W4D400-GN14-10

AC axial fan

sickled blades (S series)

with full square nozzle

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Nominal data

Type	**W4D400-GN14-10**
Motor	**M4D094-FA**

Phase		3~	3~	3~	3~
Nominal voltage	VAC	400	400	400	400
Connection		Δ	Y	Δ	Y
Frequency	Hz	50	50	60	60
Type of data definition		ml	ml	ml	ml
Valid for approval / standard		CE	CE	CE	CE
Speed (rpm)	min^{-1}	1395	1200	1585	1185
Power input	W	330	240	470	310
Current draw	A	0.8	0.41	0.86	0.52
Max. back pressure	Pa	110	80	135	75
Min. ambient temperature	°C	-40	-40	-40	-40
Max. ambient temperature	°C	65	65	65	65
Starting current	A	3.3	1.1	3.1	1.05

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}	%	30.5	30.5
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		40	40
05 Variable speed drive		No	

09 Power input P_e	kW	0.31
09 Air flow q_v	m^3/h	3205
09 Pressure increase p_{fs}	Pa	104
10 Speed (rpm) n	min^{-1}	1400
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	10.5 kg
Size	400 mm
Surface of rotor	Coated in black
Material of terminal box	ABS plastic, black
Material of blades	Press-fitted sheet steel blank, sprayed with PP plastic
Material of mounting ring	Steel, coated in black plastic (RAL 9005)
Material of wall ring	Sheet steel, galvanised and coated in black plastic (RAL 9005)
Number of blades	5
Direction of air flow	"V"
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"F"
Humidity (F)/environmental protection class (H)	F4-1
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
Condensate discharge holes	Rotor-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
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60034-1 (2010); CE
Approval	EAC

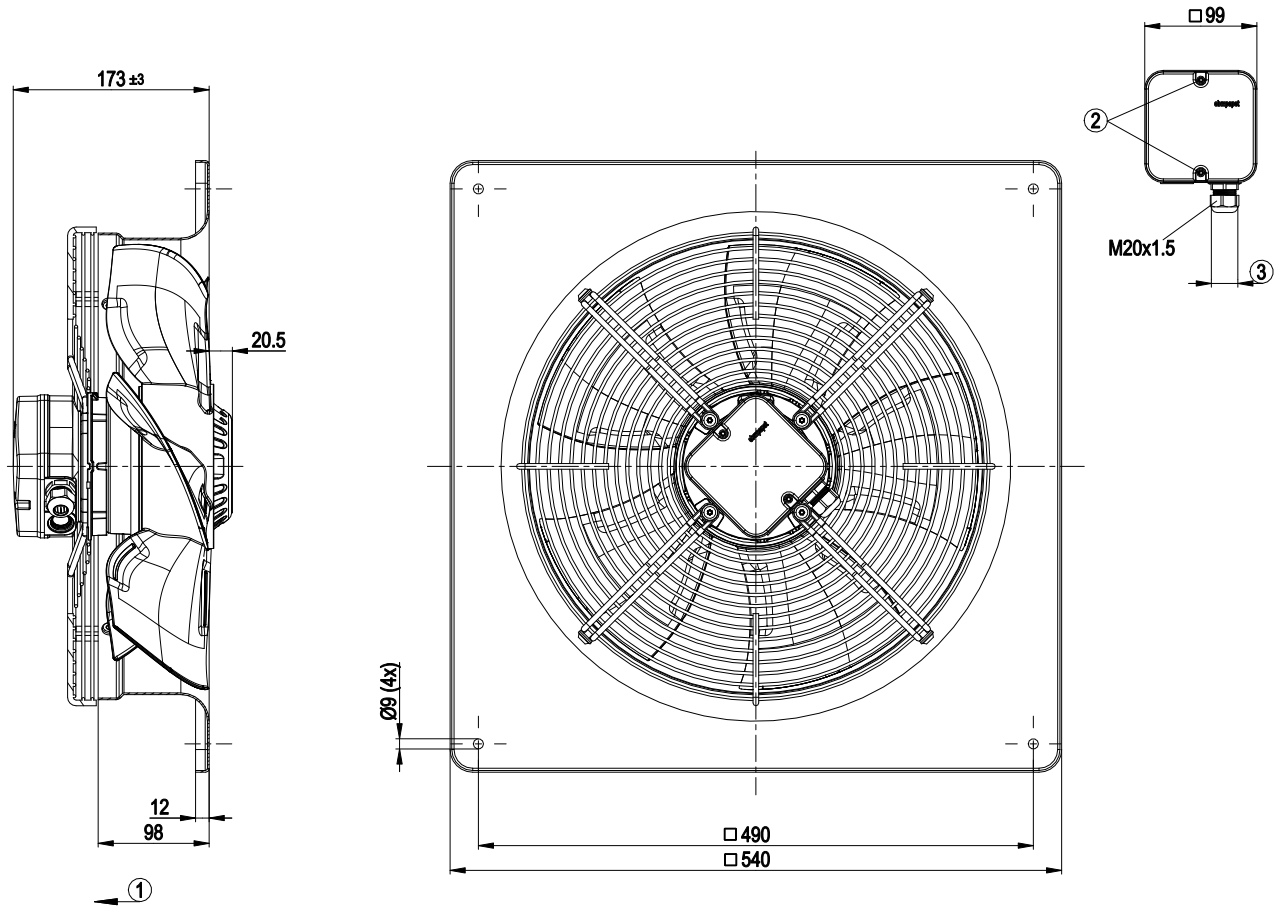
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Product drawing



