W4D500-CM03-05

AC axial fan - HyBlade

sickle-shaped blades (S series)

with round full nozzle, for rail applications

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Nominal data

Type	**W4D500-CM03-05**
Motor	**M4D110-GF**

Phase		3~	3~
Nominal voltage	VAC	400	400
Wiring		Δ	Δ
Frequency	Hz	50	50
Method of obtaining data		ml	ml
Valid for approval/standard		CE	CE
Speed	min^{-1}	1390	1385
Power consumption	W	720	740
Current draw	A	1.41	1.43
Max. back pressure	Pa	140	160
Min. ambient temperature	°C	-40	-40
Max. ambient temperature	°C	65	55
Starting current	A	6.5	6.5

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

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Technical description

Weight	16.8 kg
Fan size	500 mm
Rotor surface	Painted black
Impeller material	PA plastic, sheet-metal plate painted black
Fan housing material	Sheet steel, galvanized and coated with black plastic (RAL 9005)
Guard grille material	Steel, coated with black plastic (RAL 9005)
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	F4-1
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 storage	Ball bearing
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) externally wired
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 61800-5-1; CE
Approval	EAC; VDE

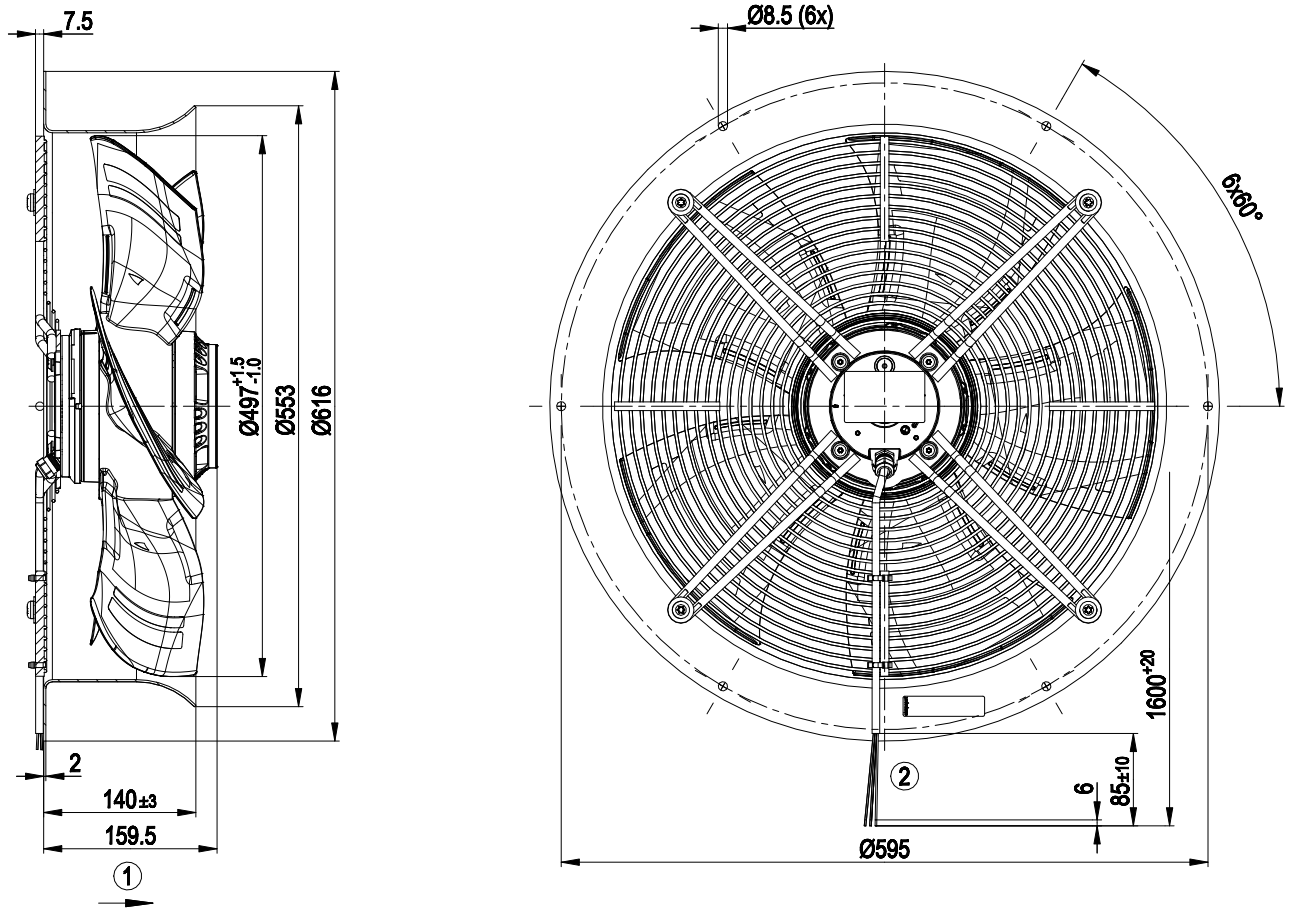
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Product drawing



