G4D250-DC14-10

AC centrifugal fan

forward-curved, single-intake

with housing (flange), for rail applications

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Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	**G4D250-DC14-10**
Motor	**M4D094-HA**

Phase		3~	3~	3~	3~	3~	3~
Nominal voltage	VAC	400	400	400	400	480	480
Wiring		Δ	Y	Δ	Y	Δ	Y
Frequency	Hz	50	50	60	60	60	60
Method of obtaining data		ml	ml	ml	ml	ml	ml
Valid for approval/standard		CE	CE	CE	CE	CE	CE
Speed (rpm)	min^{-1}	1340	1030	1480	980	1590	1170
Power consumption	W	580	400	780	420	860	560
Current draw	A	1.14	0.72	1.41	0.78	1.34	0.83
Min. back pressure	Pa	0	0	88	37	100	55
Min. back pressure	in. wg	0	0	0.35	0.15	0.4	0.22
Min. ambient temperature	°C	-25	-25	-25	-25	-25	-25
Max. ambient temperature	°C	75	75	45	45	45	45
Starting current	A	3.9	1.3	3.5	1.2		

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change

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Technical description

Weight	13.5 kg
Size	250 mm
Motor size	94
Rotor surface	Cast in aluminum
Impeller material	Sheet steel, galvanized
Housing material	Sheet steel, galvanized
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H1
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Any
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	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60034-1 (2010); CE
Approval	EAC

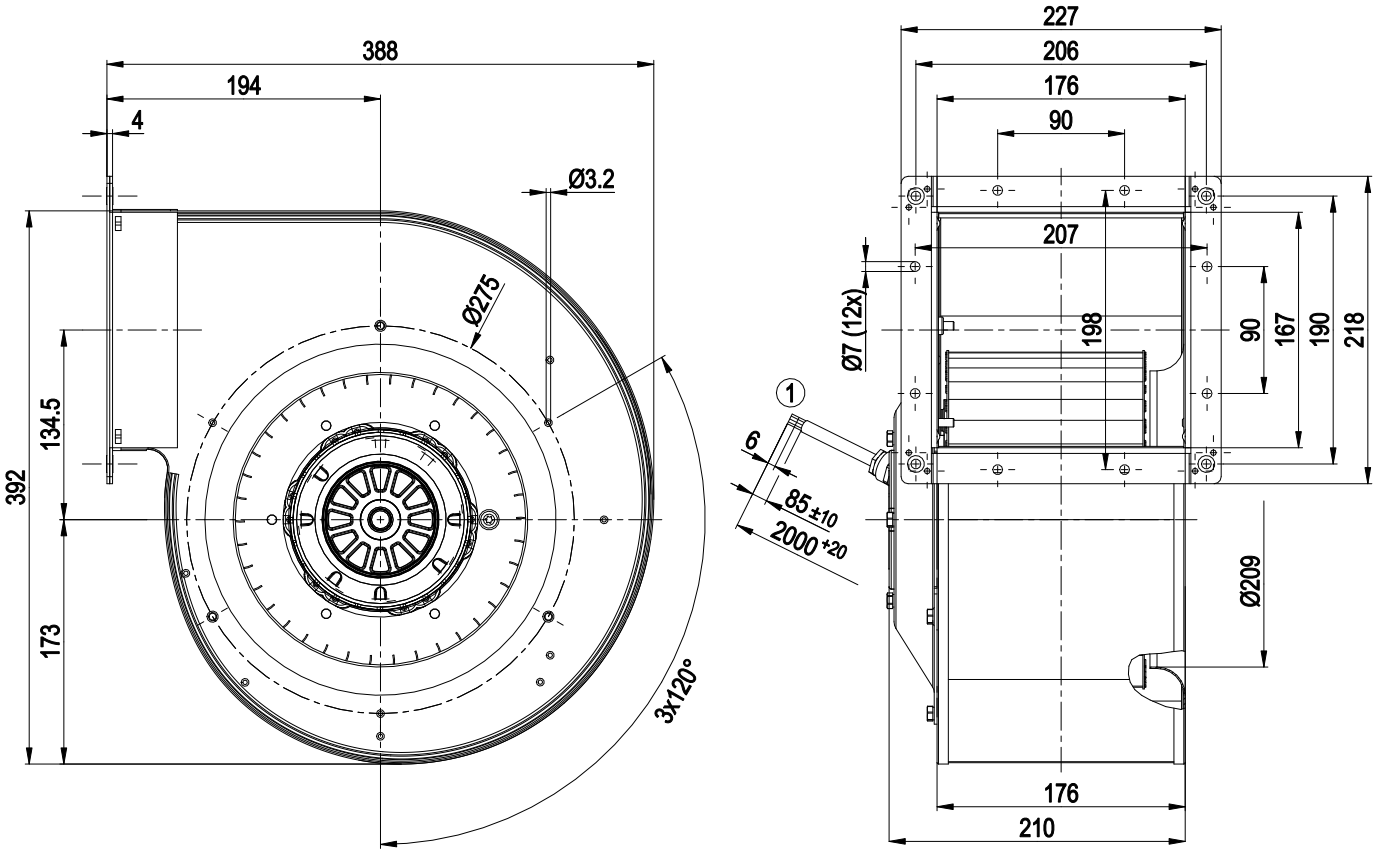
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Product drawing



