

# AC axial fan

sickle-shaped blades (S series)

Fan housing with guard grille

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Amtsgericht (court of registration) Stuttgart · HRB 590142



## Nominal data

Type	W4D400-DP12-40				
Motor	M4D074-EI				
Phase		3~	3~	3~	3~
Nominal voltage	VAC	200	220	230	230
Wiring		Δ	Δ	Δ	Δ
Frequency	Hz	50	60	50	60
Method of obtaining data		fa	fa	fa	fa
Valid for approval/standard		CE	CE	CE	CE
Speed (rpm)	min <sup>-1</sup>	1400	1630	1430	1640
Power consumption	W	150	220	175	225
Current draw	A	0.72	0.78	0.92	0.80
Max. back pressure	Pa	100	125	105	125
Max. back pressure	inH <sub>2</sub> O	0.4	0.5	0.42	0.5
Min. ambient temperature	°C	-40	-40	-40	-40
Max. ambient temperature	°C	65	60	65	60
Starting current	A	2.8	2.8	3.0	3.0

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 $\eta_{es}$	%	32.7	29.1	09 Power consumption $P_e$	kW 0.19
02 Measurement category		A		09 Air flow $q_v$	m <sup>3</sup> /h 2595
03 Efficiency category		Static		09 Pressure increase $p_{fs}$	Pa 91
04 Efficiency grade N		43.6	40	10 Speed (rpm) n	min <sup>-1</sup> 1415
05 Variable speed drive		No		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 =  $1 + p_{fs} / 100\,000\text{ Pa}$

LU-27622



### Technical description

<b>Weight</b>	9 kg
<b>Fan size</b>	400 mm
<b>Rotor surface</b>	Painted black
<b>Blade material</b>	Sheet steel, painted black
<b>Fan housing material</b>	Sheet steel, pre-galvanized and coated with black plastic
<b>Guard grille material</b>	Steel, phosphated and coated with black plastic
<b>Number of blades</b>	5
<b>Airflow direction</b>	"V"
<b>Direction of rotation</b>	Counterclockwise, viewed toward rotor
<b>Degree of protection</b>	IP44; installation- and position-dependent as per EN 60034-5
<b>Insulation class</b>	"F"
<b>Moisture (F) / Environmental (H) protection class</b>	H0+
<b>Max. permitted ambient temp. for motor (transport/storage)</b>	+ 80 °C
<b>Min. permitted ambient temp. for motor (transport/storage)</b>	- 40 °C
<b>Installation position</b>	Shaft horizontal or rotor on bottom; rotor on top on request
<b>Condensation drainage holes</b>	On rotor side
<b>Mode</b>	S1
<b>Motor bearing</b>	Ball bearing
<b>Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)</b>	< 0.75 mA
<b>Motor protection</b>	Thermal overload protector (TOP) with basic insulation
<b>With cable</b>	Variable
<b>Protection class</b>	I (with customer connection of protective earth)
<b>Conformity with standards</b>	CE
<b>Approval</b>	CCC; UL 1004-1; CSA C22.2 No. 100

