

AC centrifugal fan

backward-curved, single-intake

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Nominal data

Type	R2E190-RA18-96		
Motor	M2E068-BF		
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	2050	2100
Power consumption	W	39	48
Current draw	A	0.17	0.21
Capacitor	µF	1	1
Capacitor voltage	VDB	400	400
Capacitor standard		S2 (CE)	S2 (CE)
Min. ambient temperature	°C	-25	-25
Max. ambient temperature	°C	70	70
Starting current	A	0.22	2.3

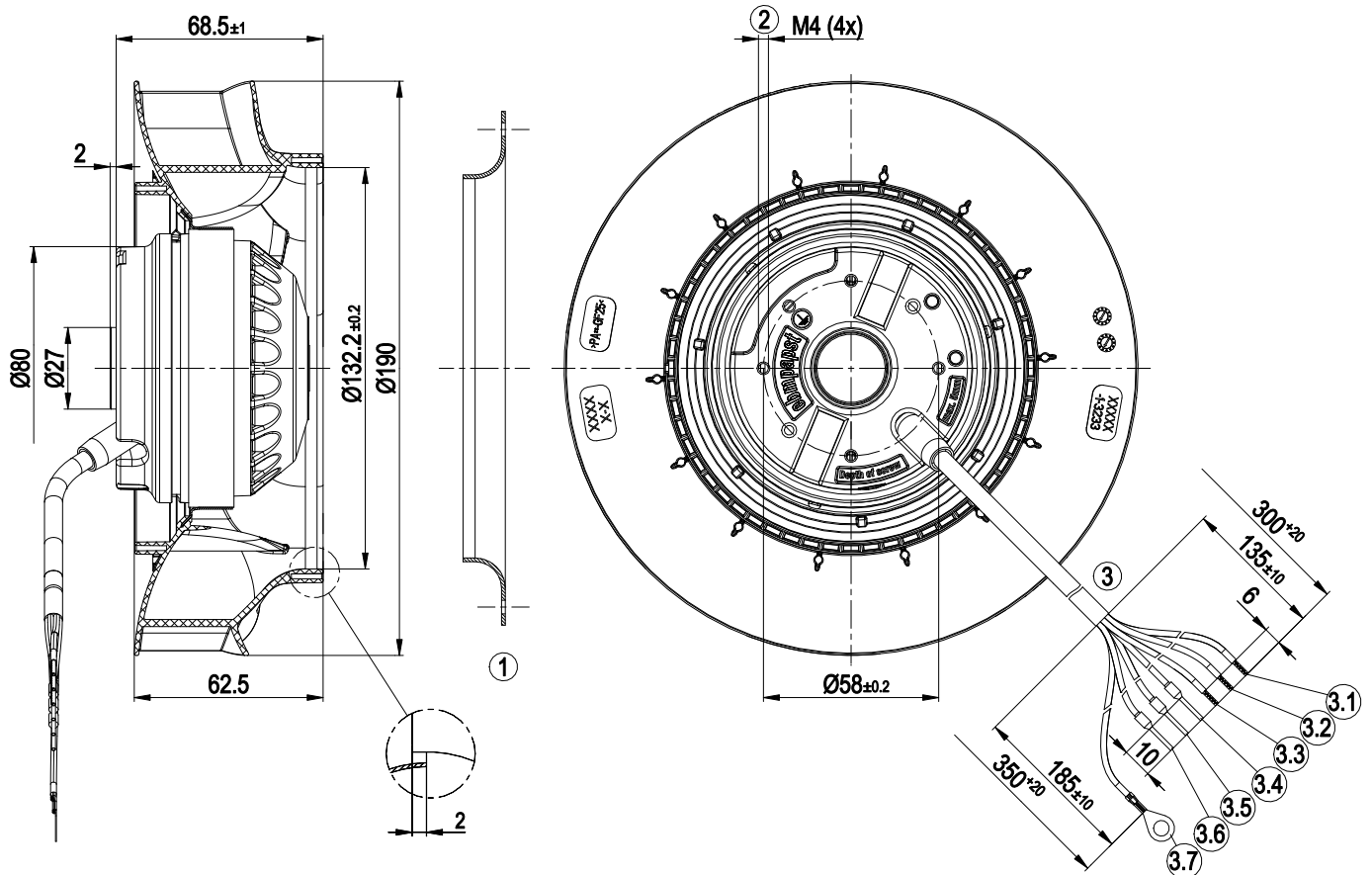
ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change



