R4E400-RO09-06

AC centrifugal fan - RadiCal®

backward curved, single inlet

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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**R4E400-RO09-06**
Motor	**M4E094-HA**

Phase		1~	1~
Nominal voltage	VAC	230	230
Frequency	Hz	50	60
Type of data definition		ml	ml
Valid for approval / standard		CE	CE
Speed	min^{-1}	1340	1430
Power input	W	470	650
Current draw	A	2.33	3.0
Motor capacitor	µF	9	9
Capacitor voltage	VDB	400	400
Capacitor standard		P0 (CE)	P0 (CE)
Min. back pressure	Pa	0	0
Min. ambient temperature	°C	-40	-40
Max. ambient temperature	°C	60	45
Starting current	A	5.9	

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

Installation category	A
Efficiency category	Static
Variable speed drive	No
Specific ratio*	1.00

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

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}		48.6	44.2	48.2
Efficiency grade N		62.4	58	62
Power input P_e	kW	0.48		
Air flow q_v	m^3/h	2810		
Pressure increase p_{fs}	Pa	306		
Speed n	min^{-1}	1390		

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

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Technical features

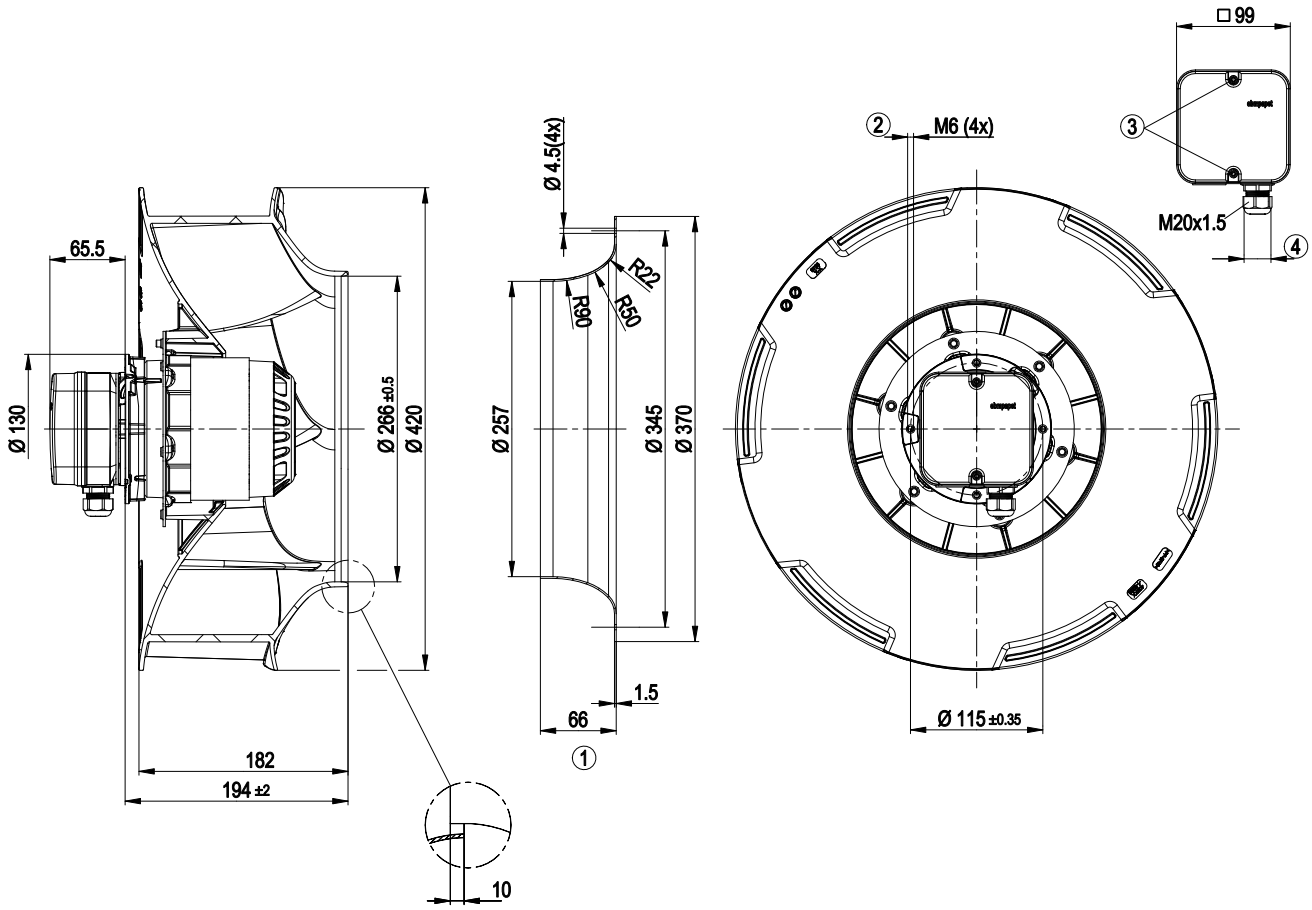
Mass	9 kg
Size	400 mm
Surface of rotor	Coated in black
Material of impeller	PP plastic
Number of blades	6
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"F"
Humidity class	F4-1
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Any
Condensate discharge holes	None
Operation mode	S1
Motor bearing	Ball bearing
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Electrical leads	Via terminal box, integrated capacitor connected via terminal box
Motor protection	Thermal overload protector (TOP) brought out
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60034-1 (2004); CE

