AC axial fan

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

Fan housing with guard grille

W2D315-CQ10-05 ebmpapst Datasheet
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Nominal data

Type	**W2D315-CQ10-05**
Motor	**M2D074-EI**

Phase		3~	3~	3~	3~
Nominal voltage	VAC	400	400	400	400
Wiring		Δ	Y	Δ	Y
Frequency	Hz	50	50	60	60
Method of obtaining data		fa	fa	fa	fa
Valid for approval/standard		CE	CE	CE	CE
Speed (rpm)	min^{-1}	2650	2150	2850	2000
Power consumption	W	230	165	350	200
Current draw	A	0.41	0.27	0.56	0.33
Max. back pressure	Pa	150	80	150	70
Max. back pressure	inH2O	0.6	0.32	0.6	0.28
Min. ambient temperature	°C	-25	-25	-25	-25
Max. ambient temperature	°C	85	85	50	60
Starting current	A	1.47	0.53	1.5	0.5

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	30.4
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		43.5	40
05 Variable speed drive		No	

09 Power consumption P_e	kW	0.3
09 Air flow q_v	m^3/h	2510
09 Pressure increase p_{fs}	Pa	150
10 Speed (rpm) n	min^{-1}	2520
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-51086

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Technical description

Weight	6.25 kg
Fan size	315 mm
Rotor surface	Painted black
Blade material	Sheet steel
Fan housing material	Sheet steel, pre-galvanized and coated with cement-gray plastic (RAL 7033)
Guard grille material	Steel, phosphated and coated with black plastic
Number of blades	5
Airflow direction	"V"
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	F2-2
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	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; CE

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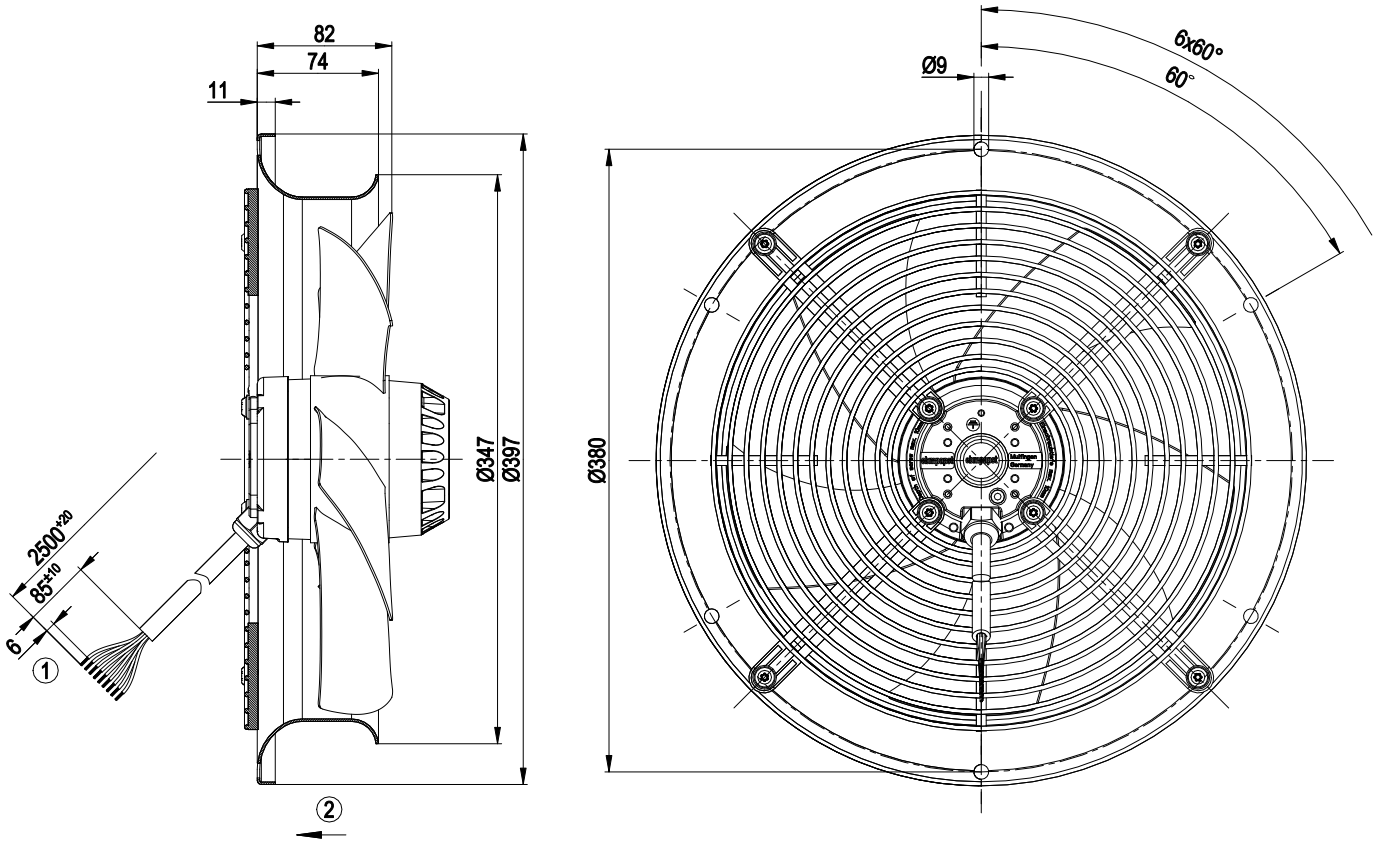
Product drawing



