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Limited partnership · Headquarters Mulfingen  
County court Stuttgart · HRA 590344General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen  
County court Stuttgart · HRB 590142**Nominal data**

Type	S4D450-AO14-01						
Motor	M4D094-HA						
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 <sup>-1</sup>	1360	1110	1510	1060	1600	1240
Power input	W	480	340	690	400	760	520
Current draw	A	0.98	0.58	1.2	0.72	1.17	0.75
Max. back pressure	Pa	140	90	145	70	160	95
Min. ambient temperature	°C	-40	-40	-40	-40	-40	-40
Max. ambient temperature	°C	65	65	50	50	50	50
Starting current	A	3.9	1.3	3.5	1.2	3.9	1.3

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**

Installation category	A
Efficiency category	Static
Variable speed drive	No
Specific ratio*	1.00

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

		Actual	Request 2013	Request 2015
Overall efficiency $\eta_{es}$	%	35.4	27.5	31.5
Efficiency grade N		43.9	36	40
Power input $P_e$	kW	0.46		
Air flow $q_v$	m <sup>3</sup> /h	4530		
Pressure increase $p_{fs}$	Pa	133		
Speed n	min <sup>-1</sup>	1365		

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



## Technical features

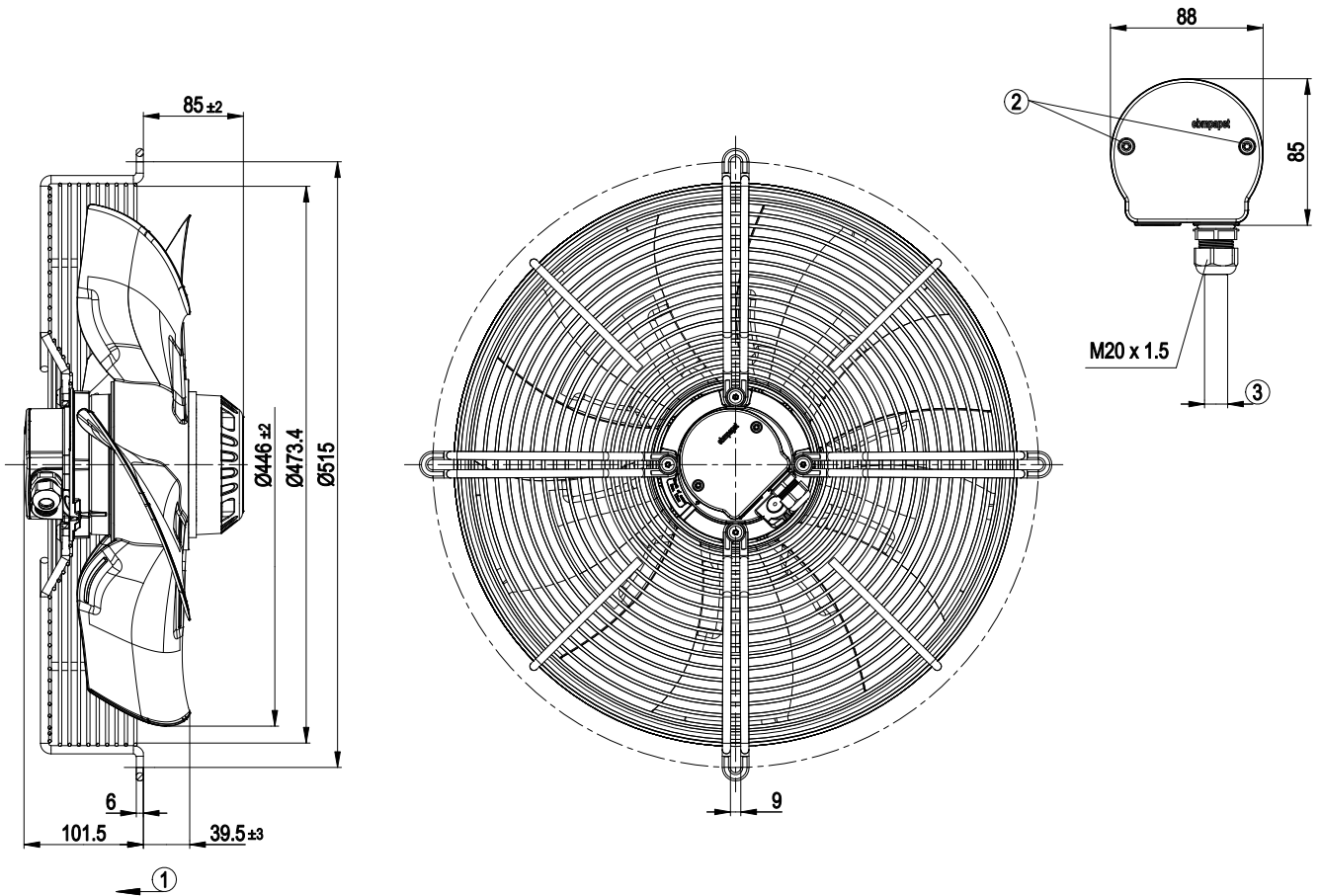
<b>Mass</b>	10 kg
<b>Size</b>	450 mm
<b>Surface of rotor</b>	Coated in black
<b>Material of terminal box</b>	ABS plastic, black
<b>Material of impeller</b>	PP-GF40 plastic
<b>Material of guard grille</b>	Steel, phosphated and coated in black plastic
<b>Number of blades</b>	5
<b>Direction of air flow</b>	"V"
<b>Direction of rotation</b>	Counter-clockwise, seen on rotor
<b>Type of protection</b>	IP 54
<b>Insulation class</b>	"F"
<b>Humidity class</b>	F4-1
<b>Max. permissible ambient motor temp. (transp./ storage)</b>	+80 °C
<b>Min. permissible ambient motor temp. (transp./storage)</b>	-40 °C
<b>Mounting position</b>	Shaft horizontal or rotor on bottom; rotor on top on request
<b>Condensate discharge holes</b>	Rotor-side
<b>Operation mode</b>	S1
<b>Motor bearing</b>	Ball bearing
<b>Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)</b>	<= 3.5 mA
<b>Electrical leads</b>	Via terminal box
<b>Motor protection</b>	Thermal overload protector (TOP) brought out
<b>Protection class</b>	I (if protective earth is connected by customer)
<b>Product conforming to standard</b>	EN 60034-1 (2004); CE
<b>Approval</b>	CCC; GOST

