

R2D160-AF28-27 ebmpapst Datasheet

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Nominal data

Type	R2D160-AF28-27			
Motor	M2D068-EC			
Phase		3~	3~	3~
Nominal voltage	VAC	400	400	480
Wiring		Y	Y	Y
Frequency	Hz	50	60	60
Method of obtaining data		ml	ml	ml
Valid for approval/standard		CE	CE	CE
Speed (rpm)	min ⁻¹	2700	3000	3200
Power consumption	W	155	215	235
Current draw	A	0.26	0.33	0.33
Min. back pressure	Pa	500	620	700
Min. back pressure	in. wg	2.01	2.49	2.81
Min. ambient temperature	°C	-25	-25	-25
Max. ambient temperature	°C	90	75	75
Starting current	A	1.1	1.15	1.3

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

Data according to Commission Regulation (EU) 327/2011 (EN 17166)

		Actual	Req. 2015			
01 Overall efficiency η_{es}	%	35.4	32.4	09 Power consumption P_e	kW	0.14
02 Measurement category		A		09 Air flow q_v	m ³ /h	365
03 Efficiency category		Static		09 Pressure increase p_{fs}	Pa	518
04 Efficiency grade N		47	44	10 Speed (rpm) n	min ⁻¹	2725
05 Variable speed drive		No		11 Specific ratio*		1.01

Data obtained at optimum efficiency level.
The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