1	Cable, halogen-free, railway application EN 45545, 6G 0.75 mm²
	6x splice

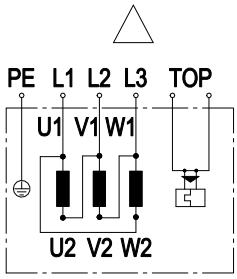
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Connection diagram



Note: Change of rotation direction by reversing two phases

Δ	Delta connection	L1	= U1 = black	L2	= V1 = blue
L3	= W1 = brown	TOP	2x gray	PE	green/yellow

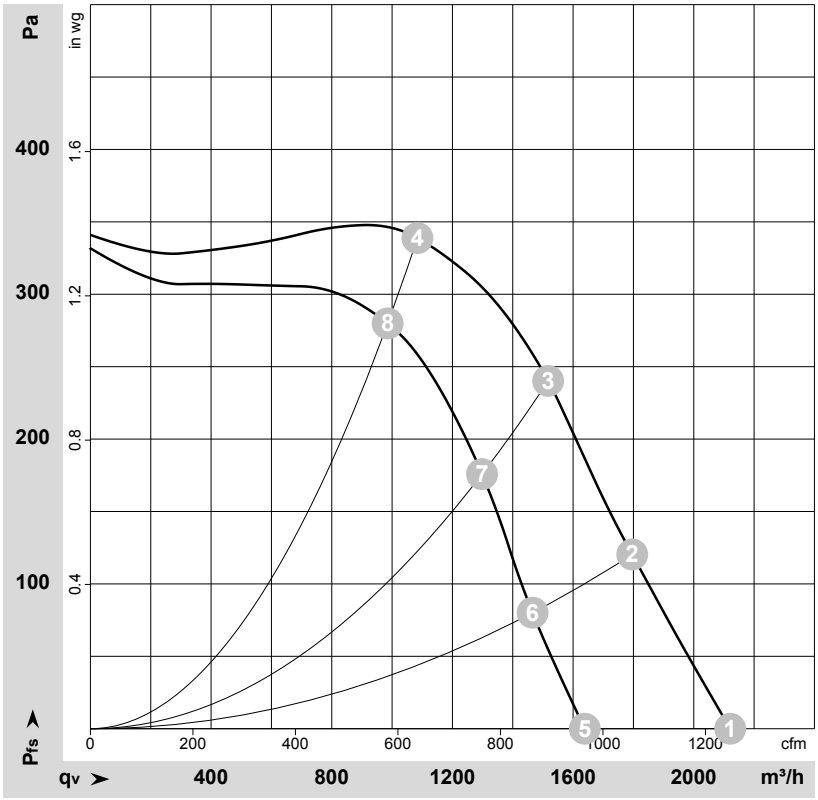
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-105207-1
Measurement: LU-105204-1

