

R6D450-AN01-01

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



Nominal data

Type	R6D450-AN01-01				
Motor	M6D110-EF				
Phase		3~	3~	3~	3~
Nominal voltage	VAC	230	277	400	480
Connection		Δ	Δ	Y	Y
Frequency	Hz	50	60	50	60
Type of data definition		ml	ml	ml	ml
Valid for approval / standard		CE	CE	CE	CE
Speed	min ⁻¹	930	1110	930	1110
Power input	W	290	440	290	440
Current draw	A	1.3	1.4	0.75	0.81
Min. back pressure	Pa	0	0	0	0
Min. ambient temperature	°C	-40	-40	-40	-40
Max. ambient temperature	°C	85	70	85	70
Starting current	A	4.5	5.1	2.6	2.9

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 = $1 + p_{fs} / 100\,000\text{ Pa}$

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}	%	45.7	41.7	45.7
Efficiency grade N		62	58	62
Power input P_e	kW	0.28		
Air flow q_v	m ³ /h	2600		
Pressure increase p_{fs}	Pa	175		
Speed n	min ⁻¹	930		

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

LU-73887



R6D450-AN01-01

AC centrifugal fan

backward curved, single inlet

Technical features

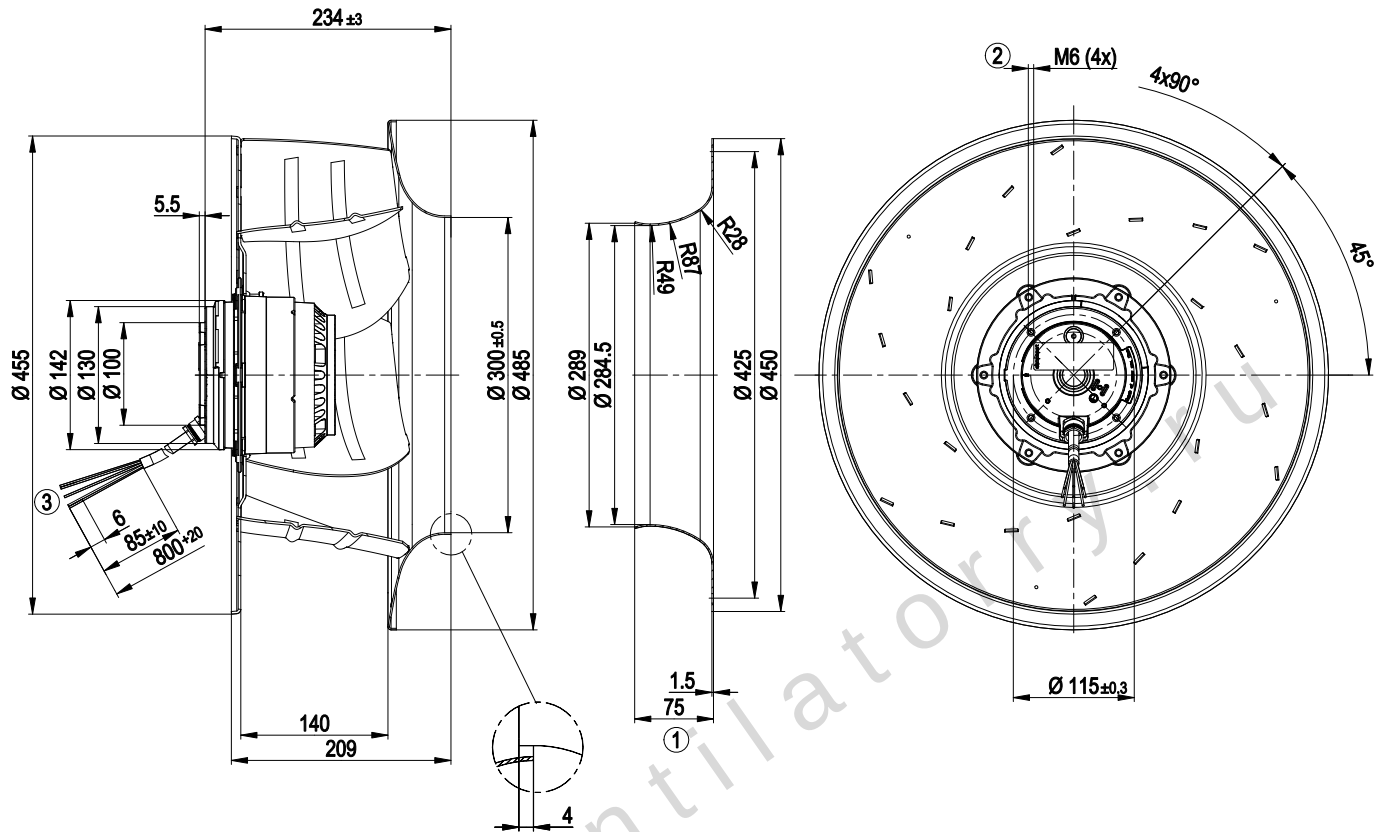
Mass	9.7 kg
Size	450 mm
Material of impeller	Aluminium sheet
Number of blades	6
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"F"
Humidity class	F3-1
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-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	CE
Approval	CCC; CSA C22.2 Nr.100; EAC; UL 1004-1; VDE

