

**ebm-papst Mulfingen GmbH & Co. KG**

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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-AU01-01				
Motor	M4D094-EA				
Phase		3~	3~	3~	3~
Nominal voltage	VAC	400	400	400	400
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	min <sup>-1</sup>	1250	875	1360	860
Power input	W	340	200	415	205
Current draw	A	0.61	0.33	0.70	0.35
Max. back pressure	Pa	120	60	85	35
Min. ambient temperature	°C	-40	-40	-40	-40
Max. ambient temperature	°C	60	60	50	50
Starting current	A	1.7	0.55	1.57	0.51

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 =  $1 + p_s / 100\,000\text{ Pa}$

	Actual	Request 2013	Request 2015
Overall efficiency $\eta_{es}$	32	26.4	30.4
Efficiency grade N	41.6	36	40
Power input $P_e$	kW	0.3	
Air flow $q_v$	m <sup>3</sup> /h	3610	
Pressure increase $p_{fs}$	Pa	96	
Speed n	min <sup>-1</sup>	1285	

Data established at point of optimum efficiency



## Technical features

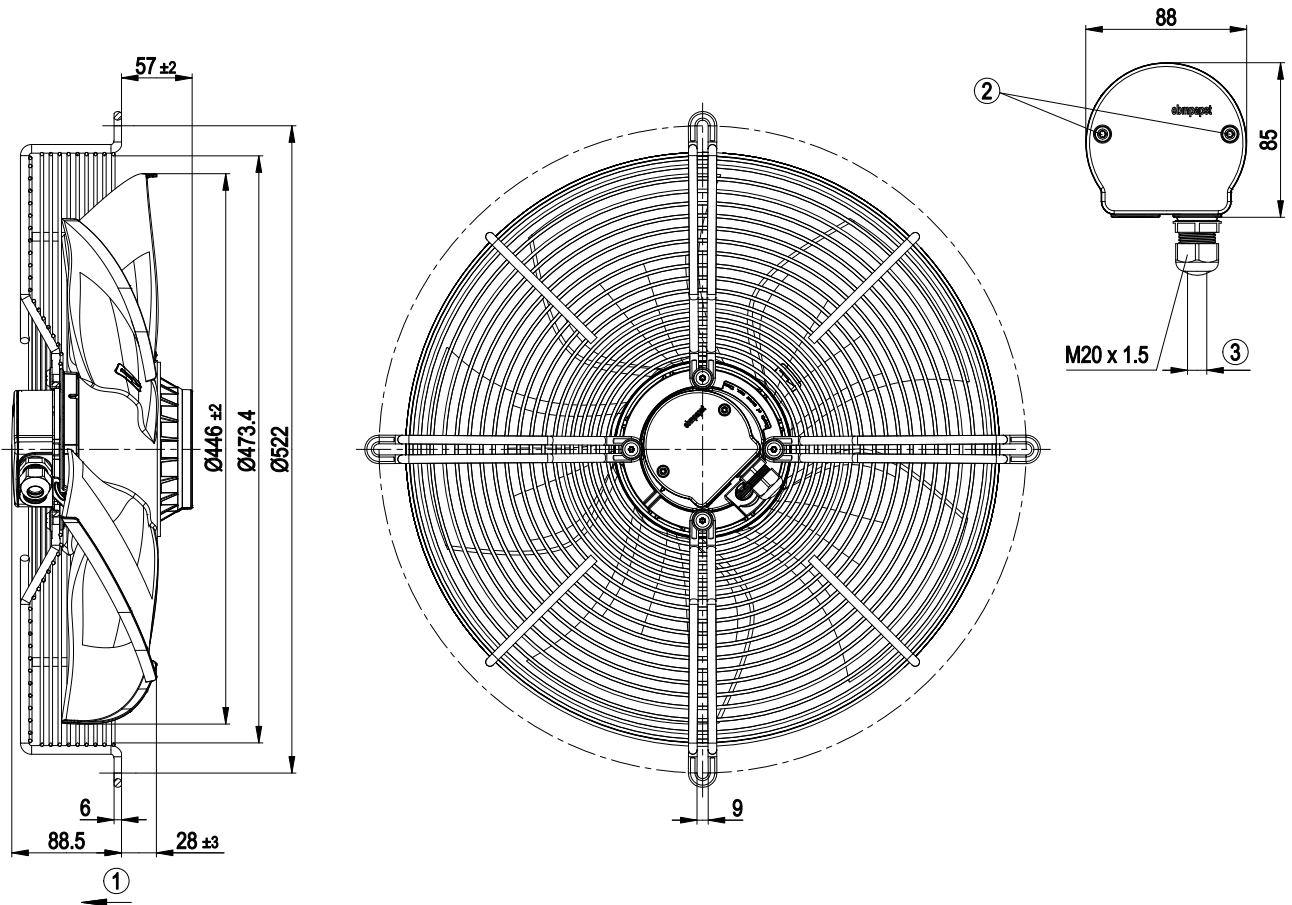
<b>Mass</b>	7.2 kg
<b>Size</b>	450 mm
<b>Surface of rotor</b>	Coated in black
<b>Material of terminal box</b>	ABS plastic, black
<b>Material of blades</b>	Press-fitted sheet steel blank, sprayed with PP plastic
<b>Material of guard grille</b>	Steel, phosphated and coated in black plastic
<b>Number of 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

