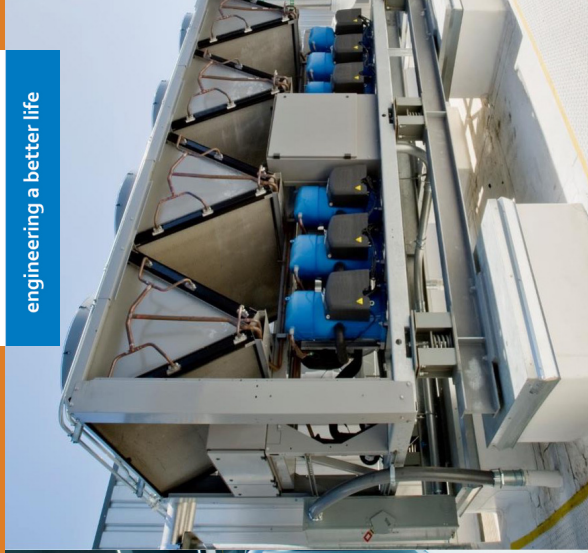
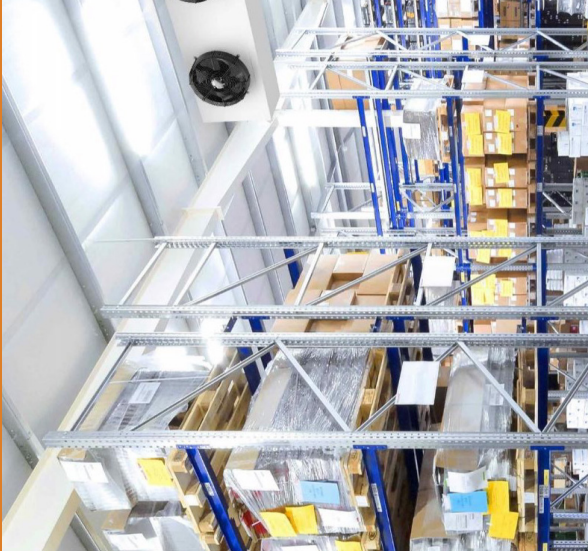


This Fan! 15th edition

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Introduction

Axial Fans

Motors

Radial Fans

Pumps

High Temperature Application

Control Equipment

Technical Information

Wiring Diagrams

This Fan 15th edition

Index_2023

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Introduction

Axial Fans

Motors

Radial Fans

Pumps

HiTemp

Controls

Tech Info

Diagrams

This Fan

ebm-papst, a certified company

This is a short form catalogue directed at the replacement market, and therefore is intentionally brief.

Local Product

ebm-papst stocks a large variety of different fans and motors in Australia and New Zealand for the local market. This catalogue covers the products typically used in Australia and New Zealand.

Imported Products

There are overseas manufacturers' products imported into Australia and New Zealand using our fans and motors, which we may not stock locally. Usually a locally stocked fan or motor will satisfactorily replace the original. As we have products for a wide range of different power supplies, when replacing components of imported product it is very important to check operating voltage and frequency as well as air flow direction.

Product Identification

Identification labels are placed on all fans before leaving the factory; correct identification makes replacement an easy exercise – see page 15 to 17 for more identification information.

Warranty

All ebm-papst labelled products sold in AU & NZ carry 2 years warranty from date of purchase, subject to correct use and application. Specific warranty details are available on request.

Availability

To locate your nearest wholesaler contact ebm-papst on (03) 9360 6400 in Australia or (09) 525 0245 in New Zealand or check our website www.ebmpapst.au or www.ebmpapst.co.nz.

Sound Data

The suction-side sound power levels $L_w(A)$ and sound pressure levels at 1m $L_p(A)$ provided in this publication are measured as per ISO 13347. The acoustic values given are only valid under the measurement conditions and will vary depending on the installation situation.

Disclaimer

Whilst every care has been taken in compilation of this catalogue, ebm-papst A&NZ Pty Ltd takes no responsibility for any errors or inaccuracies.

For more information please contact your ebm-papst representative.



Wondering where to buy? Scan the QR Code below



About ebm-papst

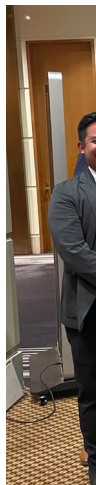
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ebm-papst provides a wide range of high quality and highly efficient air movement systems. Combined with excellent customer service and local engineering support, it is a brand you and your customer can rely on.

Our offices in Melbourne and Auckland as well as our team in Sydney, consist of qualified engineers, developers, logistics and other highly qualified professionals, accounting for more than 100 years of combined fan engineering experience.

Specialising in aerodynamics, motor technology and controls allows us to offer the best air-movement solution for your application.





Above: ARBS Awards dinner 2022



Above: ebm-papst A&NZ Team gathering 2023

Experience ebm-papst A&NZ:

Excellent Sales Team

Our sales representatives are engineers with excellent product knowledge, who work in close collaboration with you to select the most suitable fan product. We aim to not just be a fan supplier, but be your development partner.

Design & Development

We can solve any problem from a simple connector change, customised controller development up to any complex aerodynamic engineering challenge. We offer agile local support with global resources through our highly skilled engineering team. We are ideally placed to work with you as your development partner.

Technical Support

Our sales team is supported by highly qualified local engineers. If you need support on site, we aim to be there within 24 hours.

Logistics

We work closely with your supply team to ensure adequate stock availability and delivery when you need it.

EC Upgrades

Together with our partners we can find an upgrade solution for your existing system. We upgrade your HVAC&R installation to boost performance, sustainability, save energy or reduce carbon emissions and maintenance costs. In most cases, there is no need to invest in new capital equipment to benefit from innovative fan technologies: Simply switch to Green Intelligence EC fans.

In this catalogue, we have identified all high efficiency EC products with green text.

EC fans can lower power consumption by up to 90%.

EC Technology

Upgrade to EC

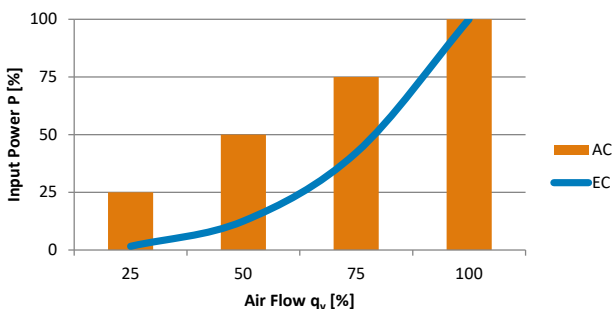
ebm-papst EC technology (EC = electronically commutated) is an environmentally sound and a more cost-effective (in terms of running costs), alternative to AC technology. ebm-papst EC fans and motors give you high-performance, silent speed control and long

life expectancy in a product which is the same size as the power hungry AC products it replaces.

More information and case studies are available on ebmpapst.com.au

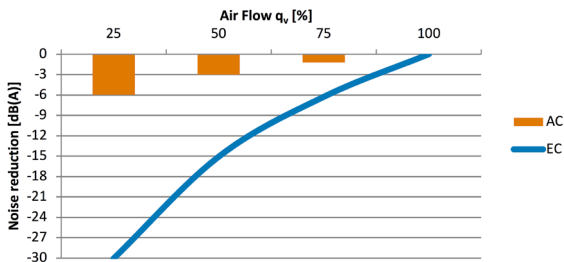
Introduction

Power Consumption



Low energy consumption: The bars show the power input of fans that are activated incrementally as needed. The air performance is reduced by 50% if 50% of the fans are shut off. The blue line shows the power input with continuous speed adjustment. If all EC fans are reduced to 50% of their maximum speed, the power is reduced by 87.5%, compared to 50% reduction when half of the AC fans are turned off.

Noise reduction



Lower noise: While shutting off half of the fans (one-half of the air flow) decreases the noise level by only about 3 dB. When reducing the speed of all fans to 50% of the maximum speed, the noise is reduced by 15dB(A).

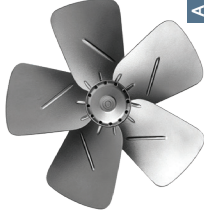
Fan Identification

Helpful hints for fan identification

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1. What does the impeller look like?	
Looks like a propeller	Axial (A, B or C)
Looks like a rotating drum	Centrifugal or radial (D, E or F)
2. What is the diameter of the impeller?	
Axial	
Up to 1600mm	
Radial	
Up to 1250mm	
3. What do the blades look like?	
Axial	
Straight blades (typically 5 blades)	'A' Blades (A)
Sickle shaped blades (5, 7 or 9 blades)	'S' Blades (B)
HyBlade (3 or 5 blades, plastic)	HyBlade (C)
Radial	
Few blades	Backward curved centrifugal (D or F)
Many Blades	Forward curved centrifugal (E)



A



B



C



D



E



F

4. What is the material of the blades?

Axial	
Die-cast alloy	'S' Blade (bolted fastening) (A)
Welded sheet steel	(B ₁ or B ₂)
HyBlade (composite plastic)	(C)
Radial	
Plastic	(D, K or L)
Aluminum	(E, I or J)

5. What is the mounting Style or Housing?

Axial	
Wall plate square or round	(F ₁ or F ₂)
Basket grille	(G)
Flat grille	(H)
No mounting	(A, B or C)
Radial	
No housing	(Commonly) backward curved (D or E)
Housing	(Commonly) forward curved (I, J, K or L)
Scroll housing 1 inlet	(I)
Scroll housing 2 inlets	(J, K or L)



What fan is that?

Helpful hints for fan identification

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6. Is it an AC or EC Motor (EC has electronics built into the back of the motor)?

AC (A)

EC (B)

7. Which way does the air flow?

Axial

When looking at rotor (spinning part) does the air:

Blow towards you?

Airflow 'A'

Blow away from you?

Airflow 'V' (out over mounting brackets)

Radial

At 90° angle to the motor



A



B

8. What is the power supply (Lead count is not an indication)

Single-phase (230V), three-phase (400V) or DC	
If a capacitor is present	Single-phase
Other voltage may apply if from imported equipment	

9. Is the equipment manufactured locally or overseas

Imported equipment	We can only offer the closest alternative
Local equipment	We may be able to find the model depending on the brand

10. What is the fan speed? (Customers may not know this if the label has worn off)

~2800rpm	2 pole
~1440rpm	4 pole
~960rpm	6 pole
~720rpm	8 pole
Not applicable to EC motors	

11. What is the application?

To better understand your needs, and to propose a suitable replacement, the more you know and can tell us about the application, the better we can help you.

Examples of typical applications:

Evaporator: cool room, freezer room, display cabinet

Condenser: rooftop, bottle cooler

Air conditioning: air handling unit (AHU), fan coil unit, supply/return air fans

Ventilation: exhaust, inline

High temperature application: oven, heater

ebm-papst Axial and Radial/Centrifugal

Part number system

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1	2	3	4	5	6	
S	4	E	3 0 0	A S 7 2	4 4	C T Indicates carton version

Radial/Centrifugal

A = Bare fan and motor
S = With grille
W = With wall plate
M = Motor

R = Bare fan and motor
D = Forward curved (double inlet) with housing
G = Forward curved (single inlet) with housing
K = Centrifugal assembly

2,4,6 or 8 = Number of poles (speed)
1 or 3 = 1 or 3 core EC products, it is not representative of speed

D = Three-phase motor
E = Single-phase motor
G = EC motor
S = Shaded pole motor
Q = Square motor

Impeller diameter

Fan and motor configuration

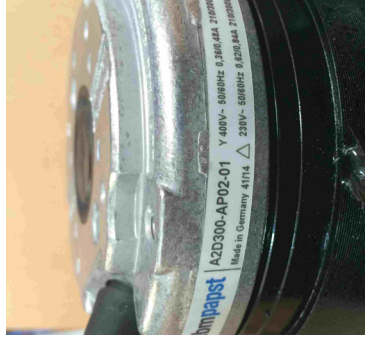
ebm-papst material numbers and type codes are changing. Please scan the QR code for more updated information.



Part Number / Label Location

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AC axial - label



AC axial – print



AC double inlet

Part Number/Label Locations

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Compact fan



EC axial



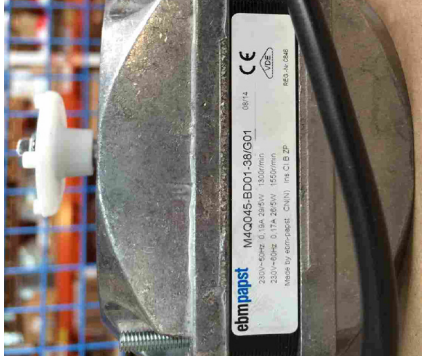
EC axial wallplate – motor



EC axial wallplate – plate



EC spider mount



Q-motor



Radial cube design



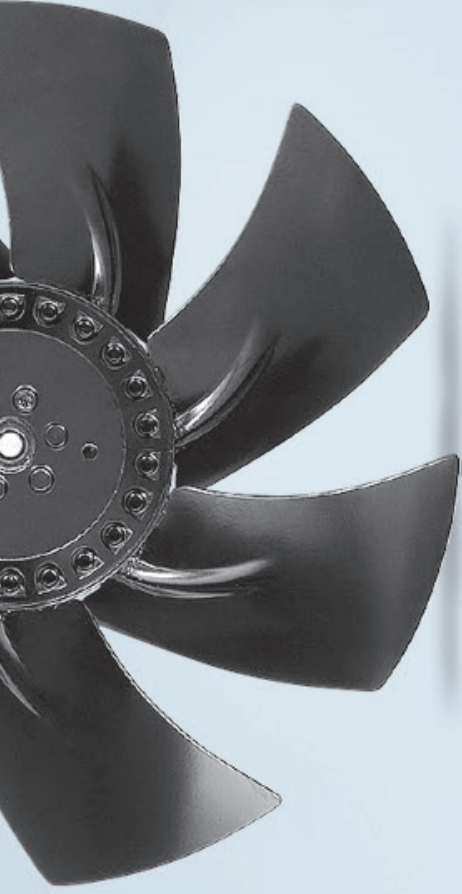
EC double inlet

Axial Fans

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As the name suggests, Axial fans move air in an axial direction. Looking at the rotor, they can either push air away from you (V-flow) or towards you (A-flow).

