W3G450-TC28-30

EC axial fan - AxiCool

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

Fan housing with guard grille

ebm-papst Mulfingen GmbH & Co. KG
Bachmühle 2 · D-74673 Mulfingen
Phone +49 7938 81-0
Fax +49 7938 81-110
info1@de.ebmpapst.com
www.ebmpapst.com

Limited partnership · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRB 590142

ErP2015 EXCEEDS THE NORM

Nominal data

Type	**W3G450-TC28-30**	
Motor	**M3G084-FA**	
Phase		1~
Nominal voltage	VAC	230
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min^{-1}	1300
Power consumption	W	345
Current draw	A	2.2
Max. back pressure	Pa	125
Max. back pressure	inH2O	0.5
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	40

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}	%	42.6	30.7
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		51.9	40
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.34
09 Air flow q_v	m^3/h	4005
09 Pressure increase p_{fs}	Pa	118
10 Speed (rpm) n	min^{-1}	1305
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-124620

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Technical description

Weight	11 kg
Fan size	450 mm
Rotor surface	Painted black
Blade material	Press-fitted sheet steel blank, sprayed with PP plastic
Fan housing material	PP plastic
Number of blades	5
Airflow direction	"V"
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	F3-1
Max. permitted ambient temp. for motor (transport/storage)	+ 70 °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 with low-temperature lubricant
Technical features	- Output 10 VDC, max. 1.1 mA - Motor current limitation - PFC, passive - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from supply - Thermal overload protection for electronics/motor - Line undervoltage detection
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC circuit feedback	According to EN 61000-3-2/3
EMC interference emission	According to EN 61000-6-3 (household environment)
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; CE

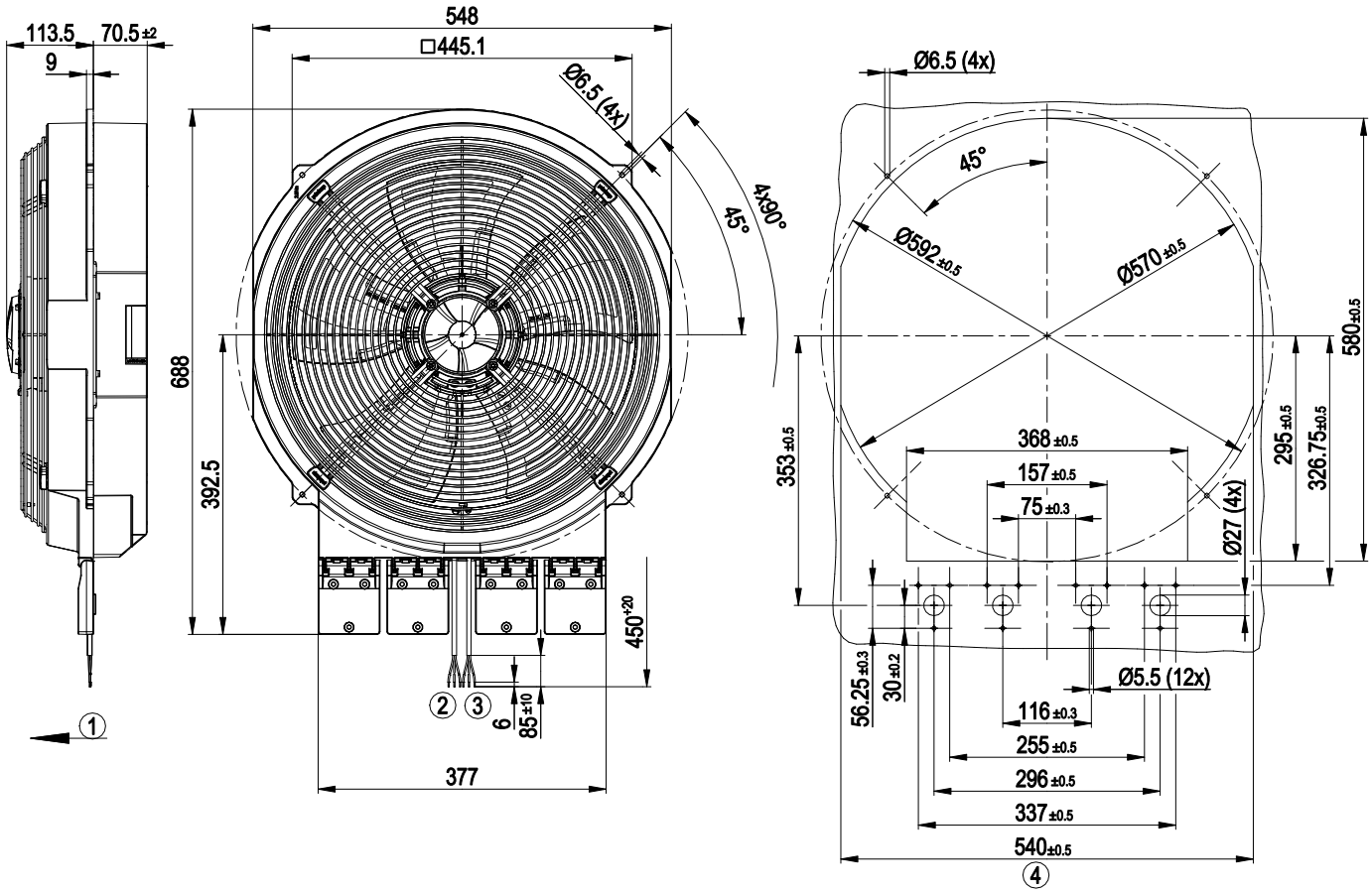
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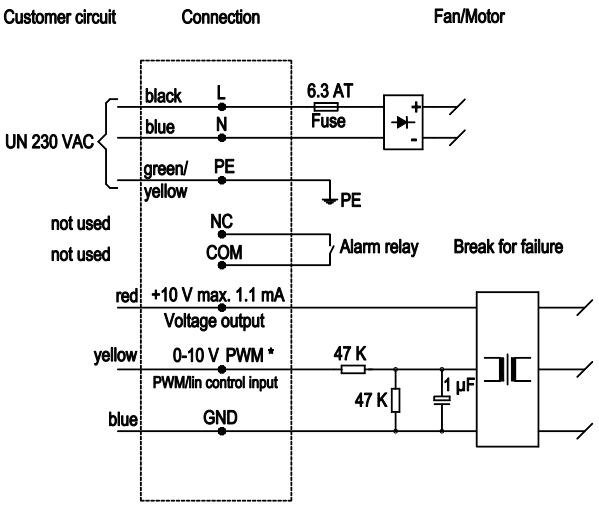
Fan housing with guard grille

