A4D450-AO10-03

AC axial fan - HyBlade

sickle-shaped blades (S series)

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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**A4D450-AO10-03**
Motor	**M4D094-HA**

Phase		3~	3~	3~	3~	3~
Nominal voltage	VAC	230	230	400	400	460
Wiring		Δ	Δ	Y	Y	Y
Frequency	Hz	50	60	50	60	60
Method of obtaining data		ml	ml	ml	ml	ml
Valid for approval/standard		CE	CE	CE	CE	CE
Speed (rpm)	min^{-1}	1370	1520	1370	1520	1600
Power consumption	W	455	695	455	695	710
Current draw	A	1.77	2.15	1.02	1.24	1.15
Max. back pressure	Pa	120	150	120	150	110
Max. back pressure	inH2O	0.48	0.6	0.48	0.6	0.44
Min. ambient temperature	°C	-25	-25	-25	-25	-25
Max. ambient temperature	°C	65	60	65	60	65
Starting current	A	7.0	6.4	4	3.7	

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change

Data according to ErP Directive

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	33.9	31.5
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		42.4	40
05 Variable speed drive		No	

09 Power consumption P_e	kW	0.45
09 Air flow q_v	m^3/h	4530
09 Pressure increase p_{fs}	Pa	124
10 Speed (rpm) n	min^{-1}	1375
11 Specific ratio*		1.00

Data obtained at optimum efficiency level.
The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

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

LU-111305

AC axial fan - HyBlade

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Technical description

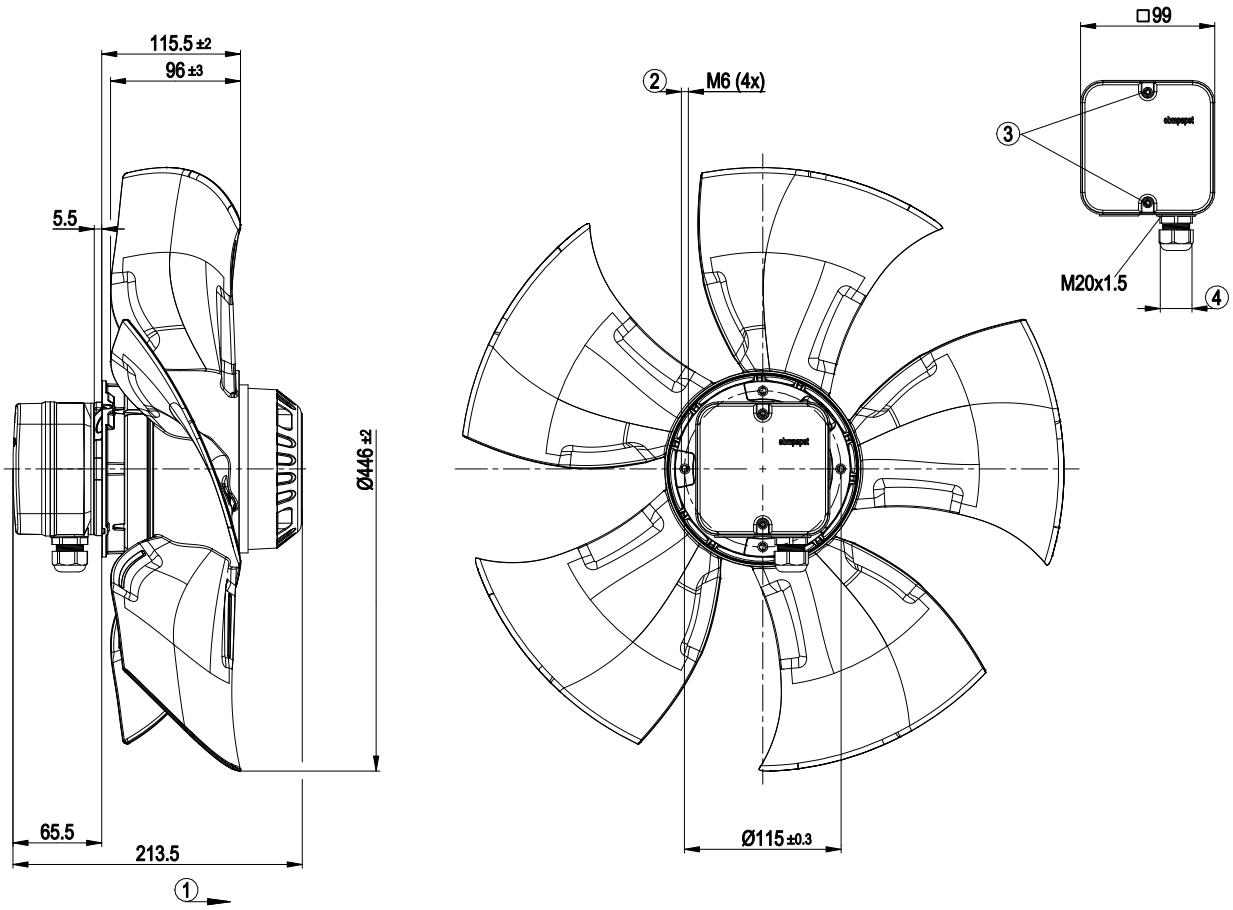
Weight	7.2 kg
Fan size	450 mm
Rotor surface	Painted black
Terminal box material	PC/ABS plastic, black
Blade material	Press-fitted sheet steel blank, sprayed with PP plastic
Number of blades	5
Airflow direction	"A"
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	F5
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensation drainage holes	On rotor side
Mode	S1
Motor bearing	Ball bearing
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	Via terminal box
Motor protection	Thermal overload protector (TOP) with basic insulation
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60034-1 (2010); CE
Approval	CSA C22.2 No. 100; UL 1004-1