Axial fans are typically used for high air volume, low pressure applications. With this fan type it is recommended to use a housing with full inlet nozzle as it provides the best aerodynamic performance. Not using a housing with full inlet nozzle can result in performance losses of 10-15%, a reduction in efficiency and an increase in noise.

Axial Fans Motorised Impeller

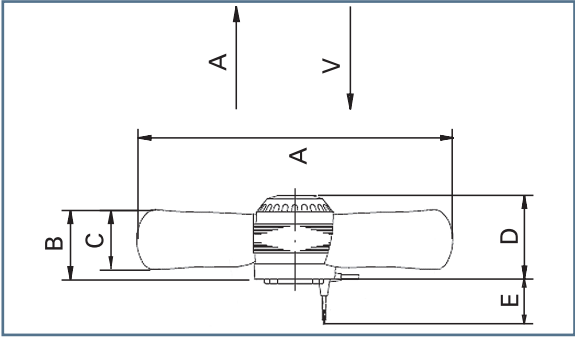
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Dimensions

Order No.	Type Code	Style	A	B	C	D	E
A2E200AK3801-CT0	VVY0200X2MCS	S	198	61	48	64	450
A2E200AI3801	VAY0200X2MCS	S	197	57	39	62	450
A4S200AH0401	VVY0200XRMCs	S	197	54	39	62	450
A4S200AI0401	VAY0200XRMCs	S	197	55	39	62	450
A2E250AL0601-CT0	VVY0250X2MES	S	251	52	34	72	450
A2E250AE6502	VAY0250X2MGs	A	250	66	39	83	450
A4S250AH0201	VVY0250XRMEs	S	251	52	34	72	450
A2E300AP0201	VVY0300X2NGs	S	298	65	38	104	450
A2E300AC4702	VAY0300X2MJs	A	300	50	20	98	450
A4D300AT0401	VVY0300H5MGs	HyBlade	300	81	58	83	450
A4E300AS7201-CT0	VVY0300H4MEs	HyBlade	300	71	58	73	450
A4E300AS7202-CT0	VAY0300H4MEs	HyBlade	300	58	51	80	450
A4E350AA1032-CT0	VVY0350X4MJZ	A	353	91	70	102	350
A4E350AN0201	VVY0350H4NGs	HyBlade	352	97	87	105	600

JB = Junction Box



S



A



HyBlade

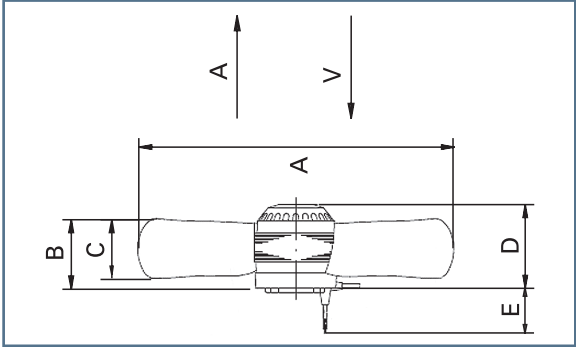
Order No.	Type Code	Style	Airflow Direction	Nominal Voltage	Frequency	Airflow at 0Pa	Nominal Data at	Speed	Power Input	Current Draw	Sound Pressure Level at 1m	Max. Perm. Amb. Temperature	Capacitor	Approximate Weight	Wiring Diagram	Motor Type
A2E200AK3801-CT0	VVY0200X2MCS	S	V	230	50	930	FA	2670	60	0.3	57	65	1.5/450	1.3	A1	AC
A2E200AI3801	VAY0200X2MCS	S	A	230	50	890	FA	2600	64	0.3	65	65	1.5/450	1.3	A1	AC
A4S200AH0401	VVY0200XRMCS	S	V	230	50	470	FA	1370	30	0.21	42	75	—	1.2	B	AC
A4S200AI0401	VAY0200XRMCS	S	A	230	50	470	FA	1370	30	0.21	42	75	—	1.2	B	AC
A2E250AL0601-CT0	VVY0250X2MES	S	V	230	50	1820	FA	2450	115	0.51	69	65	3.0/400	2	A1	AC
A2E250AE6502	VAY0250X2MGS	A	A	230	50	1610	FA	2550	115	0.51	72	55	4.0/400	2.2	A1	AC
A4S250AH0201	VVY0250XRMES	S	V	230	50	1000	FA	1390	69	0.53	54	50	—	1.7	B	AC
A2E300AP0201	VVY0300X2NGS	S	V	230	50	3140	FA	2700	230	1.1	73	50	8.0/400	3.1	A1	AC
A2E300AC4702	VAY0300X2MJS	A	A	230	50	2440	FA	2650	140	0.62	75	55	5.0/400	2.5	A1	AC
A4D300AT0401	VVY0300H5MGS	HyBlade	V	400Y	50	1805	ML	1350	90	0.16	55	70	—	2.1	C2	AC
A4E300AS7201-CT0	VVY0300H4MES	HyBlade	V	230	50	1800	ML	1320	72	0.32	53	50	2.0/400	1.8	A1	AC
A4E300AS7202-CT0	VAY0300H4MES	HyBlade	A	230	50	1800	ML	1320	72	0.32	53	50	2.0/4.00	1.8	A1	AC
A4E350AA1032-CT0	VVY0350X4MJZ	A	V	230	50	3100	FA	1400	130	0.55	n/a	45	4.0/400	3.1	A1	AC
A4E350AN0201	VVY0350H4NGS	HyBlade	V	230	50	3300	ML	1340	165	0.73	56	65	4.0/400	3.5	A1	AC

FA = Free air at 0Pa ML = Maximum load

Axial Fans Motorised Impeller

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Dimensions

Order No.	Type Code	Style	A	B	C	D	E
A4D400AP1620	VVY0400X5NKZ	S	392	94	68	117	2500
A4E400AP0201	VVY0400X4NKS	S	392	94	68	117	600
A6E400AP1019	VVY0400X6NGZ	S	392	86	88	104	1250
A4D450AO1401	VVY0450H5QMS	HyBlade	446	103	96	148	JB
A4E450AO0909	VVY0450H4QMZ	HyBlade	446	103	96	148	600
A6E450AJ0811-CT0	VVY0450H6NKZ	S	446	100	93	122	1500
A6E450AQ0511-CT0	VVY0450X6NKZ	S	446	96	92	117	1500
A4D500AJ0301	VVY0500H5RJS	HyBlade	497	108	105	124	JB
A4E500AM0301	VVY0500H4RMS	HyBlade	497	108	105	144	JB
A6E500AJ0305-CT0	VVY0500H6RJZ	HyBlade	497	108	105	124	1800

JB = Junction Box



S



A



HyBlade

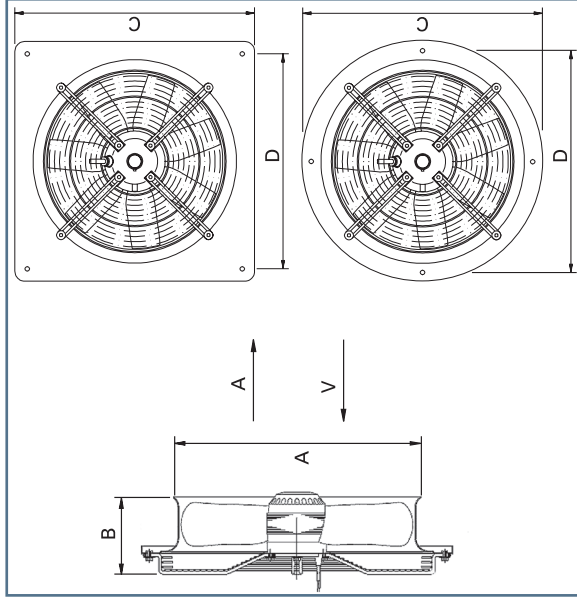
Order No.	Type Code	Style	Airflow Direction		Nominal Voltage		Frequency		Airflow at 0Pa		Nominal Data at		Speed		Power Input		Current Draw		Sound Pressure Level at 1m		Max. Perm. Amb. Temperature		Capacitor		Approximate Weight		Wiring Diagram	Motor Type
			V	Hz	m³/hr	RPM	W	A	dB(A)	°C	µF/V	kg																
A4D400AP1620	VVY0400X5NKZ	S	V	400 Δ/Y*	50	4180	FA	1440	170	0.53	67	55	–															AC
A4E400AP0201	VVY0400X4NKS	S	V	230	50	4235	FA	1430	160	0.73	69	40	6.0/400															AC
A6E400AP1019-CT0	VVY0400X6NGZ	S	V	230	50	3290	FA	940	120	0.55	59	55	3.0/450															AC
A4D450AO1401	VVY0450H5QMS	HyBlade	V	400 Δ/Y*	50	7070	ML	1360	480	0.98	62	65	–															AC
A4E450AO0909	VVY0450H4QMZ	HyBlade	V	230	50	7070	ML	1310	490	2.36	62	65	10.0/400															AC
A6E450AJ0811-CT0	VVY0450H6NKZ	S	V	230	50	4445	ML	850	160	0.7	n/a	55	4.0/400															AC
A6E450AO0511-CT0	VVY0450X6NKZ	S	V	230	50	4475	FA	910	155	0.7	62	70	4.0/450															AC
A4D500AJ0301	VVY0500H5RJS	HyBlade	V	400 Δ/Y*	50	9030	ML	1340	710	1.4	64	60	–															AC
A4E500AM0301	VVY0500H4RMS	HyBlade	V	230	50	8900	ML	1300	680	3	68	65	12.0/450															AC
A6E500AJ0305-CT0	VVY0500H6RJZ	HyBlade	V	230	50	6100	ML	915	270	1.18	56	65	8.0/400															AC

FA = Free air at 0Pa ML = Maximum load
* Nominal Data Shown for Δ Wiring

Axial Fans Square and Round Plate

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Square Wall Plate



Round Wall Plate

Round Plate Dimensions

Order No.	Type Code	A	B	C	D
W2E200CH3801	VWR0200X2MCS	200	80	280	250
W2E200CI3801	VUR0200X2MCS	200	80	280	250
W4S200CI0401	VUR0200XRMCS	200	80	280	250
W2E250CL0601	VWR0250X2MES	257	87	320	295
W2E250CE6502	VUR0250X2MES	257	85	320	295
W4S250CI0201	VUR0250XRMEs	257	87	320	295
W2E300CC4702	VUR0300X2MJS	326	80	397	380
W4E300CS72CT-001	VWR0300H4MES	326	113	397	380
W4E300CS72CT-002	VUR0300H4MES	327	113	397	380

Square Plate Dimensions

W2E200DH3801	VWA0200X2MCS	200	64	312	260
W2E200DI3801	VUA0200X2MCS	200	62	312	260
W4S200DI0401	VUA0200XRMCS	200	62	312	260
W2E250DE6502	VUA0250X2MES	257	83	370	320
W4S250DI0201	VUA0250XRMEs	256	73	370	320
W2E300DC4702	VUA0300X2MJS	326	98	430	380
W4E300DS72CT-002	VUA0300H4MES	327	113	430	380

