

# AC centrifugal fan

backward curved, single inlet  
with housing (flange)

G2D160-AF02-01 ebmpapst Datasheet

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## Nominal data

Type	G2D160-AF02-01				
Motor	M2D068-EC				
Phase		3~	3~	3~	3~
Nominal voltage	VAC	230	230	400	400
Connection		$\Delta$	$\Delta$	Y	Y
Frequency	Hz	50	60	50	60
Type of data definition		ml	ml	ml	ml
Valid for approval / standard		CE	CE	CE	CE
Speed	min <sup>-1</sup>	2300	2550	2300	2550
Power input	W	305	335	305	335
Current draw	A	0.83	0.9	0.48	0.52
Min. back pressure	Pa	0	300	0	300
Min. ambient temperature	°C	-25	-25	-25	-25
Max. ambient temperature	°C	50	40	50	40
Starting current	A	1.75	1.65	1.0	0.95

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit  
Subject to alterations

## Data according to ErP directive

Installation category	A
Efficiency category	Static
Variable speed drive	No
Specific ratio*	1.01

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

		Actual	Request 2013	Request 2015
Overall efficiency $\eta_{es}$	%	34	25.5	32.5
Efficiency grade N		45.5	37	44
Power input $P_e$	kW	0.15		
Air flow $q_v$	m <sup>3</sup> /h	390		
Pressure increase $p_{fs}$	Pa	501		
Speed n	min <sup>-1</sup>	2685		

Data definition with optimum efficiency. LU-39223  
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.



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## Technical features

<b>Mass</b>	4 kg
<b>Size</b>	160 mm
<b>Surface of rotor</b>	Uncoated
<b>Material of impeller</b>	Sheet steel, sendzimir galvanised
<b>Housing material</b>	Die-cast aluminium
<b>Direction of rotation</b>	Clockwise, seen on rotor
<b>Type of protection</b>	IP 44
<b>Insulation class</b>	"B"
<b>Humidity class</b>	F1-1
<b>Max. permissible ambient motor temp. (transp./ storage)</b>	+ 80 °C
<b>Min. permissible ambient motor temp. (transp./storage)</b>	- 40 °C
<b>Mounting position</b>	Any
<b>Condensate discharge holes</b>	None
<b>Operation mode</b>	S1
<b>Motor bearing</b>	Ball bearing
<b>Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)</b>	< 0.75 mA
<b>Protection class</b>	I (if protective earth is connected by customer)
<b>Product conforming to standard</b>	EN 60335-1, motor does not have factory-installed overheating protection; CE
<b>Approval</b>	CCC

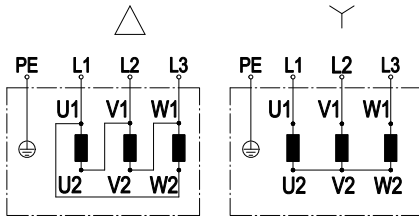




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## Connection screen



Change direction of rotation by reversing two phases

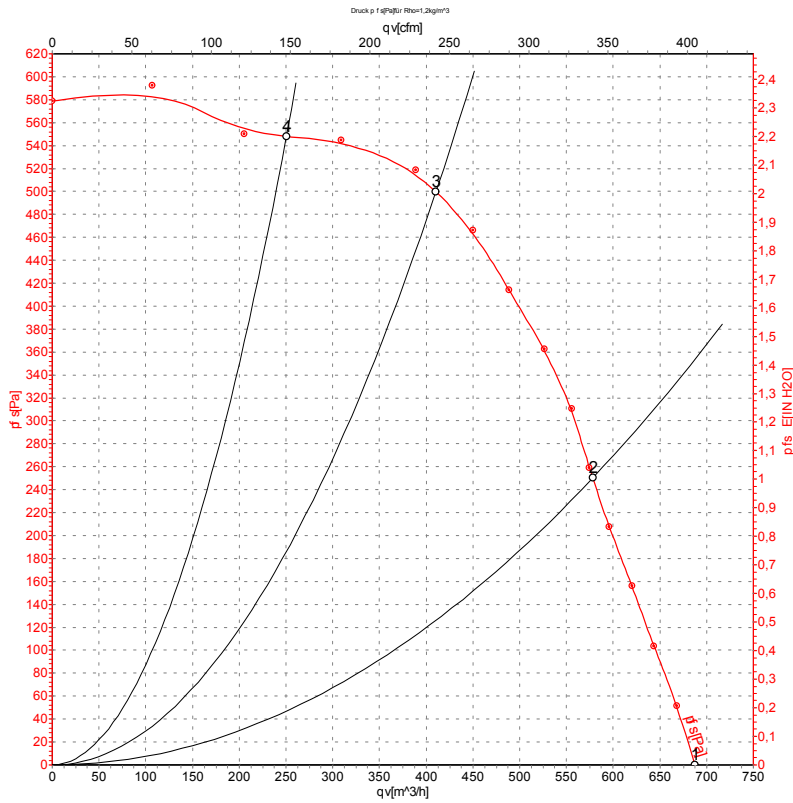
	Three-phase motor	Δ	Delta connection	Y	Star connection
L1	= U1 = black	L2	= V1 = blue	L3	= W1 = brown
U2	green	V2	white	W2	yellow
PE	green/yellow				