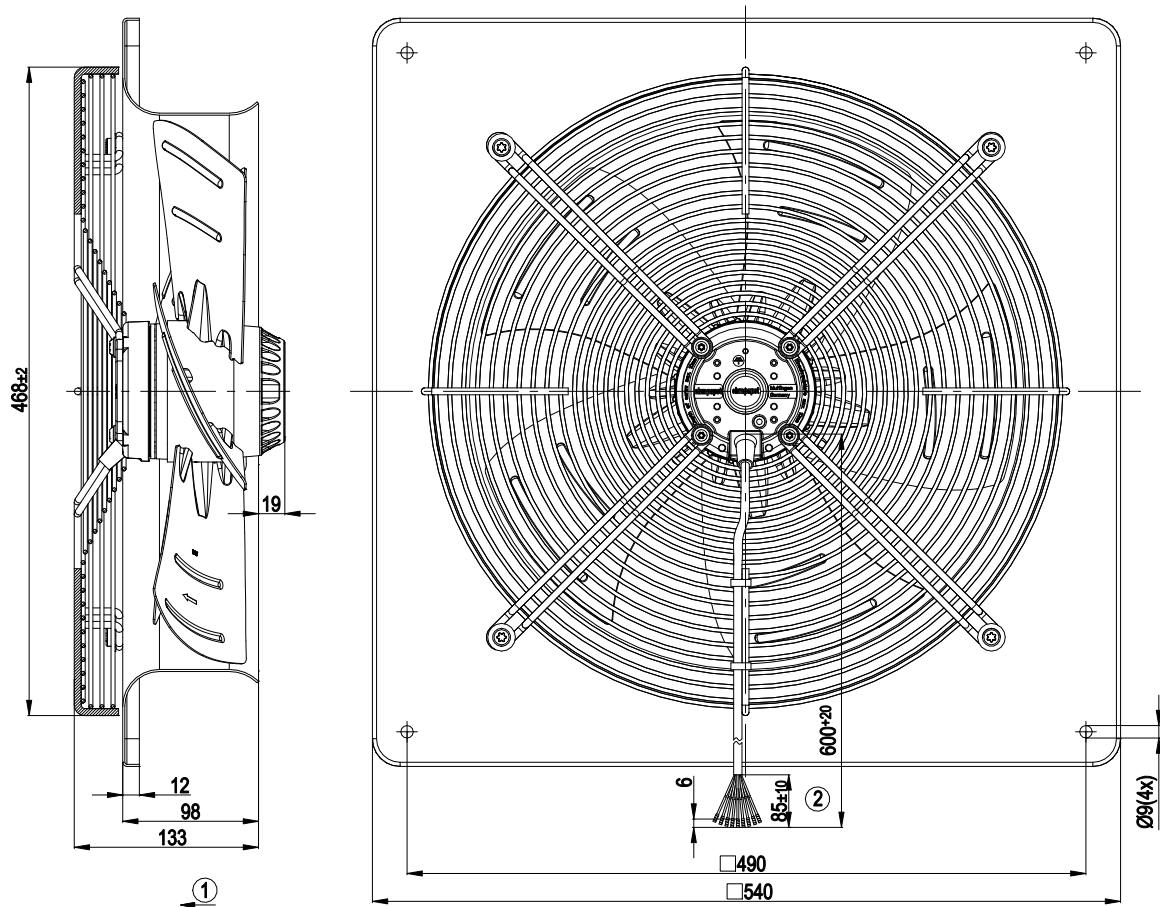
W4D400-DP12-40

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## Product drawing



- |   |                                                       |
|---|-------------------------------------------------------|
| 1 | Direction of air flow "V"                             |
| 2 | Cable PFA 9G 0.5 mm <sup>2</sup> , 9x crimped splices |

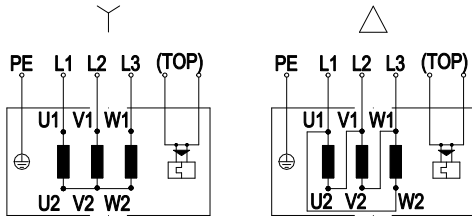


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## Connection diagram



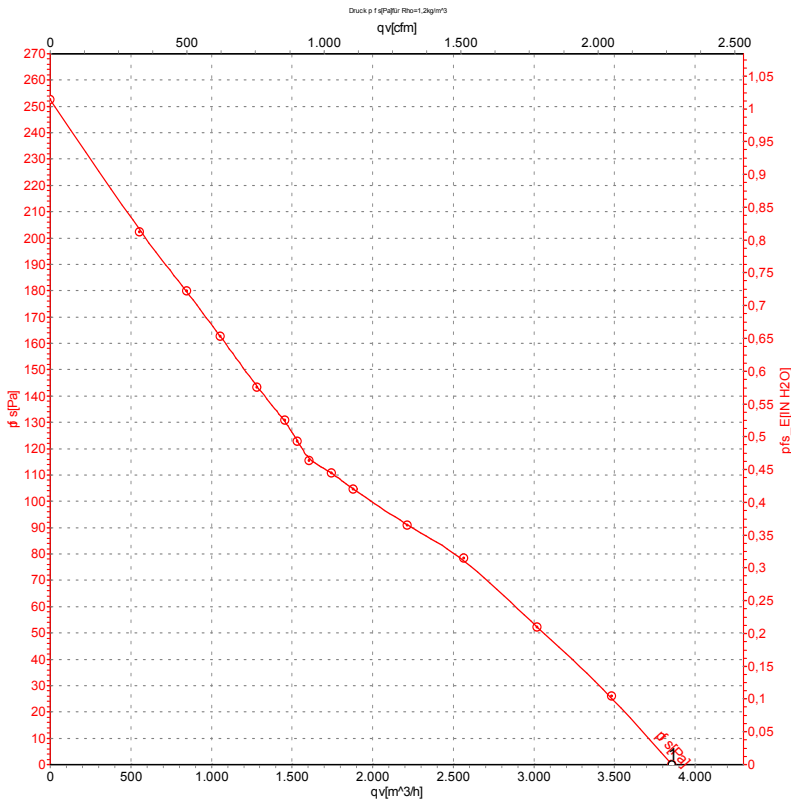
Y	Star connection	Δ	Delta connection	L1	= U1 = black
U2	green	L2	= V1 = blue	V2	white
L3	= W1 = brown	W2	yellow	TOP	2x gray
PE	green/yellow				

