R4D400-RO22-01

AC centrifugal fan - RadiCal

backward curved, single inlet

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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**R4D400-RO22-01**
Motor	**M4D094-HA**

Phase		3~	3~	3~	3~
Nominal voltage	VAC	400	400	400	400
Connection		Δ	Y	Δ	Y
Frequency	Hz	50	50	60	60
Type of data definition		ml	ml	ml	ml
Valid for approval / standard		CE	CE	CE	CE
Speed	min^{-1}	1400	1210	1580	1180
Power input	W	515	390	770	500
Current draw	A	1.19	0.65	1.35	0.87
Min. back pressure	Pa	0	0	0	0
Min. ambient temperature	°C	-40	-40	-40	-40
Max. ambient temperature	°C	60	60	40	40
Starting current	A	4.95	1.62	4.35	1.48

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}		48.3	44.3	48.3
Efficiency grade N		62	58	62
Power input P_e	kW	0.5		
Air flow q_v	m^3/h	2730		
Pressure increase p_{fs}	Pa	323		
Speed n	min^{-1}	1400		

Data established at point of optimum efficiency

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Technical features

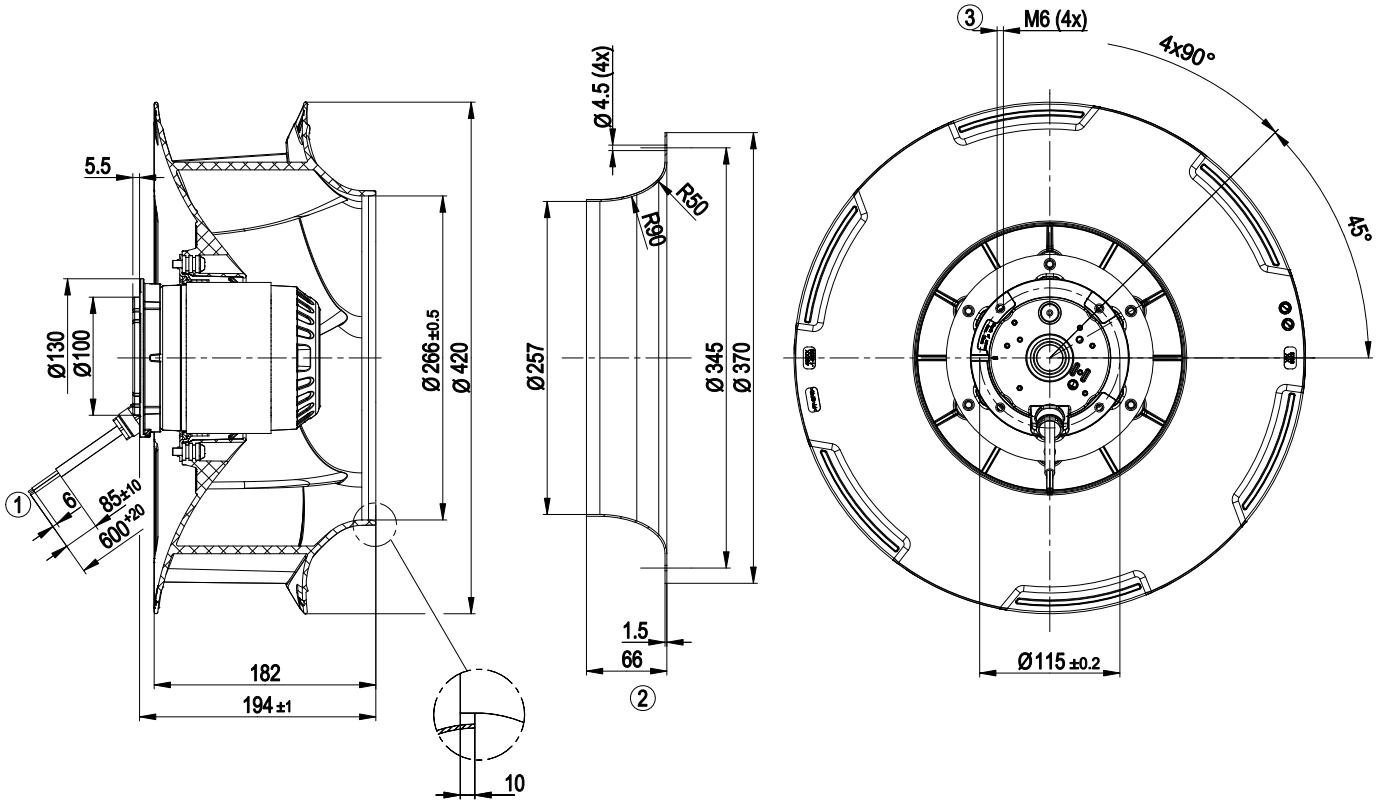
Mass	8.8 kg
Size	400 mm
Surface of rotor	Coated in black
Material of impeller	PP plastic
Number of blades	6
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"F"
Humidity class	F4-1
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible 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
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



