AC centrifugal fan - RadiCal

backward curved

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Nominal data

Type	**R2D225-RA31-19**
Motor	**M2D068-DF**

Phase		3~	3~	3~
Nominal voltage	VAC	400	400	460
Connection		Y	Y	Y
Frequency	Hz	50	60	60
Type of data definition		ml	ml	ml
Valid for approval / standard		CE	CE	UL 2111
Speed (rpm)	min^{-1}	2100	2100	2300
Power input	W	100	125	150
Current draw	A	0.16	0.19	0.2
Min. ambient temperature	°C	-25	-25	-25
Max. ambient temperature	°C	80	75	75

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

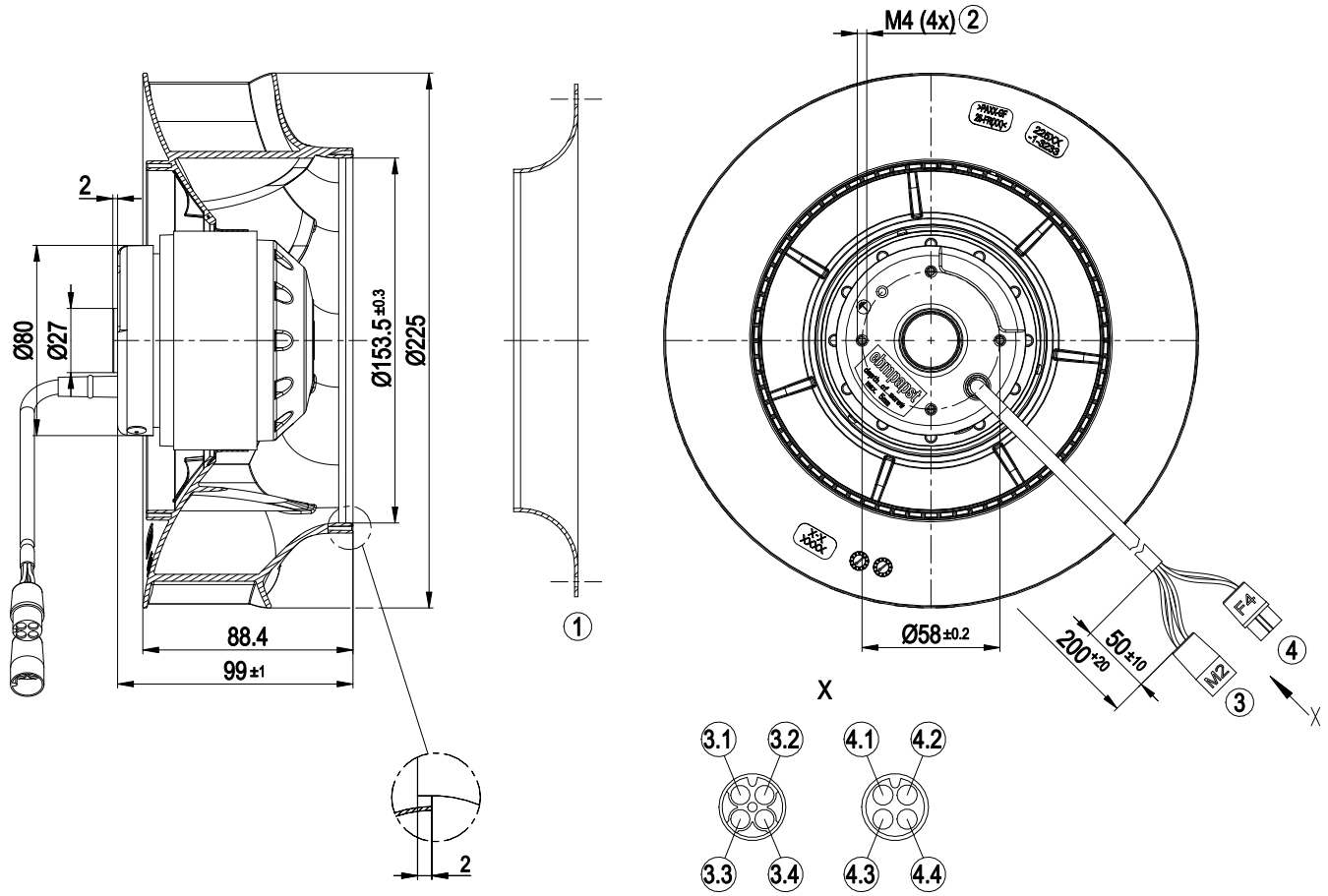
Mass	2.14 kg
Size	225 mm
Motor size	68
Surface of rotor	Coated in black
Material of impeller	PA plastic
Number of blades	7
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP44; Depending on installation and position
Insulation class	"F"
Humidity (F) / environmental protection class (H)	H1+
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Any
Condensation drainage holes	None
Operation mode	S1
Motor bearing	Ball bearing
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	< 0.75 mA
Motor protection	Thermal switch auto reset, internally connected
Cable exit	Axial
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60335-1; CE
Note on CE	Ecodesign Directive 2009/125/EC + Fan Directive (EC) No. 327/2011 not applicable, as power consumption <125W.
Approval	UL 1004-3; CSA C22.2 no. 77

