R4D280-CI03-01

AC centrifugal fan

forward curved, single inlet

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Nominal data

Type	**R4D280-CI03-01**
Motor	**M4D110-IA**

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		fa	ml	fa	ml
Valid for approval / standard		CE	CE	CE	CE
Speed (rpm)	min^{-1}	1330	1590	1330	1590
Power input	W	1320	1800	1320	1800
Current draw	A	4.75	5.12	2.75	2.96
Min. back pressure	Pa	0	250	0	250
Min. ambient temperature	°C	-25	-25	-25	-25
Max. ambient temperature	°C	65	45	65	45

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

		Actual	Request 2015
01 Overall efficiency η_{es}	%	36.1	36
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		44.1	44
05 Variable speed drive		No	

09 Power input P_e	kW	0.55
09 Air flow q_v	m^3/h	1445
09 Pressure increase p_{fs}	Pa	500
10 Speed (rpm) n	min^{-1}	1440
11 Specific ratio*		1.01

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

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

LU-110159

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Technical features

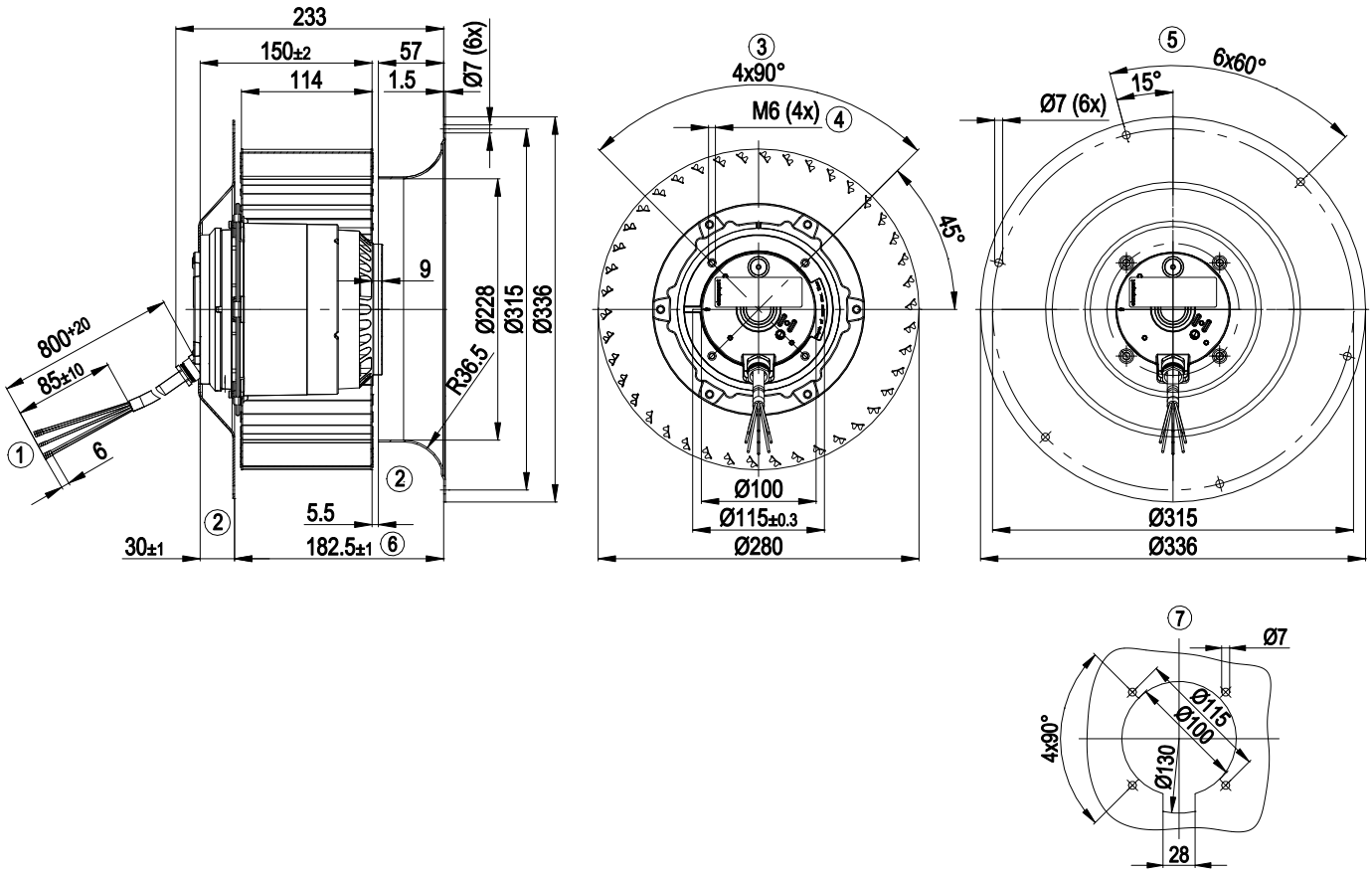
Mass	12 kg
Size	280 mm
Surface of rotor	Cast in aluminium
Material of impeller	Sheet steel, hot-dip galvanised
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"F"
Humidity (F)/environmental protection class (H)	F3-1
Max. permissible ambient motor temp. (transp./ 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, basic insulation
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 61800-5-1; CE
Approval	CSA C22.2 No.100; UL 1004-1; VDE; EAC