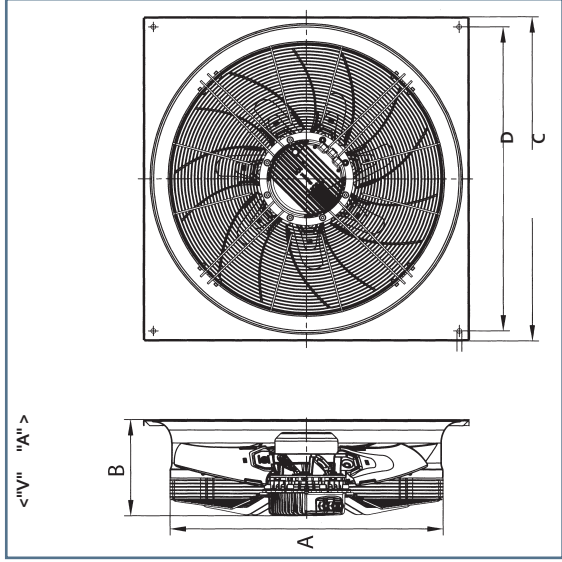
Order No.	Type Code	Airflow Direction		Nominal Voltage		Frequency		Airflow at 0Pa		Nominal Data at		Speed		Power Input		Current Draw		Sound Pressure Level at 1m		Max. Perm. Amb. Temperature		Capacitor		Approximate Weight		Wiring Diagram		Motor Type	
		V		V		Hz		m³/hr		RPM		W		A		dB(A)		°C		µF/V		kg		A1		AC		AC	
W2E200-CH38-01	VWR0200X2MCS	V		230		50		930		FA		2600		64		0.3		65		65		1.5/450		2.3		A1		AC	
W2E200-DH38-01	VWA0200X2MCS																												
W2E200-CI38-01	VUR0200X2MCS	A		230		50		890		FA		2600		64		0.3		65		65		1.5/450		2.4		A1		AC	
W2E200-DI38-01	VUA0200X2MCS																												
W4S200-CI04-01	VUR0200XRMCS	A		230		50		470		FA		1370		30		0.21		42		75		-		1.2		B		AC	
W4S200-DI04-01	VUA0200XRMCS																												
W2E250-CL06-01	VWR0250X2MES	V		230		50		1820		FA		2450		115		0.15		69		65		3.0/400		1.9		A1		AC	
W2E250-CE65-02	VUR0250X2MES																												
W2E250-DE65-02	VUA0250X2MES	A		230		50		1610		FA		2550		115		0.15		72		55		4.0/400		2.2		A1		AC	
W4S250-CI02-01	VUR0250XRMES	A		230		50		1000		FA		1390		69		0.53		54		50		-		3.1		B		AC	
W4S250-DI02-01	VUA0250XRMES																												
W2E300-CC47-02	VUR0300X2MJS	A		230		50		2440		FA		2650		140		0.62		75		55		5.0/400		3		A1		AC	
W2E300-DC47-02	VUA0300X2MJS																												
W4E300CS72CT-001	VWR0300H4MES	V		230		50		1800		ML		1320		72		0.32		53		50		2.0/400		3.7		A1		AC	
W4E300CS72CT-002	VUR0300H4MES																												
W4E300DS72CT-002	VUA0300H4MES	A		230		50		1800		ML		1320		72		0.32		53		50		2.0/400		3.7 ₄		A1		AC	

FA = Free air
ML = Maximum load

Axial Fans Large Square Plate

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Dimensions

Order No.	Type Code	A	B	C	D
8317066737	VWA0500H5RMZ	542	176	600	560
W3G500GN3307	VWA0500HTRLZ	542	170	600	560
W4D630GD0101	VWA0630H5SQS	696	227	805	750
W3G630GU3103	VWA0630HTTPS	696	250	805	750
8317078523	VWA0800B7SNZ	923	336	970	910
8317081777	VWA0800BTTLZ	923	334	970	910
8317081776	VWA0800BTPPZ	923	334	970	910
8317078212	VWA0910BTTLS	1022	338	1070	1010
8317077728	VWA0910BTTPS	1022	338	1070	1010

Order No.	Type Code	Style	Airflow Direction	Nominal Voltage	Frequency	Airflow at 0Pa	Nominal Data at		Power Input	Current Draw	Sound Pressure Level at 1m	Max. Perm. Amb. Temperature	Approximate Weight	Wiring Diagram	Motor Type
8317066737	VWA0500H5RMZ	HyBlade	V	400 Δ/Y*	50	9030	ML	1340	710	1.4	64/58	60	14	F1b/F2b	AC
W3G500GN3307	VWA0500HTRLZ	HyBlade	V	380-480	50/60	10390	ML	1600	980	1.6	68	60	15.8	L2	EC
W4D630GD0101	VWA0630H5SQS	HyBlade	V	400 Δ/Y*	50	19890	ML	1320	2630	4.78	73/67	60	38.9	F1b/F2b	AC
W3G630GU3103	VWA0630HTTPS	HyBlade	V	380-480	50/60	21190	ML	1510	3200	5	78	65	40	L5	EC
8317078523	VWA0800B7SNZ	AxiBlade	V	400 Δ/Y*	50/50	23030	ML	870	1430	2.8	74/64	60	44	F1b/F2b	AC
8317081777	VWA0800B7TLZ	AxiBlade	V	380-480	50/60	25740	ML	940	1950	3.1	79	60	43	RP6	EC
8317081776	VWA0800B7TPZ	AxiBlade	V	380-480	50/60	29510	ML	1080	2900	4.4	85	60	47.5	RP6	EC
8317078212	VWA0910B7TLS	AxiBlade	V	380-480	50/60	29145	ML	850	1770	2.8	79	60	45	RP6	EC
8317077728	VWA0910B7TPS	AxiBlade	V	380-480	50/60	33630	ML	980	2250	3.9	75	60	48	RP6	EC

FA = Free air
ML = Maximum load
*Data shown is for 50Hz Δ/Y

*Nominate Data Shown for Δ Wiring

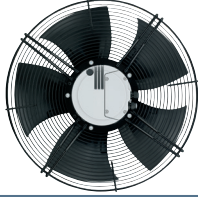
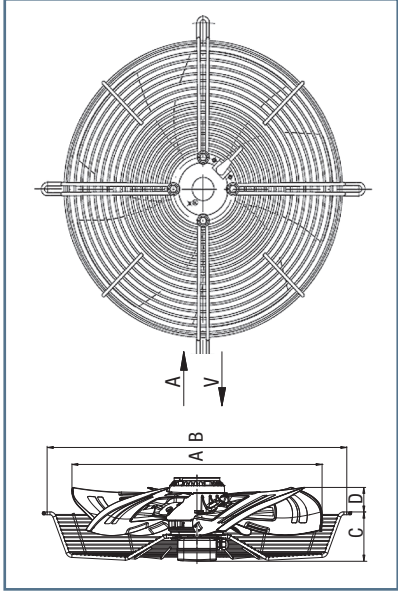
Axial Fans



Axial Fans Basket Grille

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Dimensions

Order No.	Type Code	A	B	C	D
S2D170BA0406	VMP0170X3MCZ	170	220	4	63
S4E300AR26CT-002	VMA0300X4MEZ	300	360	100	49
S4E300AS72CT-001	VMA0300H4MES	300	360	115	23
S4E300AS72A2-CT0	VNA0300H4MEZ	300	360	99.5	49.4
S1G300FO01111-CT0	VMA0300HSLGS	300	360	68.5	33.8
S3G300AK1365-CT0	VMA0300HSLSZ	300	360	120	28
S3G300AK1360-CT0	VMA0300HSLSZ	300	360	126	28
S4E350AN02CT-048	VMA0350H4NGS	352	422	122	55
S4E350AN02CT-060	VMA0350H4NGS	352	442	111	65
S3G350AN01CT-002	VMA0350HSNES	352	442	116	56
S3G350AP0160-CT0	VMA0350HSNGZ	352	422	126	58

Order No.	Type Code	Style	Airflow Direction	Nominal Voltage	Frequency	Airflow at 0Pa	Nominal Data at	Speed	Power Input	Current Draw	Sound Pressure Level at 1m	Max. Perm. Amb. Temperature	Capacitor	Approximate Weight	Wiring Diagram	Motor Type
S2D170BA0406	VMP0170X3MCZ	A	V	400Y	50	470	FA	2750	45	0.13	64	75	-	1.4	C2	AC
S4E300AR26CT-002	VMA0300X4MEZ	S	V	230	50	1935	FA	1380	70	0.32	59	55	2.0/400	3.1	A1	AC
S4E300A572CT-001	VMA0300H4MES	HyBlade	V	230	50	1800	ML	1330	70	0.31	53	40	2.0/400	3	A1	AC
S4E300A572A2-CT0	VNA0300H4MEZ	HyBlade	A	230	50/60	1800	ML	1320	72	0.32	53	50	2.0/4.00	2.9	A1	AC
S1G300FO0111-CT0	VMA0300HSLGS	HyBlade	V	200-240	50/60	1550	ML	1250 (high speed)	62	0.55	56	40	-	1.6	ESM	EC
S3G300AK1358-CT0	VMA0300HSLSZ	HyBlade	V	200-240	50/60	1975	ML	1360	60	0.53	54	60	-	2.5	H3	EC
S3G300AK1360-CT0	VMA0300HSLSZ	S	V	200-240	50/60	2265	ML	1500	85	0.8	58	60	-	2.7	H4	EC
S4E350AN02CT-048	VMA0350H4NGS	HyBlade	V	230	50	3305	ML	1340	165	0.73	56	40	4.0/400	5.1	A1	AC
S4E350AN02CT-060	VMA0350H4NGS	HyBlade	V	230	50	3305	ML	1340	165	0.73	56	40	4.0/400	5.1	A1	AC
S3G350AN01CT-002	VMA0350HSNES	S	V	200-240	50/60	3420	ML	1450	160	1.3	57	40	-	3.7	H3	EC
S3G350AP0160-CT0	VMA0350HSNGZ	S	V	200-240	50/60	3925	ML	1475	165	1.35	57	60	-	4.3	H4	EC

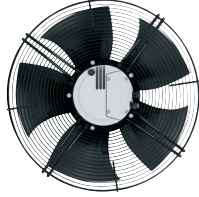
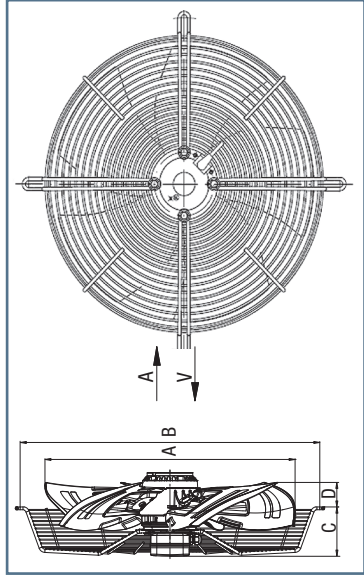
FA = Free air

ML = Maximum load

Axial Fans Basket Grille

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Dimensions

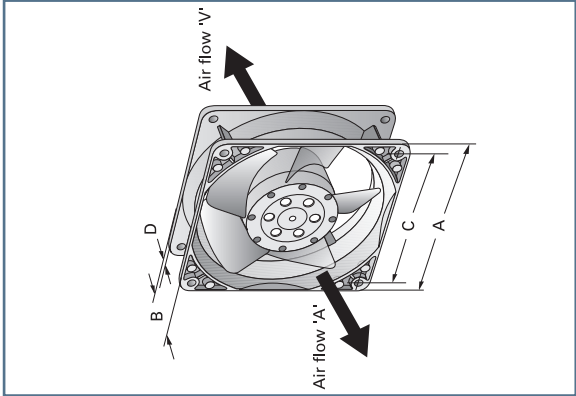
Order No.	Type Code	A	B	C	D
S4E400AP0244-CT0	VMA0400X4NKZ	392	470	117	67
S4E450AU0337-CT0	VMA0450H4QHZ	445	522	116	57
S4E450BU0335-CT0	VMA0450H4QHZ	445	522	36	107
S4D500AM0301-CT0	VMA0500H5RMS	497	565	126	84
S4E500AM0301-CT0	VMA0500H4RMS	497	565	126	84
8317077318	VMA0500H5RHS	497	565	108	64
S6E560AN0101	VMA0560H6RMS	552	700	102	108
S4D630AR0101	VMA0630H5RNS	627	750	101	
S6D630AN0101	VMA0630H7RMS	626	750	124	86
S6E630AN0101	VMA0630H6RMS	626	750	124	86
S3G630AU2301	VMA0630HTTPS	627	750	178	76
S6E710AR0301	VMA0710H6RNS	703	853	155	70

Order No.	Type Code	Style	Airflow Direction		Nominal Voltage		Frequency		Airflow at 0Pa		Nominal Data at		Speed		Power Input		Current Draw		Sound Pressure Level at 1m		Max. Perm. Amb. Temperature		Capacitor		Approximate Weight		Wiring Diagram		Motor Type	
			V	Hz	m³/hr	FA	RPM	W	A	dB(A)	°C	µF/V	kg																	
S4E400AP0244-CT0	VMA0400X4NKZ	S	V	230	50	4235	FA	1430	160	0.73	60	6.0/400	6.1	A1	AC															
S4E450AU0337-CT0	VMA0450H4QHZ	S	V	230	50	5770	ML	1300	350	1.55	55	8.0/400	7	A1	AC															
S4E450BU0335-CT0	VMA0450H4QHZ	S	V	230	50	5770	ML	1300	350	1.55	55	8.0/450	6.3	A1	AC															
S4D500AM0301-CT0	VMA0500H5RMS	HyBlade	V	400Δ/Y*	50	9195	ML	1390	720	1.41	65	-	13	F1b/F2b	AC															
S4E500AM0301-CT0	VMA0500H4RMS	HyBlade	V	230	50	8905	ML	1300	680	3	65	12.0/450	13	A2b	AC															
8317077318	VMA0500H5SRHS	HyBlade	V	200-277	50/60	9245	ML	1420	750	3.4	60	-	10.5	L1	EC															
S6E560AN0101	VMA0560H6RMS	HyBlade	V	230	50	8105	ML	920	390	1.78	75	10.0/400	14.5	A2b	AC															
S4D630AR0101	VMA0630H5RNS	HyBlade	V	400Δ/Y*	50	13835	ML	1330	1250	2.48	55	-	16.2																	
S6D630AN0101	VMA0630H7RMS	HyBlade	V	400Δ/Y*	50	11270	ML	890	600	1.2	65	-	14	F1b/F2b	AC															
S6E630AN0101	VMA0630H6RMS	HyBlade	V	230	50	11020	ML	860	600	2.62	55	14.0/400	14	A2b	AC															
S3G630AU2301	VMA0630H1TPS	HyBlade	V	380-480	50/60	21190	ML	1510	3200	5	65	-	32.4	L5	EC															
S6E710AR0301	VMA0710H6RNS	HyBlade	V	230	50	11700	ML	900	630	2.79	70	14.0/450	19.3	A2b	AC															

