D4D250-CA02-02

AC centrifugal fan

forward-curved, dual-intake

with housing (large flange)

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Amtsgericht (court of registration) Stuttgart · HRA 590344

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Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	**D4D250-CA02-02**
Motor	**M4D094-LA**

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}	1200	1410
Power consumption	W	1270	1270
Current draw	A	2.3	2.2
Min. back pressure	Pa	50	350
Min. back pressure	in. wg	0.2	1.41
Min. ambient temperature	°C	-25	-25
Max. ambient temperature	°C	45	45
Starting current	A	4.6	4

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change

Data according to Commission Regulation (EU) 327/2011 (EN 17166)

		Actual	Req. 2015
01 Overall efficiency η_e	%	46.2	41
02 Measurement category		B	
03 Efficiency category		Total	
04 Efficiency grade N		54.2	49
05 Variable speed drive		No	

09 Power consumption P_e	kW	0.53
09 Air flow q_v	m^3/h	2190
09 Pressure increase p_f	Pa	411
10 Speed (rpm) n	min^{-1}	1400
11 Specific ratio*		1.00

Data obtained at optimum efficiency level.
The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

* Specific ratio = 1 + p_f / 100 000 Pa

LU-42113

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Technical description

Weight	17.2 kg
Size	250 mm
Motor size	94
Rotor surface	Cast in aluminum
Impeller material	Sheet steel, galvanized
Housing material	Sheet steel, galvanized
Motor suspension	Motor vibration-damped on both sides
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP20
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H0 - dry environment
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Any
Condensation drainage holes	None, open rotor
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
With cable	Axial
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60034-1 (2010); CE
Approval	EAC

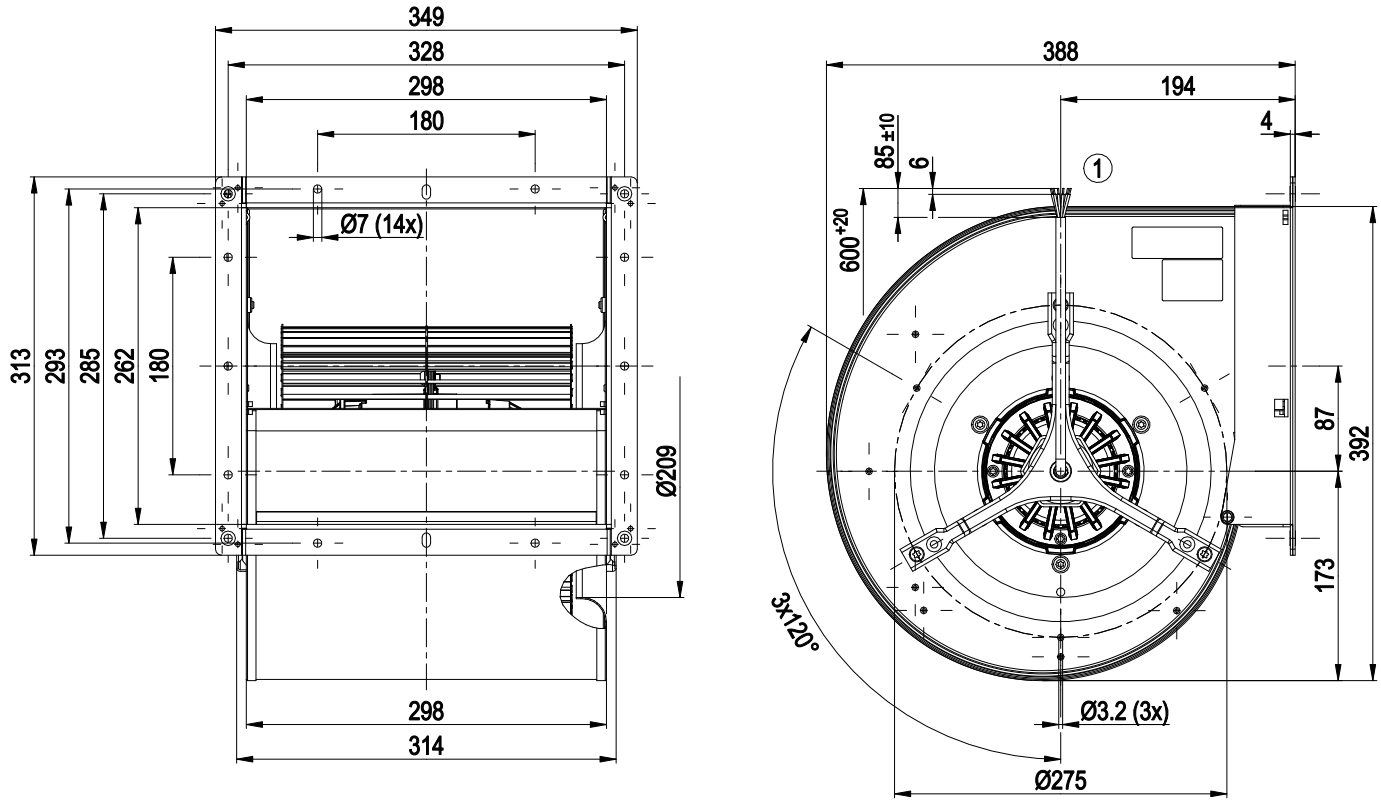
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Product drawing



