

# AC centrifugal fan

forward curved, dual inlet  
with housing (flange)

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### Nominal data

Type	D2D146-AA24-23				
Motor	M2D068-EC				
Phase		3~	3~	3~	3~
Nominal voltage	VAC	230	230	400	400
Connection		Δ	Δ	Y	Y
Frequency	Hz	50	60	50	60
Type of data definition		ml	ml	ml	ml
Valid for approval / standard		-	-	-	-
Speed (rpm)	min <sup>-1</sup>	1900	2350	1900	2350
Power input	W	265	250	265	250
Current draw	A	0.72	0.67	0.41	0.38
Min. back pressure	Pa	200	350	200	350
Min. ambient temperature	°C	-25	-25	-25	-25
Max. ambient temperature	°C	50	55	50	55
Starting current	A	1.35	1.5	0.78	0.87

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



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## Technical features

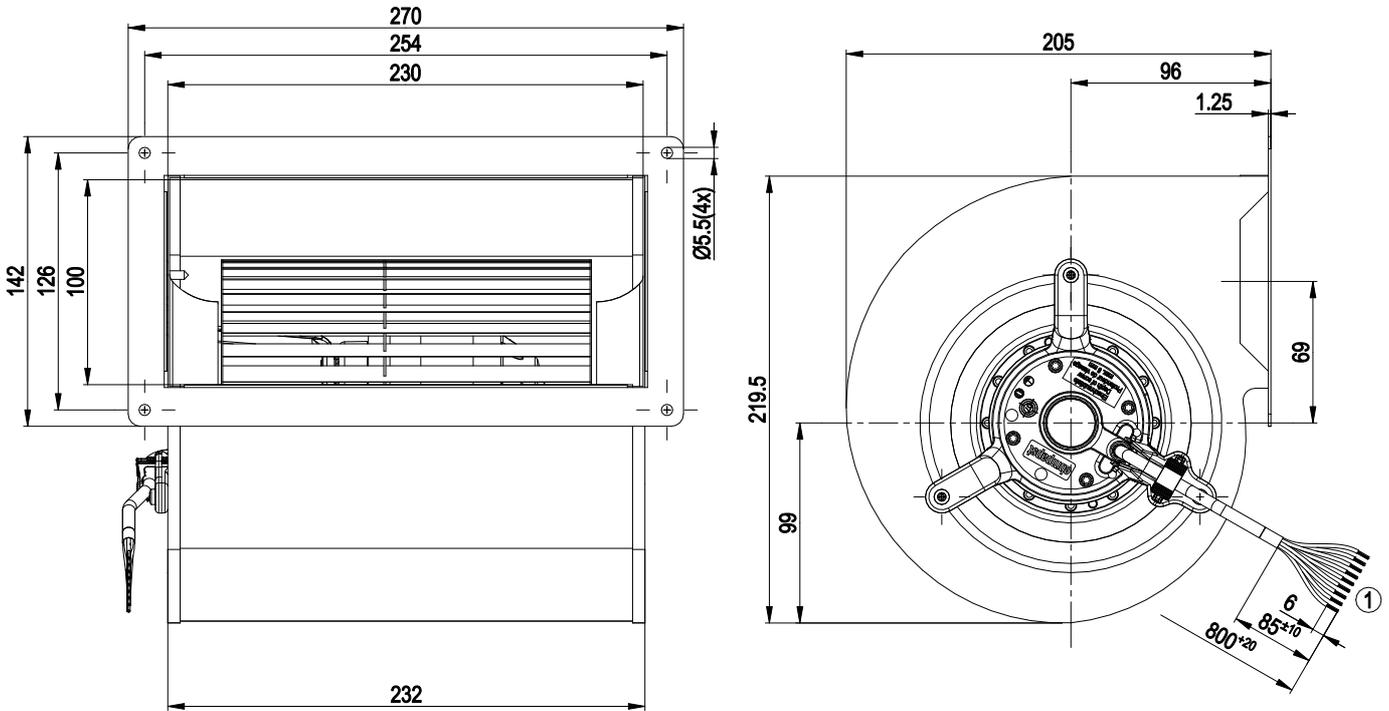
<b>Mass</b>	4.6 kg
<b>Size</b>	146 mm
<b>Motor size</b>	68
<b>Material of impeller</b>	Sheet steel, hot-galvanised
<b>Housing material</b>	Sheet steel, hot-galvanised
<b>Motor suspension</b>	Motor mounted via brackets on one side
<b>Direction of rotation</b>	Counter-clockwise, seen on rotor
<b>Type of protection</b>	IP44; Depending on installation and position as per EN 60034-5
<b>Insulation class</b>	"F"
<b>Humidity (F) / environmental protection class (H)</b>	H1
<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>	Shaft horizontal or rotor on bottom; rotor on top on request
<b>Condensation drainage holes</b>	Rotor-side
<b>Operation mode</b>	S1
<b>Motor bearing</b>	Hybrid bearing
<b>Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)</b>	< 0.75 mA
<b>Motor protection</b>	Thermal overload protector (TOP) brought out, basic insulation
<b>Protection class</b>	I (if protective earth is connected by customer)
<b>Product conforming to standard</b>	EN 60335-1
<b>Approval</b>	EAC

