AC centrifugal fan

forward-curved, single-intake

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	**R4D280-CI01-08**
Motor	**M4D110-IA**

Phase		3~	3~
Nominal voltage	VAC	400	400
Wiring		Δ	Δ
Frequency	Hz	50	60
Method of obtaining data		ml	ml
Valid for approval/standard		CE	CE
Speed (rpm)	min^{-1}	1330	1520
Power consumption	W	1220	1470
Current draw	A	2.5	2.7
Min. back pressure	Pa	0	250
Min. back pressure	in. wg	0	1
Min. ambient temperature	°C	-40	-40
Max. ambient temperature	°C	80	65
Starting current	A	9.7	8.8

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

Data according to Commission Regulation (EU) 327/2011

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	36.2	35.7
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		44.5	44
05 Variable speed drive		No	

09 Power consumption P_e	kW	0.48
09 Air flow q_v	m^3/h	1205
09 Pressure increase p_{fs}	Pa	529
10 Speed (rpm) n	min^{-1}	1445
11 Specific ratio*		1.01

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-115384

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Technical description

Weight	12.1 kg
Fan size	280 mm
Rotor surface	Cast in aluminum
Terminal box material	ABS plastic
Impeller material	Sheet steel, galvanized
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H1
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 bottom; rotor on top on request
Condensation drainage holes	On rotor side
Mode	S1
Motor bearing	Ball bearing
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	Via terminal box
Motor protection	Thermal overload protector (TOP) with basic insulation
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 61800-5-1; CE
Approval	CSA C22.2 No. 100; UL 1004-1; VDE; EAC

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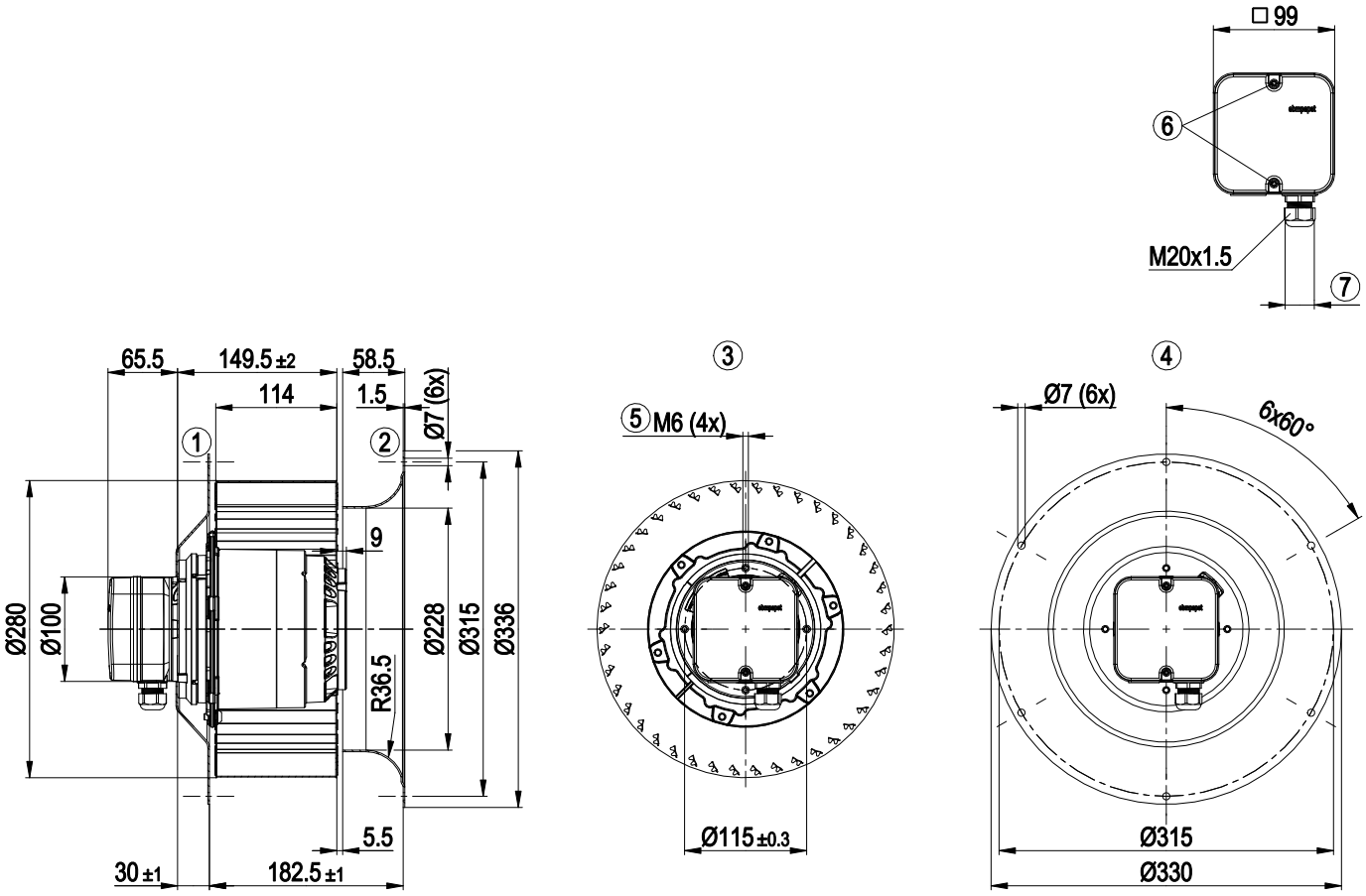
Product drawing



