

R4D500-RA01-06 ebmpapst Datasheet

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## Nominal data

Type	R4D500-RA01-06		
Motor	M4D138-HF		
Phase		3~	3~
Nominal voltage	VAC	400	400
Wiring		$\Delta$	Y
Frequency	Hz	50	50
Method of obtaining data		ml	ml
Valid for approval/standard		CE	CE
Speed (rpm)	min <sup>-1</sup>	1370	1140
Power consumption	W	1500	1120
Current draw	A	2.8	1.84
Min. ambient temperature	°C	-40	-40
Max. ambient temperature	°C	55	55
Starting current	A	11.5	4.0

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment  
Subject to change

## Data according to Commission Regulation (EU) 327/2011 (EN 17166)

		Actual	Req. 2015			
01 Overall efficiency $\eta_{es}$	%	54.7	53.4	09 Power consumption $P_e$	kW	1.5
02 Measurement category		A		09 Air flow $q_v$	m <sup>3</sup> /h	6215
03 Efficiency category		Static		09 Pressure increase $p_{fs}$	Pa	475
04 Efficiency grade N		63.3	62	10 Speed (rpm) n	min <sup>-1</sup>	1370
05 Variable speed drive		No		11 Specific ratio*		1.01

Data obtained at optimum efficiency level.  
The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

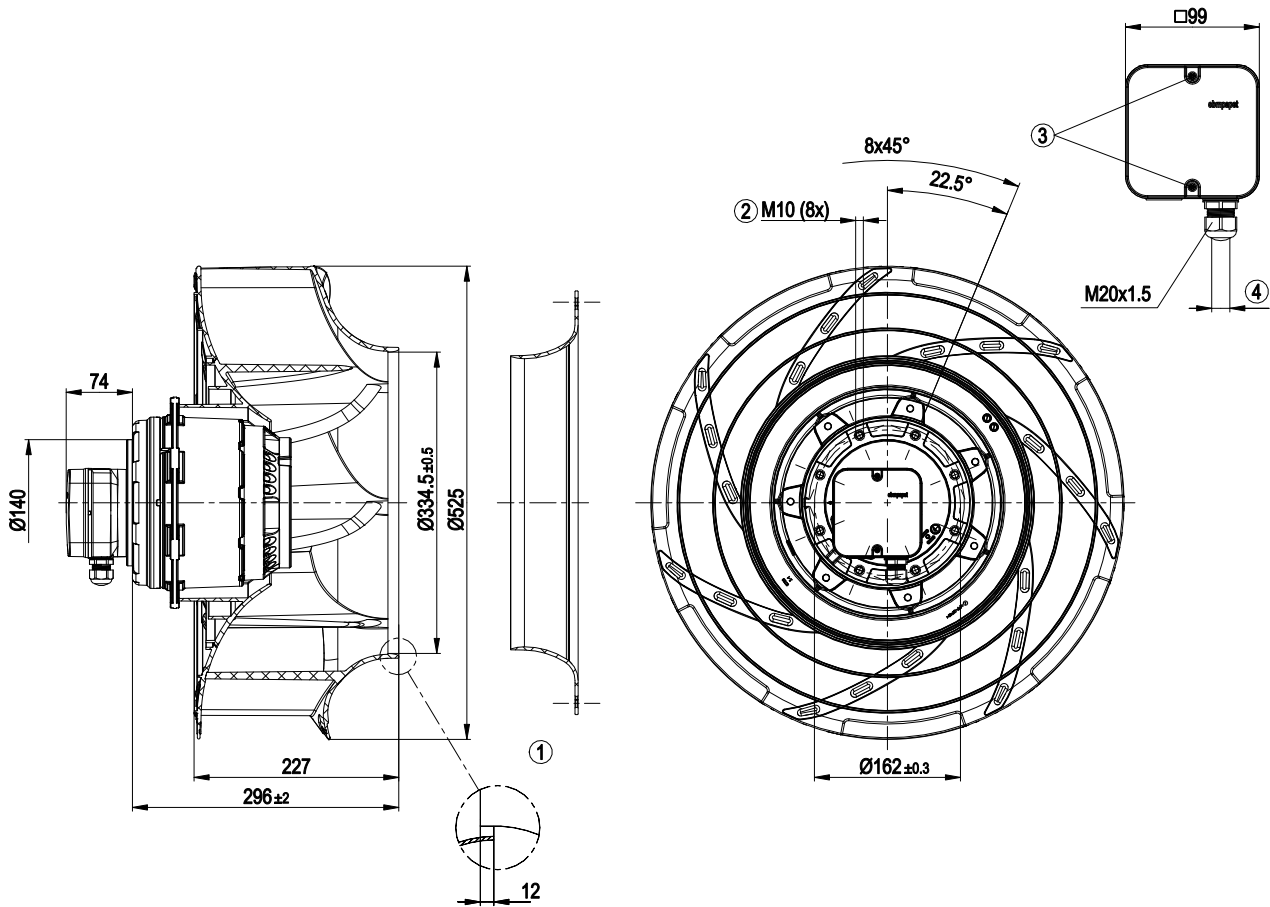
\* Specific ratio =  $1 + p_s / 100\,000\text{ Pa}$ 