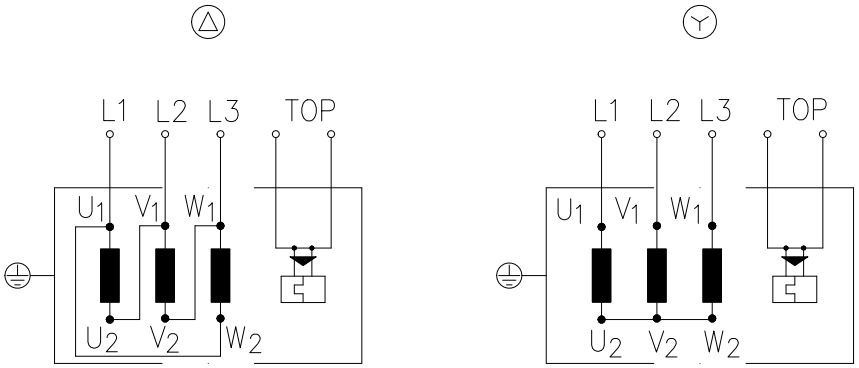
1	Connection line silicone 9G 0.5 mm², 9x brass lead tips crimped
2	Accessory part: Inlet nozzle 54476-2-4013, not included in the standard scope of delivery.
3	Depth of screw max. 12 mm

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Connection screen



Changing the direction of rotation by reversing the two phases

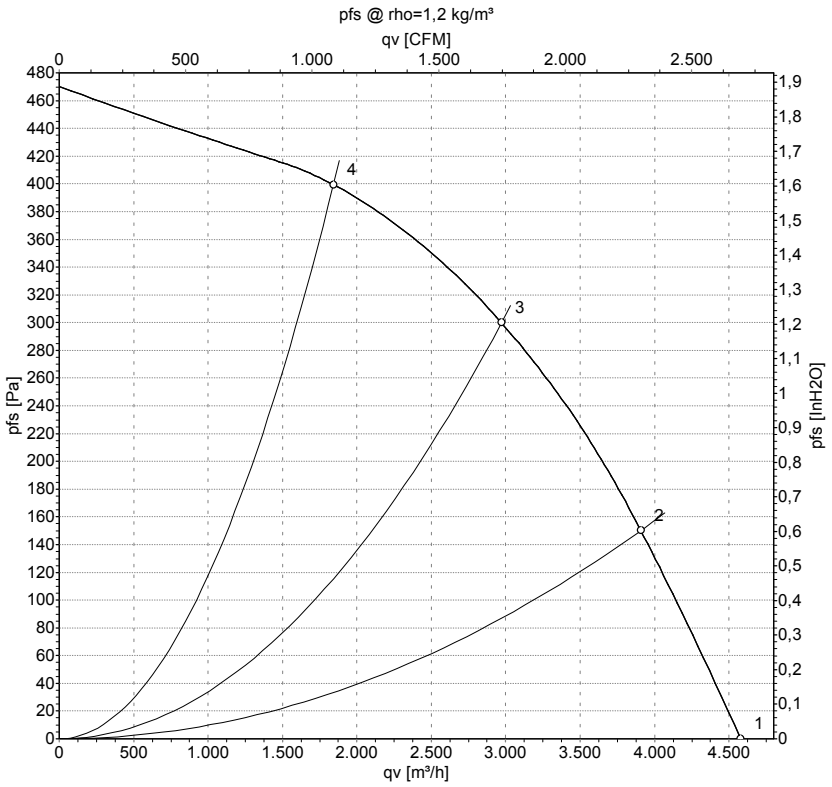
Δ	Delta connection	Y	Star connection	L1	= U1 = black
L2	= V1 = blue	L3	= W1 = brown	W2	yellow
U2	green	V2	white	TOP	2 x grey
PE	green / yellow				