Technical description

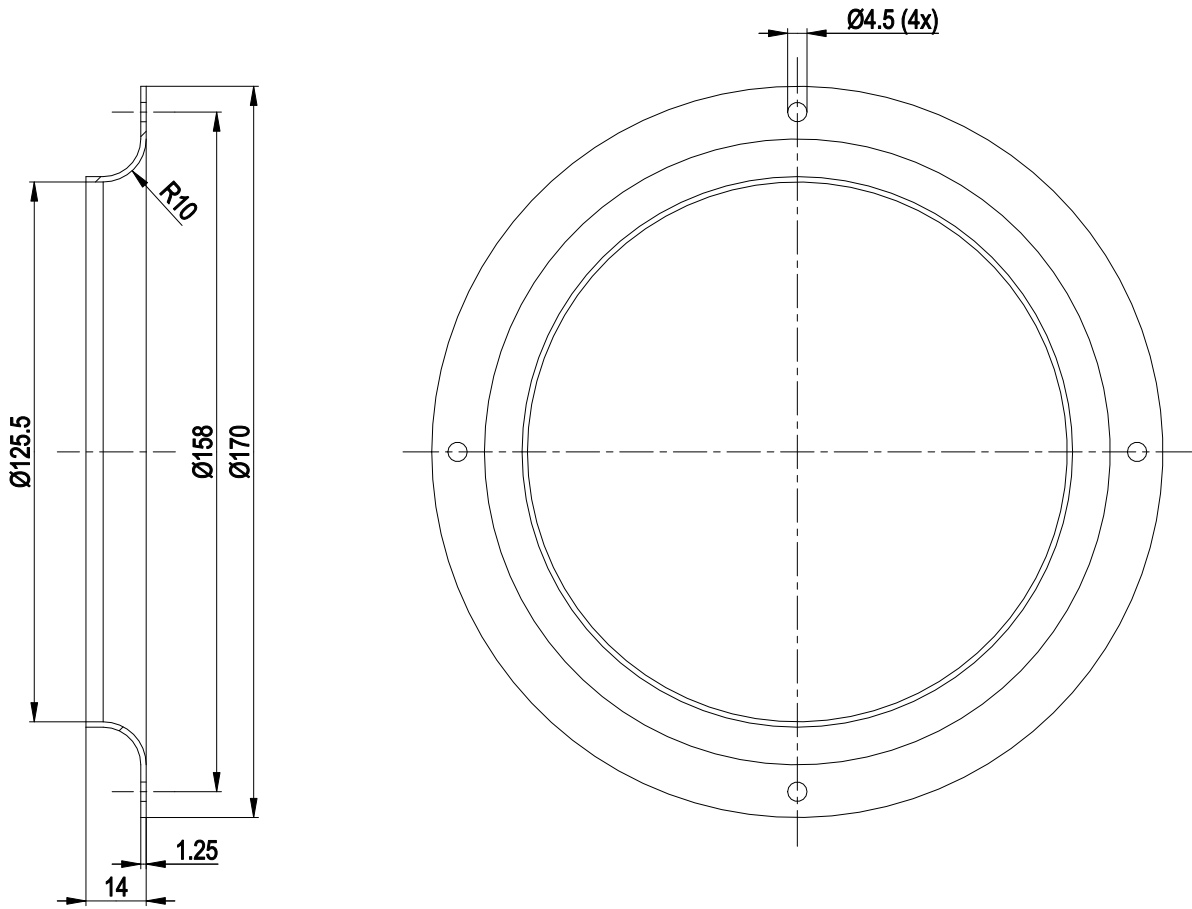
Weight	1.3 kg
Size	190 mm
Motor size	68
Rotor surface	Painted black
Impeller material	PA plastic
Number of blades	7
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP44; installation- and position-dependent
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H1
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
Speed levels	3
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	CSA C22.2 No. 100; UL 1004-1

