R4D450-AD22-06

AC centrifugal fan

backward-curved, single-intake

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Nominal data

Type	**R4D450-AD22-06**		
Motor	**M4D094-HA**		
Phase		3~	3~
Nominal voltage	VAC	400	400
Wiring		Δ	Y
Frequency	Hz	50	50
Method of obtaining data		ml	ml
Valid for approval/standard		-	-
Speed (rpm)	min^{-1}	1380	1130
Power consumption	W	665	470
Current draw	A	1.55	0.82
Min. back pressure	Pa	0	0
Min. back pressure	in. wg	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 = Free air · cs = Customer specification · ce = Customer equipment
Subject to change

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Technical description

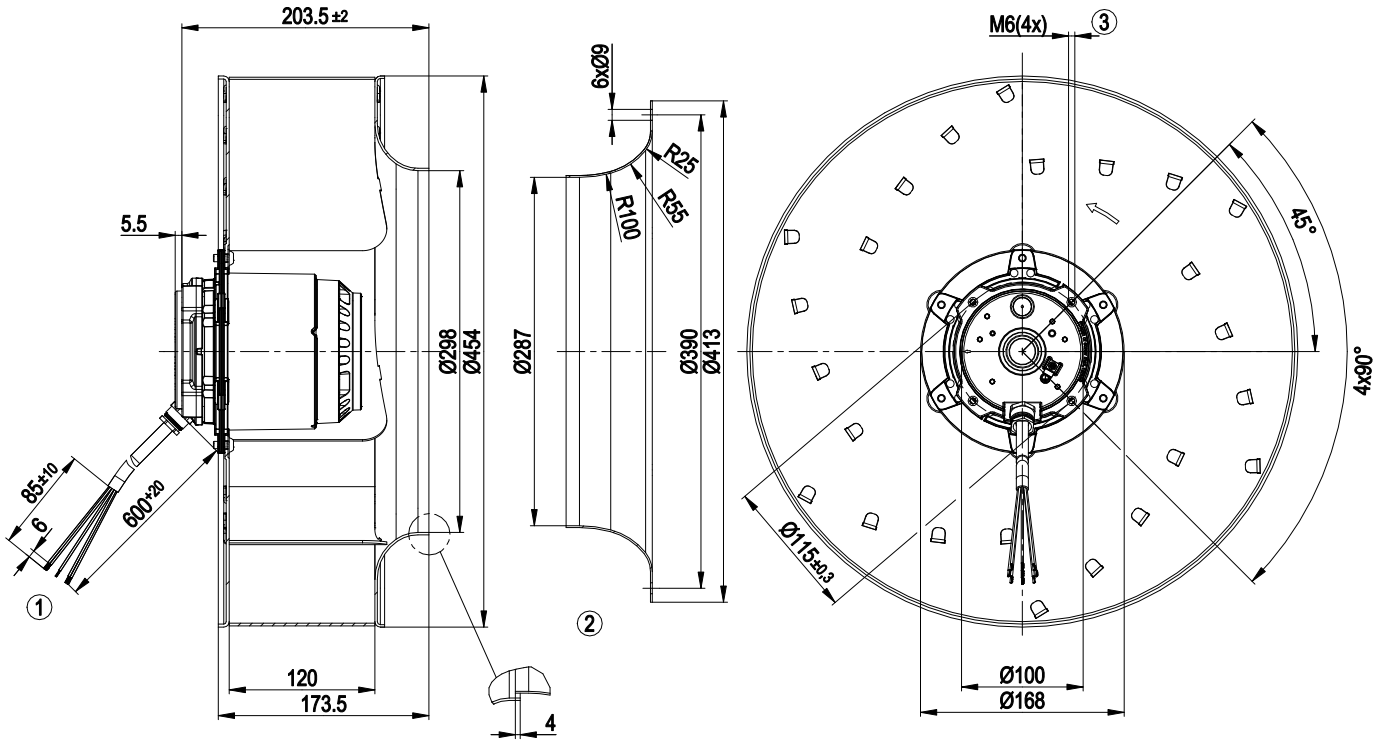
Weight	9 kg
Fan size	450 mm
Rotor surface	Painted black
Impeller material	Sheet aluminum
Number of blades	6
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	F4-1
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Any
Condensation drainage holes	None
Mode	S1
Motor bearing	Ball bearing
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) with basic insulation
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60034-1 (2010)
Approval	CCC; EAC

