R2E180-AS77-42

AC centrifugal fan

backward-curved

R2E180-AS77-42 ebmpapst Datasheet
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Nominal data

Type	**R2E180-AS77-42**
Motor	**M2E068-BF**

Phase		1~	1~	1~
Nominal voltage	VAC	230	230	230
Frequency	Hz	50	60	60
Method of obtaining data		fa	fa	fa
Status			prelim.	
Valid for approval/standard		CE	UL 2111	CE
Speed (rpm)	min^{-1}	2300	2300	2300
Power consumption	W	82	110	100
Current draw	A	0.36	0.47	0.45
Capacitor	µF	2	2	2
Capacitor voltage	VDB	450	450	450
Min. back pressure	Pa	5	0	0
Min. back pressure	inH2O	0.02	0	0
Min. ambient temperature	°C	-25	-25	-25
Max. ambient temperature	°C	60	55	55

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

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Technical description

Weight	1.34 kg
Fan size	180 mm
Rotor surface	Painted black
Impeller material	PA plastic
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP44
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H0+
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	None
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) internally connected
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; CE
Approval	UL 2111; CSA C22.2 No. 77

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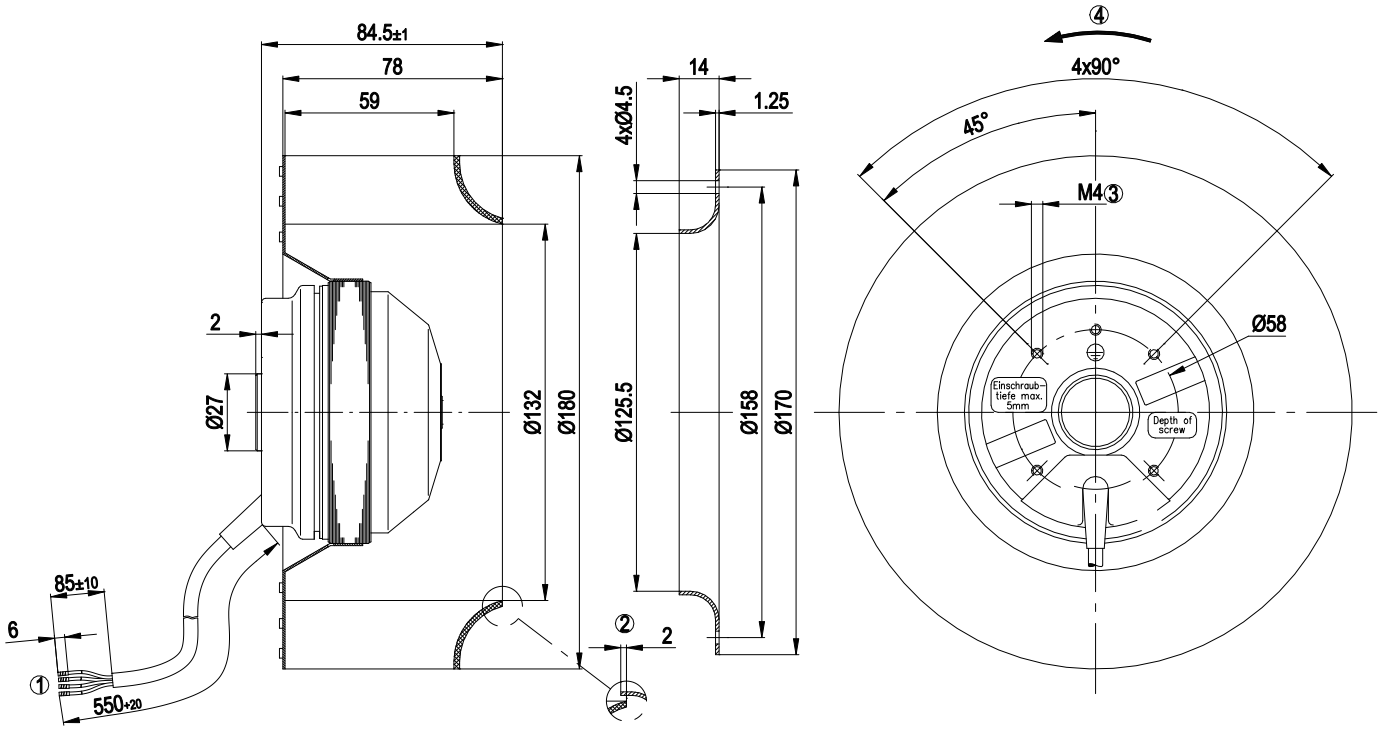
Product drawing



1	Cable PFA, 4x crimped splices
2	Accessory part: Inlet ring 09576-2-4013, not included in scope of delivery
3	Max. clearance for screw 5 mm
4	Direction of rotation clockwise, viewed toward rotor

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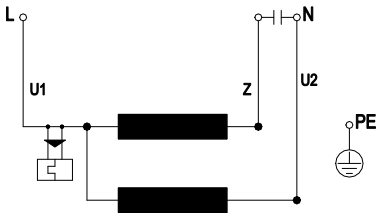
Connection diagram



