W4D400-FP16-38

AC axial fan - AxiCool

sickled blades (S series), single inlet

Wall ring with guard grille

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Nominal data

Type	**W4D400-FP16-38**
Motor	**M4D074-EI**

Phase		3~	3~
Nominal voltage	VAC	400	400
Connection		Y	Y
Frequency	Hz	50	60
Type of data definition		fa	fa
Valid for approval / standard		CE	CE
Speed (rpm)	min^{-1}	1300	1360
Power input	W	115	160
Current draw	A	0.21	0.27
Max. back pressure	Pa	100	60
Min. ambient temperature	°C	-25	-25
Max. ambient temperature	°C	30	30

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

Data according to ErP directive

		Actual	Request 2015
01 Overall efficiency η_{es}	%	28.5	28.3
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		40.2	40
05 Variable speed drive		No	

09 Power input P_e	kW	0.14
09 Air flow q_v	m^3/h	2550
09 Pressure increase p_{fs}	Pa	60
10 Speed (rpm) n	min^{-1}	1200
11 Specific ratio*		1.00

Data definition with optimum efficiency.
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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

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Technical features

Mass	8 kg
Size	400 mm
Surface of rotor	Coated in black
Material of terminal box	ABS plastic
Material of blades	Sheet steel, coated in black
Material of wall ring	Sheet steel, galvanised and coated in traffic white plastic (RAL 9016)
Material of guard grille	Steel, coated in black plastic (RAL9005)
Number of blades	5
Direction of air flow	"V"
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	IP 44; Depending on installation and position as per EN 60034-5
Insulation class	"F"
Humidity (F)/environmental protection class (H)	F2-2
Max. permissible ambient motor temp. (transp./ storage)	+ 70 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensate discharge holes	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing with anti-freezing grease
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	< 0.75 mA
Electrical leads	Via terminal box
Motor protection	Thermal overload protector (TOP) brought out, basic insulation
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60335-1, motor does not have factory-installed overheating protection

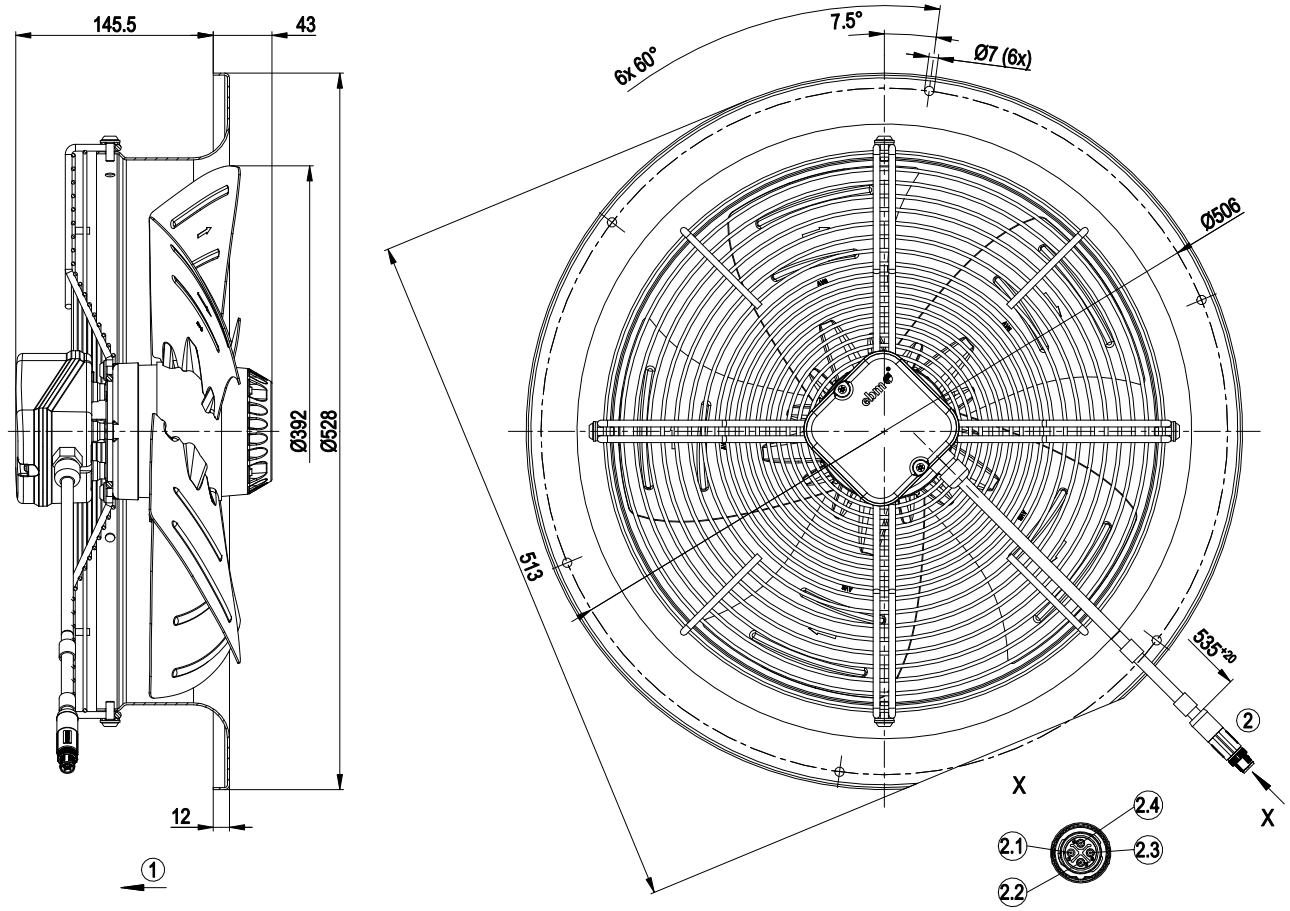
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Product drawing



