

G2E160-BY50-27

AC centrifugal fan

forward-curved, single-intake
with housing (flange)

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Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	G2E160-BY50-27			
Motor	M2E068-EC			
Phase		1~	1~	1~
Nominal voltage	VAC	230	230	230
Frequency	Hz	50	60	60
Method of obtaining data		ml	ml	ml
Valid for approval/standard		CE	CE	UL 1004-3
Speed (rpm)	min ⁻¹	2400	2950	2950
Power consumption	W	240	240	250
Current draw	A	1.05	1.08	1.12
Capacitor	µF	6	6	6
Capacitor voltage	VDB	400	400	400
Capacitor standard		S0 (CE)	S0 (CE)	S0 (CE)
Min. back pressure	Pa	220	600	600
Min. back pressure	in. wg	0.88	2.41	2.41
Min. ambient temperature	°C	-25	-25	-25
Max. ambient temperature	°C	40	40	40

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 (prEN 17166)

		Actual	Req. 2015			
01 Overall efficiency η_{es}	%	33.8	32.7	09 Power consumption P_e	kW	0.16
02 Measurement category		A		09 Air flow q_v	m ³ /h	385
03 Efficiency category		Static		09 Pressure increase p_{fs}	Pa	524
04 Efficiency grade N		45.1	44	10 Speed (rpm) n	min ⁻¹	2700
05 Variable speed drive		No		11 Specific ratio*		1.01

Data obtained at optimum efficiency level.

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

LU-167318

The efficiency values displayed for achieving conformity with the Ecodesign Regulation EU 327/2011 has been reached with defined air duct components (e.g. inlet rings).
The dimensions must be requested from ebm-papst. If other air conduction geometries are used on the installation side, the ebm-papst evaluation loses its validity/the conformity must be confirmed again.
The product does not fall within the scope of Regulation (EU) 2019/1781 due to the exception specified in Article 2 (2a) (motors completely integrated into a product).



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Technical description

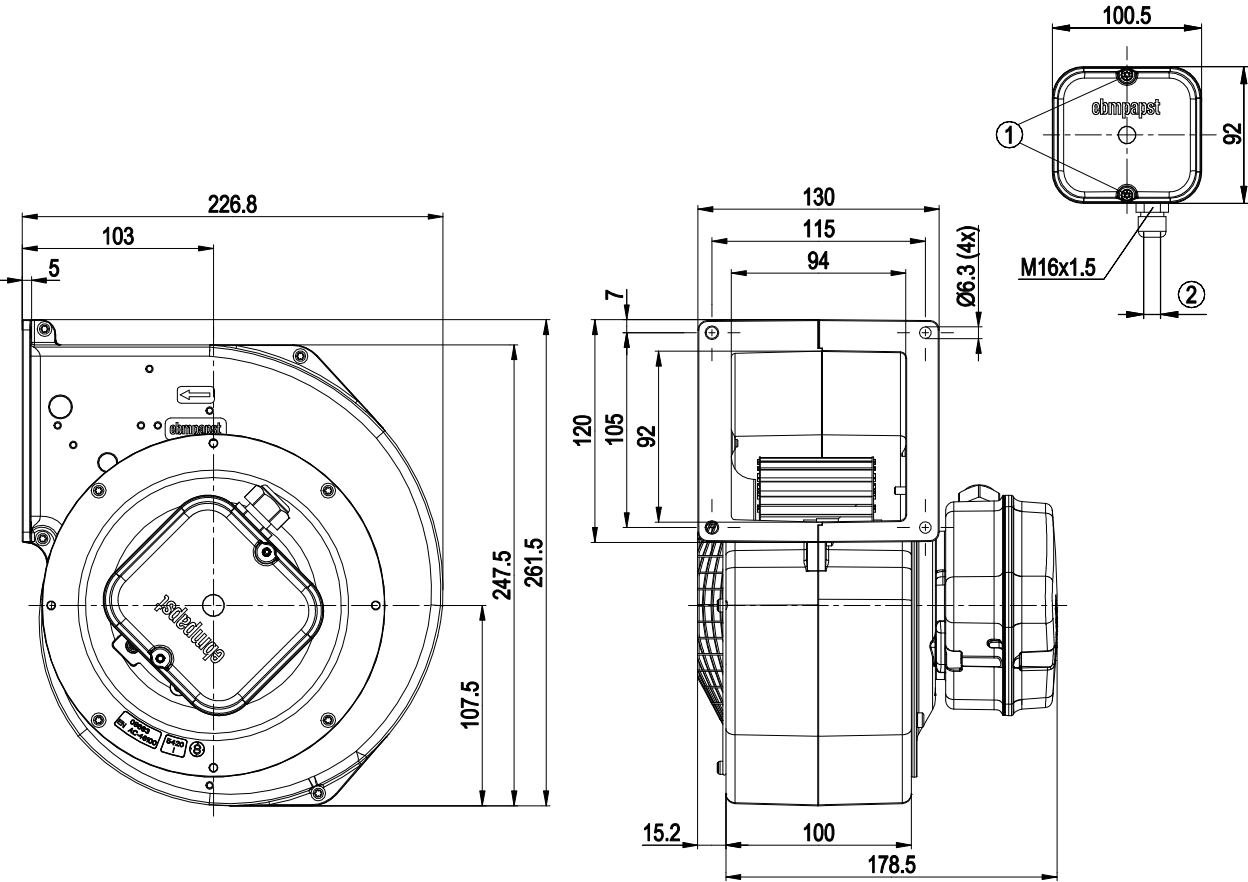
Weight	4.32 kg
Size	160 mm
Motor size	68
Rotor surface	Painted black
Terminal box material	PP plastic
Impeller material	Sheet steel, painted black
Housing material	Die-cast aluminum
Guard grille material	Hot-dip galvanized and spot-welded net
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP44; installation- and position-dependent as per EN 60034-5
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	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; Capacitor integrated and connected
Motor protection	Thermal overload protector (TOP) internally connected
Protection class assignment	I; If a protective earth is connected by the customer This component for installation may have several local protection classes. This information relates to this component's basic design. The final protection class is based on the component's intended installation and connection.
Motor capacitor according to EN 60252-1 in safety protection class	S0
Conformity with standards	EN 60034-1; EN 60204-1; EN 60335-1; CE
Approval	UL 1004-3; CSA C22.2 No. 77