D2D146-AA24-23

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## Product drawing



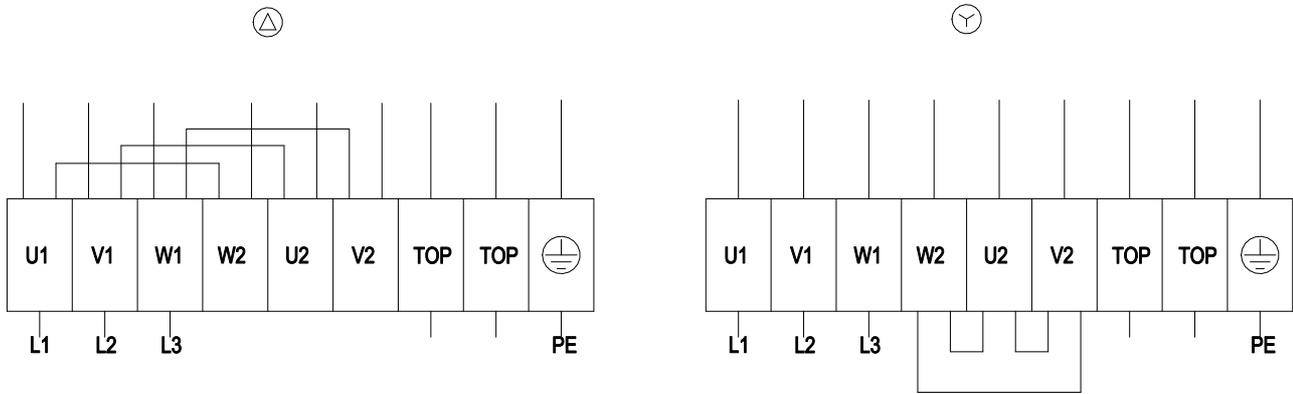
1 Connection line Dipotherm 9G 0.5 mm<sup>2</sup>, 9x brass lead tips crimped