LU-167200

### Technical description

<b>Weight</b>	21 kg
<b>Size</b>	500 mm
<b>Motor size</b>	138
<b>Rotor surface</b>	Cast in aluminum
<b>Impeller material</b>	PP plastic
<b>Number of blades</b>	7
<b>Direction of rotation</b>	Clockwise, viewed toward rotor
<b>Degree of protection</b>	IP54
<b>Insulation class</b>	"F"
<b>Moisture (F) / Environmental (H) protection class</b>	H2
<b>Ambient temperature note</b>	Occasional start-up at temperatures between -40°C and -25°C is permitted. For continuous operation at ambient temperatures below -25°C (such as refrigeration applications), use must be made of a fan design with special low-temperature bearings.
<b>Max. permitted ambient temp. for motor (transport/storage)</b>	+80 °C
<b>Min. permitted ambient temp. for motor (transport/storage)</b>	-40 °C
<b>Installation position</b>	Any
<b>Condensation drainage holes</b>	On rotor and stator sides
<b>Mode</b>	S1
<b>Motor bearing</b>	Ball bearing
<b>Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)</b>	<= 3.5 mA
<b>Electrical hookup</b>	Terminal box
<b>Motor protection</b>	Thermal overload protector (TOP) with basic insulation
<b>With cable</b>	Axial
<b>Protection class</b>	I (with customer connection of protective earth)
<b>Conformity with standards</b>	EN 60034-1 (2010); CE
<b>Approval</b>	EAC; VDE

