R2E160-AS12-20

AC centrifugal fan

forward curved, single inlet

R2E160-AS12-20 ebmpapst Datasheet
sales@fansco.com
www.fansco.com

Limited partnership · Headquarters Mulfingen
County court Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
County court Stuttgart · HRB 590142

Nominal data

Type	**R2E160-AS12-20**
Motor	**M2E068-DF**

Phase		1~
Nominal voltage	VAC	230
Frequency	Hz	50
Type of data definition		ml
Valid for approval / standard		CE
Speed (rpm)	min^{-1}	2200
Power input	W	205
Current draw	A	0.9
Motor capacitor	µF	4
Capacitor voltage	VDB	450
Capacitor standard		S2 (CE)
Min. back pressure	Pa	210
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	35

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

Data according to ErP directive

		Actual	Request 2015
01 Overall efficiency η_{es}	%	32.5	32.5
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		44	44
05 Variable speed drive		No	

09 Power input P_e	kW	0.15
09 Air flow q_v	m^3/h	350
09 Pressure increase p_{fs}	Pa	493
10 Speed (rpm) n	min^{-1}	2590
11 Specific ratio*		1.01

Data definition with optimum efficiency.
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

* Specific ratio = 1 + p_{fs} / 100 000 Pa

LU-169460

AC centrifugal fan

forward curved, single inlet

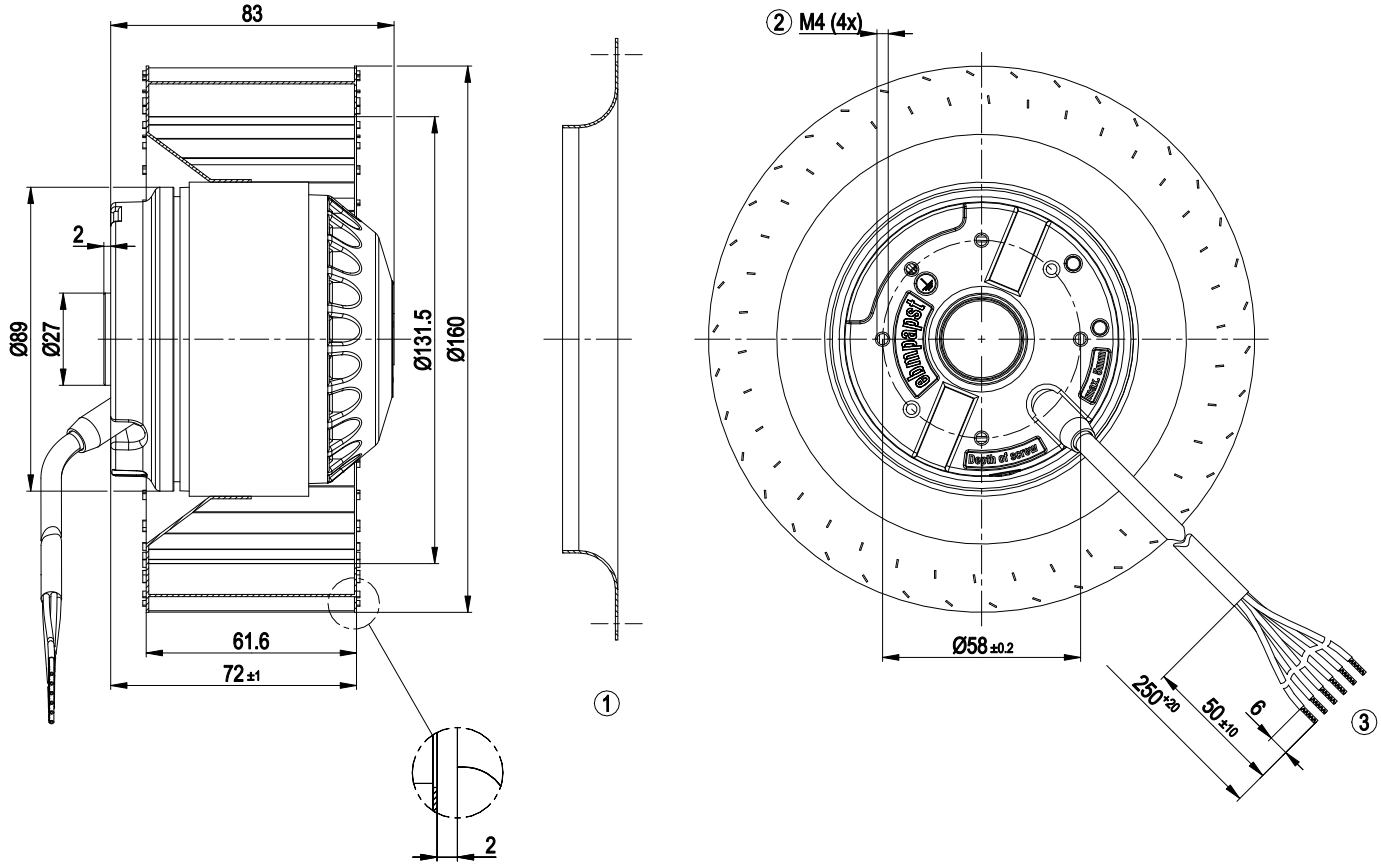
Technical features

Mass	2.3 kg
Size	160 mm
Material of impeller	Sheet steel, galvanised
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 44; Depending on installation and position
Insulation class	"F"
Humidity (F)/environmental protection class (H)	H0 - dry environment
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Any
Condensate discharge holes	None
Operation mode	S1
Motor bearing	Ball bearing
Speed steps	2
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	< 0.75 mA
Motor protection	Thermal overload protector (TOP) wired internally
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60335-1; CE

