R4D400-RM10-05

AC centrifugal fan - RadiCal®

backward curved, single inlet

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ErP2013 EXCEEDS THE NORM

Nominal data

Type	**R4D400-RM10-05**
Motor	**M4D094-EA**

Phase		3~	3~
Nominal voltage	VAC	400	400
Connection		Δ	Y
Frequency	Hz	50	50
Type of data definition		ml	ml
Valid for approval / standard		CE	CE
Speed	min^{-1}	1280	930
Power input	W	430	270
Current draw	A	0.79	0.46
Min. back pressure	Pa	0	0
Min. ambient temperature	°C	-40	-40
Max. ambient temperature	°C	55	55
Starting current	A	2.0	0.75

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}	%	44.9	43.5	47.5
Efficiency grade N		59.4	58	62
Power input P_e	kW	0.42		
Air flow q_v	m^3/h	2705		
Pressure increase p_{fs}	Pa	257		
Speed n	min^{-1}	1285		

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

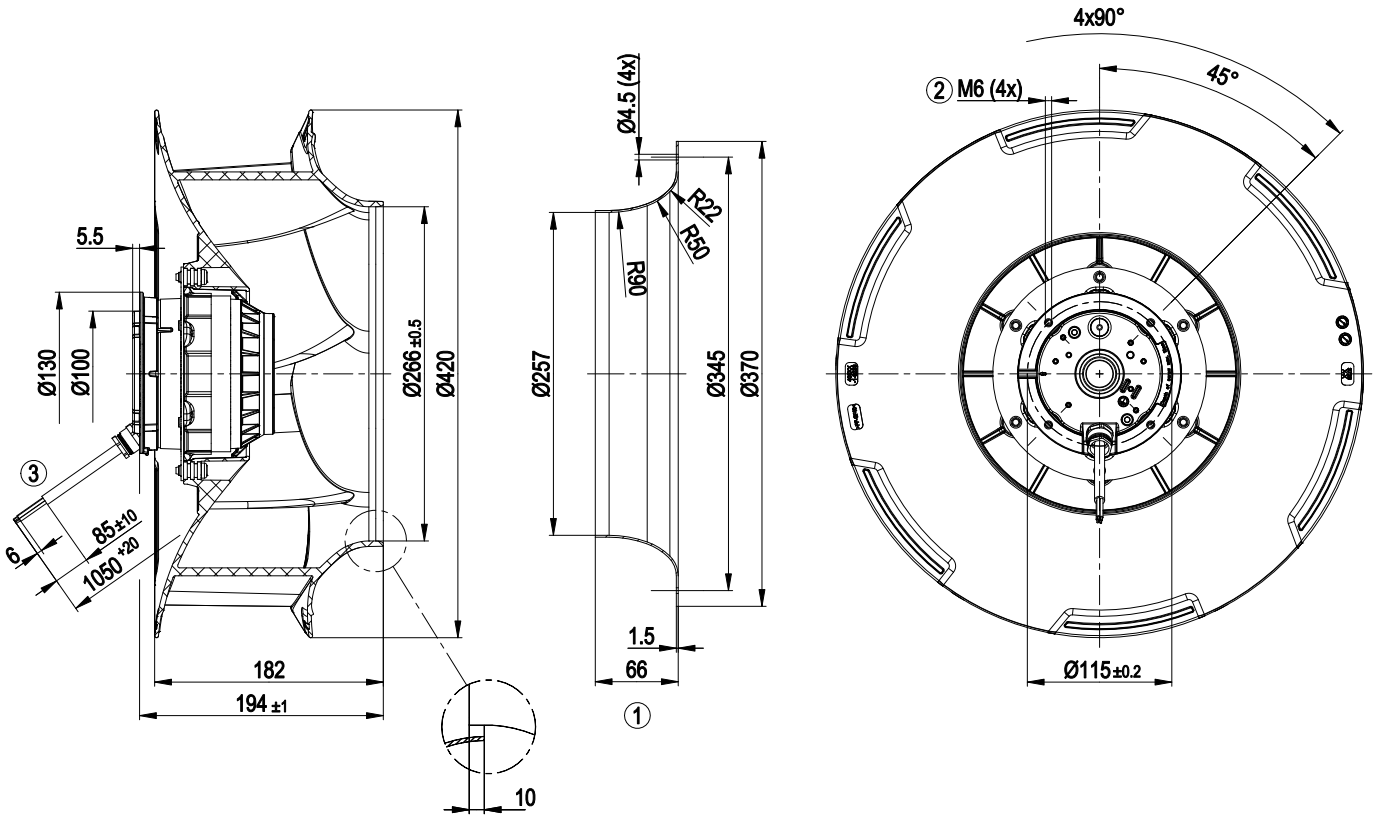
Mass	6.5 kg
Size	400 mm
Surface of rotor	Coated in black
Material of impeller	PP plastic
Number of blades	6
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"F"
Humidity class	F4-1
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensate discharge holes	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) brought out
Cable exit	Variable
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



