

AC axial fan - HyBlade

sickle-shaped blades (S series), single-intake

Fan housing with guard grille

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Nominal data

Type	W4D300-DT04-09					
Motor	M4D068-DF					
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	1350	1530	1350	1530	1600
Power consumption	W	65	90	65	90	100
Current draw	A	0.28	0.29	0.16	0.17	0.17
Max. back pressure	Pa	60	75	60	75	80
Max. back pressure	in. wg	0.24	0.3	0.24	0.3	0.32
Min. ambient temperature	°C	-25	-25	-25	-25	-25
Max. ambient temperature	°C	70	70	70	70	70

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



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Technical description

Weight	3 kg
Size	300 mm
Motor size	68
Rotor surface	Painted black
Blade material	PP plastic
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	V
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP44; installation- and position-dependent as per EN 60034-5
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H1
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)	< 0.75 mA
Motor protection	Thermal overload protector (TOP) with basic insulation
With cable	Lateral
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1
Approval	UL 1004-1; CSA C22.2 No. 100

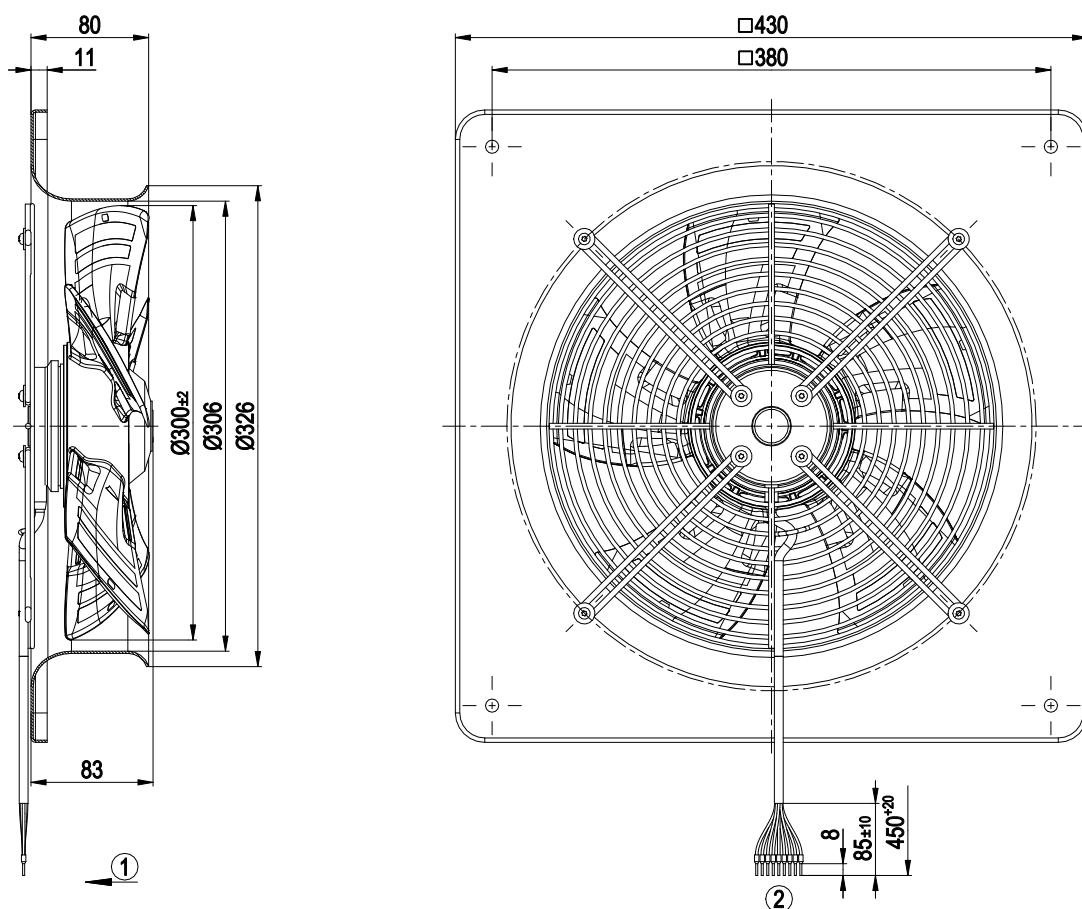


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Product drawing

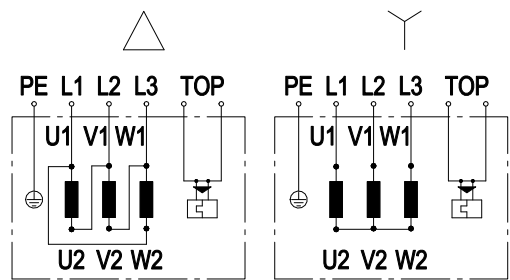


- | | |
|---|--------------------------------------|
| 1 | Airflow direction "V" |
| 2 | Cable PFA AWG20, 9x crimped ferrules |

