R4D450-AK03-05

AC centrifugal fan

backward curved, single inlet



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Nominal data

Type	**R4D450-AK03-05**
Motor	**M4D110-GF**

Phase		3~	3~	3~	3~	3~	3~
Nominal voltage	VAC	230	277	400	400	480	480
Connection		Δ	Δ	Δ	Y	Δ	Y
Frequency	Hz	50	60	50	50	60	60
Type of data definition		ml	ml	ml	ml	ml	ml
State			prelim.				prelim.
Valid for approval / standard		CE	CE	CE	CE	CE	CE
Speed	min^{-1}	1090	1205	1350	1090	1580	1205
Power input	W	510	770	730	510	1180	770
Current draw	A	1.52	2.02	1.48	0.88	1.8	1.17
Min. back pressure	Pa	0	0	0	0	0	0
Min. ambient temperature	°C					-40	
Max. ambient temperature	°C	80	55	80	80	55	55
Starting current	A			6.5		7.5	

ml = max. load · me = max. efficiency · fa = running at free air · cs = customer specs · cu = customer unit
Subject to alterations

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Technical features

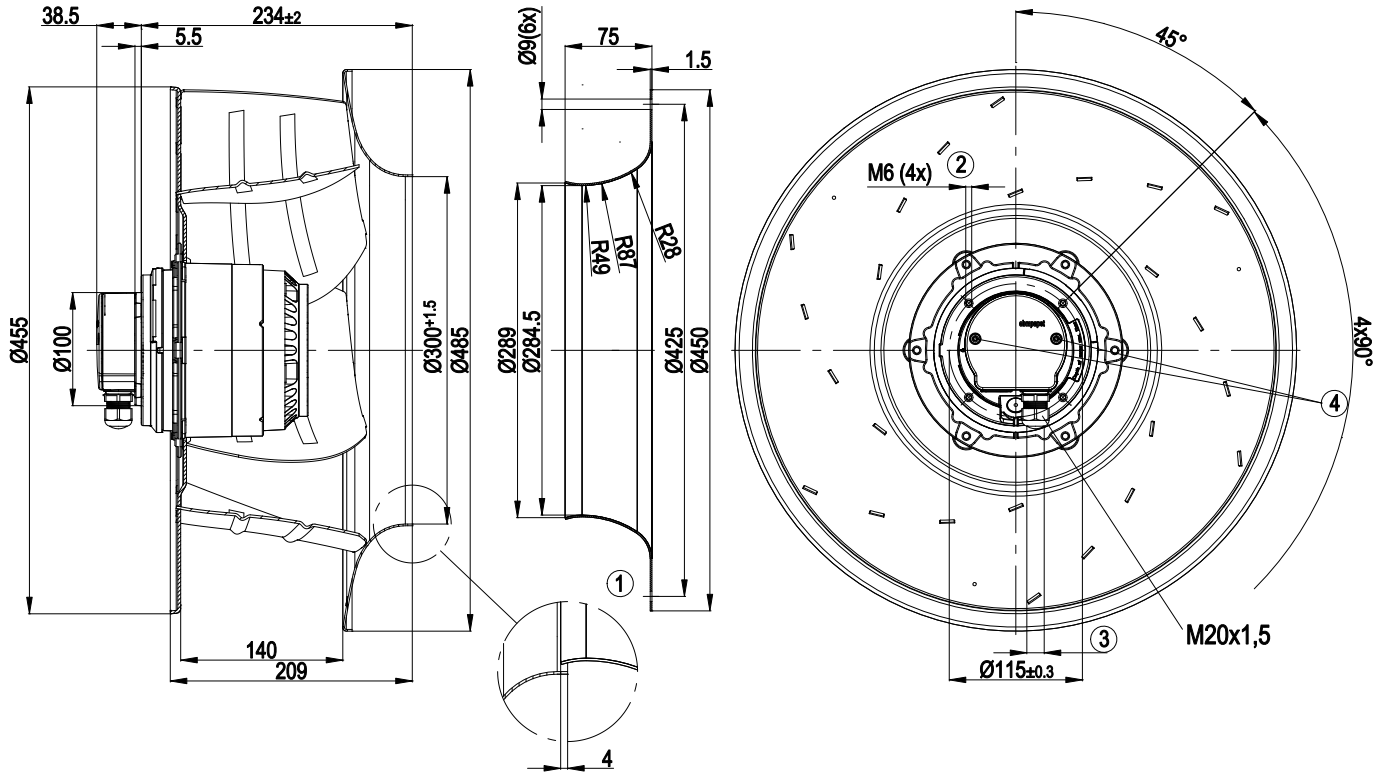
Mass	11.5 kg
Size	450 mm
Surface of rotor	Cast in aluminium
Material of terminal box	ABS plastic, black
Material of impeller	Aluminium sheet
Number of blades	6
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"F"
Humidity class	F3-1
Max. permissible ambient motor 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
Electrical leads	Via terminal box
Motor protection	Thermal overload protector (TOP) brought out
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 61800-5-1; CE
Approval	CCC; VDE

