D2D146-BG03-14

AC centrifugal fan

forward-curved, dual-intake

with housing (flange)

D2D146-BG03-14 ebmpapst Datasheet FansCo

sales@fansco.com

www.fansco.com

Nominal data

Type	**D2D146-BG03-14**
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
Wiring		Y	Y	Y	Y
Frequency	Hz	50	60	50	60
Method of obtaining data		ml/ce	ml/ce	ml/ce	ml/ce
Valid for approval/standard		CE	UL 507	CE	UL 507
Speed (rpm)	min^{-1}	2580	2700	2650	2960
Power consumption	W	350	500	430	560
Current draw	A	0.6	0.78	0.65	0.76
Min. back pressure	Pa	290	315	300	385
Min. back pressure	in. wg	1.16	1.26	1.2	1.55
Min. ambient temperature	°C	-25	-25	-25	-25
Max. ambient temperature	°C	60	60	60	60

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

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	35.6	33.5
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		46.1	44
05 Variable speed drive		No	

09 Power consumption P_e	kW	0.22
09 Air flow q_v	m^3/h	705
09 Pressure increase p_{fs}	Pa	416
10 Speed (rpm) n	min^{-1}	2750
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-110559

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Technical description

Weight	5.7 kg
Size	146 mm
Motor size	68
Rotor surface	Painted black
Impeller material	Sheet steel, painted black
Housing material	Sheet steel, galvanized
Guard grille material	Steel, phosphated and coated with white-aluminum plastic (RAL 9006)
Motor suspension	Motor mounted with brackets on one side
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP55
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	F5; H1+
Ambient temperature note	Determined on the basis of delta t = 90 k, measured in customer device (size 12), operating point at 400 V/50 Hz = 1050 m³/h at 290 Pa; thermal design in accordance with the following standards: 50 Hz: EN 60034, 60 Hz: UL 1004 (temperature rise in accordance with UL507 thermocouple method); ambient temp. for 60 Hz data records is only valid without speed control, i.e. at maximum speed
Max. permitted ambient temp. for motor (transport/storage)	+ 80 °C
Min. permitted ambient temp. for motor (transport/storage)	- 40 °C
Installation position	Shaft horizontal
Condensation drainage holes	None
Mode	S1
Motor bearing	Ball bearing
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 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; EN 60204-1; CE
Approval	UL 1004-1; CSA C22.2 No. 100; CCC

