G2D120-AA22-03

AC centrifugal fan

forward-curved

with housing (flange), for rail applications

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Nominal data

Type	**G2D120-AA22-03**
Motor	**M2D068-BF**

Phase		3~	3~	3~
Nominal voltage	VAC	400	400	480
Wiring		Y	Y	Y
Frequency	Hz	50	60	60
Method of obtaining data		fa	fa	fa
Valid for approval/standard		CE	CE	CE
Speed (rpm)	min^{-1}	2250	2300	2600
Power consumption	W	69	80	100
Current draw	A	0.13	0.13	0.16
Min. back pressure	Pa	0	0	0
Min. back pressure	in. wg	0	0	0
Min. ambient temperature	°C	-40	-40	-40
Max. ambient temperature	°C	80	80	80
Starting current	A	0.25	0.27	0.28

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	2.2 kg
Size	120 mm
Motor size	68
Impeller material	Sheet steel, galvanized
Housing material	Die-cast aluminum
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP44
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H1+
Ambient temperature note	Occasional start-up at temperatures between -40°C and -25°C is permitted. For continuous operation at ambient temperatures below -25°C (such as refrigeration applications), use must be made of a fan design with special low-temperature bearings.
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; (sealed)
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	< 0.75 mA
Motor protection	Thermal overload protector (TOP) with basic insulation
With cable	Axial
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 45545-2, HL3: 2013 + A1:2015; EN 50155: 2008; EN 60034-1 (2010); EN 61373, Cat. 1B: 2010

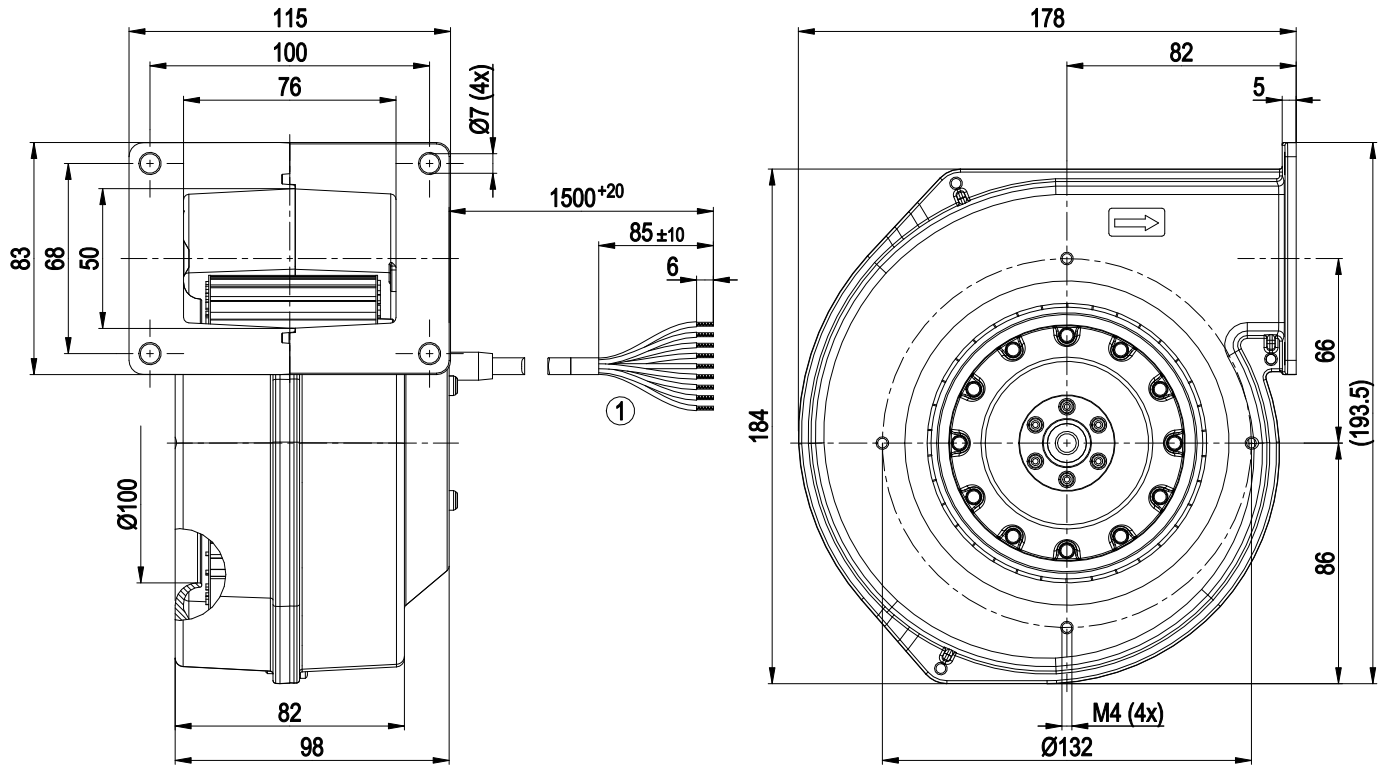
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Product drawing



