W8D990-CE05-80

AC axial fan - HyBlade

sickled blades (S series)

with full round nozzle, Transformator fan

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Nominal data

Type	**W8D990-CE05-80**
Motor	**M8D138-LA**

Phase		3~	3~	3~	3~
Nominal voltage	VAC	230	277	400	480
Connection		Δ	Y	Y	Y
Frequency	Hz	50	60	50	60
Type of data definition		fa	fa	fa	fa
Valid for approval / standard		CE	CE	CE	CE
Speed (rpm)	min^{-1}	670	780	670	780
Power input	W	830	1330	830	1330
Current draw	A	3.8	4.5	2.2	2.6
Max. back pressure	Pa	90	55	90	55
Min. ambient temperature	°C	-40	-40	-40	-40
Max. ambient temperature	°C	70	60	70	60
Starting current	A	6.4	7.1	6.4	7.1

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

		Actual	Request 2015
01 Overall efficiency η_{es}	%	37.2	33.9
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		43.3	40
05 Variable speed drive		No	

09 Power input P_e	kW	1.07
09 Air flow q_v	m^3/h	16275
09 Pressure increase p_{fs}	Pa	89
10 Speed (rpm) n	min^{-1}	645
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

LU-177122

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Technical features

Mass	58 kg
Size	990 mm
Surface of rotor	Coated in black
Material of terminal box	Die-cast aluminium, 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	IP 55
Insulation class	"F"
Humidity (F)/environmental protection class (H)	H2+
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 top; rotor on bottom on request
Condensate discharge 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 leads	Via 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); EN 61800-5-1; CE
Approval	CSA C22.2 No.100; UL 1004-1; EAC

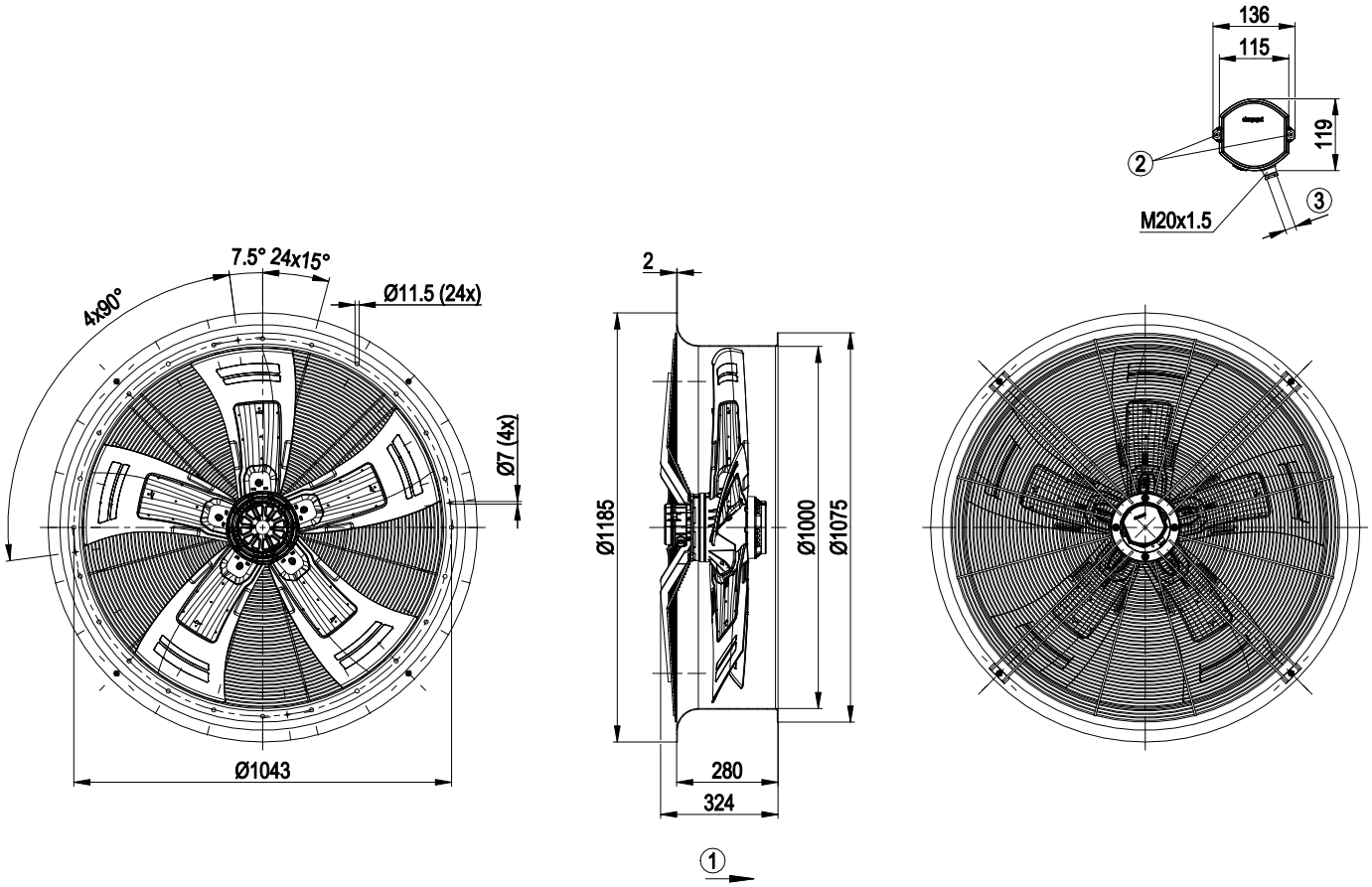
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Product drawing



