D2D146-BG03-14

AC centrifugal fan

forward curved, dual inlet

with housing (flange)

ebm-papst Mulfingen GmbH & Co. KG
Bachmühle 2 · D-74673 Mulfingen
Phone +49 7938 81-0
Fax +49 7938 81-110
info1@de.ebmpapst.com
www.ebmpapst.com

Limited partnership · Headquarters Mulfingen
County court Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
County court Stuttgart · HRB 590142

ErP2015 EXCEEDS THE NORM

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
Connection		Y	Y	Y	Y
Frequency	Hz	50	60	50	60
Type of data definition		ml	ml	ml	ml
Valid for approval / standard		CE	UL 507	CE	UL 507
Speed	min^{-1}	2580	2700	2650	2960
Power input	W	350	500	430	560
Current draw	A	0.6	0.78	0.65	0.76
Min. back pressure	Pa	290	315	300	385
Max. ambient temperature	°C	60	60	60	60

ml = max. load · me = max. efficiency · fa = running at free air · cs = customer specs · cu = customer unit
Subject to alterations

Data according to ErP directive

Installation category	A
Efficiency category	Static
Variable speed drive	No
Specific ratio*	1.00

* Specific ratio = 1 + p_{fs} / 100 000 Pa

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}		35.6	26.5	33.5
Efficiency grade N		46.1	37	44
Power input P_e	kW	0.22		
Air flow q_v	m^3/h	705		
Pressure increase p_{fs}	Pa	416		
Speed n	min^{-1}	2750		

Data established at point of optimum efficiency

AC centrifugal fan

forward curved, dual inlet

with housing (flange)

Technical features

Mass	5.7 kg
Size	146 mm
Surface of rotor	Coated in black
Material of impeller	Sheet steel, coated in black
Housing material	Sheet steel, hot-galvanised
Material of guard grille	Steel, phosphated and plastic-coated in white aluminium (RAL 9006)
Motor suspension	Motor mounted via brackets on one side
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	IP 55
Insulation class	"F"
Humidity class	F5
Note ambient temperature	Measured based on delta t = 90 k, measured in customer's end device (size 12), operating point at 400 V / 50 Hz = 1050 m³/h at 290 Pa; thermal configuration according to the following standards: 50 Hz: EN 60034, 60 Hz : UL 1004 (heating according to UL507-thermocouple method); ambient temp. at 60 Hz; data set is valid without closed-loop speed control only, i.e. at maximum speed
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Shaft horizontal
Condensate discharge holes	None
Operation mode	S1
Motor bearing	Ball bearing
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) brought out
Cable exit	Axial
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60335-1; CE
Approval	CCC; UL 1004-1; CSA C22.2 Nr.100

