R4D310-CK03-01

AC centrifugal fan

forward curved, single inlet

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Nominal data

Type	**R4D310-CK03-01**
Motor	**M4D138-HF**

Phase		3~	3~
Nominal voltage	VAC	230	400
Connection		Δ	Y
Frequency	Hz	50	50
Type of data definition		ml	ml
Valid for approval / standard		CE	CE
Speed (rpm)	min^{-1}	1310	1310
Power input	W	2180	2180
Current draw	A	6.75	3.9
Min. back pressure	Pa	0	0
Min. ambient temperature	°C	-40	-40
Max. ambient temperature	°C	55	55
Starting current	A	24	14

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

Data in accordance with ecodesign regulation EU 327/2011

		Actual	Request 2015
01 Overall efficiency η_{es}	%	37.5	37.3
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		44.2	44
05 Variable speed drive		No	

09 Power input P_e	kW	0.87
09 Air flow q_v	m^3/h	2005
09 Pressure increase p_{fs}	Pa	593
10 Speed (rpm) n	min^{-1}	1435
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

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Technical features

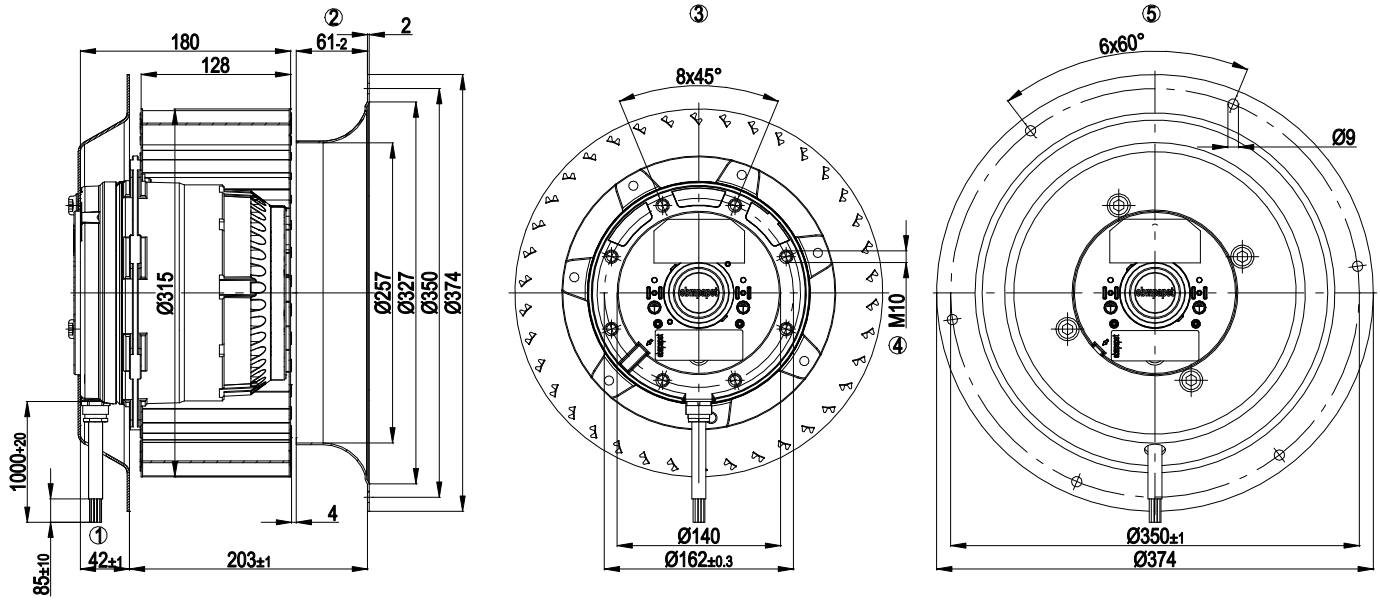
Mass	19.7 kg
Size	310 mm
Surface of rotor	Cast in aluminium
Material of impeller	Sheet steel, galvanised
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"F"
Humidity (F)/environmental protection class (H)	F3-1
Note ambient temperature	Occasional start-up between -40°C and -25°C is permissible. For continuous operation at ambient temperatures below -25°C (e.g. refrigeration applications) we recommend our fan version with special low-temperature bearings.
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Any
Condensate discharge holes	On rotor and stator sides
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
Cable exit	Lateral
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 61800-5-1; EN 60034-1 (2010); CE
Approval	VDE; EAC

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Product drawing



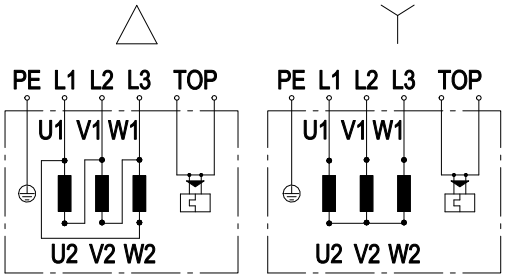
1	Connection line halogen-free, 9 x 0.75 mm², 9 x brass lead tips crimped
2	Accessory part: Inlet nozzle 31010-2-4013 and flange 38310-2-4017 not included in the standard scope of delivery
3	View without flange
4	Depth of screw max. 18 mm
5	View with flange

