R4D280-CI01-07

AC centrifugal fan

forward-curved, single-intake

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Amtsgericht (court of registration) Stuttgart · HRA 590344

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Nominal data

Type	**R4D280-CI01-07**
Motor	**M4D110-IA**

Phase		3~	3~
Nominal voltage	VAC	690	690
Wiring		Y	Y
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	1.46	1.55
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

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 (EN 17166)

		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

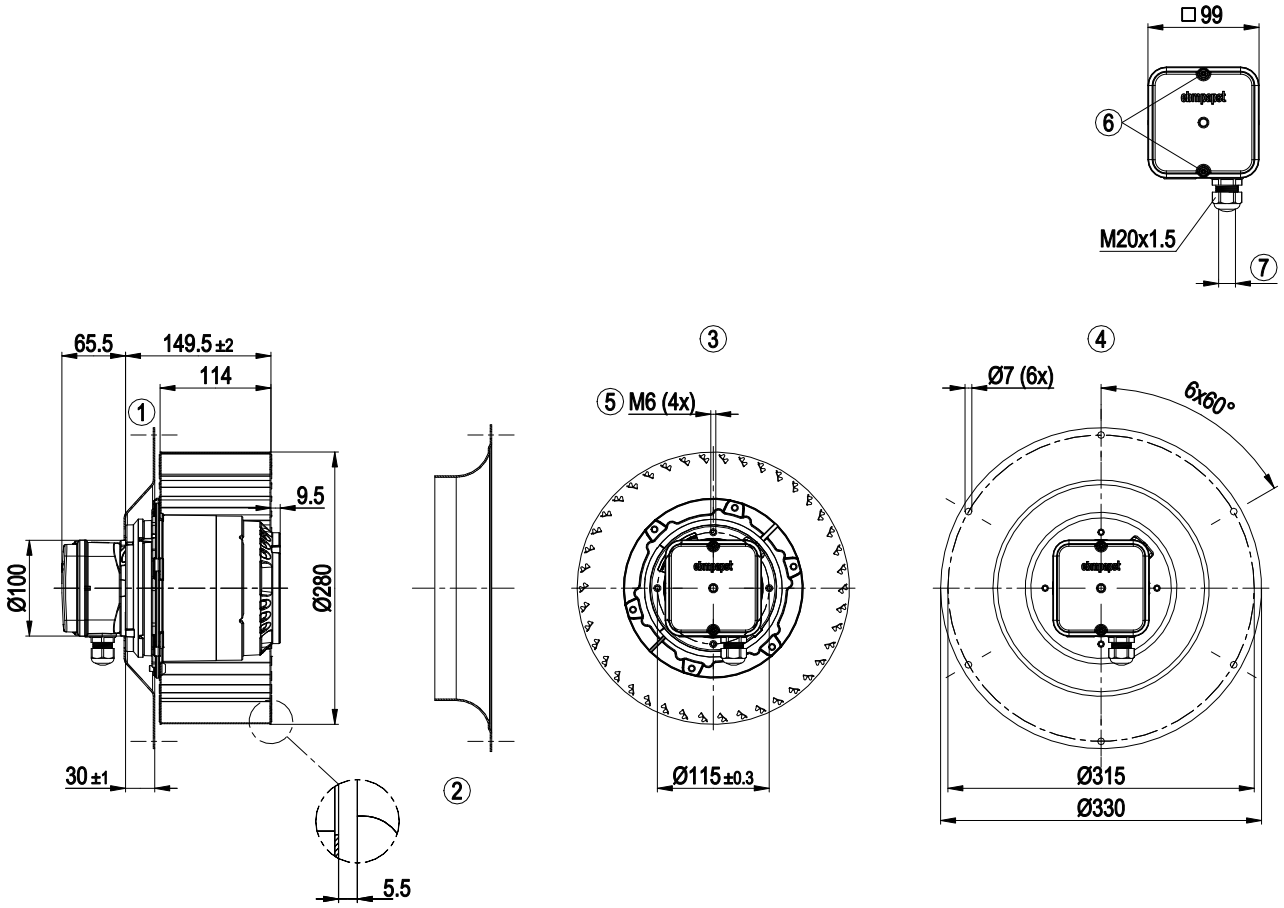
Weight	12.1 kg
Size	280 mm
Motor size	110
Rotor surface	Cast in aluminum
Terminal box material	PP plastic
Impeller material	Sheet steel, galvanized
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H1
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	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	Terminal box
Motor protection	Thermal overload protector (TOP) with basic insulation
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60034-1 (2010); CE
Approval	VDE

