R4D450-AD12-06

AC centrifugal fan

backward curved, single inlet

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ErP2013 EXCEEDS THE NORM

Nominal data

Type	**R4D450-AD12-06**
Motor	**M4D094-HA**

Phase		3~
Nominal voltage	VAC	400
Connection		Y
Frequency	Hz	50
Type of data definition		ml
Valid for approval / standard		CE
Speed	min^{-1}	1380
Power input	W	650
Current draw	A	1.45
Min. back pressure	Pa	0
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	45
Starting current	A	5.4

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}		46.5	45.5	49.5
Efficiency grade N		59	58	62
Power input P_e	kW	0.64		
Air flow q_v	m^3/h	3065		
Pressure increase p_{fs}	Pa	351		
Speed n	min^{-1}	1380		

Data established at point of optimum efficiency

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Technical features

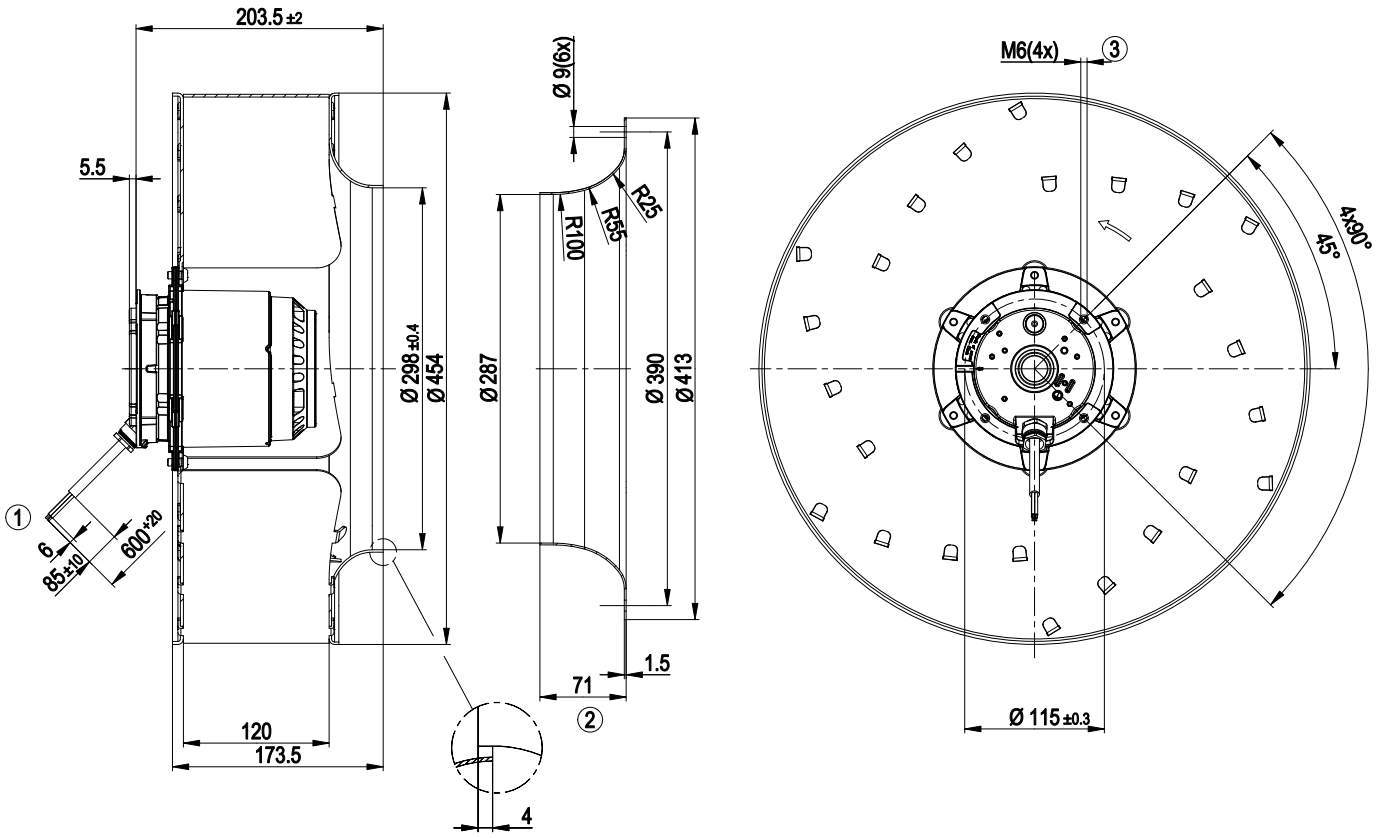
Mass	9.4 kg
Size	450 mm
Surface of rotor	Coated in black
Material of impeller	Aluminium sheet
Number of blades	6
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"F"
Humidity class	F4-1
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible 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
Approval	CCC