R6D450-AN01-01

AC centrifugal fan

backward curved, single inlet

Product drawing



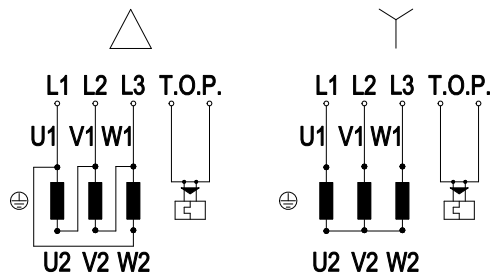
1	Accessory part: Inlet nozzle 63045-2-4013, not included in the standard scope of delivery.
2	Depth of screw max. 12 mm
3	Connection line silicone 9 x 0.75 mm ² , 9 x brass lead tips crimped

R6D450-AN01-01

AC centrifugal fan

backward curved, single inlet

Connection screen



Note: Direction of rotation changes when two phases are reversed

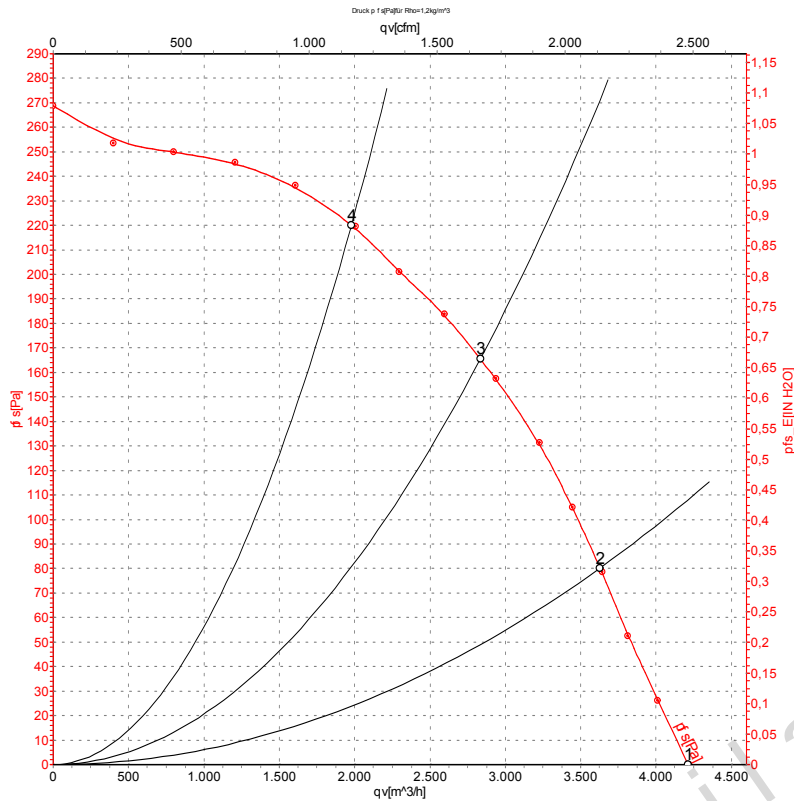
Δ	Delta-connection	Y	Star connection	L1	black
L2	blue	L3	brown	U1	black
V1	blue	W1	brown	U2	green
V2	white	W2	yellow	TOP	grey

