D2D146-AA24-25

AC centrifugal fan

forward-curved, dual-intake

with housing (flange), for rail applications

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Nominal data

Type	**D2D146-AA24-25**		
Motor	**M2D068-EC**		
Phase		3~	3~
Nominal voltage	VAC	400	400
Wiring		Y	Y
Frequency	Hz	50	60
Method of obtaining data		ml	ml
Valid for approval/standard		CE	CE
Speed (rpm)	min^{-1}	2050	2600
Power consumption	W	240	200
Current draw	A	0.37	0.31
Min. back pressure	Pa	250	400
Min. back pressure	in. wg	1	1.61
Min. ambient temperature	°C	-25	-25
Max. ambient temperature	°C	60	65

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	4.48 kg
Size	146 mm
Motor size	68
Rotor surface	Painted black
Impeller material	Sheet steel, galvanized
Housing material	Sheet steel, galvanized
Motor suspension	Motor mounted on brackets for one-sided vibration damping
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP44; installation- and position-dependent as per EN 60034-5
Insulation class	"F"
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
Motor protection	Thermal overload protector (TOP) with basic insulation
Protection class	I (with customer connection of protective earth)
Approval	EAC

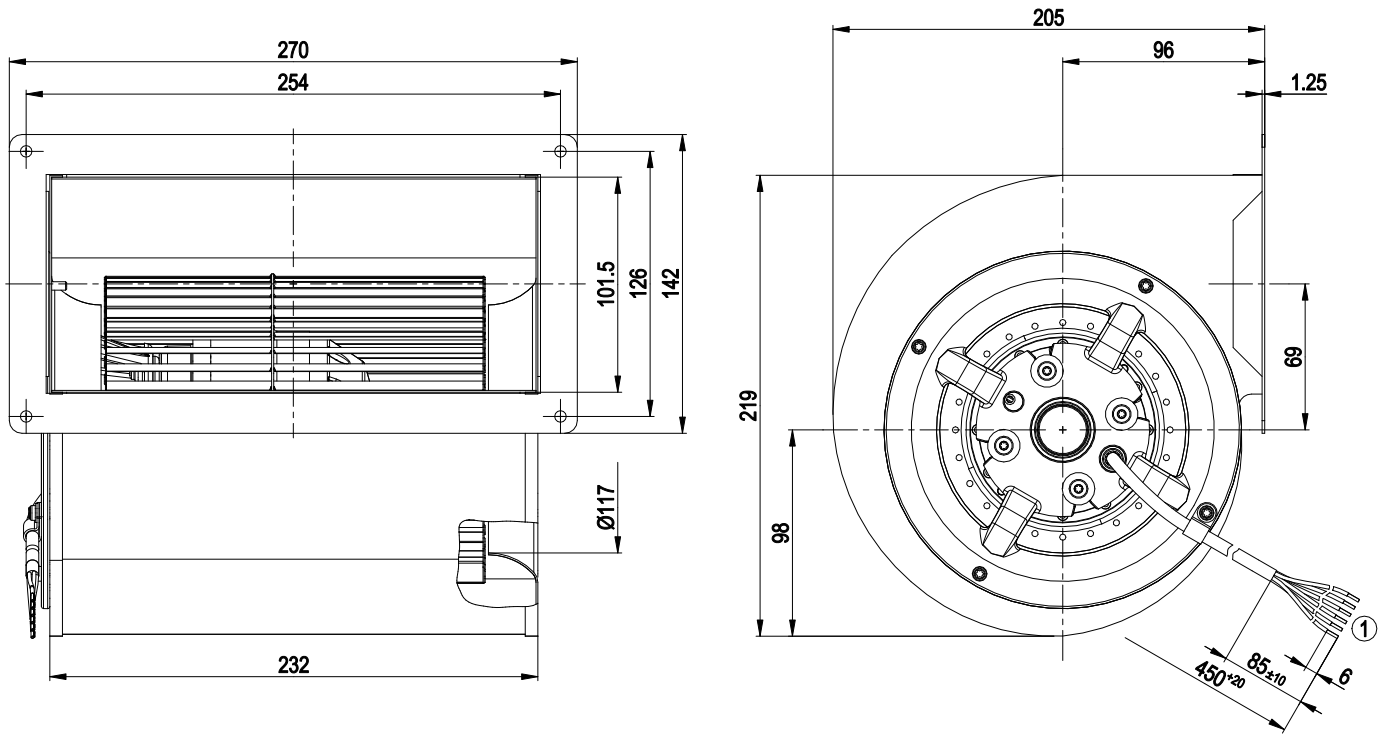
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Product drawing



1	Cable silicone 6G 0.5 mm², 6x crimped splices

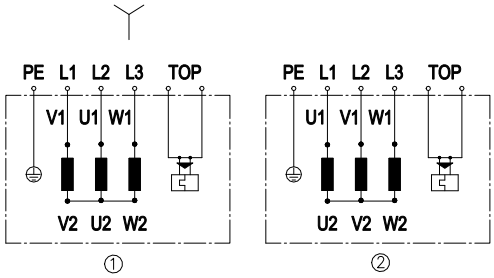
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Connection diagram



