R4D450-AD22-06

AC centrifugal fan

backward curved, single inlet

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ErP2013 EXCEEDS THE NORM

Nominal data

Type	**R4D450-AD22-06**
Motor	**M4D094-HA**

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}	1380	1130
Power input	W	665	470
Current draw	A	1.55	0.82
Min. back pressure	Pa	0	0
Min. ambient temperature	°C	-40	-40
Max. ambient temperature	°C	50	55
Starting current	A	5.0	1.7

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}		45.5	45.5	49.5
Efficiency grade N		58	58	62
Power input P_e	kW	0.65		
Air flow q_v	m^3/h	2570		
Pressure increase p_{fs}	Pa	400		
Speed n	min^{-1}	1385		

Data established at point of optimum efficiency

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Technical features

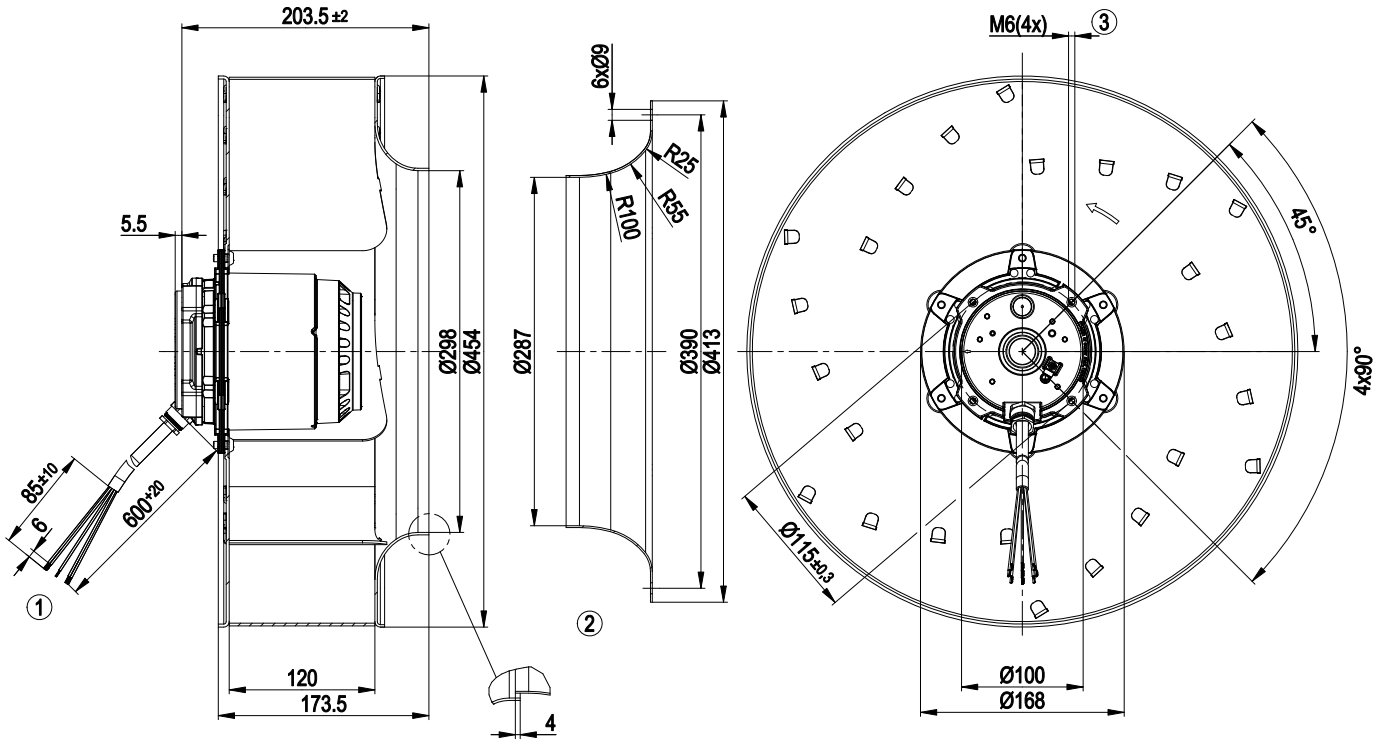
Mass	9 kg
Size	450 mm
Surface of rotor	Coated in black
Material of impeller	Aluminium sheet
Number of blades	6
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"F"
Humidity class	F4-1
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible 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