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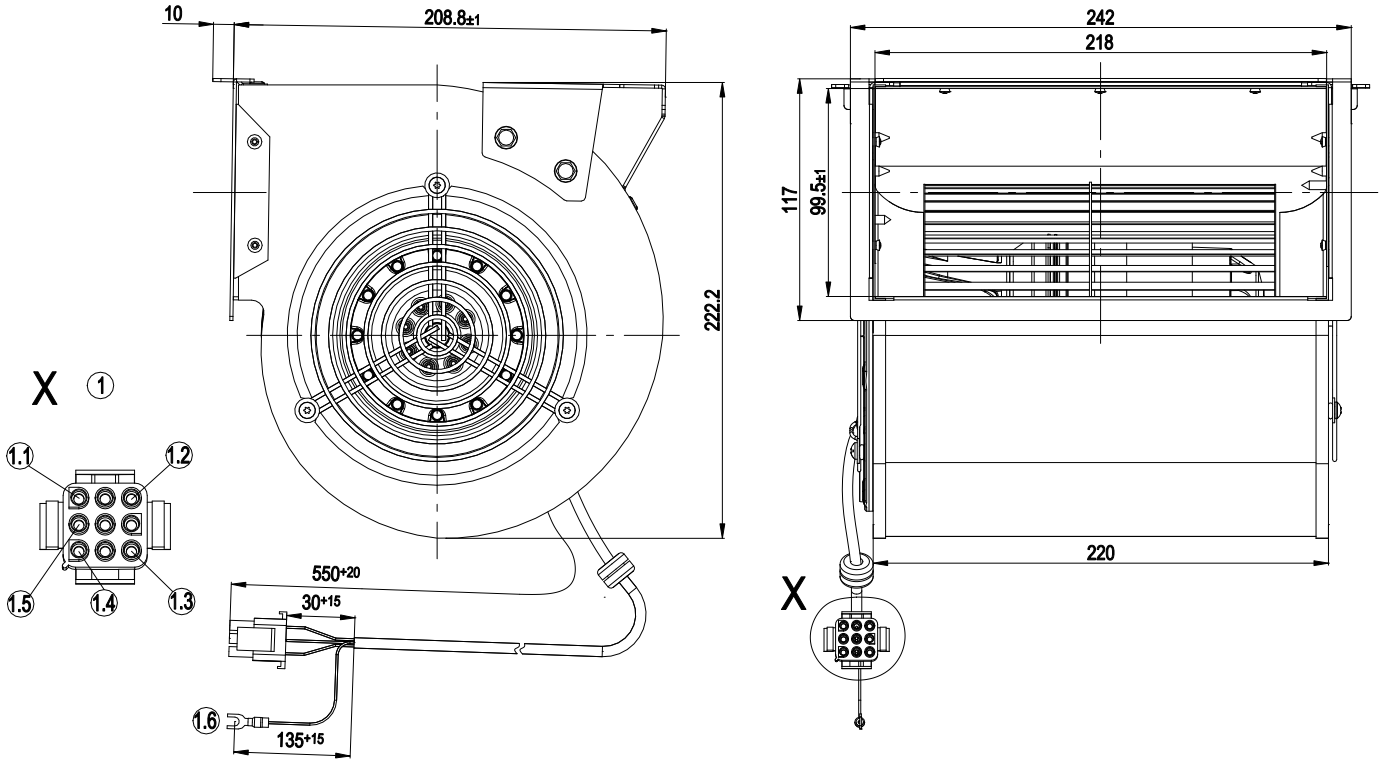
Product drawing



1	Cable PFA AWG20, 9-pole connector housing tyco 350720-1, 5x plug pin tyco 926886-1
1.1	black
1.2	brown
1.3	blue
1.4	gray
1.5	gray
1.6	PE

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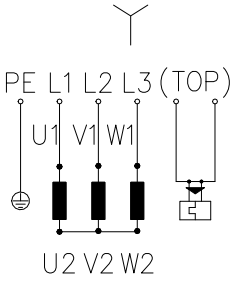
Connection diagram



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

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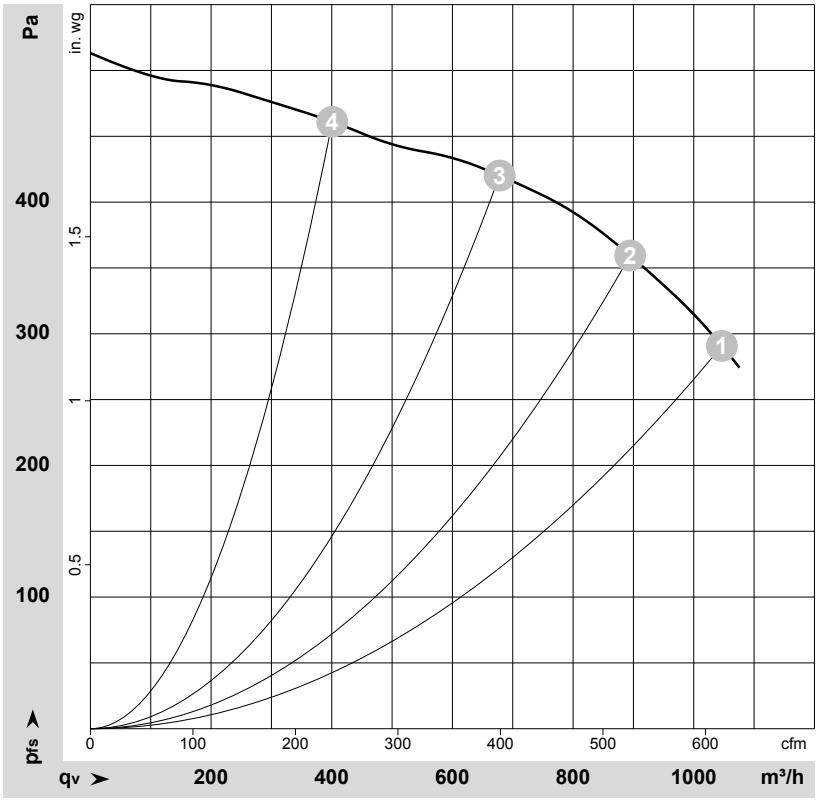
Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-110559-1