Change of rotation direction by reversing two phases

	Three-phase motor
Y	Star connection
1	Counterclockwise operation
L1	= V1 = blue
L2	= U1 = black
L3	= W1 = brown
2	Clockwise operation
L1	= U1 = black
L2	= V1 = blue
L3	= W1 = brown
PE	green/yellow
TOP	2x gray

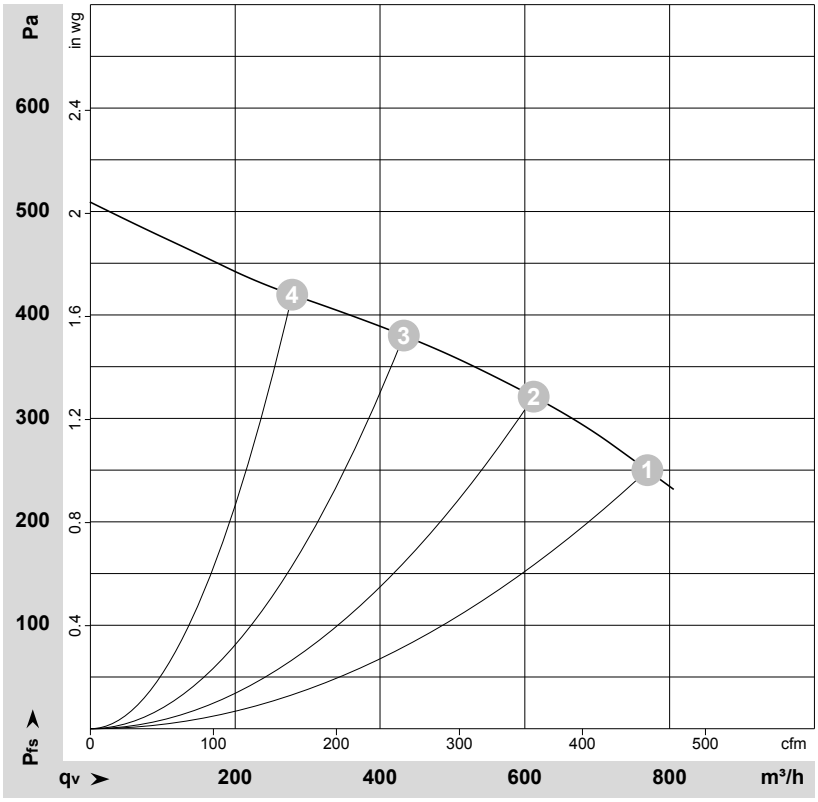
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-56535-1

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	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	in. wg
1	Δ	400	50	2050	240	0.37	770	250	455	1.00
2	Δ	400	50	2285	195	0.31	610	320	360	1.28
3	Δ	400	50	2500	152	0.24	435	380	255	1.53
4	Δ	400	50	2590	129	0.22	280	420	165	1.69

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

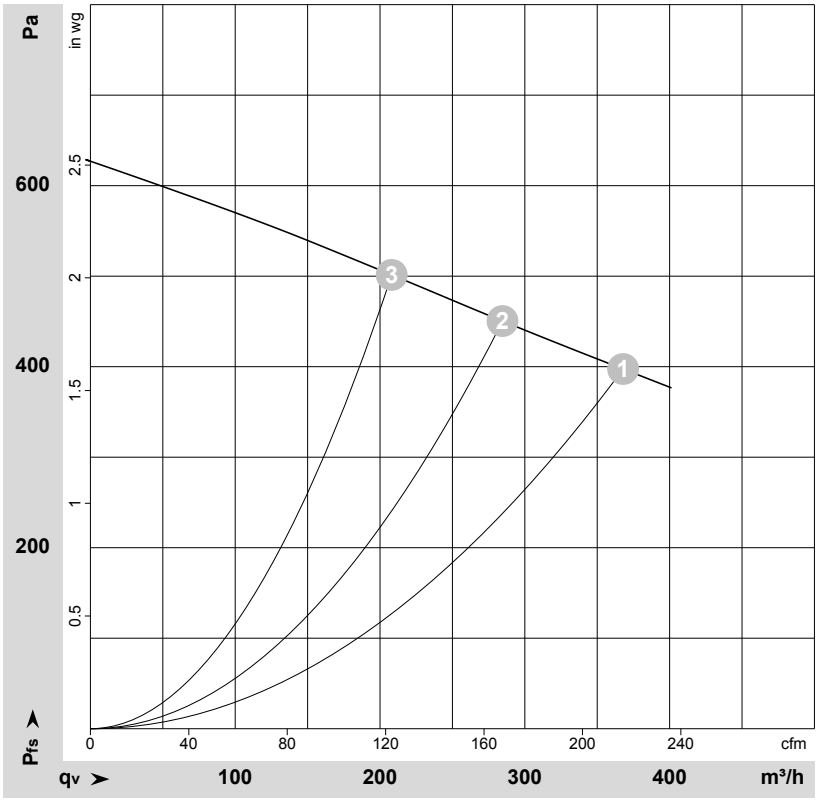
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Curves: Air performance 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-169354-1

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	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	in. wg
1	Δ	400	60	2600	200	0.31	370	400	215	1.61
2	Δ	400	60	2725	186	0.28	285	450	170	1.81
3	Δ	400	60	2895	160	0.24	210	500	120	2.01

Wired = Wiring · 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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