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Product drawing



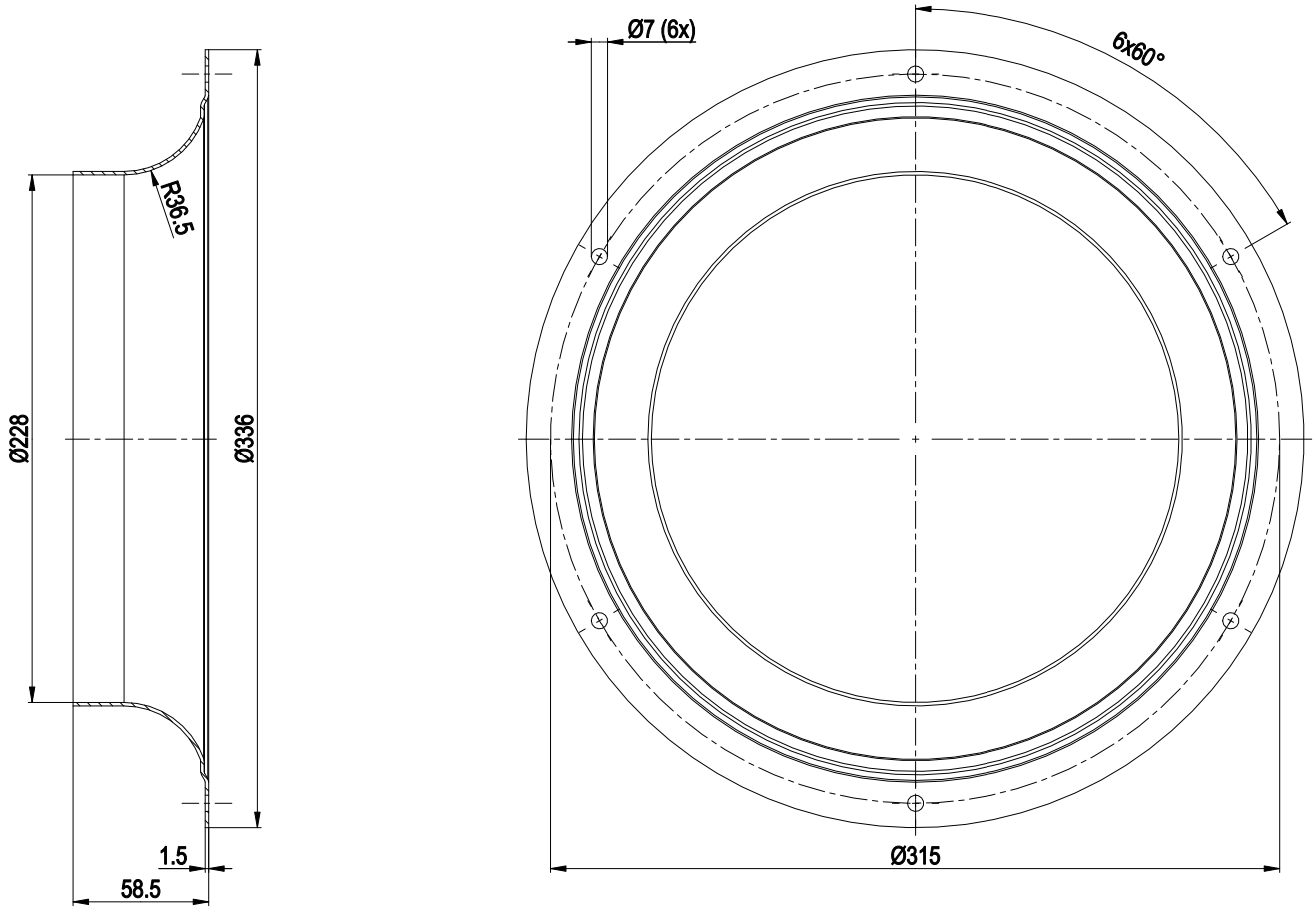
1	Accessory part: Flange 10280-2-4017 not included in scope of delivery
2	Accessory part: Inlet ring 28010-2-4013 not included in scope of delivery
3	View without flange
4	View with flange
5	Max. clearance for screw 12 mm
6	Tightening torque 1.5 ± 0.2 Nm
7	Cable diameter min. 6 mm, max. 12 mm, tightening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

