

R4D400-AL17-05

# AC centrifugal fan

backward curved, single inlet



R4D400-AL17-05 ebmpapst

Datesheet

sales@fansco.com

www.fansco.com

## Nominal data

Type	R4D400-AL17-05		
Motor	M4D110-GF		
Phase		3~	3~
Nominal voltage	VAC	400	480
Connection		$\Delta$	$\Delta$
Frequency	Hz	50	60
Type of data definition		ml	ml
Valid for approval / standard		CE	CE
Speed	min <sup>-1</sup>	1405	1655
Power input	W	450	740
Current draw	A	1.01	1.22
Min. back pressure	Pa	0	0
Min. ambient temperature	°C	-40	-40
Max. ambient temperature	°C	100	80
Starting current	A	4.89	5.43

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 =  $1 + p_{fs} / 100\,000\text{ Pa}$

	Actual	Request 2013	Request 2015
Overall efficiency $\eta_{es}$	48.7	43.9	47.9
Efficiency grade N	62.8	58	62
Power input $P_e$	kW	0.45	
Air flow $q_v$	m <sup>3</sup> /h	2405	
Pressure increase $p_{fs}$	Pa	330	
Speed n	min <sup>-1</sup>	1405	

Data established at point of optimum efficiency



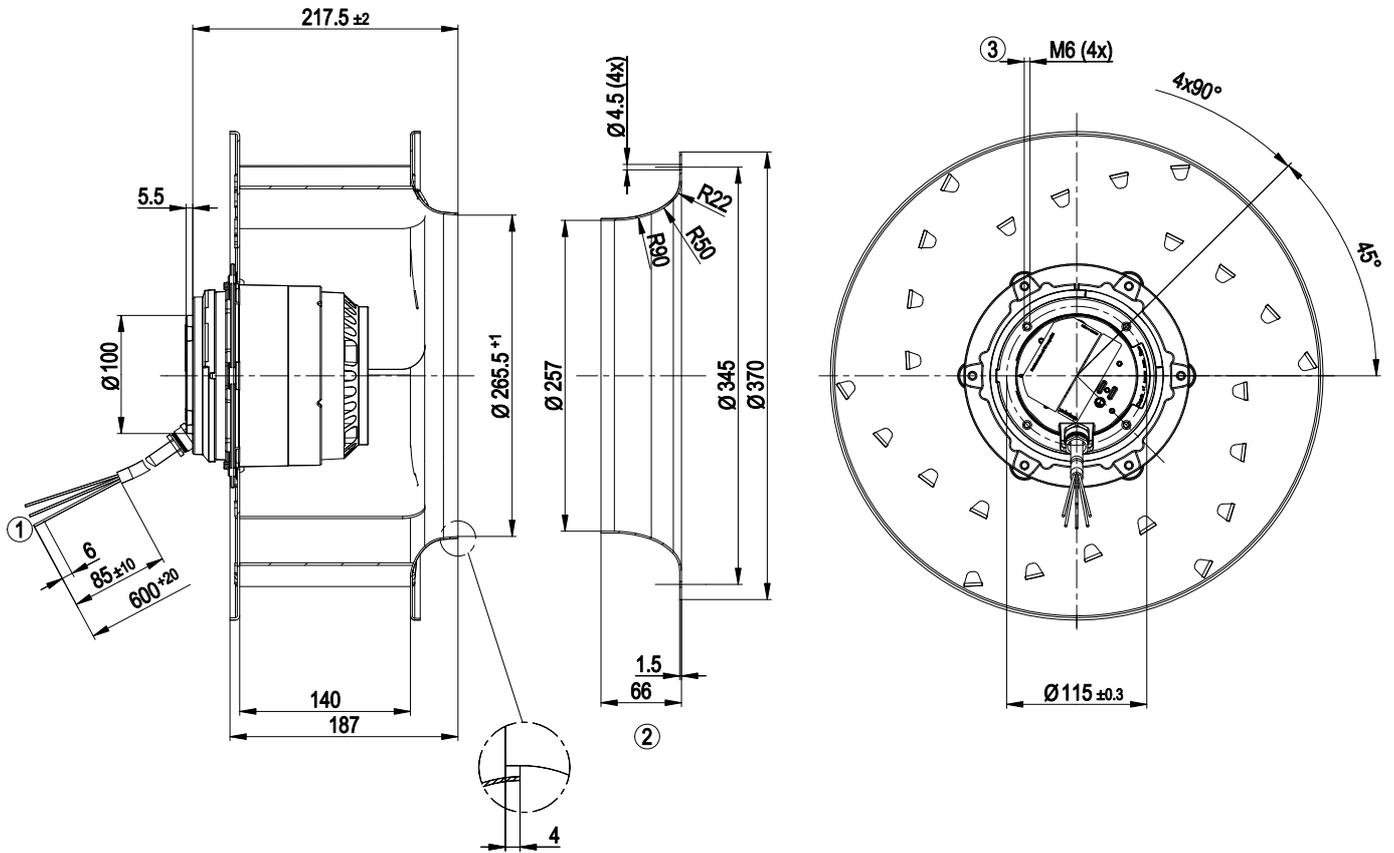
### Technical features

<b>Mass</b>	14.5 kg
<b>Size</b>	400 mm
<b>Surface of rotor</b>	Cast in aluminium
<b>Material of impeller</b>	Aluminium sheet