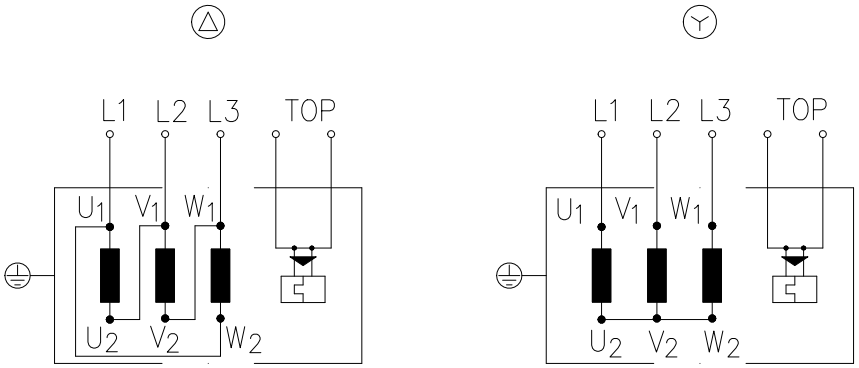
1	Accessory part: inlet nozzle 54476-2-4013, not included in scope of delivery.
2	Depth of screw max. 10 mm
3	Connection line silicone 9G 0.5 mm², 9x lead tips crimped

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Connection screen



Changing the direction of rotation by reversing the two phases

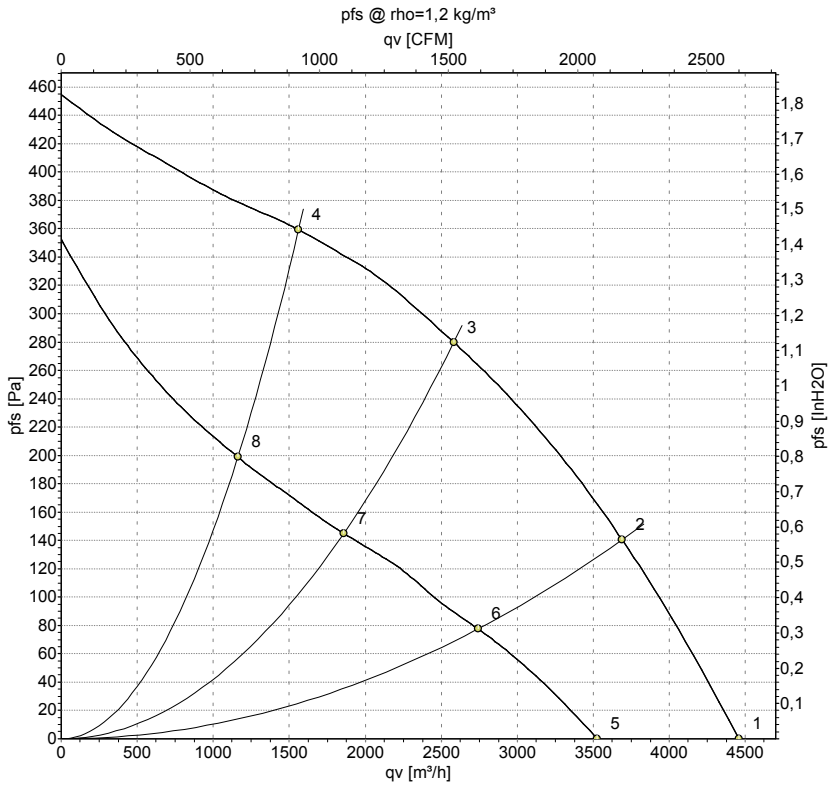
Δ	Delta connection	Y	Star connection	L1	= U1 = black
L2	= V1 = blue	L3	= W1 = brown	W2	yellow
U2	green	V2	white	TOP	2 x grey
PE	green / yellow				

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Charts: Air flow 50 Hz



Measurement: LU-153177
Measurement: LU-153245

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

	Conn.	U	f	n	P_e	I	qv	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa
1	Δ	400	50	1355	318	0.66	4460	0
2	Δ	400	50	1300	404	0.76	3690	140
3	Δ	400	50	1280	430	0.79	2580	280
4	Δ	400	50	1310	390	0.73	1560	360
5	Y	400	50	1080	226	0.38	3525	0
6	Y	400	50	960	261	0.44	2745	78
7	Y	400	50	930	270	0.46	1860	145
8	Y	400	50	970	256	0.43	1160	199

Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

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