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Product drawing



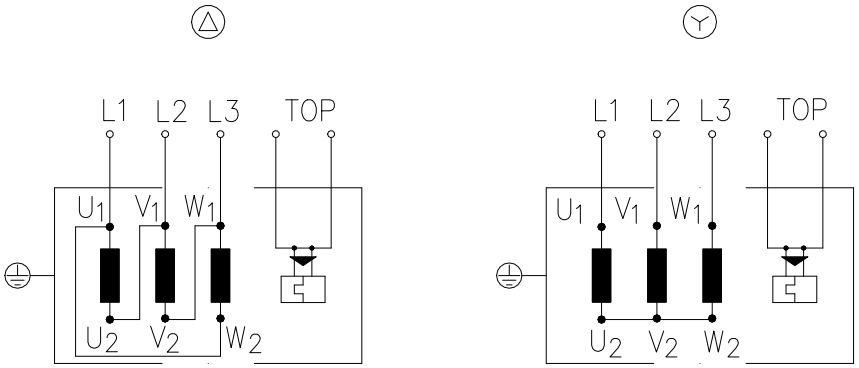
1	Cable silicone, 9x crimped splices
2	Accessory part: inlet ring 54478-2-4013 not included in scope of delivery. Other inlet rings on request.
3	Max. clearance for screw 12 mm

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Connection diagram



Change of rotation direction by reversing two phases

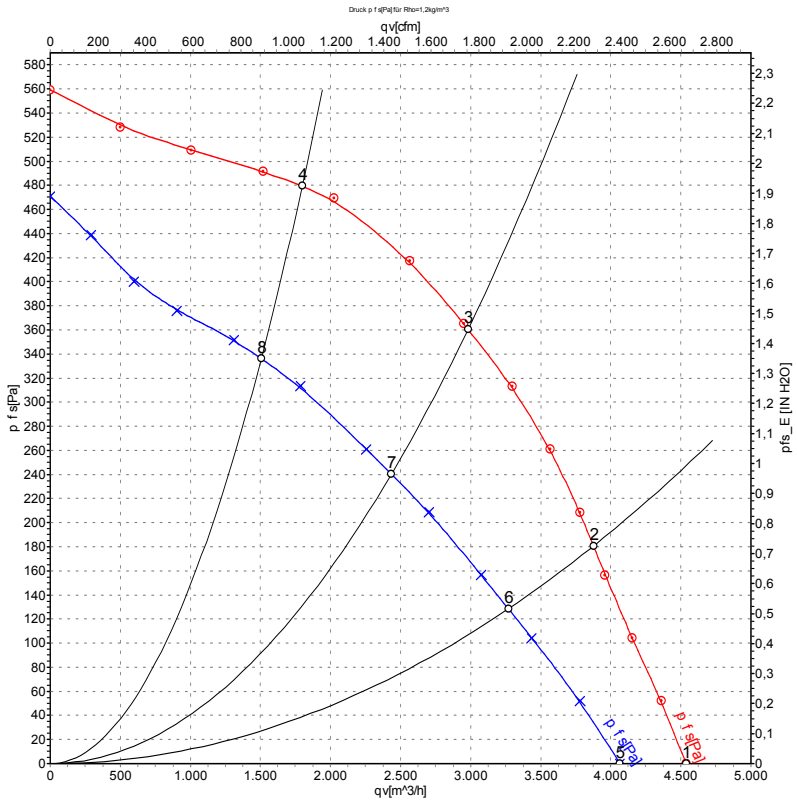
Δ	Delta connection	Y	Star connection	L1	= U1 = black
L2	= V1 = blue	L3	= W1 = brown	W2	yellow
U2	green	V2	white	TOP	2x gray
PE	green/yellow				

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Curves: Air performance 50 Hz Δ



Measurement: LU-59866-1
Measurement: LU-59872-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. Intake sound level: Sound power level according to ISO 13347 / sound pressure level measured at 1 m distance from fan axis. The values given are valid under the specified measuring conditions and may vary due to conditions of installation. For deviations from the standard configuration, the parameters have to be checked on the installed unit.

Measured values

	Wired	U	f	n	P_e	I	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	in. wg
1	Δ	400	50	1425	452	1.37	4535	0	2670	0.00
2	Δ	400	50	1400	594	1.50	3875	180	2280	0.72
3	Δ	400	50	1380	665	1.55	2980	360	1755	1.45
4	Δ	400	50	1395	599	1.47	1800	479	1060	1.92
5	Y	400	50	1280	335	0.59	4065	0	2395	0.00
6	Y	400	50	1175	434	0.75	3270	128	1925	0.51
7	Y	400	50	1130	470	0.82	2435	240	1435	0.96
8	Y	400	50	1170	440	0.76	1505	336	885	1.35

Wired = Wiring · U = Power supply · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase

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