1	Cable ETFE AWG18		6x splice

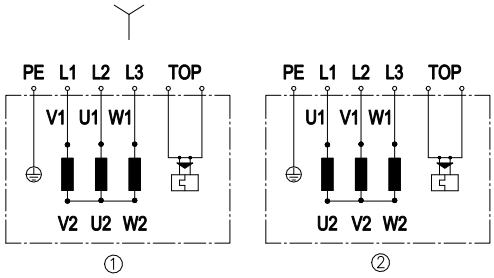
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Connection diagram



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

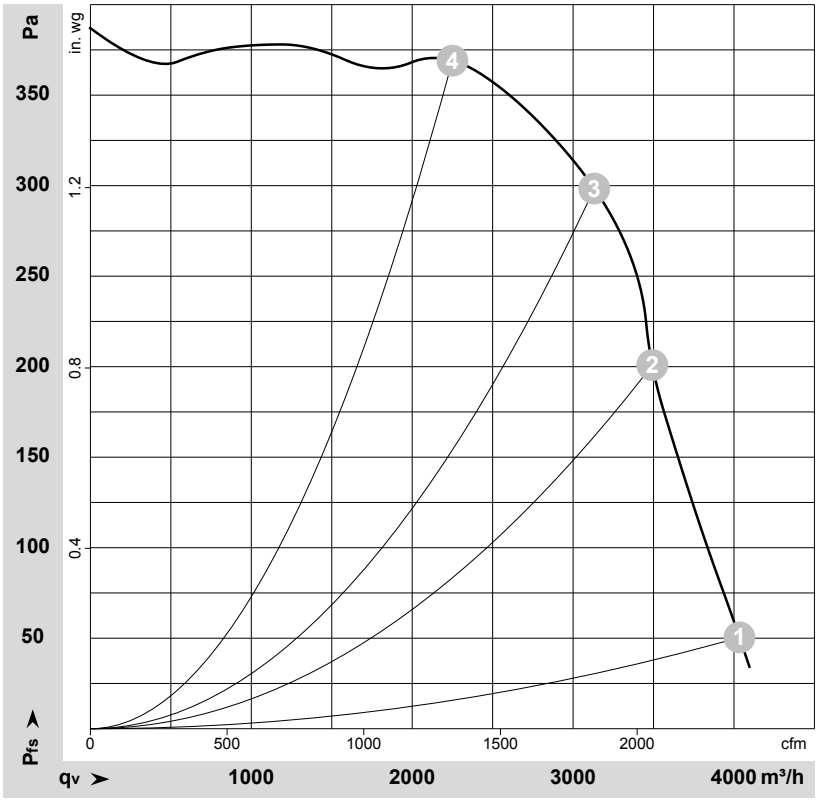
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-42113-1

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	Y	400	50	1200	1270	2.30	4035	50	2375	0.20
2	Y	400	50	1280	1007	1.87	3495	200	2055	0.80
3	Y	400	50	1330	830	1.60	3130	300	1845	1.20
4	Y	400	50	1395	558	1.25	2250	370	1325	1.49

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

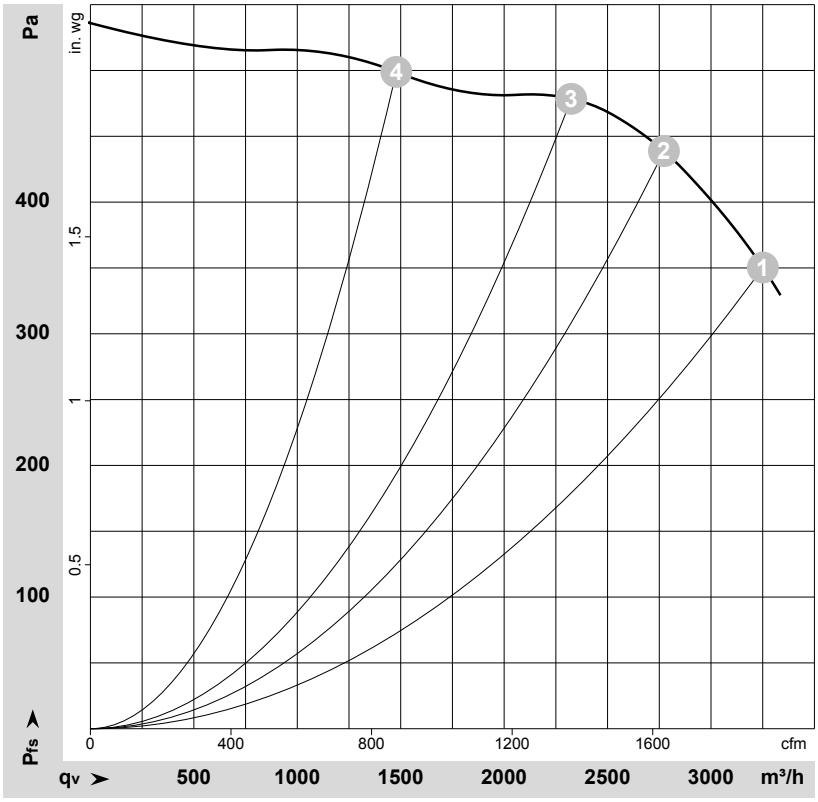
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Curves: Air performance 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-42114-1

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

	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	400	60	1410	1270	2.20	3250	350	1915	1.41
2	400	60	1530	936	1.71	2775	440	1630	1.77
3	400	60	1590	769	1.44	2325	480	1370	1.93
4	400	60	1675	509	1.07	1480	500	870	2.01

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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