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Connection diagram



Note: Change of rotation direction by reversing two phases

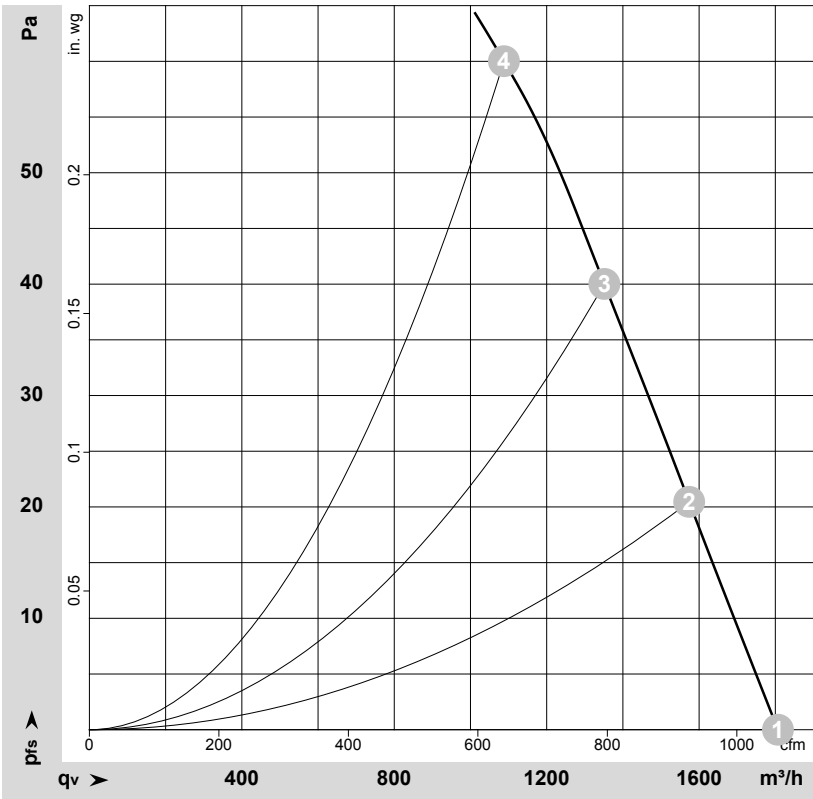
Δ	Delta connection	Y	Star connection	L1	black
L2	blue	L3	brown	U1	black
V1	blue	W1	brown	U2	green
V2	white	W2	yellow	TOP	2x gray
PE	green/yellow				



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Curves: Air performance 50 Hz



$\rho = 1.178 \text{ kg/m}^3 \pm 2 \%$

Measurement: LU-141395-1

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	LpA _{in}	LwA _{in}	q _v	p _{fs}	q _v	p _{fs}
		V	Hz	min ⁻¹	W	A	dB(A)	dB(A)	m³/h	Pa	cfm	in. wg
1	Y	400	50	1410	52	0.15	53	60	1805	0	1065	0.00
2	Y	400	50	1395	57	0.15	52	59	1575	20	925	0.08
3	Y	400	50	1385	60	0.15	51	59	1350	40	795	0.16
4	Y	400	50	1350	65	0.16	55	62	1090	60	640	0.24

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
q_v = Air flow · p_{fs} = Pressure increase

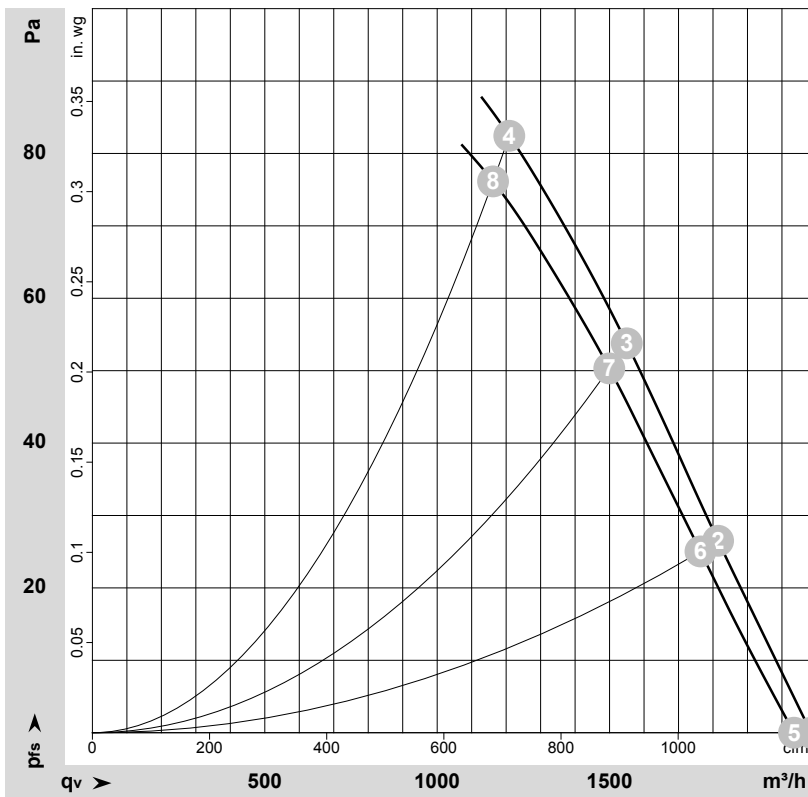


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Curves: Air performance 60 Hz



$$\rho = 1.177 \text{ kg/m}^3 \pm 2 \%$$

Measurement: LU-141399-1
Measurement: LU-141397-1

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	LpA _{in}	LwA _{in}	q _V	p _{fs}	q _V	p _{fs}
		V	Hz	min ⁻¹	W	A	dB(A)	dB(A)	m ³ /h	Pa	cfm	in. wg
1	Y	460	60	1650	77	0.15	57	64	2085	0	1225	0.00
2	Y	460	60	1630	84	0.16	56	63	1815	26	1070	0.10
3	Y	460	60	1615	89	0.16	56	63	1550	54	910	0.22
4	Y	460	60	1600	100	0.17	58	65	1210	80	710	0.32
5	Y	400	60	1605	70	0.14	56	63	2035	0	1200	0.00
6	Y	400	60	1580	78	0.15	55	62	1765	25	1040	0.10
7	Y	400	60	1560	82	0.16	55	62	1500	50	880	0.20
8	Y	400	60	1530	90	0.17	56	63	1160	75	685	0.30

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
q_V = Air flow · p_{fs} = Pressure increase

