S4D630-BR11-08

AC axial fan - HyBlade®

sickled blades (S series)

with guard grille for full nozzle

ebm-papst Mulfingen GmbH & Co. KG
Bachmühle 2 · D-74673 Mulfingen
Phone +49 7938 81-0
Fax +49 7938 81-110
info1@de.ebmpapst.com
www.ebmpapst.com

Limited partnership · Headquarters Mulfingen
County court Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
County court Stuttgart · HRB 590142

ErP2015 EXCEEDS THE NORM

Nominal data

Type	**S4D630-BR11-08**
Motor	**M4D110-IA**

Phase		3~	3~	3~	3~
Nominal voltage	VAC	400	400	480	480
Connection		Δ	Y	Δ	Y
Frequency	Hz	60	60	60	60
Type of data definition		ml	ml	ml	ml
Valid for approval / standard		CE	CE	CE	CE
Speed	min^{-1}	1310	835	1440	960
Power input	W	1320	600	1590	820
Current draw	A	2.32	1.1	2.4	1.22
Max. back pressure	Pa	90	37	110	50
Min. ambient temperature	°C	-40	-40	-40	-40
Max. ambient temperature	°C	40	40	40	40
Starting current	A	4.8	1.5	6.1	2.0

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}	%	34.1	30	34
Efficiency grade N		40.1	36	40
Power input P_e	kW	1.14		
Air flow q_v	m^3/h	8070		
Pressure increase p_{fs}	Pa	175		
Speed n	min^{-1}	1200		

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

AC axial fan - HyBlade®

sickled blades (S series)

with guard grille for full nozzle

Technical features

Mass	16 kg
Size	630 mm
Surface of rotor	Cast in aluminium
Material of terminal box	PC / ABS 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	-10°
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	UL 1004-1; VDE; CSA C22.2 Nr.100

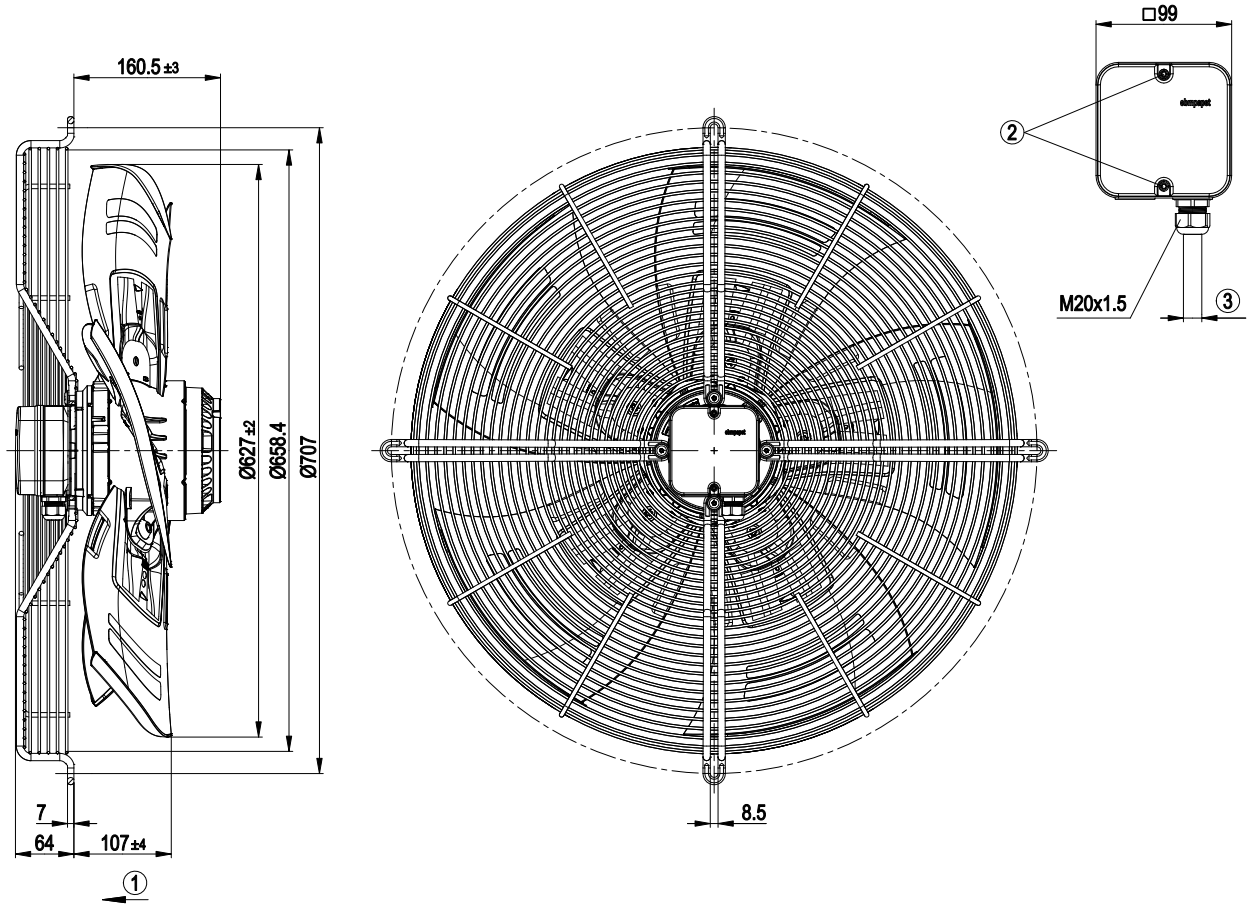
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