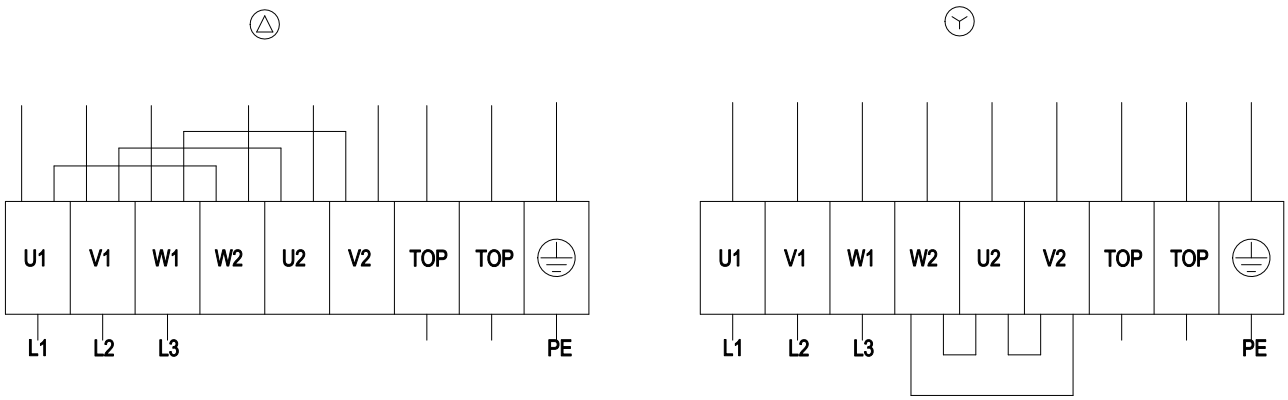
1	Connection line silicone, 9x brass lead tips crimped
2	Accessory part: Inlet nozzle 54478-2-4013, not included in the standard scope of delivery. Other inlet nozzles on request
3	Depth of screw max. 12 mm

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Connection screen



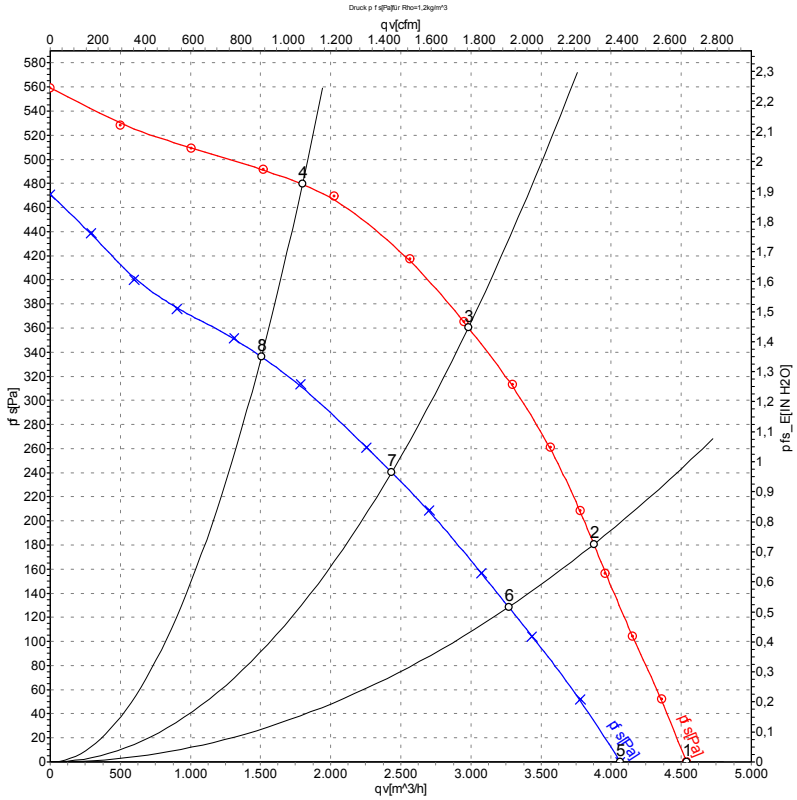
Δ	Delta-connection	Y	Star connection	L1	= U1 = black
L2	= V1 = blue	L3	= W1 = brown	W2	yellow
U2	green	V2	white	TOP	2 x grey
PE	green / yellow				

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Charts: Air flow 50 Hz Δ



Measurement: LU-59866
Measurement: LU-59872

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	1425	452	1.37	4535	0
2	Δ	400	50	1400	594	1.50	3875	180
3	Δ	400	50	1380	665	1.55	2980	360
4	Δ	400	50	1395	599	1.47	1800	479
5	Y	400	50	1280	335	0.59	4065	0
6	Y	400	50	1175	434	0.75	3270	128
7	Y	400	50	1130	470	0.82	2435	240
8	Y	400	50	1170	440	0.76	1505	336

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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