G2D180-AB08-27

AC centrifugal fan

forward-curved, single-intake

with housing (flange)

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Amtsgericht (court of registration) Stuttgart · HRA 590344

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Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	**G2D180-AB08-27**
Motor	**M2D074-EI**

Phase		3~	3~	3~
Nominal voltage	VAC	400	400	480
Wiring		Y	Y	Y
Frequency	Hz	50	60	60
Method of obtaining data		fa	ml	ml
Valid for approval/standard		CE	CE	CE
Speed (rpm)	min^{-1}	2350	2450	2750
Power consumption	W	425	510	595
Current draw	A	0.68	0.81	0.79
Min. back pressure	Pa	0	200	250
Min. back pressure	in. wg	0	0.8	1
Min. ambient temperature	°C	-25	-25	-25
Max. ambient temperature	°C	75	45	55

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

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	36.4	33.1
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		47.3	44
05 Variable speed drive		No	

09 Power consumption P_e	kW	0.19
09 Air flow q_v	m^3/h	405
09 Pressure increase p_{fs}	Pa	647
10 Speed (rpm) n	min^{-1}	2650
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 Pa

LU-68753

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Technical description

Weight	5.8 kg
Size	180 mm
Motor size	74
Rotor surface	Painted black
Terminal box material	PC/ABS plastic
Impeller material	Sheet steel, painted black
Housing material	Die-cast aluminum
Guard grille material	Steel, coated with black plastic (RAL 9005)
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP44; installation- and position-dependent as per EN 60034-5
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	F2-2; 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	On rotor side
Mode	S1
Motor bearing	Ball bearing
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	< 0.75 mA
Electrical hookup	Terminal box
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

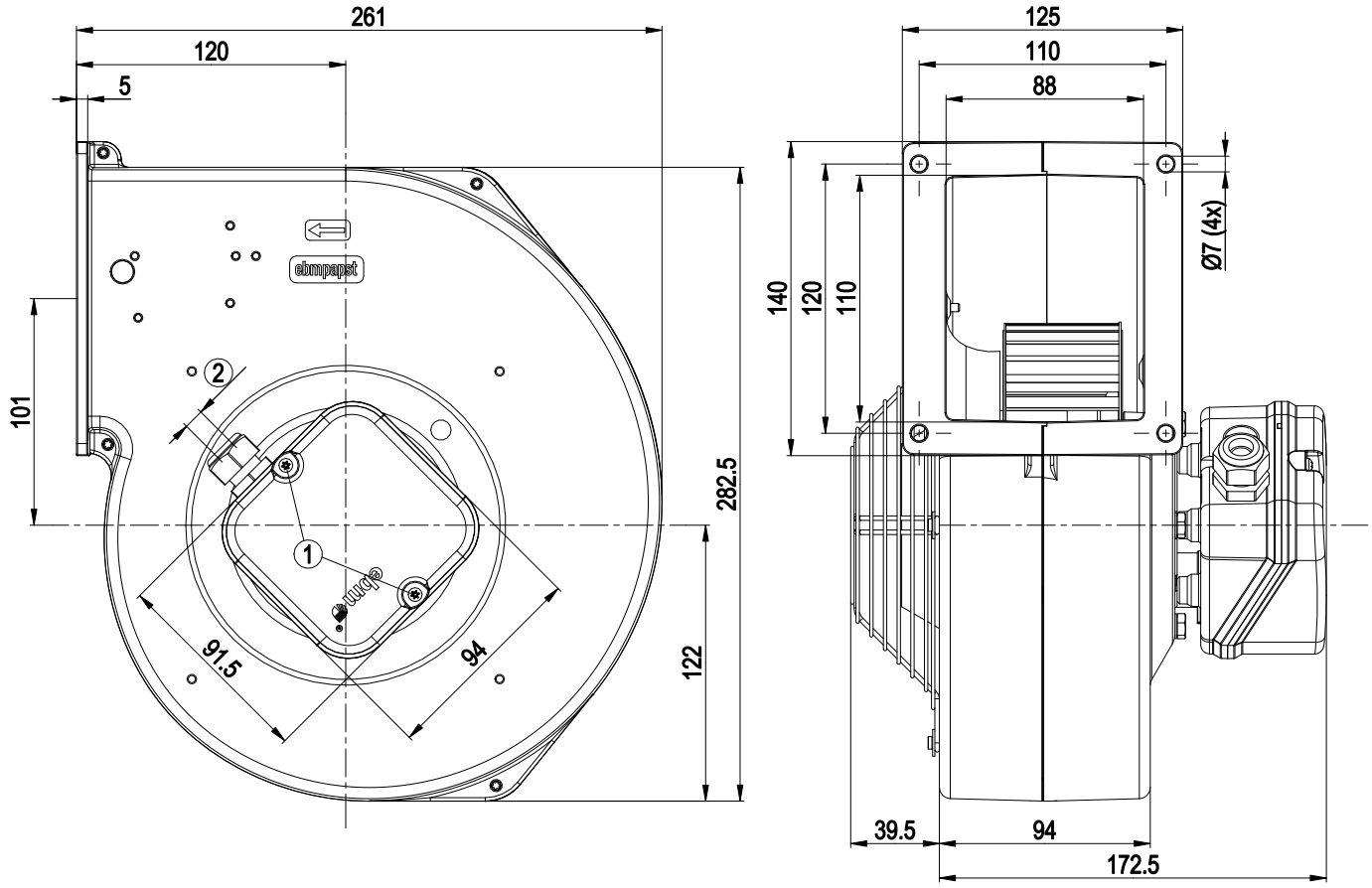
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Product drawing