1	Direction of air flow "V"
2	Connection line PUR 4x 1.5 mm², with connector M12 Phoenix, 4-pole (s-coded)
2.1	L1 (black1)
2.2	L2 (black2)
2.3	L3 (black3)
2.4	PE (green/yellow)

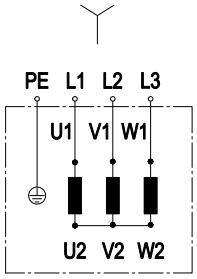
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Connection screen



Change direction of rotation by reversing two phases

	Three-phase motor	Y	Star connection	L1	black 1
L2	black 2	L3	black 3	PE	green/yellow

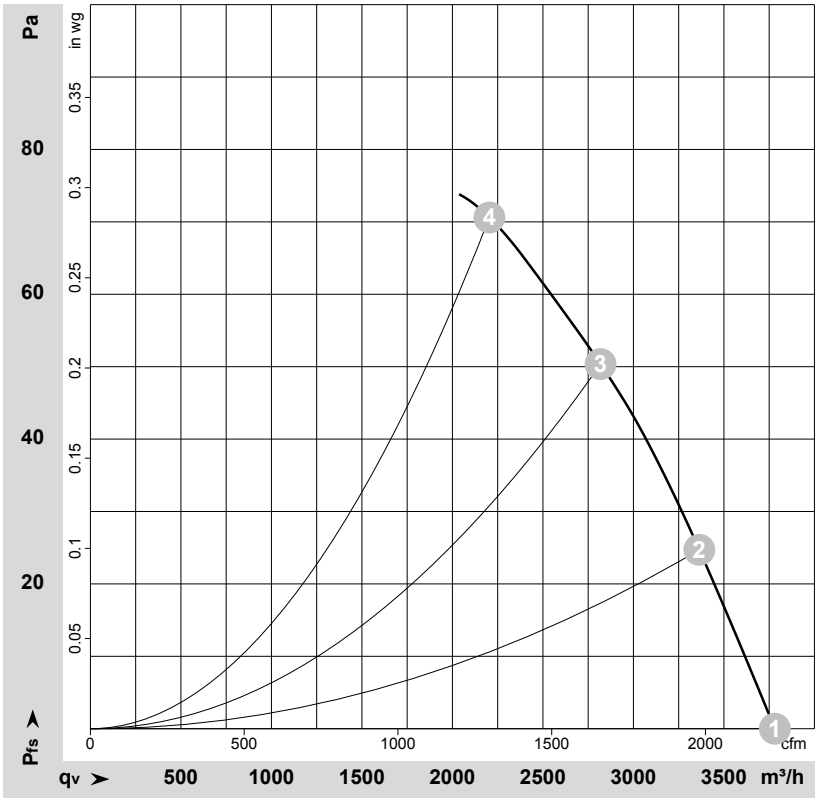
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Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-51669-1