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## Curves: Air performance 50 Hz Δ



Measurement: LU-50712-1

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 <sub>e</sub>	I	qv	qv	p <sub>st</sub>
		V	Hz	min <sup>-1</sup>	W	A	m <sup>3</sup> /h	CFM	inH2O
1	Δ	230	50	1430	175	0.92	3855	2270	0.00

Wired = Wiring · U = Power supply · f = Frequency · n = Speed (rpm) · P<sub>e</sub> = Power consumption · I = Current draw · qv = Air flow

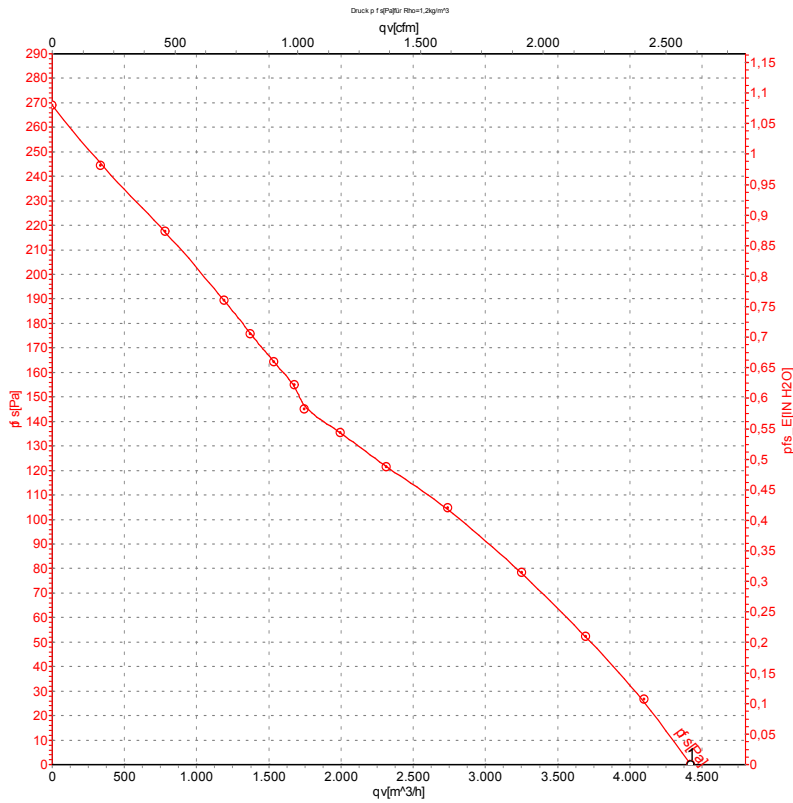


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## Curves: Air performance 60 Hz Δ



Measurement: LU-50713-1

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 <sub>e</sub>	I	qv	qv	p <sub>fs</sub>
		V	Hz	min <sup>-1</sup>	W	A	m <sup>3</sup> /h	CFM	inH <sub>2</sub> O
1	Δ	230	60	1640	225	0.80	4420	2605	0.00

Wired = Wiring · U = Power supply · f = Frequency · n = Speed (rpm) · P<sub>e</sub> = Power consumption · I = Current draw · qv = Air flow



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