

R2D220-AC14-19

AC centrifugal fan

backward-curved



R2D220-AC14-19 ebmpapst Datasheet

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Nominal data

Type	R2D220-AC14-19			
Motor	M2D068-CF			
Phase		3~	3~	3~
Nominal voltage	VAC	400	400	460
Wiring		Y	Y	Y
Frequency	Hz	50	60	60
Method of obtaining data		fa	fa	fa
Valid for approval/standard		CE	CE	UL
Speed (rpm)	min ⁻¹	2650	2950	3080
Power consumption	W	74	98	115
Current draw	A	0.16	0.17	
Min. back pressure	Pa	0	0	0
Min. back pressure	in. wg	0	0	0
Min. ambient temperature	°C	-25	-25	-25
Max. ambient temperature	°C	65	50	50
Starting current	A	0.48	0.46	0.46

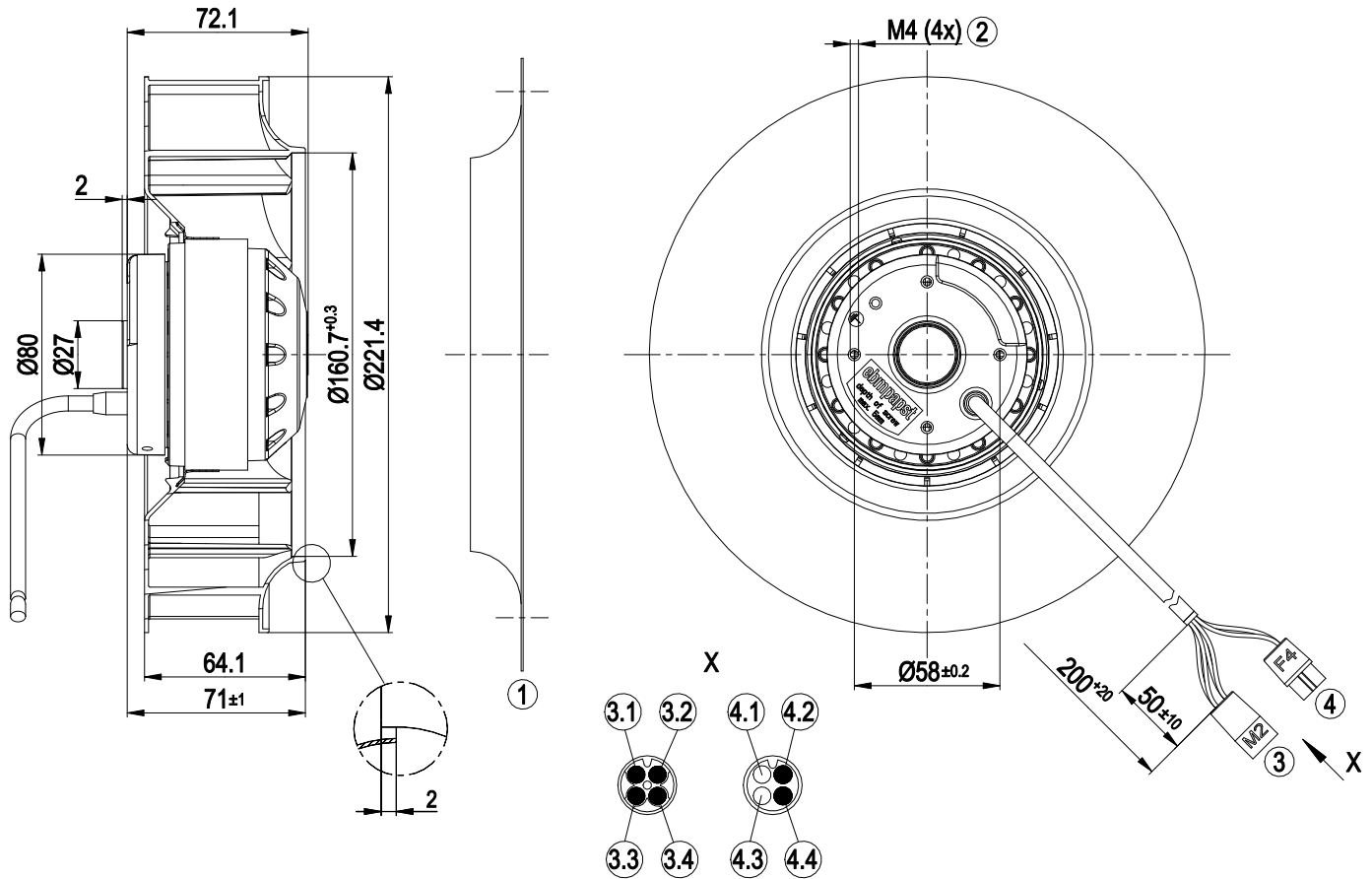
ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change



