

R2D250-RA10-20

AC centrifugal fan - RadiCal

backward-curved, single-intake

for rail applications

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

Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen

Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	R2D250-RA10-20	
Motor	M2D068-EC	

Phase		3~
Nominal voltage	VAC	230
Wiring		Δ
Frequency	Hz	50

Method of obtaining data		ml
Valid for approval/standard		CE
Speed (rpm)	min ⁻¹	2500
Power consumption	W	200
Current draw	A	0.57
Min. back pressure	Pa	0
Min. back pressure	in. wg	0
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	80
Starting current	A	1.6

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



AC centrifugal fan - RadiCal

backward-curved, single-intake

for rail applications

Technical description

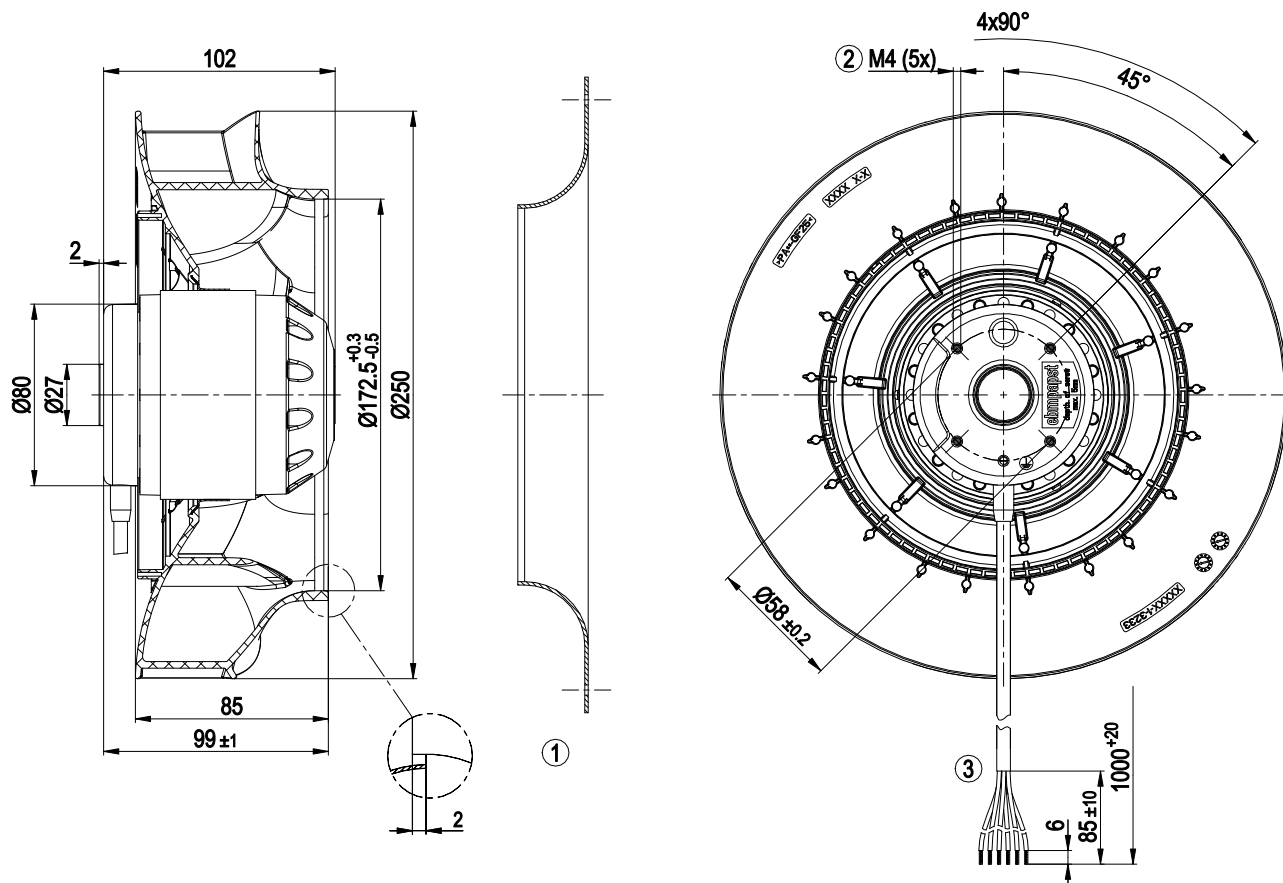
Weight	2.9 kg
Size	250 mm
Motor size	68
Rotor surface	Painted black
Impeller material	PA plastic, sheet-metal plate painted black
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP44; installation- and position-dependent
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H1+
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensation drainage holes	On rotor side
Mode	S1
Motor bearing	Ball bearing
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	< 0.75 mA
Motor protection	Thermal overload protector (TOP) with basic insulation
With cable	Lateral
Protection class assignment	I; If a protective earth is connected by the customer This component for installation may have several local protection classes. This information relates to this component's basic design. The final protection class is based on the component's intended installation and connection.
Conformity with standards	EN 45545-2, HL3: 2013 + A1:2015; EN 50155: 2008; IEC 61373: 2010
Approval	EAC