FA = Free air
ML = Maximum load
* Nominal Data Shown for Δ Wiring

Axial Fans Compact Range

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Dimensions

Order No.	Type Code	Case Style	A	B	C	D
8556N-CT0	VWCF080AQHFS	B	80	38	72	3
3956-CT0	VWCD092AQFGS	B	92	25	83	4
4412FM-CT0	VWCD119FHGKS	B	119	25	105	4
9956-CT1	VWCD119AQFJS	B	119	25	105	4
4314-CT0	VWCE119AJJLS	B	119	32	105	5
4184NX-CT1	VUCF119YJJLS	B	119	38	105	6
4650Z-CT1	VWC0119AQHCS	B	119	38	105	10
4650N-CT1	VUC0119YQHCS	B	119	38	105	6
4656Z-CT1	VWC0119AQHCS	B	119	38	105	10
4656N-CT1	VUC0119YQHCS	B	119	38	105	6
8324100005	VWCF119DSGLS	B	119	38	105	6
5958-CT1	VWCF127AQLS	B	127	38	113	7
7214N	VWEH150XJLPS	A	150d	55	162d	6
6224N	VWEG172XJLPS	C	172d	51	162d	–
W25130AA0363	VWEH150XQLPZ	A	150d	55	162d	6
W25130BM0301	VUEH150XQLPS	A	150d	55	162d	6
W1G130AA2511	VWEH151XSLNZ	A	150d	58	162	10
W2E142BB0101	VWLF150X2LPS	A	153d	38	162d	11
W2E200HK3801	VWLJ225X2MTS	D	225	80	170	7
W2E250HL0601	VWLJ280X2MXS	D	280	80	209	7

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Order No.		Type Code	Airflow Direction		Nominal Voltage		Frequency	Airflow at 0Pa	Speed		Power Input	Sound Pressure Level at 1m	Max. Perm. Amb. Temperature	Approximate Weight	Lead	Motor Type
			V	Hz	m³/hr	RPM	W	dB(A)	°C	kg						
8556N-CT0		VWCF080AQHFS	V	230	50	50	12	31	90	0.49	310	AC				
3956-CT1		VWCD092AQFGS	V	230	50	59	11	35	80	0.28	PIN*	AC				
4412FM-CT0		VWCD119FHGKS	V	12	-	140	3.2	38	75	0.175	310	DC				
9956-CT1		VWCD119AQFJS	V	230	50	117	14	37	70	0.8	PIN*	AC				
4314-CT0		VWCE119AJJLS	V	24	-	170	5	45	75	0.22	310	DC				
4184NX-CT1		VUCF119YJJLS	A	24	-	180	4.9	49	70	0.39	PIN*	DC				
4650Z-CT1		VWCO119AQHCS	V	230	50	160	19	40	50	0.54	PIN*	AC				
4650N-CT1		VUCO119YQHCS	A	230	50	160	19	46	55	0.55	PIN*	AC				
4656Z-CT1		VWCO119AQHCS	V	230	50	160	19	40	75	0.54	PIN*	AC				
4656N-CT1		VUCO119YQHCS	A	230	50	160	19	47	85	0.55	PIN*	AC				
8324100005		VWCF119DSGLS	V	195-265	50/60	180	4.4	42	75	0.25	PIN*	EC				
5958-CT1		VWCF127AQGLS	V	230	50	180	18	44	60	0.57	PIN*	AC				
7214N		VWEH150XJLPS	V	24	-	360	12	53	72	0.725	365	DC				
6224N		VWEG172XJLPS	V	24	-	410	18	55	72	0.82	PIN	DC				
W2S130AA0363-CT0		VWEH150XQLPZ	V	230	50	340	45	49	50	1.13	1500	AC				
W2S130BM0301-CT0		VUEH150XQLPS	A	230	50	385	47	60	50	1.1	330	AC				
W1G130AA2511		VWEH151XSLNZ	V	230	50/60	370	23	55	70	0.8	1500	EC				
W2E142BB0101		VWLF150X2LPS	V	230	50	320	27	51	55	0.8	PIN	AC				
W2E200HK3801		VWLJ225X2MTS	V	230	50	880	64	58	60	2.1	Terminal	AC				
W2E250HL0601		VWLJ280X2MXS	V	230	50/60	1865	127	69	60	2.8	Terminal	AC				

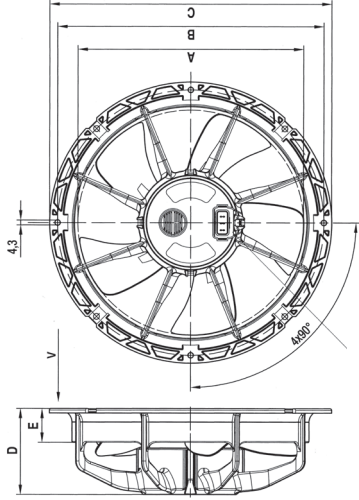
PIN connectors require separate lead. LZ126 Lead + Plug, included in delivery of -CT1

Axial Fans

Axial Fans ESM Fans

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Standard



Truncated

Dimensions

Order No.	Type Code	Type	A	B	C	D	E
W1G172EC9122-CT1	VWS0172XSLCZ	standard	172	208	222	78.5	35
W1G200EC9110-CT0	VWT0200XSLCZ	truncated	200	236	250	78.5	40
W1G200EC9145-CT0	VWT0200XSLCS	standard	200	236	250	78.5	40
W1G230EB9122-CT2	VWT0230XSLCZ	truncated	250	266	280	78.5	50

Axial Fans



Order No.	Type Code	Airflow Direction	Nominal Voltage	Frequency	Airflow at 0Pa	Speed	Power Input	Current Draw	Sound Pressure Level at 1m	Max. Perm. Amb. Temperature	Speed Step	Approximate Weight	Wiring Diagram	Motor Type
W1G172EC9122-CT1	VW50172XS1CZ	V	230	50/60	525	2500	22	0.18	54	50	high-low	0.8	ESM	EC
W1G200EC9110-CT0	VWT0200XS1CZ	V	230	50/60	750	2100	31	0.24	54	50	high-low	1	ESM	EC
W1G200EC9145-CT0	VWT0200XS1CS	V	230	50/60	750	2100	31	0.24	54	50	high-low	1	ESM	EC
W1G230EB9122-CT2	VWT0230XS1CZ	V	230	50/60	1060	1600	32	0.3	n/a	50	high-low	1	ESM	EC

ebm-papst energy-saving motors (ESM fans) have 2 programmable speeds with a motor and electronics system that is robust, maintenance-free and durable. ESM fans are designed for refrigeration applications, especially for display cases and bottle cooler evaporators.

Motors

iQC- and NiQ-Motors

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ebm-papst pioneered increasing efficiency in refrigeration systems with the release of its iQ series motor over 10 years ago. With proven application in harsh conditions all over the world in both new and replacement installations, the iQC and NiQ now improve on the tried and tested iQ series motors. The iQC and the NiQ have enhanced the existing advantages by reducing environmental costs.

Technical Data Typical iQ-motor combined with different axial impellers (speed 1,300 RPM)																
mm	Airflow @ 0Pa*		iQ-Motor Power Consumption		Q-Motor Power Consumption		SAVE		Airflow @ 0Pa*		iQ-Motor Power Consumption		Q-Motor Power Consumption		SAVE	
	m³/h	W	W	%	W	W	%	m³/h	W	W	%	m³/h	W	W	%	m³/h
Impeller diameter	Blade pitch 22 degrees				Blade pitch 28 degrees				Blade pitch 34 degrees				Blade pitch 34 degrees			
154	170	2	29	93%	29	2.8	29	90%	190	2.8	29	90%	220	3.3	29	89%
172	230	2.6	29	91%	29	2.9	29	90%	270	2.9	29	90%	310	3.8	29	87%
200	360	3.4	31	89%	31	5.3	31	83%	410	5.3	31	83%	470	7.3	31	76%
230	520	6	36	83%	36	13.1	36	64%	710	13.1	36	64%	750	16.9	36	53%
254	710	11.3	58	81%	58	23.1	58	60%	980	23.1	58	60%	1010	28.4	62	54%
300	1380	24.3	62	61%	62											

*Free airflow with wall ring

Order No.	Type Code	Direction of Rotation	Power Output	Voltage	Frequency	Speed	Power Input	Current	Max. Perm. Amb. Temperature	Approximate Weight	Lead Length	Motor Type
			W	V	Hz	RPM	W	A	°C	kg	mm	
M4Q045BD0138-CT0	DS045CXRXX0Z	CCW	5	230	50	1300	29	0.19	40	0.9	450	AC
M4Q045CA0138-CT0	DS045DXRXX0Z	CCW	7	230	50	1300	31	0.2	40	1.1	450	AC
M4Q045CA0172A01-CT0	DS045DXRXX0Z	CCW	7	230	50	1300	31	0.2	40	1.1	380	AC
M4Q045CA0338A01-CT0	DS045DXRXX0Z	CCW	10	230	50	1300	36	0.25	40	1.2	450	AC
M4Q045CA0375B01-CT0	DS045DXRXX0Z	CCW	10	230	50	1300	36	0.25	40	1.2	1500	AC
iQC3612-00-CT0*	DE036CCCKXX0Z	CCW	≤15	220-240	50/60	1300/1500	23	-	50	0.5	2000	EC
M4Q045CF0138-CT0	DS045EXRXX0Z	CCW	16	230	50	1300	60	0.42	40	1.3	450	AC
M4Q045CF0175B01-CT0	DS045EXRXX0Z	CCW	16	230	50	1300	60	0.42	40	1.3	1500	AC
M4Q045DA0538-CT0	DS045FXRXX0Z	CCW	23	230	50	1300	86	0.62	40	1.6	450	AC
M4Q045DA0575B01-CT0	DS045FXRXX0Z	CCW	23	230	50	1300	86	0.62	40	1.6	1500	AC
M4Q045EA0138-CT0	DS045HXRXX0Z	CCW	25	230	50	1300	90	0.62	40	2	450	AC
NiQ3224-00-CT1	DE032ENKXX0Z	CCW	20	100-240	50/60	1300	30	-	50	0.7	1500	EC
M4Q045EF0138-CT0	DS045JXRXX0Z	CCW	34	230	50	1300	110	0.75	40	2.2	450	AC
M4Q045EF0175B01-CT0	DS045JXRXX0Z	CCW	34	230	50	1300	110	0.75	40	2.2	1500	AC

KL = Ball bearing

GK = Sleeve bearing

*Also available with Lyall and AMP plug connector on request

Motors

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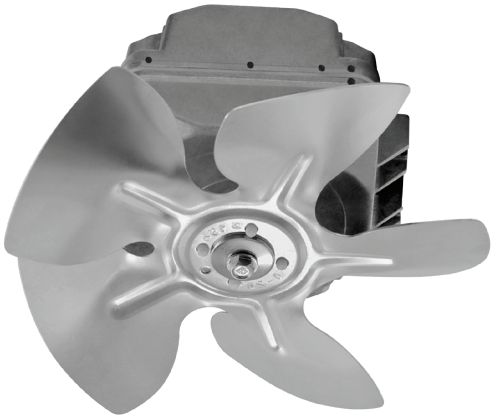
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Recommended Impellers

[illegible]

Impeller Part Number

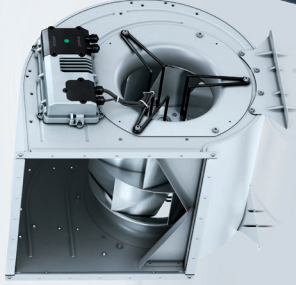
Part No. 'V' Flow	Part No. 'A' Flow	Size & Blade Angle
73801-2-3634	73761-2-3634	154mm 22° ± 1°30'
73802-2-3634	73762-2-3634	154mm 28° ± 1°30'
73803-2-3634	73763-2-3634	154mm 34° ± 1°30'
73804-2-3634	73764-2-3634	172mm 22° ± 1°30'
73805-2-3634	73765-2-3634	172mm 28° ± 1°30'
73806-2-3634	73766-2-3634	172mm 34° ± 1°30'
73807-2-3634	73767-2-3634	200mm 22° ± 1°30'
73808-2-3634	73768-2-3634	200mm 28° ± 1°30'
73809-2-3634	73769-2-3634	200mm 34° ± 1°30'
73810-2-3634	73770-2-3634	230mm 22° ± 1°30'
73811-2-3634	73771-2-3634	230mm 28° ± 1°30'
73812-2-3634	73772-2-3634	230mm 34° ± 1°30'
73813-2-3634	73773-2-3634	254mm 22° ± 1°30'
73814-2-3634	73774-2-3634	254mm 28° ± 1°30'
73815-2-3634	73775-2-3634	254mm 34° ± 1°30'
73816-2-3634	73776-2-3634	300mm 22° ± 1°30'
73817-2-3634	73777-2-3634	300mm 28° ± 1°30'
73818-2-3634	73778-2-3634	300mm 34° ± 1°30'



Radial Fans

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The air intake of a radial fan runs in parallel with the shaft. The air flow is then diverted by 90° in the impeller and discharged in a centrifugal direction.

Backward curved fans have a free-running impeller and do not need a scroll housing. Backward curved fans are typically used for applications with medium air volume and medium to high back pressure. It is always recommended to use backward curved fans with inlet rings.