1	Direction of air flow "A"
2	Cable halogen-free, BETAtrans® 3 GKW flex, sw 6G 0.5 mm², 6x crimped splices

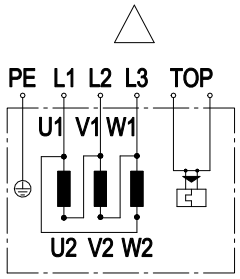
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Connection diagram



Note: Change of rotation direction by reversing two phases

Δ	Delta connection	L1	= U1 = black	L2	= V1 = blue
L3	= W1 = brown	TOP	2x gray	PE	green/yellow

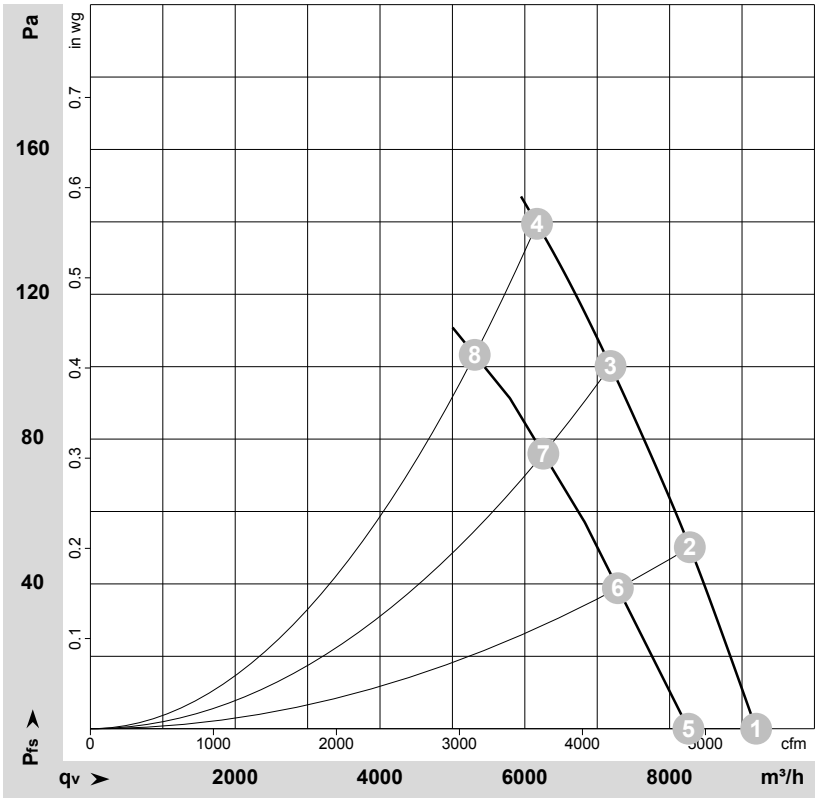
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Curves: Air performance 50 Hz