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Product drawing



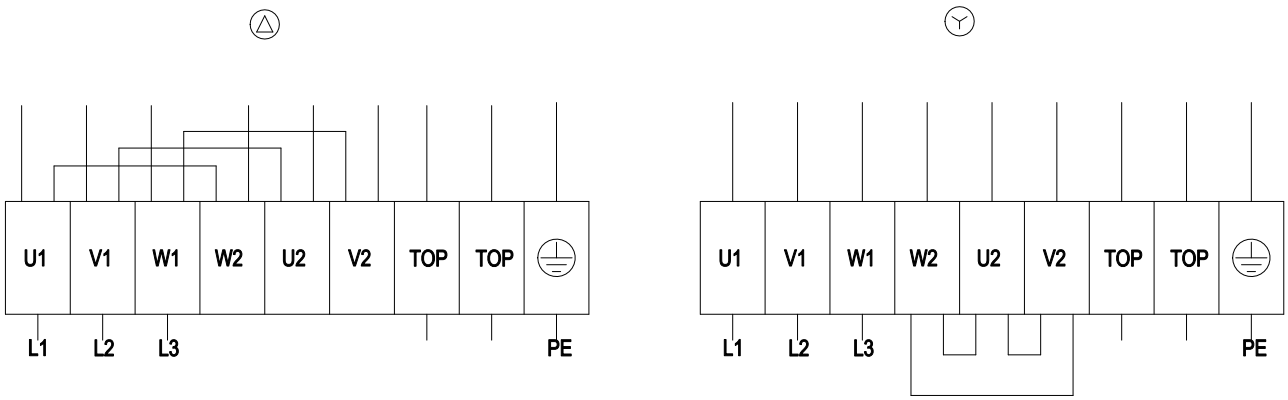
1	Accessory part: inlet nozzle 63045-2-4013 not included in the standard scope of delivery; other inlet nozzles on request
2	Depth of screw max. 12 mm
3	Cable diameter: min. 6 mm, max. 12 mm, tightening torque: 2±0.3 Nm
4	Tightening torque 1.0 ± 0.15 Nm

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Connection screen



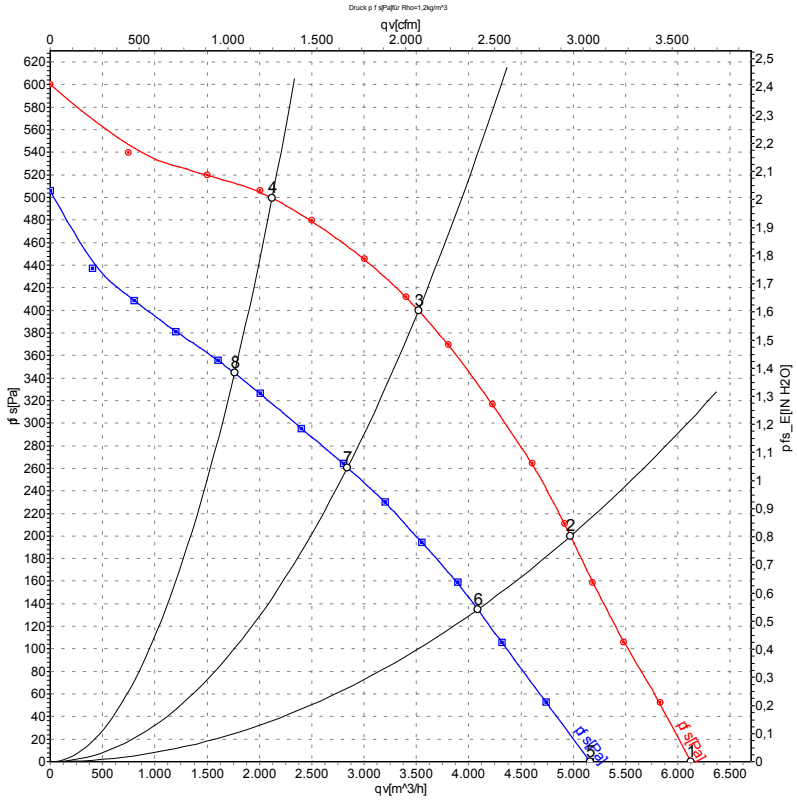
Δ	Delta-connection	Y	Star connection	L1	= U1 = black
L2	= V1 = blue	L3	= W1 = brown	W2	yellow
U2	green	V2	white	TOP	2 x grey
PE	green / yellow				

