R2D220-AC16-21

AC centrifugal fan

backward curved



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Nominal data

Type	**R2D220-AC16-21**
Motor	**M2D068-CF**

Phase		3~	3~	3~
Nominal voltage	VAC	400	460	460
Connection		Y	Y	Y
Frequency	Hz	50	60	60
Type of data definition		fa	fa	fa
Valid for approval / standard		CE	CE	UL
Speed (rpm)	min^{-1}	2550	3000	3000
Power input	W	70	100	105
Current draw	A	0.13	0.15	0.15
Min. back pressure	Pa	0	0	0
Min. ambient temperature	°C	-25	-25	-25
Max. ambient temperature	°C	55	55	55
Starting current	A	0.37		

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

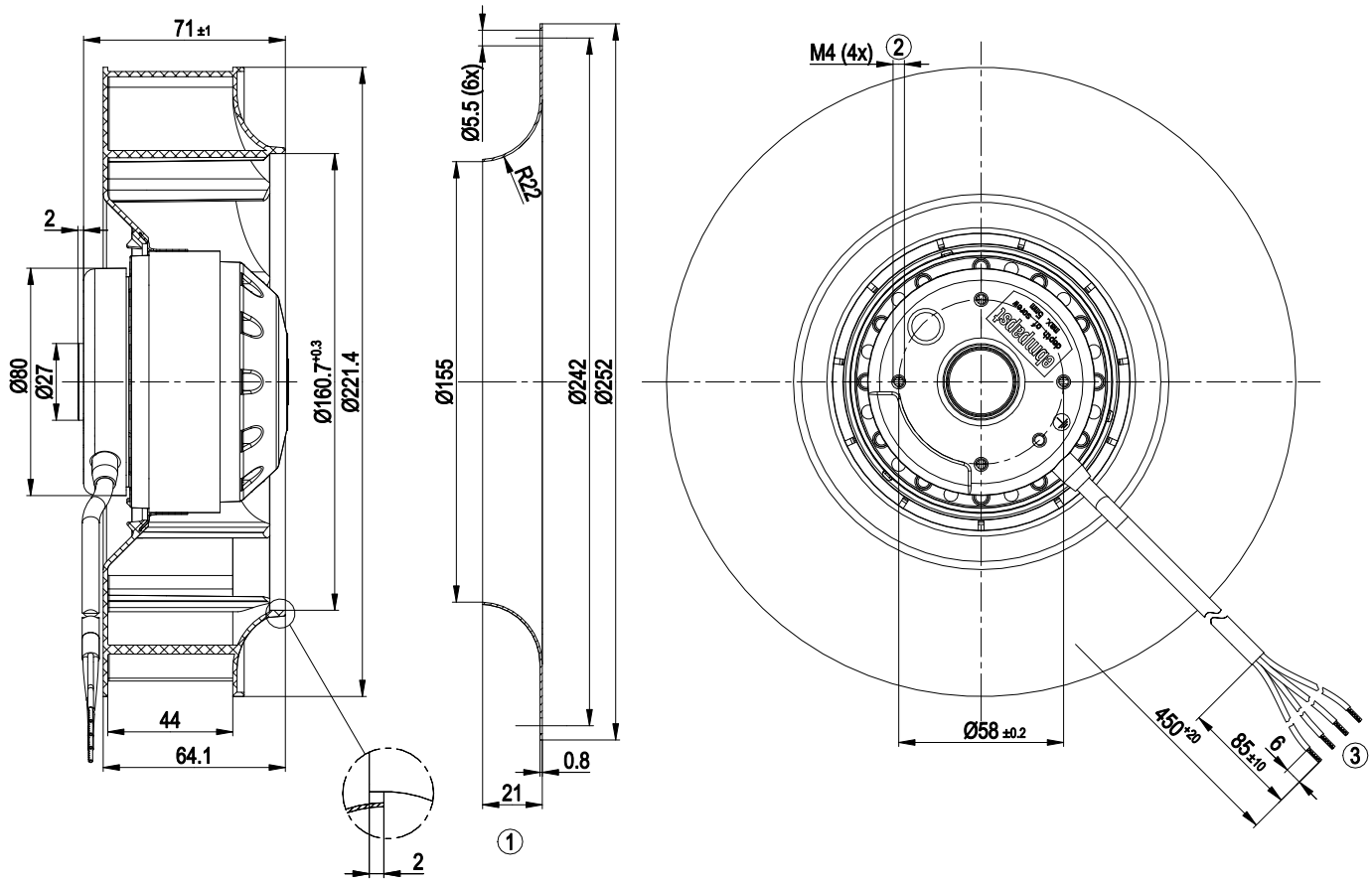
Mass	1.8 kg
Size	220 mm
Surface of rotor	Uncoated
Material of impeller	PA plastic
Number of blades	11
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 44; Depending on installation and position
Insulation class	"F"
Humidity (F)/environmental protection class (H)	F1-1
Max. permissible 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)	< 0.75 mA
Motor protection	Thermal overload protector (TOP) wired internally
Cable exit	Lateral
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60335-1; CE
Approval	CSA C22.2 No.77; UL 2111

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Product drawing



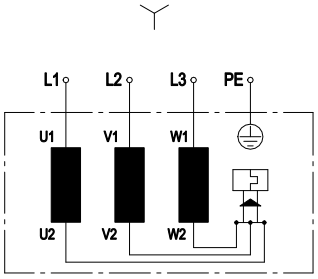
1	Accessory part: Inlet nozzle 09609-2-4013, not included in the standard scope of delivery
2	Depth of screw max. 5 mm
3	Connection line PFA AWG20, 4 x brass lead tips crimped

