W2D250-GQ02-15

AC axial fan - HyBlade

sickle-shaped blades (S series)

with guard grille for short nozzle

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Nominal data

Type	**W2D250-GQ02-15**		
Motor	**M2D068-DF**		
Phase		3~	3~
Nominal voltage	VAC	400	400
Nominal voltage range	VAC	380 .. 415	380 .. 415
Wiring		Y	Y
Frequency	Hz	50	60
Method of obtaining data		ml	ml
Valid for approval/standard		CE	CE
Speed (rpm)	min^{-1}	2550	2750
Power consumption	W	125	175
Current draw	A	0.23	0.28
Max. back pressure	Pa	110	145
Max. back pressure	in. wg	0.44	0.58
Min. ambient temperature	°C	-25	-25
Max. ambient temperature	°C	70	60
Starting current	A	0.73	0.73

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 (EN 17166)

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	30.7	28
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		42.7	40
05 Variable speed drive		No	

09 Power consumption P_e	kW	0.12
09 Air flow q_v	m^3/h	1200
09 Pressure increase p_{fs}	Pa	118
10 Speed (rpm) n	min^{-1}	2550
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-187077

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Technical description

Size	250 mm
Motor size	68
Rotor surface	Painted black
Impeller material	PP plastic, galvanized sheet-metal plate
Fan housing material	Sheet steel, galvanized and coated with black plastic (RAL 9005)
Guard grille material	Steel, phosphated and coated with black plastic
Number of blades	7
Airflow direction	A
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP20
Insulation class	"B"
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	Shaft horizontal or rotor on bottom; rotor on top on request
Condensation drainage holes	None, open rotor
Mode	S1
Motor bearing	Ball bearing
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	< 0.75 mA
With cable	Lateral
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60034-1; EN 60204-1; EN 60335-1; CE
Approval	CSA C22.2 No. 100; UL 1004-1; CCC

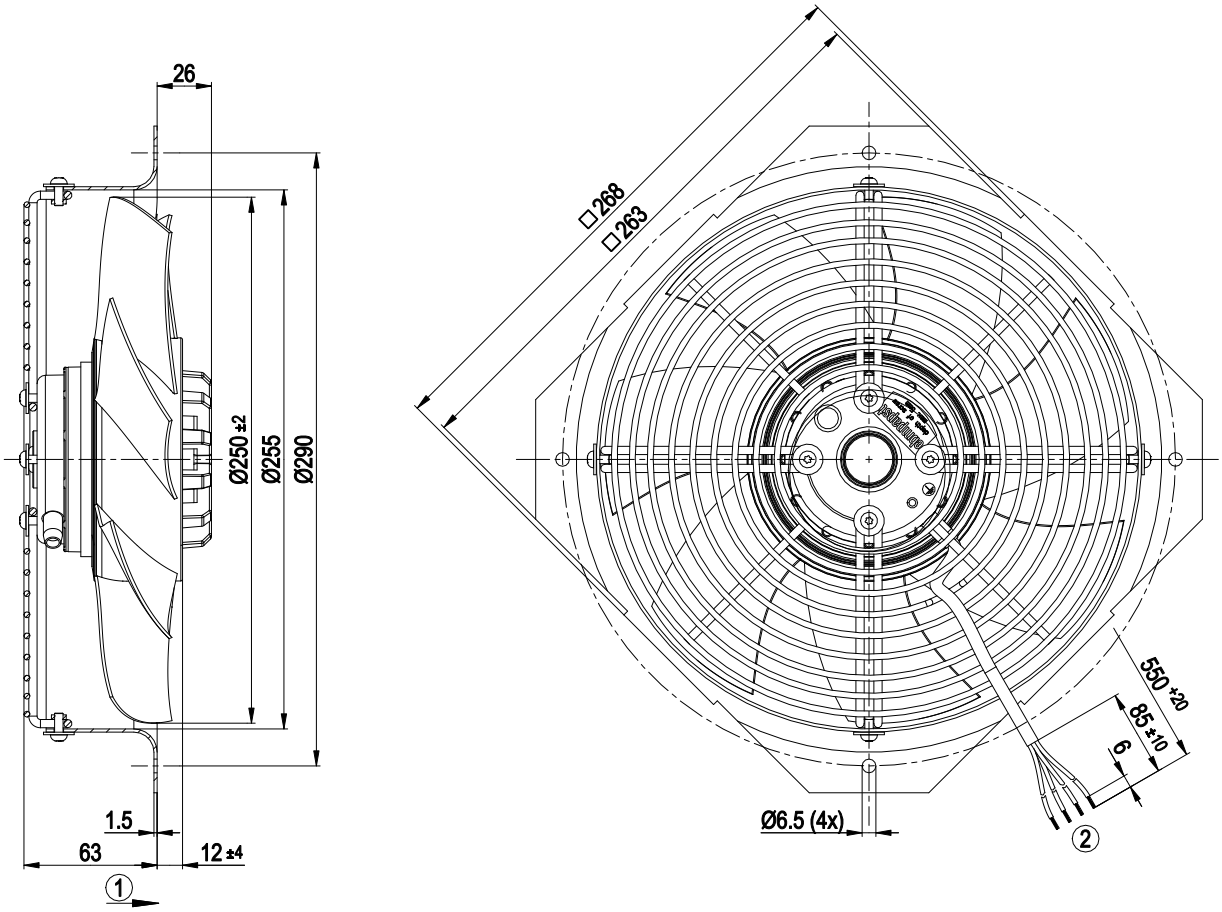
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Product drawing



