

# AC axial fan

straight blades (A series)

with full square nozzle

## ASIA PACIFIC SHENGRUI LIMITED

Phone +00852 56261528

info@apacshengrui.com

www.apacfan.com



### Nominal data

Type	W2D250-GA02-07		
Motor	M2D068-DF		
Phase		3~	3~
Nominal voltage	VAC	400	400
Connection		Y	Y
Frequency	Hz	50	60
Type of data definition		fa	fa
Valid for approval / standard		CE	CE
Speed	min <sup>-1</sup>	2700	3000
Power input	W	112	180
Current draw	A	0.23	0.27
Max. back pressure	Pa	280	280
Max. ambient temperature	°C	60	50
Starting current	A	0.78	0.75

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

		Actual	Request 2013	Request 2015
Installation category	A			
Efficiency category	Static			
Variable speed drive	No			
Specific ratio*	1.00			
Overall efficiency $\eta_{es}$		28.1	24.1	28.1
Efficiency grade N		40	36	40
Power input $P_e$	kW	0.13		
Air flow $q_v$	m <sup>3</sup> /h	1050		
Pressure increase $p_{fs}$	Pa	121		
Speed n	min <sup>-1</sup>	2600		

Data established at point of optimum efficiency

\* Specific ratio =  $1 + p_b / 100\,000\text{ Pa}$



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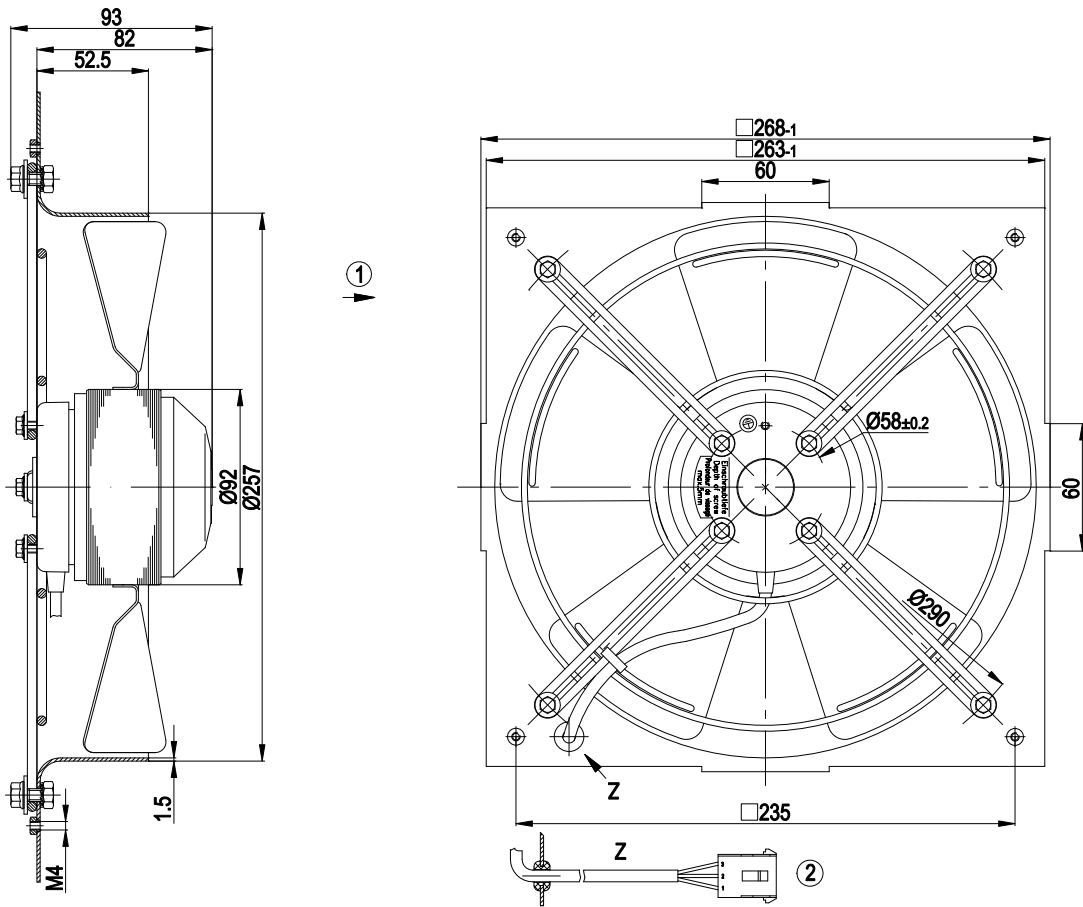
## Technical features