Product drawing



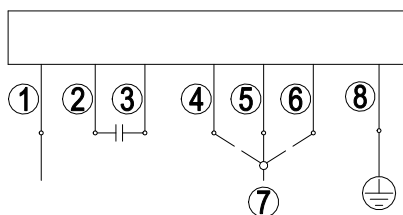
1	Accessory part: inlet ring 09576-2-4013 not included in scope of delivery
2	Max. clearance for screw 5 mm
3	Cable PFA AWG20
3.1	Capacitor (yellow), splice
3.2	Capacitor (brown), splice
3.3	N (blue), splice
3.4	Step 1 (white), wire-end ferrule
3.5	Step 2 (gray), wire-end ferrule
3.6	Step 3 (black), wire-end ferrule
3.7	PE (green/yellow), ring terminal Ø5

Accessory part



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

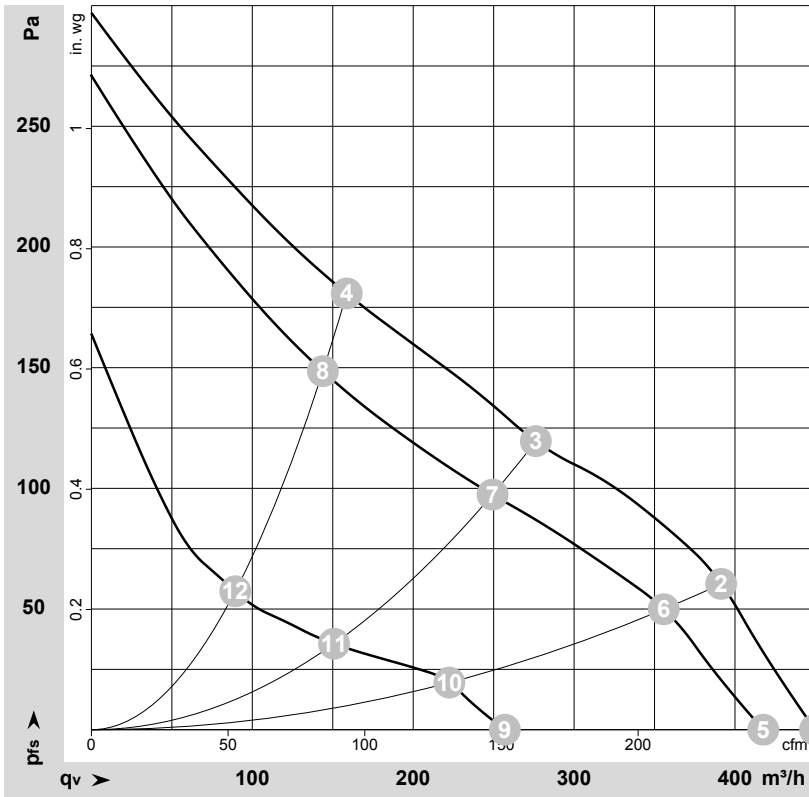
Connection diagram



Note: High speed (step III); low speed (step I); the switch must interrupt the circuit on switching.

1	blue (N)	2	brown	3	yellow
4	Step 1 (white)	5	Step 2 (gray)	6	Step 3 (black)
7	L1	8	PE (green/yellow)		

Curves: Air performance 50 Hz



$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$

Measurement: LU-186024-1
 Measurement: LU-186033-1
 Measurement: LU-186034-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebmpapst. 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.