* Specific ratio = $1 + p_{fs} / 100\,000\text{ Pa}$

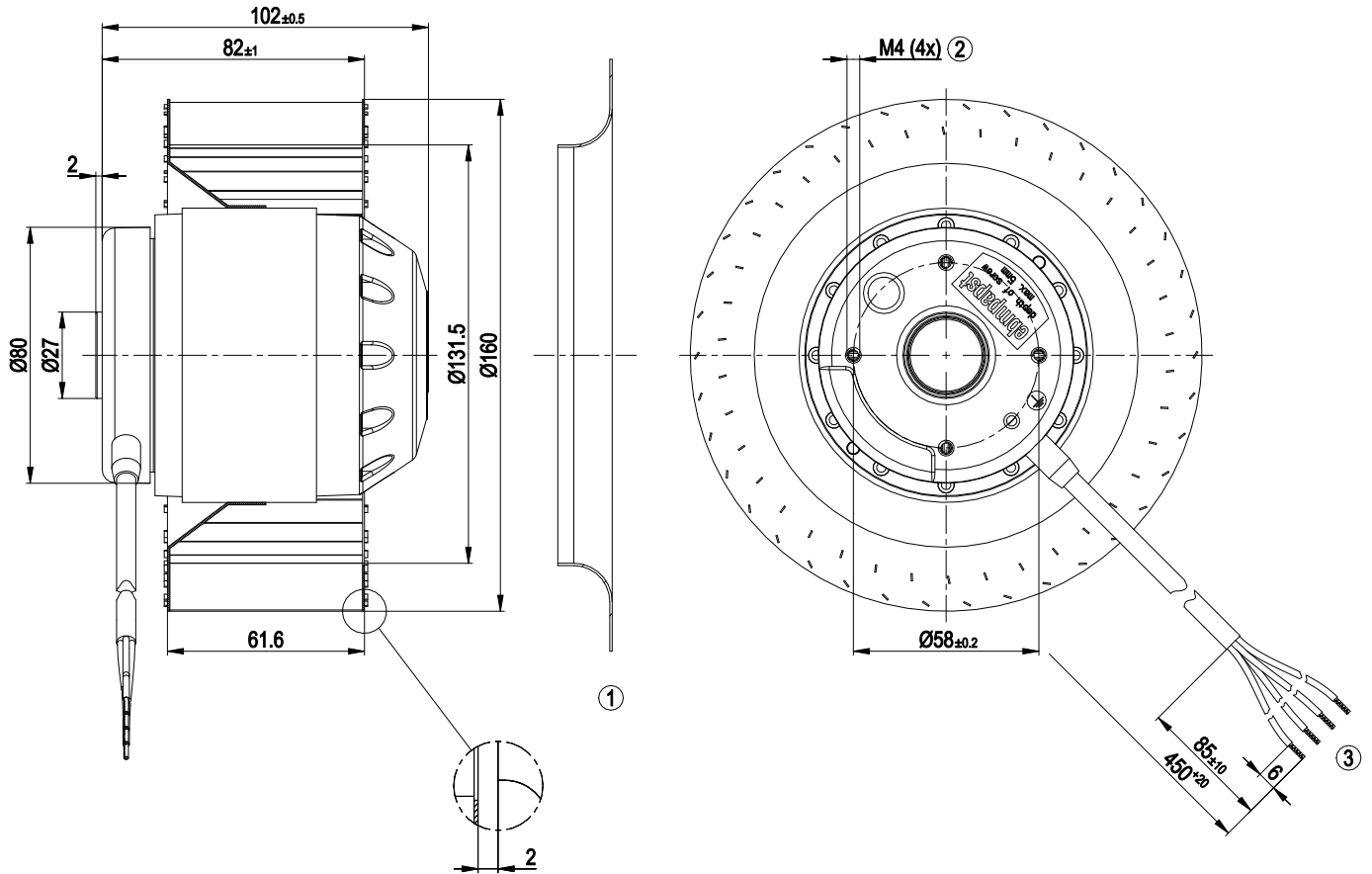
LU-200193



Technical description

Weight	2.7 kg
Size	160 mm
Motor size	68
Impeller material	Sheet steel, hot-dip galvanized
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP44; installation- and position-dependent
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	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
With cable	Lateral
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1, motor does not have factory-installed overheating protection; CE
Approval	CSA C22.2 No. 100; UL 1004-1

