

PowerBox³ Performance Evolved

SUPPLY AND EXTRACT CENTRIFUGAL BOX FAN





POWERBOX³

**A newly developed
range of box fans with
higher static efficiency
and very low breakout
sound levels**



Standard model
up to 50°C.

T120 model
up to 120°C

The new PowerBox³ range offers high efficiency, very low breakout sound levels and is suitable for air temperatures up to 120°C. Available in seven inlet spigot sizes from 315 mm up to 630 mm with dual voltage single and three phase electrical connection options (dependent on size). With a max airflow up to 4.7 m³/s and max static pressure up to 1100 Pa, the PowerBox³ fan caters to a wide variety of applications, including high temperature and steam.

Our sales and engineering teams are committed to provide you with exceptional products and technical guidance as well as ensuring your logistical needs are met. All Woods Air Movement fans are easy to select and order – our online Fan Selector tool is easy to use and will give all information needed to design your application. We are also focused on providing great after-sales support – from installation and commissioning to regular servicing. In short; Woods Air Movement is a complete partner for all your fan needs.

SUITABLE APPLICATIONS

- Kitchen extract and supply
- In-duct ventilation in hotels, offices and other buildings.
- Can be used for internal and external applications.
- T120 model can be used in air temperatures up to 120°C and installations that have steam.

A great fit for all your box fan needs

Our new PowerBox³ can be used for supply or extract air applications and can be installed in any position. The units comply with the Ventilation Unit Regulation 1253/2014 and can be installed with perpendicular (90°) discharge in all vertical and horizontal directions. They can be quickly reconfigured by changing panels to provide an inline outlet flow.



The collage consists of four images. Top left: A commercial kitchen with stainless steel equipment, including a large oven with a glass door and a range hood. Top right: An office space with a desk, a laptop, and a window. Bottom left: A man in a dark blue Woods uniform with his arms crossed, standing in front of an office background. Bottom right: A chef in a white uniform and hat working in a commercial kitchen.

Our team is always happy to answer your questions. You can contact us on:

- +44 (0) 1206 222 555
- quotations.woods@flaktgroup.com
- woodsairmovement.com



Our Global Reach

From our base in Colchester, Woods Air Movement operates with a truly international distribution network – ensuring our products and services are available wherever our customers need them.



- **Headquarters & Centre of Excellence**
Our UK factory in Colchester is the heart of our R&D, design, certification and manufacturing.
- **Extended Locations**
We have established offices and facilities beyond the UK, including in the USA and Singapore.
- **Global Distributor & Partner Network**
Woods works with over 70 international distributors and agents, supported by regional partners, offices, and local contacts, to ensure rapid delivery, local stock holding, and service close to you.
- **Local Stock & Fast Delivery**
Many of our distributors hold stock so products can be delivered on short lead times. This means wherever you are, Woods solutions are more accessible.
- **Support in Key Regions**
 - **UK** (HQ services, major manufacturing & testing)
 - **USA** – office and sales to serve North America
 - **Singapore** – for Asia-Pacific reachMany more via partners in Europe, Middle East, India and beyond.

PowerBox³ delivers outstanding performance for a **wide range** of applications

- › VOLUME FLOW RATE UP TO 4.7 m³/s
- › STATIC PRESSURE UP TO 1100 Pa
- › AIR TEMPERATURE UP TO 50°C
- › ErP AND DW172 COMPLIANT

All aluminium Pentapost frame and corner design provides a sturdy and robust structure.

Highly efficient Powerdrive system with configurable speed control.



Panel with handle installed to aid for easy removal.

Choice of 3 box sizes with multiple air performance options.

Capable of handling air temperatures up to 50°C.

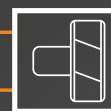
Panels designed for quick and easy removal during installation and to provide access for maintenance.

Thermally insulated double skinned galvanised steel panels reduce breakout noise to a minimum.

Highly efficient, low-noise backward curved centrifugal impeller. Rugged aluminium construction withstands harsh operation and high temperature.

Grease resistant gasket to prevent leakage.

Discharge options



› PERPENDICULAR (90°) DISCHARGE

› INLINE (180°) DISCHARGE

PowerBox³ T120 is the right solution for **high temperature and steam** applications

- › VOLUME FLOW RATE UP TO 4.62 m³/s › STATIC PRESSURE UP TO 1035 Pa
- › AIR TEMPERATURE UP TO 120°C › ErP AND DW172 COMPLIANT

Casing made from pre-galvanised sheet steel BS EN 10346: 2009 DX 51D + Z 275G/M2

Quick and easy to maintain

Choice of 3 box sizes with multiple air performance options.

