

AC 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	R4D450-AD12-06	
Motor	M4D094-HA	
Phase		3~
Nominal voltage	VAC	400
Wiring		Y
Frequency	Hz	50
Method of obtaining data		ml
Valid for approval/standard		-
Speed (rpm)	min ⁻¹	1380
Power consumption	W	650
Current draw	A	1.45
Min. back pressure	Pa	0
Min. back pressure	in. wg	0
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	45
Starting current	A	5.4

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change



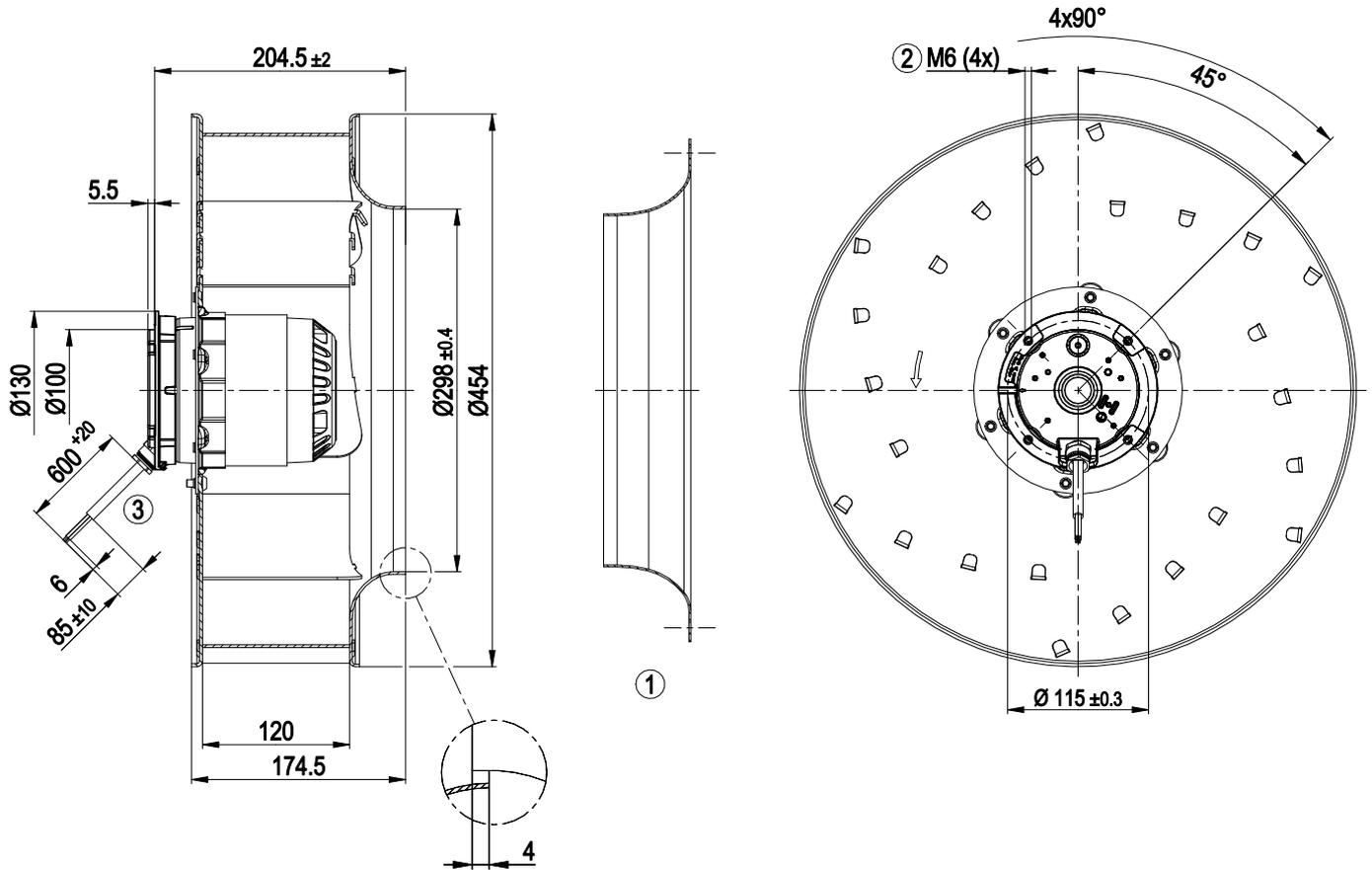
Technical description

Weight	9.16 kg
Size	450 mm
Motor size	94
Rotor surface	Painted black
Impeller material	Sheet aluminum
Number of blades	6
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H2
Ambient temperature note	Occasional start-up at temperatures between -40°C and -25°C is permitted. For continuous operation at ambient temperatures below -25°C (such as refrigeration applications), use must be made of a fan design with special low-temperature bearings.
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Any
Condensation drainage holes	None
Mode	S1
Motor bearing	Ball bearing
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) with basic insulation
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60034-1 (2010)
Approval	CCC; EAC

