

# AC centrifugal fan

forward curved, dual inlet  
with housing (flange)

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### Nominal data

Type	D2D146-BG03-15				
Motor	M2D068-GA				
Phase		3~	3~	3~	3~
Nominal voltage	VAC	400	400	440	480
Nominal voltage range	VAC	380 .. 440	380 .. 480	380 .. 440	380 .. 480
Connection		Y	Y	Y	Y
Frequency	Hz	50	60	50	60
Type of data definition		ml	ml	ml	ml
Valid for approval / standard		CE	UL 507	CE	UL 507
Speed	min <sup>-1</sup>	2580	2700	2650	2960
Power input	W	350	500	430	560
Current draw	A	0.6	0.78	0.65	0.76
Min. back pressure	Pa	290	315	300	385
Max. ambient temperature	°C	60	60	60	60

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

		Actual	Request 2013	Request 2015
Installation category	A			
Efficiency category	Static			
Variable speed drive	No			
Specific ratio*	1.00			
Overall efficiency $\eta_{es}$		35.6	26.5	33.5
Efficiency grade N		46.1	37	44
Power input $P_e$	kW	0.22		
Air flow $q_v$	m <sup>3</sup> /h	705		
Pressure increase $p_{fs}$	Pa	416		
Speed n	min <sup>-1</sup>	2750		

Data established at point of optimum efficiency

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



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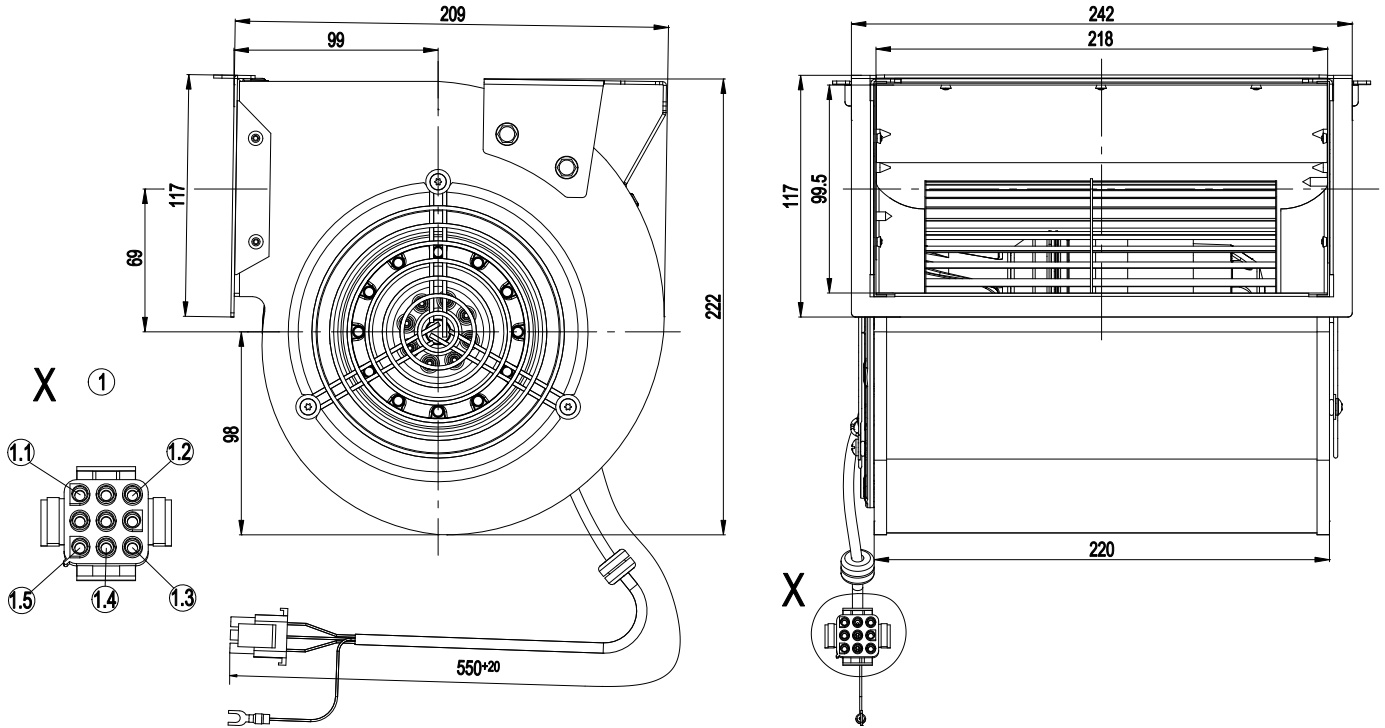
## Technical features

<b>Mass</b>	5.8 kg
<b>Size</b>	146 mm
<b>Surface of rotor</b>	Coated in black
<b>Material of impeller</b>	Sheet steel, hot-dip galvanised
<b>Housing material</b>	Sheet steel, hot-dip galvanised
<b>Material of guard grille</b>	Steel, phosphated and coated in black plastic
<b>Motor suspension</b>	Motor mounted via brackets on one side
<b>Direction of rotation</b>	Counter-clockwise, seen on rotor
<b>Type of protection</b>	IP 55
<b>Insulation class</b>	"F"
<b>Humidity class</b>	F5
<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>	<= 3.5 mA
<b>Motor protection</b>	Thermal overload protector (TOP) brought out
<b>Cable exit</b>	Axial
<b>Protection class</b>	I (if protective earth is connected by customer)
<b>Product conforming to standard</b>	EN 60335-1; CE
<b>Approval</b>	UL 1004-1; CSA C22.2 Nr.100

