D2D133-DB04-21

AC centrifugal fan

forward-curved, dual-intake

with housing (without flange)

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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**D2D133-DB04-21**
Motor	**M2D068-DF**

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}	2350	2450
Power consumption	W	210	270
Current draw	A	0.35	0.41
Min. back pressure	Pa	250	270
Min. back pressure	inH2O	1	1.08
Min. ambient temperature	°C	-25	-25
Max. ambient temperature	°C	70	35
Starting current	A	1	1

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

Data according to ErP Directive

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	32.9	32.3
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		44.6	44
05 Variable speed drive		No	

09 Power consumption P_e	kW	0.14
09 Air flow q_v	m^3/h	510
09 Pressure increase p_{fs}	Pa	345
10 Speed (rpm) n	min^{-1}	2590
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_{fs} / 100 000 Pa

LU-61146

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Technical description

Weight	4.2 kg
Fan size	133 mm
Rotor surface	Painted black
Impeller material	Sheet steel, galvanized
Housing material	Sheet steel, galvanized
Motor suspension	Motor mounted with brackets on one side
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	H0+
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
With cable	Axial
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; CE
Approval	UL 1004-1; CSA C22.2 No. 100

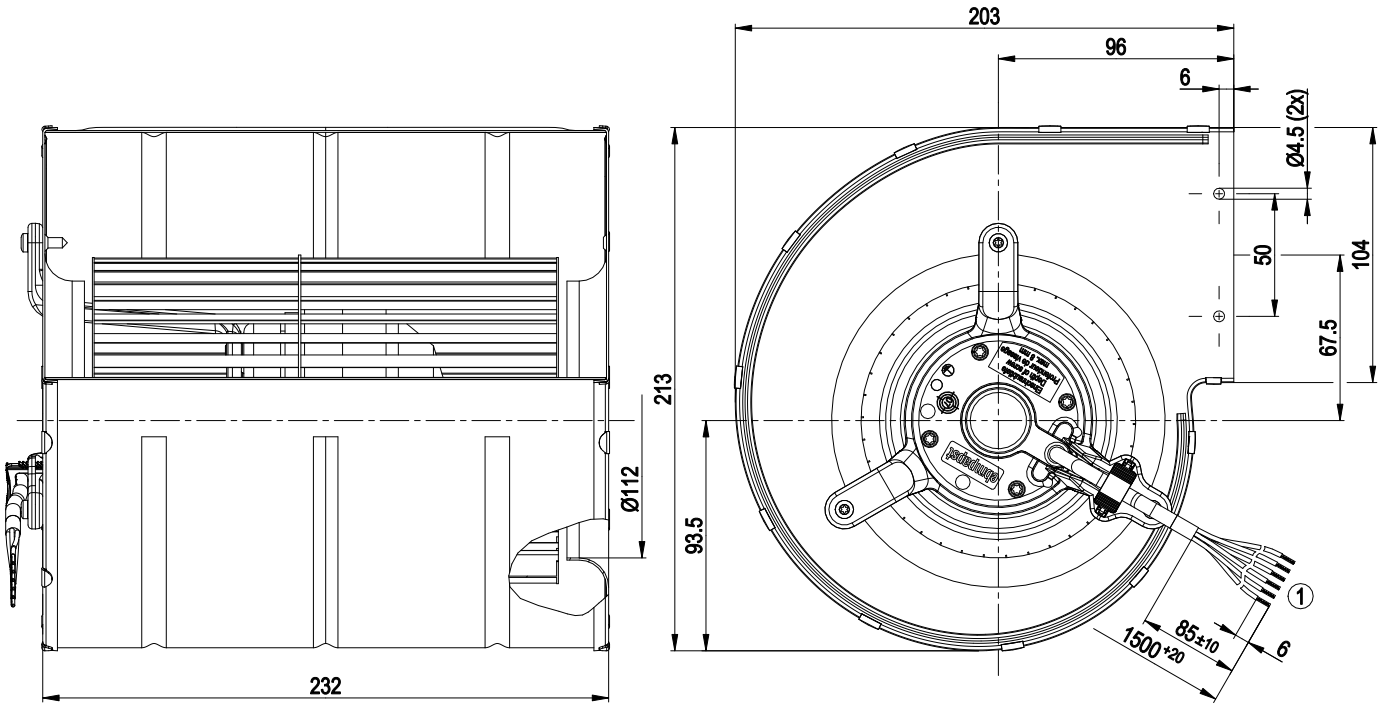
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Product drawing



1	Cable PFA AWG20 (green/yellow AWG18), 6x crimped splices

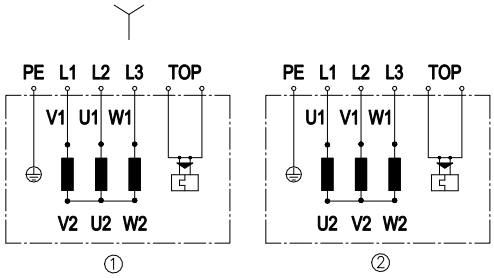
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Connection diagram