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Product drawing



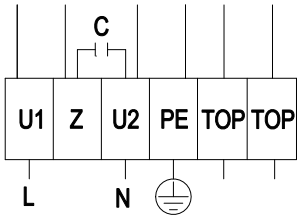
1	Accessory part: inlet nozzle 54476-2-4013, not included in standard scope of delivery
2	Depth of screw max. 12 mm
3	Tightening torque 0.8 ± 0.15 Nm
4	Cable diameter: min. 6 mm, max. 12 mm; tightening torque 2±0.3 Nm

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Connection screen



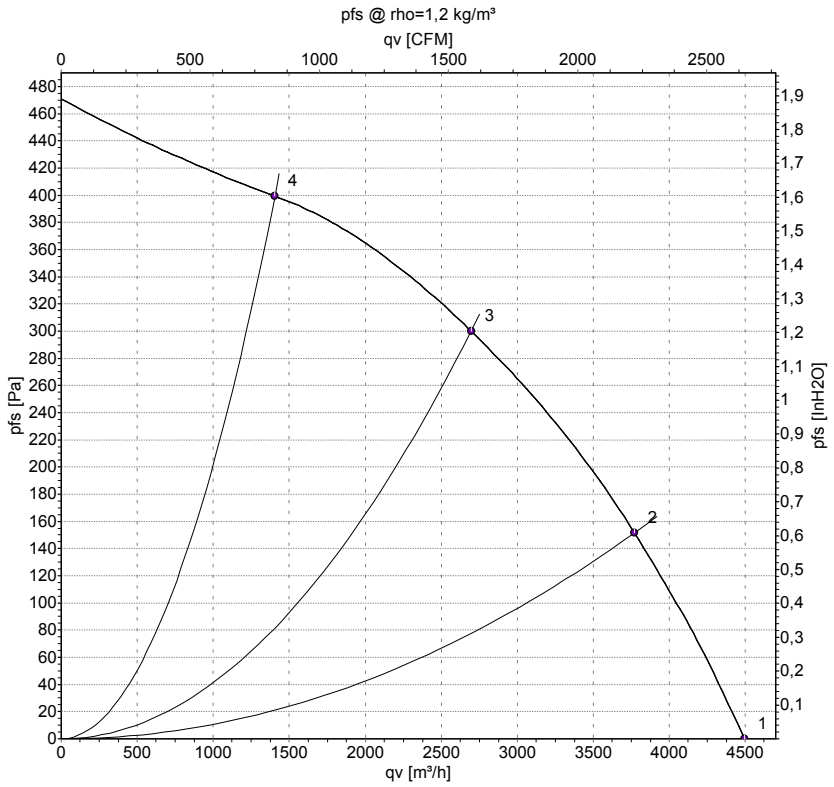
L	= U1 = blue	Z	brown	N	= U2 = black
PE	green / yellow	TOP	grey		

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Charts: Air flow 50 Hz



Measurement: LU-152577

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

	U	f	n	P_e	I	LpA_{in}	LwA_{in}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa
1	230	50	1395	368	1.95	70	78	4495	0
2	230	50	1360	436	2.21	66	74	3770	150
3	230	50	1340	470	2.33	59	67	2695	300
4	230	50	1375	402	2.06	60	68	1405	400

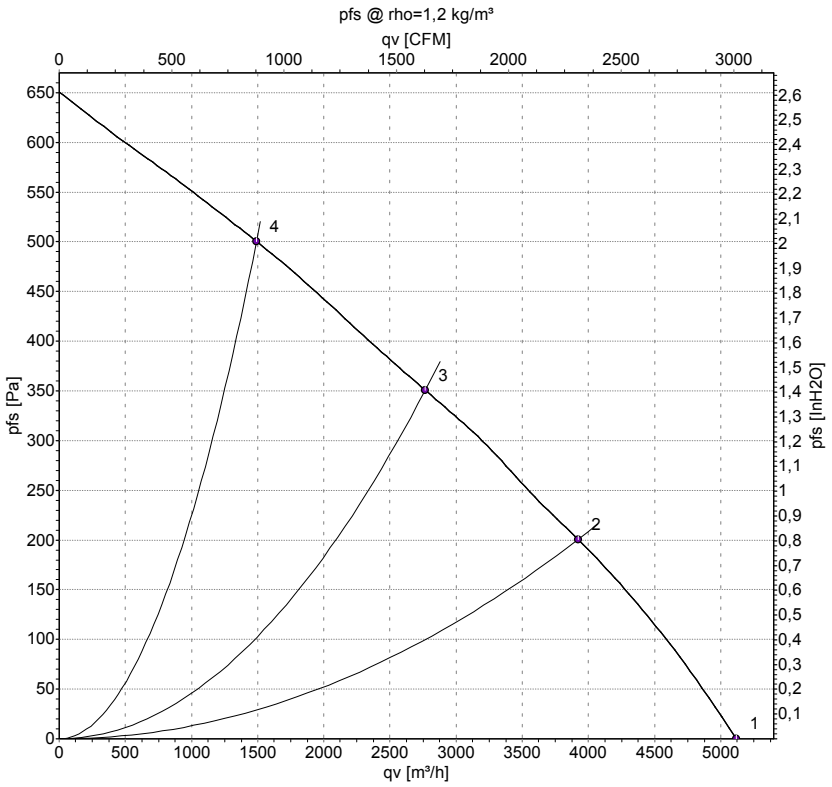
U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side · qv = Air flow
p_{fs} = Pressure increase

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Charts: Air flow 60 Hz



Measurement: LU-152583

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

	U	f	n	P_e	I	LpA_{in}	LwA_{in}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa
1	230	60	1585	527	2.35	72	80	5120	0
2	230	60	1455	634	2.94	65	72	3920	200
3	230	60	1430	650	3.00	59	67	2765	350
4	230	60	1540	564	2.55	65	73	1490	500

U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side · qv = Air flow
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