In contrast to backward curved fans, forward curved fans must have a scroll housing for optimum air flow. The housing can either have single inlet, meaning air intake only from one side, or double inlet, with air intake from 2 sides. Due to the requirement of a housing and air direction, forward curved fans are often also called forward curved blowers.

Radial Fans Backward Curved

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Dimensions

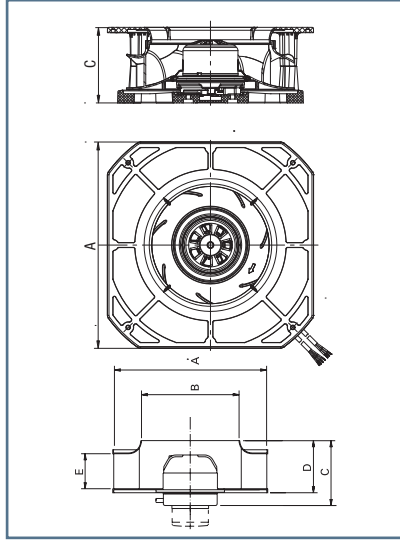
Order No.	Type Code	Type	A	B	C	D
R2S133AE1705-CT0	VBS0133XQLDS	A	133	93	91	61
R2E133RA0313-CT0	VBS0133R2JDZ	A	133	93	56	59
R1G175AB6359-CT0	VBS0175XULCZ	A	175	131	69	62
R2E180CB2809-CT0	VBS0180X2MCZ	A	180	132	55	48
R2E190RA2651-CT0	VBS0190R2MCZ	A	190	132	69	63
R3G190RB0101-CT0	VBS0190RSLCS	A	190	133	69	63
R3G190RC0528-CT0	VBS0190RSLDZ	A	190	132	71	63
R3G190RD4503	VBS0190RSLCS	A	190	133	91	63
K3G190RD4509	VBS0190RSLCS	B	226	133	102	63
R2E220RA3801	VBS0220R2MCS	A	220	161	71	63.7
R3G220RC0503-CT0	VBS0220RSLDS	A	220	161	71	64
K3G220RD5303	VBS0220RSLCS	B	270	161	111	64
R2E225RA9209-CT0	VBS0225R2MGS	A	225	154	99	88
R3G225RE0703	VBS0225RSLCS	A	225	154	101	88
K3G225RE0703	VBS0225RSLGS	B	270	154	131	88
R2E250RA5001	VBS0250R2MJ5	A	250	173	99	85
R4E250RA0105	VBS0250R4MES	A	250	173	93	85
R2E280AE5205	VBS0280X2MJ5	A	281	191	125	82
R4E280AD0805	VBS0280X4MGS	A	281	191	125	112



A



B



FA = Free air
ML = Maximum load

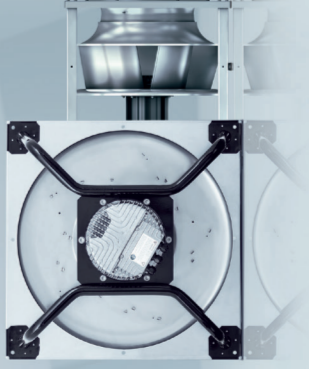
Radial Fans

Order No.	Type Code	Direction of Rotation	Nominal Voltage	Frequency	Airflow at 0Pa	Nominal Data at	Speed	Power Input	Current Draw	Sound Pressure Level at 1m	Max. Perm. Amb Temperature	Capacitor	Approximate Weight	Wiring Diagram	Motor Type
R2S133AE1705-CT0	VBS0133XQLDS	CW	230	50/60	280	FA	2780	36	0.25	55	65	–	0.9	B	AC
R2E133RA0313-CT0	VBS0133R2JDZ	CW	230	50/60	195	ML	2700	26	0.12	58	60	1.5/400	0.58	A1	AC
R1G175AB6359-CT0	VBS0175XULCZ	CW	24	–	555	FA	3100	34	1.6	n/a	40	–	0.85	n/a	EC
R2E180CB2809-CT0	VBS0180X2MCZ	CW	230	50	440	FA	2550	60	0.28	n/a	55	1.5/450	1.4	A1	AC
R2E190RA2651-CT0	VBS0190R2MCZ	CW	240	50	540	ML	2400	50	0.25	54	60	1.5/450	1.2	A1	AC
R3G190RB0101-CT0	VBS0190RSLCS	CW	200-240	50/60	640	ML	2710	57	0.43	60	60	–	1	H3	EC
R3G190RC0528-CT0	VBS0190RSLDZ	CW	200-240	50/60	695	ML	3200	83	0.75	60	60	–	1.05		EC
R3G190RD4503	VBS0190RSLES	CW	200-240	50/60	975	ML	4120	169	1.35	66	60	–	1.38	H4	EC
K3G190RD4509	VBH0190RSLEZ	CW	200-240	50/60	975	ML	4120	169	1.35	63	60	–	2	H4	EC
R2E220RA3801	VBS0220R2MCS	CW	230	50/60	885	ML	2100	88	0.39	52	50	2.0/450	1.3	A1	AC
R3G220RC0503-CT0	VBS0220RSLDS	CW	200-240	50/60	1015	ML	2580	85	0.7	n/a	60	–	1.13	H4	EC
K3G220RD5303	VBH0220RSLES	CW	200-240	50/60	1290	ML	3230	168	1.4	66	45	–	2.1	H4	EC
R2E225RA9209-CT0	VBS0225R2MGS	CW	230	50	1195	ML	2500	155	0.68	63	70	3.5/450	2.3	A1	AC
R3G225RE0703	VBS0225RSLGS	CW	200-240	50/60	1300	ML	2860	170	1.4	60	60	–	1.75	H4	EC
K3G225RE0703	VBH0225RSLGS	CW	200-240	50/60	1300	ML	2860	170	1.4	60	60	–	2.5	H4	EC
R2E250RA5001	VBS0250R2MJS	CW	230	50	1420	ML	2500	210	0.93	58	70	5.0/400	2.9	A1	AC
R4E250RA0105	VBS0250R4MES	CW	230	50	775	ML	1350	47	0.22	43	55	1.5/400	1.9	A1	AC
R2E280AE5205	VBS0280X2MJS	CW	230	50	2110	FA	2700	225	1	n/a	40	7.0/400	3.5	A1	AC
R4E280AD0805	VBS0280X4MGS	CW	230	50	1425	FA	1420	78	0.35	n/a	40	2.5/450	3.18	A1	AC

EC Plug Fans
In Stock

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Order No.	Type Code	Assembly Type	Description	Voltage	Phase	N Level
K3G250PR04H2	VBH0250PSPGS	spider mount	RadiPac II	230V	1~	81.3
K3G250PR1719	VBH0250PSPGZ	spider mount	RadiPac II	230V	1~	79.1
K3G280PR04I2	VBH0280PSPGS	spider mount	RadiPac II	230V	1~	79.6
8317082255	VBH0355PTRLZ	spider mount	RadiPac II	400V	3~	70.7
K3G400FV72J1	VBH0400STRLS	spider mount	RadiCal II	400V	3~	77.5
8317077713	VBH0450PTTLS	spider mount	RadiPac II	400V	3~	73
8317080577	VBH0500STTLS	spider mount	RadiCal II	400V	3~	76.8
8317077714	VBH0500PTTPS	spider mount	RadiPac II	400V	3~	74.7
K3G500PB3331	VBH0500PTTPS	spider mount	RadiPac II	400V	3~	71.7
8317080555	VBH0560STTLS	spider mount	RadiCal II	400V	3~	78.2
8317077715	VBH0560PTTPS	spider mount	RadiPac II	400V	3~	74.1
K3G560PC0431	VBH0560PTTRS	spider mount	RadiPac II	400V	3~	73.3
K3G630FB3208	VBH0630STTPS	spider mount	RadiCal II	400V	3~	77.5
K3G630PV0401	VBF0630PTVNS	cube design	RadiPac II	400V	3~	70.1
K3G710PV0501	VBF0710PTVQS	cube design	RadiPac II	400V	3~	71.3
K3G800PV1301	VBF0800PTVTS	cube design	RadiPac II	400V	3~	71.9
K3G900AR1001	VBF0900NTVTS	cube design	RadiPac	400V	3~	68
D3G160HA0402	VHD0160XSPGS	blower	7/7 Tight	230V	1~	53.2
D3G225IF1102	VHD0225XSPMS	blower	9/7	230V	1~	58.8
D3G310GG0501	VCD0310FTRNS	blower	12/12	400V	3~	69.4
D3G355GG0301	VCD0355FTRNS	blower	15/15	400V	3~	70.6

FA = Free air

ML = Maximum load

Radial Fans

For a full list of plug fans and product updates, add me to your mailing list!



Radial Fans

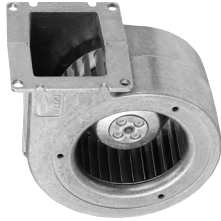
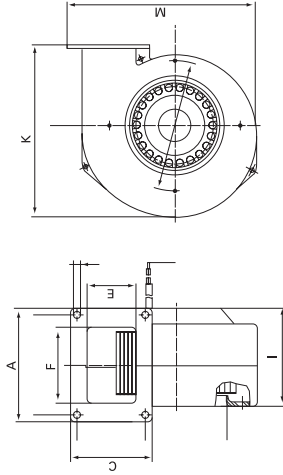
Forward Curved - Single Inlet

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Dimensions

Order No.	Type Code	A	C	E	F	I	K	M
G2E120CR2603-CT0	VHS0120X2MCZ	110	98	67.5	77	99	171	180
G2E140AI2801-CT0	VHS0140X2MGS	130	120	92	94	100	227	248
G2E160AY4701-CT0	VHS0160X2MJS	130	120	92	94	100	227	248



Order No.	Type Code	Direction of Rotation	Nominal Voltage	Frequency	Airflow at 0Pa	Nominal Data at	Speed	Power Input	Current Draw	Max. Perm. Amb. Temperature	Capacitor	Approximate Weight	Wiring Diagram	Motor Type
G2E120CR2603-CT0	VHS0120X2MCZ	CW	240	50	290	FA	2200	80	0.34	60	2.0/450	1.9	A1	AC
G2E140AI2801-CT0	VHS0140X2MGS	CW	230	50	500	FA	2400	160	0.7	70	4.0/400	3.5	A1	AC
G2E160AY4701-CT0	VHS0160X2MJJS	CW	230	50	590	FA	2100	240	1.05	50	6.0/400	4	A1	AC

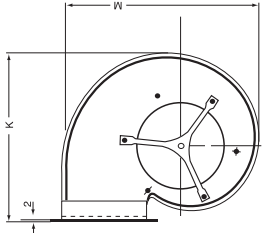
FA = Free air
ML = Maximum load

Radial Fans

Forward Curved - Double Inlet

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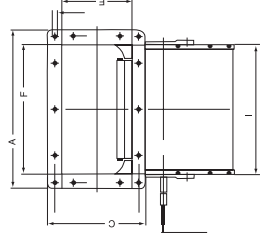
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A



B



C



D

Dimensions

Order No.	Type Code	Case Style	A	C	E	F	I	K	M
D2E133DM4701-CT0	VHD0133X2MG5	B	-	-	104	232	232	203	213
D2E133AM8398-CT0	VHD0133X2MGZ	B	-	-	71	215	215	171	180
D2E146AP4722-CT0	VHD0146X2MJ5	C	270	142	102	233	232	205	219
D4E146AA0702-CT0	VHD0146X4MES	B	-	-	104	232	232	205	219
D3G146LV1330-CT2	VHD0146X5SLG5	D	272	116	98	226	244	202	209
D2E146HS9704-CT2	VHD0146X2MGZ	A	173	162	150	Round	194	220	216
D2E146HT6701-CT2	VHD0146X2MJ5	A	173	162	150	Round	199	223	216

Type A and D require plug and lead option

Order No.	Type Code	Nominal Voltage	Frequency	Airflow at 0Pa	Nominal Data at	Speed	Power Input	Current Draw	Sound Pressure Level at 1m	Max. Perm. Amb. Temperature	Capacitor	Approximate Weight	Wiring Diagram	Motor Type
		V	Hz	m ³ /hr		RPM	W	A	dB(A)	°C	µF/V	kg		
D2E133DM4701-CT0	VHD0133X2MGS	230	50	760	ML	1650	175	0.78	58	40	3.0/450	3.8	A1	AC
D2E133AM8398-CT0	VHD0133X2MGZ	230	50	705	FA	1500	185	0.81	60	35	3.0/500	3.7	ebm-5-speed	AC
D2E146AP4722-CT0	VHD0146X2MJS	230	50	970	ML	2050	300	1.31	63	30	8.0/400	4.4	A1	AC
D4E146AA0702-CT0	VHD0146X4MES	230	50	835	FA	1000	100	0.44	55	50	2.0/450	3.3	A1	AC
D3G146LV1330-CT1	VHD0146XSLGS	200-240	50/60	1155	FA	1550	167	1.3	61	60	–	2.9	H6	EC
D2E146HS9704-CT1	VHD0146X2MGZ	230	50	760	FA	1350	195	0.86	57	45	5.0/400 (P2)	3.4	ebm-4-speed	AC
D2E146HT6701-CT1	VHD0146X2MJS	230	50	1060	ML	1850	355	1.55	66	55	8.0/450 (P2)	3.44	ebm-4-speed	AC