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Product drawing



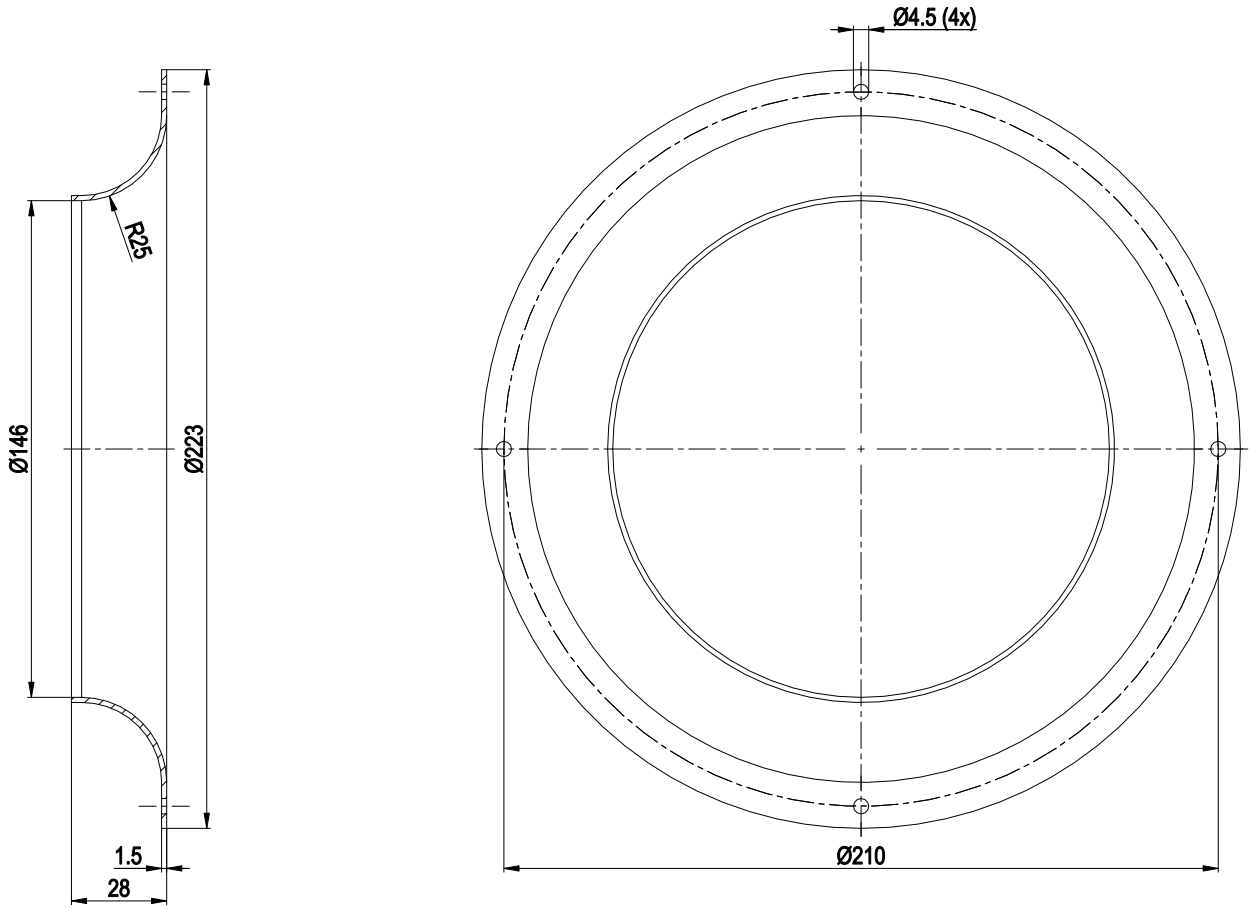
1	Accessory part: Inlet nozzle 96358-2-4013 not included in scope of delivery
2	Thread reach max. 5 mm
3	Connection line PFA AWG20, 4-pole connector housing tyco 925075-7, 4x plug pin tyco 163555-6
3.1	PE (green/yellow)
3.2	L1 (black)
3.3	L3 (brown)
3.4	L2 (blue)
4	Connection line PFA AWG20, 4-pole connector housing tyco 925076-7, 4x female connector tyco 163300-8
4.1	not used
4.2	TOP (grey)
4.3	not used
4.4	TOP (grey)