<b>Number of blades</b>	6
<b>Direction of rotation</b>	Clockwise, seen on rotor
<b>Type of protection</b>	IP 54
<b>Insulation class</b>	"F"
<b>Humidity class</b>	F3-1
<b>Max. permissible ambient motor temp. (transp./ storage)</b>	+100 °C
<b>Min. permissible ambient motor temp. (transp./storage)</b>	-40 °C
<b>Mounting position</b>	Shaft horizontal or rotor on bottom; rotor on top on request
<b>Condensate discharge holes</b>	Rotor-side
<b>Operation mode</b>	S1
<b>Motor bearing</b>	Ball bearing
<b>Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)</b>	<= 3.5 mA
<b>Motor protection</b>	Thermal overload protector (TOP) brought out
<b>Protection class</b>	I (if protective earth is connected by customer)
<b>Product conforming to standard</b>	EN 61800-5-1; CE
<b>Approval</b>	VDE

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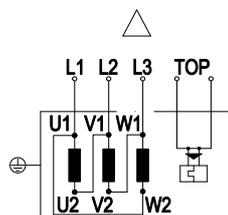
## Product drawing



1	Connection line silicone 6G 0.5 mm <sup>2</sup> , 6 x brass lead tips crimped
2	Accessory part: Inlet nozzle 54476-2-4013, not included in the standard scope of delivery
3	Depth of screw max. 12 mm