AC centrifugal fan

backward-curved, single-intake

Product drawing



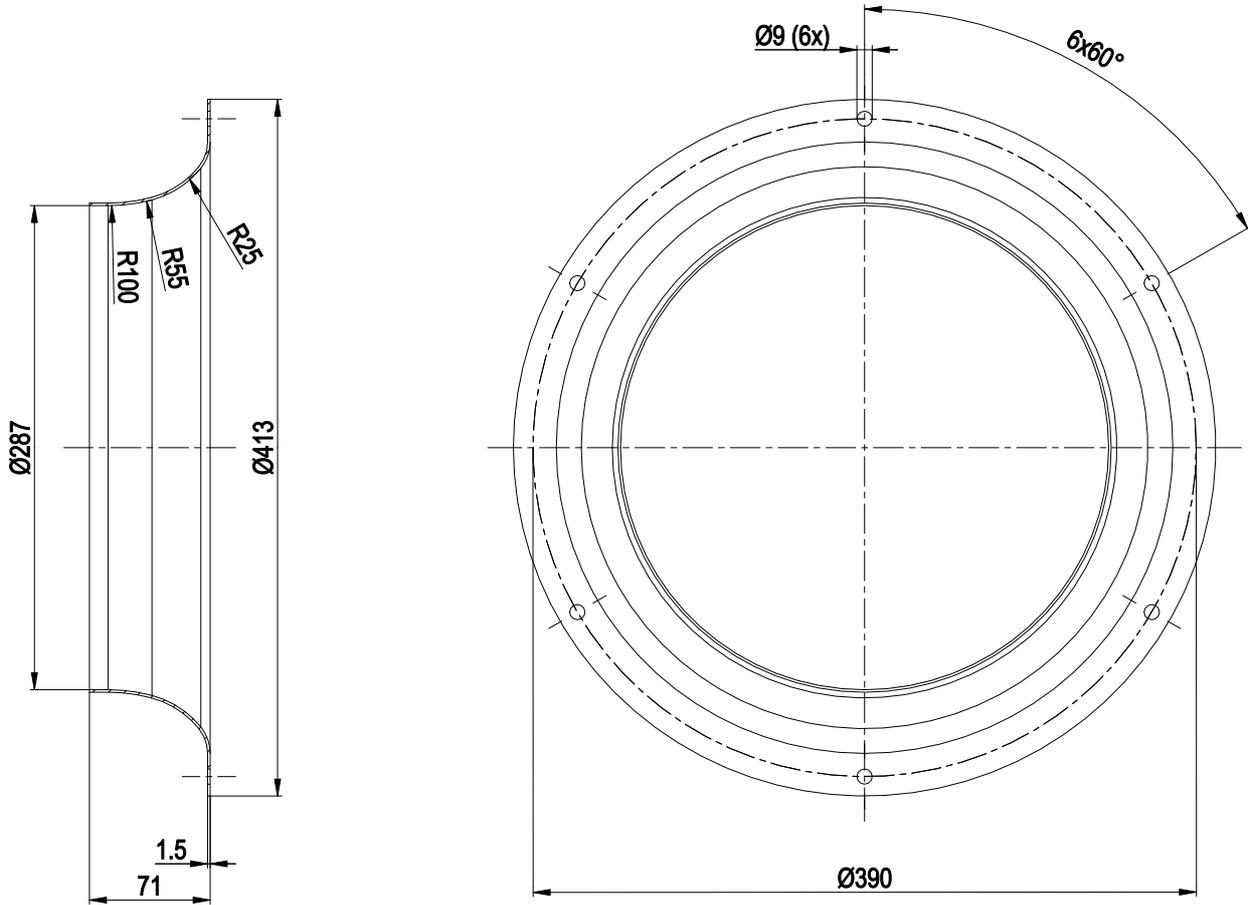
1	Accessory part: Inlet ring 54478-2-4013 not included in scope of delivery.
2	Max. clearance for screw 12 mm
3	Cable silicone 6G 0.5 mm ²
	6x splice