1	Cable halogen-free, BETAtrans® GKW flex R, 9G 0.5 mm²
	9x splice

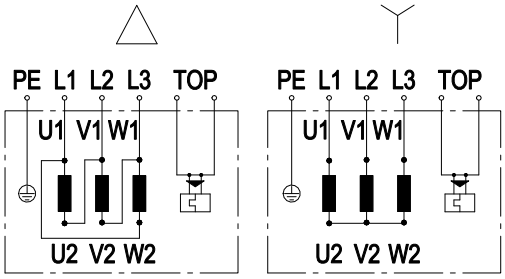
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Connection diagram



Note: Change of rotation direction by reversing two phases

Δ	Delta connection	Y	Star connection	L1	black
L2	blue	L3	brown	U1	black
V1	blue	W1	brown	U2	green
V2	white	W2	yellow	TOP	2x gray
PE	green/yellow				

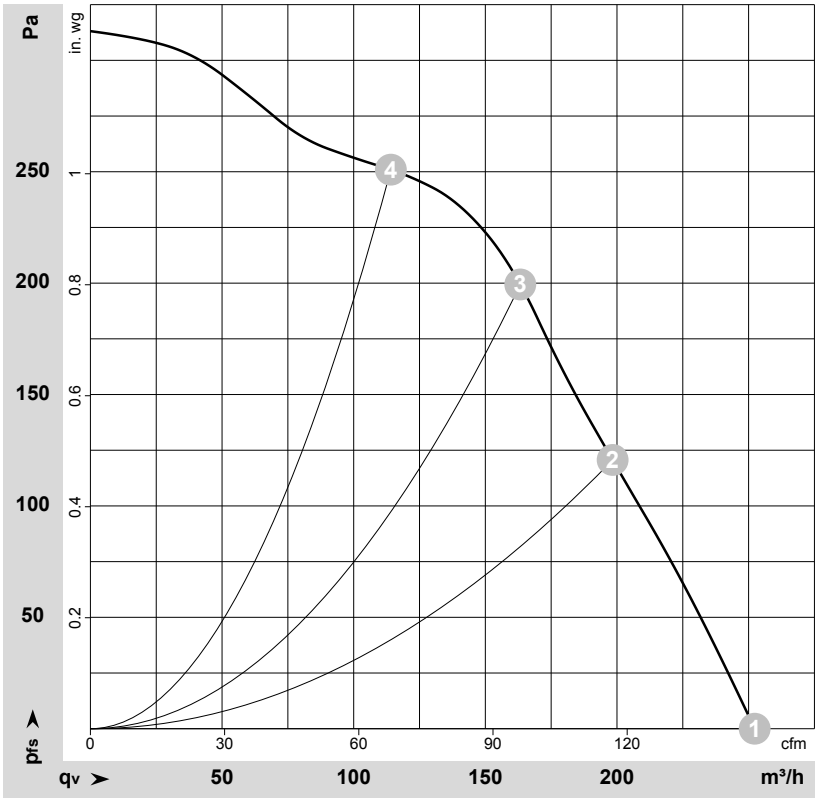
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-191993-1