AC axial fan - HyBlade®

sickled blades (S series)

with guard grille for full nozzle

Product drawing



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

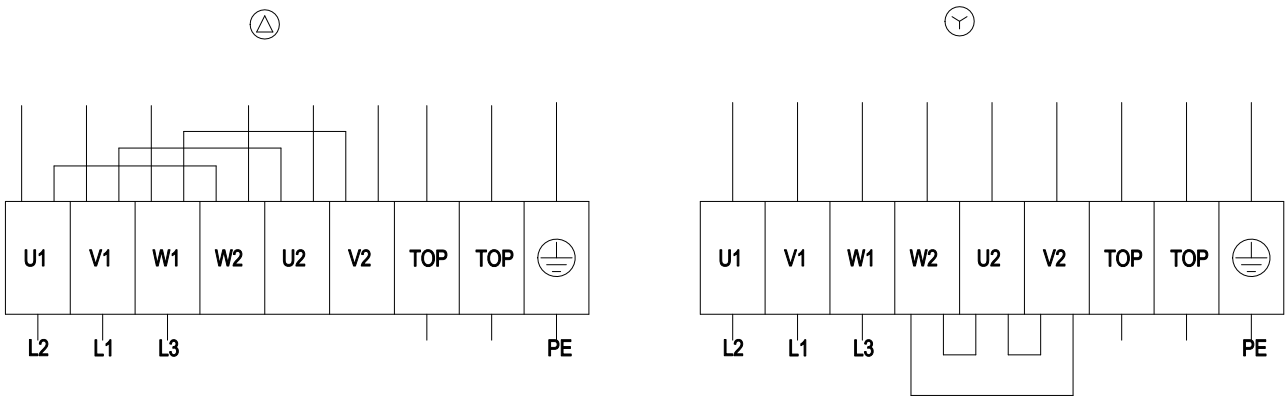
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

AC axial fan - HyBlade®

sickled blades (S series)

with guard grille for full nozzle

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				

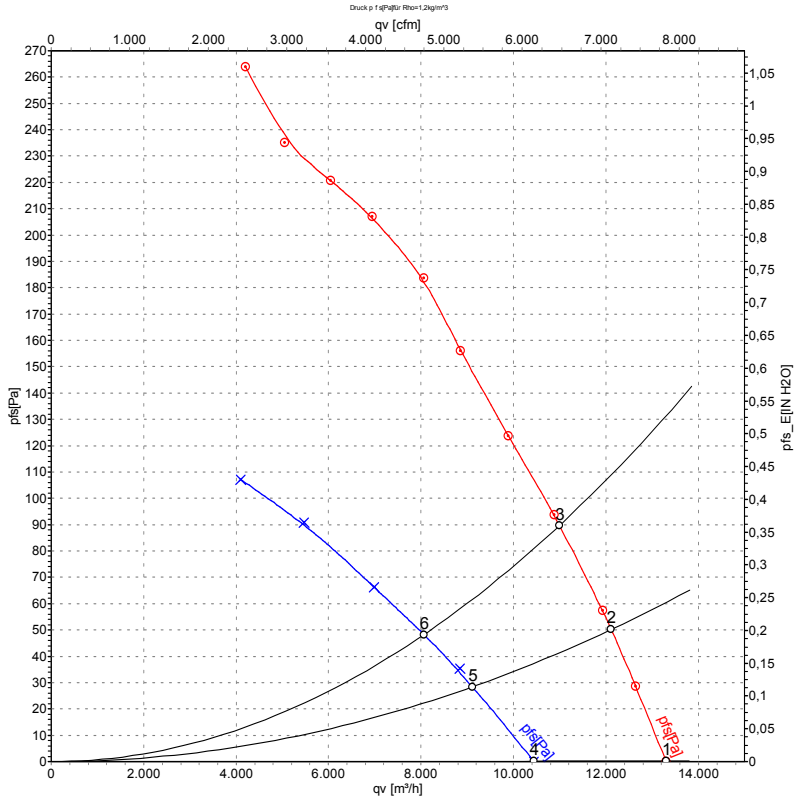
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