AC centrifugal fan

backward-curved, single-intake

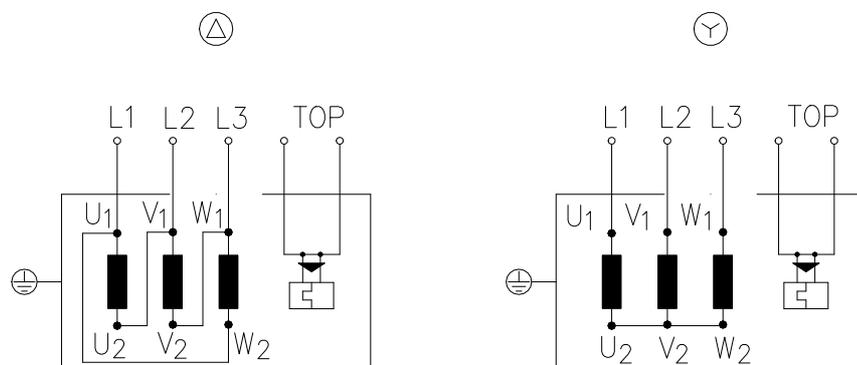
Accessory part



Inlet ring 54478-2-4013 not included in scope of delivery



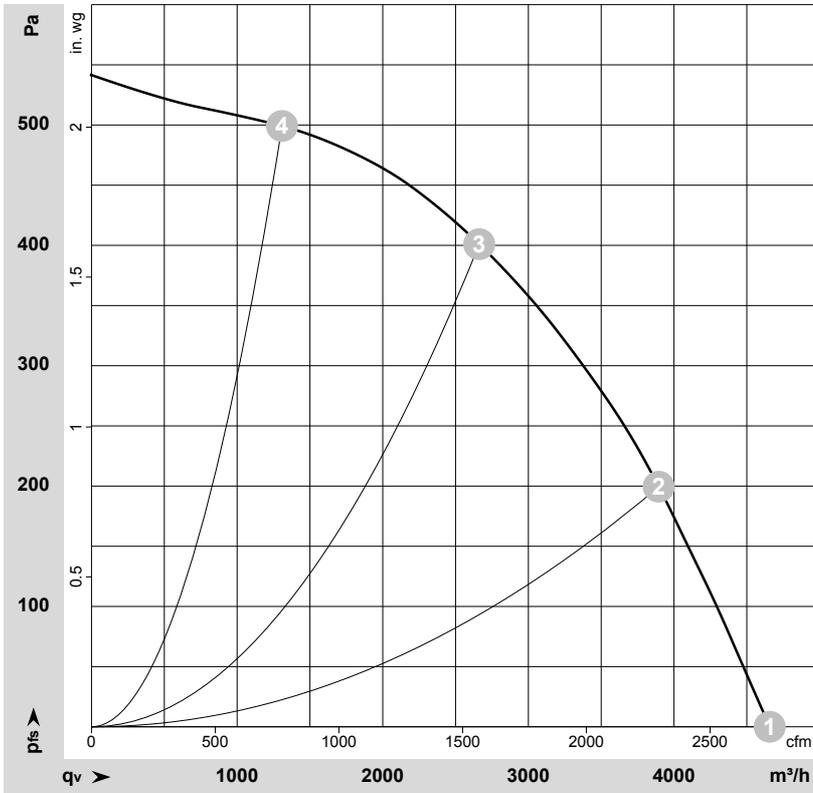
Connection diagram



Change of rotation direction by reversing two phases

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

Curves: Air performance 50 Hz



$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$

Measurement: LU-107301-1

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 _e	I	q _v	P _{fs}	q _v	P _{fs}
		V	Hz	min ⁻¹	W	A	m ³ /h	Pa	cfm	in. wg
1	Y	400	50	1435	416	1.32	4655	0	2740	0.00
2	Y	400	50	1395	585	1.42	3895	200	2295	0.80
3	Y	400	50	1380	650	1.45	2660	400	1565	1.61
4	Y	400	50	1405	545	1.38	1310	500	770	2.01

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · q_v = Air flow · P_{fs} = Pressure increase