# AC axial fan - HyBlade®

sickled blades (S series)

with guard grille for short nozzle

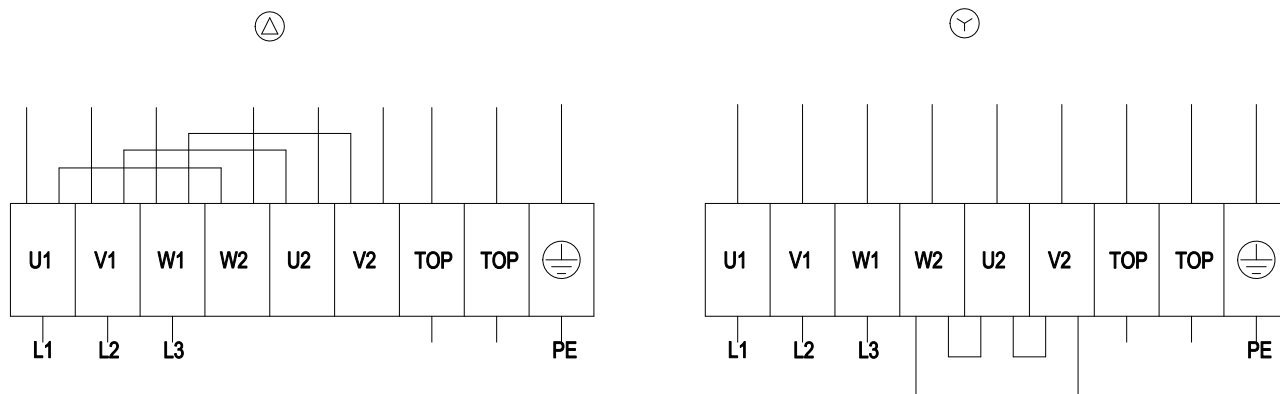
## Product drawing



1	Direction of air flow "V"
2	Tightening torque 1.0 ± 0.15 Nm
3	Cable diameter: min. 6 mm, max. 12 mm; tightening torque: 2±0.2 Nm

