R4D400-AB04-05

AC centrifugal fan

backward curved, single inlet

ebm-papst Mulfingen GmbH & Co. KG
Bachmühle 2 · D-74673 Mulfingen
Phone +49 7938 81-0
Fax +49 7938 81-110
info1@de.ebmpapst.com
www.ebmpapst.com

Limited partnership · Headquarters Mulfingen
County court Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
County court Stuttgart · HRB 590142

ErP2013 EXCEEDS THE NORM

Nominal data

Type	**R4D400-AB04-05**
Motor	**M4D094-HA**

Phase		3~	3~
Nominal voltage	VAC	400	400
Connection		Y	Y
Frequency	Hz	50	60
Type of data definition		ml	ml
Valid for approval / standard		CE	CE
Speed	min^{-1}	1430	1650
Power input	W	440	680
Current draw	A	1.2	1.27
Min. back pressure	Pa	0	0
Max. ambient temperature	°C	75	55

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 Pa

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}		45.4	44.3	48.3
Efficiency grade N		59.1	58	62
Power input P_e	kW	0.5		
Air flow q_v	m^3/h	2755		
Pressure increase p_{fs}	Pa	301		
Speed n	min^{-1}	1420		

Data established at point of optimum efficiency

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Technical features

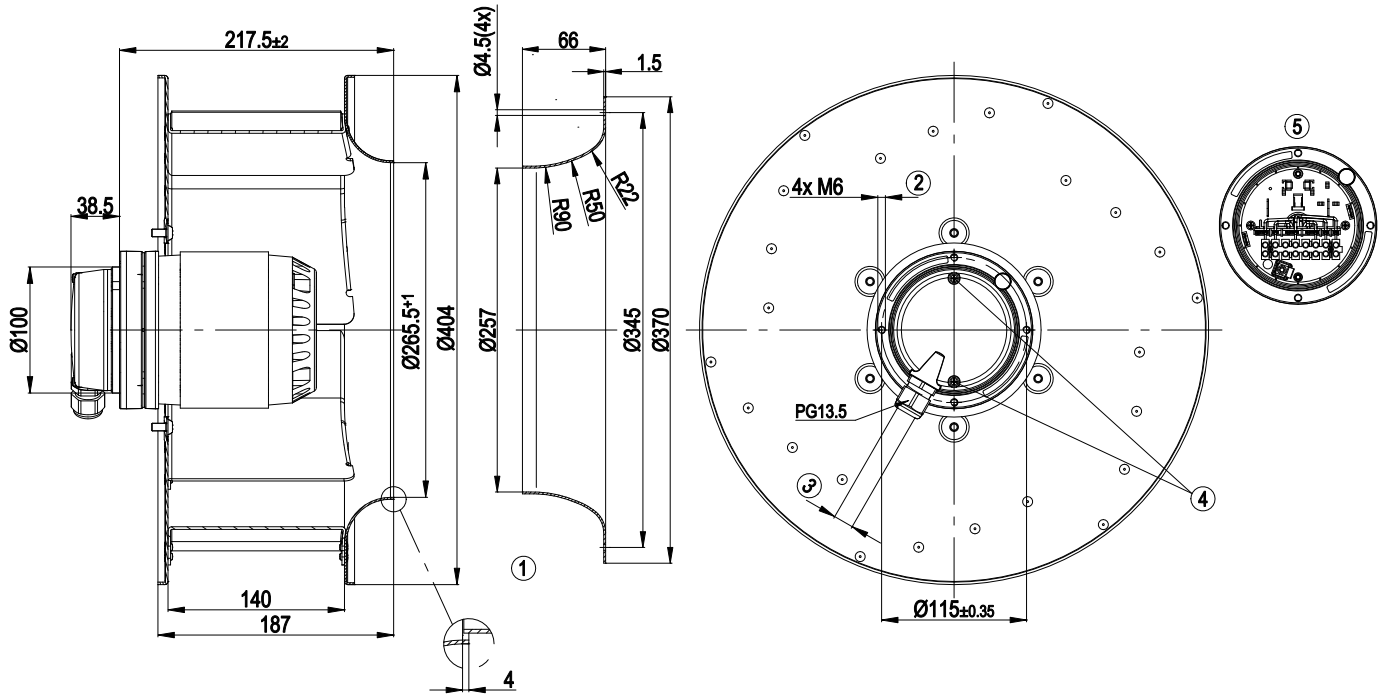
Size	400 mm
Surface of rotor	Coated in black
Material of terminal box	ABS plastic, black
Material of impeller	Aluminum sheet, riveted
Number of blades	6
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"F"
Humidity class	F4-1
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Any
Condensate discharge holes	None
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
Cable exit	Lateral
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60034-1 (2004); CE
Approval	CCC

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Product drawing



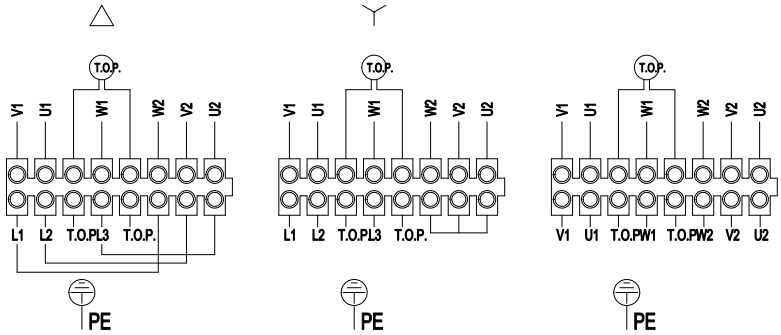
1	Accessory part: Inlet nozzle 54476-2-4013, not included in the standard scope of delivery
2	Depth of screw max. 10 mm
3	Cable diameter: min. 6 mm, max. 12 mm; tightening torque: 2 Nm ±0.3 Nm
4	Tightening torque 1.5 Nm±0.2 Nm
5	Shown without terminal box cover

