R4D500-AQ05-01

AC centrifugal fan

backward curved

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Nominal data

Type	**R4D500-AQ05-01**
Motor	**M4D138-LA**

Phase		3~	3~	3~	3~
Nominal voltage	VAC	230	277	400	480
Connection		Δ	Δ	Y	Y
Frequency	Hz	50	60	50	60
Type of data definition		ml	fa	ml	ml
Valid for approval / standard		CE	CE	CE	CE
Speed	min^{-1}	1410	1670	1410	1670
Power input	W	1450	2400	1450	2400
Current draw	A	5.54	6.75	3.2	3.9
Min. back pressure	Pa	0	0	0	0
Min. ambient temperature	°C	-40	-40	-40	-40
Max. ambient temperature	°C	95	70	95	70

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

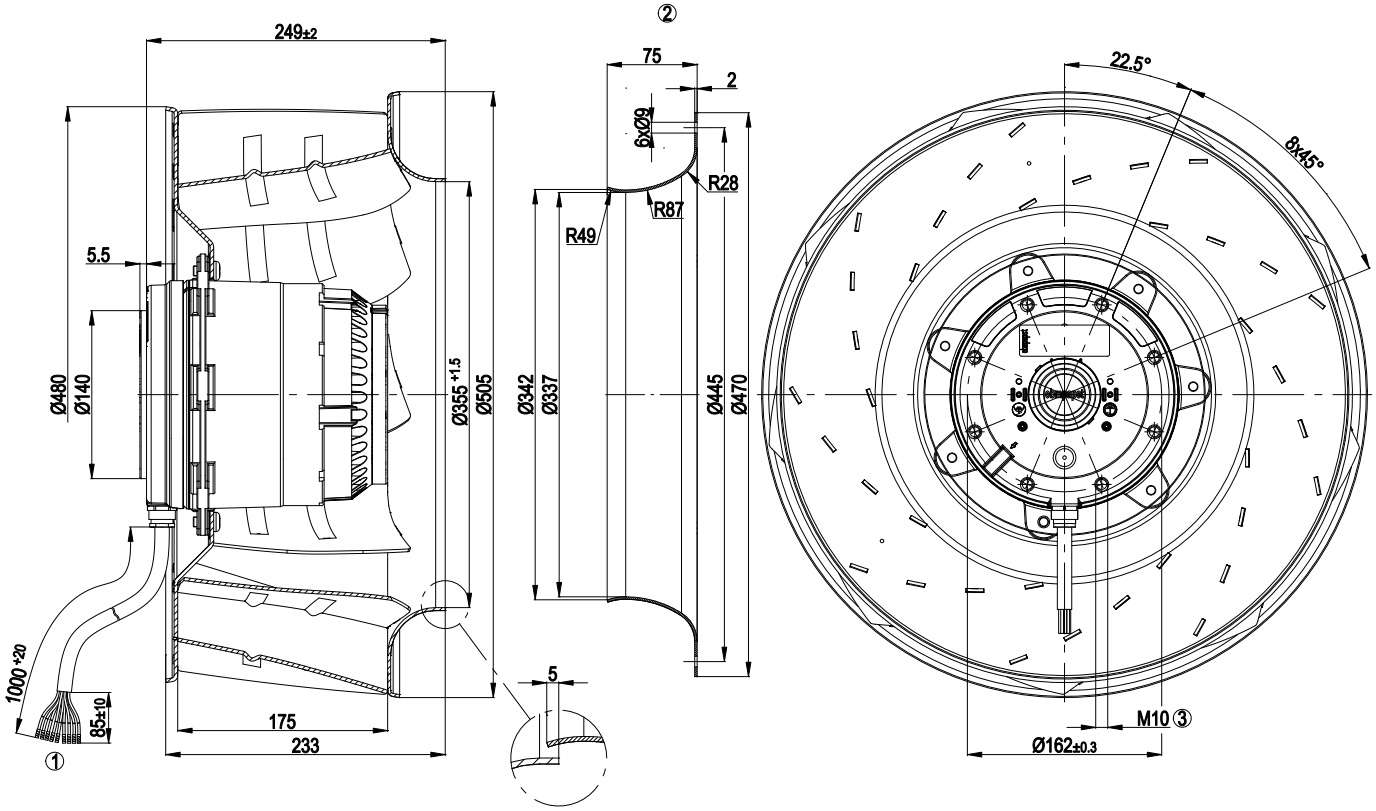
Mass	25.5 kg
Size	500 mm
Surface of rotor	Cast in aluminium
Material of impeller	Aluminium sheet
Number of blades	9
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"F"
Humidity class	F3-1
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Any
Condensate discharge holes	On rotor and stator sides
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	Lateral
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 61800-5-1; EN 60034
Approval	CSA C22.2 Nr.100; EAC; UL 1004-1