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Product drawing



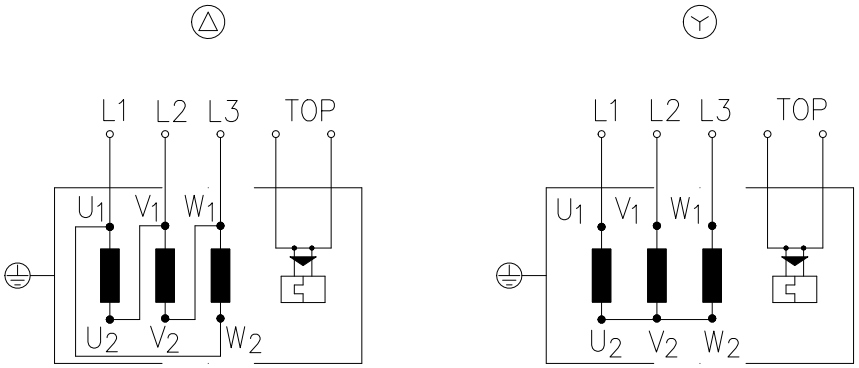
1	Connection line silicone, 6x brass lead tips crimped
2	Accessory part: Inlet nozzle 54478-2-4013, not included in the standard scope of delivery.
3	Depth of screw max. 12 mm

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Connection screen



Changing the direction of rotation by reversing the two phases

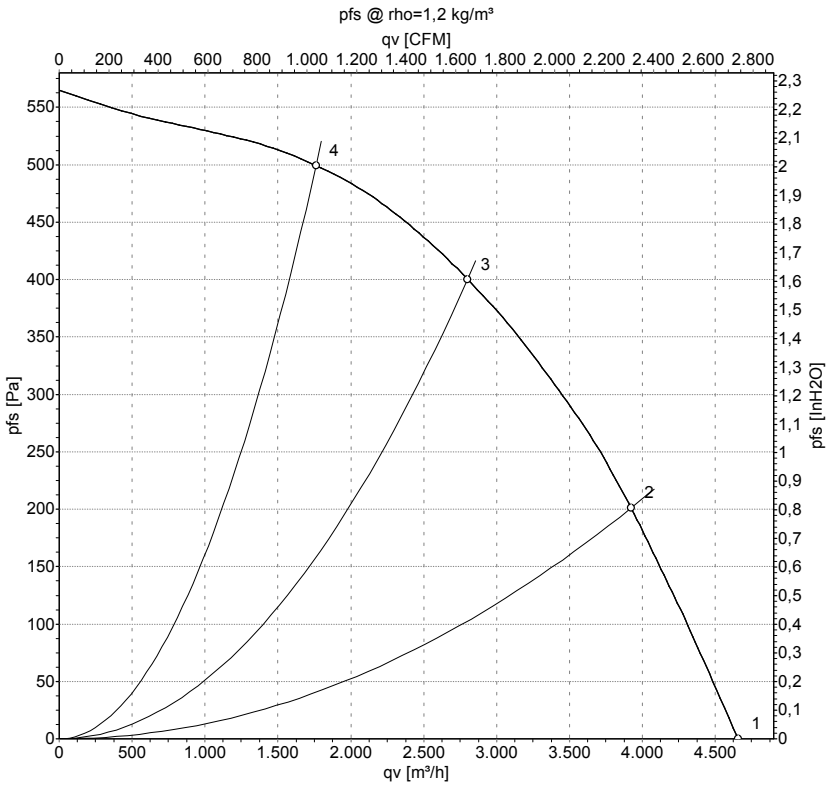
Δ	Delta connection	Y	Star connection	L1	= U1 = black
L2	= V1 = blue	L3	= W1 = brown	W2	yellow
U2	green	V2	white	TOP	2 x grey
PE	green / yellow				

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Charts: Air flow 50 Hz



Measurement: LU-107301

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	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa
1	400	50	1435	416	1.32	4655	0
2	400	50	1395	580	1.41	3920	200
3	400	50	1380	650	1.45	2800	400
4	400	50	1395	588	1.42	1760	500

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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