R3G400-AC30-61

EC centrifugal fan

backward-curved, single-intake



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

Nominal data

Type	**R3G400-AC30-61**
Motor	**M3G084-FA**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min^{-1}	1370
Power consumption	W	380
Current draw	A	1.7
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	30

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}	%	58.4	47.1
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		73.3	62
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.38
09 Air flow q_v	m^3/h	2390
09 Pressure increase p_{fs}	Pa	300
10 Speed (rpm) n	min^{-1}	1370
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-73076

EC centrifugal fan

backward-curved, single-intake

Technical description

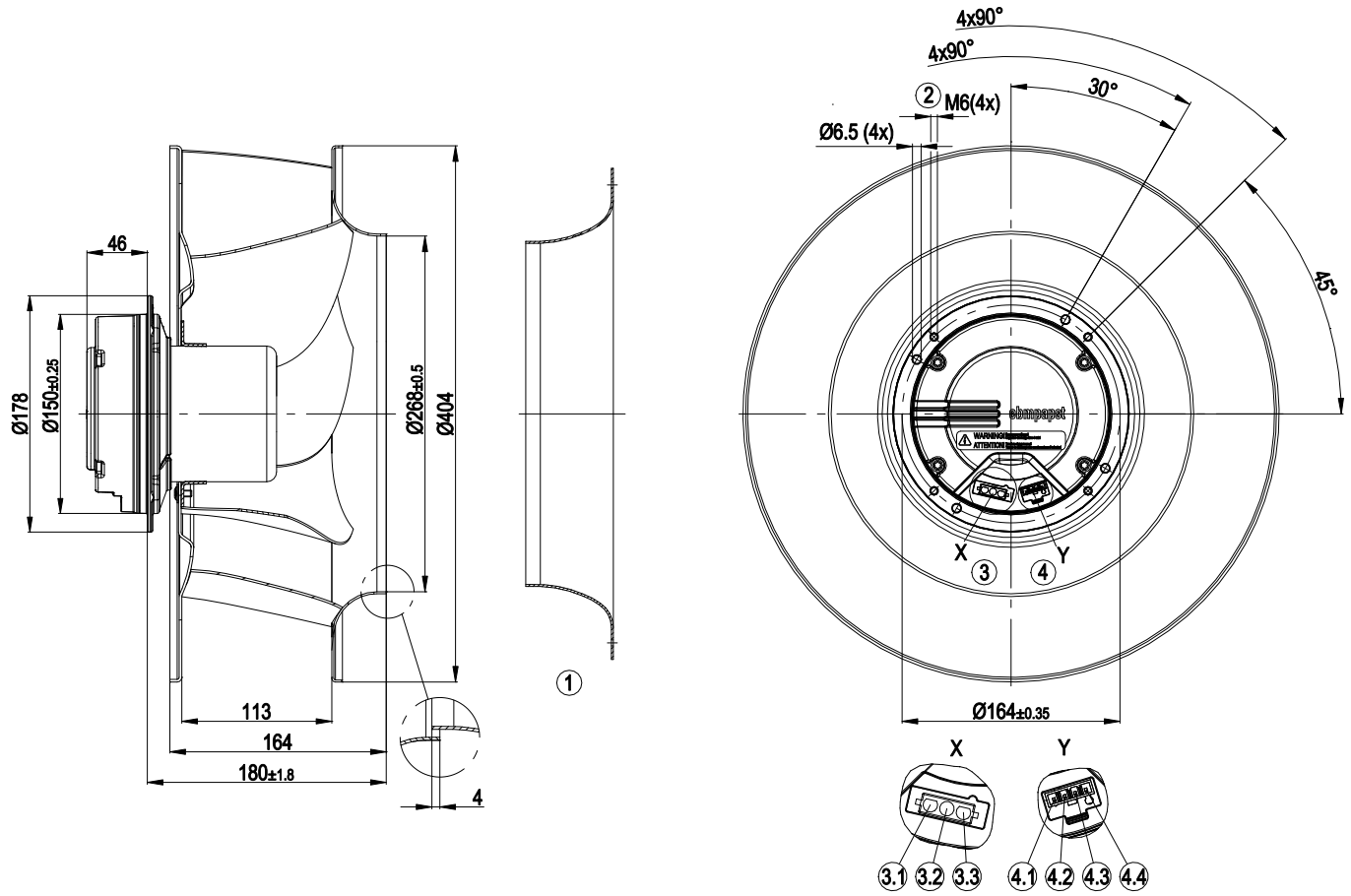
Weight	5.8 kg
Fan size	400 mm
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	Sheet aluminum
Number of blades	6
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP20
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	F0
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 top; rotor on bottom on request
Condensation drainage holes	None
Mode	S1
Motor bearing	Ball bearing
Technical features	- Operation and alarm display: reversible voltage output 0 V / +15 V - Integrated PID controller - Motor current limitation - PFC, active - RS-485 ebmBUS - Soft start - Control interface with SELV potential safely disconnected from supply - Thermal overload protection for electronics/motor - Line undervoltage / phase failure 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 61000-6-4 (industrial environment)
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	With plug
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 61800-5-1; CE
Approval	UL 507; EAC; CSA C22.2 No. 113; CCC