AC centrifugal fan - RadiCal

backward-curved, single-intake
for rail applications

Product drawing



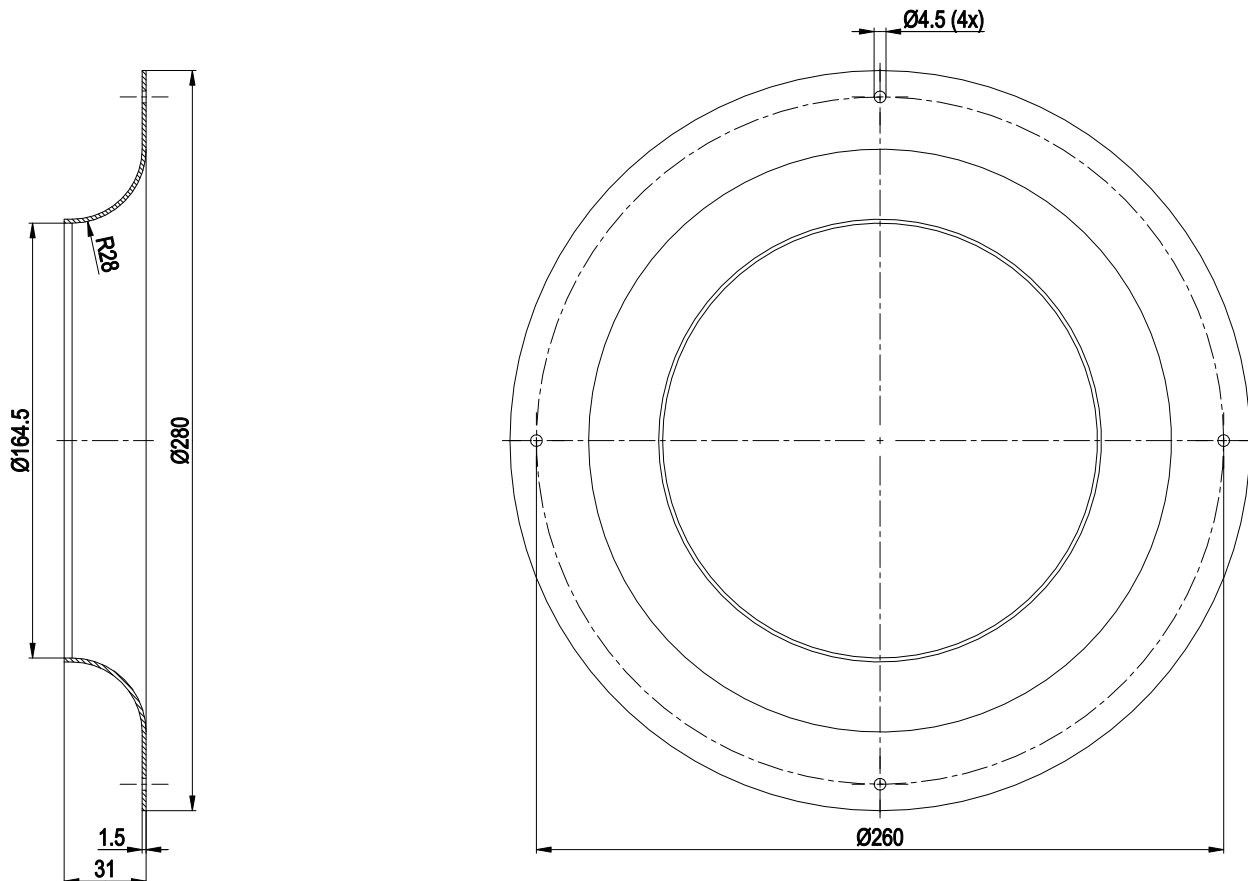
1	Accessory part: Inlet ring 96420-2-4013 (not included in scope of delivery)
2	Max. clearance for screw 5 mm
3	Cable, halogen-free, railway application EN 45545, 6G 0.5 mm ²
	6x splice