FA = Free air

ML = Maximum load

Radial Fans

Forward Curved - Fan Coil Unit



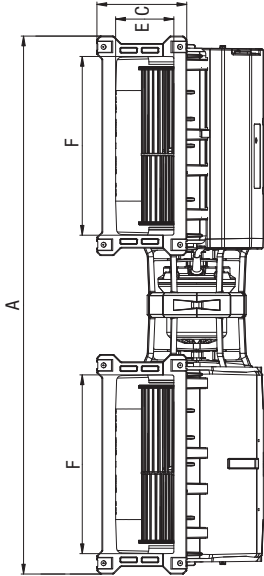
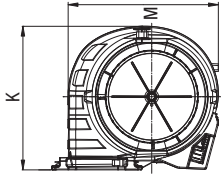
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Dimensions

Order No.	Type Code	Case Style					
K3G146AD0101-K01	VHM0146X5NGS	A	677	116	98	226	202
						202	209



A



Order No.	Type Code	Nominal Voltage	Frequency	Airflow at 0Pa	Nominal Data at	Speed	Power Input	Current Draw	Sound Pressure Level at 1m	Max. Perm. Amb. Temperature	Approximate Weight	Wiring Diagram	Motor Type
K3G146AD0101-K01	VHM0146XSNGS	V 200-240	Hz 50/60	m³/hr 2295	ML	RPM 1400	W 243	A 1.8	dB(A) 63	°C 40	kg 4.2	H6	EC

ML = Maximum load

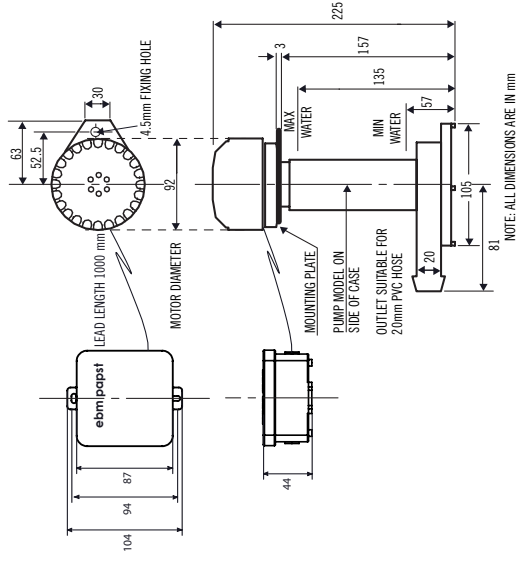
Radial Fans



Pumps Evaporative Cooler

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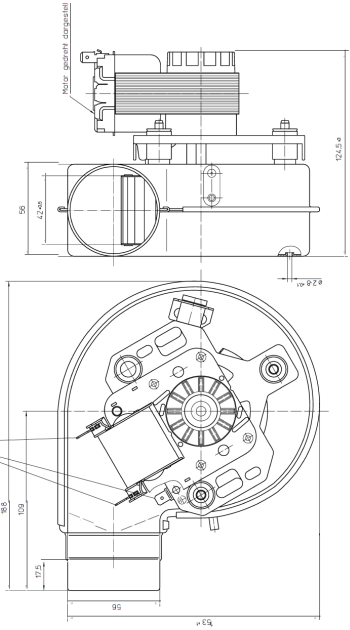
Part No.	Nominal Voltage	Frequency	Speed	Power Input	Flow rate at 1m head	Flow rate at 2 m head	Approximate Weight	Motor Type
EBM ALPHA-CT0	V 240	Hz 50	RPM 2700	W 50	L/s 32	L/s 25	kg 1.4	AC

High Temperature Applications Oven Fans / Heaters

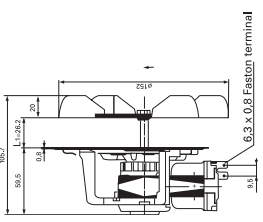
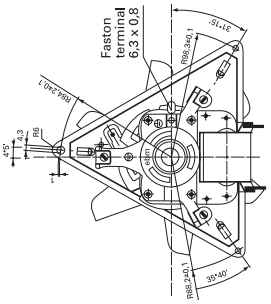
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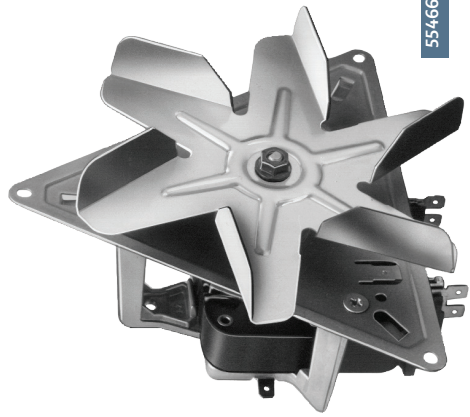
Flanschhalter gemäß IEC
Steckdose 6,3...DN 400/27



55465.12040



55466.32180



Article Number		Nominal Voltage		Frequency	Airflow at 0Pa	Speed	Power Input	Current Draw	Max. Perm. Amb. Temperature	Approximate Weight	Motor Type
Order No.	Type Code	V	Hz	m³/hr	RPM	W	A	°C	kg		
55466.32180	VBS0152XQJDZ	230	50	200	2000	32	0.27	120	0.9		AC
55465.12040	VHS0097XQJDZ	230	50	108	2520	28		90/220	3		AC

Control Equipment Controllers / Sensors

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A



B



C



D



E

ebm-papst's EC technology offers all-inclusive air movement from one supplier. Our EC products come with everything you need: PID control amplifier, interference suppression filter, power filter, motor protection and a power supply for external sensors. That's how easy it is with "Plug & Play".

Bringing our systems approach to the next level, we now introduce our connECtor range. The connECtor range makes the best use of already existing features of our EC products and is perfectly-suited for industries like refrigeration, ventilation, air conditioning, information technology, data centres, agriculture and more. The connECtor range helps monitor, control and measure your fan system. Our always expanding connECtor range currently includes the following products:

- EC Fan Display for easy monitoring
- EC Fan Gateway for monitoring and incorporation in BACnet Building Management System (BMS)
- Data Center Fan Controller Kit for complete pressure control
- Differential pressure controller for pressure measurement or closed loop pressure control
- Temperature Sensor for easy temperature control
- Head Pressure Controller for refrigeration systems
- Potentiometer for easy manual speed control of EC fans

Part No.	Description	Nominal Voltage			Comment
		Type	V		
ECCN01-CT0	Data centre controller with 0-50Pa pressure sensors	E	20 to 38VDC/24VAC		Application guide available via QR code on the controller
ECCN01-CT1	Data centre controller with potentiometer	E	20 to 38VDC/24VAC		Application guide available via QR code on the controller
ECCN02-CT0 ECCN06-CT0	BACnet Gateway Generation II	E	24VDC/24VAC		Connect and control Modbus capable fans to BACnet BMS via High Level Interface
ECCN03-CT0	Fan condition monitor and Auto addressing	-	20 to 38VDC/24VAC		-
8324100021	MODBUS display with speed setting	-	20 to 48VDC		-
ECCN05-CT0	240VAC switch 3 speed controller	-	20 to 38VDC/24VAC		-
PRESS12-CT0	Head pressure sensor range 4 to 12.5 bar	A	10VDC		Suitable for refrigerant R-134A
PRESS21-CT0	Head pressure sensor range 10 to 21 bar	A	10VDC		Suitable for refrigerant R-407C/R-404A/R-507
PRESS28-CT0	Head pressure sensor range 12 to 28 bar	A	10VDC		Suitable for refrigerant R-410A
50010-1-0174	Temperature sensor range +10°C to +45°C	B	10VDC		-
50011-1-0174	Temperature sensor range +30°C to +55°C	B	10VDC		-
8324100021	Modbus Display and Control (MDC)	-	10-48VDC		Connect up to 100 fans to monitor fan operation
DPC200-EP4000-001	Differential air pressure controller range 0 to 4000 Pa	D	10-30VDC		Can act as a sensor or stand-alone controller
CLC000AE0401	10 kΩ potentiometer with housing	C	10VDC		Use for manual adjustment of speed

Technical Information

Dynamic Pressure - Air velocity chart at 20°C ambient temperature

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Velocity (v)	Dynamic Pressure (P _{fd})		Velocity (v)	Dynamic Pressure (P _{fd})		Velocity (v)	Dynamic Pressure (P _{fd})	
	m/s	Pa		m/s	Pa		m/s	Pa
1.00		0.60	5.00		15.0	9.00		49
1.25		0.94	5.25		16.5	9.25		51
1.50		1.35	5.50		18.2	9.50		54
1.75		1.84	5.75		19.8	9.75		57
2.00		2.40	6.00		21.6	10.0		60
2.25		3.04	6.25		23.4	12.5		94
2.50		3.75	6.50		25.4	15.0		135
2.75		4.54	6.75		27.3	17.5		184
3.00		5.40	7.00		29.4	20.0		240
3.25		6.34	7.25		32	22.5		304
3.50		7.35	7.50		34	25.0		375
3.75		8.44	7.75		36	27.5		454
4.00		9.6	8.00		38	30.0		735
4.25		10.8	8.25		41	40.0		960
4.50		12.2	8.50		43	45.0		1215
4.75		13.5	8.75		46	50.0		1500

Technical Information

Hooke's Law for Fans

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The air volume q_v changes proportionally to the speed n :

$$q_{v2} = q_{v1} \left(\frac{n_2}{n_1} \right)$$

The static pressure p_{fs} changes proportionally to the square of the speed n :

$$p_{fs2} = p_{fs1} \left(\frac{n_2}{n_1} \right)^2$$

The input power P changes proportionally to the third power of the speed n :

$$P_2 = P_1 \left(\frac{n_2}{n_1} \right)^3$$

Technical Information

Humidity Classes

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H0 (dry)

- No water action, no condensation
- Maximum relative humidity (%): ≤ 95
- Corrosion requirements: No
- Example application: Condensing technology

H1 (moist)

- Water action from condensation
- Maximum relative humidity (%): 100
- Corrosion requirements: Yes
- Example application: Refrigerated display case at a supermarket

H2 (wet)

- Direct water exposure such as rain, snow and ice
- Maximum relative humidity (%): 100
- Corrosion requirements: Yes
- Example application: Outdoor condenser without rain protection

Wiring Diagrams

AC Wiring Connection Diagrams

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The following information applies generally, but not exhaustively, to the majority of AC products sold in Australia & New Zealand.

Notes

1. BE CAREFUL – always check the data on the motor, if in doubt ask an ebm-papst A&NZ representative
2. 3 phase – change direction of rotation by changing any 2 phases (applies for AC motors only, not EC)
3. All connection leads brought out by ebm-papst are 'internal leads' as defined by EN 60335-1
4. 'PE' = Earth

Please check our website www.ebmpapst.com.au or catalogue for complete wiring information.

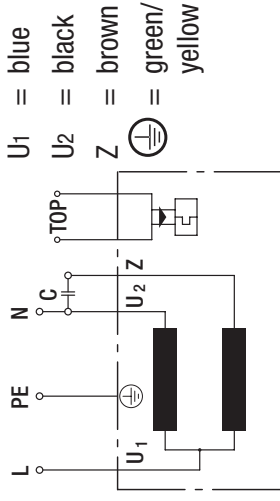
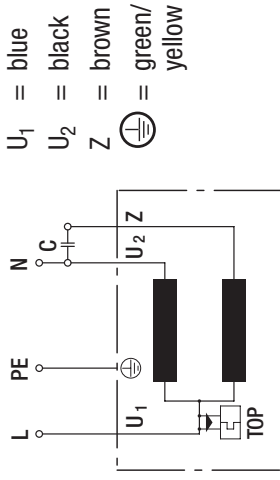
Wiring Diagrams

AC Wiring Connection Diagrams

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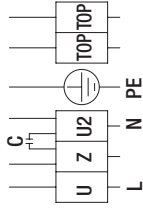
1 ~ 230VAC power line



A1. Single phase capacitor motor with TOP wired internally

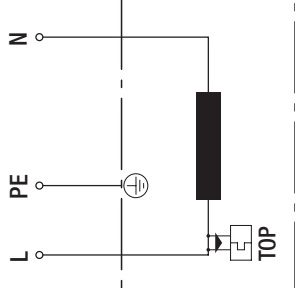
A2a. Single phase capacitor motor with connection for external TOP

1 ~ 230VAC power line



U_1 = blue
 U_2 = black
 Z = brown
 PE = green/
 yellow

Fans with terminal box



L = blue
 N = brown
 PE = green/
 yellow

A2b. Single phase capacitor motor with connection for external TOP

B. Shaded pole motor with TOP wired internally

Wiring Diagrams

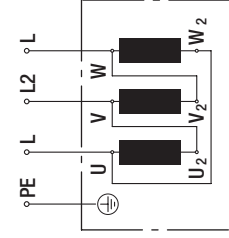
AC Wiring Connection Diagrams

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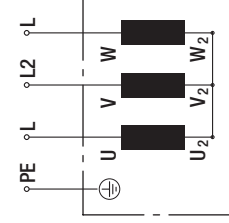
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1 speed 3 ~ 230VAC power line

1 speed 3 ~ 400 VAC power line



U₁ = black
U₂ = green
V₁ = blue
V₂ = white
W₁ = brown
W₂ = yellow
⊕ = green/
yellow