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

	Wired	U	f	n	P_e	I	LpA_{in}	LwA_{in}	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
1	Y	400	50	2250	69	0.13	60	68	250	0	150	0.00
2	Y	400	50	2440	59	0.12	59	66	200	120	115	0.48
3	Y	400	50	2540	53	0.12	58	66	165	200	95	0.80
4	Y	400	50	2655	46	0.12	58	65	115	250	65	1.00

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
q_V = Air flow · p_{fs} = Pressure increase

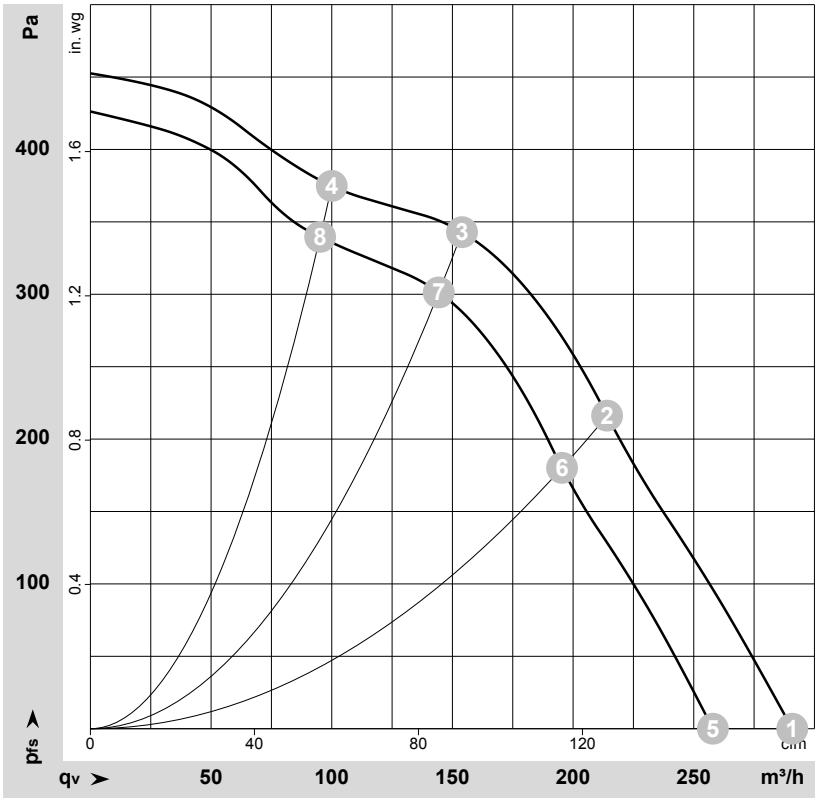
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Curves: Air performance 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-192176-1
Measurement: LU-192173-1

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

	Wired	U	f	n	P_e	I	LpA_{in}	LwA_{in}	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
1	Y	480	60	2600	100	0.16	64	71	290	0	170	0.00
2	Y	480	60	2905	80	0.13	63	70	215	216	125	0.87
3	Y	480	60	3090	66	0.13	62	70	155	344	90	1.38
4	Y	480	60	3230	57	0.12	62	69	100	373	60	1.50
5	Y	400	60	2300	80	0.13			260	0	150	0.00
6	Y	400	60	2675	64	0.11			195	180	115	0.72
7	Y	400	60	2910	52	0.10			145	300	85	1.20
8	Y	400	60	3080	43	0.09			95	340	55	1.36

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
q_V = Air flow · p_{fs} = Pressure increase

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