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Product drawing



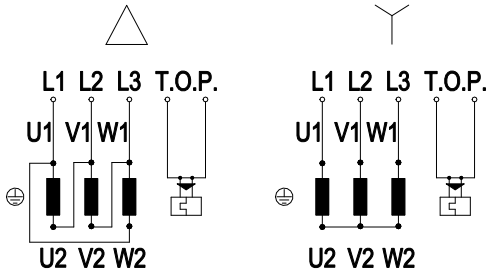
1	Connection line silicone, 9 x brass lead tips crimped
2	Accessory part: Inlet nozzle 28010-2-4013 and flange 10280-2-4017 not included in the standard scope of delivery
3	View without flange
4	Depth of screw max. 12 mm
5	View with flange
6	Housing width
7	Drill pattern for mounting without flange

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Connection screen



Note: Direction of rotation changes when two phases are reversed

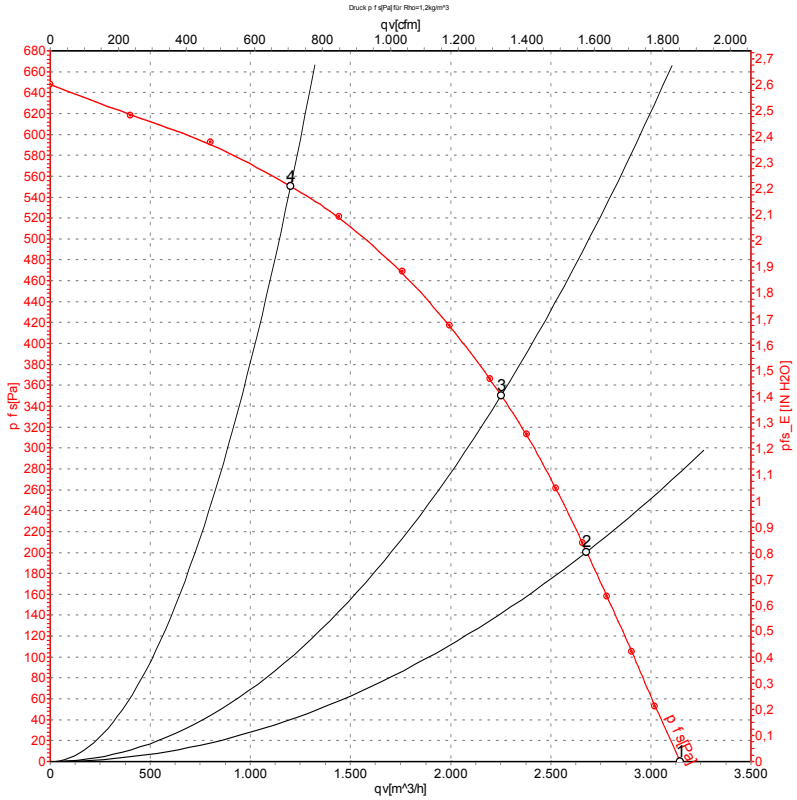
Δ	Delta-connection	Y	Star connection	L1	black
L2	blue	L3	brown	U1	black
V1	blue	W1	brown	U2	green
V2	white	W2	yellow	TOP	grey

