R4E450-AK01-01

AC centrifugal fan

backward curved, single inlet



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
County court Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
County court Stuttgart · HRB 590142

ErP2013 EXCEEDS THE NORM

Nominal data

Type	**R4E450-AK01-01**
Motor	**M4E110-GF**

Phase		1~
Nominal voltage	VAC	230
Frequency	Hz	50
Type of data definition		ml
Valid for approval / standard		CE
Speed	min^{-1}	1250
Power input	W	680
Current draw	A	3
Motor capacitor	µF	14
Capacitor voltage	VDB	400
Min. back pressure	Pa	0
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	70

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

Installation category	A
Efficiency category	Static
Variable speed drive	No
Specific ratio*	1.00

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

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}	%	45.7	45.7	49.7
Efficiency grade N		58	58	62
Power input P_e	kW	0.67		
Air flow q_v	m^3/h	3650		
Pressure increase p_{fs}	Pa	300		
Speed n	min^{-1}	1255		

Data definition with optimum efficiency. LU-71549
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

ebmpapst

AC centrifugal fan

backward curved, single inlet

Technical features

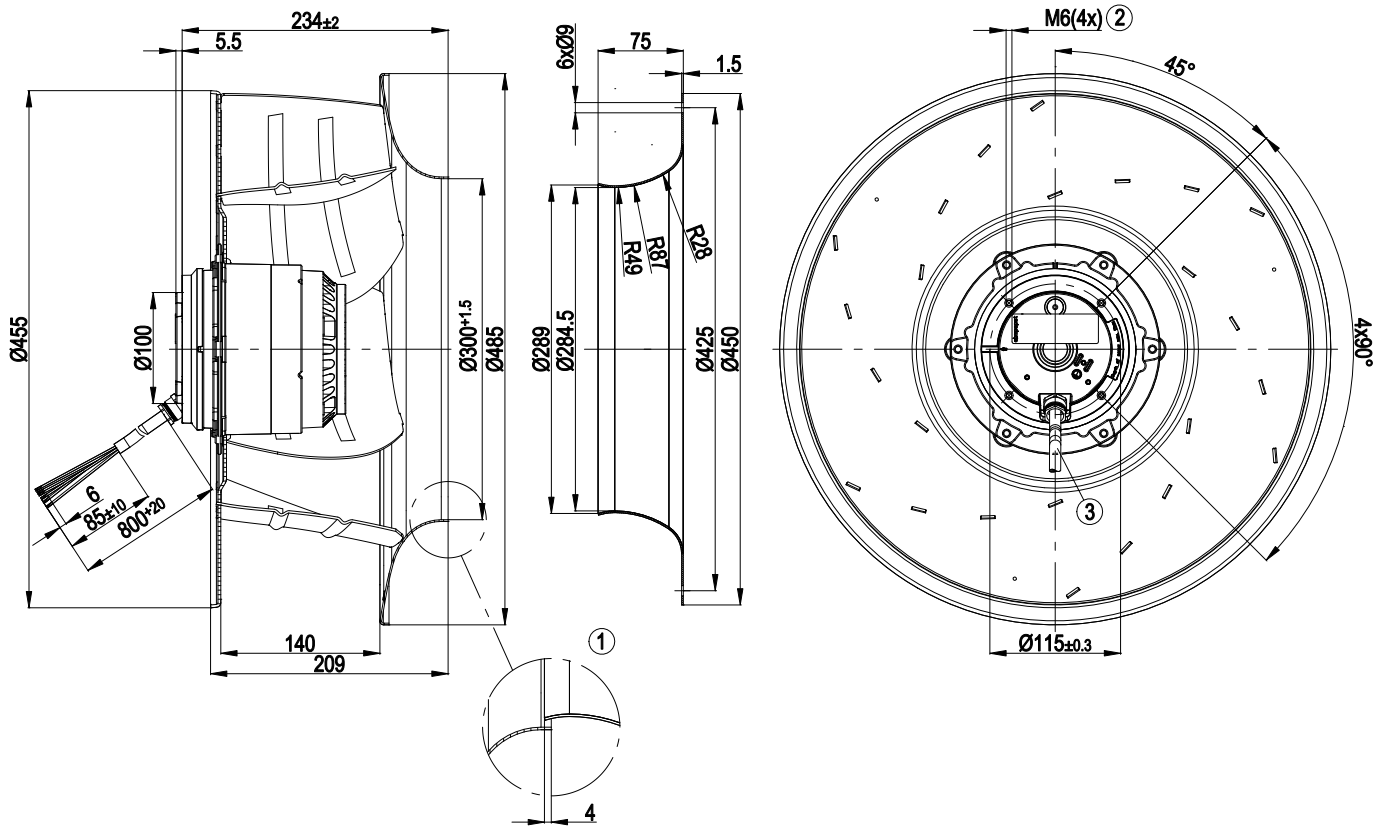
Mass	12 kg
Size	450 mm
Surface of rotor	Cast in aluminium
Material of impeller	Aluminium sheet
Number of blades	6
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"F"
Humidity class	F3-1
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible 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
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) brought out
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 61800-5-1; CE
Approval	CCC; CSA C22.2 Nr.100; EAC; UL 1004-1; VDE

