AC axial fan - HyBlade®

sickled blades (S series)

with full square nozzle

W4D560-GQ01-01 ebmpapst Datasheet
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www.fansco.com

ErP2015 EXCEEDS THE NORM

Nominal data

Type	**W4D560-GQ01-01**
Motor	**M4D110-IA**

Phase		3~	3~
Nominal voltage	VAC	400	400
Connection		Δ	Y
Frequency	Hz	50	50
Type of data definition		ml	ml
Valid for approval / standard		CE	CE
Speed	min^{-1}	1350	1110
Power input	W	1100	760
Current draw	A	2.32	1.3
Max. back pressure	Pa	170	115
Min. ambient temperature	°C	-40	-40
Max. ambient temperature	°C	65	65
Starting current	A	10	3.35

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}	%	34	30	34
Efficiency grade N		40	36	40
Power input P_e	kW	1.11		
Air flow q_v	m^3/h	6990		
Pressure increase p_{fs}	Pa	193		
Speed n	min^{-1}	1345		

Data definition with optimum efficiency. LU-111140
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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Technical features

Mass	21.8 kg
Size	560 mm
Surface of rotor	Cast in aluminium
Material of terminal box	PP plastic
Material of blades	Aluminium sheet insert, sprayed with PP plastic
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	-5°
Direction of air flow	"V"
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	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
Cable exit	Axial
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 61800-5-1; CE
Approval	EAC; VDE

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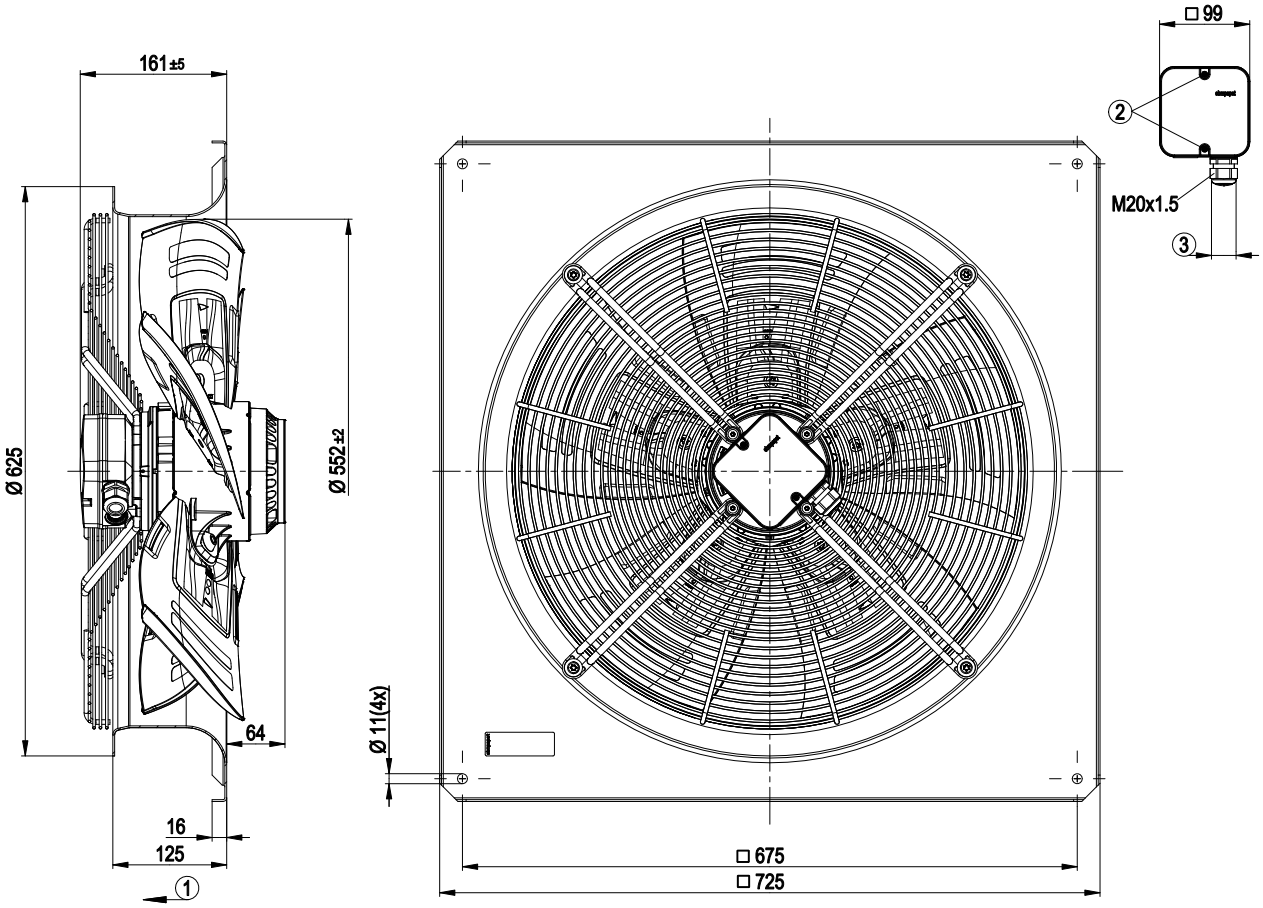
Product drawing