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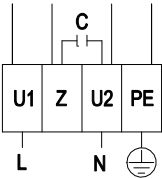
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Product drawing



- | | |
|---|--|
| 1 | Tightening torque 1.5 ± 0.2 Nm |
| 2 | Cable diameter min. 5 mm, max. 10 mm, tightening torque 2 ± 0.3 Nm |

Connection diagram



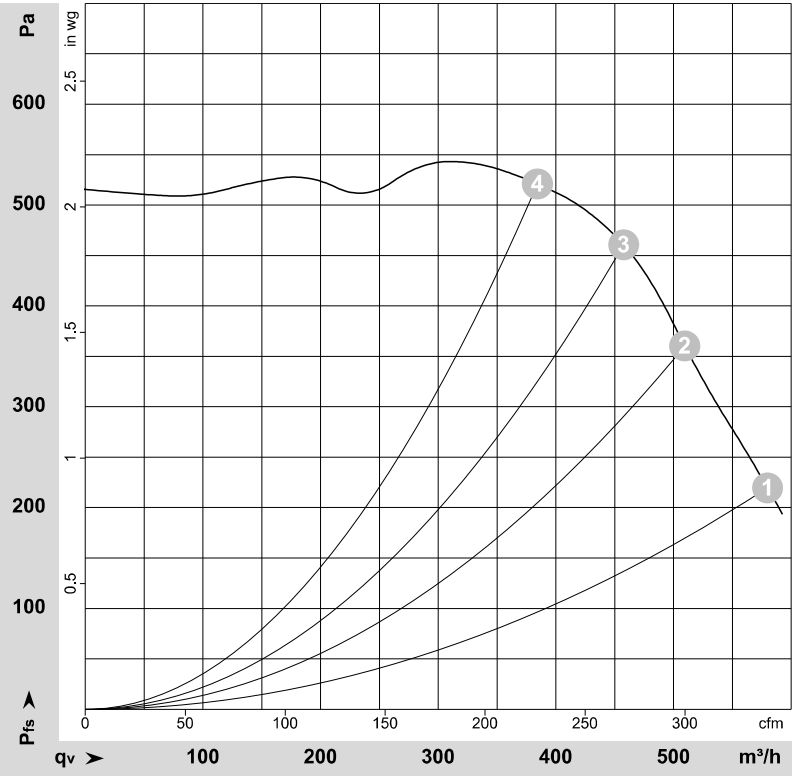
L	= U1 = blue	Z	brown	N	= U2 = black
PE	green/yellow				



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Curves: Air performance 50 Hz



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

Measurement: LU-167318-1

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	230	50	2400	240	1.05	580	220	340	0.88
2	230	50	2545	209	0.91	510	360	300	1.45
3	230	50	2615	190	0.83	460	460	270	1.85
4	230	50	2695	166	0.72	385	520	225	2.09

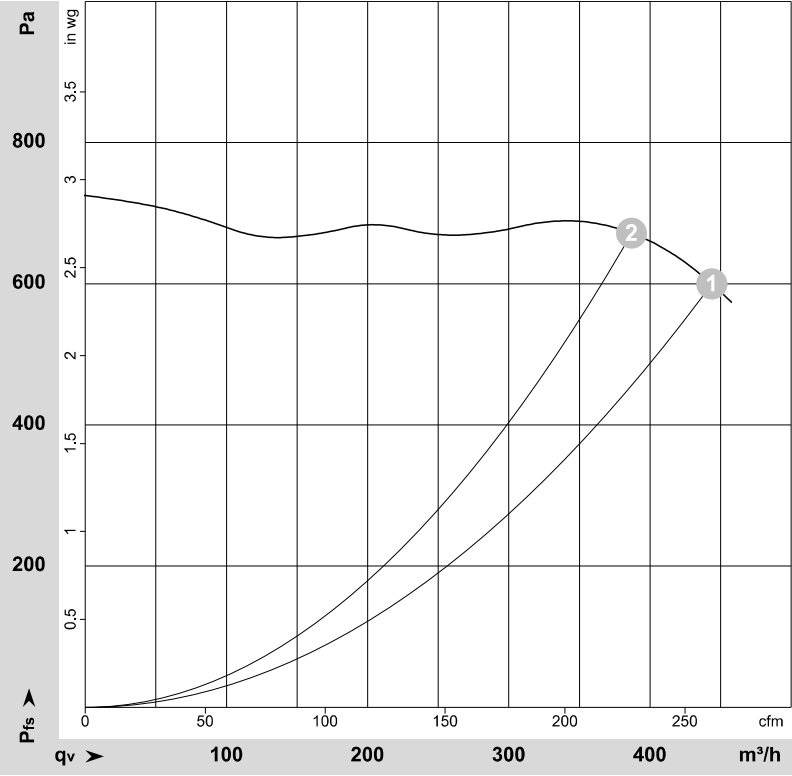
U = Voltage · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · q_v = Air flow · p_{fs} = Pressure increase



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Curves: Air performance 60 Hz



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

Measurement: LU-167375-1

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	230	60	2950	240	1.08	445	600	260	2.41
2	230	60	3055	223	0.99	385	670	230	2.69

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