1	Tightening torque 0.5 ± 0.1 Nm
2	Cable diameter min. 5 mm, max. 10 mm, tightening torque 2 ± 0.3 Nm

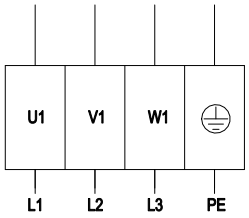
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Connection diagram



Change of rotation direction by reversing 2 phases

1	Three-phase motor star connection
U1	= L1 = black
V1	= L2 = blue
W1	= L3 = brown
	PE (green/yellow)

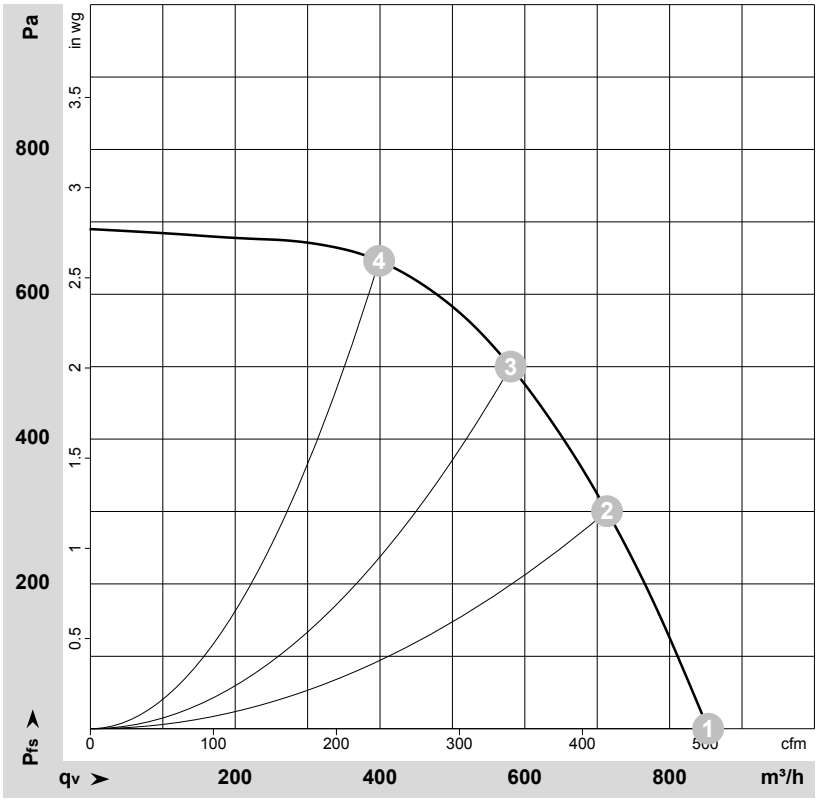
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-108808-1

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	400	50	2350	425	0.68	855	0	500	0.00
2	400	50	2490	347	0.55	715	300	420	1.20
3	400	50	2605	282	0.46	580	500	340	2.01
4	400	50	2735	202	0.37	400	650	235	2.61

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

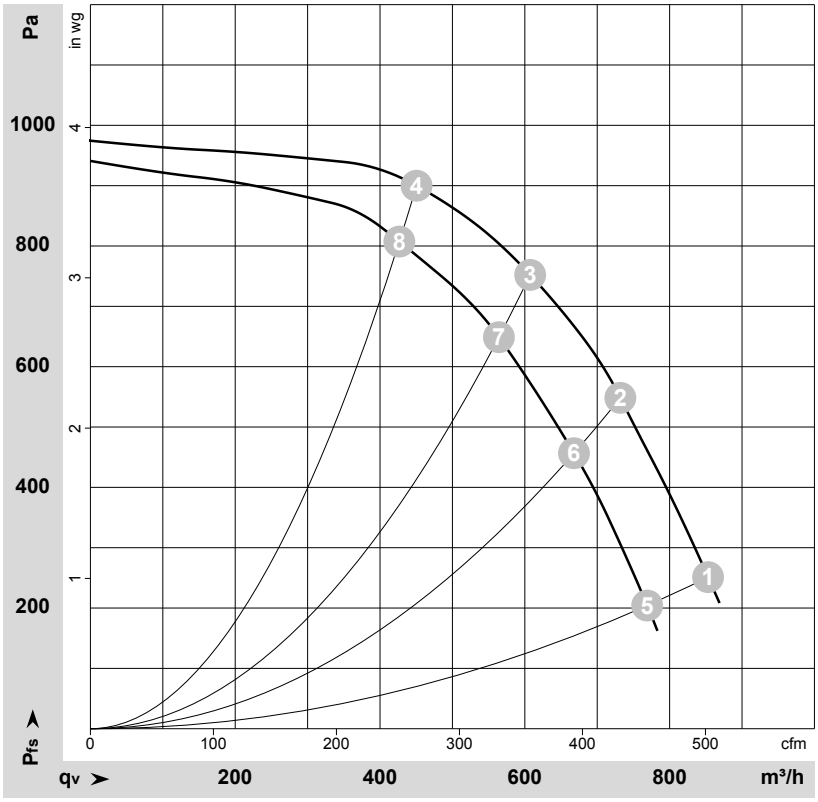
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Curves: Air performance 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-108812-1
Measurement: LU-108809-1

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	480	60	2750	595	0.79	855	250	500	1.00
2	480	60	2930	498	0.66	730	550	430	2.21
3	480	60	3075	416	0.56	605	750	355	3.01
4	480	60	3230	314	0.44	450	900	265	3.61
5	400	60	2450	510	0.81	770	200	455	0.80
6	400	60	2670	442	0.69	670	457	395	1.83
7	400	60	2860	376	0.59	565	649	330	2.61
8	400	60	3080	287	0.46	425	808	250	3.24

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

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