The fans are operated and controlled using Woods supplied speed control drives.

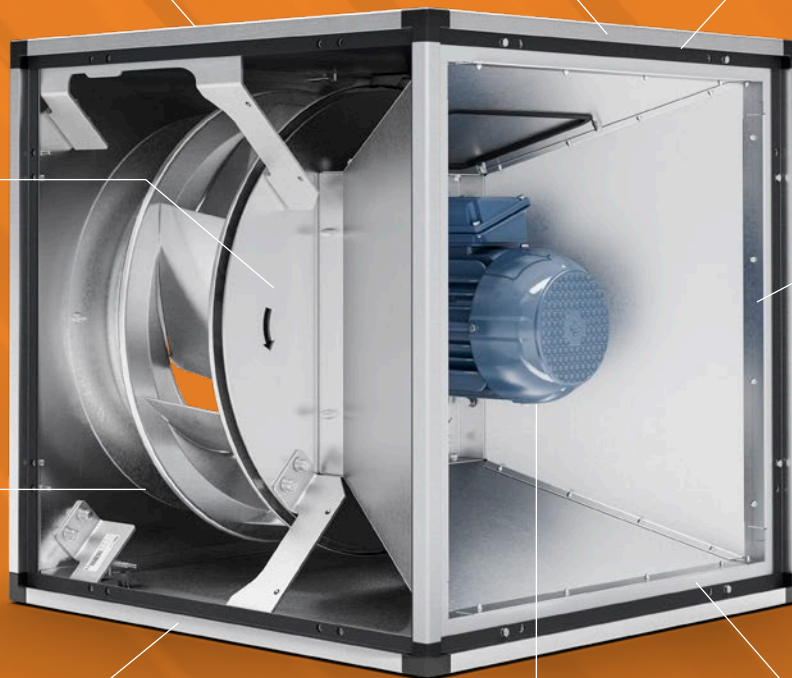
90° discharge

Thermal insulation is achieved from glass fibre with a thickness of 18–26 mm.

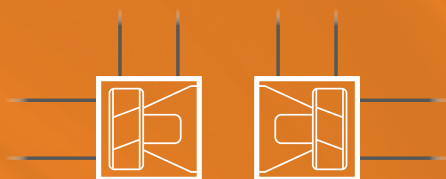
High efficiency motors (placed out of airstream). Class F motors with IP55 protection.

Capable of handling steam and air temperatures up to 120°C.

Panels designed for quick removal during installation and to provide easy access for maintenance.



Discharge options



- › T120 (HIGH TEMPERATURE)
PERPENDICULAR (90°) DISCHARGE ONLY

Inside, outside, floor, wall or roof – the flexible PowerBox³ is always a reliable choice

The PowerBox³ can be floor or wall-mounted, internally, and externally as standard. These being centrifugal fans, the PowerBox³ range is most suitable for installations where there is high static pressure due to length of duct run, filtration, number of direction changes etc.

With five possible discharge directions, the PowerBox³ gives the flexibility to install under different site conditions. They can be placed on anti-vibration mounting tracks to reduce vibration transfer through the mounting surface and can also be connected using flexible connectors to reduce transmission of vibration to the ductwork. During installation, extra care should be taken to check if the wall/ roof or the fan clamp can handle the fan weight and/or vibration.



› WALL-MOUNTED*



› FLOOR-MOUNTED



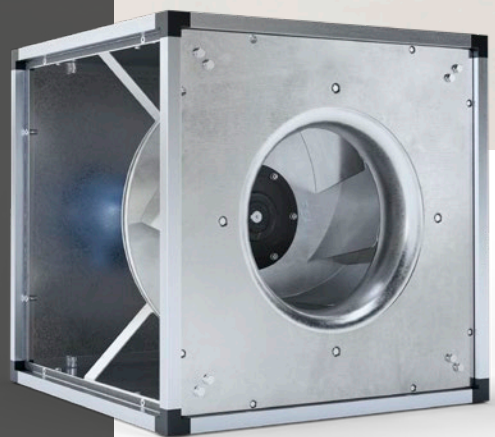
› ROOF-MOUNTED

**Mounting brackets are not supplied by Woods Air Movement.
Please note that these illustrations are for marketing purposes,
we would recommend when installing that you use best practice.*



PowerBox³ – a key ingredient for an efficient kitchen ventilation system

This product seamlessly integrates into your kitchen environment, ensuring minimal disruption while delivering maximum performance. It's the perfect blend of form and function, combining sleek design with industry-leading extraction capabilities. Efficiently removing fumes and smoke from your kitchen space.