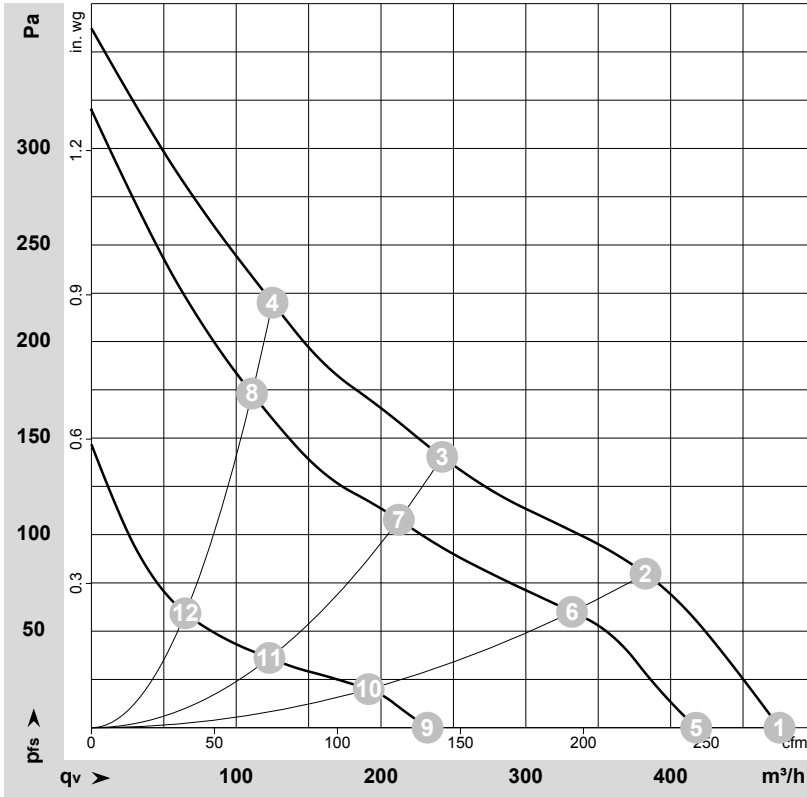
Measured values

	Stage	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	in. wg
1	3	230	50	2200	36	0.16	450	0	265	0.00
2	3	230	50	2185	36	0.16	390	60	230	0.24
3	3	230	50	2050	39	0.17	275	120	160	0.48
4	3	230	50	2145	37	0.16	160	180	95	0.72
5	2	230	50	2050	33	0.15	420	0	245	0.00
6	2	230	50	1995	34	0.15	355	51	210	0.20
7	2	230	50	1845	35	0.16	250	97	145	0.39
8	2	230	50	1950	34	0.15	145	149	85	0.60
9	1	230	50	1300	28	0.13	255	0	150	0.00
10	1	230	50	1270	29	0.13	220	20	130	0.08
11	1	230	50	1130	29	0.13	150	36	90	0.14
12	1	230	50	1210	29	0.13	90	57	50	0.23

U = Voltage · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · q_v = Air flow · P_{fs} = Pressure increase



Curves: Air performance 60 Hz



$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$

Measurement: LU-187319-1
 Measurement: LU-187346-1
 Measurement: LU-187348-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebmpapst. 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

	Stage	Wired	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	in. wg
1	3	1~	230	60	2350	45	0.20	475	0	280	0.00
2	3	1~	230	60	2240	46	0.20	385	80	225	0.32
3	3	1~	230	60	2100	48	0.21	240	140	140	0.56
4	3	1~	230	60	2335	45	0.20	125	220	75	0.88
5	2	1~	230	60	2080	40	0.18	420	0	245	0.00
6	2	1~	230	60	1955	41	0.18	330	60	195	0.24
7	2	1~	230	60	1820	42	0.19	210	108	125	0.43
8	2	1~	230	60	2065	40	0.18	110	173	65	0.69
9	1	1~	230	60	1195	31	0.14	230	0	135	0.00
10	1	1~	230	60	1150	31	0.14	190	20	110	0.08
11	1	1~	230	60	1065	31	0.14	125	36	70	0.14
12	1	1~	230	60	1205	30	0.14	65	59	40	0.24

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · q_v = Air flow · P_{fs} = Pressure increase