1	Direction of air flow "A"
2	Cable PVC AWG20
	4x splice

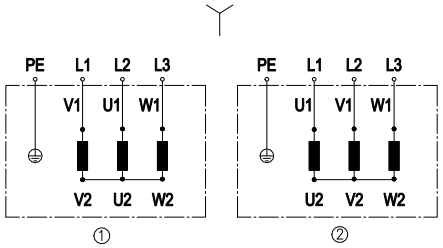
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Connection diagram



Change of rotation direction by reversing two phases

	Three-phase motor
Y	Star connection
1	Counterclockwise operation
L1	= V1 = blue
L2	= U1 = black
L3	= W1 = brown
2	Clockwise operation
L1	= V1 = black
L2	= U1 = blue
L3	= W1 = brown
PE	green/yellow

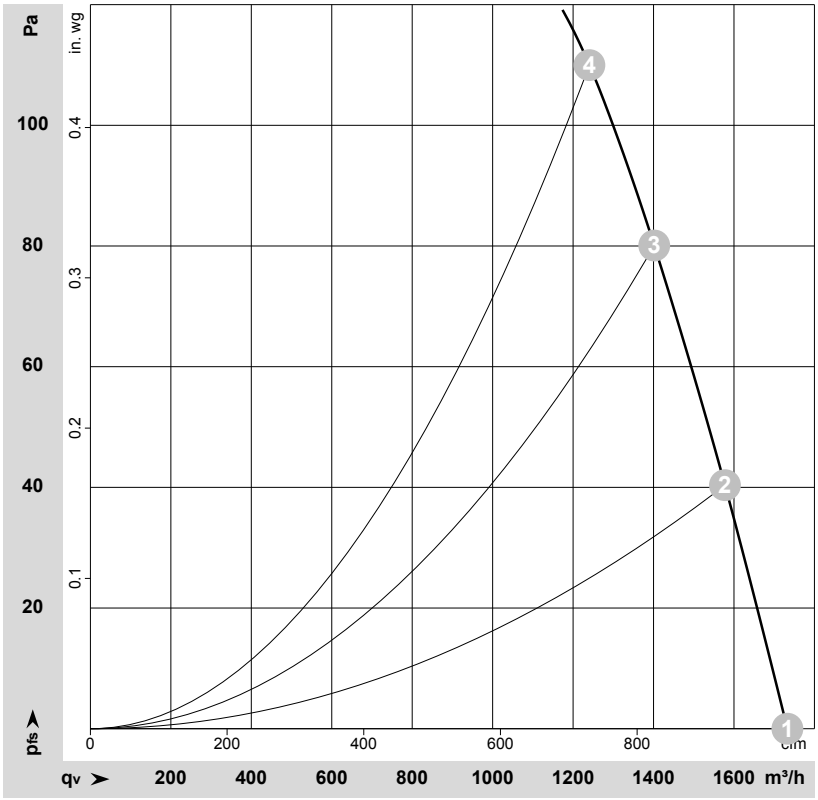
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-185387-1

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	2695	96	0.21	1735	0	1020	0.00
2	Y	400	50	2645	107	0.22	1580	40	930	0.16
3	Y	400	50	2605	117	0.23	1400	80	825	0.32
4	Y	400	50	2550	125	0.23	1240	110	730	0.44

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

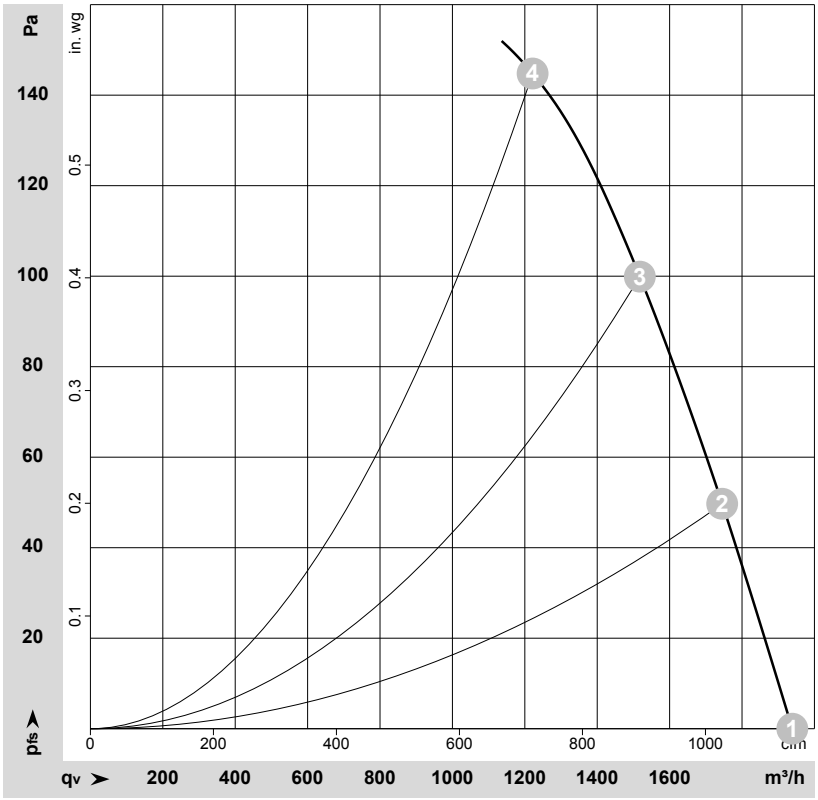
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Curves: Air performance 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-185496-1

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	60	3000	135	0.23	1940	0	1140	0.00
2	Y	400	60	2910	151	0.25	1745	50	1025	0.20
3	Y	400	60	2830	165	0.28	1520	100	895	0.40
4	Y	400	60	2750	175	0.28	1220	145	720	0.58

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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