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

Measured values

	Conn.	U	f	n	P_e	I	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	inH2O
1	Y	400	50	1300	115	0.21	3780	0	2225	0.00
2	Y	400	50	1265	128	0.22	3365	25	1980	0.10
3	Y	400	50	1220	144	0.25	2820	50	1660	0.20
4	Y	400	50	1180	156	0.27	2205	70	1295	0.28

Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed (rpm) · P_e = Power input · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase

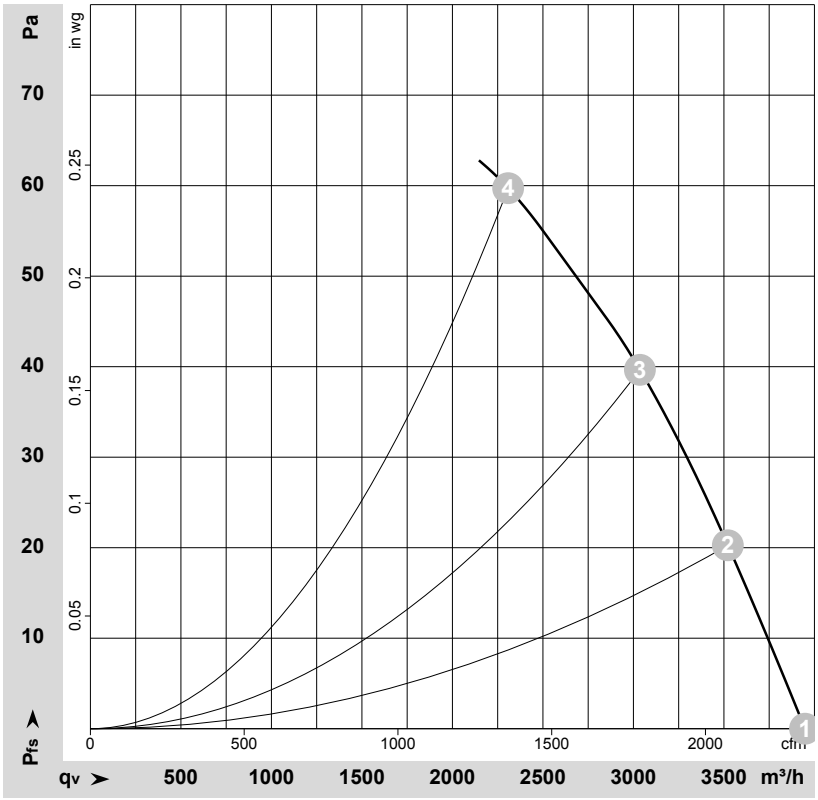
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Charts: Air flow 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-51672-1

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

Measured values

	Conn.	U	f	n	P_e	I	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	inH2O
1	Y	400	60	1360	160	0.27	3950	0	2325	0.00
2	Y	400	60	1290	171	0.29	3520	20	2075	0.08
3	Y	400	60	1225	183	0.31	3035	40	1785	0.16
4	Y	400	60	1145	195	0.33	2310	60	1360	0.24

Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed (rpm) · P_e = Power input · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase

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