

AC axial fan

sickled blades (S series)

with full square nozzle

W4D630-DO01-02 ebmpapst Datasheet

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Nominal data

Type	W4D630-DO01-02						
Motor	M4D138-HF						
Phase		3~	3~	3~	3~	3~	3~
Nominal voltage	VAC	400	400	400	400	480	480
Connection		Δ	Y	Δ	Y	Δ	Y
Frequency	Hz	50	50	60	60	60	60
Type of data definition		ml	ml	ml	ml	ml	ml
Valid for approval / standard		CE	CE	CE	CE	CE	CE
Speed	min ⁻¹	1360	1120	1560	1165	1630	1300
Power input	W	1620	1120	2050	1300	2240	1600
Current draw	A	3.02	1.87	3.63	2.32	3.4	2.3
Max. back pressure	Pa	230	150	135	75	150	95
Max. ambient temperature	°C	65	65	55	55	55	55
Starting current	A	14	4.5	13	4.0	16	5.3

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 2013	Request 2015
Installation category	A			
Efficiency category	Static			
Variable speed drive	No			
Specific ratio*	1.00			
Overall efficiency η_{es}		36.2	30.9	34.9
Efficiency grade N		41.3	36	40
Power input P_e	kW	1.54		
Air flow q_v	m ³ /h	9700		
Pressure increase p_{fs}	Pa	208		
Speed n	min ⁻¹	1365		

Data established at point of optimum efficiency

* Specific ratio = $1 + p_b / 100\,000\text{ Pa}$ 

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Technical features

Mass	34 kg
Size	630 mm
Surface of rotor	Cast in aluminium
Material of terminal box	ABS plastic, black
Material of blades	Die-cast aluminium
Material of wall ring	Sheet steel, pre-galvanised and coated in black plastic (RAL 9005)
Material of guard grille	Steel, coated in black plastic (RAL9005)
Number of blades	5
Blade angle	-10°
Direction of air flow	"A"
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"F"
Humidity class	F3-1
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Any
Condensate discharge holes	On rotor and stator sides
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
Cable exit	Axial
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60034; EN 61800-5-1; CE
Approval	VDE