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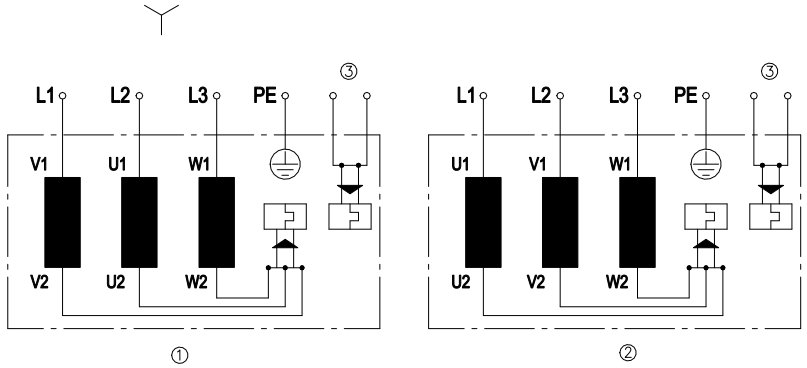
Accessory part



Inlet nozzle 96358-2-4013 not included in scope of delivery

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Connection screen



Change in direction of rotation by reversing two phases

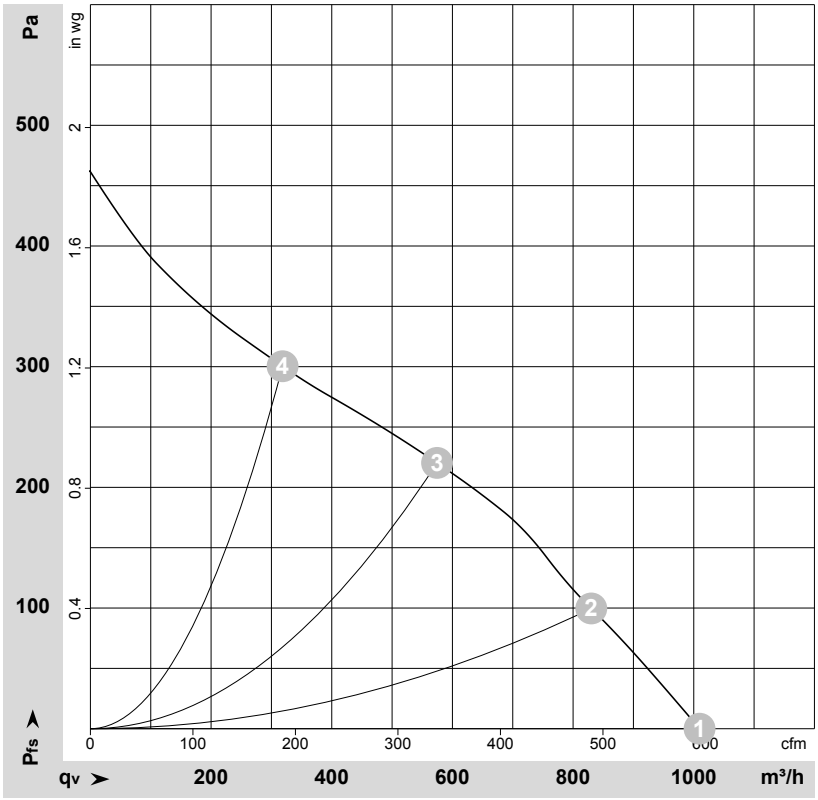
Y	Star connection
1	Anti-clockwise operation
L1	= V1 = blue
L2	= U1 = black
L3	= W1 = brown
2	Clockwise operation
L1	=U1=black
L2	=V1=blue
L3	=W1=brown
PE	green/yellow
3	TOP signal, 2x grey
	Three-phase motor