1	Direction of air flow "V"
2	Tightening torque 1.5±0.2 Nm
3	Cable diameter: min. 6 mm, max. 12 mm, tightening torque 2±0.3 Nm

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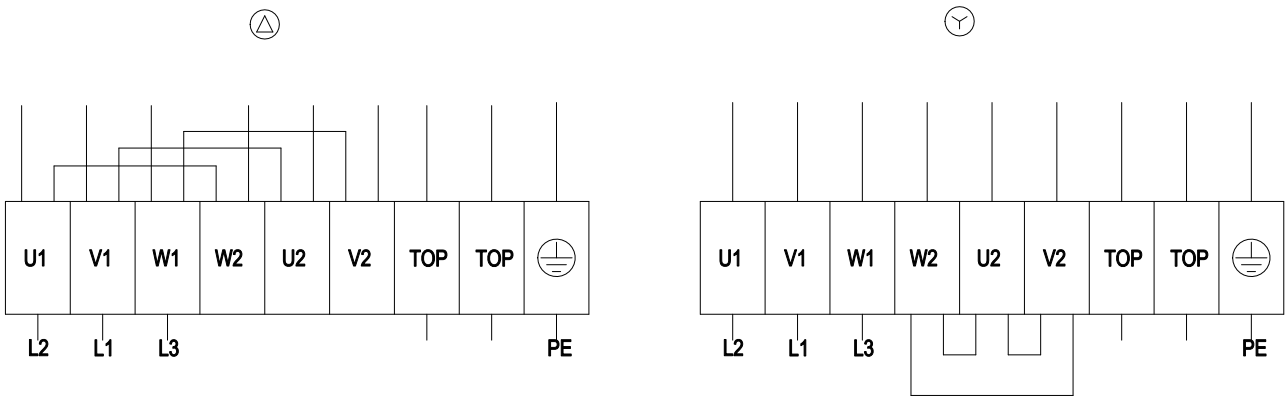
Connection screen



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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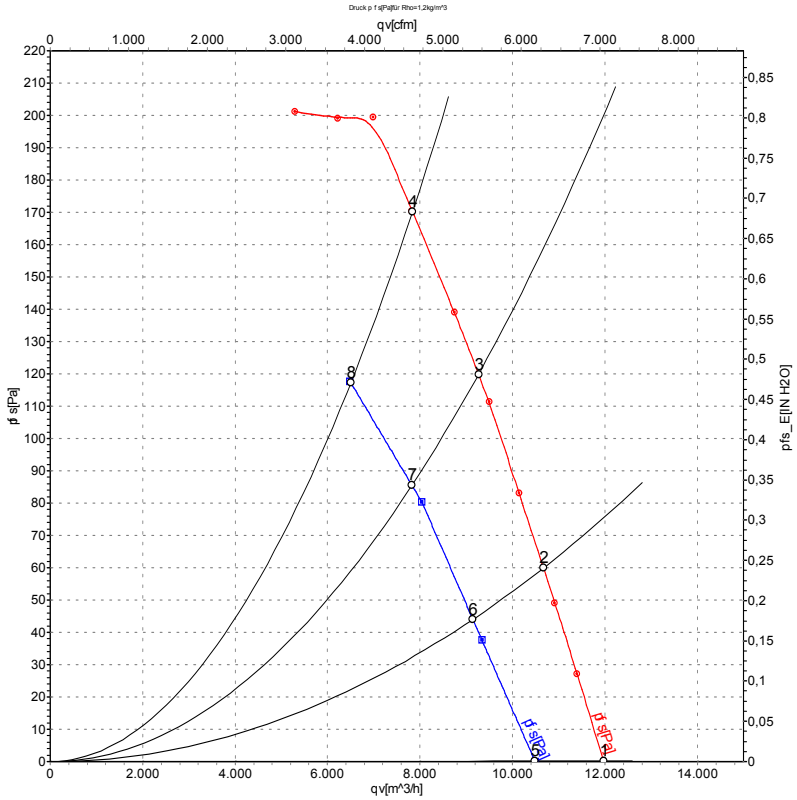
Charts: Air flow 50 Hz