<b>Mass</b>	2.9 kg
<b>Size</b>	250 mm
<b>Surface of rotor</b>	Coated in black
<b>Material of impeller</b>	Sheet steel, coated in black
<b>Material of mounting ring</b>	Steel, phosphated and coated in black plastic
<b>Material of wall ring</b>	Sheet steel, galvanised
<b>Number of blades</b>	5
<b>Direction of air flow</b>	"A"
<b>Direction of rotation</b>	Clockwise, seen on rotor
<b>Type of protection</b>	IP 44; Depending on installation and position
<b>Insulation class</b>	"B"
<b>Humidity class</b>	F1-2
<b>Max. permissible ambient motor temp. (transp./ storage)</b>	+ 80 °C
<b>Min. permissible ambient motor temp. (transp./storage)</b>	- 40 °C
<b>Mounting position</b>	Any
<b>Condensate discharge holes</b>	None
<b>Operation mode</b>	S1
<b>Motor bearing</b>	Ball bearing
<b>Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)</b>	< 0.75 mA
<b>Cable exit</b>	Lateral
<b>Protection class</b>	I (if earth wire is connected by customer)
<b>Product conforming to standard</b>	EN 60335-1, motor does not have factory-installed overheating protection

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Product drawing



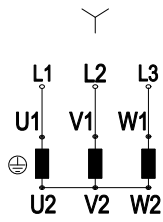
1	Direction of air flow "A"
2	Connection line PVC 3X 0.5 mm <sup>2</sup> , length starting at stator bush 250 mm, connector housing Molex No. 350 767-1 crimped
Plug assignment:	
1	black = U1
2	blue = V1
3	brown = W1



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## Connection screen



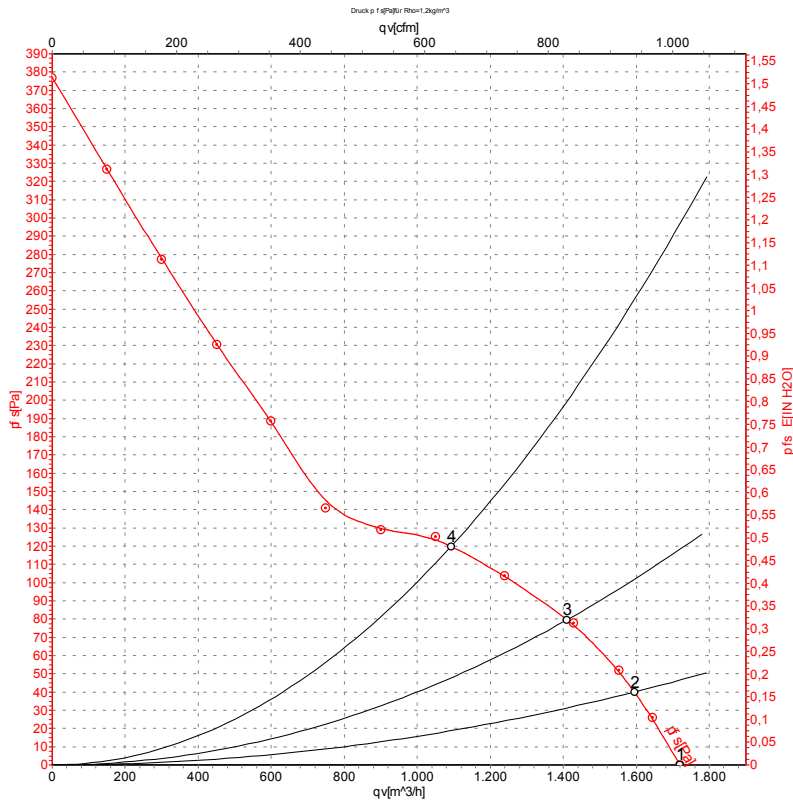
Note: Direction of rotation changes when two phases are reversed