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Accessory part



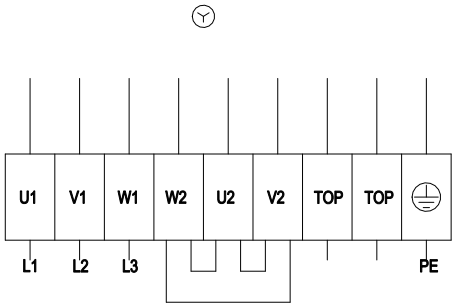
Inlet ring 28010-2-4013

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Connection diagram



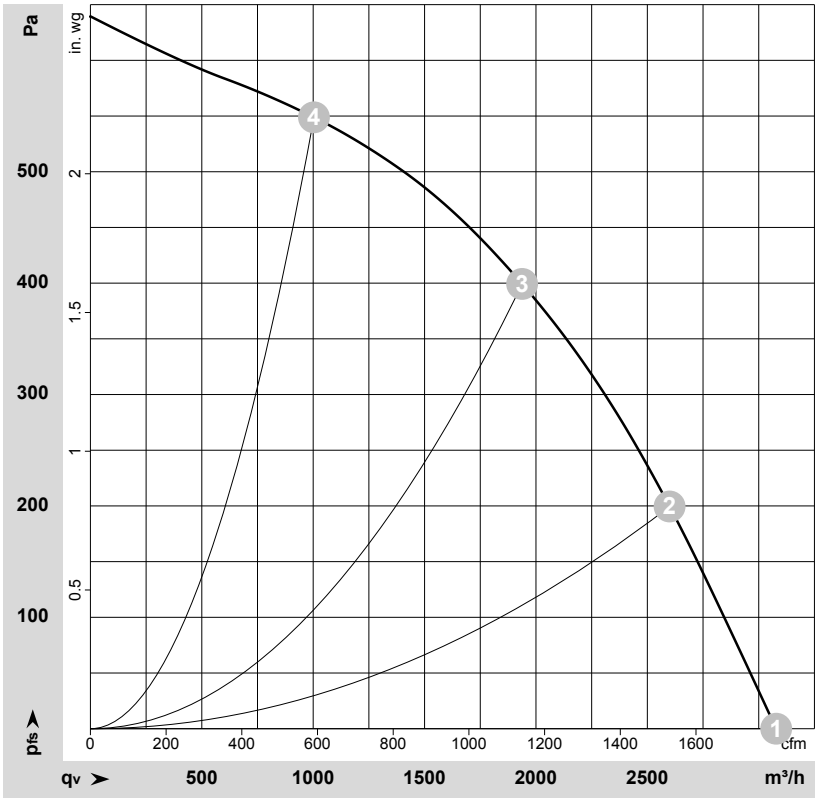
Y	Star connection	L1	= U1 = black	L2	= V1 = blue
L3	= W1 = brown	W2	yellow	U2	green
V2	white	TOP	2x gray	PE	green/yellow

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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-115384-1

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	690	50	1330	1220	1.46	3080	0	1810	0.00
2	Y	690	50	1370	988	1.29	2600	200	1530	0.80
3	Y	690	50	1410	731	1.12	1940	400	1140	1.61
4	Y	690	50	1450	437	1.00	1005	550	590	2.21

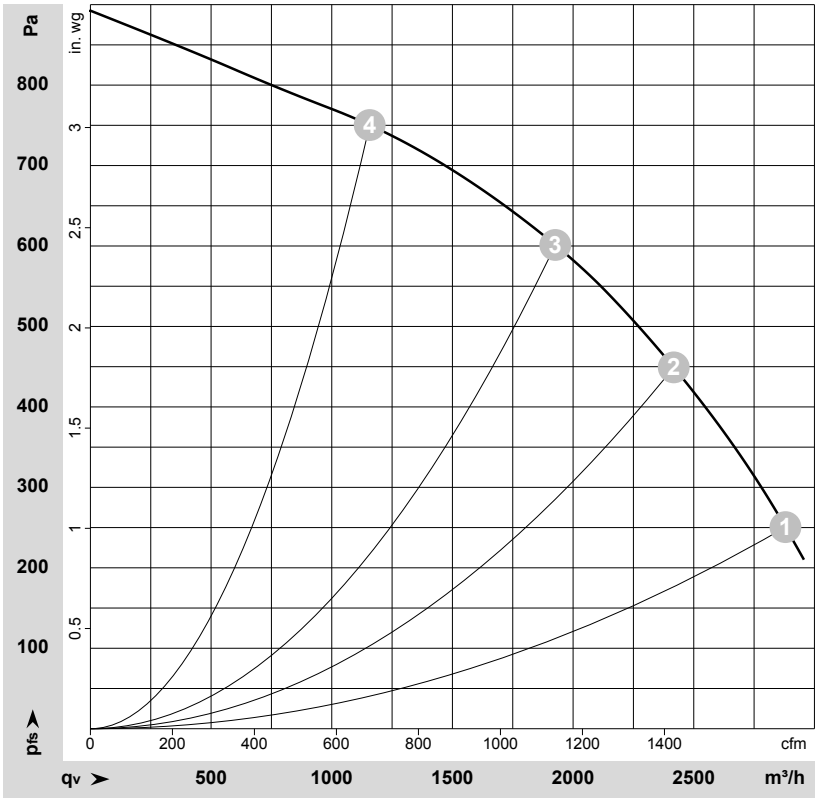
Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase

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Curves: Air performance 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-115386-1

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	690	60	1520	1470	1.55	2880	250	1695	1.00
2	Y	690	60	1585	1198	1.31	2415	450	1425	1.81
3	Y	690	60	1640	944	1.09	1925	600	1135	2.41
4	Y	690	60	1700	642	0.87	1155	750	680	3.01

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

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