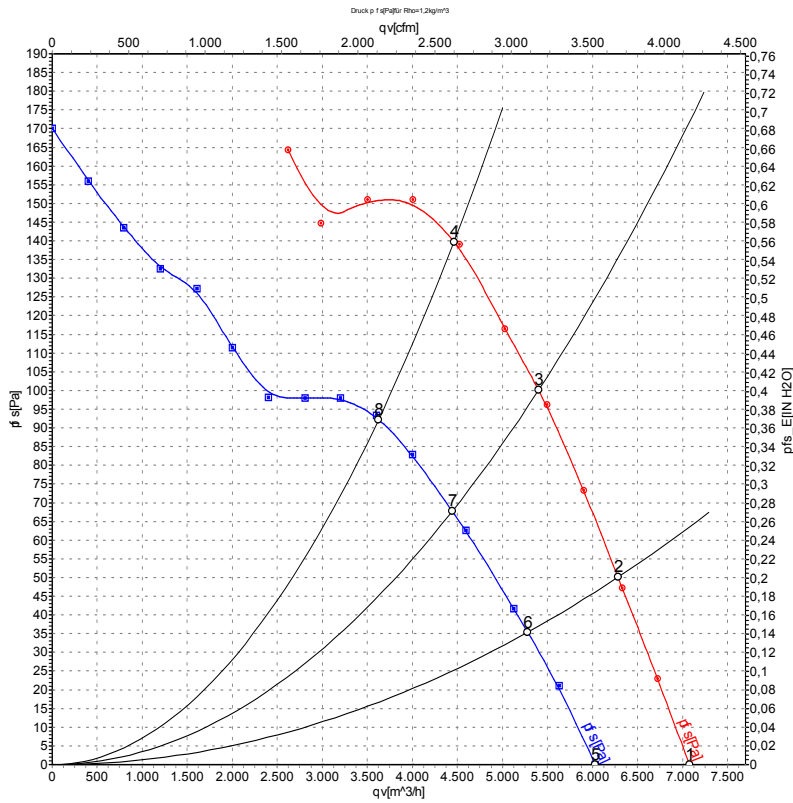


## Connection screen



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				

## Charts: Air flow 50 Hz



Measurement: LU-107893  
Measurement: LU-107309

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.