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	Δ	400	50	1340	580	1.14	2120	0	1250	0.00
2	Δ	400	50	1375	477	1.00	1795	120	1055	0.48
3	Δ	400	50	1400	396	0.90	1515	240	895	0.96
4	Δ	400	50	1435	272	0.79	1085	340	640	1.36
5	Y	400	50	1030	400	0.72	1640	0	965	0.00
6	Y	400	50	1125	353	0.61	1465	80	865	0.32
7	Y	400	50	1200	306	0.53	1300	176	765	0.71
8	Y	400	50	1310	220	0.39	985	281	580	1.13

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

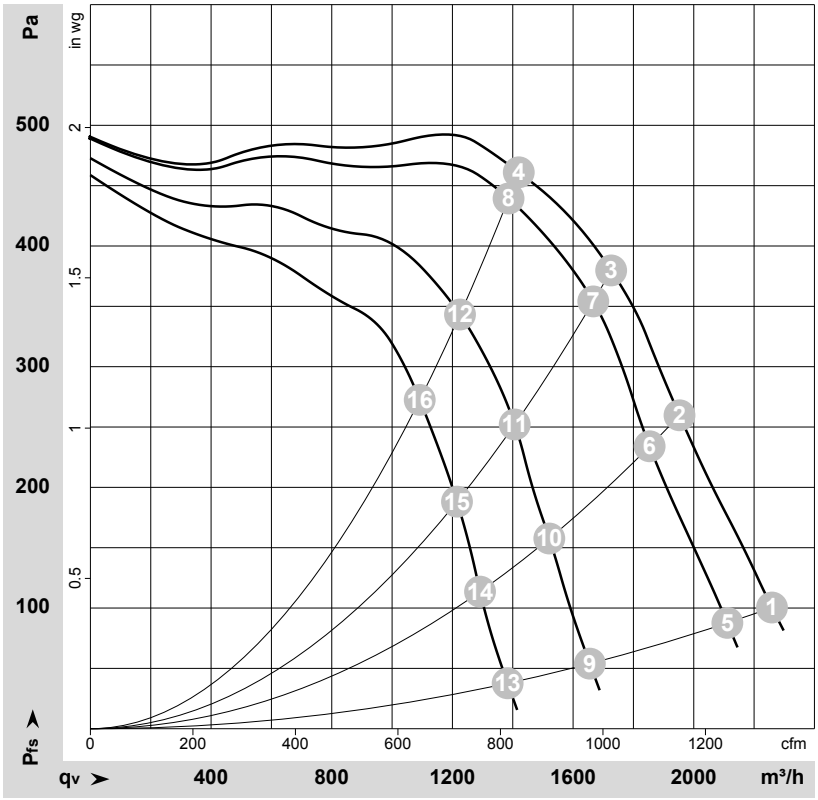
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Curves: Air performance 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-105218-1
Measurement: LU-105210-1
Measurement: LU-105214-1
Measurement: LU-105212-1

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	Δ	480	60	1590	860	1.34	2260	100	1330	0.40
2	Δ	480	60	1635	708	1.16	1955	260	1150	1.04
3	Δ	480	60	1665	604	1.04	1725	380	1015	1.53
4	Δ	480	60	1695	484	0.91	1420	460	835	1.85
5	Δ	400	60	1480	780	1.41	2110	88	1240	0.35
6	Δ	400	60	1550	664	1.21	1855	234	1090	0.94
7	Δ	400	60	1600	571	1.06	1665	356	980	1.43
8	Δ	400	60	1650	453	0.88	1385	441	815	1.77
9	Y	480	60	1170	560	0.83	1655	54	975	0.22
10	Y	480	60	1275	511	0.75	1520	158	895	0.63
11	Y	480	60	1360	463	0.67	1405	254	830	1.02
12	Y	480	60	1470	388	0.56	1225	345	720	1.39
13	Y	400	60	980	420	0.78	1385	37	815	0.15
14	Y	400	60	1085	398	0.72	1290	113	760	0.45
15	Y	400	60	1180	376	0.67	1215	189	715	0.76
16	Y	400	60	1315	334	0.59	1090	273	645	1.10

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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