AC centrifugal fan

forward curved, single inlet

Product drawing

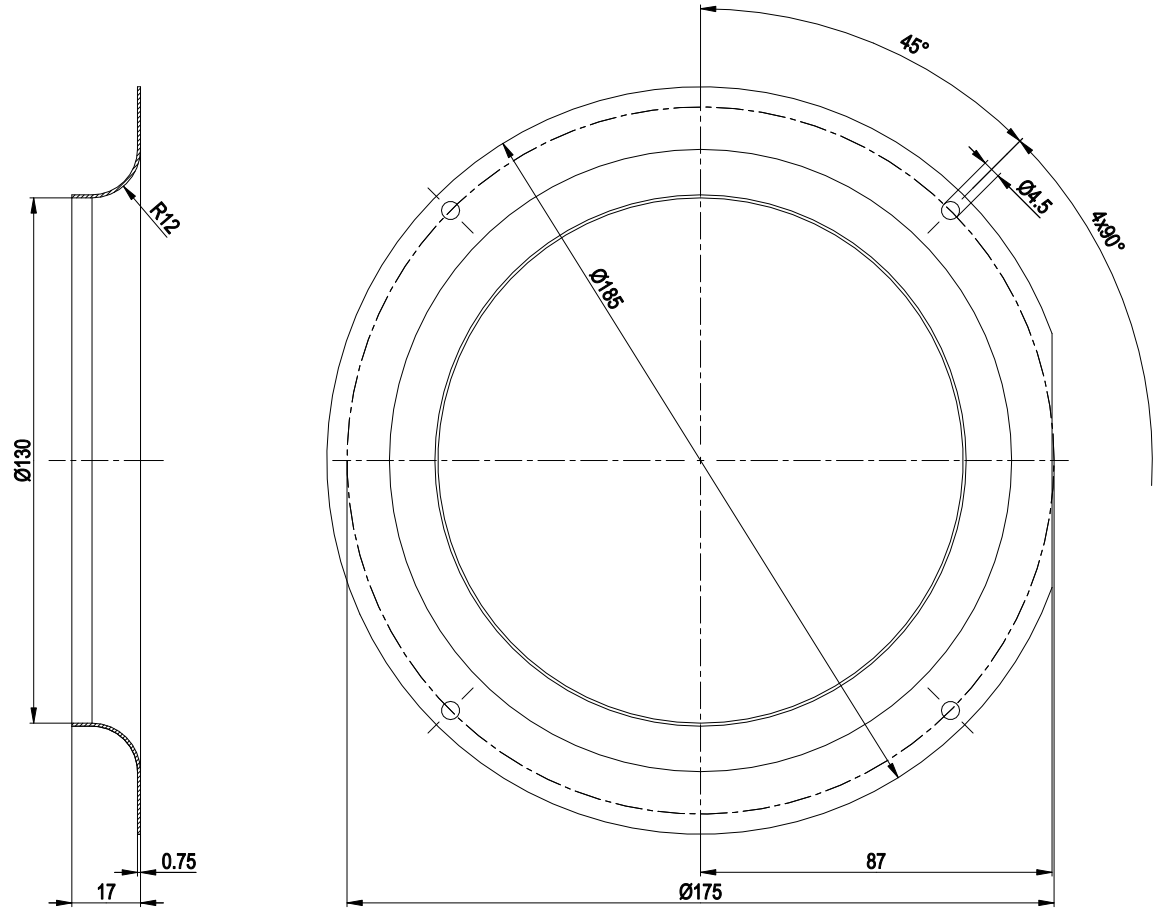


1	Accessory part: Inlet nozzle 09588-2-4013 not included in scope of delivery
2	Thread reach max. 5 mm
3	Connection line halogen and silicone-free 6G 0.5 mm², 6x lead tips crimped

AC centrifugal fan

forward curved, single inlet

Accessory part

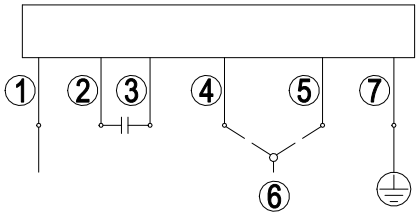


Accessory part: inlet nozzle 09588-2-4013 not included in scope of delivery

AC centrifugal fan

forward curved, single inlet

Connection screen



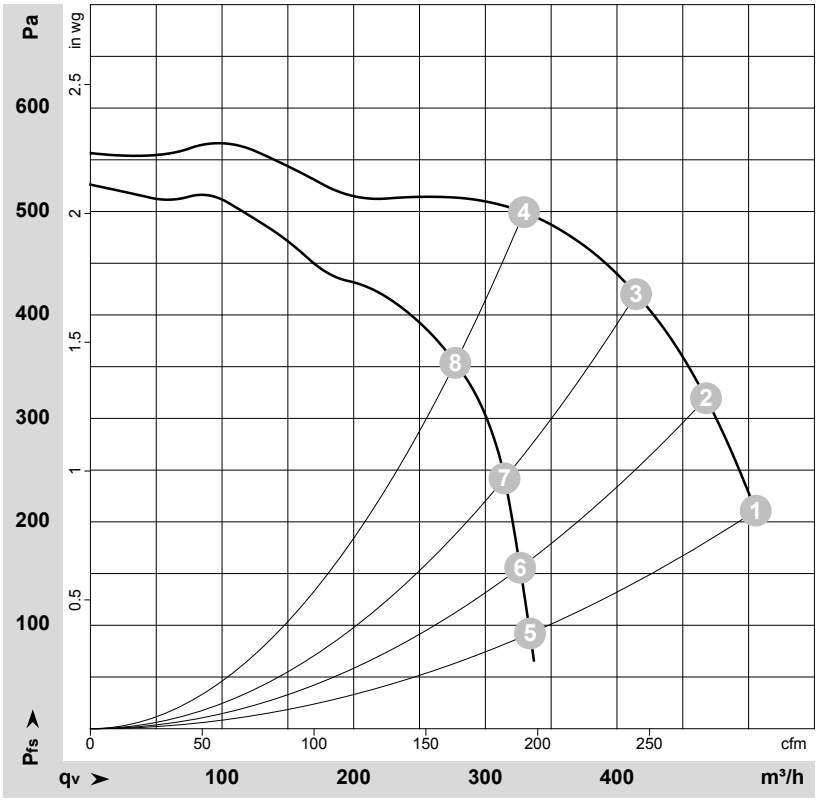
Note: Fast speed (step II); slow speed (step I)

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

AC centrifugal fan

forward curved, single inlet

Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-169460-1
Measurement: LU-169676-1

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

Measured values

	Stage	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	2	230	50	2200	205	0.90	69	74	505	210	295	0.84
2	2	230	50	2355	187	0.81	68	74	470	320	275	1.28
3	2	230	50	2475	170	0.74	68	73	415	420	245	1.69
4	2	230	50	2620	147	0.64	67	72	330	500	195	2.01
5	1	230	50	1455	162	0.71	58	64	335	95	195	0.38
6	1	230	50	1670	155	0.68	59	65	325	165	190	0.66
7	1	230	50	1910	146	0.65	60	67	315	246	185	0.99
8	1	230	50	2245	126	0.57	62	69	275	354	165	1.42

U = Supply voltage · f = Frequency · n = Speed (rpm) · P_e = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side · q_V = Air flow
p_{fs} = Pressure increase