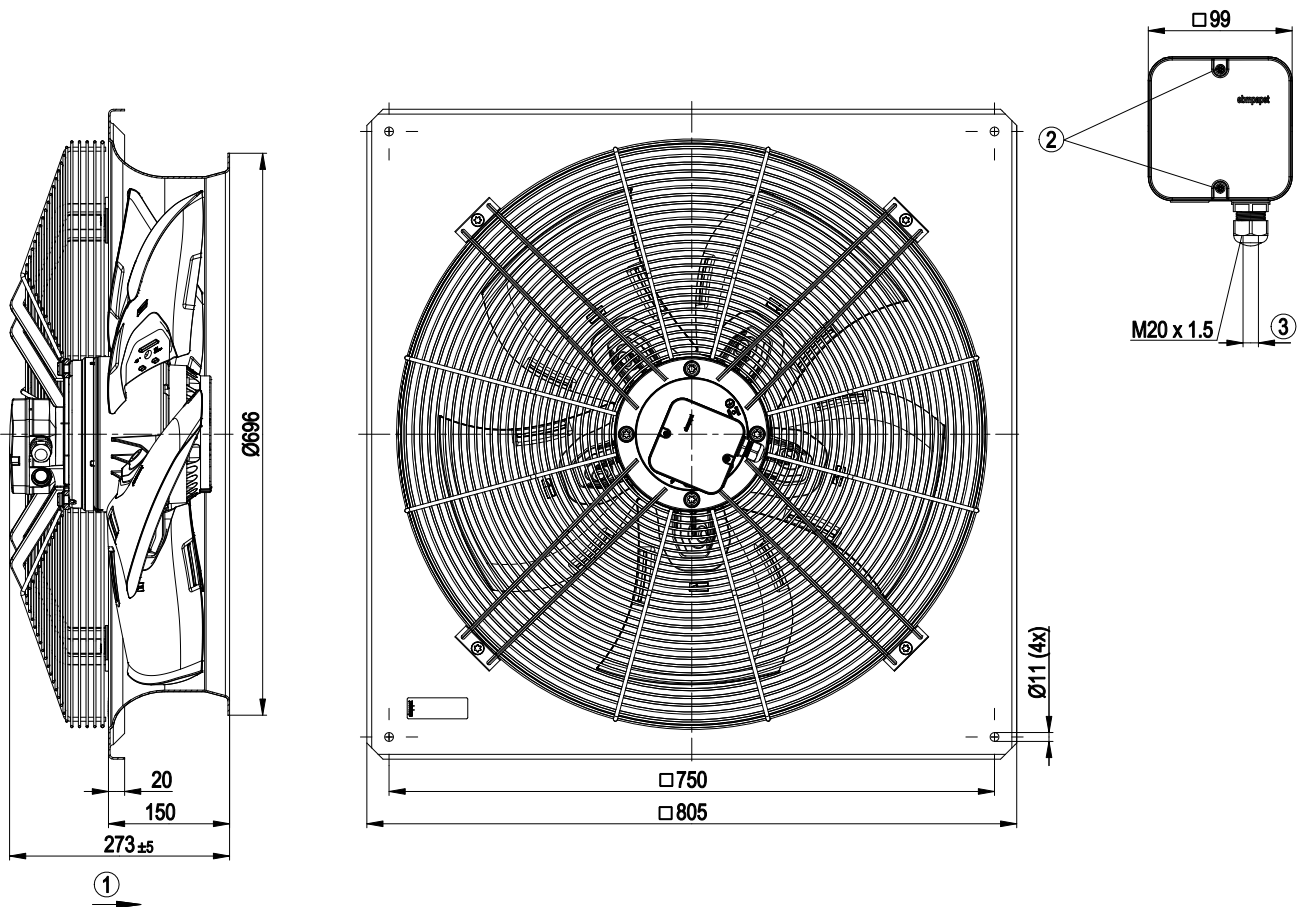


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Product drawing

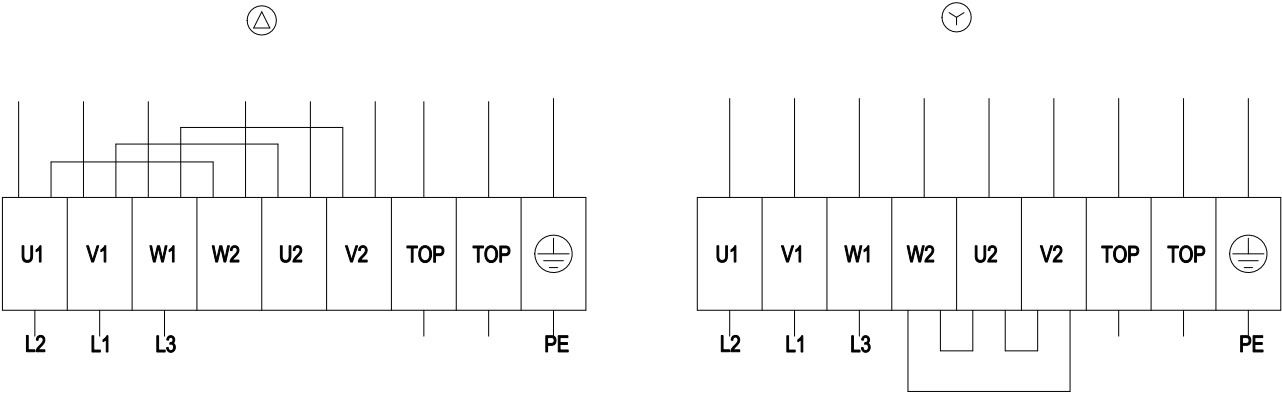


1	Direction of air flow "A"
2	Tightening torque 1.5±0.2 Nm
3	Cable diameter: min. 7 mm, max. 14 mm, tightening torque: 2±0.3 Nm