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Product drawing



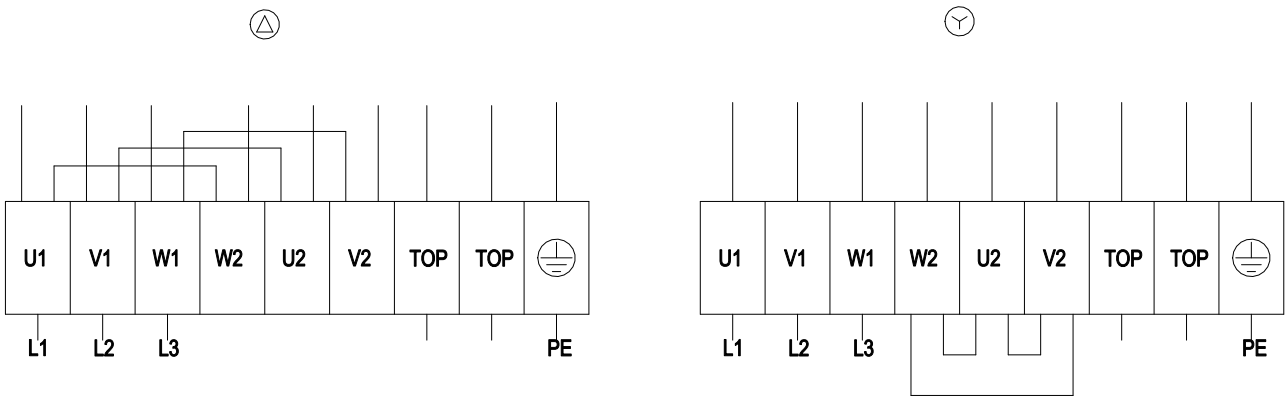
1	Direction of air flow "A"
2	Max. clearance for screw 12 mm
3	Tightening torque 0.8 ± 0.15 Nm
4	Cable diameter: min. 6 mm, max. 12 mm; tightening torque 2±0.3 Nm

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Connection diagram



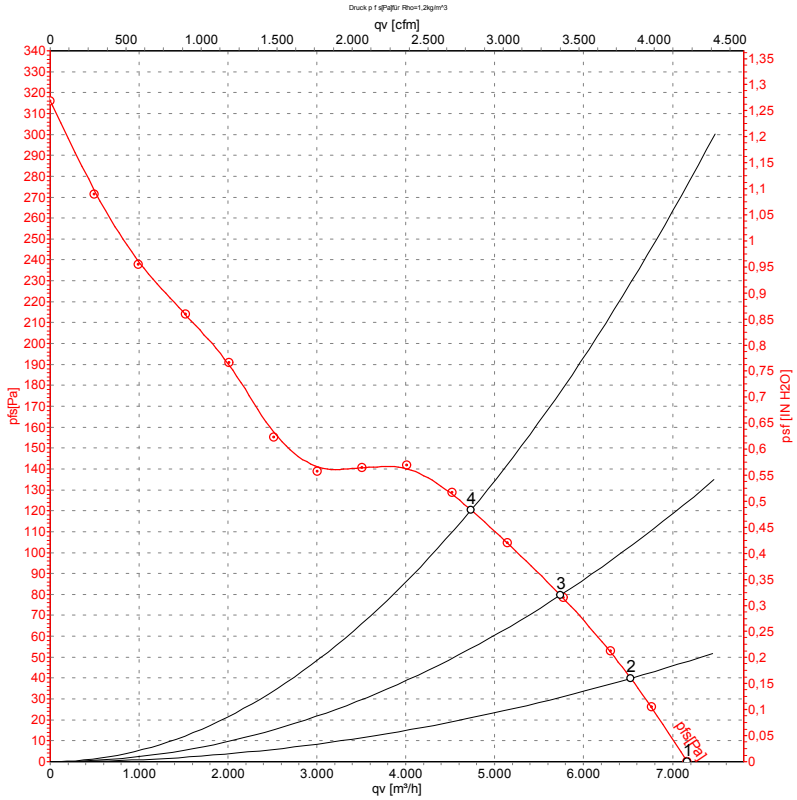
Δ	Delta connection	Y	Star connection	L1	= U1 = black
L2	= V1 = blue	L3	= W1 = brown	W2	yellow
U2	green	V2	white	TOP	2x gray
PE	green/yellow				