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## Charts: Air flow 50 Hz



Measurement: LU-39223

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

## Measured values

	U	f	n	P <sub>e</sub>	I	qv	P <sub>fs</sub>
	V	Hz	min <sup>-1</sup>	W	A	m <sup>3</sup> /h	Pa
1	400	50	2300	305	0.48	690	0
2	400	50	2470	242	0.39	580	250
3	400	50	2665	168	0.29	410	500
4	400	50	2790	114	0.23	250	548

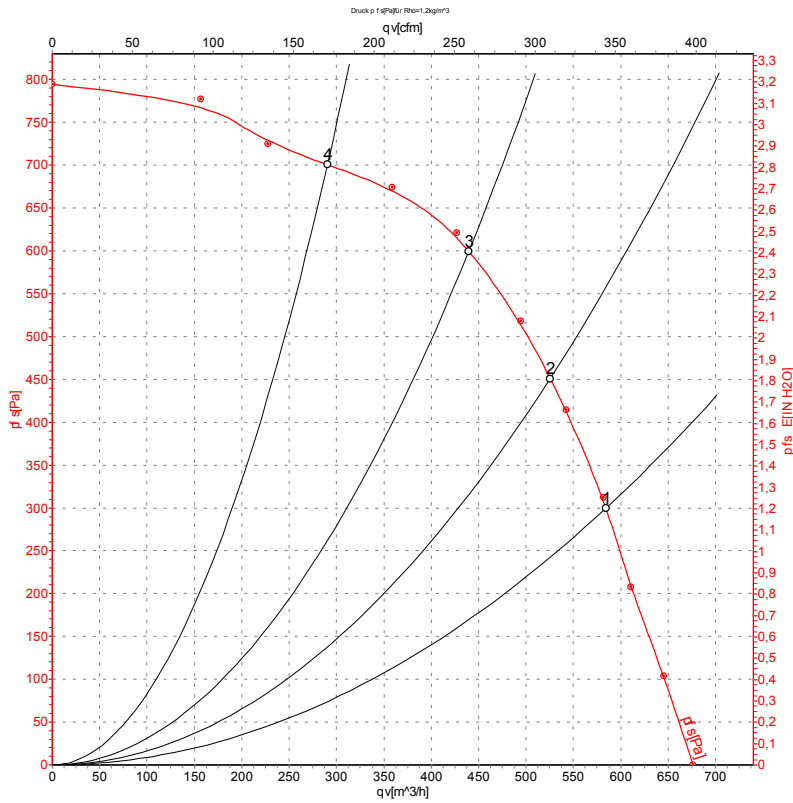
U = Supply voltage · f = Frequency · n = Speed · P<sub>e</sub> = Power input · I = Current draw · qv = Air flow · P<sub>fs</sub> = Pressure increase



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## Charts: Air flow 60 Hz



Measurement: LU-39224

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: L<sub>wA</sub> measured as per ISO 13347 / L<sub>pA</sub> measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

## Measured values

	U	f	n	P <sub>e</sub>	I	qv	P <sub>fs</sub>
	V	Hz	min <sup>-1</sup>	W	A	m <sup>3</sup> /h	Pa
1	400	60	2550	335	0.52	585	300
2	400	60	2720	296	0.46	525	450
3	400	60	2905	247	0.39	440	600
4	400	60	3145	176	0.29	290	700

U = Supply voltage · f = Frequency · n = Speed · P<sub>e</sub> = Power input · I = Current draw · qv = Air flow · P<sub>fs</sub> = Pressure increase

