W6D990-CX01-80

AC axial fan - HyBlade

sickled blades (S series)

In-line duct fan, Transformator fan

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

Nominal data

Type	**W6D990-CX01-80**		
Motor	**M6D138-OA**		
Phase		3~	3~
Nominal voltage	VAC	230	400
Connection		Δ	Y
Frequency	Hz	50	50
Type of data definition		fa	fa
Valid for approval / standard		CE	CE
Speed (rpm)	min^{-1}	940	940
Power input	W	1940	1940
Current draw	A	7.8	4.5
Max. back pressure	Pa	145	145
Min. ambient temperature	°C	-40	-40
Max. ambient temperature	°C	60	60
Starting current	A	35	20

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

Data in accordance with ecodesign regulation EU 327/2011 (EN 17166)

		Actual	Request 2015
01 Overall efficiency η_{es}	%	38.7	36.4
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		42.3	40
05 Variable speed drive		No	

09 Power input P_e	kW	2.67
09 Air flow q_v	m^3/h	22320
09 Pressure increase p_{fs}	Pa	168
10 Speed (rpm) n	min^{-1}	915
11 Specific ratio*		1.00

Data definition with optimum efficiency.
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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

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Technical features

Mass	58 kg
Size	990 mm
Motor size	138
Surface of rotor	Coated in black
Material of blades	Aluminium sheet insert (coated in black), sprayed with PP plastic
Material of wall ring	Sheet steel, galvanised and plastic-coated in white aluminium (RAL 9006)
Material of guard grille	Steel, coated in white aluminium plastic (RAL 9006)
Number of blades	5
Blade angle	-5°
Direction of air flow	A
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	IP55
Insulation class	"F"
Humidity (F) / environmental protection class (H)	H2+T
Note ambient temperature	Occasional start-up between -40 °C and -25 °C is permissible. For continuous operation at ambient temperatures below -25 °C (e.g. refrigeration applications), a fan version with special low-temperature bearings must be used.
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensation drainage holes	On the stator side
Operation mode	S1
Motor bearing	Ball bearing
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Electrical connection	Terminal box
Motor protection	Thermal overload protector (TOP) brought out, basic insulation
Cable exit	Axial
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60034-1 (2010); CE
Approval	CSA C22.2 no. 100; UL 1004-1

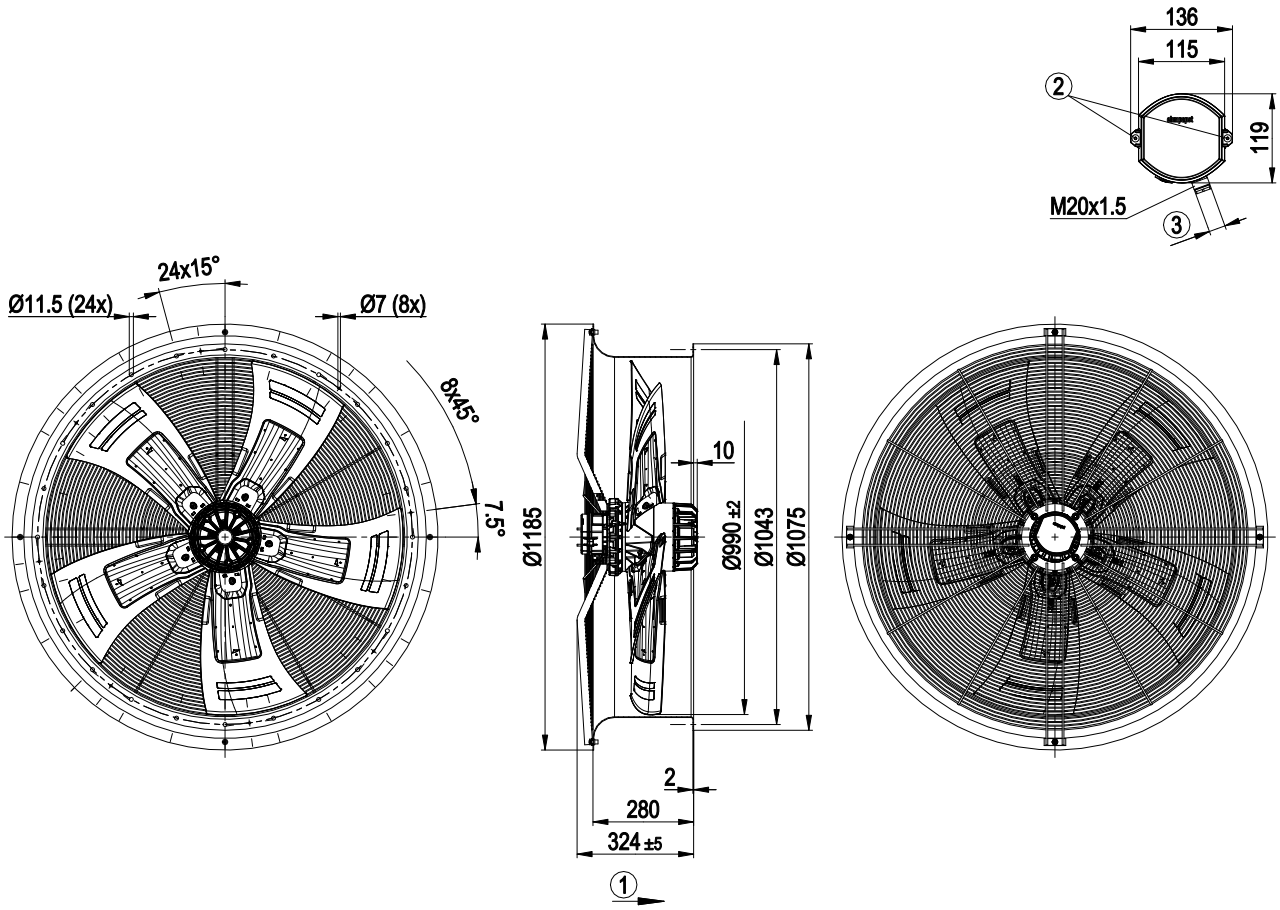
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Product drawing