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

AC centrifugal fan

backward curved, single inlet

Product drawing



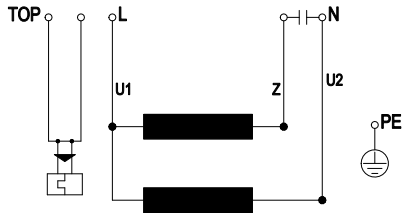
1	Accessory part: inlet nozzle 63045-2-4013 not included in the standard scope of delivery; other inlet nozzles on request
2	Depth of screw max. 12 mm
3	Connection line silicone 6G0.75 mm², 6 x brass lead tips crimped

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

AC centrifugal fan

backward curved, single inlet

Connection screen



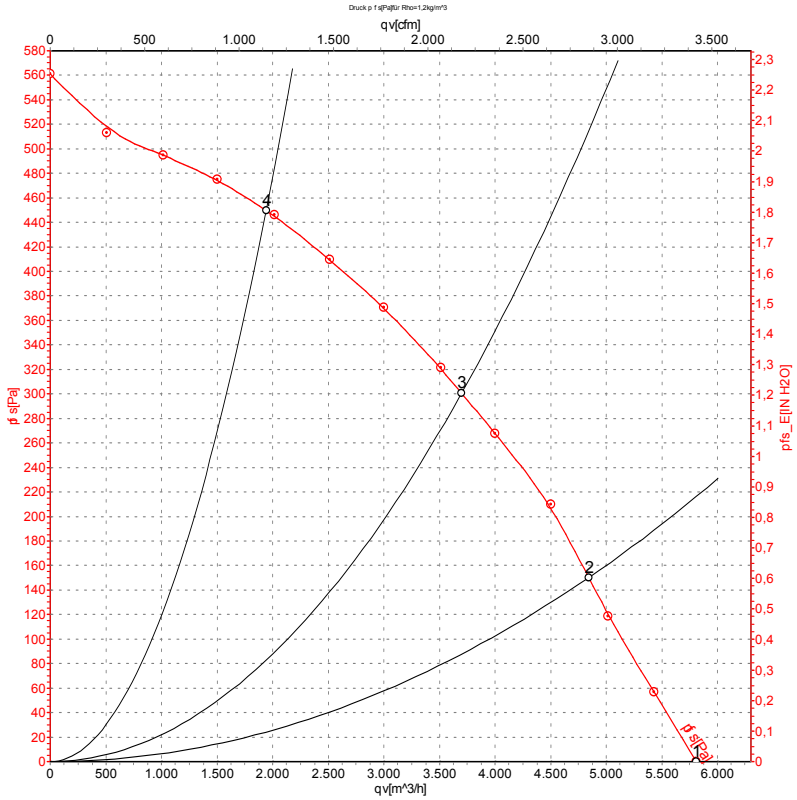
TOP	2 x grey	U1	blue	Z	brown
U2	black	PE	green / yellow		

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

AC centrifugal fan

backward curved, single inlet

Charts: Air flow 50 Hz



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

	U	f	n	P_e	I	LpA_{in}	LwA_{in}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa
1	230	50	1350	574	2.51	70	78	5810	0
2	230	50	1305	646	2.80	66	74	4840	150
3	230	50	1250	680	3.00	62	69	3700	300
4	230	50	1305	635	2.76	66	74	1940	450

U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side · qv = 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