Technical description

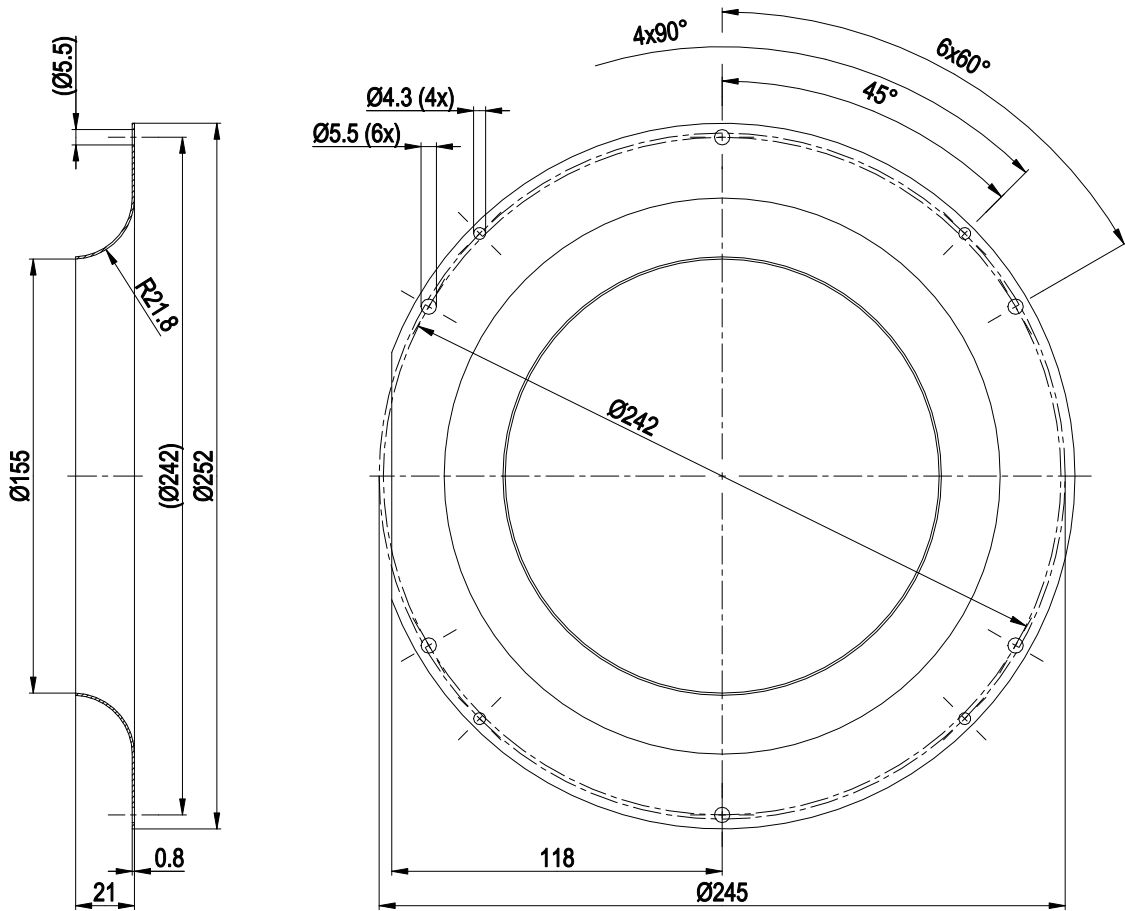
Weight	1.67 kg
Size	220 mm
Motor size	68
Rotor surface	Painted black
Impeller material	PA6 plastic, glass-fiber reinforced
Number of blades	11
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP44; installation- and position-dependent
Insulation class	"B"
Moisture (F) / Environmental (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	Any
Condensation drainage holes	None
Mode	S1
Motor bearing	Ball bearing
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	< 0.75 mA
Electrical hookup	Connector with cable
Motor protection	Thermal overload protector (TOP) with basic insulation
With cable	Axial
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; CE
Approval	UL 1004-1; CSA C22.2 No. 100; CCC

Product drawing



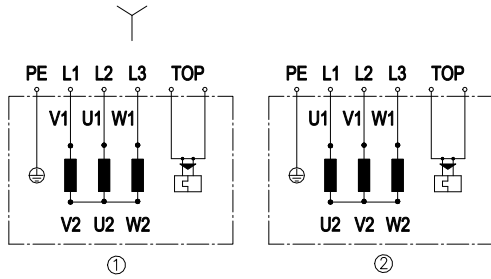
1	Accessory part: Inlet ring 96358-2-4013, not included in scope of delivery.
2	Max. clearance for screw 5 mm
3	Cable PFA AWG20 (green/yellow AWG18), 4-pole connector housing tyco 925075-7, 4x plug pin tyco 163555-6
3.1	PE (green/yellow)
3.2	L1 (black)
3.3	L3 (brown)
3.4	L2 (blue)
4	Cable PFA AWG20, 4-pole connector housing tyco 925076-7, 4x socket tyco 163300-8
4.1	not used
4.2	TOP (gray)
4.3	not used
4.4	TOP (gray)