1	Accessory part: Flange 10280-2-4017 not included in scope of delivery
2	Accessory part: Inlet ring 28010-2-4013 not included in scope of delivery
3	View without flange
4	View with flange
5	Max. clearance for screw 12 mm
6	Tightening torque 1.5 ± 0.2 Nm
7	Cable diameter min. 6 mm, max. 12 mm, tightening torque 2 ± 0.3 Nm

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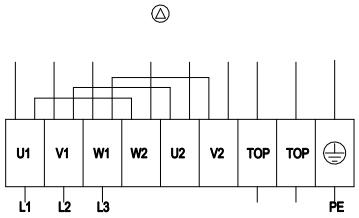
Connection diagram



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

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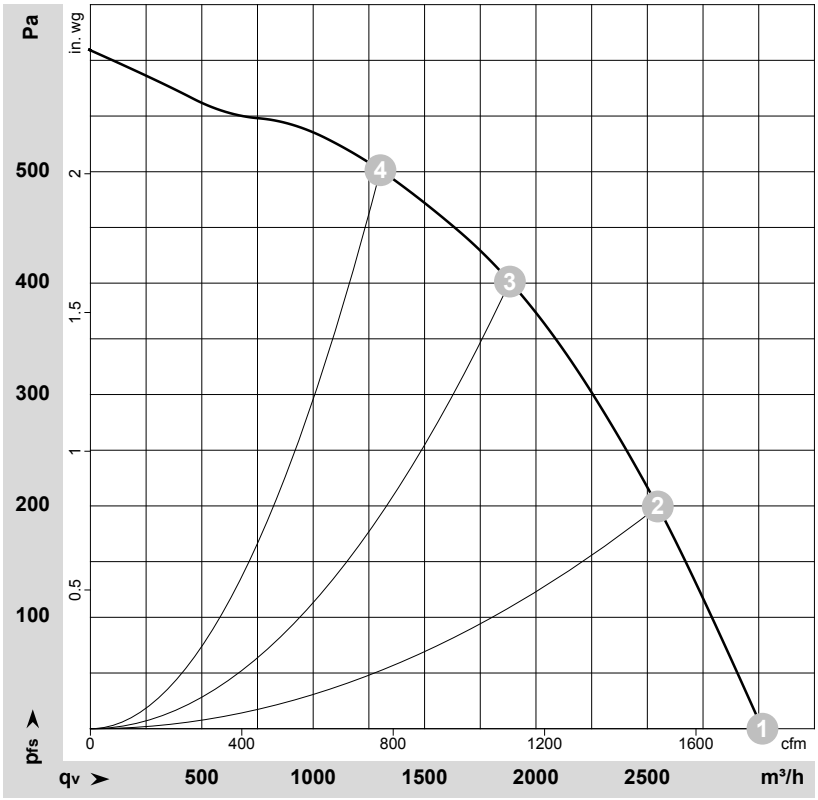
Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-187030-1

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	Δ	400	50	1330	1220	2.50	3015	0	1775	0.00
2	Δ	400	50	1380	957	2.02	2545	200	1500	0.80
3	Δ	400	50	1420	687	1.74	1885	400	1110	1.61
4	Δ	400	50	1445	505	1.59	1300	500	765	2.01

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

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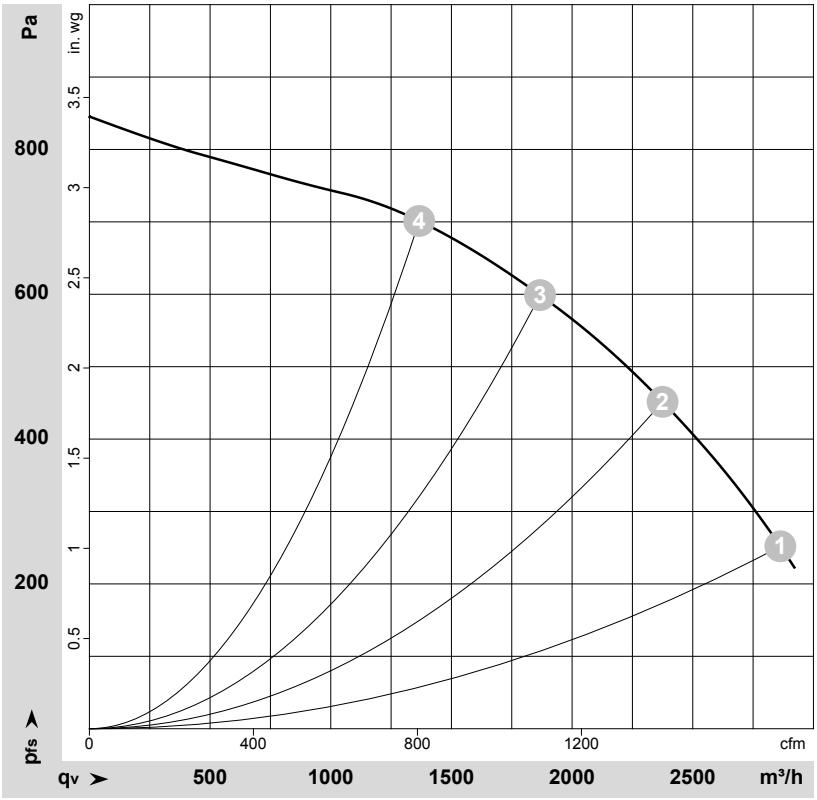
Curves: Air performance 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-187026-1

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	Δ	400	60	1520	1470	2.70	2865	250	1685	1.00
2	Δ	400	60	1605	1148	2.04	2375	450	1400	1.81
3	Δ	400	60	1660	885	1.68	1865	600	1100	2.41
4	Δ	400	60	1700	677	1.43	1365	700	805	2.81

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