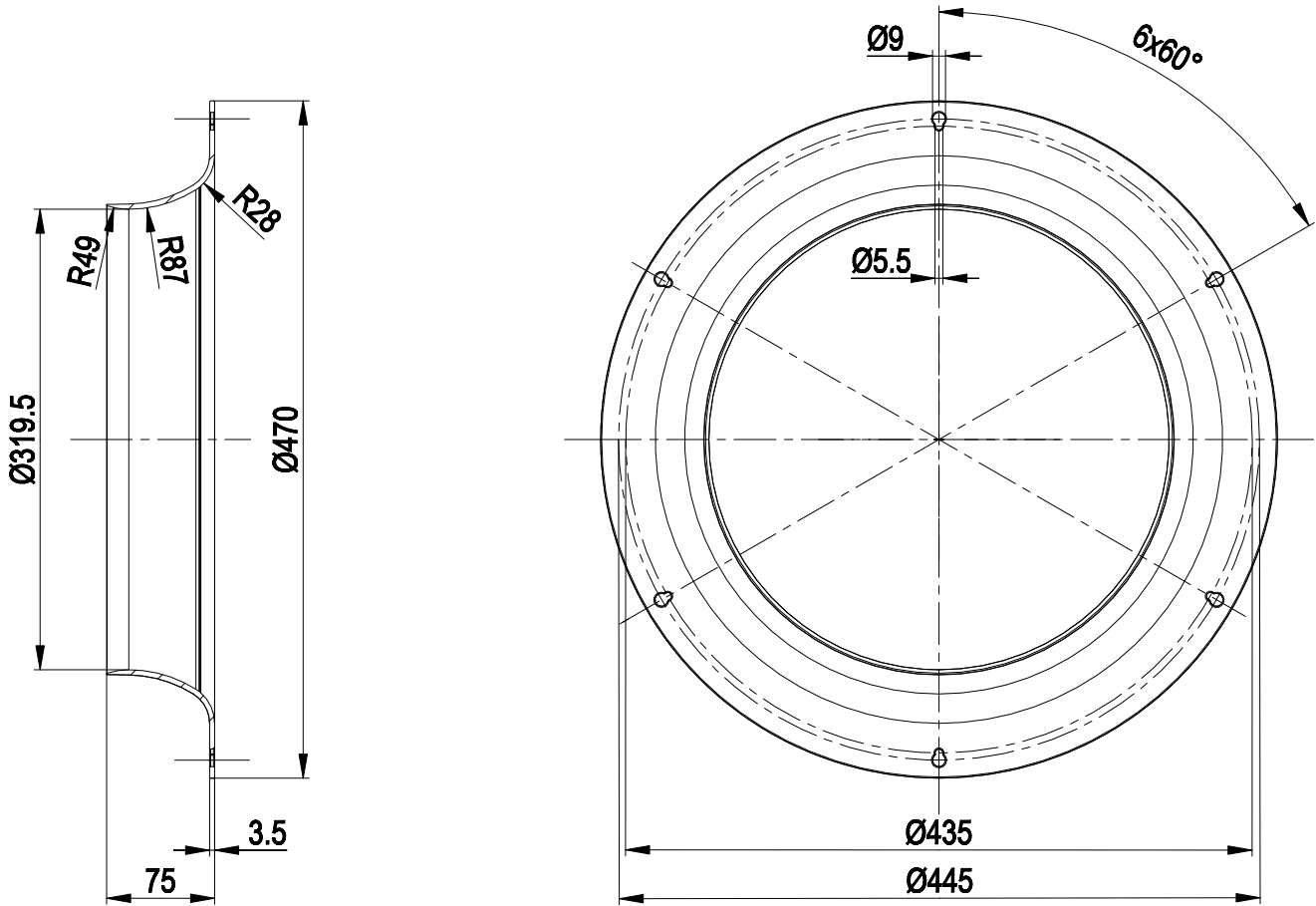
Product drawing



- |   |   |
|---|---|
| 1 | Accessory part: inlet ring 50901-2-2943 not included in scope of delivery |
| 2 | Max. clearance for screw 18 mm  |
| 3 | Tightening torque $1.5 \pm 0.2$ Nm  |
| 4 | Cable diameter min. 7 mm, max. 14 mm, tightening torque $2 \pm 0.3$ Nm    |