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Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-167181-1

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	LpA_{in}	LwA_{in}	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
1	Y	400	50	2280	88	0.14	62	70	1010	0	595	0.00
2	Y	400	50	2150	100	0.16	58	65	830	100	490	0.40
3	Y	400	50	2100	100	0.16	52	59	575	220	340	0.88
4	Y	400	50	2230	91	0.15	58	66	320	300	190	1.20

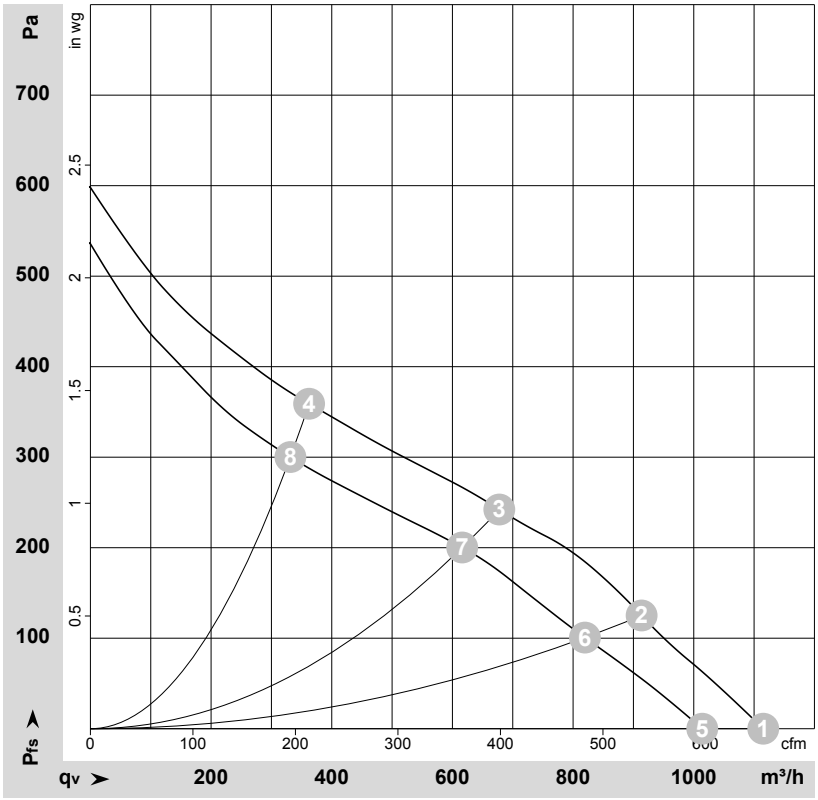
Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed (rpm) · P_e = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side
q_V = Air flow · p_{fs} = Pressure increase

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Charts: Air flow 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-167210-1
Measurement: LU-167209-1

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	LpA_{in}	LwA_{in}	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
1	Y	460	60	2520	131	0.18	65	72	1115	0	655	0.00
2	Y	460	60	2375	143	0.19	59	67	915	125	540	0.50
3	Y	460	60	2300	150	0.20	54	62	680	242	400	0.97
4	Y	460	60	2455	135	0.18	60	68	360	359	215	1.44
5	Y	400	60	2300	114	0.18	62	70	1015	0	595	0.00
6	Y	400	60	2135	123	0.19	58	66	820	100	485	0.40
7	Y	400	60	2100	125	0.19	53	60	615	200	365	0.80
8	Y	400	60	2250	116	0.18	58	66	330	300	195	1.20

Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed (rpm) · P_e = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side
q_V = Air flow · p_{fs} = Pressure increase

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