1	Cable silicone 9G 0.5 mm², 9x crimped splice
2	Airflow direction "V"

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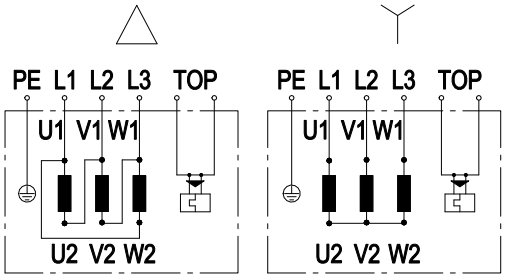
Connection diagram



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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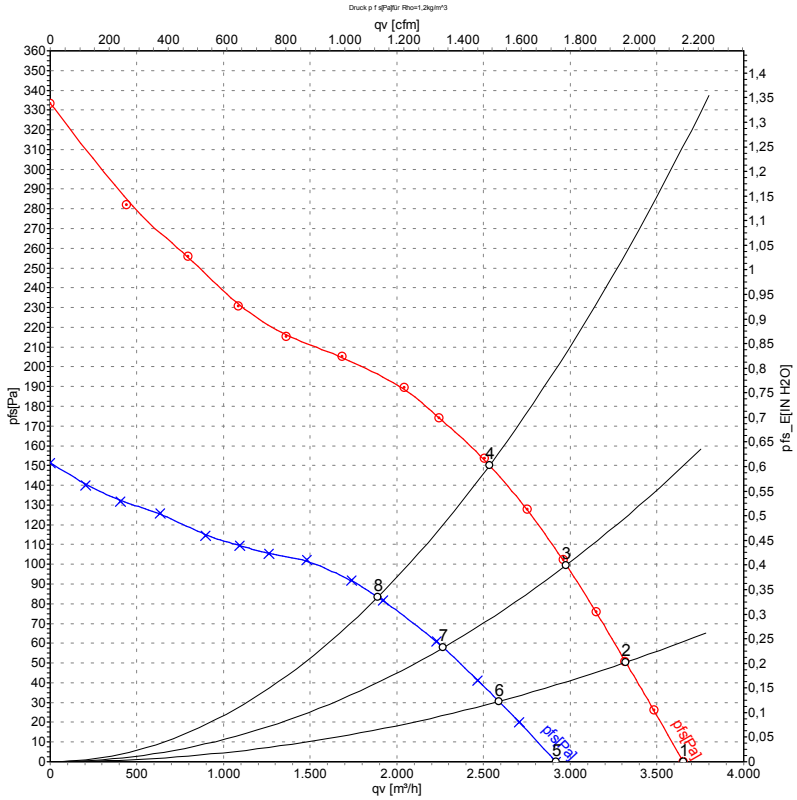
Curves: Air performance 50 Hz Δ