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

EC centrifugal fan

backward-curved, single-intake

Product drawing



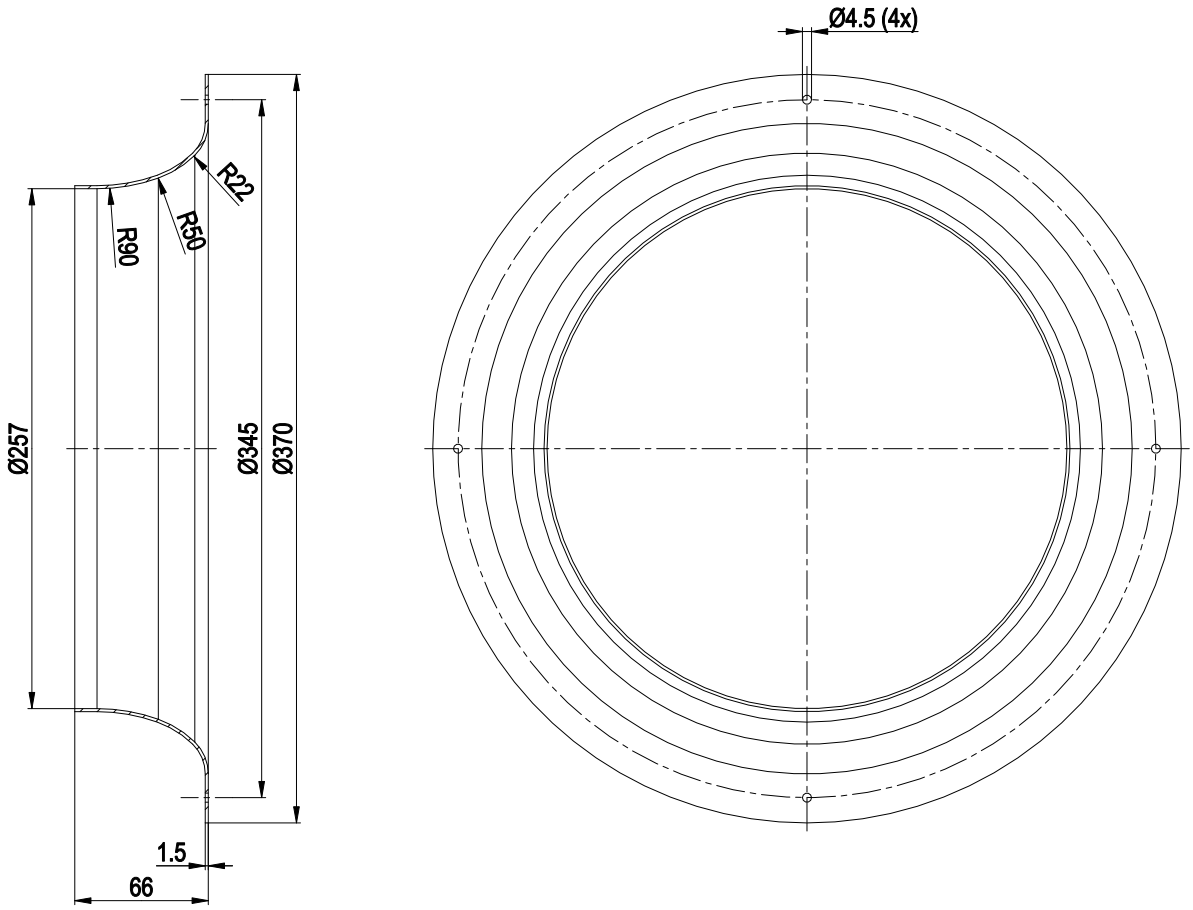
1	Accessory part: inlet ring 54476-2-4013 not included in scope of delivery
2	Max. clearance for screw 10 mm
3	Header Lonco no. C63502-3A, mating connectors with sockets not included in scope of delivery
3.1	PE
3.2	N
3.3	L
4	4-pole header Molex 39-30-2040, mating connector with sockets not included in scope of delivery
4.1	RSB
4.2	RSA
4.3	+15 V; in case of fault: 0 V
4.4	0 V; in case of fault: +15 V