1	Direction of air flow "V"
2	Tightening torque 0.8±0.15 Nm
3	Cable diameter min. 6 mm, max. 12 mm, tightening torque 2±0.15 Nm

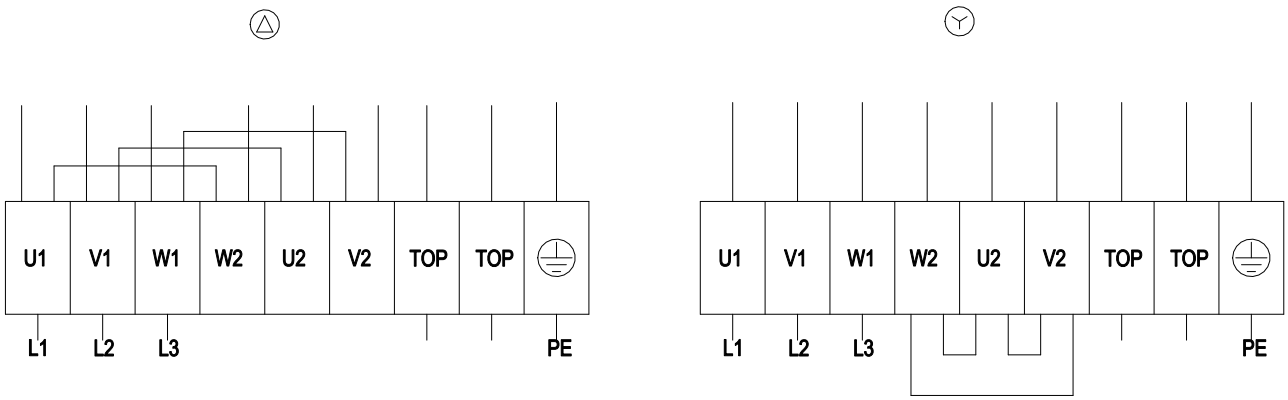
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Connection screen



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

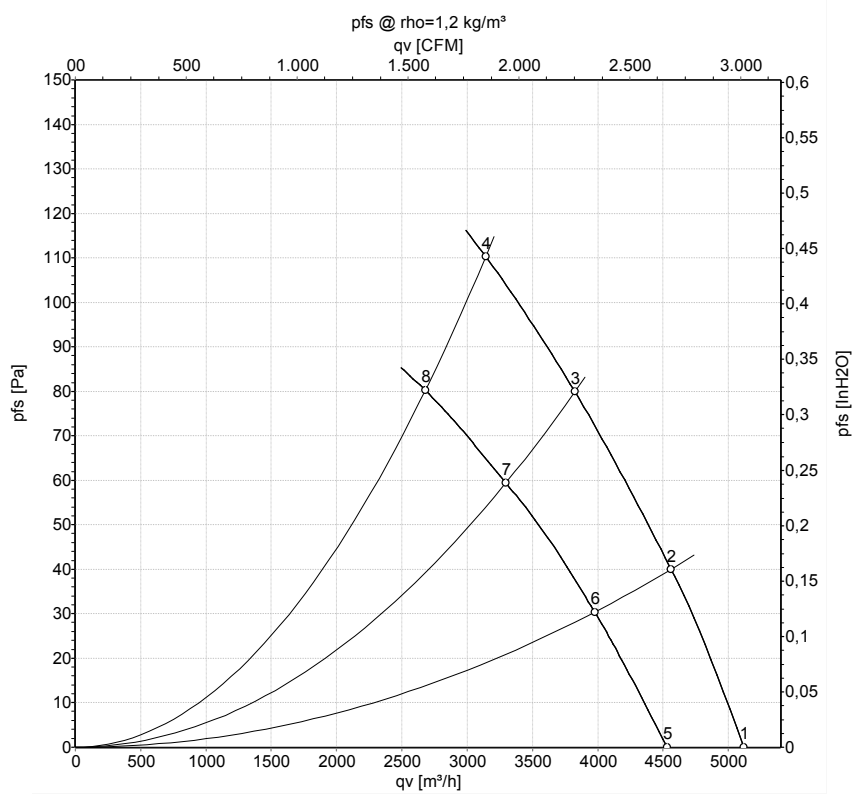
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Charts: Air flow 50 Hz