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}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa
1	Δ	400	50	1400	806	1.98	69	76	76	11970	0
2	Δ	400	50	1380	915	2.08	67	74	74	10670	60
3	Δ	400	50	1365	1014	2.17	66	73	73	9270	120
4	Δ	400	50	1350	1100	2.32	70	76	76	7840	170
5	Y	400	50	1225	611	1.05	65	72	72	10490	0
6	Y	400	50	1180	671	1.14	63	70	70	9145	44
7	Y	400	50	1140	722	1.22	62	70	69	7825	86
8	Y	400	50	1110	760	1.30	65	74	72	6505	115

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
LwA_{out} = Sound power level outlet side · qv = Air flow · p_{fs} = Pressure increase

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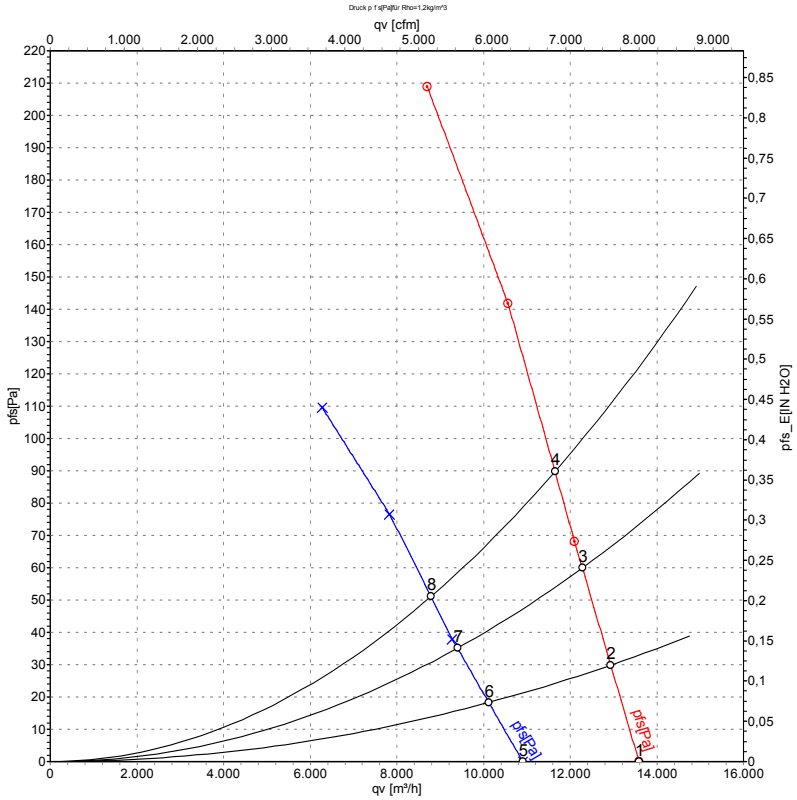
Charts: Air flow 60 Hz



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}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa
1	Δ	400	60	1605	1177	2.13	72	79	79	13590	0
2	Δ	400	60	1585	1244	2.21	72	78	78	12940	30
3	Δ	400	60	1565	1312	2.30	71	77	77	12280	60
4	Δ	400	60	1540	1380	2.40	70	77	77	11650	90
5	Y	400	60	1260	786	1.35	66	73	73	10900	0
6	Y	400	60	1220	805	1.38	65	71	71	10120	18
7	Y	400	60	1185	822	1.40	63	70	70	9400	35
8	Y	400	60	1150	840	1.45	63	72	70	8785	51

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
LwA_{out} = Sound power level outlet side · qv = Air flow · p_{fs} = Pressure increase