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Connection screen

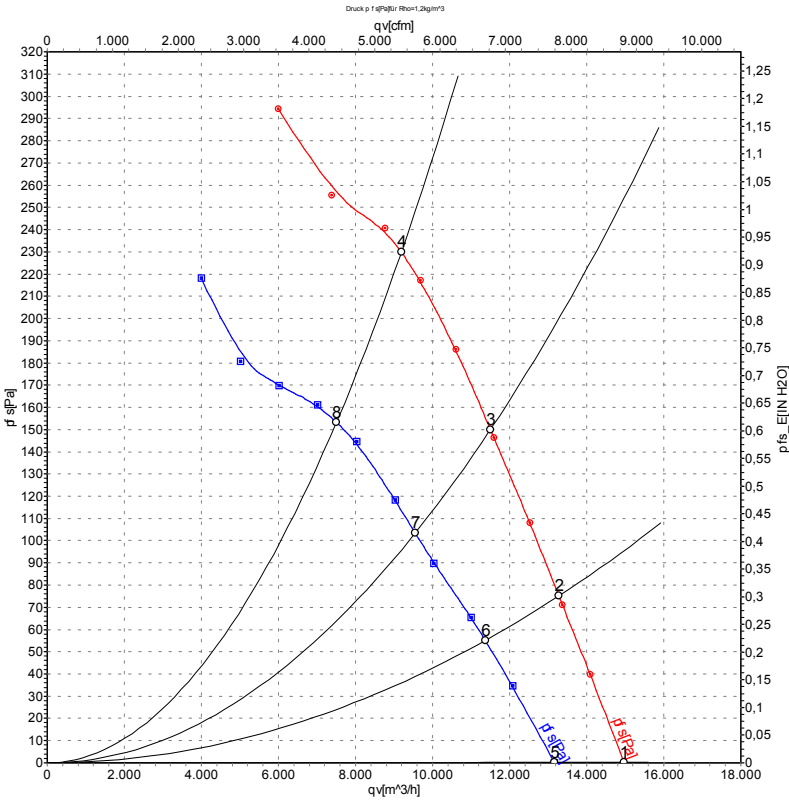


Δ	Delta connection	Y	Star connection	L1	= V1 = blue
L2	= U1 = black	L3	= W1 = brown	W2	yellow
U2	green	V2	white	TOP	2 x grey
PE	green/yellow				



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Charts: Air flow 50 Hz



Measurement: LU-101076
Measurement: LU-101079

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

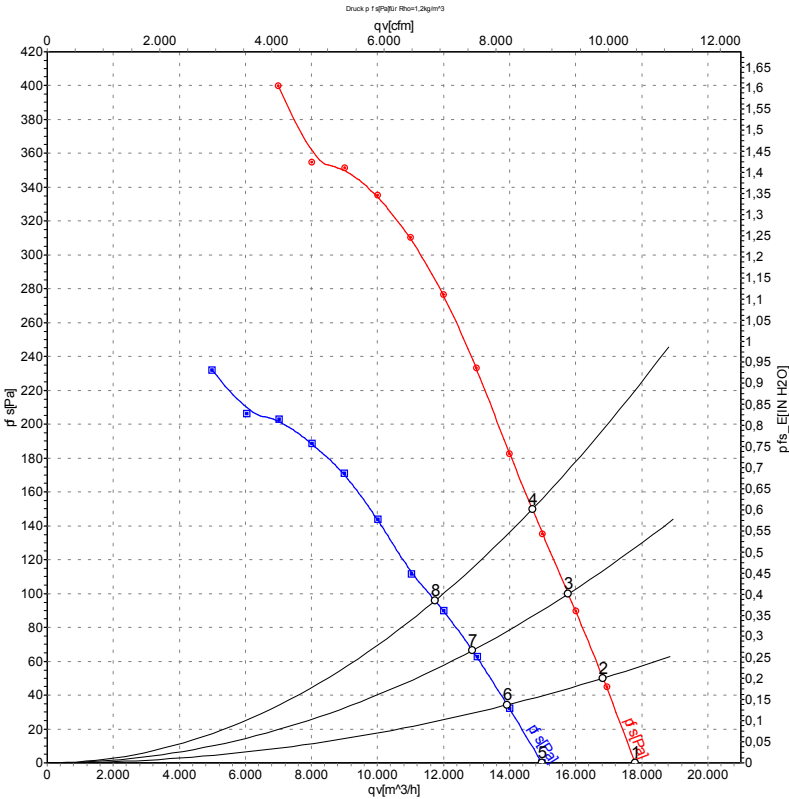
	Conn.	U	f	n	P _e	I	LpA _{in}	LwA _{in}	qv	p _{fs}
		V	Hz	min ⁻¹	W	A	dB(A)	dB(A)	m³/h	Pa
1	Δ	400	50	1410	1088	2.35	74	80	14970	0
2	Δ	400	50	1390	1289	2.58	74	80	13280	75
3	Δ	400	50	1375	1446	2.75	74	80	11500	150
4	Δ	400	50	1360	1620	3.02	77	83	9190	230
5	Y	400	50	1240	848	1.43	72	77	13160	0
6	Y	400	50	1190	973	1.64	70	76	11370	55
7	Y	400	50	1150	1061	1.79	70	76	9550	103
8	Y	400	50	1120	1120	1.87	71	78	7505	153

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



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Charts: Air flow 60 Hz



Measurement: LU-101077
Measurement: LU-101078

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
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Measured values

	Conn.	U	f	n	P _e	I	LpA _{in}	LwA _{in}	qv	p _{fs}
		V	Hz	min ⁻¹	W	A	dB(A)	dB(A)	m ³ /h	Pa
1	Δ	480	60	1670	1784	2.80	78	84	17800	0
2	Δ	480	60	1655	1968	3.00	78	84	16830	50
3	Δ	480	60	1640	2130	3.19	77	84	15780	100
4	Δ	480	60	1630	2240	3.40	78	84	14690	150
5	Y	480	60	1415	1356	1.92	74	80	14980	0
6	Y	480	60	1375	1452	2.06	73	79	13920	34
7	Y	480	60	1335	1525	2.17	73	79	12870	67
8	Y	480	60	1300	1600	2.30	72	78	11740	95

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qv = Air flow · p_{fs} = Pressure increase