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

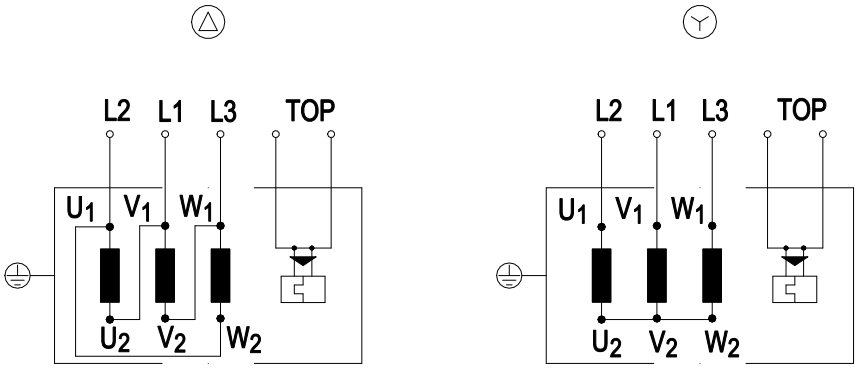
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Connection screen



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				

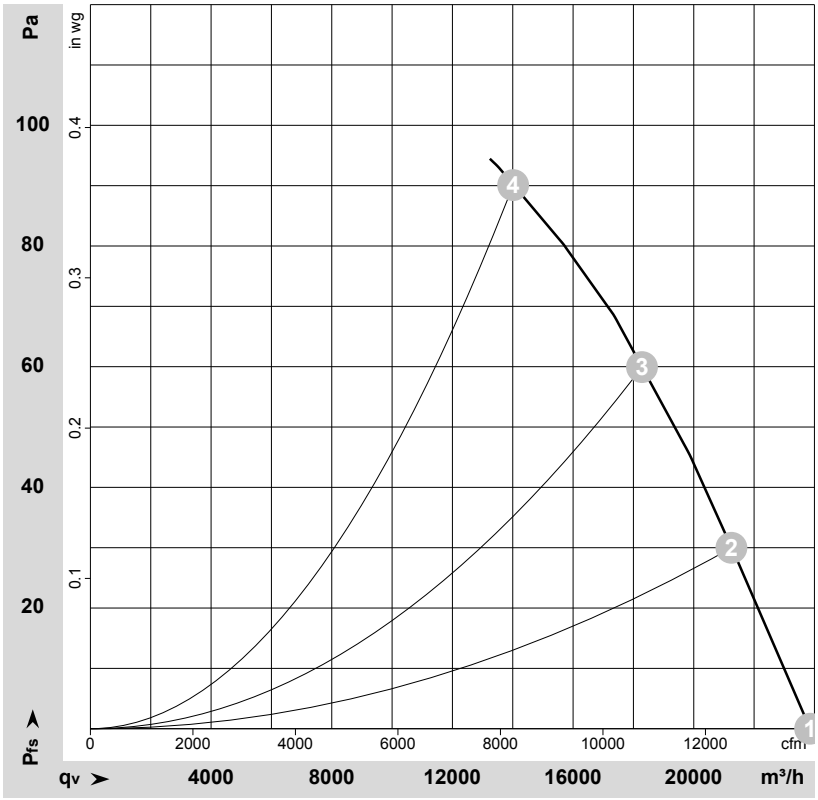
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Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-174099-1