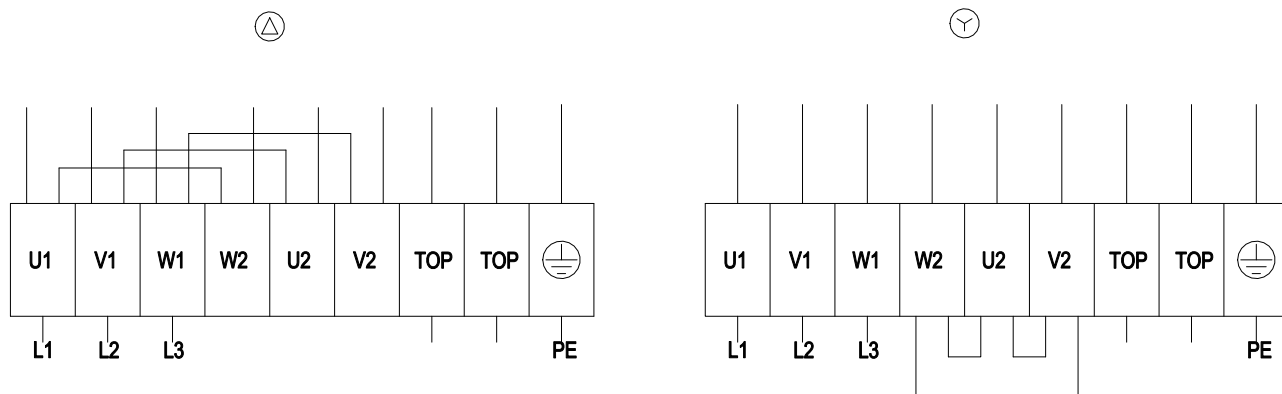
Accessory part



1 Accessory part: inlet ring 50901-2-2943



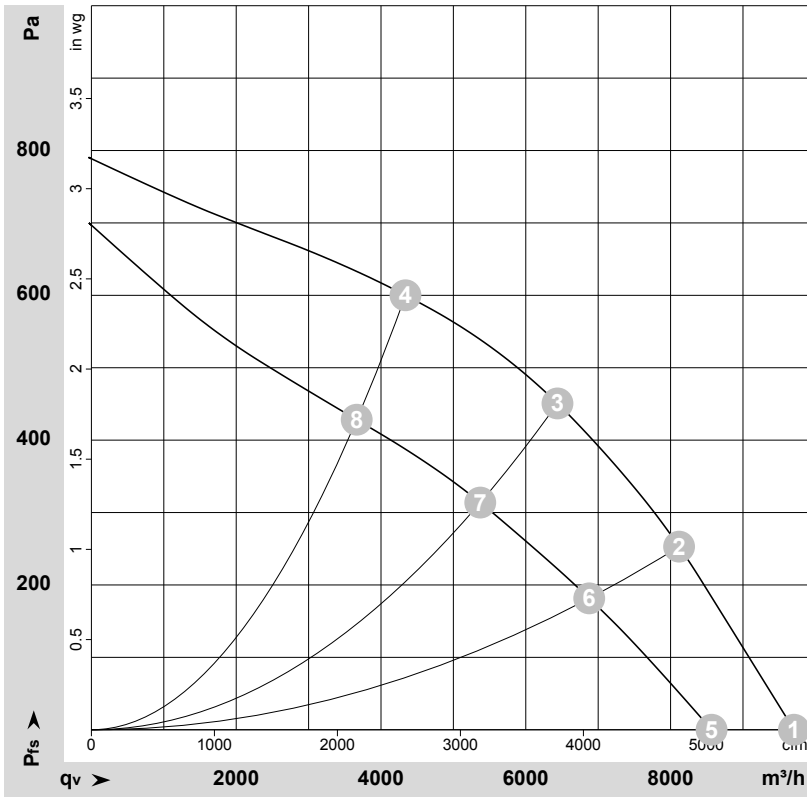
## Connection diagram



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				



## Curves: Air performance 50 Hz



$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$

Measurement: LU-167200-1  
Measurement: LU-167220-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebmpapst. 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 <sub>e</sub>	I	LpA <sub>in</sub>	LwA <sub>in</sub>	LwA <sub>out</sub>	q <sub>v</sub>	p <sub>fs</sub>	q <sub>v</sub>	p <sub>fs</sub>
		V	Hz	min <sup>-1</sup>	W	A	dB(A)	dB(A)	dB(A)	m <sup>3</sup> /h	Pa	cfm	in. wg
1	Δ	400	50	1410	1131	2.27	73	80	87	9705	0	5710	0.00
2	Δ	400	50	1380	1407	2.60	69	77	83	8115	250	4775	1.00
3	Δ	400	50	1370	1500	2.80	65	72	78	6440	450	3790	1.81
4	Δ	400	50	1380	1412	2.59	64	72	77	4340	600	2555	2.41
5	Y	400	50	1245	901	1.50	70	77	84	8565	0	5040	0.00
6	Y	400	50	1170	1068	1.77	65	73	79	6875	182	4045	0.73
7	Y	400	50	1140	1120	1.84	61	68	74	5370	314	3160	1.26
8	Y	400	50	1160	1061	1.76	60	67	72	3665	428	2155	1.72

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P<sub>e</sub> = Power consumption · I = Current draw · LpA<sub>in</sub> = Sound pressure level intake side · LwA<sub>in</sub> = Sound power level intake side  
LwA<sub>out</sub> = Sound power level outlet side · q<sub>v</sub> = Air flow · p<sub>fs</sub> = Pressure increase