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

EC centrifugal fan

backward-curved, single-intake

Accessory part



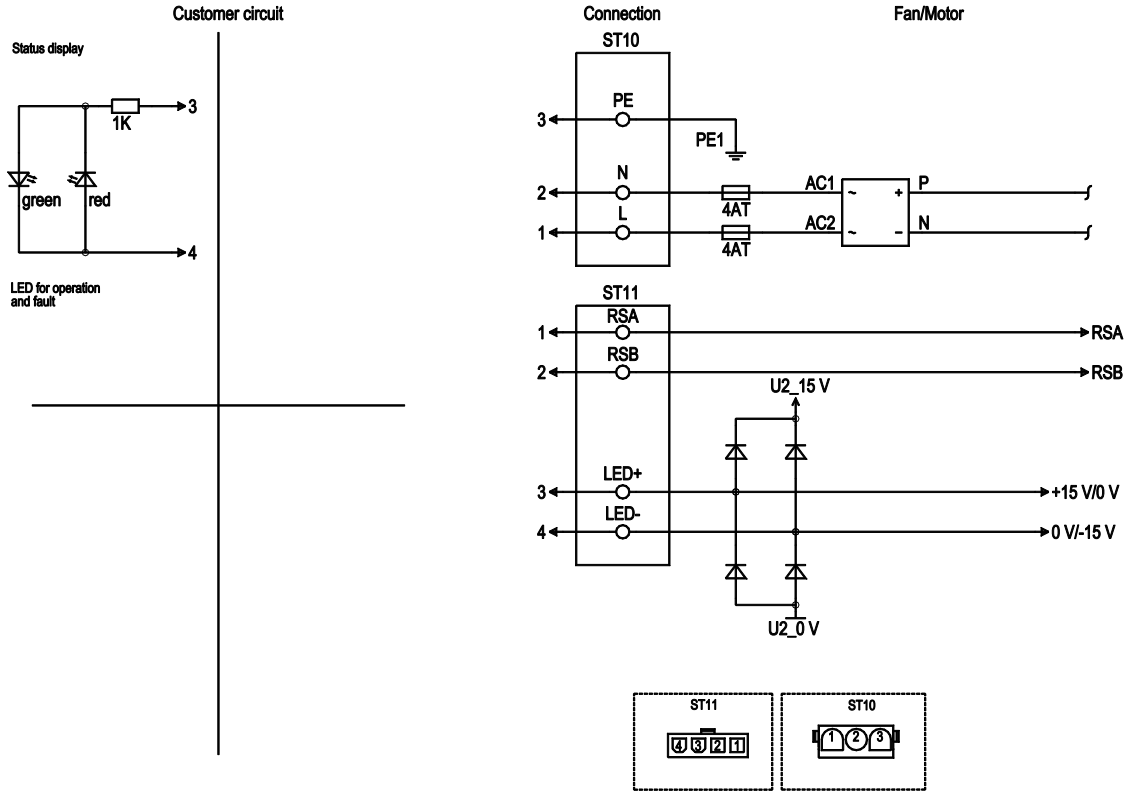
Inlet ring 54476-2-4013 not included in scope of delivery