Accessory part



Inlet ring 09609-2-4013 not included in scope of delivery

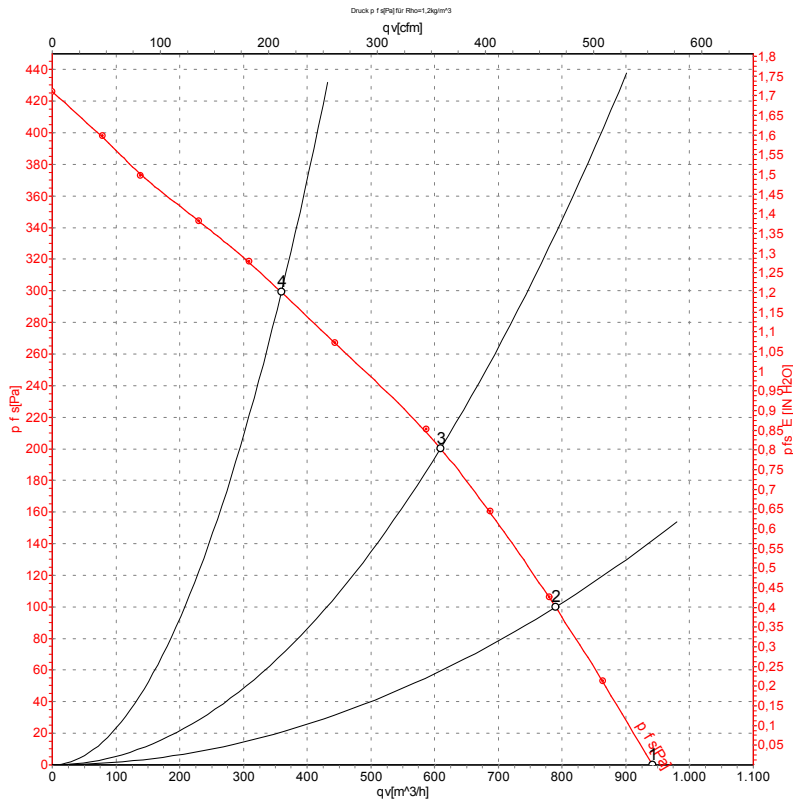
Connection diagram



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



Measurement: LU-55254-1

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.

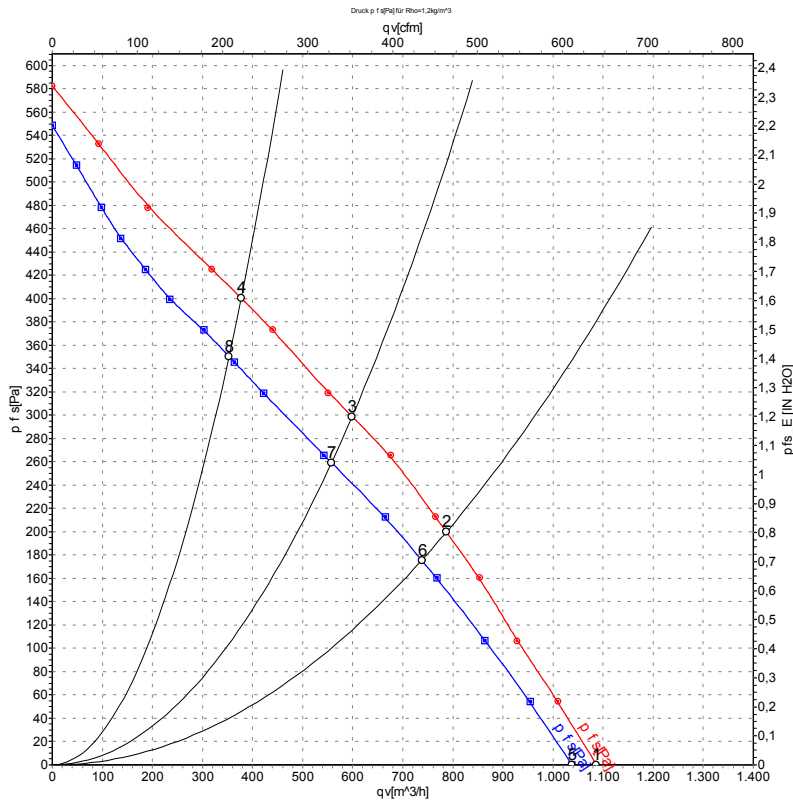
Measured values

	U	f	n	P _e	I	q _v	P _{is}	q _v	P _{is}
	V	Hz	min ⁻¹	W	A	m ³ /h	Pa	cfm	in. wg
1	400	50	2650	74	0.16	940	0	555	0.00
2	400	50	2575	87	0.17	790	100	465	0.40
3	400	50	2490	98	0.18	610	200	360	0.80
4	400	50	2505	97	0.18	360	300	210	1.20

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



Curves: Air performance 60 Hz



Measurement: LU-55256-1
Measurement: LU-55255-1

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

	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	in. wg
1	460	60	3080	107	0.18	1085	0	640	0.00
2	460	60	2865	140	0.21	785	200	465	0.80
3	460	60	2805	147	0.22	600	300	355	1.20
4	460	60	2845	142	0.21	375	400	220	1.61
5	400	60	2950	98	0.17	1035	0	610	0.00
6	400	60	2690	125	0.20	740	176	435	0.71
7	400	60	2625	132	0.21	560	259	330	1.04
8	400	60	2655	128	0.21	355	350	210	1.41

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