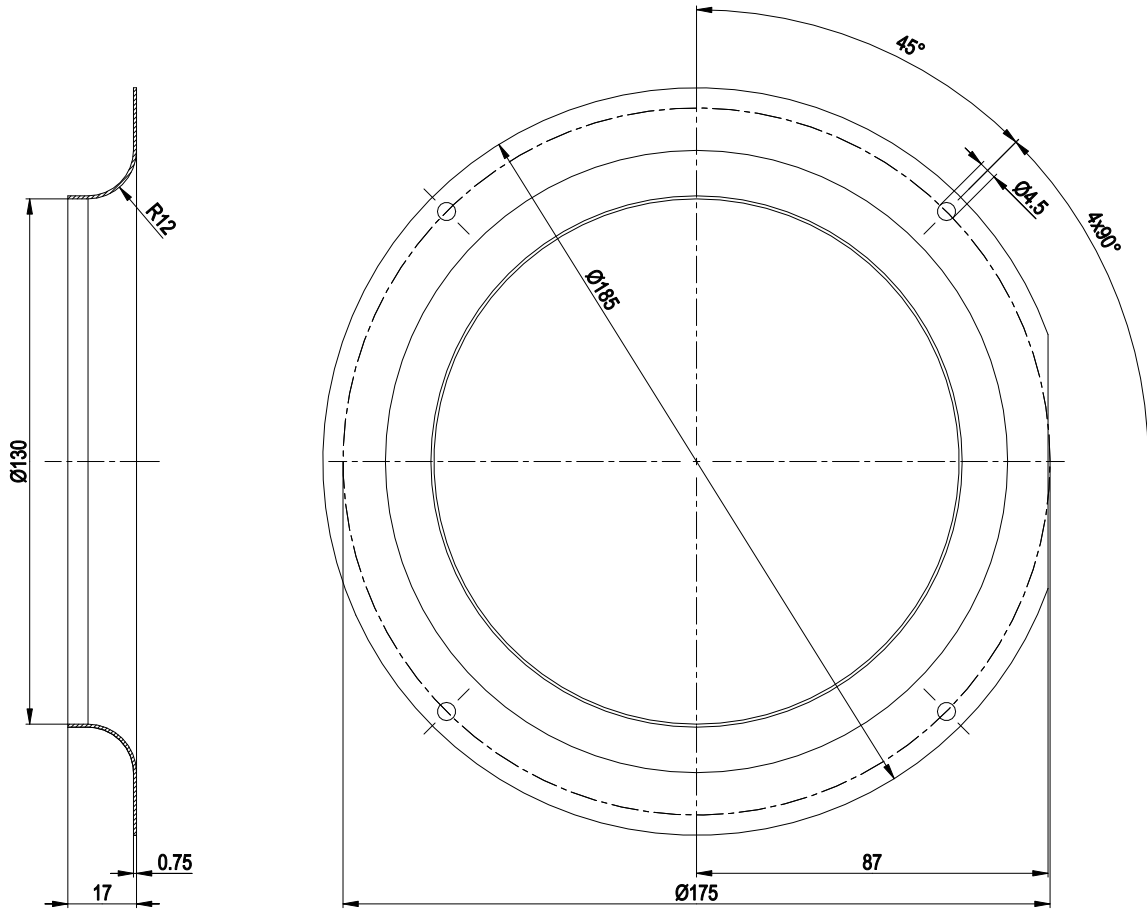
Product drawing



1	Cable PFA AWG20 (green/yellow AWG18), 4x crimped splices
2	Accessory part: inlet ring 09588-2-4013 not included in scope of delivery
3	Max. clearance for screw 5 mm



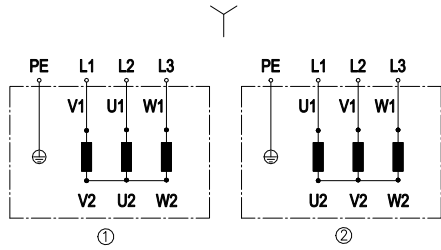
Accessory part



Accessory part: inlet ring 09588-2-4013 not included in scope of delivery



Connection diagram

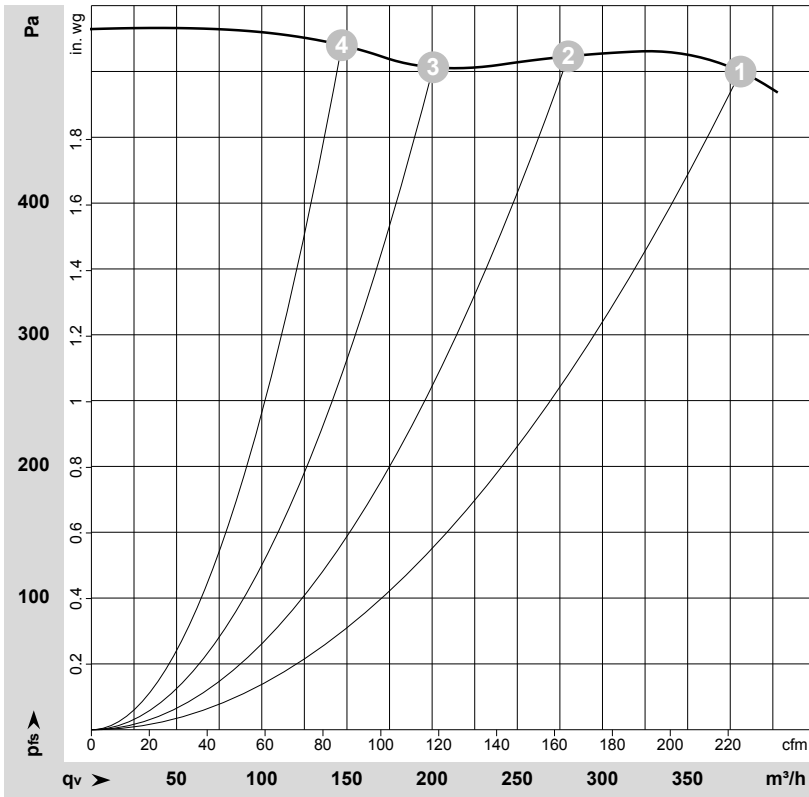


Change of rotation direction by reversing two phases

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



Curves: Air performance 50 Hz



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

Measurement: LU-200193-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebmpapst. 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.