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

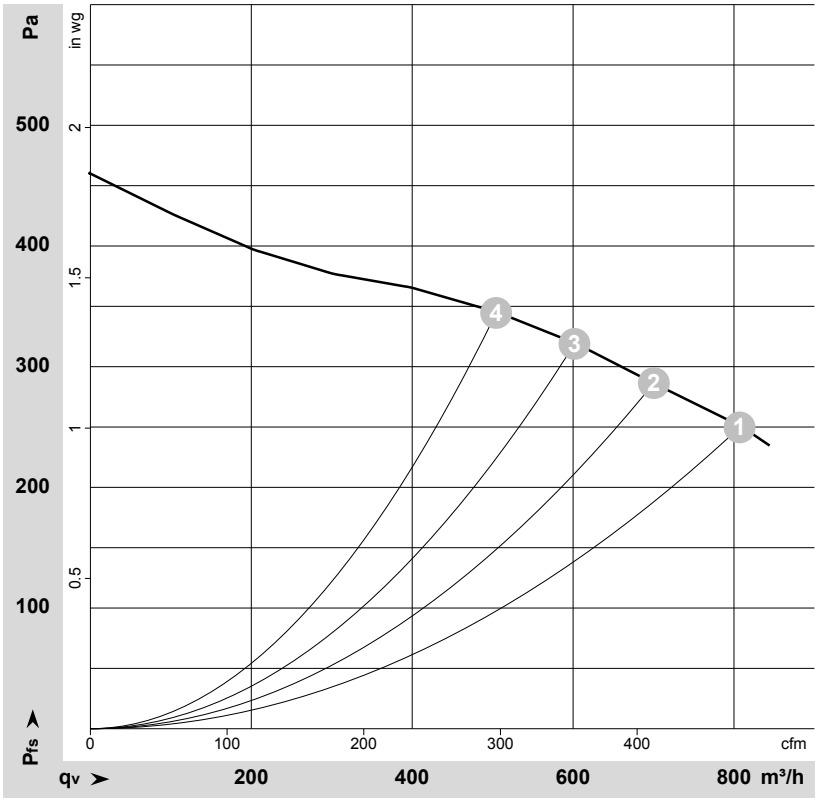
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-61146-1

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	qv	p_{fs}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	CFM	inH2O
1	400	50	2350	210	0.35	810	250	475	1.00
2	400	50	2440	186	0.32	700	286	410	1.15
3	400	50	2520	164	0.30	600	320	355	1.28
4	400	50	2590	147	0.28	505	345	295	1.39

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

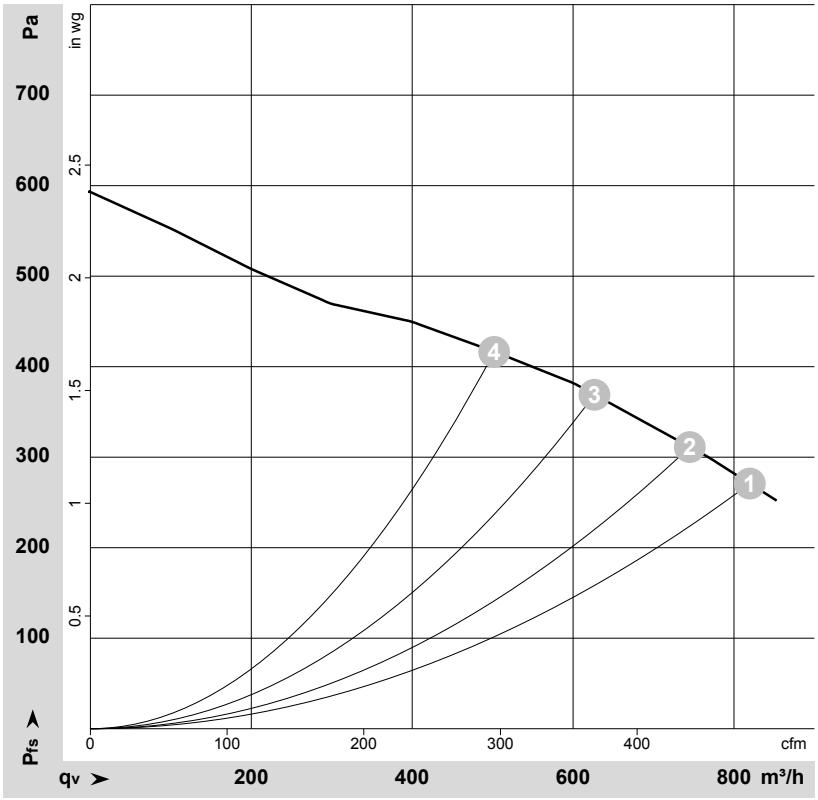
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Curves: Air performance 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-61147-1

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	qv	p_{fs}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	CFM	inH2O
1	400	60	2450	270	0.41	820	270	485	1.08
2	400	60	2535	251	0.39	745	311	440	1.25
3	400	60	2700	221	0.35	625	369	370	1.48
4	400	60	2830	196	0.31	500	417	295	1.67

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

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