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Charts: Air flow 50 Hz



Measurement: LU-139924

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	LpA_{in}	LwA_{in}	LwA_{out}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa
1	Δ	400	50	1430	406	1.11	75	81	83	4580	0
2	Δ	400	50	1410	479	1.15	68	75	79	3910	150
3	Δ	400	50	1400	515	1.19	60	67	71	2970	300
4	Δ	400	50	1410	475	1.14	59	67	71	1845	400

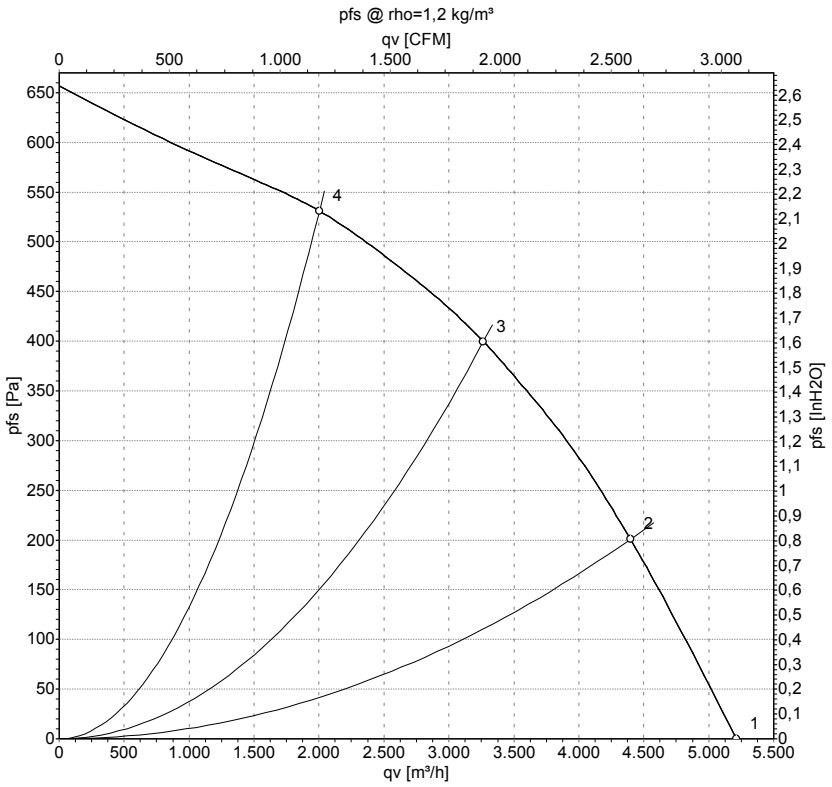
Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side
LwA_{out} = Sound power level outlet side · qv = Air flow · p_{fs} = Pressure increase

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Charts: Air flow 60 Hz



Measurement: LU-139931

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	LpA_{in}	LwA_{in}	LwA_{out}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa
1	Δ	400	60	1645	599	1.11	79	85	87	5215	0
2	Δ	400	60	1605	716	1.26	73	79	82	4400	200
3	Δ	400	60	1580	770	1.35	63	72	75	3265	400
4	Δ	400	60	1605	699	1.24	64	73	76	2000	530

Conn. = Connection · 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
LwA_{out} = Sound power level outlet side · qv = Air flow · p_{fs} = Pressure increase

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