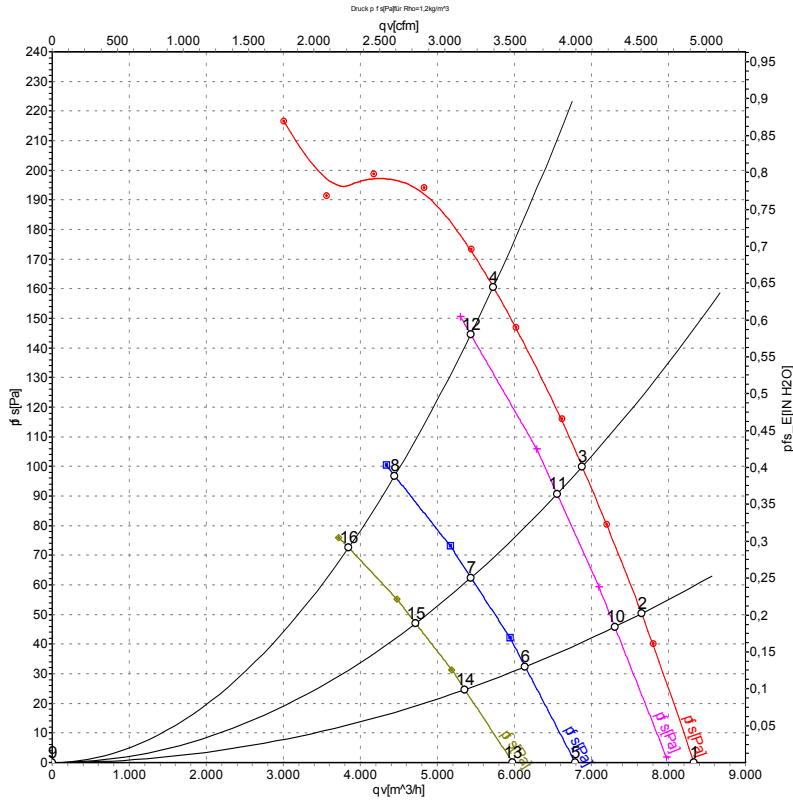
## Measured values

	Conn.	U	f	n	P <sub>e</sub>	I	LpA <sub>in</sub>	LwA <sub>in</sub>	LwA <sub>out</sub>	qv	p <sub>fs</sub>
		V	Hz	min <sup>-1</sup>	W	A	dB(A)	dB(A)	dB(A)	m³/h	Pa
1	Δ	400	50	1400	386	0.88	65	71		7080	0
2	Δ	400	50	1385	422	0.91	62	68		6285	50
3	Δ	400	50	1370	453	0.95	61	68		5400	100
4	Δ	400	50	1360	480	0.98	62	68		4460	140
5	Y	400	50	1195	285	0.49	63	68	69	6030	0
6	Y	400	50	1160	308	0.52	59	65	65	5280	35
7	Y	400	50	1130	326	0.55	57	64	64	4445	68
8	Y	400	50	1110	340	0.58	57	64	64	3625	93

Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed · P<sub>e</sub> = Power input · I = Current draw · LpA<sub>in</sub> = Sound pressure level inlet side · LwA<sub>in</sub> = Sound power level inlet side · LwA<sub>out</sub> = Sound power level outlet side · qv = Air flow · p<sub>fs</sub> = Pressure increase



## Charts: Air flow 60 Hz



Measurement: LU-107898  
 Measurement: LU-108205  
 Measurement: LU-108207  
 Measurement: LU-108206

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebmpapst. 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 <sub>e</sub>	I	LpA <sub>in</sub>	LwA <sub>in</sub>	LwA <sub>out</sub>	qv	p <sub>fs</sub>
		V	Hz	min <sup>-1</sup>	W	A	dB(A)	dB(A)	dB(A)	m³/h	Pa
1	Δ	480	60	1645	628	1.03	68	74	76	8330	0
2	Δ	480	60	1630	674	1.08	66	72	74	7650	50
3	Δ	480	60	1615	715	1.12	65	71	73	6880	100
4	Δ	480	60	1600	760	1.17	65	72	72	5725	160
5	Y	480	60	1335	459	0.66	64	70	71	6790	0
6	Y	480	60	1300	480	0.69	61	67	68	6140	32
7	Y	480	60	1265	498	0.72	60	66	67	5435	62
8	Y	480	60	1240	520	0.75	59	65	65	4445	97
9	Δ	400	60	1575	580	1.02	67	73	74	0	0
10	Δ	400	60	1550	620	1.09	65	71	73	7305	46
11	Δ	400	60	1530	657	1.15	64	70	71	6555	91
12	Δ	400	60	1510	690	1.20	64	70	71	5435	145
13	Y	400	60	1175	375	0.65	62	67	68	5980	0
14	Y	400	60	1130	388	0.68	59	64	65	5355	25
15	Y	400	60	1095	398	0.70	57	63	63	4720	47
16	Y	400	60	1060	400	0.72	56	62	62	3845	72

Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed · P<sub>e</sub> = Power input · I = Current draw · LpA<sub>in</sub> = Sound pressure level inlet side · LwA<sub>in</sub> = Sound power level inlet side  
 LwA<sub>out</sub> = Sound power level outlet side · qv = Air flow · p<sub>fs</sub> = Pressure increase