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

EC centrifugal fan

backward-curved, single-intake

Connection diagram



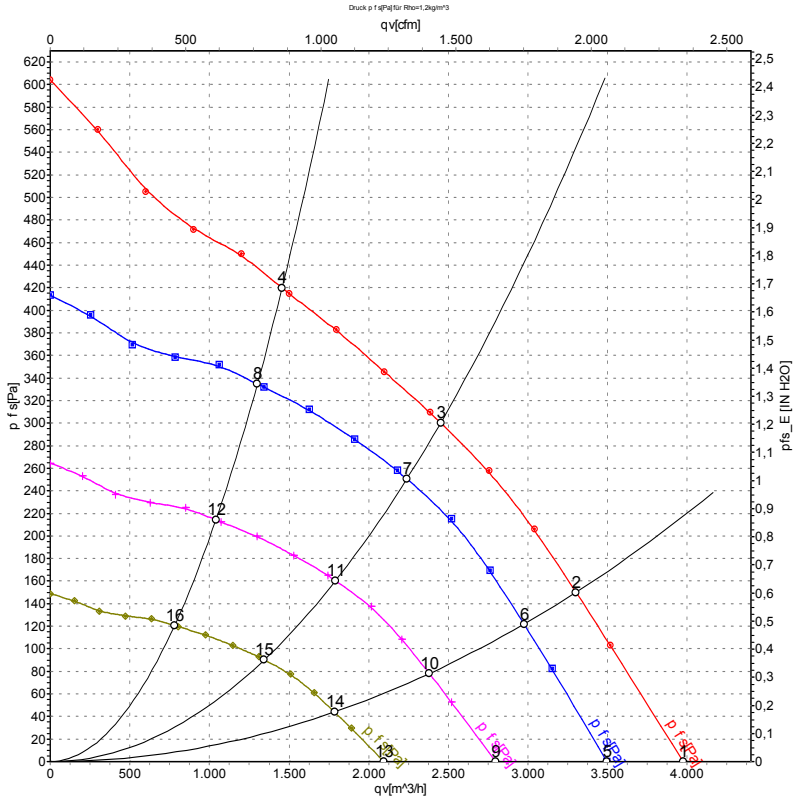
No.	Conn.	Designation	Color	Function/assignment
10	1	L		Power supply, phase, 50/60 Hz
10	2	N		Power supply, neutral conductor, 50/60 Hz
10	3	PE		Protective earth
11	1	RSA		RS485 interface for ebmBUS, RSA, SELV
11	2	RSB		RS485 interface for ebmBUS, RSB, SELV
11	3	LED +		Voltage output 15 V (+15%/-10%), max. 30 mA, power supply for external devices (e.g. status display for LED), SELV
11	4	LED -		Reference ground for control interface, SELV

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

EC centrifugal fan

backward-curved, single-intake

Curves: Air performance 50 Hz



Measurement: LU-73076-1

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	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	inH2O
1	230	50	1420	327	1.45	3975	0	2340	0.00
2	230	50	1385	362	1.60	3300	150	1945	0.60
3	230	50	1370	380	1.70	2450	300	1445	1.20
4	230	50	1400	351	1.55	1455	420	860	1.69
5	230	50	1250	222	0.99	3495	0	2055	0.00
6	230	50	1250	264	1.17	2975	122	1750	0.49
7	230	50	1250	290	1.28	2240	251	1320	1.01
8	230	50	1250	250	1.10	1300	335	765	1.34
9	230	50	1000	114	0.50	2795	0	1645	0.00
10	230	50	1000	135	0.60	2380	78	1400	0.31
11	230	50	1000	149	0.66	1790	160	1055	0.64
12	230	50	1000	128	0.56	1040	214	615	0.86
13	230	50	750	48	0.21	2095	0	1235	0.00
14	230	50	750	57	0.25	1785	44	1050	0.18
15	230	50	750	63	0.28	1345	90	790	0.36
16	230	50	750	54	0.24	780	120	460	0.48

U = Power supply · f = Frequency · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase

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