ρ = 1,15 kg/m³ ± 2%

Measurement: LU-106631
Measurement: LU-106885

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	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	1420	540	1.20	68	75	75	9195	0
2	Δ	400	50	1410	605	1.28	65	72	72	8280	50
3	Δ	400	50	1400	663	1.35	64	71	71	7185	100
4	Δ	400	50	1390	720	1.41	64	72	72	6170	140
5	Y	400	50	1275	433	0.71		72	73	8260	0
6	Y	400	50	1240	478	0.78		70	70	7285	39
7	Y	400	50	1215	518	0.85		68	68	6255	76
8	Y	400	50	1180	550	0.90		68	68	5310	103

Wired = Wiring · U = Power supply · f = Frequency · n = Speed · P_e = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
LwA_{out} = Sound power level outlet side · qv = Air flow · p_{fs} = Pressure increase

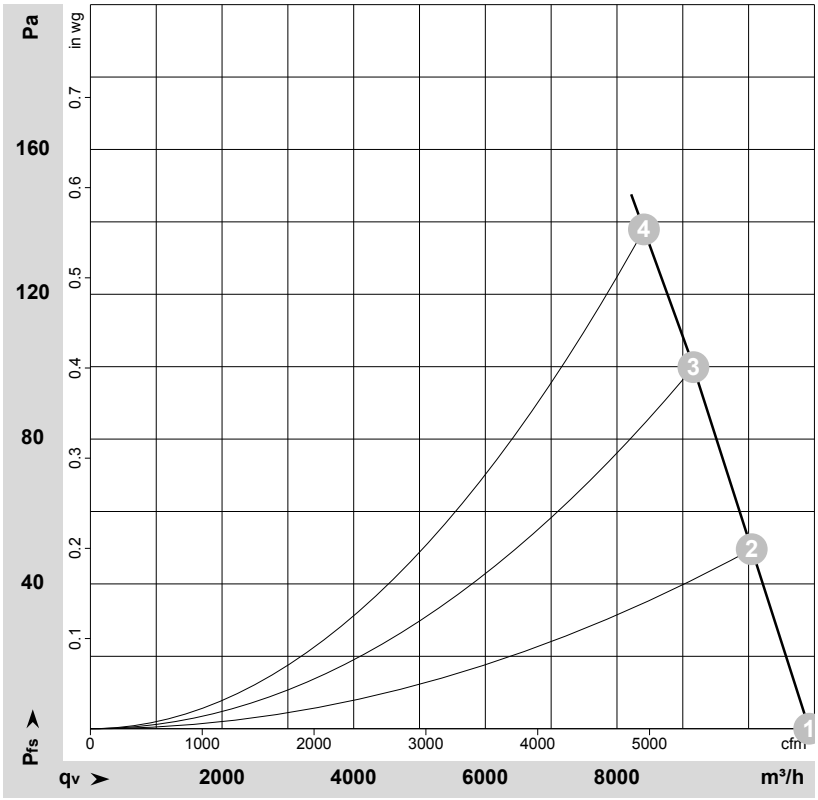
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Curves: Air performance 60 Hz



ρ = 1,15 kg/m³ ± 2%

Measurement: LU-110160

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	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	460	60	1680	854	1.41	71	79	79	10920	0
2	Δ	460	60	1670	930	1.49	70	77	77	10045	50
3	Δ	460	60	1655	1008	1.58	68	75	75	9160	100
4	Δ	460	60	1640	1060	1.64	68	75	75	8410	138

Wired = Wiring · U = Power supply · f = Frequency · n = Speed · P_e = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
LwA_{out} = Sound power level outlet side · qv = Air flow · p_{fs} = Pressure increase

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