S6D710-BH01-09

AC axial fan - HyBlade

sickled blades (S series)

with guard grille for full nozzle

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Nominal data

Type	**S6D710-BH01-09**
Motor	**M6D138-HF**

Phase		3~	3~	3~	3~
Nominal voltage	VAC	400	400	480	480
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}	905	730	1060	780
Power input	W	1030	690	1700	1030
Current draw	A	2.35	1.34	2.87	1.72
Max. back pressure	Pa	125	80	170	92
Min. ambient temperature	°C	-40	-40	-40	-40
Max. ambient temperature	°C	80	80	60	60
Starting current	A	9	3	10	3.5

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 (prEN 17166)

		Actual	Request 2015
01 Overall efficiency η_{es}	%	33.6	33.6
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	0.98
09 Air flow q_v	m^3/h	11515
09 Pressure increase p_{fs}	Pa	112
10 Speed (rpm) n	min^{-1}	915
11 Specific ratio*		1.00

Data definition with optimum efficiency.

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

LU-199790

The indicated efficiency values for obtaining conformity with the Ecodesign Directive EU 327/2011 were achieved with defined air conduction components (e.g. inlet nozzles).
The dimensions are to be requested from ebm-papst. If other air guide geometries are used on the installation side, the ebm-papst evaluation loses its validity/conformity must be confirmed again.

The product does not fall within the scope of Regulation (EU) 2019/1781 due to the exception specified in Article 2(2a) (motors completely integrated into a product).

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Technical features

Mass	25.7 kg
Size	710 mm
Motor size	138
Surface of rotor	Cast in aluminium
Material of terminal box	PP plastic
Material of blades	Aluminium sheet insert, sprayed with PP plastic
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	Clockwise, seen on rotor
Type of protection	IP54
Insulation class	"F"
Humidity (F) / environmental protection class (H)	H2
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	Any
Condensation drainage 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 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)
Standard conformity	UKCA
Product conforming to standard	CE
Approval	UL 1004-1; EAC; CSA C22.2 no. 100

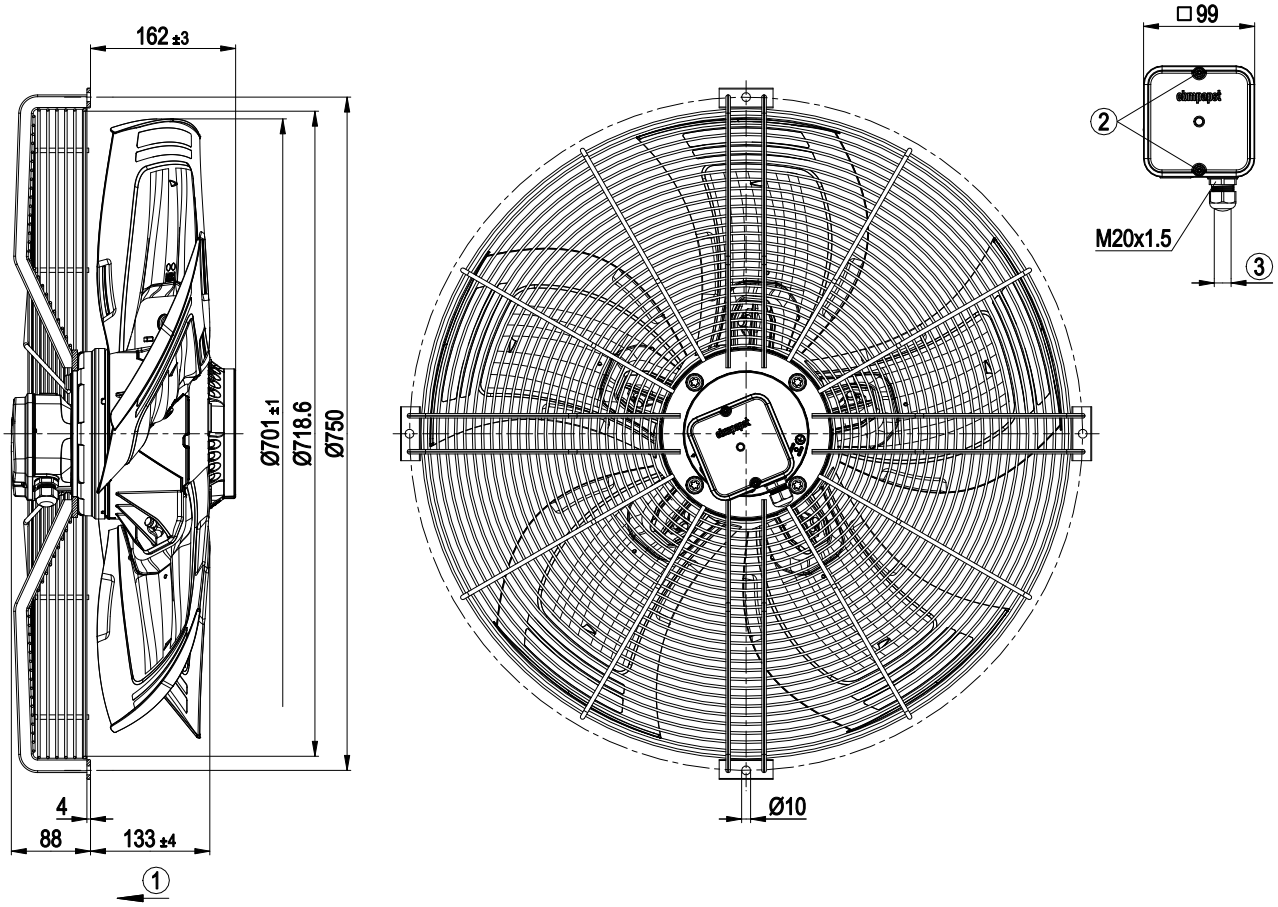
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Product drawing