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Connection screen



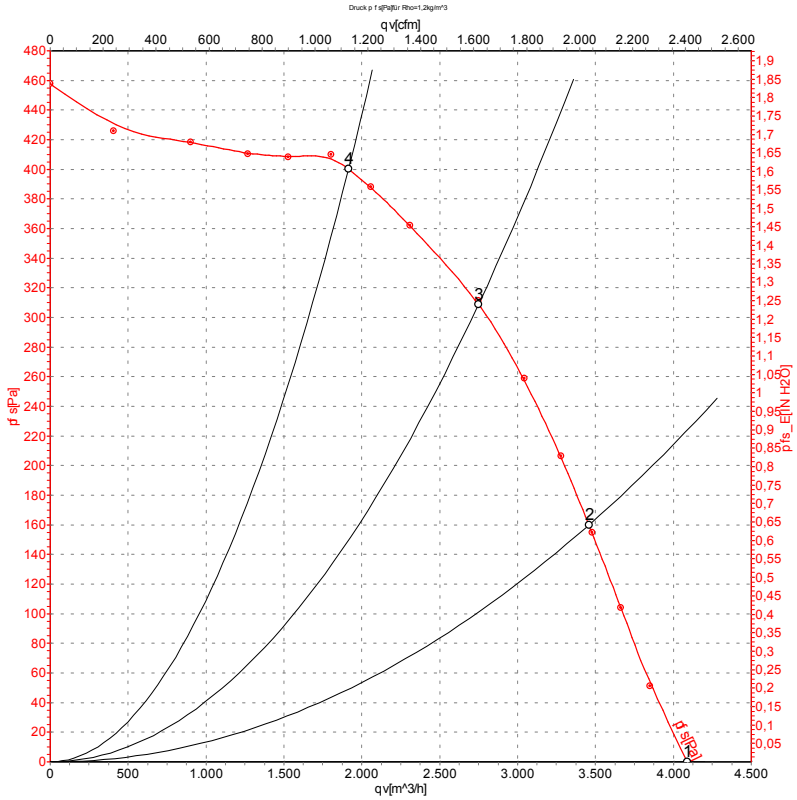
Δ	Delta-connection
Y	Star connection
L1	= V1 = black
L2	= U1 = blue
L3	= W1 = red
U2	green
V2	yellow
W2	white
TOP	Thermal overload protector

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Charts: Air flow 50 Hz



Measurement: LU-41179

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

	U	f	n	P_e	I	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa
1	400	50	1430	440	1.20	4080	0
2	400	50	1430	459	1.20	3455	160
3	400	50	1420	506	1.24	2750	312
4	400	50	1425	470	1.20	1915	400

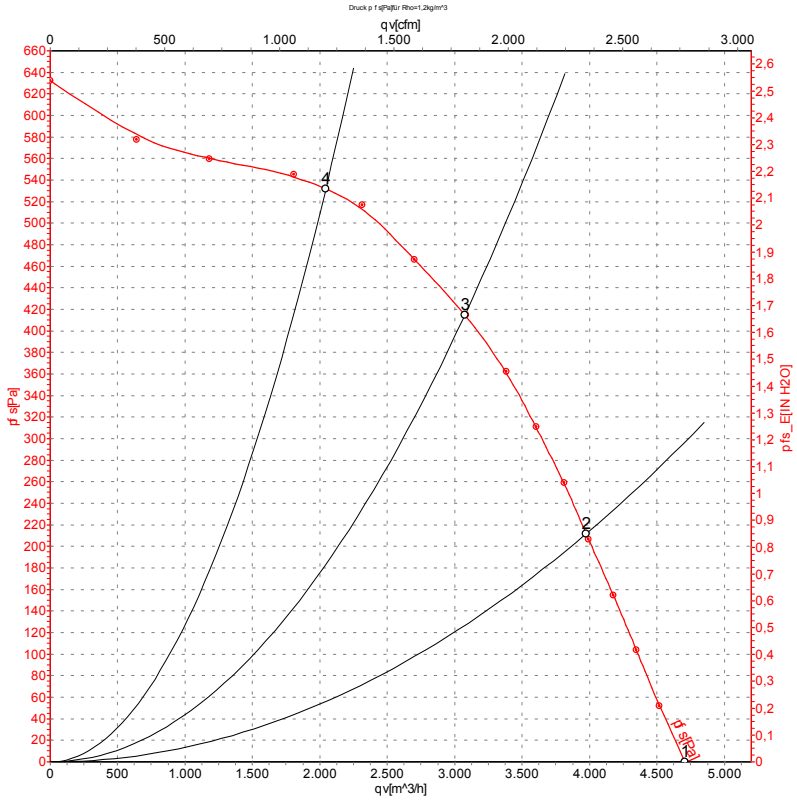
U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

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Charts: Air flow 60 Hz



Measurement: LU-41180

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

	U	f	n	P_e	I	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa
1	400	60	1650	680	1.27	4700	0
2	400	60	1645	698	1.31	3975	212
3	400	60	1625	768	1.41	3075	416
4	400	60	1645	694	1.30	2045	532

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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