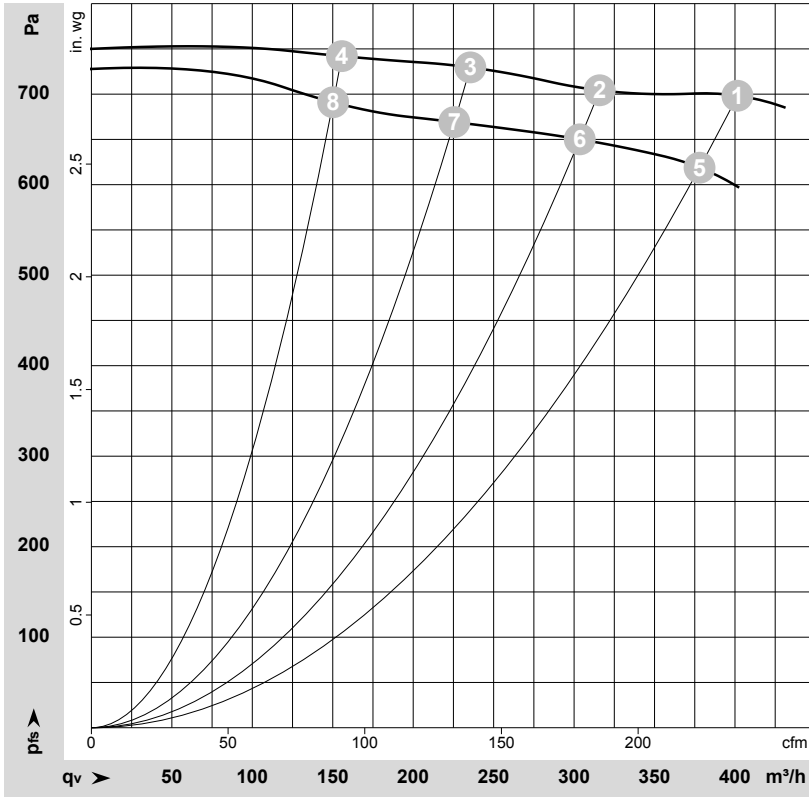
Measured values

	Wired	U	f	n	P _e	I	q _v	P _{fs}	q _v	P _{fs}
		V	Hz	min ⁻¹	W	A	m ³ /h	Pa	cfm	in. wg
1	Y	400	50	2700	155	0.26	380	500	225	2.01
2	Y	400	50	2785	121	0.22	280	515	165	2.07
3	Y	400	50	2835	96	0.20	200	500	120	2.01
4	Y	400	50	2865	84	0.19	145	520	85	2.09

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



Curves: Air performance 60 Hz



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

Measurement: LU-200236-1
Measurement: LU-200234-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebmpapst. 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	m ³ /h	Pa	cfm	in. wg
1	Y	480	60	3200	235	0.33	400	700	235	2.81
2	Y	480	60	3275	196	0.28	315	700	185	2.81
3	Y	480	60	3325	172	0.25	235	730	140	2.93
4	Y	480	60	3355	158	0.24	155	740	90	2.97
5	Y	400	60	3000	215	0.33	380	620	220	2.49
6	Y	400	60	3125	184	0.29	305	650	180	2.61
7	Y	400	60	3205	160	0.26	225	670	135	2.69
8	Y	400	60	3265	140	0.23	150	690	90	2.77

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