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Connection screen



Note: Change in direction of rotation by reversing two phases

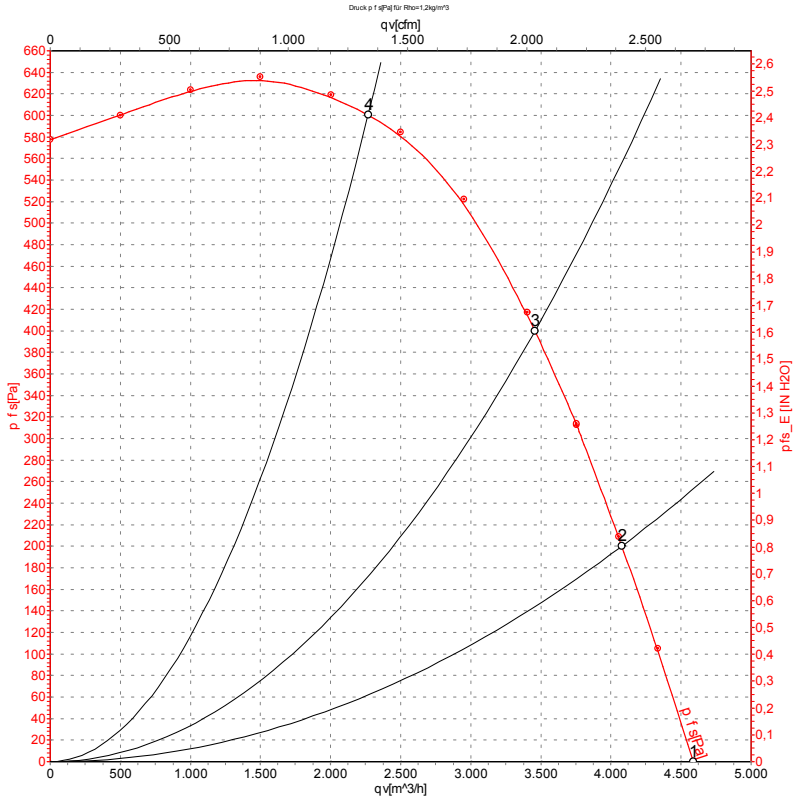
Δ	Delta connection	Y	Star connection	L1	black
L2	blue	L3	brown	U1	black
V1	blue	W1	brown	U2	green
V2	white	W2	yellow	TOP	2xgrey
PE	green/yellow				

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Charts: Air flow 50 Hz Y



Measurement: LU-111165-1

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	in. wg
1	Y	400	50	1310	2180	3.90	86	91	4585	0	2700	0.00
2	Y	400	50	1340	1857	3.41	84	89	4075	200	2400	0.80
3	Y	400	50	1375	1504	2.92	81	87	3455	400	2035	1.61
4	Y	400	50	1425	978	2.27	76	82	2270	600	1335	2.41

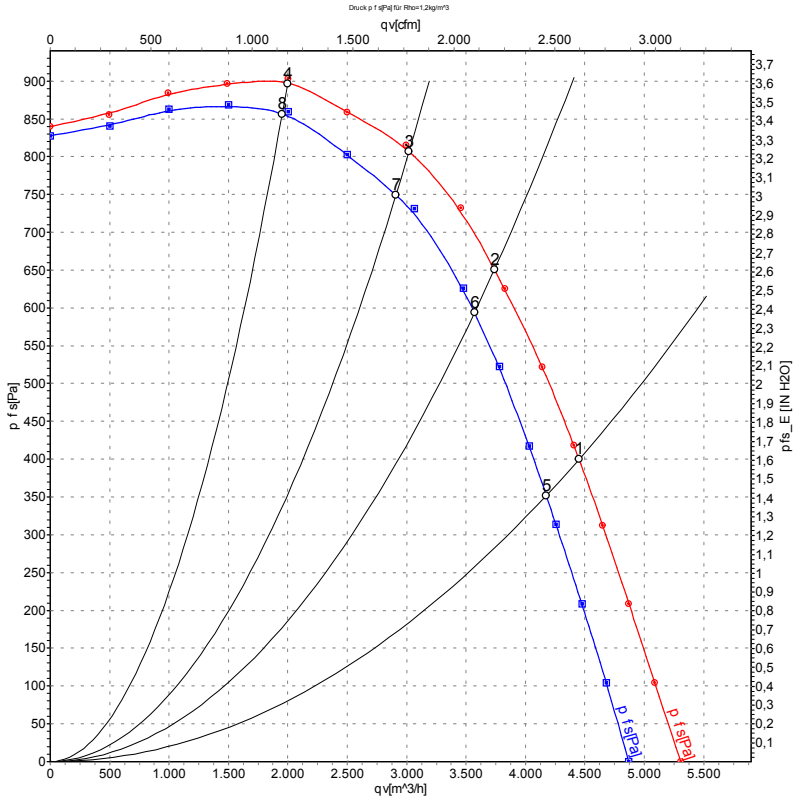
Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed (rpm) · P_e = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side
q_V = Air flow · p_{fs} = Pressure increase

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Charts: Air flow 60 Hz Y



Measurement: LU-111168-1
Measurement: LU-111166-1

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	in. wg
1	Y	480	60	1590	2750	3.98	86	92	4450	400	2620	1.61
2	Y	480	60	1630	2249	3.33	84	90	3740	650	2200	2.61
3	Y	480	60	1675	1781	2.77	82	88	3020	815	1775	3.27
4	Y	480	60	1715	1237	2.18	80	86	2000	900	1175	3.61
5	Y	400	60	1490	2490	4.23	84	91	4175	350	2455	1.41
6	Y	400	60	1560	2083	3.51	83	89	3570	595	2100	2.39
7	Y	400	60	1615	1673	2.88	80	86	2910	752	1715	3.02
8	Y	400	60	1680	1162	2.14	78	84	1955	862	1150	3.46

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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