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Curves: Air performance 50 Hz



Measurement: LU-111305-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. Intake sound level: Sound power level according to ISO 13347 / sound pressure level measured at 1 m distance from fan axis. The values given are valid under the specified measuring conditions and may vary due to conditions of installation. For deviations from the standard configuration, the parameters have to be checked on the installed unit.

Measured values

	Wired	U	f	n	P_e	I	qv	p_{fs}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	CFM	inH2O
1	Y	400	50	1405	372	0.93	7165	0	4220	0.00
2	Y	400	50	1395	400	0.96	6530	40	3845	0.16
3	Y	400	50	1385	427	0.98	5735	80	3375	0.32
4	Y	400	50	1370	455	1.02	4735	120	2785	0.48

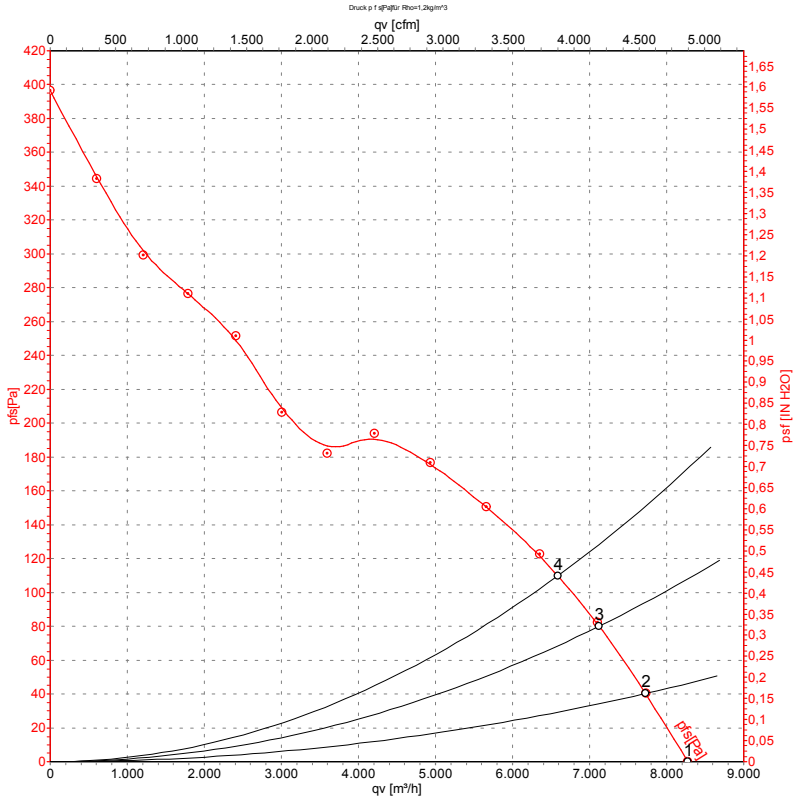
Wired = Wiring · U = Power supply · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

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AC axial fan - HyBlade

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Curves: Air performance 60 Hz



Measurement: LU-116995-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. Intake sound level: Sound power level according to ISO 13347 / sound pressure level measured at 1 m distance from fan axis. The values given are valid under the specified measuring conditions and may vary due to conditions of installation. For deviations from the standard configuration, the parameters have to be checked on the installed unit.

Measured values

	Wired	U	f	n	P_e	I	qv	p_{fs}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	CFM	inH2O
1	Y	460	60	1640	606	1.03	8275	0	4870	0.00
2	Y	460	60	1615	653	1.09	7725	40	4545	0.16
3	Y	460	60	1605	680	1.12	7120	80	4190	0.32
4	Y	460	60	1600	710	1.15	6590	110	3880	0.44

Wired = Wiring · U = Power supply · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

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