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## Product drawing



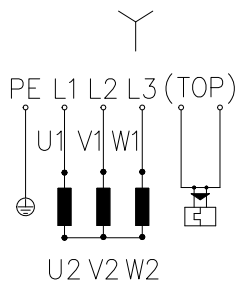
1	Connector housing AMP Universal Mate-N-Lok 350720-1, pluggable with 350782-1
1.1	blue
1.2	brown
1.3	black
1.4	grey
1.5	grey



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## Connection screen



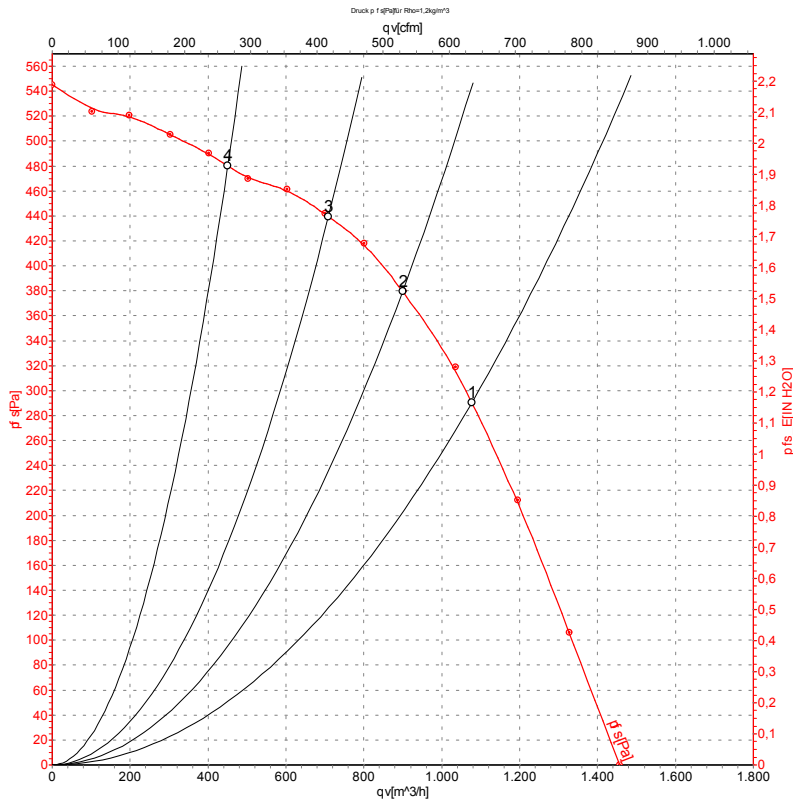
Y	Star connection	L1	black	L2	blue
L3	brown	U1	black	V1	blue
W1	brown	U2	green	V2	white
W2	yellow	TOP	grey		

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## Charts: Air flow 50 Hz



Measurement: LU-110559

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebmpapst. 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

	Conn.	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	Y	400	50	2580	350	0.60	1075	290
2	Y	400	50	2665	288	0.53	900	380
3	Y	400	50	2745	230	0.47	710	440
4	Y	400	50	2815	178	0.42	450	480

Conn. = Connection · 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

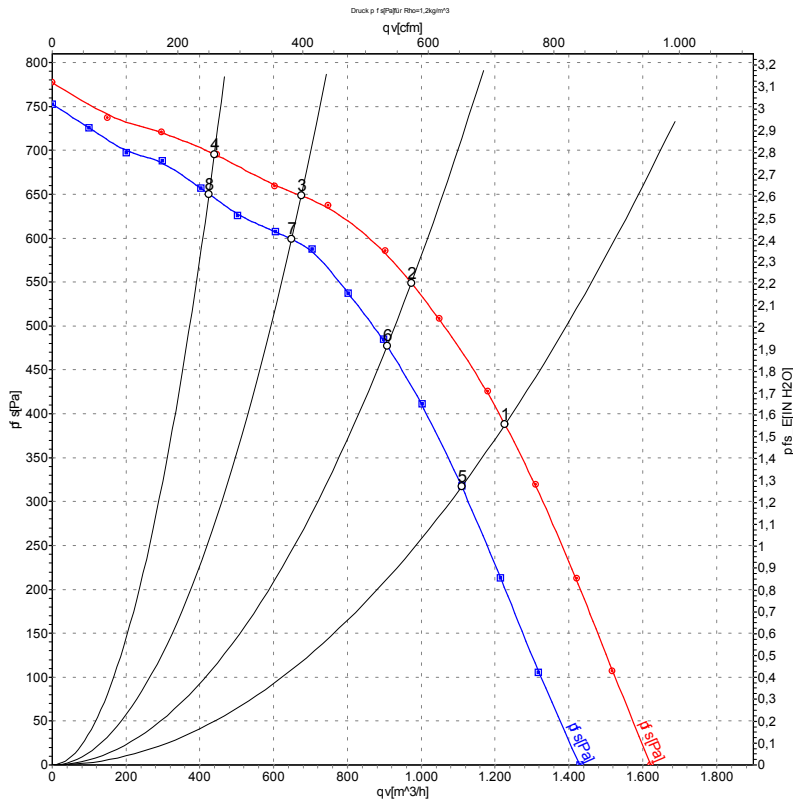


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## Charts: Air flow 60 Hz



Measurement: LU-110562  
Measurement: LU-110561

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

	Conn.	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	Y	480	60	2960	560	0.76	1225	385
2	Y	480	60	3120	447	0.63	975	550
3	Y	480	60	3275	330	0.50	675	650
4	Y	480	60	3365	255	0.43	440	700
5	Y	400	60	2700	500	0.78	1110	315
6	Y	400	60	2915	404	0.64	905	478
7	Y	400	60	3140	311	0.51	650	599
8	Y	400	60	3240	247	0.42	425	650

Conn. = Connection · 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

