R4D310-CK03-01

AC centrifugal fan

forward curved, single inlet

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County court Stuttgart · HRB 590142

ErP2015 EXCEEDS THE NORM

Nominal data

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

Phase		3~	3~	3~	3~	3~	3~
Nominal voltage	VAC	230	230	277	400	400	480
Connection		**Δ**	**Δ**	**Δ**	Y	Y	Y
Frequency	Hz	50	60	60	50	60	60
Type of data definition		ml	ml	ml	ml	ml	ml
Valid for approval / standard		CE	CE	CE	CE	CE	CE
Speed	min^{-1}	1310	1490	1590	1310	1490	1590
Power input	W	2180	2490	2750	2180	2490	2750
Current draw	A	6.75	7.31	6.88	3.9	4.23	3.98
Min. back pressure	Pa	0	350	400	0	350	400
Max. ambient temperature	°C	55	40	40	55	40	40

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 integrated	No
Specific ratio*	1,01

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

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}		37,5	30,3	37,3
Efficiency grade N		44,2	37	44
Power input P_e	kW	0,87		
Air flow q_v	m^3/h	2005		
Pressure increase p_{fs}	Pa	593		
Speed n	min^{-1}	1435		

Data established at point of optimum efficiency

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Technical features

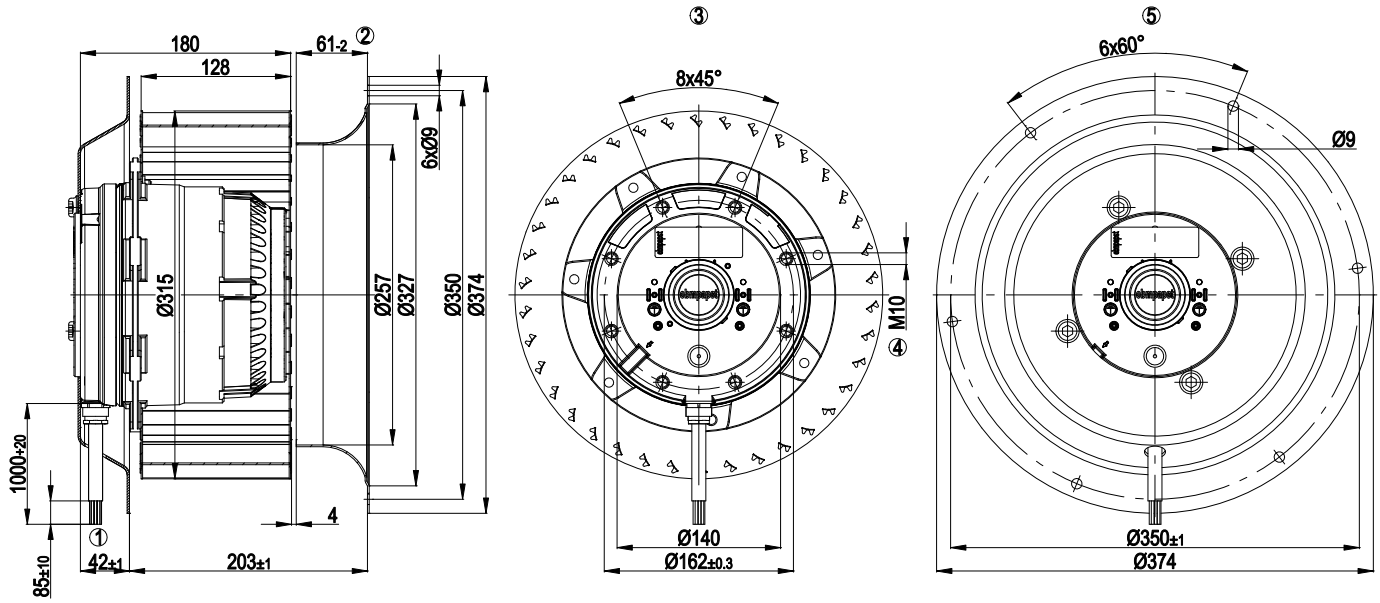
Mass	19.15 kg
Size	310 mm
Surface of rotor	Cast in aluminium
Material of impeller	Sheet steel, hot-dip galvanised
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"F"
Humidity class	F3-1
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible 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
Leakage current	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) brought out
Cable exit	Lateral
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 61800-5-1; CE
Approval	VDE

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Product drawing



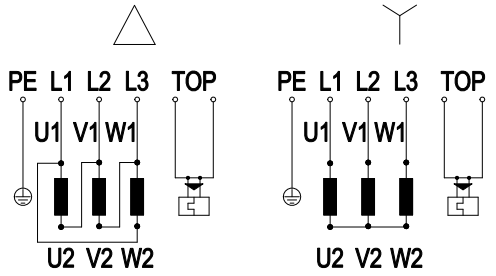
1	Connection line halogen-free, 9 x 0.75 mm², 9 x brass lead tips crimped
2	Accessory part: Inlet nozzle 31010-2-4013 and flange 38310-2-4017 not included in the standard scope of delivery
3	View without flange
5	Depth of screw max. 18 mm
6	View with flange