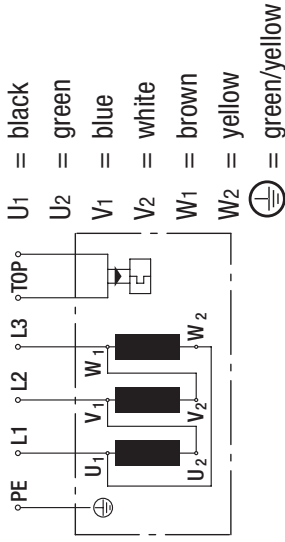


U₁ = black
U₂ = green
V₁ = blue
V₂ = white
W₁ = brown
W₂ = yellow
⊕ = green/
yellow

C1. Delta Connection (3 ~ 230 VAC power system) without TOP

C2. Star connection (3 ~ 400 VAC power system) without TOP

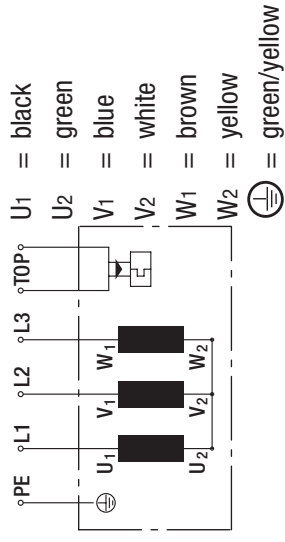
1 speed 3 ~ 230VAC power line



D1. Delta Connection (3 ~ 230 VAC power line) with TOP

Direction of rotation is reversed by swapping 2 line phases

1 speed 3 ~ 400 or 480VAC power line



D2. Star connection (3 ~ 400 or 480 VAC power line) with TOP

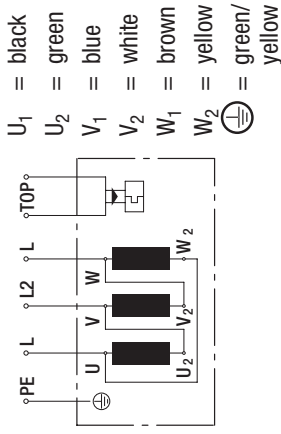
Wiring Diagrams

AC Wiring Connection Diagrams

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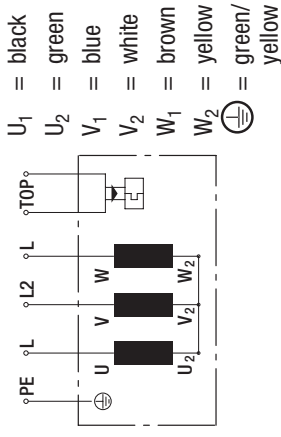
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2 speeds via Δ / λ -switch 3 ~ 400 VAC power line



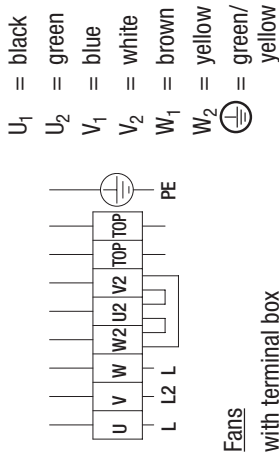
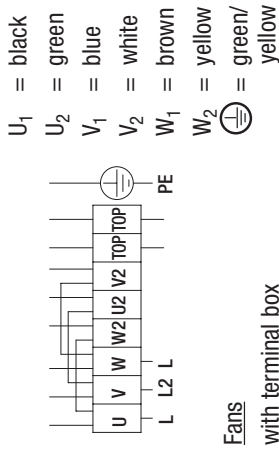
F1a. Delta Connection (high speed) with TOP

Direction of rotation is reversed by swapping 2 line phases



F2a. Star connection (low speed) with TOP

2 speeds via Δ / Y-switch 3 ~ 400 VAC power line



F1b. Delta Connection (high speed) with TOP

F2b. Star connection (low speed) with TOP

Direction of rotation is reversed by swapping 2 line phases

Wiring Diagrams

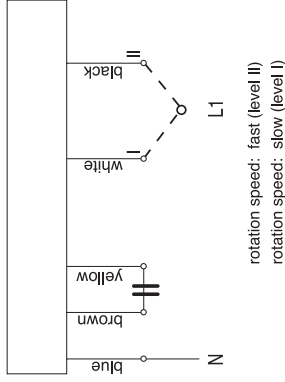
AC Wiring Connection Diagrams

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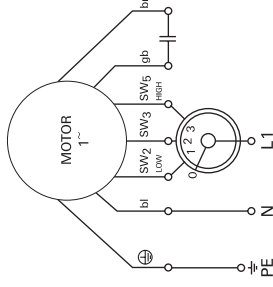
Single phase 2 speed



Rotation speed fast (level II)
Rotation speed slow (level I)

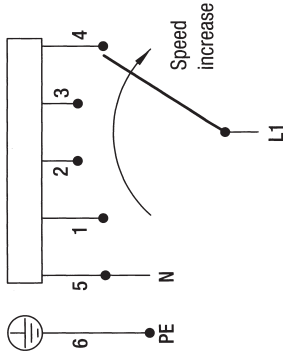
ebm 3

Single phase 3 speed



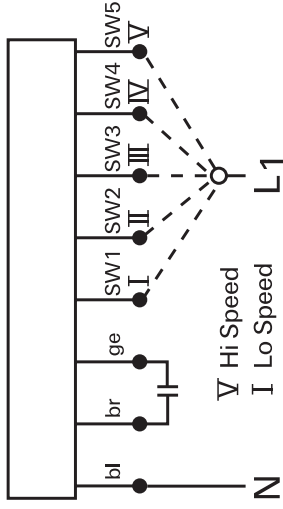
green/yellow SW2 black #2 SW3 black #3 SW5 black #5
bl blue br brown gb yellow

Single phase 4 speed control



Connection Diagram When changing speeds, the switch must break the circuit

Single phase 5 speed



bl blue br brown ge yellow SW1 white
SW2 red SW3 grey SW4 orange SW5 black

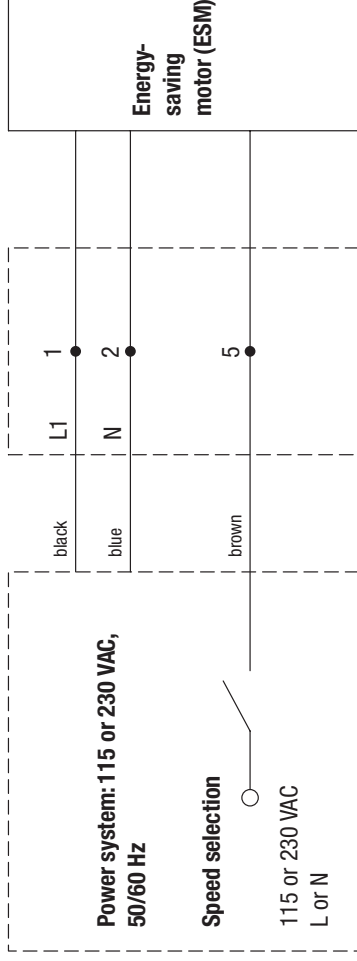
Wiring Diagrams

AC Wiring Connection Diagrams

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ESM



Wiring Diagrams

EC Wiring Connection Diagrams

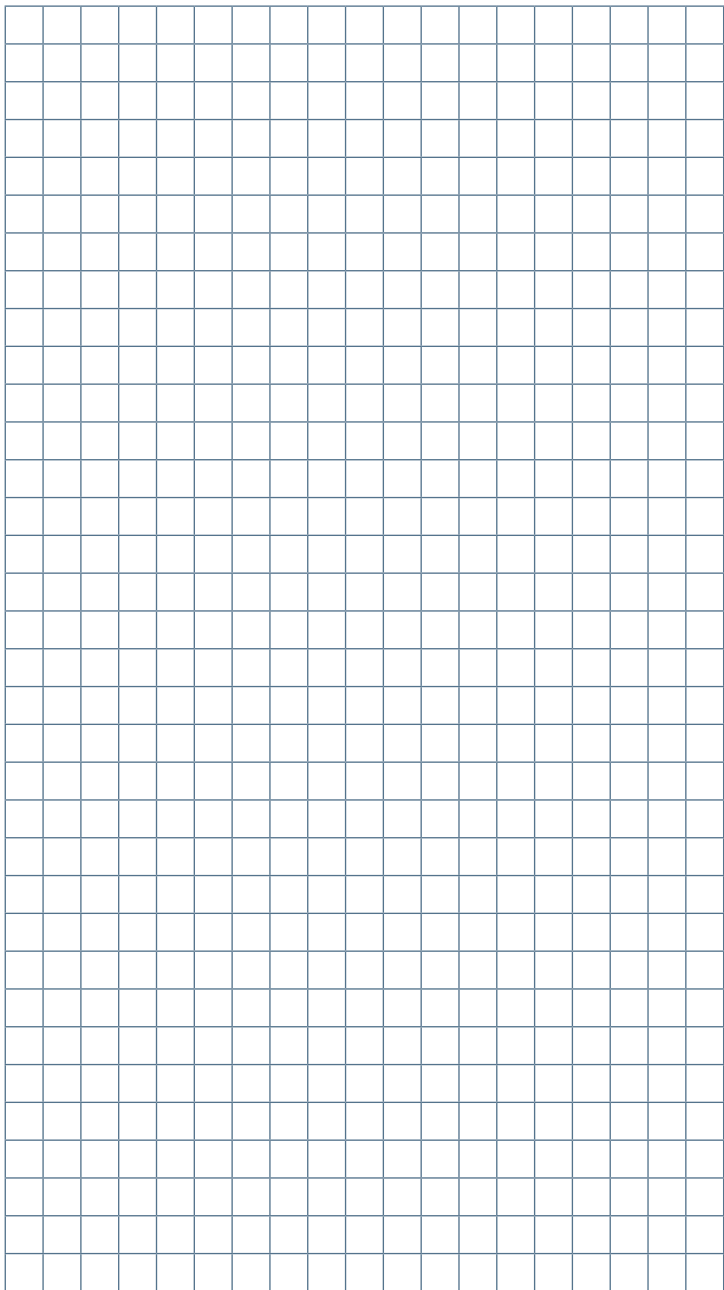
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Wiring Type	Power Supply	Description	Alarm Relay	Bus Interface
H3	1~ 230V 50/60Hz	Two speed selectable	No	No
H4	1~ 230V 50/60Hz	0-10V speed control	No	No
K1	1~ 230V 50/60Hz	0-10V speed control	Yes	No
L1	1~ 230V 50/60Hz	EC Gen I control interface	Yes	ebmBUS
L2	3~ 400V 50/60Hz	EC Gen I control interface	Yes	ebmBUS
L5	3~ 400V 50/60Hz	EC Gen II control interface	Yes	MODBUS
L6	3~ 400V 50/60Hz	EC Gen I control interface	Yes	MODBUS
L7	1~ 230V 50/60Hz	EC Gen I control interface	Yes	MODBUS
RP1 (previously M3)	3~ 400V 50/60Hz	EC Gen II control interface	Yes	MODBUS
RP2 (previously M5)	3~ 400V 50/60Hz	EC Gen II control interface	Yes	MODBUS
RP3 (previously P5)	1~ 230V 50/60Hz	EC Gen II control interface	Yes	MODBUS
RP6	3~ 400V 50/60Hz	EC Gen III control interface	Yes	MODBUS

