AC centrifugal fan - RadiCal

backward curved, single inlet

R2D190-RA22-11 ebmpapst Datasheet
sales@fansco.com
www.fansco.com

Limited partnership · Headquarters Mulfingen
County court Stuttgart · HRA 590344

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

Nominal data

Type	**R2D190-RA22-11**
Motor	**M2D068-BF**

Phase		3~	3~
Nominal voltage	VAC	400	460
Connection		Y	Y
Frequency	Hz	50	60
Type of data definition		ml	ml
Valid for approval / standard		CE	CE
Speed (rpm)	min^{-1}	2450	2750
Power input	W	60	80
Current draw	A	0.13	0.11
Min. ambient temperature	°C	-25	-25
Max. ambient temperature	°C	50	50

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	1.2 kg
Size	190 mm
Surface of rotor	Coated in black
Material of impeller	PA plastic
Number of blades	7
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 44; Depending on installation and position as per EN 60034-5
Insulation class	"B"
Humidity (F)/environmental protection class (H)	F2-2
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)	< 0.75 mA
Motor protection	Thermal overload protector (TOP) brought out, basic insulation
Cable exit	Lateral
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60335-1; CE
Approval	UL 1004-1; CSA C22.2 No.100; CCC

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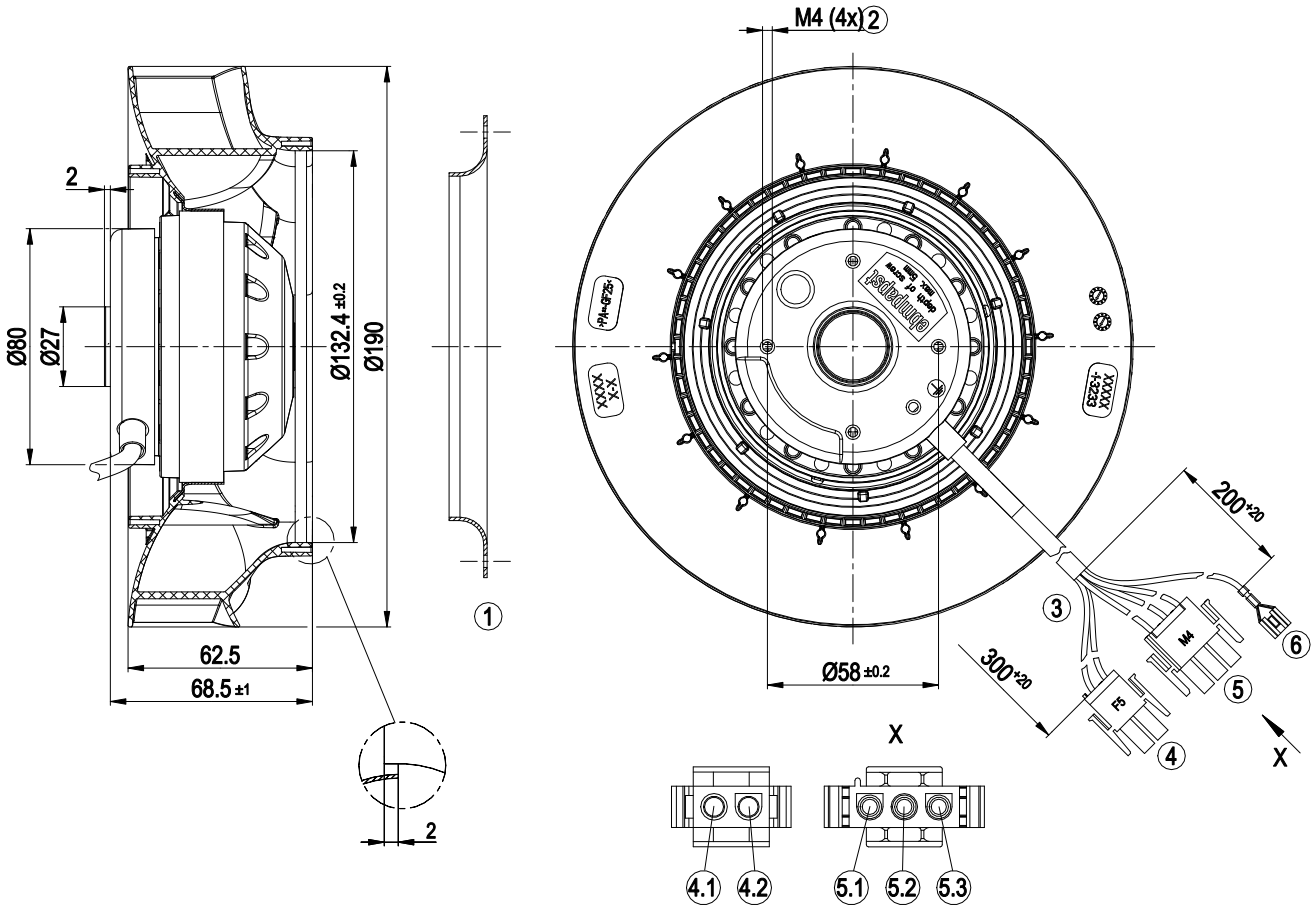
Product drawing