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Product drawing



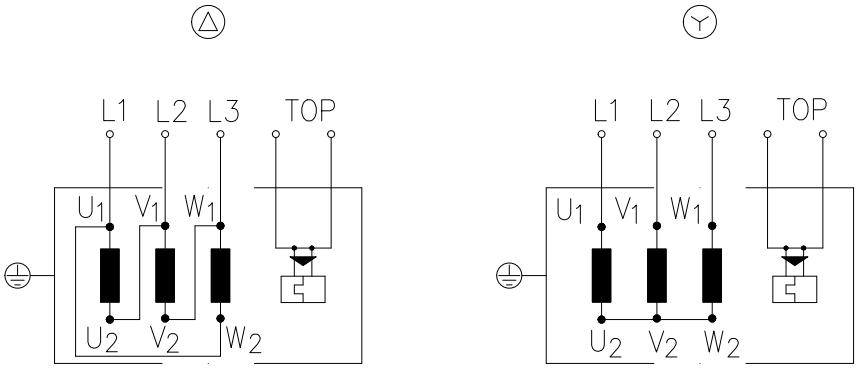
1	Connection line silicone 9 x 0.75 mm², 9 x brass lead tips crimped
2	Accessory part: Inlet nozzle 63072-2-4013, not included in the standard scope of delivery. Other inlet nozzles on request.
3	Depth of screw max. 18 mm

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Connection screen



Changing the direction of rotation by reversing the two phases

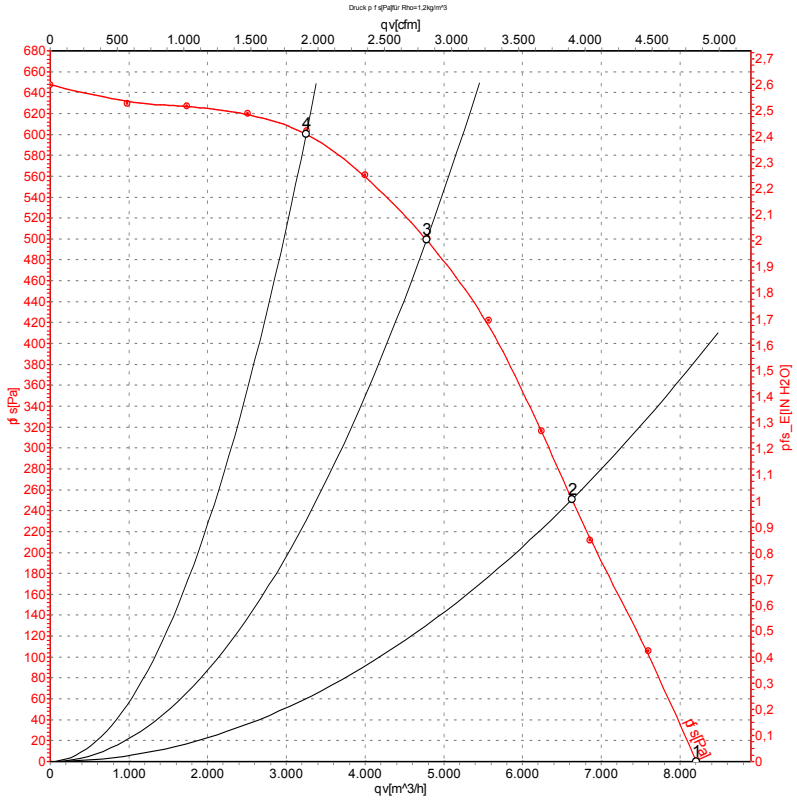
Δ	Delta connection	Y	Star connection	L1	= U1 = black
L2	= V1 = blue	L3	= W1 = brown	W2	yellow
U2	green	V2	white	TOP	2 x grey
PE	green / yellow				

