R6D400-CM05-01

AC centrifugal fan

forward-curved, single-intake

R6D400-CM05-01 ebmpapst Datasheet
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Nominal data

Type	**R6D400-CM05-01**
Motor	**M6D138-LA**

Phase		3~	3~
Nominal voltage	VAC	230	400
Wiring		Δ	Y
Frequency	Hz	50	50
Method of obtaining data		fa	fa
Valid for approval/standard		CE	CE
Speed (rpm)	min^{-1}	840	840
Power consumption	W	2400	2400
Current draw	A	8.47	4.9
Min. back pressure	Pa	0	0
Min. back pressure	in. wg	0	0
Max. ambient temperature	°C	75	75
Starting current	A	22	13

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}	%	40.9	37.5
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		47.4	44
05 Variable speed drive		No	

09 Power consumption P_e	kW	0.93
09 Air flow q_v	m^3/h	3010
09 Pressure increase p_{fs}	Pa	458
10 Speed (rpm) n	min^{-1}	950
11 Specific ratio*		1.00

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-75017

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Technical description

Weight	25.1 kg
Fan size	400 mm
Rotor surface	Cast in aluminum
Impeller material	Sheet steel, galvanized
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP20
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	F0
Ambient temperature note	Occasional start-up between -40°C and -25°C is permissible. For continuous operation at temperatures below -25°C (e.g. refrigeration applications) we recommend our 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	Any
Cooling hole/opening	On rotor and stator sides
Mode	S1
Motor bearing	Ball bearing
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) with basic insulation
With cable	Lateral
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 61800-5-1; EN 60034; CE
Approval	VDE; EAC

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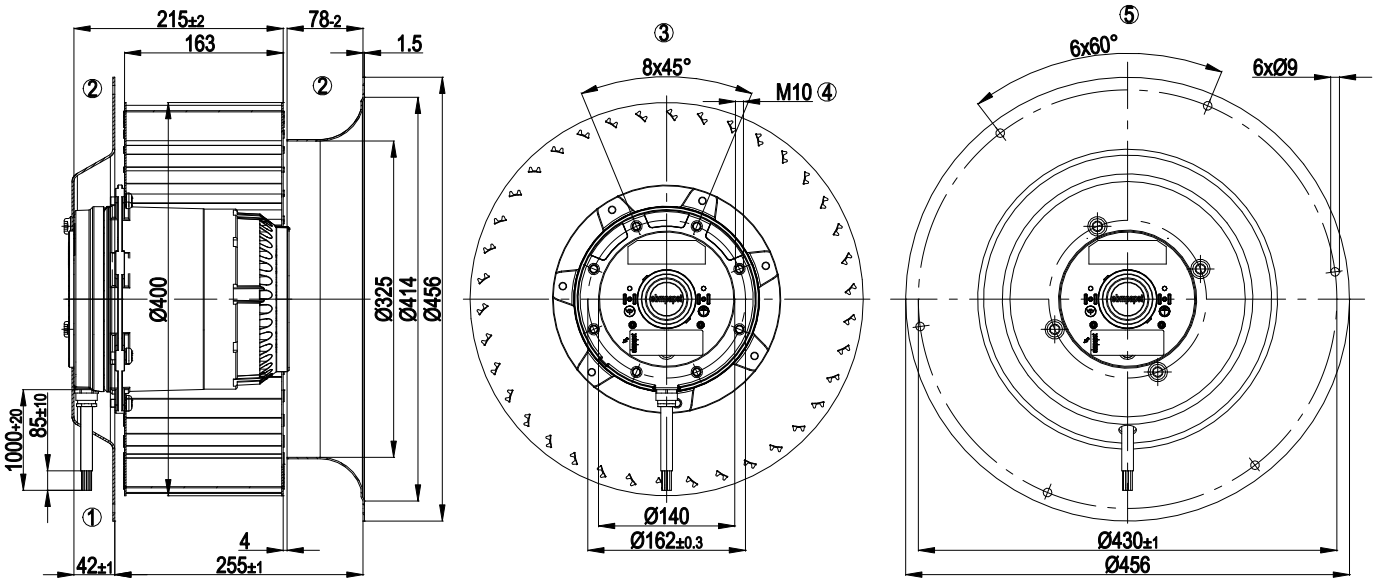
Product drawing



1	Cable halogen-free, 9 x 0.75 mm², 9 x crimped splices
2	Accessory part: Inlet ring 40010-2-4013 and flange 38400-2-4017 not included in scope of delivery
3	View without flange
4	Max. clearance for screw 18 mm
5	View with flange

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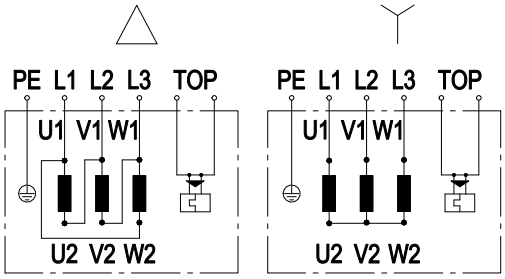
Connection diagram



Note: Change of rotation direction 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	2x gray
PE	green/yellow				