1	Accessory part: Inlet nozzle 09576-2-4013 not included in scope of delivery
2	Thread reach max. 5 mm
3	Connection line PFA AWG20 (green/yellow AWG18)
4	2-pole connector housing tyco 1-1703061-3
	2x plug pin tyco 926885-1
4.1	TOP
4.2	TOP
5	Connector housing 3-pole Tyco 350766-4
5	3x plug pin tyco 926885-1
5.1	L3
5.2	L2
5.3	L1
6	PE (green/yellow), threaded pin 6.3x1.0

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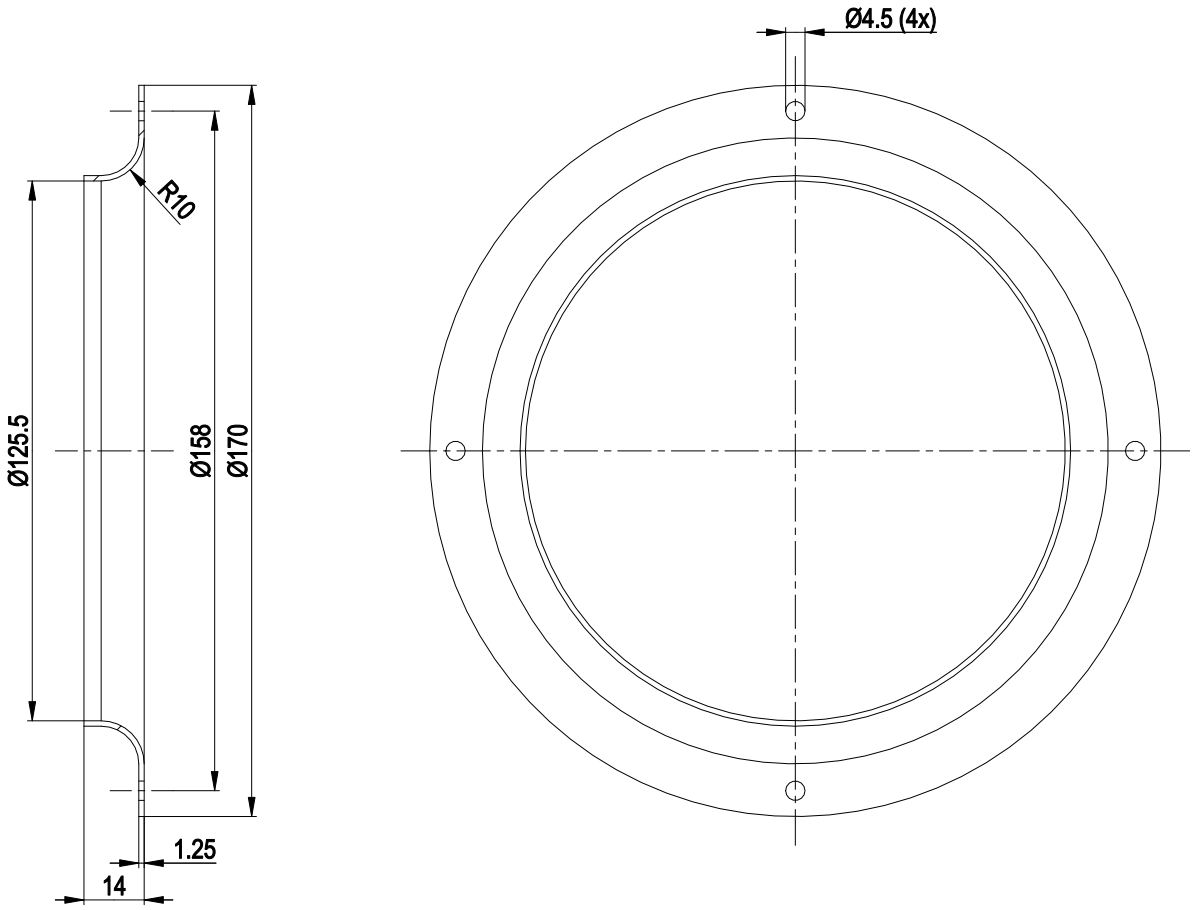
Accessory part



1	Accessory part: Inlet nozzle 09576-2-4013 not included in scope of delivery

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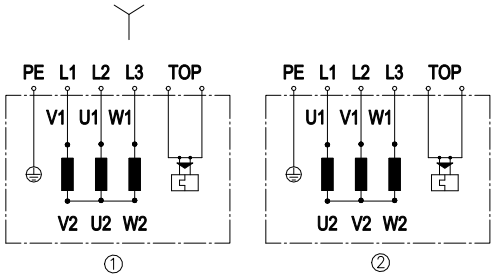
Connection screen



Change direction of rotation by reversing two phases

	Three-phase motor
Y	Star connection
1	Anti-clockwise operation
L1	= V1 = blue
L2	= U1 = black
L3	= W1 = brown
2	Clockwise operation
L1	= U1 = black
L2	= V1 = blue
L3	= W1 = brown
PE	green/yellow
TOP	2x grey