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	inH2O
1	Y	400	50	670	830	2.20	69	76	76	23860	0	14045	0.00
2	Y	400	50	655	942	2.32	68	75	74	21250	30	12505	0.12
3	Y	400	50	645	1027	2.45	70	75	75	18285	60	10760	0.24
4	Y	400	50	635	1105	2.56	75	80	80	14015	90	8250	0.36

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

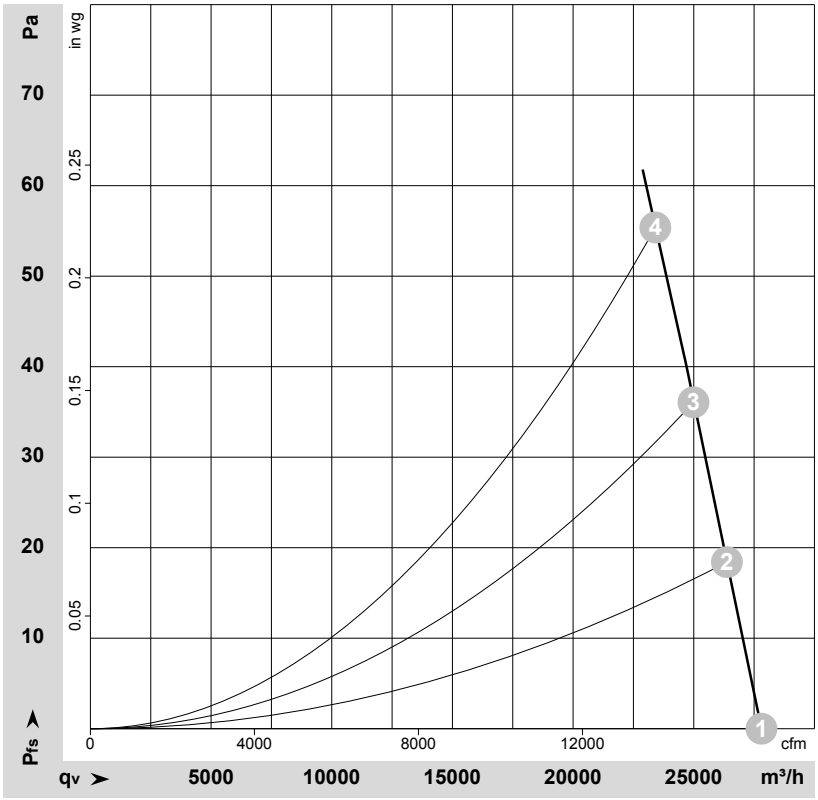
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Charts: Air flow 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-174097-1

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	inH2O
1	Y	480	60	780	1330	2.60	74	81	80	27800	0	16360	0.00
2	Y	480	60	775	1399	2.69	73	80	79	26375	18	15525	0.07
3	Y	480	60	765	1473	2.79	72	79	79	24985	36	14705	0.14
4	Y	480	60	755	1544	2.88	72	78	78	23410	55	13775	0.22

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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