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## Connection screen

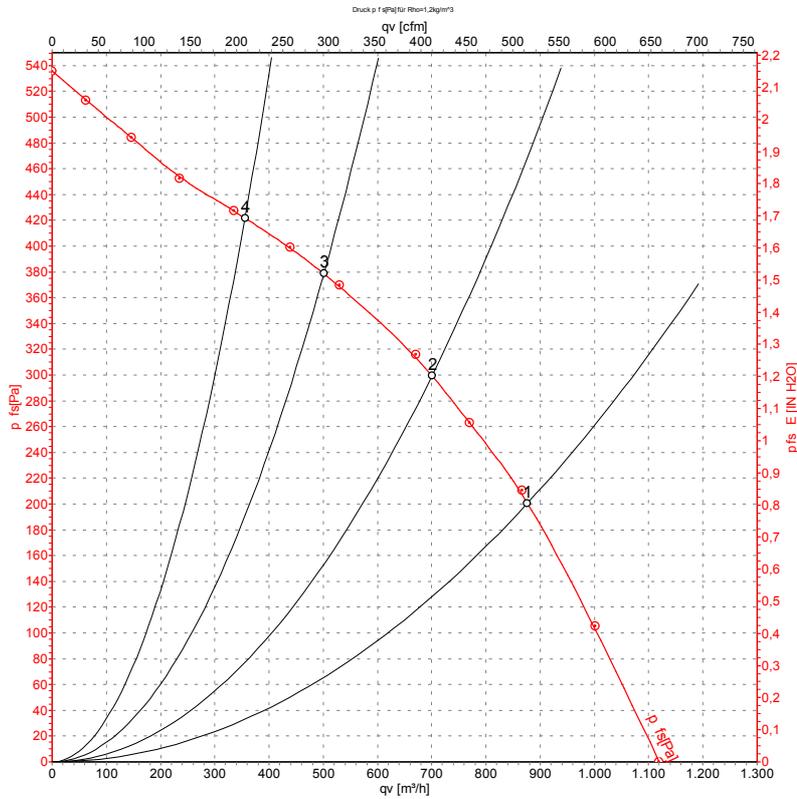


Δ	Delta-connection	Y	Star connection	L1	= U1 = black
L2	= V1 = blue	L3	= W1 = brown	W2	yellow
U2	green	V2	white	TOP	2 x grey
PE	green / yellow				

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## Charts: Air flow 50 Hz



Measurement: LU-56535-1

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	q <sub>v</sub>	P <sub>fs</sub>	q <sub>v</sub>	P <sub>fs</sub>
	V	Hz	min <sup>-1</sup>	W	A	m <sup>3</sup> /h	Pa	cfm	in. wg
1	400	50	1900	265	0.41	875	200	515	0.80
2	400	50	2165	219	0.34	700	300	410	1.20
3	400	50	2430	167	0.27	500	380	295	1.53
4	400	50	2545	141	0.23	355	420	210	1.69

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

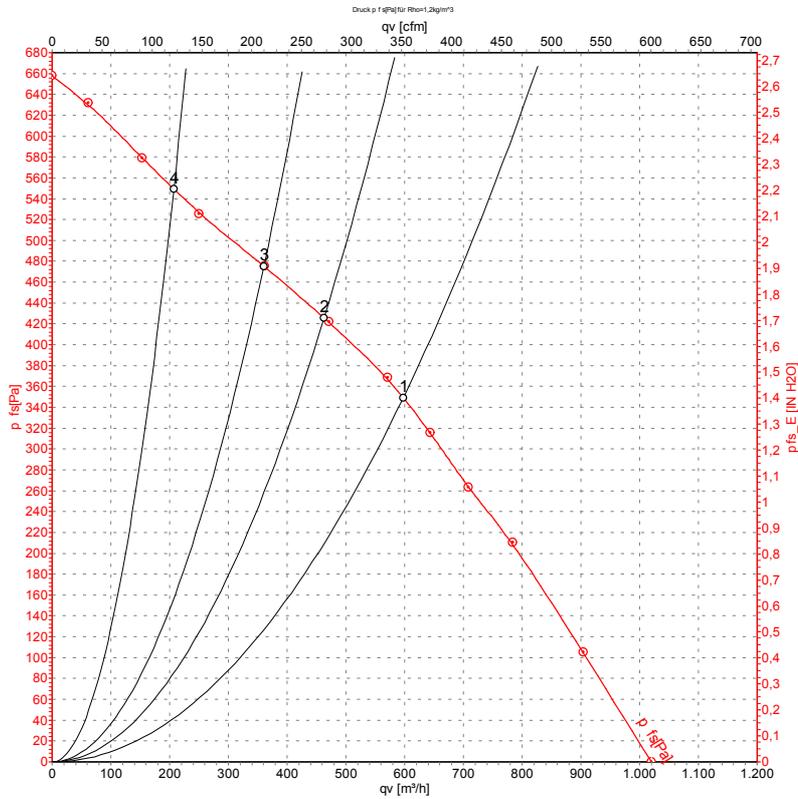


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## Charts: Air flow 60 Hz



Measurement: LU-56536-1

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	q <sub>v</sub>	P <sub>fs</sub>	q <sub>v</sub>	P <sub>fs</sub>
	V	Hz	min <sup>-1</sup>	W	A	m <sup>3</sup> /h	Pa	cfm	in. wg
1	400	60	2350	250	0.38	600	350	350	1.41
2	400	60	2580	219	0.34	465	425	275	1.71
3	400	60	2715	197	0.31	360	475	210	1.91
4	400	60	2855	174	0.27	205	550	120	2.21

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