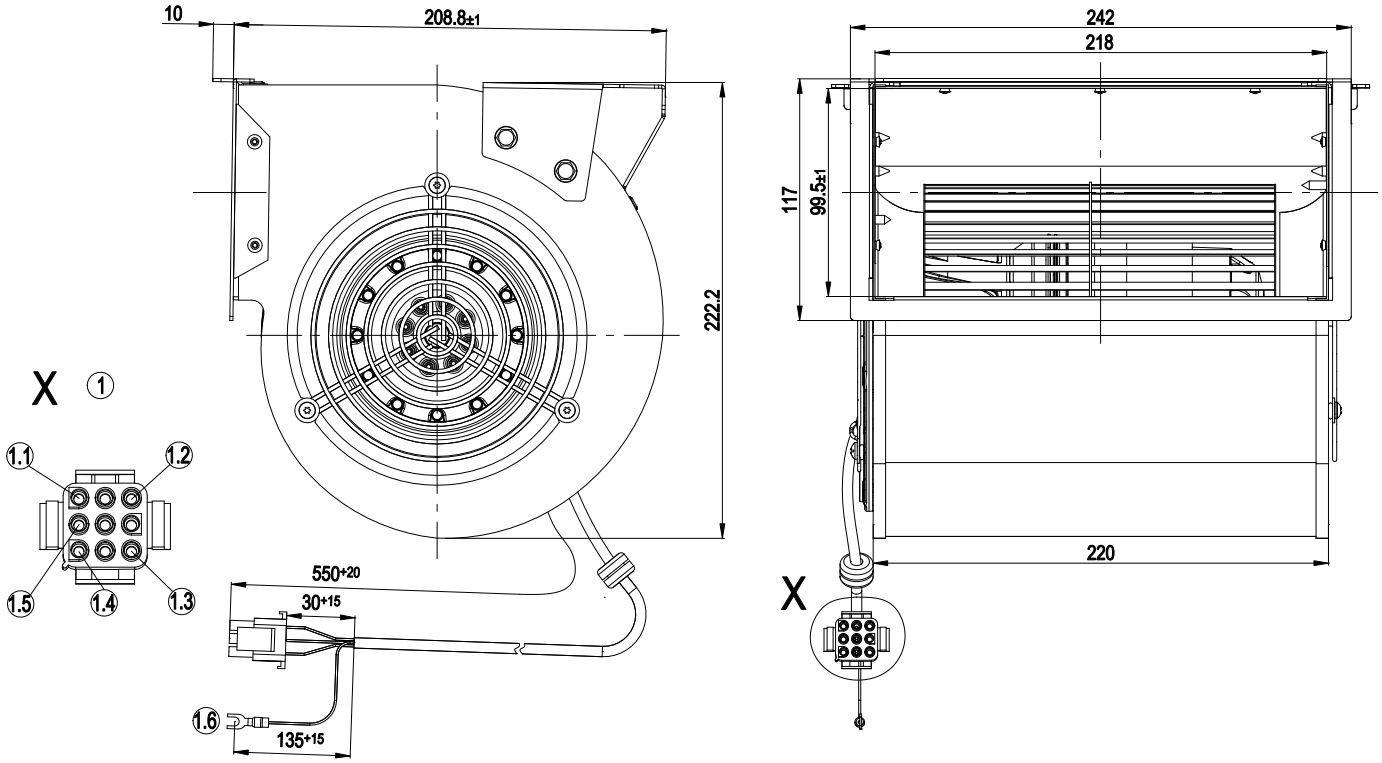
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

AC centrifugal fan

forward curved, dual inlet

with housing (flange)

Product drawing



1	Connector housing AMP Universal Mate-N-Lok 350720-1, pluggable with 350782-1
1.1	black
1.2	brown
1.3	blue
1.4	grey
1.5	grey
1.6	PE

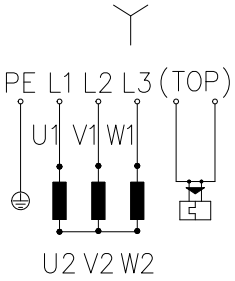
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

AC centrifugal fan

forward curved, dual inlet

with housing (flange)

Connection screen



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

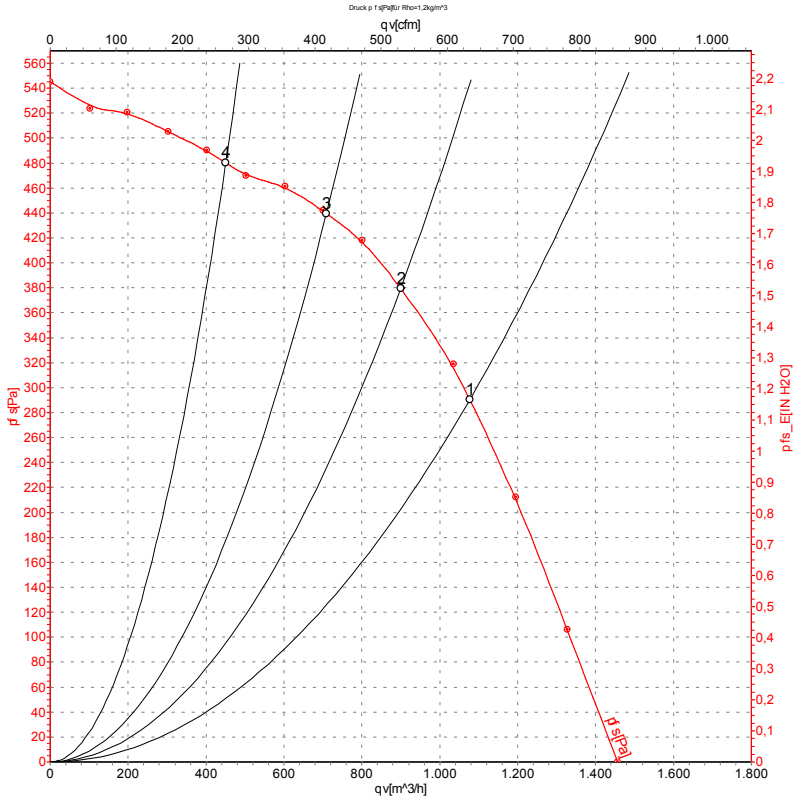
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