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Connection screen



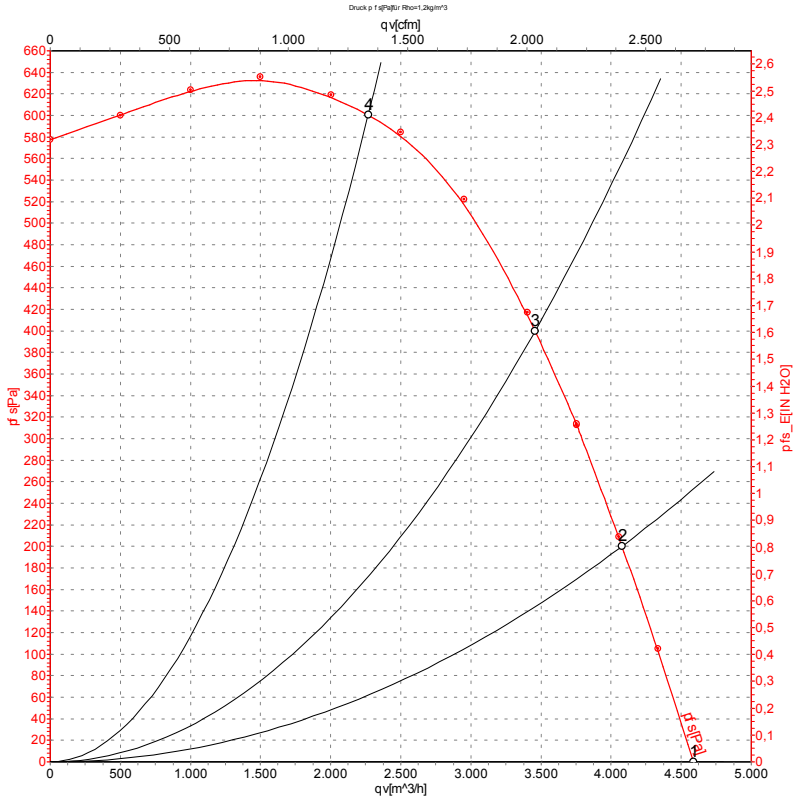
Δ	Delta connection	Y	Star connection	L1	black
L2	blue	L3	brown	U1	black
V1	blue	W1	brown	U2	green
V2	white	W2	yellow	TOP	2xgrey
PE	green/yellow				

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Charts: Air flow 50 Hz Y



Measurement: LU-111165

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

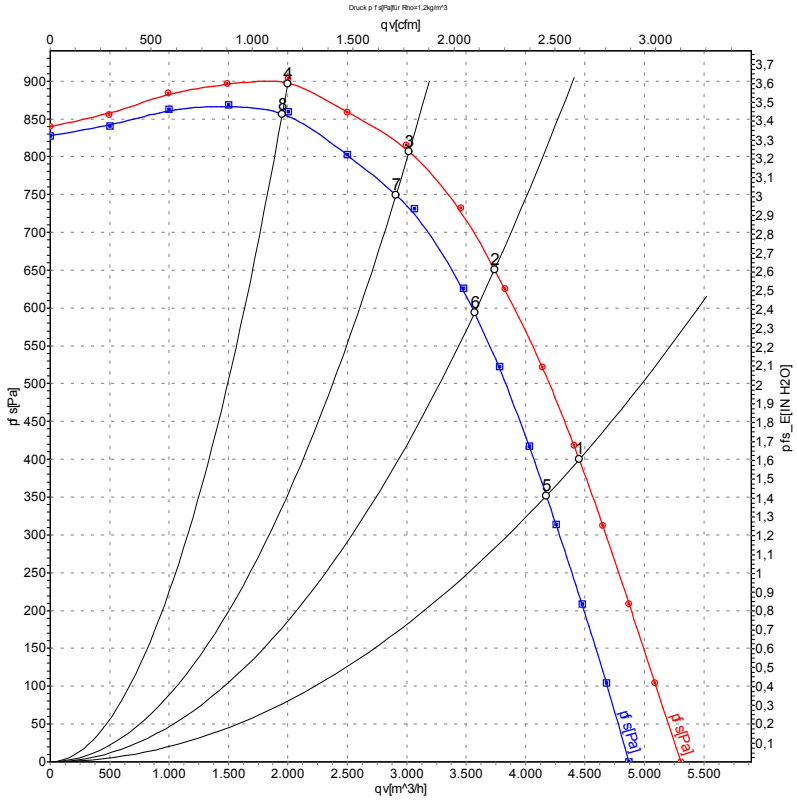
	Conn.	U	f	n	P_e	I	LpA_{in}	LwA_{in}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa
1	Y	400	50	1310	2180	3.90	86	91	4585	0
2	Y	400	50	1340	1857	3.41	84	89	4075	200
3	Y	400	50	1375	1504	2.92	81	87	3455	400
4	Y	400	50	1425	978	2.27	76	82	2270	600

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Charts: Air flow 60 Hz Y



Measurement: LU-111168
Measurement: LU-111166

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}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa
1	Y	480	60	1590	2750	3.98	86	92	4450	400
2	Y	480	60	1630	2249	3.33	84	90	3740	650
3	Y	480	60	1675	1781	2.77	82	88	3020	815
4	Y	480	60	1715	1237	2.18	80	86	2000	900
5	Y	400	60	1490	2490	4.23	84	91	4175	350
6	Y	400	60	1560	2083	3.51	83	89	3570	595
7	Y	400	60	1615	1673	2.88	80	86	2910	752
8	Y	400	60	1680	1162	2.14	78	84	1955	862

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