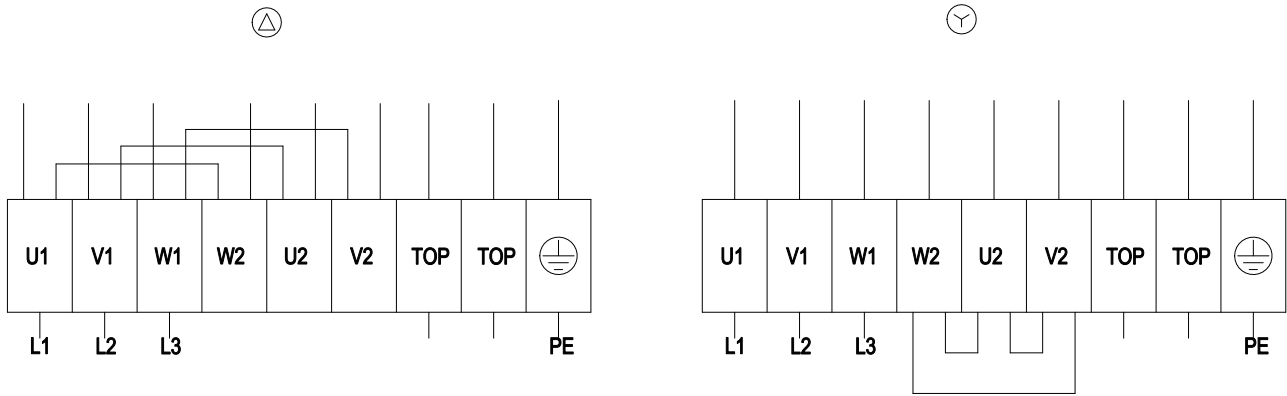


# AC axial fan - HyBlade®

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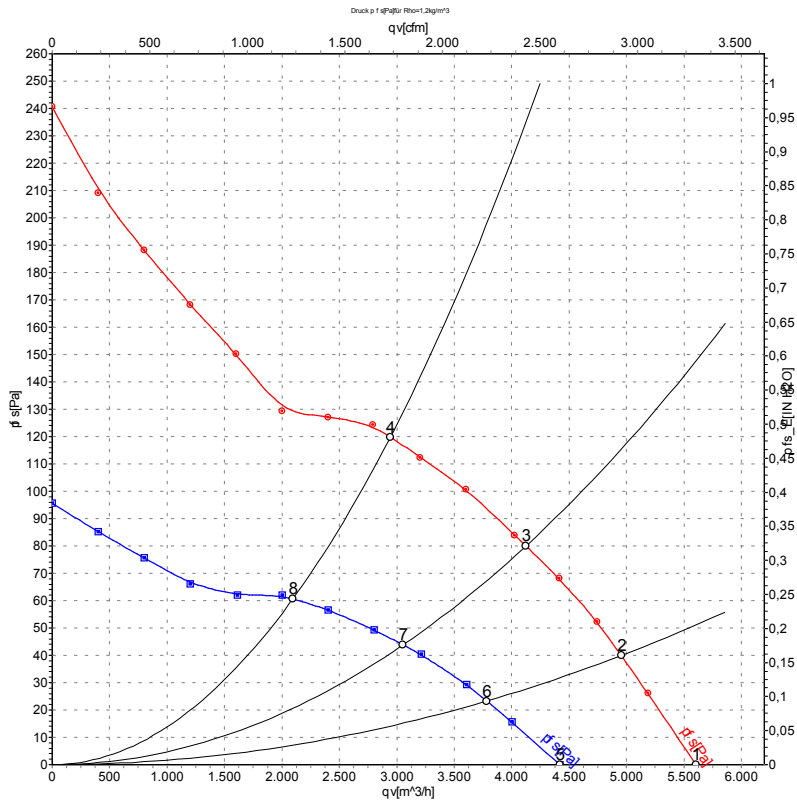
## Connection screen



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				



## Charts: Air flow 50 Hz Δ



Measurement: LU-72632  
Measurement: LU-72634

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.