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Charts: Air flow 50 Hz Y



Measurement: LU-110159-1

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	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	inH2O
1	Y	400	50	1330	1320	2.75	3160	0	1860	0.00
2	Y	400	50	1375	1031	2.27	2680	200	1575	0.80
3	Y	400	50	1400	848	2.06	2255	350	1325	1.41
4	Y	400	50	1450	497	1.78	1200	550	705	2.21

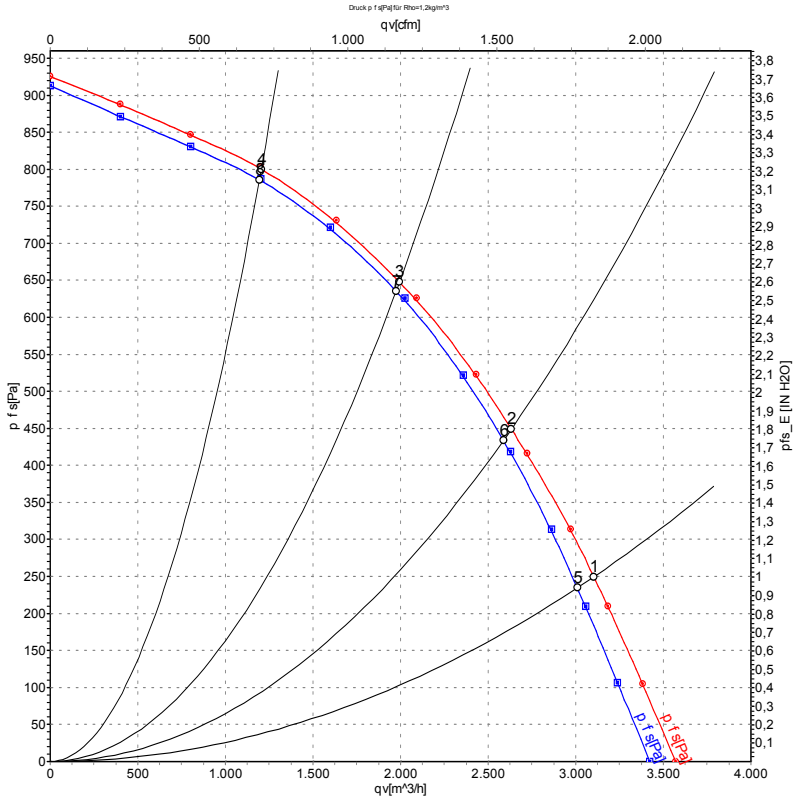
Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed (rpm) · P_e = Power input · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase

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Charts: Air flow 60 Hz Y



Measurement: LU-110166-1
Measurement: LU-110165-1

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	LpA_{in}	LwA_{in}	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	cfm	inH2O
1	Y	480	60	1590	1800	2.96	83	89	3200	250	1885	1.00
2	Y	480	60	1650	1382	2.42	81	87	2635	450	1550	1.81
3	Y	480	60	1695	1016	2.06	79	85	1995	650	1175	2.61
4	Y	480	60	1730	709	1.82	78	84	1205	800	710	3.21
5	Y	400	60	1500	1630	2.90	83	88	3010	235	1770	0.94
6	Y	400	60	1580	1303	2.40	81	87	2585	435	1525	1.75
7	Y	400	60	1645	982	1.93	79	85	1975	638	1160	2.56
8	Y	400	60	1700	661	1.51	78	84	1195	788	705	3.16

Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed (rpm) · P_e = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side
q_V = Air flow · p_{fs} = Pressure increase

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