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Charts: Air flow 50 Hz



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}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa
1	Y	400	50	1430	1210	2.87	78	86	8205	0
2	Y	400	50	1415	1383	3.07	74	82	6625	250
3	Y	400	50	1410	1450	3.20	70	78	4780	501
4	Y	400	50	1425	1248	2.90	71	78	3250	603

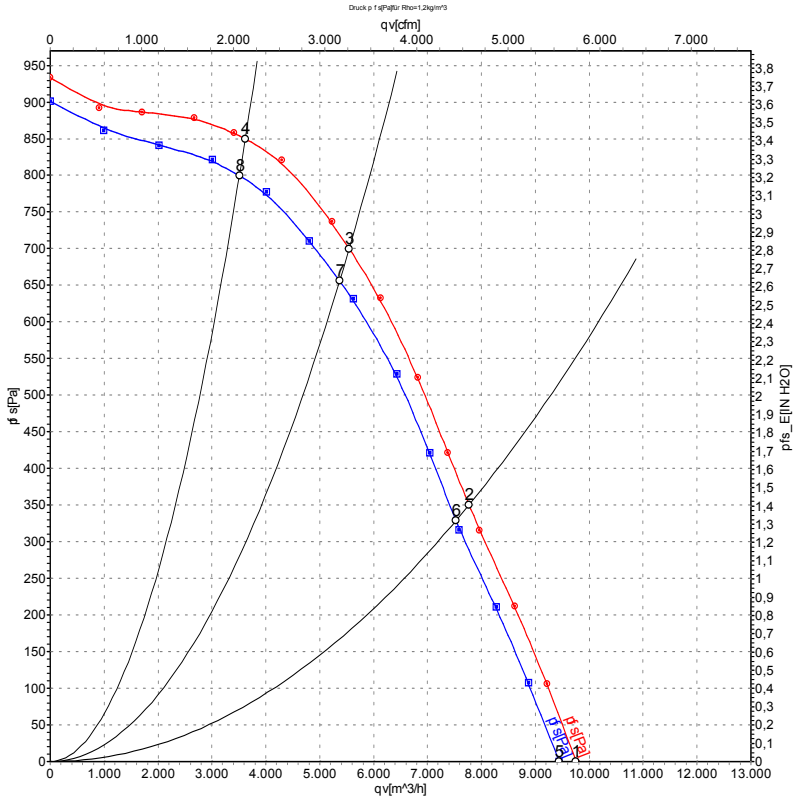
Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side
qv = Air flow · p_{fs} = Pressure increase

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Charts: Air flow 60 Hz



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}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa
1	Y	480	60	1695	2008	3.41	84	91	9755	0
2	Y	480	60	1675	2291	3.69	79	86	7770	350
3	Y	480	60	1670	2400	3.90	75	82	5545	700
4	Y	480	60	1690	2021	3.38	76	83	3620	850
5	Y	400	60	1645	1883	3.36	82	90	9440	0
6	Y	400	60	1615	2144	3.76	78	85	7530	327
7	Y	400	60	1600	2240	3.90	74	81	5370	656
8	Y	400	60	1640	1894	3.39	75	82	3510	800

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
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