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Connection screen



Change direction of rotation by reversing two phases

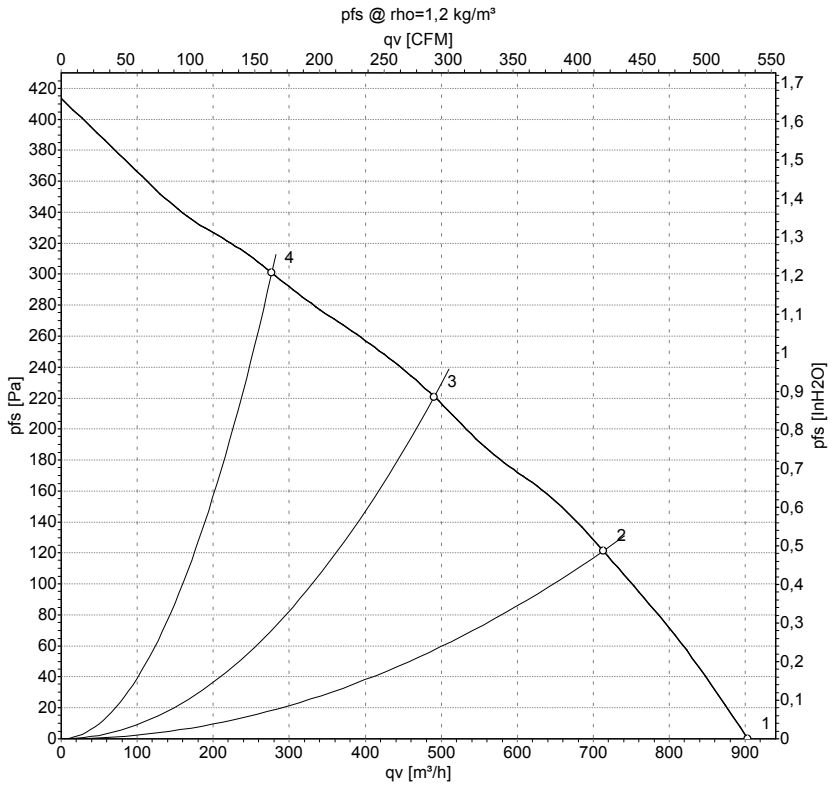
	Three-phase motor	Y	Star connection	L1	= U1 = black
L2	= V1 = blue	L3	= W1 = brown	PE	green / yellow

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Charts: Air flow 50 Hz



Measurement: LU-127140-1

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

	U	f	n	P_e	I	qv	p_{fs}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	CFM	inH2O
1	400	50	2550	70	0.13	905	0	530	0.00
2	400	50	2435	82	0.15	715	120	420	0.48
3	400	50	2360	90	0.15	490	220	290	0.88
4	400	50	2420	83	0.15	275	300	165	1.20

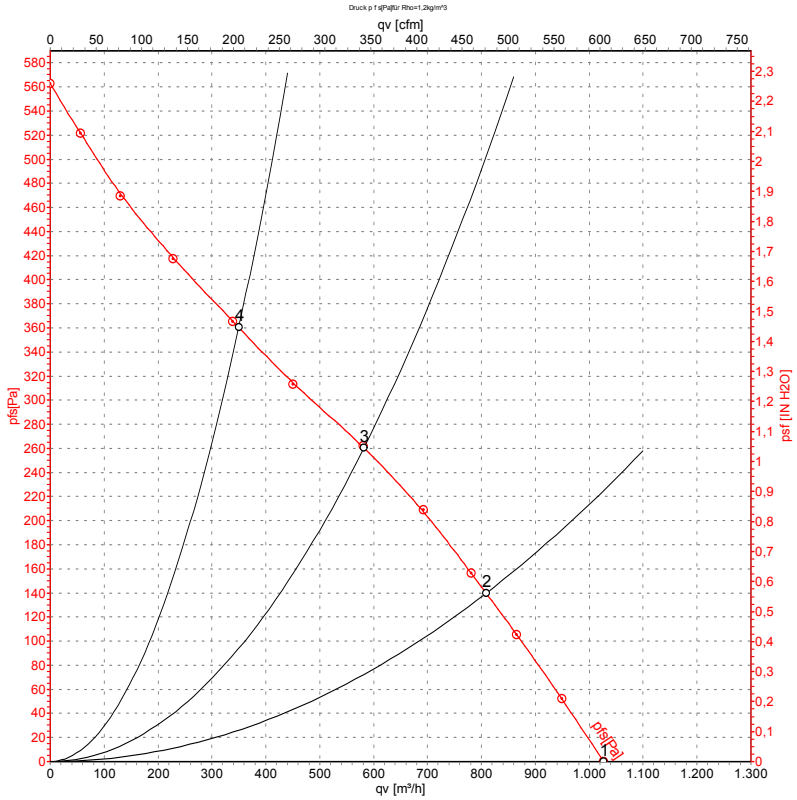
U = Supply voltage · f = Frequency · n = Speed (rpm) · P_e = Power input · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

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Charts: Air flow 60 Hz



Measurement: LU-58677-1

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

	U	f	n	P_e	I	qv	p_{fs}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	CFM	inH2O
1	460	60	3000	100	0.15	1025	0	605	0.00
2	460	60	2785	123	0.17	810	140	475	0.56
3	460	60	2670	135	0.19	580	260	345	1.04
4	460	60	2690	131	0.18	350	360	205	1.45

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

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