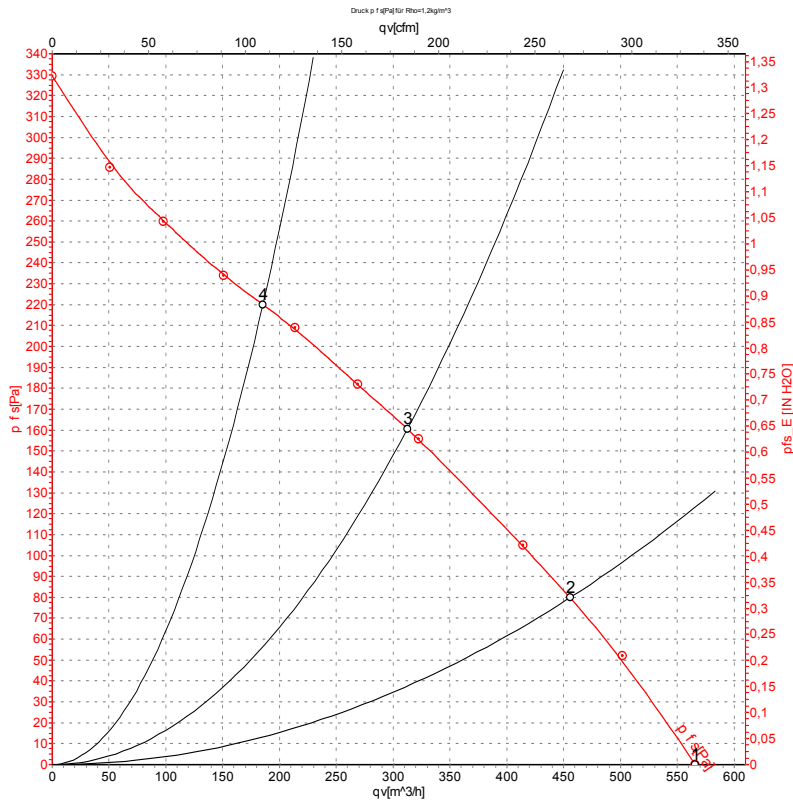
- 1 Cable silicone 4G 0.5 mm<sup>2</sup>, 4x crimped splices
- 2 Accessory part: inlet ring 09576-2-4013 not included in scope of delivery.
- 3 Max. clearance for screw 5 mm

## Connection diagram



U1	blue	Z	brown	U2	black
PE	green/yellow				

## Curves: Air performance 50 Hz



Measurement: LU-50915-1

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.

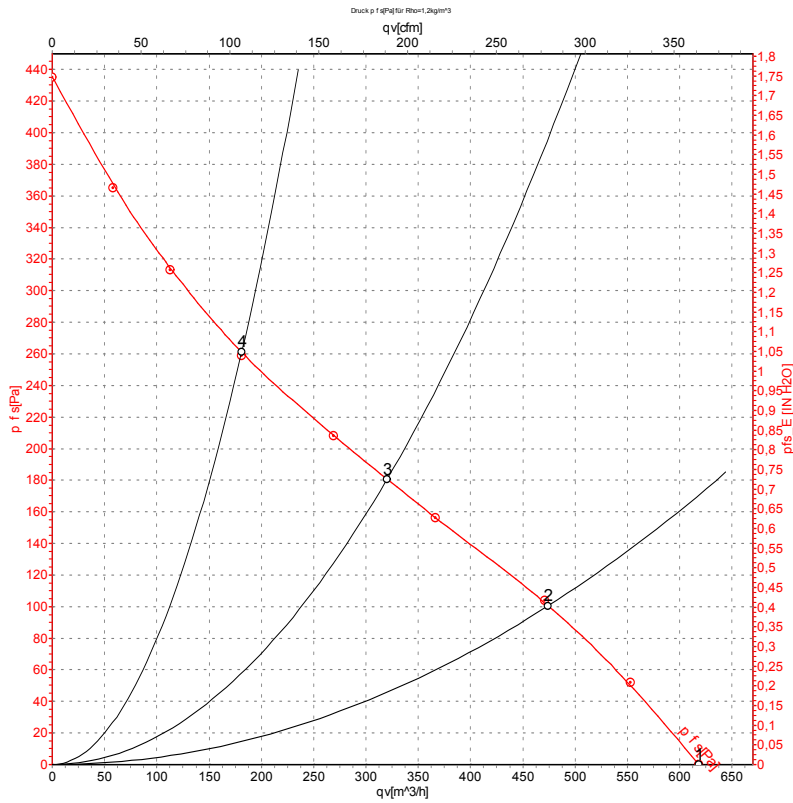
## Measured values

	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	inH <sub>2</sub> O
1	400	50	2500	52	0.14	565	0	335	0.00
2	400	50	2415	55	0.14	455	80	270	0.32
3	400	50	2340	57	0.15	310	160	185	0.64
4	400	50	2420	54	0.14	185	220	110	0.88

U = Power supply · 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-50916-1

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	inH <sub>2</sub> O
1	400	60	2750	62	0.16	620	0	365	0.00
2	400	60	2595	66	0.16	475	100	280	0.40
3	400	60	2475	69	0.17	320	180	190	0.72
4	400	60	2600	65	0.16	180	260	105	1.04

U = Power supply · 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