AC axial fan - HyBlade®

sickled blades (S series)

with guard grille for full nozzle

Charts: Air flow 50 Hz



Measurement: LU-127547
Measurement: LU-127784

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	1330	782	1.53	71	78	77	13300	0
2	Δ	400	50	1295	902	1.71	68	75	75	12120	50
3	Δ	400	50	1260	1000	1.85	66	73	73	10990	90
4	Y	400	50	1035	513	0.90	65	72	71	10440	0
5	Y	400	50	970	550	0.97	62	68	68	9110	29
6	Y	400	50	915	570	1.02	60	67	66	8065	48

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

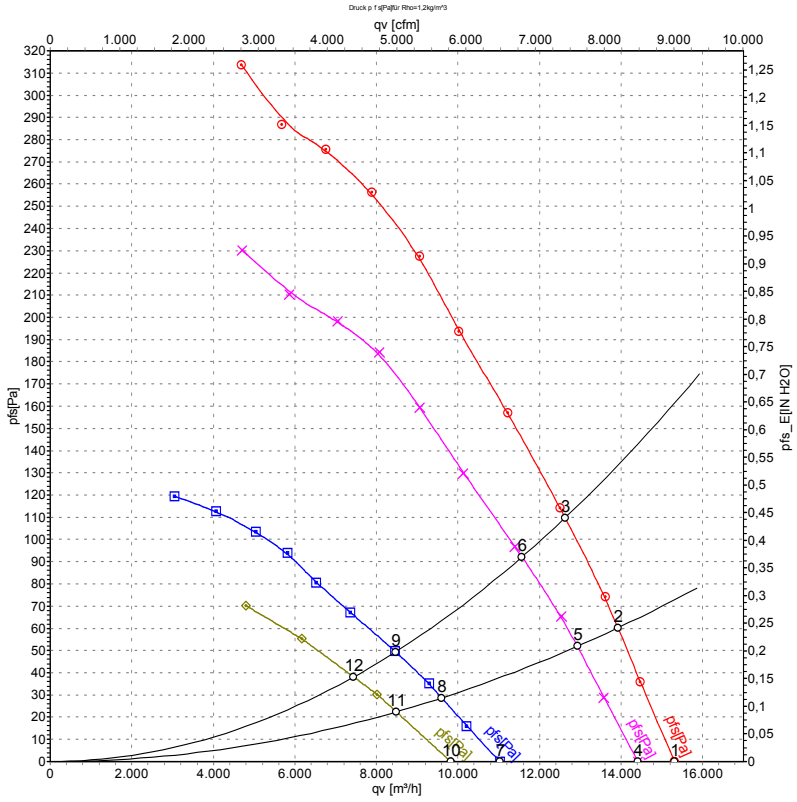
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

AC axial fan - HyBlade®

sickled blades (S series)

with guard grille for full nozzle

Charts: Air flow 60 Hz



Measurement: LU-137181
Measurement: LU-127706
Measurement: LU-137186
Measurement: LU-127783

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	480	60	1540	1291	2.02	74	81	81	15310	0
2	Δ	480	60	1490	1446	2.21	71	79	78	13920	60
3	Δ	480	60	1440	1590	2.40	69	76	76	12620	110
4	Δ	400	60	1440	1120	2.00	72	79	78	14410	0
5	Δ	400	60	1370	1227	2.17	69	76	75	12930	52
6	Δ	400	60	1310	1320	2.32	66	74	73	11570	92
7	Y	480	60	1095	757	1.11	67	73	72	11030	0
8	Y	480	60	1025	791	1.17	63	70	69	9605	29
9	Y	480	60	960	820	1.22	60	67	67	8470	50
10	Y	400	60	970	578	1.06	63	70	69	9820	0
11	Y	400	60	895	590	1.09	60	67	66	8485	22
12	Y	400	60	835	600	1.10	58	65	65	7440	38

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

ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com