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

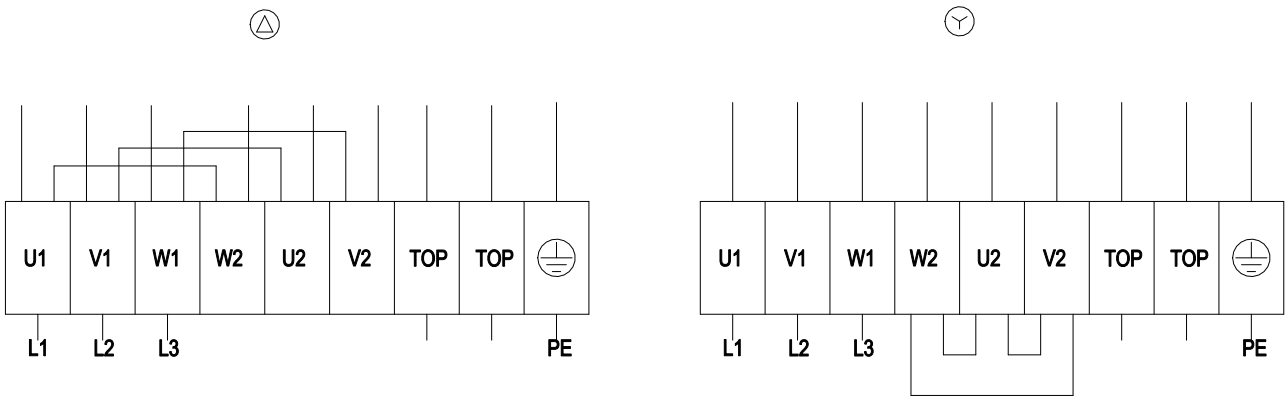
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Connection screen



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

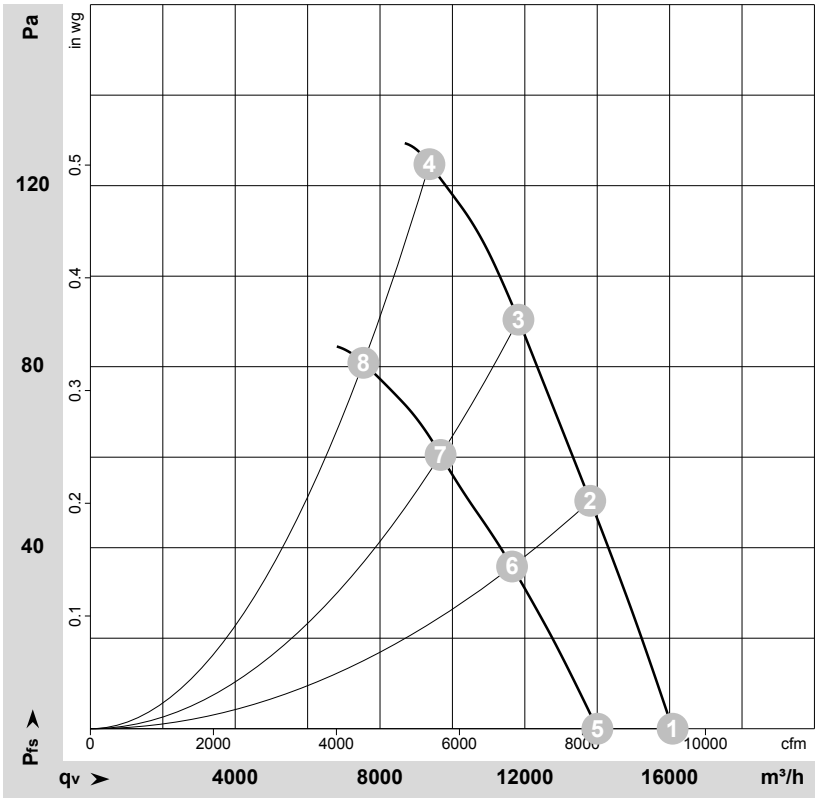
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Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-113715-1
Measurement: LU-113738-1