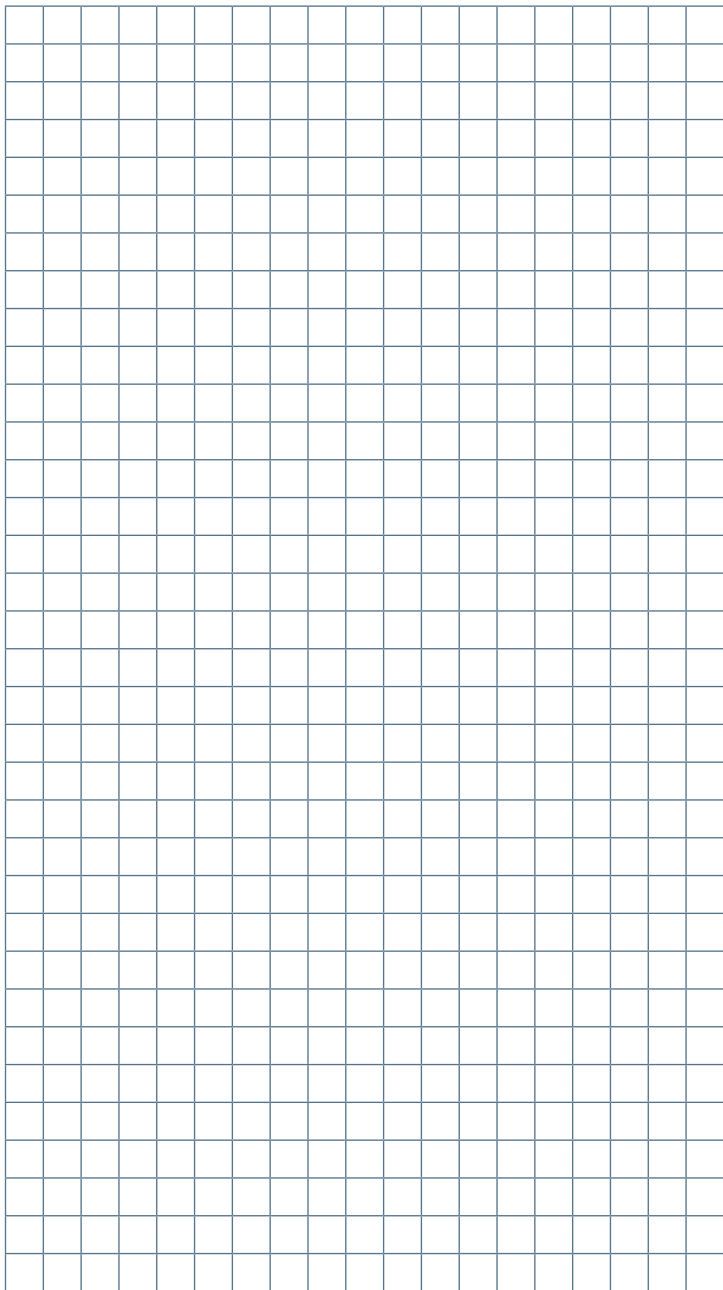
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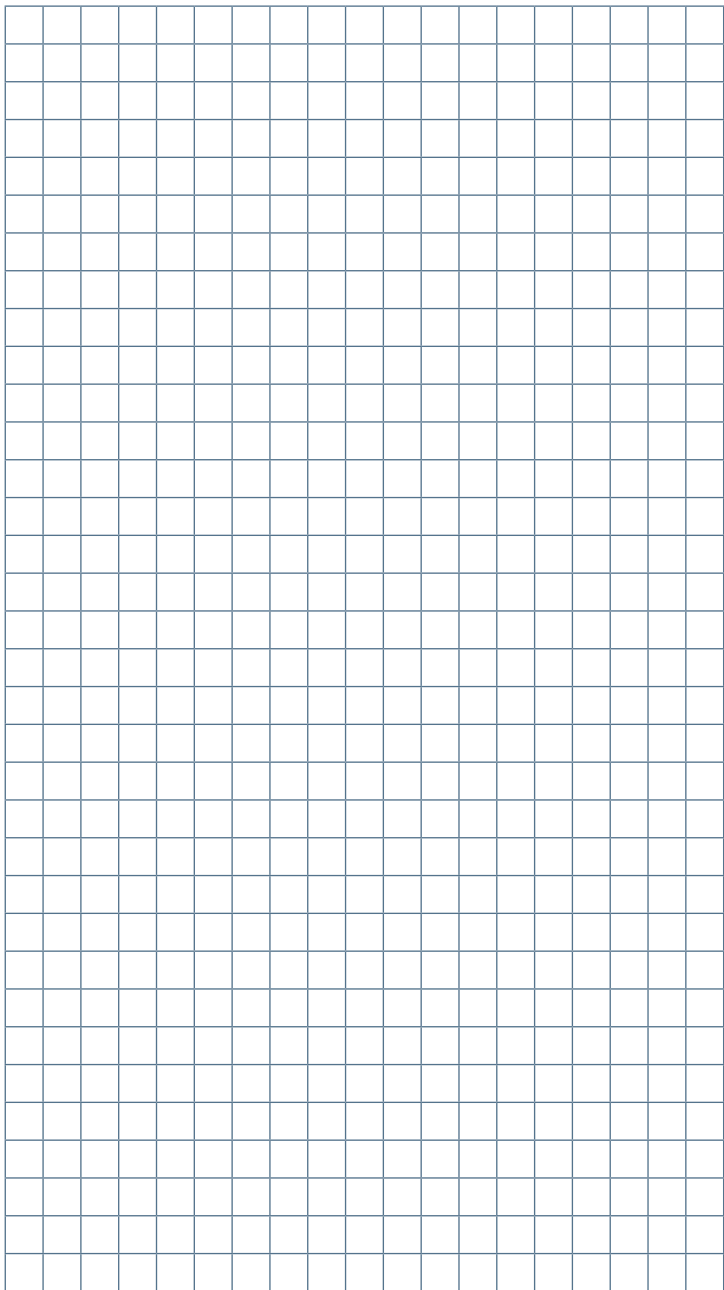
A Space

for notes



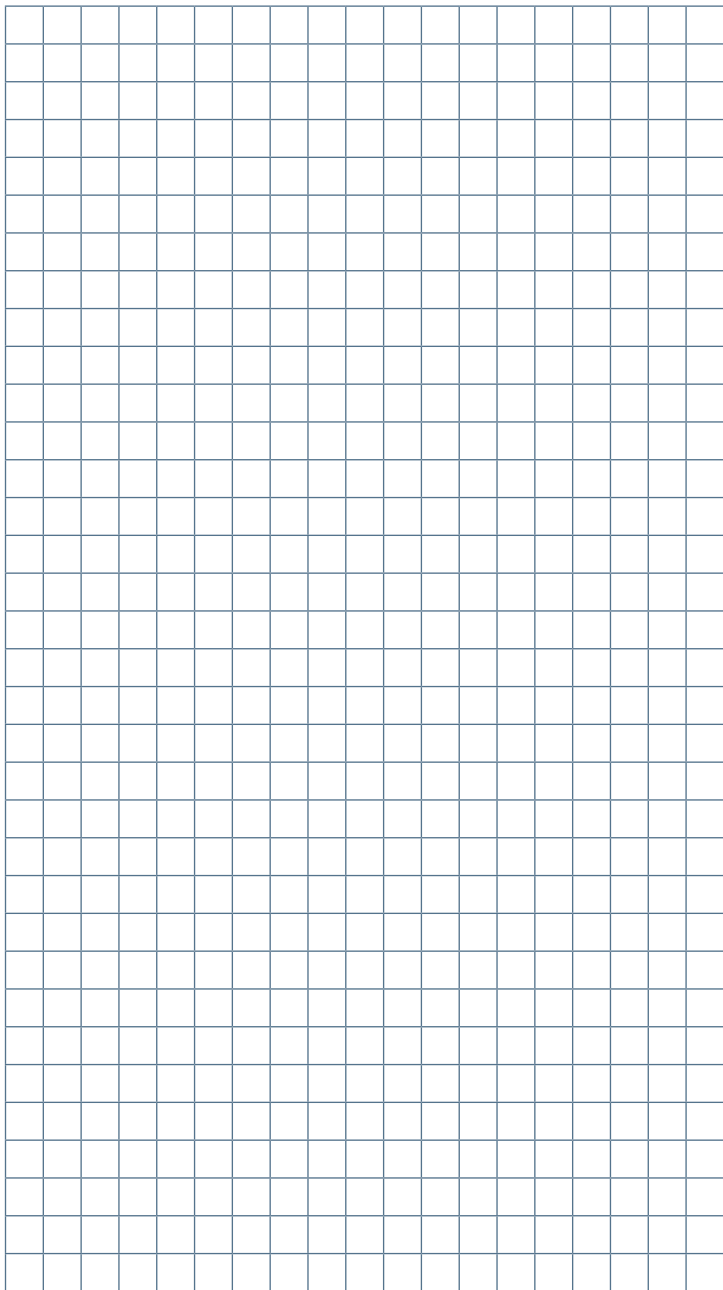
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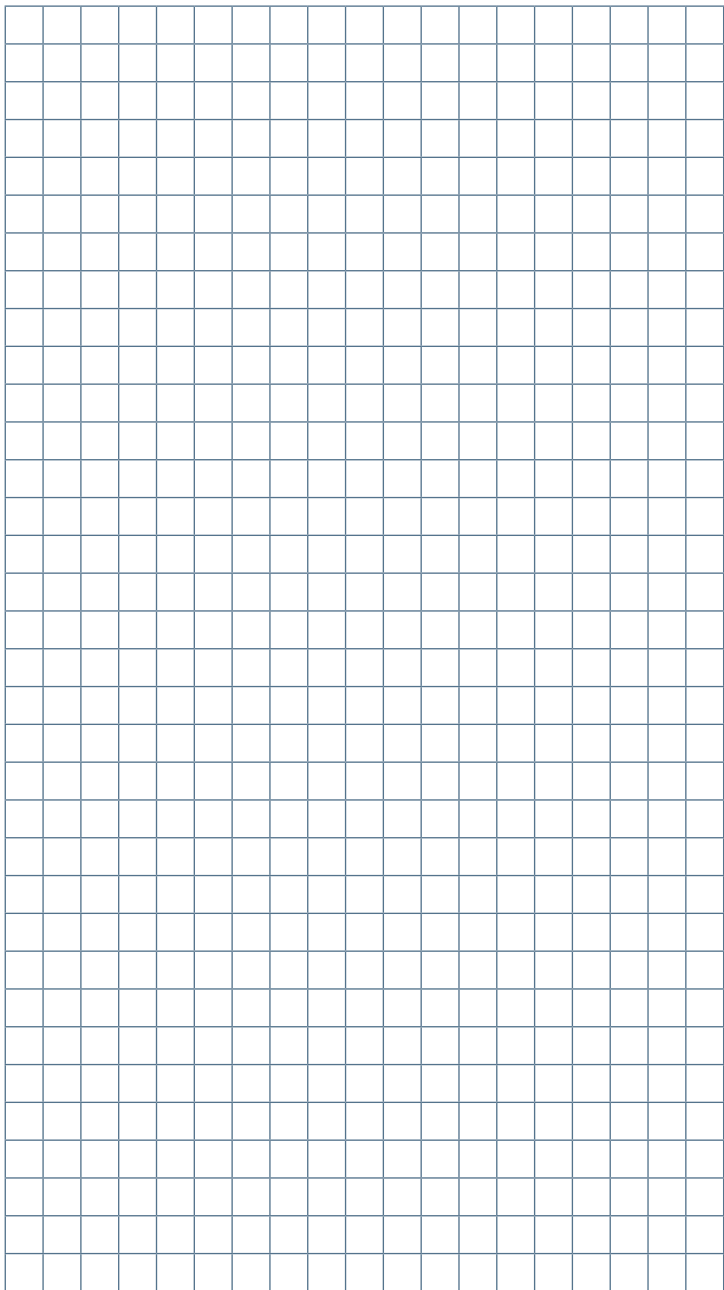
A Space

for notes



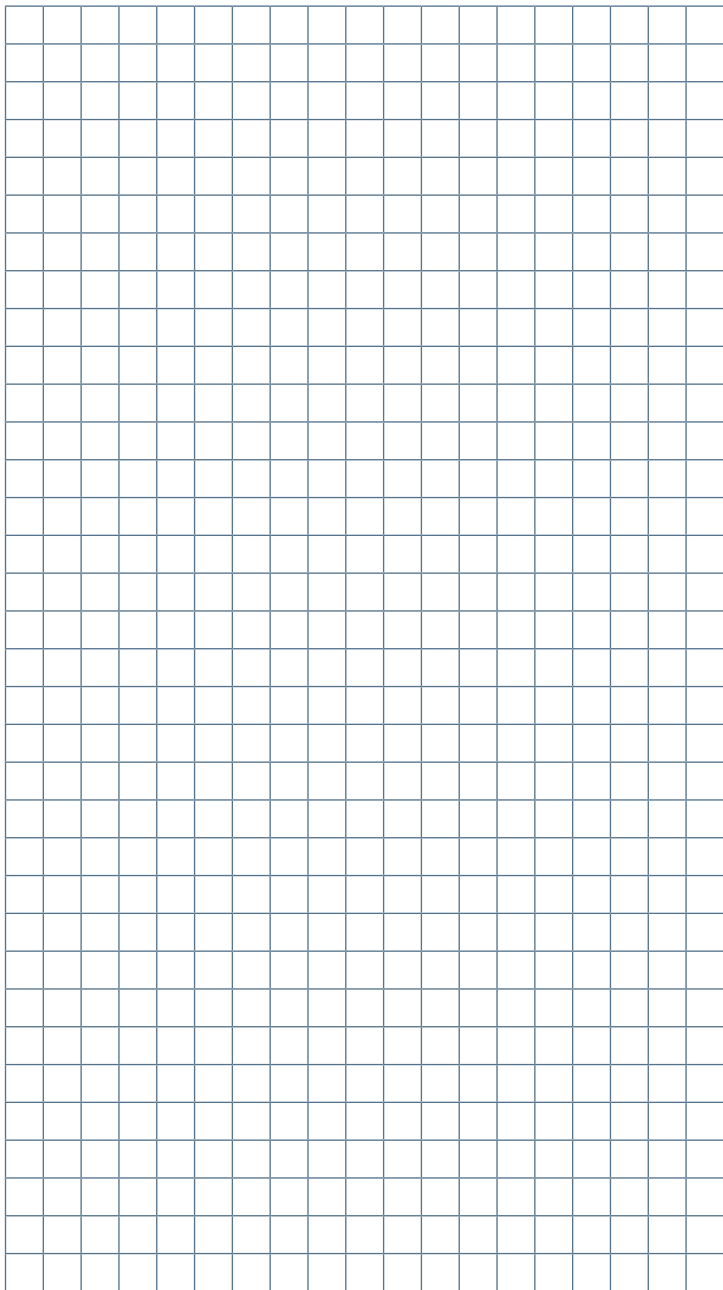
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A Space

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ebm-papst A&NZ Pty Ltd
Victoria

10 Oxford Road
Laverton North VIC 3026
Phone +61 (03) 9360 6400
avenquiries@ebmpapst.com.au

New South Wales

P.O Box 1162
Albion Park Rail NSW 2572
Phone +61 (02) 9827 6400
avenquiries@ebmpapst.com.au

New Zealand

Unit H, 61 Hugo Johnston Drive
Penrose Auckland 1061
Phone +64 (9) 525 0245
nzenquiries@au.ebmpapst.com