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	2580	350	0.60	1045	290	615	1.16
2	Y	400	50	2665	287	0.53	895	360	525	1.45
3	Y	400	50	2755	224	0.46	680	420	400	1.69
4	Y	400	50	2830	168	0.41	400	460	235	1.85

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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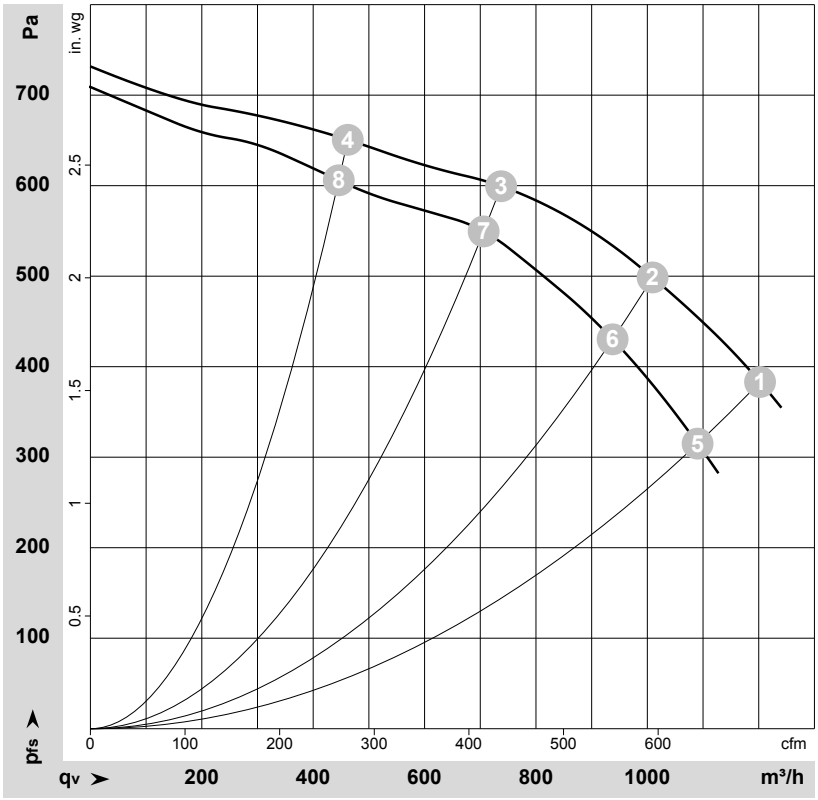
Curves: Air performance 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-110562-1
Measurement: LU-110561-1

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	480	60	2960	560	0.76	1200	385	705	1.55
2	Y	480	60	3100	464	0.64	1010	499	595	2.00
3	Y	480	60	3250	351	0.52	735	600	435	2.41
4	Y	480	60	3360	262	0.44	460	650	270	2.61
5	Y	400	60	2700	500	0.78	1090	315	640	1.26
6	Y	400	60	2880	420	0.66	940	430	550	1.73
7	Y	400	60	3110	327	0.53	705	553	415	2.22
8	Y	400	60	3225	254	0.43	445	606	265	2.43

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