1	Direction of air flow "A"
2	Tightening torque 2.5 Nm ± 0.4 Nm
3	Cable diameter min. 10 mm, max. 12 mm, tightening torque 4±0.6 Nm

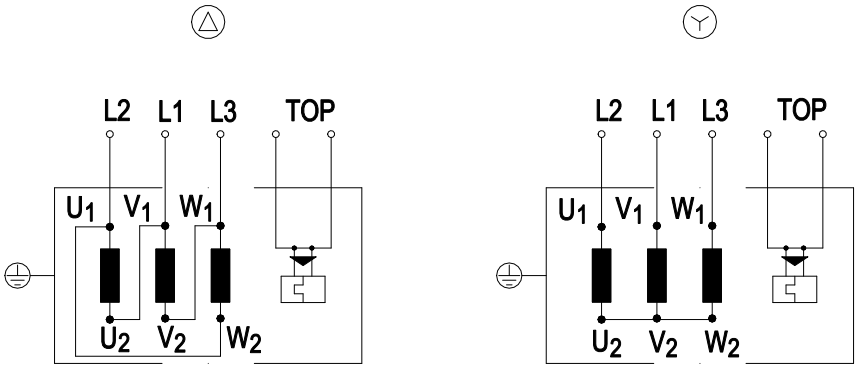
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Connection screen



Change direction of rotation by reversing two phases

Δ	Delta connection	Y	Star connection	L2	= U1 = black
L1	= V1 = blue	L3	= W1 = brown	W2	yellow
U2	green	V2	white	TOP	2x grey
PE	green/yellow				

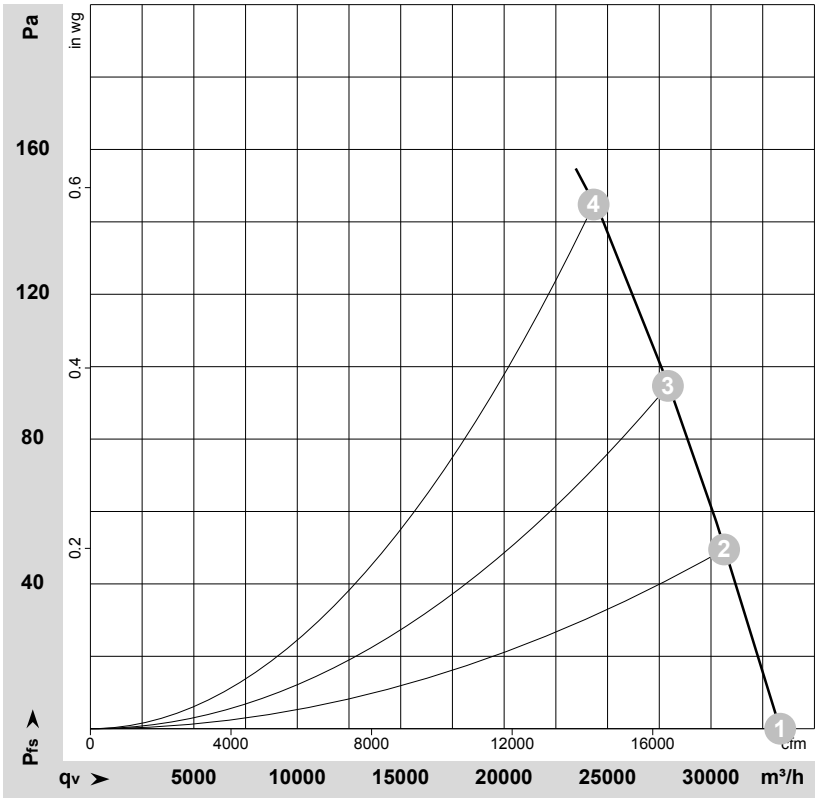
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Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-175567-1

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	LpA_{in}	LwA_{in}	LwA_{out}	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
1	Y	400	50	940	1940	4.50	80	86	87	33345	0	19625	0.00
2	Y	400	50	935	2195	4.82	79	85	86	30635	50	18030	0.20
3	Y	400	50	925	2417	5.09	79	84	85	27915	95	16430	0.38
4	Y	400	50	920	2596	5.33	82	87	87	24325	145	14320	0.58

Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed (rpm) · P_e = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side LwA_{out} = Sound power level outlet side · q_V = Air flow · p_{fs} = Pressure increase

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