R6D450-AN01-01

AC centrifugal fan

backward curved, single inlet

Charts: Air flow 50 Hz Y



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	qv	p _{fs}
		V	Hz	min ⁻¹	W	A	m ³ /h	Pa
1	Y	400	50	950	221	0.71	4215	0
2	Y	400	50	940	260	0.73	3630	80
3	Y	400	50	930	290	0.75	2835	165
4	Y	400	50	935	274	0.73	1980	220

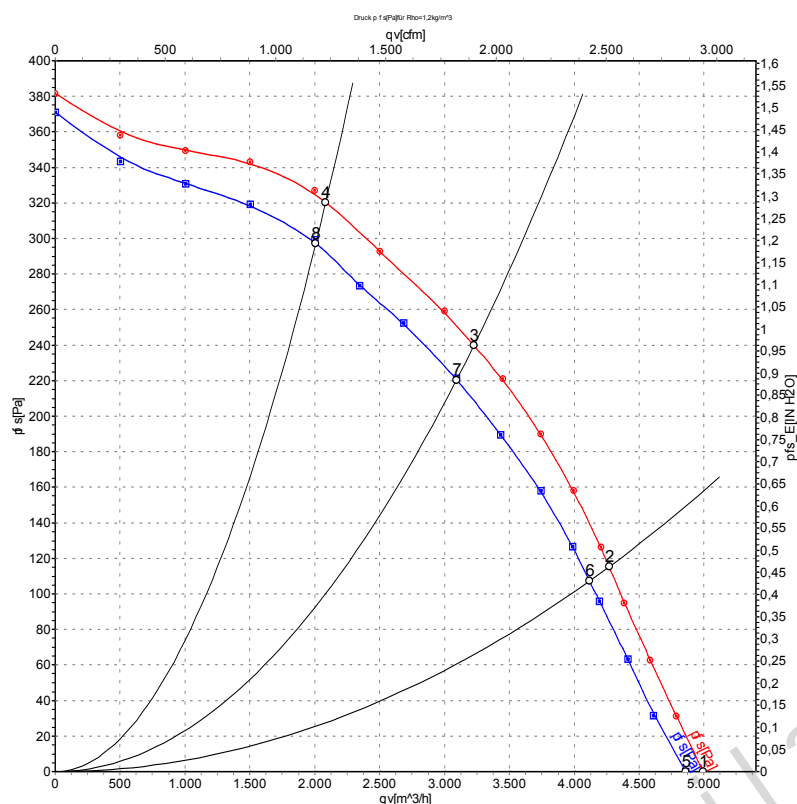
Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

R6D450-AN01-01

AC centrifugal fan

backward curved, single inlet

Charts: Air flow 60 Hz Y



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	qv	p _{fs}
		V	Hz	min ⁻¹	W	A	m ³ /h	Pa
1	Y	480	60	1130	343	0.75	5000	0
2	Y	480	60	1110	402	0.79	4270	115
3	Y	480	60	1110	440	0.81	3225	240
4	Y	480	60	1110	417	0.80	2085	320
5	Y	400	60	1100	307	0.66	4860	0
6	Y	400	60	1070	368	0.72	4120	107
7	Y	400	60	1060	400	0.77	3095	221
8	Y	400	60	1065	379	0.74	2010	299

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