Measurement: LU-161465-1
Measurement: LU-161540-1

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	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	inH2O
1	Δ	400	50	1420	272	0.73	5120	0	3010	0.00
2	Δ	400	50	1415	290	0.74	4560	40	2685	0.16
3	Δ	400	50	1405	305	0.75	3825	80	2250	0.32
4	Δ	400	50	1395	330	0.80	3145	110	1850	0.44
5	Y	400	50	1255	204	0.34	4530	0	2665	0.00
6	Y	400	50	1230	219	0.36	3975	31	2340	0.12
7	Y	400	50	1215	229	0.38	3300	59	1940	0.24
8	Y	400	50	1200	240	0.41	2680	80	1575	0.32

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

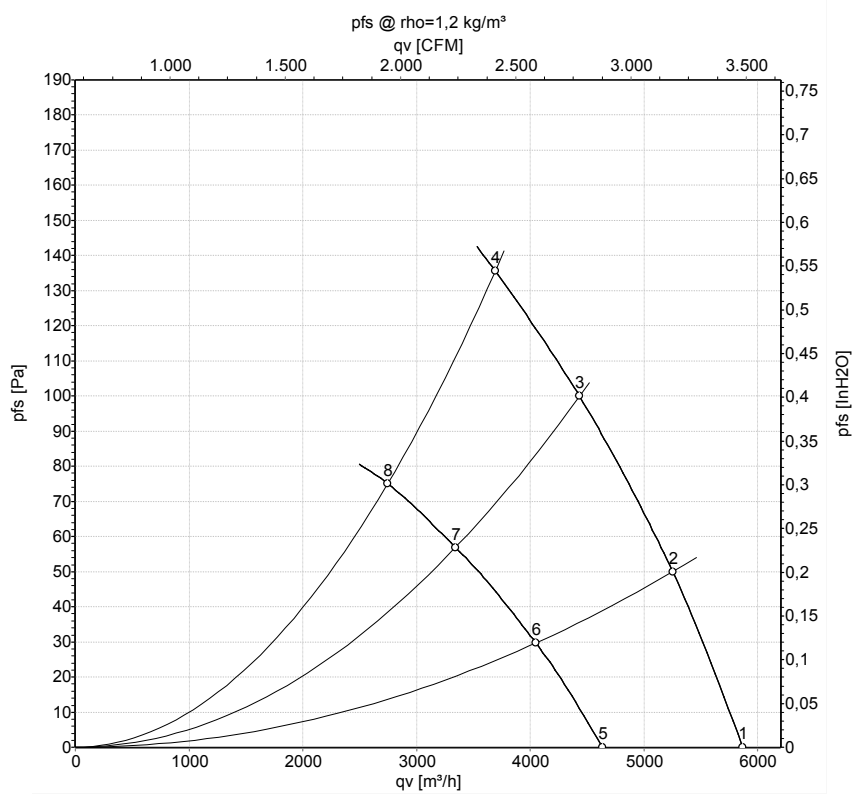
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Charts: Air flow 60 Hz



Measurement: LU-161538-1
Measurement: LU-161541-1

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	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	inH2O
1	Δ	400	60	1630	396	0.74	5870	0	3455	0.00
2	Δ	400	60	1615	427	0.78	5255	50	3090	0.20
3	Δ	400	60	1600	447	0.80	4430	100	2610	0.40
4	Δ	400	60	1585	470	0.86	3690	135	2175	0.54
5	Y	400	60	1280	289	0.48	4635	0	2725	0.00
6	Y	400	60	1240	300	0.50	4050	30	2385	0.12
7	Y	400	60	1210	308	0.51	3345	57	1970	0.23
8	Y	400	60	1185	310	0.52	2745	75	1615	0.30

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

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