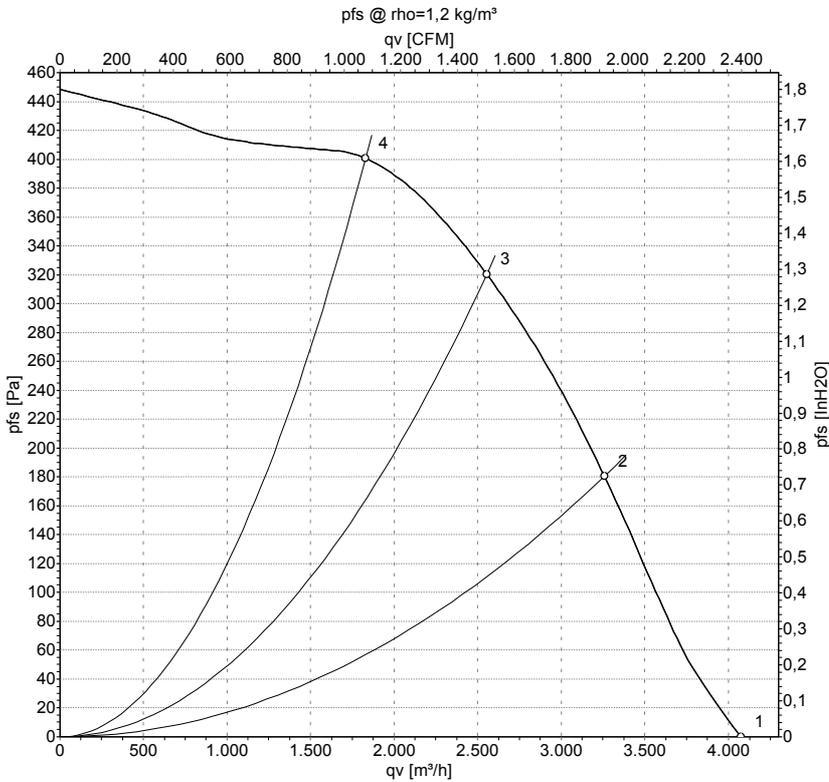


## Connection screen



L1	= U1 = black	L2	= V1 = blue	L3	= W1 = brown
TOP	2 x grey	PE	green / yellow		

## Charts: Air flow 50 Hz Δ



Measurement: LU-135131

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.

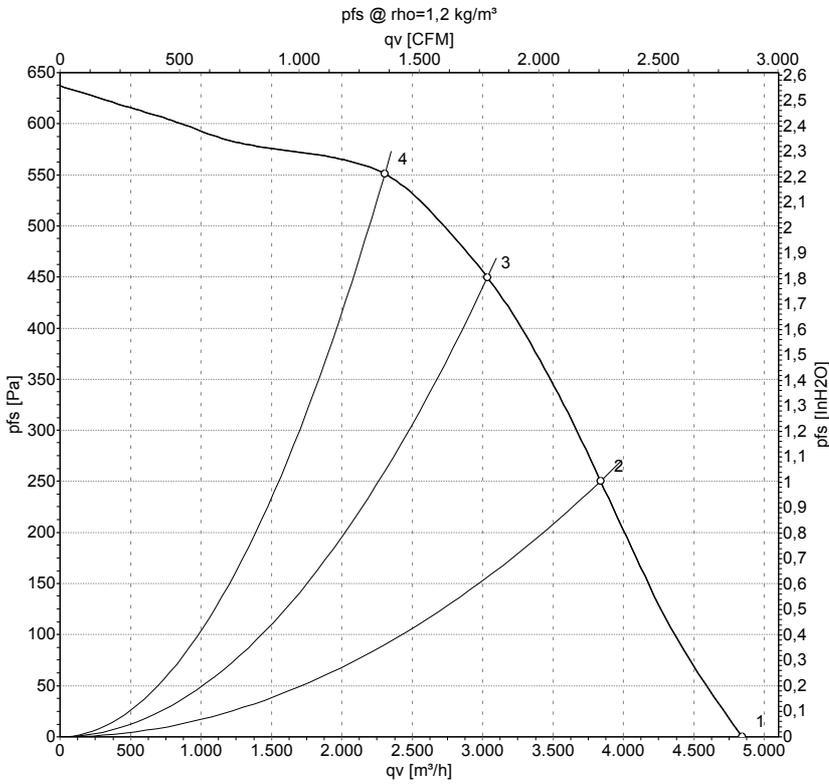
## Measured values

	Conn.	U	f	n	P <sub>e</sub>	I	qv	p <sub>fs</sub>
		V	Hz	min <sup>-1</sup>	W	A	m <sup>3</sup> /h	Pa
1	Δ	400	50	1430	348	0.84	4075	0
2	Δ	400	50	1415	409	0.89	3260	180
3	Δ	400	50	1405	450	1.01	2555	320
4	Δ	400	50	1410	420	0.90	1830	400

Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed · P<sub>e</sub> = Power input · I = Current draw · qv = Air flow · p<sub>fs</sub> = Pressure increase



## Charts: Air flow 60 Hz



Measurement: LU-135148

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 <sub>e</sub>	I	qv	p <sub>fs</sub>
		V	Hz	min <sup>-1</sup>	W	A	m <sup>3</sup> /h	Pa
1	Δ	480	60	1695	558	0.96	4840	0
2	Δ	480	60	1670	675	1.08	3835	250
3	Δ	480	60	1655	740	1.22	3035	450
4	Δ	480	60	1665	701	1.11	2305	550

Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed · P<sub>e</sub> = Power input · I = Current draw · qv = Air flow · p<sub>fs</sub> = Pressure increase