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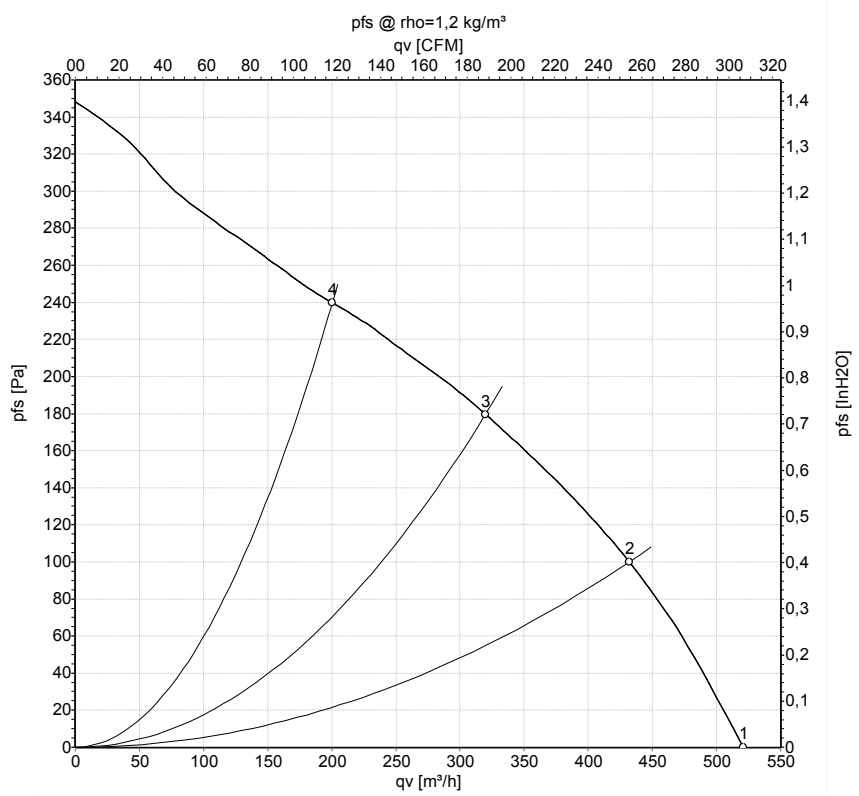
Charts: Air flow 50 Hz



Measurement: LU-160894-1

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	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	inH2O
1	Y	400	50	2540	54	0.13	520	0	305	0.00
2	Y	400	50	2490	56	0.13	430	100	255	0.40
3	Y	400	50	2450	60	0.13	320	180	190	0.72
4	Y	400	50	2470	57	0.13	200	240	120	0.96

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

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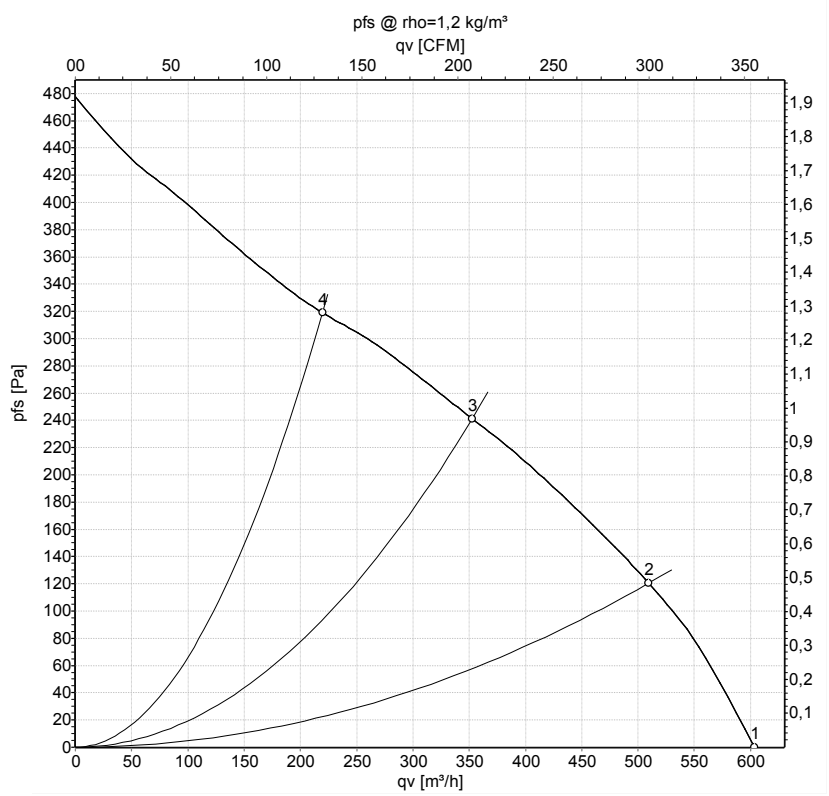
Charts: Air flow 60 Hz



Measurement: LU-160948-1

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	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	inH2O
1	Y	460	60	2930	70	0.11	605	0	355	0.00
2	Y	460	60	2870	73	0.11	510	120	300	0.48
3	Y	460	60	2750	80	0.11	355	240	210	0.96
4	Y	460	60	2825	75	0.11	220	320	130	1.28

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