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	Δ	400	50	940	725	2.07	64	71	70	16080	0	9465	0.00
2	Δ	400	50	925	866	2.19	62	69	69	13805	50	8125	0.20
3	Δ	400	50	915	947	2.27	64	70	69	11825	90	6960	0.36
4	Δ	400	50	905	1030	2.35	68	75	74	9365	125	5510	0.50
5	Y	400	50	820	542	1.05	61	67	67	14005	0	8245	0.00
6	Y	400	50	780	620	1.19	58	65	64	11650	36	6855	0.14
7	Y	400	50	755	661	1.27	59	65	64	9675	60	5695	0.24
8	Y	400	50	730	690	1.34	62	69	68	7540	81	4435	0.33

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

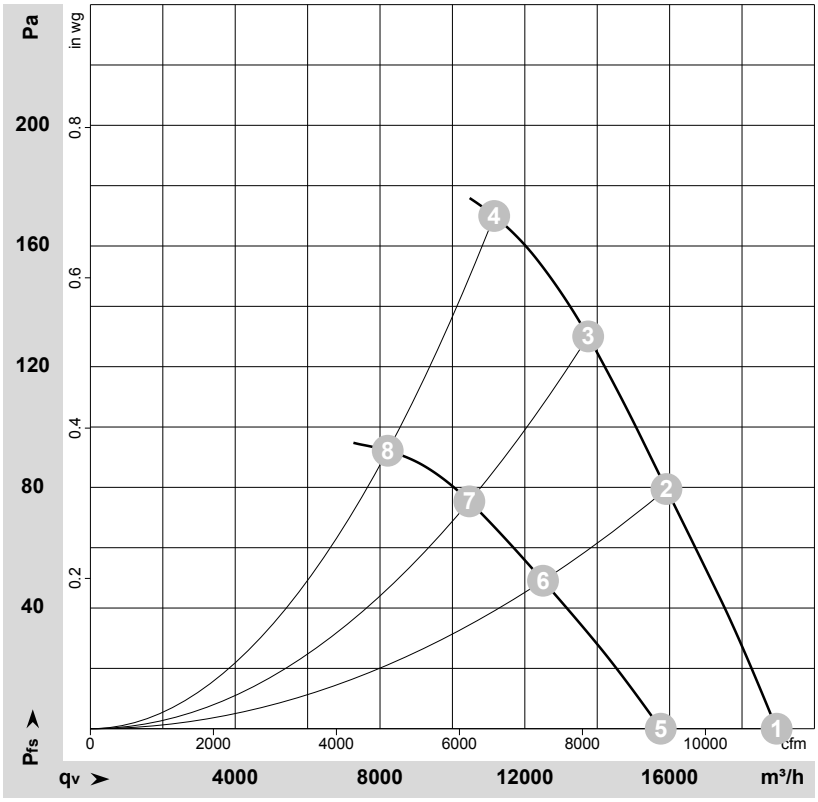
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Charts: Air flow 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-121540-1
Measurement: LU-121544-1

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	Δ	480	60	1115	1191	2.37	67	74	74	18955	0	11155	0.00
2	Δ	480	60	1085	1444	2.60	66	73	73	15910	80	9365	0.32
3	Δ	480	60	1075	1563	2.71	68	75	74	13750	130	8095	0.52
4	Δ	480	60	1060	1700	2.87	72	79	78	11155	170	6565	0.68
5	Y	480	60	930	853	1.37	63	70	69	15755	0	9275	0.00
6	Y	480	60	855	959	1.57	60	67	66	12505	49	7360	0.20
7	Y	480	60	820	996	1.65	61	67	66	10465	75	6160	0.30
8	Y	480	60	780	1030	1.72	64	70	70	8215	93	4835	0.37

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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