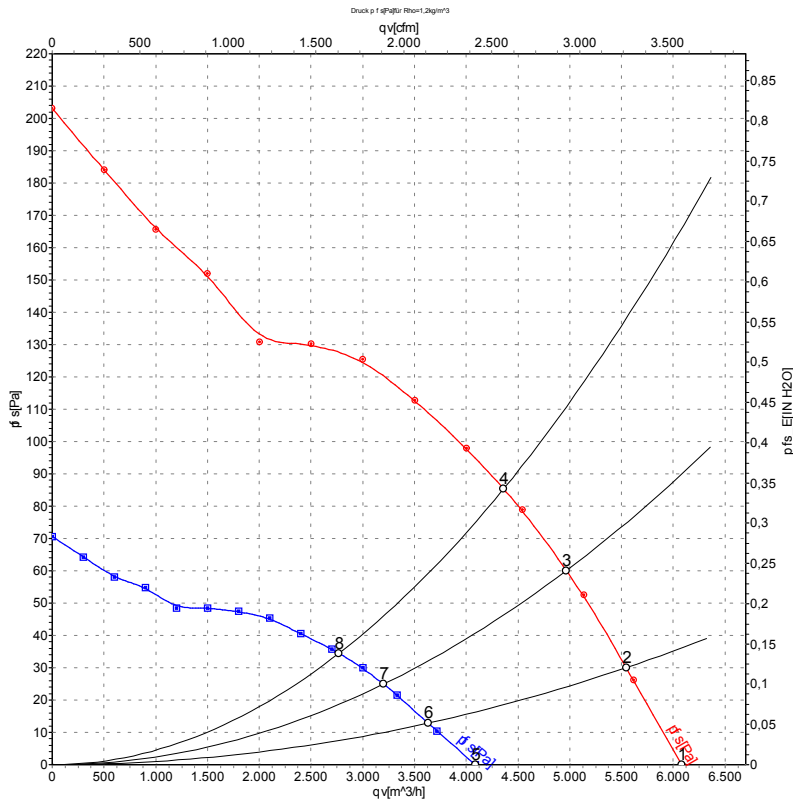
## Measured values

	Conn.	U	f	n	Pe	I	LwA <sub>in</sub>	qv	ps
		V	Hz	min <sup>-1</sup>	W	A	dB(A)	m <sup>3</sup> /h	Pa
1	Δ	400	50	1350	231	0.49	73	5605	0
2	Δ	400	50	1320	262	0.52	74	4955	40
3	Δ	400	50	1300	289	0.55	72	4125	80
4	Δ	400	50	1250	340	0.61	72	2945	120
5	Y	400	50	1070	160	0.27	67	4420	0
6	Y	400	50	1015	172	0.29	66	3785	23
7	Y	400	50	970	182	0.31	65	3055	44
8	Y	400	50	875	200	0.33	65	2095	61

Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed · Pe = Power input · I = Current draw · LwA<sub>in</sub> = Sound power level inlet side · qv = Air flow · ps = Pressure increase



## Charts: Air flow 60 Hz Δ



Measurement: LU-72642  
Measurement: LU-72646

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	LwA <sub>in</sub>	qv	p <sub>fs</sub>
		V	Hz	min <sup>-1</sup>	W	A	dB(A)	m <sup>3</sup> /h	Pa
1	Δ	400	60	1455	334	0.57	75	6085	0
2	Δ	400	60	1415	359	0.61	75	5545	30
3	Δ	400	60	1380	381	0.64	75	4965	60
4	Δ	400	60	1360	415	0.70	73	4360	85
5	Y	400	60	990	187	0.31	67	4090	0
6	Y	400	60	940	192	0.32	67	3630	13
7	Y	400	60	900	197	0.33	65	3200	25
8	Y	400	60	860	205	0.35	63	2770	35

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



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