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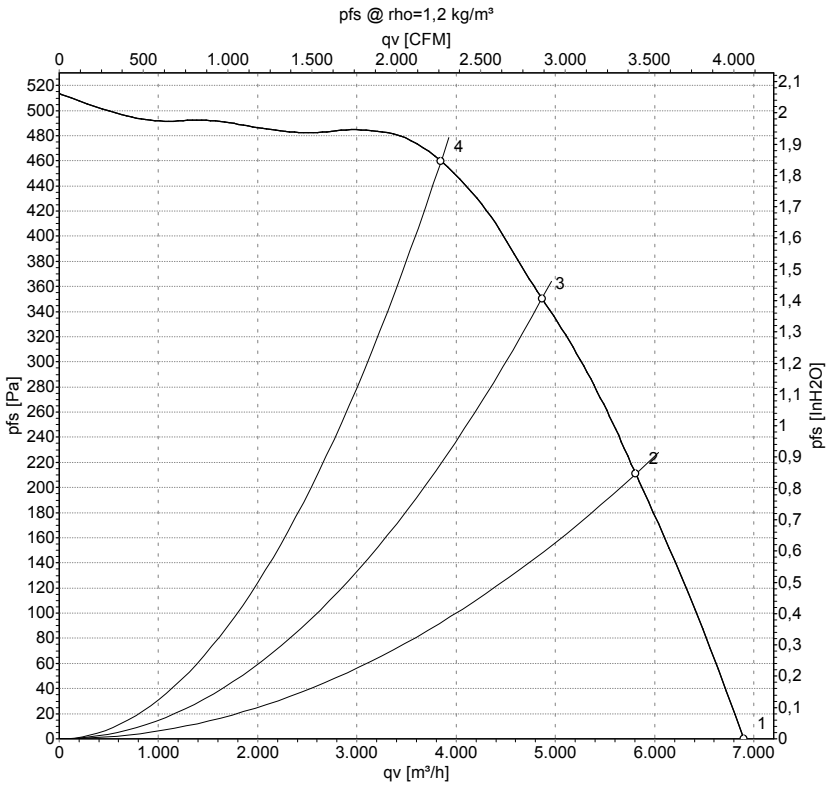
Curves: Air performance 50 Hz Y



Measurement: LU-75017-1

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	400	50	840	2400	4.90	6900	0	4060	0.00
2	Y	400	50	885	1871	4.11	5810	210	3420	0.84
3	Y	400	50	915	1515	3.62	4865	350	2865	1.41
4	Y	400	50	935	1182	3.21	3850	460	2265	1.85

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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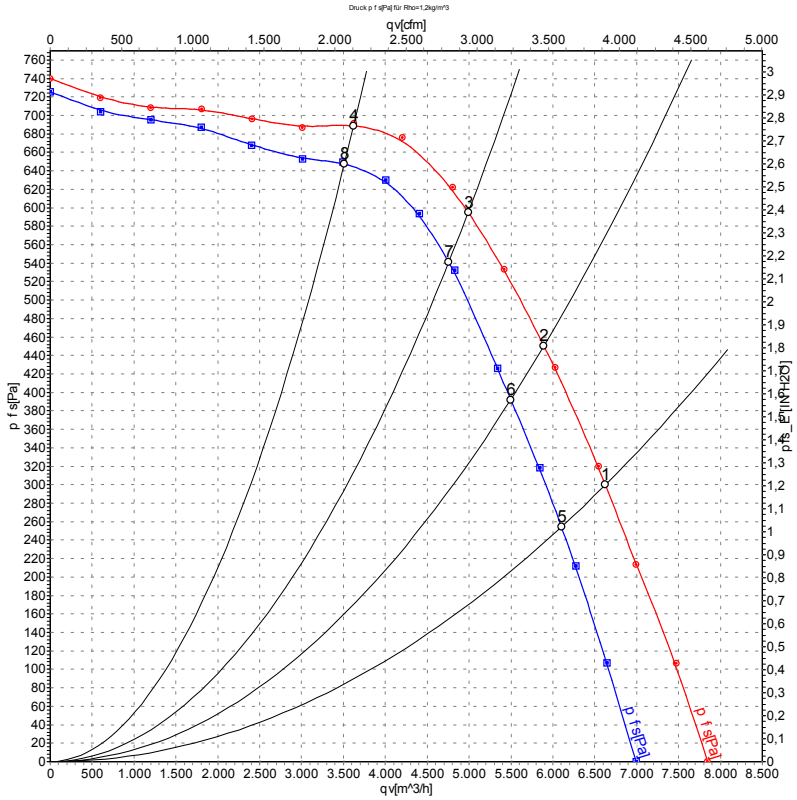
Curves: Air performance 60 Hz Y



Measurement: LU-75021-1
Measurement: LU-75019-1

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	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	1030	2940	4.90	84	89	6625	300	3900	1.20
2	Y	480	60	1060	2577	4.55	82	88	5890	450	3470	1.81
3	Y	480	60	1090	2122	3.95	80	85	4990	600	2935	2.41
4	Y	480	60	1125	1542	3.31	77	83	3620	690	2130	2.77
5	Y	400	60	950	2580	5.15	81	87	6100	255	3590	1.02
6	Y	400	60	990	2299	4.60	80	85	5500	392	3235	1.57
7	Y	400	60	1040	1943	3.95	78	84	4755	543	2800	2.18
8	Y	400	60	1095	1426	3.12	76	82	3510	649	2065	2.61

Wired = Wiring · U = Power supply · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
q_V = Air flow · p_{fs} = Pressure increase