Product drawing



1	Direction of air flow "V"
2	Cable PVC AWG18, 3x crimped splices
3	Control cable PVC AWG22, 3x crimped splices
4	Mounting dimensions

Connection diagram



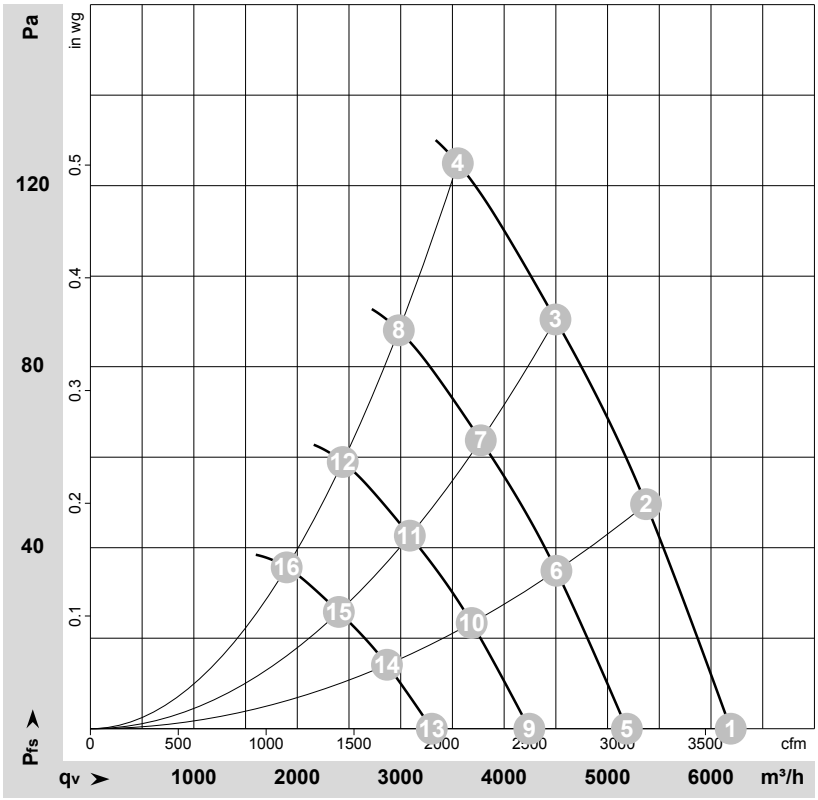
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-146536-1

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

	U	f	n	P_{ed}	I	LpA_{in}	LwA_{in}	LwA_{out}	qv	p_{fs}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	CFM	inH2O
1	230	50	1300	265	1.77	64	70	71	6190	0	3645	0.00
2	230	50	1300	301	2.00	62	68	69	5370	50	3160	0.20
3	230	50	1300	325	2.15	61	67	69	4495	90	2645	0.36
4	230	50	1300	345	2.20	64	70	71	3550	125	2090	0.50
5	230	50	1100	156	1.04	60	66	67	5185	0	3055	0.00
6	230	50	1100	178	1.18	57	63	65	4505	35	2650	0.14
7	230	50	1100	192	1.27	57	63	64	3775	64	2220	0.26
8	230	50	1100	205	1.35	59	66	66	2980	88	1755	0.35
9	230	50	900	85	0.57	55	61	62	4245	0	2500	0.00
10	230	50	900	97	0.64	52	58	60	3685	23	2170	0.09
11	230	50	900	105	0.70	52	58	59	3090	43	1820	0.17
12	230	50	900	112	0.74	54	61	61	2440	59	1435	0.24
13	230	50	700	40	0.27	49	54	56	3300	0	1945	0.00
14	230	50	700	46	0.30	46	52	53	2865	14	1685	0.06
15	230	50	700	50	0.33	45	51	53	2400	26	1415	0.10
16	230	50	700	53	0.35	48	55	55	1900	36	1115	0.14

U = Power supply · f = Frequency · n = Speed (rpm) · P_{ed} = 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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