Y	Star connection	L1	black	L2	blue
L3	brown	U1	black	V1	blue
W1	brown	U2	green	V2	white
W2	yellow				

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## Charts: Air flow 50 Hz Y



Measurement: LU-69121

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: L<sub>wA</sub> measured as per ISO 13347 / L<sub>pA</sub> 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 <sub>e</sub>	I	qv	p <sub>fs</sub>
		V	Hz	min <sup>-1</sup>	W	A	m <sup>3</sup> /h	Pa
1	Y	400	50	2650	110	0.22	1720	0
2	Y	400	50	2620	126	0.23	1595	40
3	Y	400	50	2600	131	0.24	1410	80
4	Y	400	50	2595	131	0.24	1090	120

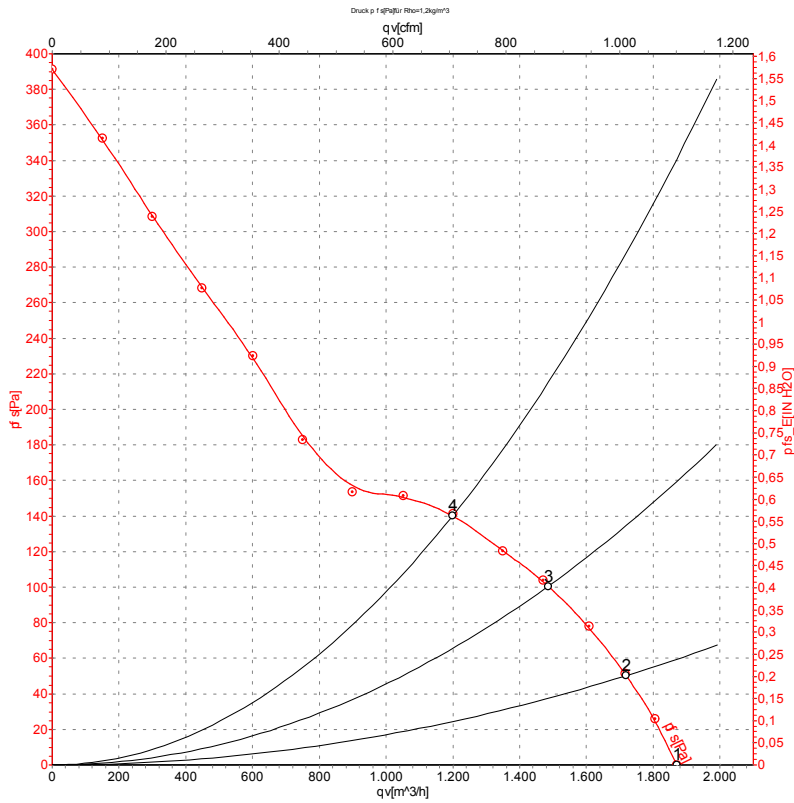
Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed · P<sub>e</sub> = Power input · I = Current draw · qv = Air flow · p<sub>fs</sub> = Pressure increase



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## Charts: Air flow 60 Hz Y



Measurement: LU-69123

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: L<sub>wA</sub> measured as per ISO 13347 / L<sub>pA</sub> 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 <sub>e</sub>	I	qv	p <sub>fs</sub>
		V	Hz	min <sup>-1</sup>	W	A	m <sup>3</sup> /h	Pa
1	Y	400	60	2950	160	0.26	1870	0
2	Y	400	60	2850	177	0.28	1720	50
3	Y	400	60	2810	184	0.29	1485	100
4	Y	400	60	2805	184	0.29	1200	140

Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed · P<sub>e</sub> = Power input · I = Current draw · qv = Air flow · p<sub>fs</sub> = Pressure increase