AC centrifugal fan - RadiCal

backward-curved, single-intake

for rail applications

Accessory part

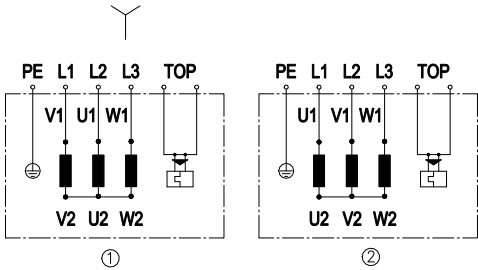


Inlet ring 96420-2-4013

AC centrifugal fan - RadiCal

backward-curved, single-intake
for rail applications

Connection diagram

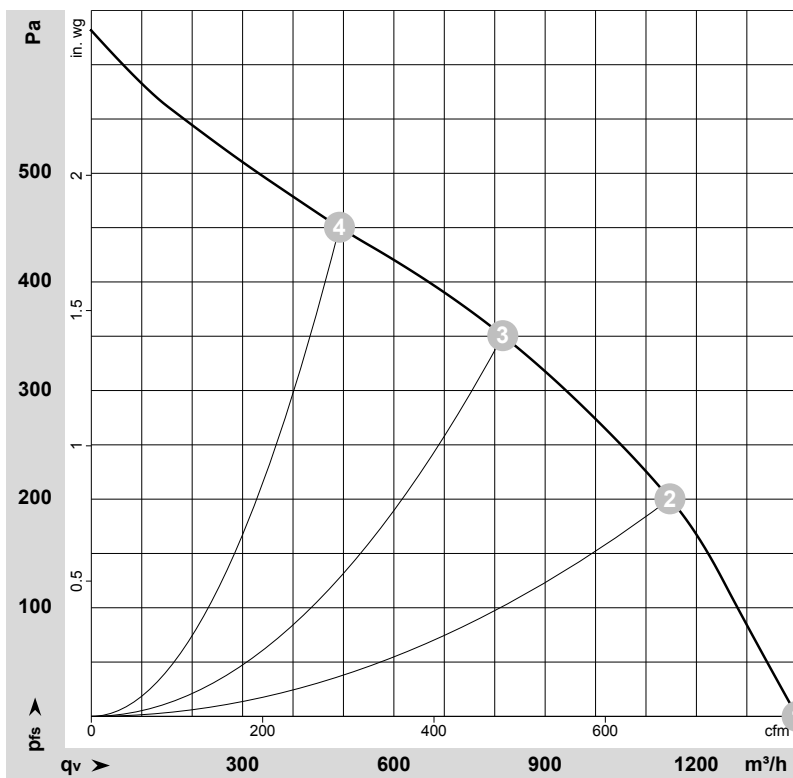


Change of rotation direction by reversing two phases

	Three-phase motor
Y	Star connection
1	Counterclockwise 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 gray



Curves: Air performance 50 Hz



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

Measurement: LU-186129-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. 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 _e	I	q _v	p _{fs}	q _v	p _{fs}
		V	Hz	min ⁻¹	W	A	m³/h	Pa	cfm	in. wg
1	Δ	230	50	2620	158	0.46	1400	0	825	0.00
2	Δ	230	50	2545	181	0.51	1150	200	675	0.80
3	Δ	230	50	2500	200	0.57	815	350	480	1.41
4	Δ	230	50	2550	177	0.50	490	450	290	1.81

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · q_v = Air flow · p_{fs} = Pressure increase