U1	blue	Z	brown	U2	black
PE	green/yellow				

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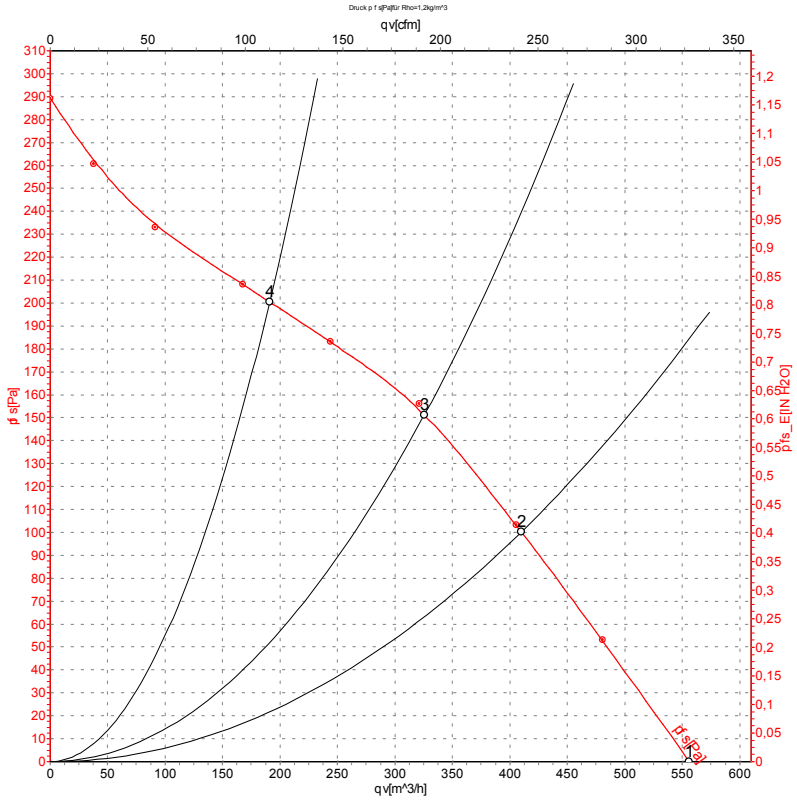
Curves: Air performance 50 Hz



Measurement: LU-20835-1

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	qv	p_{fs}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	CFM	inH2O
1	230	50	2300	82	0.36	555	0	325	0.00
2	230	50	2265	84	0.37	410	100	240	0.40
3	230	50	2315	82	0.36	325	150	190	0.60
4	230	50	2470	76	0.33	190	200	110	0.80

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

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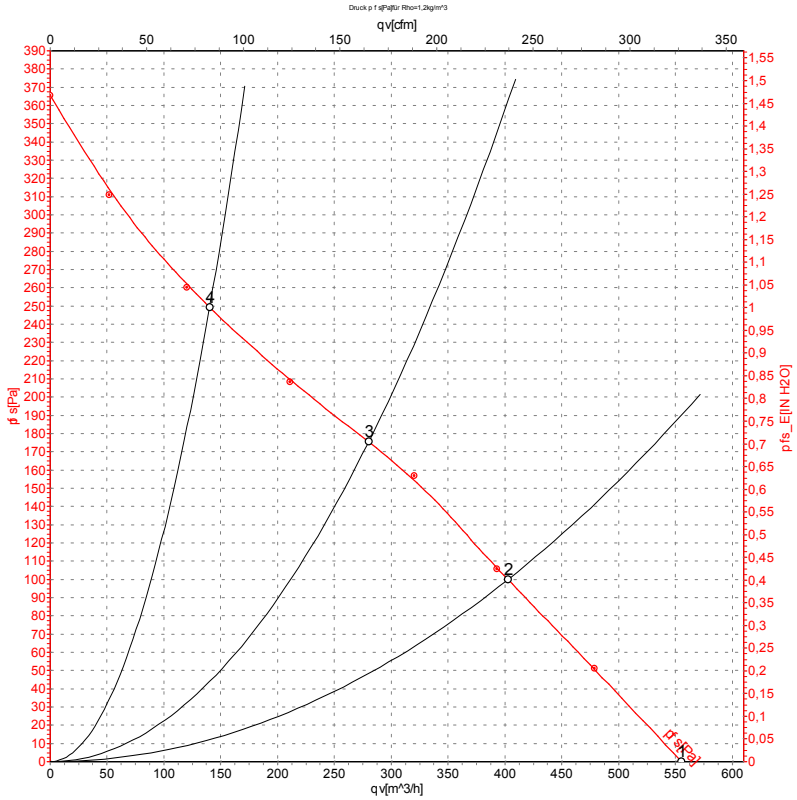
Curves: Air performance 60 Hz



Measurement: LU-20836-1

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	qv	p_{fs}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	CFM	inH2O
1	230	60	2300	100	0.45	555	0	325	0.00
2	230	60	2240	104	0.45	405	100	235	0.40
3	230	60	2400	101	0.44	280	175	165	0.70
4	230	60	2715	95	0.41	140	250	80	1.00

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