Measurement: LU-51086-1
Measurement: LU-51084-1

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	Δ	400	50	2650	230	0.41	3650	0	2150	0.00
2	Δ	400	50	2605	260	0.45	3320	50	1955	0.20
3	Δ	400	50	2570	283	0.48	2975	100	1750	0.40
4	Δ	400	50	2525	306	0.51	2535	150	1490	0.60
5	Y	400	50	2150	165	0.27	2920	0	1715	0.00
6	Y	400	50	2050	180	0.29	2590	31	1525	0.12
7	Y	400	50	1970	189	0.30	2265	58	1335	0.23
8	Y	400	50	1900	196	0.32	1890	84	1110	0.34

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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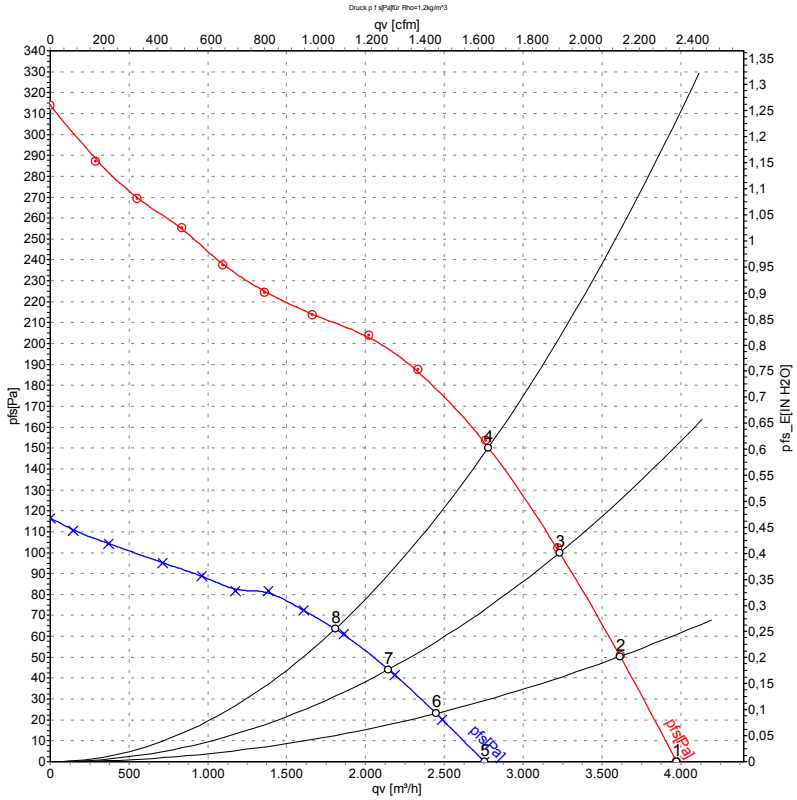
Curves: Air performance 60 Hz Δ



Measurement: LU-51087-1
Measurement: LU-51085-1

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	Δ	400	60	2850	350	0.56	3975	0	2340	0.00
2	Δ	400	60	2805	377	0.61	3615	50	2130	0.20
3	Δ	400	60	2730	402	0.65	3230	100	1900	0.40
4	Δ	400	60	2660	426	0.69	2780	150	1635	0.60
5	Y	400	60	2000	200	0.33	2755	0	1620	0.00
6	Y	400	60	1930	206	0.34	2445	23	1440	0.09
7	Y	400	60	1835	212	0.35	2145	44	1265	0.18
8	Y	400	60	1750	215	0.35	1810	64	1065	0.26

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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