AC centrifugal fan

forward curved, dual inlet

with housing (flange)

Charts: Air flow 50 Hz



Measurement: LU-110559

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: LwA measured as per ISO 13347 / LpA 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

	Conn.	U	f	n	P_e	I	qv	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa
1	Y	400	50	2580	350	0.60	1075	290
2	Y	400	50	2665	288	0.53	900	380
3	Y	400	50	2745	230	0.47	710	440
4	Y	400	50	2815	178	0.42	450	480

Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

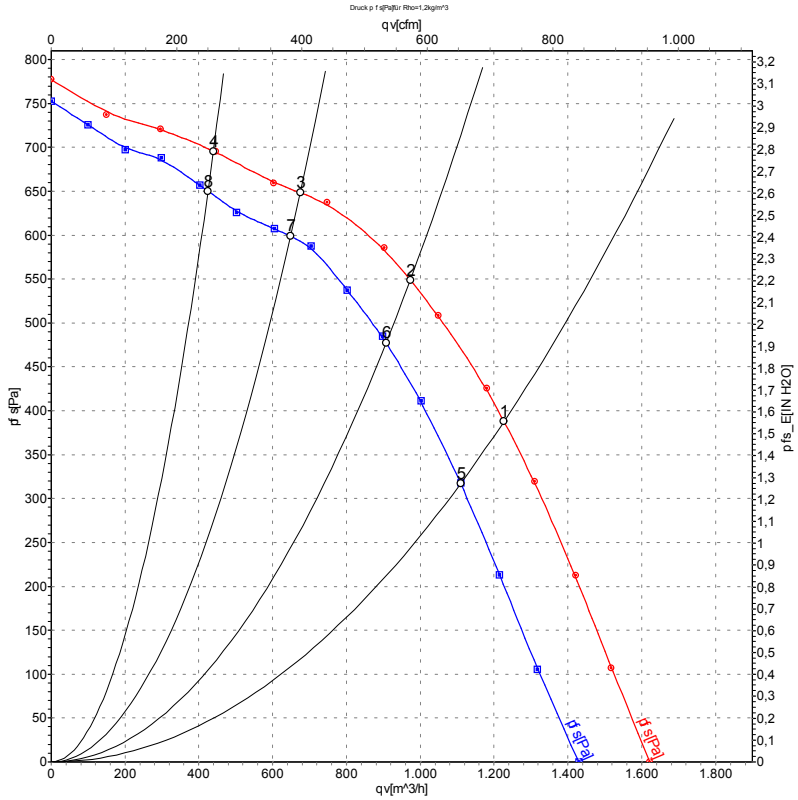
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

AC centrifugal fan

forward curved, dual inlet

with housing (flange)

Charts: Air flow 60 Hz



Measurement: LU-110562
Measurement: LU-110561

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: LwA measured as per ISO 13347 / LpA 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

	Conn.	U	f	n	P_e	I	qv	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa
1	Y	480	60	2960	560	0.76	1225	385
2	Y	480	60	3120	447	0.63	975	550
3	Y	480	60	3275	330	0.50	675	650
4	Y	480	60	3365	255	0.43	440	700
5	Y	400	60	2700	500	0.78	1110	315
6	Y	400	60	2915	404	0.64	905	478
7	Y	400	60	3140	311	0.51	650	599
8	Y	400	60	3240	247	0.42	425	650

Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com