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Charts: Air flow 50 Hz Δ



Measurement: LU-72617
Measurement: LU-72618

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	1390	564	1.27	6120	0
2	Δ	400	50	1365	678	1.40	4975	200
3	Δ	400	50	1350	730	1.48	3520	400
4	Δ	400	50	1370	648	1.36	2120	500
5	Y	400	50	1185	426	0.72	5160	0
6	Y	400	50	1120	483	0.82	4085	135
7	Y	400	50	1090	510	0.88	2840	261
8	Y	400	50	1135	469	0.79	1760	344

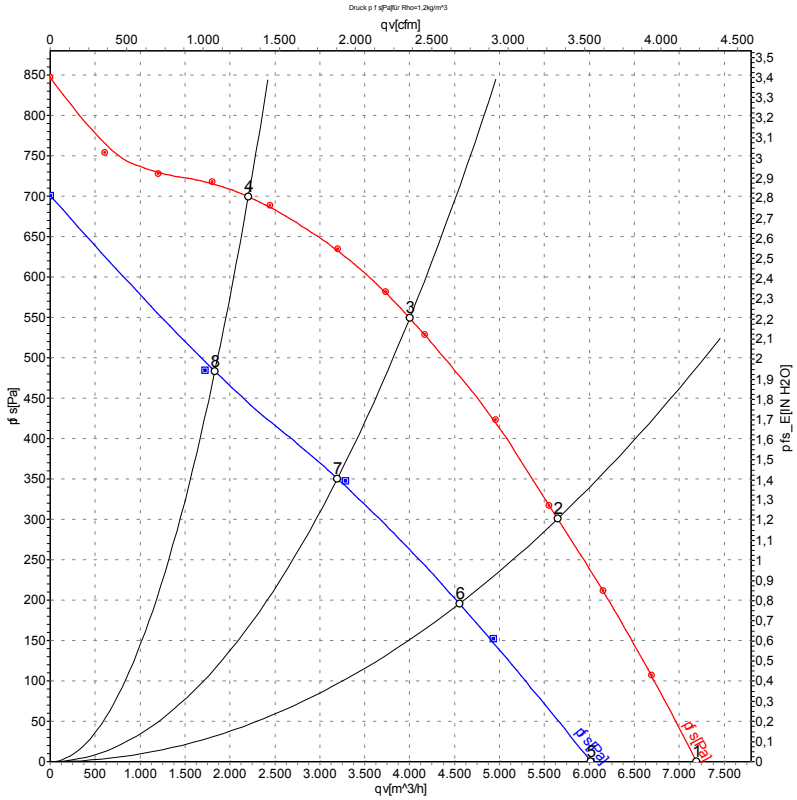
Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

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Charts: Air flow 60 Hz Δ



Measurement: LU-72619
Measurement: LU-121125

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	480	60	1635	918	1.49	7195	0
2	Δ	480	60	1595	1119	1.71	5645	300
3	Δ	480	60	1580	1180	1.80	4000	550
4	Δ	480	60	1615	1018	1.59	2205	700
5	Y	480	60	1370	660	0.92	6015	0
6	Y	480	60	1290	735	1.05	4555	197
7	Y	480	60	1205	770	1.17	3195	355
8	Y	480	60	1320	702	1.00	1830	475

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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