PowerBox³ specifications

PRODUCT FACTS

- Airflow rate up to 4.7 m³/s
- Static pressure up to 1100 Pa
- Capable of handling air temperatures up to 50°C.
- Available in 7 inlet spigot sizes:
315, 355, 400, 450, 500, 560, 630 mm
- High efficiency motor.
- Box sizes (side lengths): 500, 670, 800 mm
- All aluminium Pentapost frame and corner design provides a sturdy and robust structure.
- Highly efficient, low-noise backward curved centrifugal impeller. Rugged aluminium construction withstands harsh operation and high temperature.
- Thermally insulated double skinned galvanised steel panels reduce breakout noise to a minimum.
- Perpendicular (90°) discharge options in all vertical and horizontal directions. Can be quickly reconfigured to provide an inline outlet flow.
- Quick and easy to maintain.

CONSTRUCTION

The casing is made from pre-galvanised sheet steel BS EN 10346: 2009 DX 51D + Z 275G/M2 with double chambered aluminium supporting frames and corners. The thermal insulation is achieved using glass fibre sheets. The unit can be mounted vertically or horizontally and has removable side panels.

IMPELLER

The unit is equipped with a highly efficient, low-noise backward curved centrifugal impeller. Its rugged aluminium construction withstands harsh operation and high temperature and is dynamically balanced to ISO 21940-11 grade G6.3.

SPEED CONTROLLER

The units are operated and controlled using Woods supplied speed control drives. Most three phase units can also be operated at full speed via direct on line connection, with the exception of the 630 size and single phase range.

ELECTRICAL SUPPLY

- 220–240V/50Hz/1PH (up to size 500mm) and 380–420V/50Hz/3PH (for all sizes)

TEMPERATURE RANGE

- Up to 50°C

INLET SPIGOT SIZES

- 315, 355, 400, 450, 500, 560, 630 mm

MOTOR

The units are equipped with direct drive high efficiency motors with ingress protection to IP55.

PRODUCT NAME

POWERBOX³ – AA – BBB – C

- POWERBOX³ – Fan name
- AA – Box size (67, 80 cm, etc.)
- BBB – Spigot diameter (500, 560 mm, etc.)
- C – Phase (1 or 3)

AVAILABLE ACCESSORIES

- Mounting tracks complete with A/V mounts
- Square to round transformation
- Flexible connectors
- Inverters
- Inlet spigot
- Weatherproof

For more information and part numbers – please view our Fan Selector or our online Accessories Catalogue.



PowerBox³ T120 specifications

MOTOR OUT OF AIR STREAM

PRODUCT FACTS

- Airflow rate up to 4.62 m³/s
- Static pressure up to 1035 Pa
- Suitable for transmission of exhaust gases of temperatures up to 120°C.
- Available in 7 size options:
315, 355, 400, 450, 500, 560, 630 mm
- Box sizes: 500, 670 and 800 mm
- High efficiency motor out of airstream.
- Casing made of galvanised steel with aluminium Pentapost frame and corner design to provide robustness to the structure.
- High efficiency backward curved centrifugal impeller made of aluminium.
- Low sound level due to thermally insulated double skinned galvanised steel panels filled with glass fibre.
- Perpendicular (90°) discharge options available. Quickly re-configurable.
- Quick and easy to maintain (minimal maintenance required).
- DW172 compliant.

CONSTRUCTION

The casing is made from pre-galvanised sheet steel BS EN 10346: 2009 DX 51D + Z 275G/M2 with double chambered aluminium supporting frames and corners. The thermal insulation is achieved from glass fibre with a thickness of 18–26 mm (depending on fan size). The fans can be mounted vertically or horizontally and has removable side panels.

IMPELLER

The fan is equipped with high efficiency, low noise backward curved centrifugal impeller wheel made of aluminium to withstand harsh operation and high temperature. The impellers are dynamically balanced as per ISO 21940-11 grade G6.3.

SPEED CONTROLLER

The fans are operated and controlled using Woods supplied speed control drives.

ELECTRICAL SUPPLY

- 220–240V/50Hz/1PH (up to size 500mm) and 380–420V/50Hz/3PH (for all sizes)

TEMPERATURE RANGE

- Up to 120°C

INLET SPIGOT SIZES

- 315, 355, 400, 450, 500, 560, 630 mm

MOTOR

The fans are equipped with direct driven high efficiency motors (placed out of airstream). Class F motors with IP55 protection.

PRODUCT NAME

PowerBox³ T120 – AA – BBB – C

- PowerBox³ T120 – Fan name
- AA – Box size (50, 67, 80, etc.)
- BBB – Spigot diameter (500, 560mm, etc.)
- C – Phase (1 or 3)

AVAILABLE ACCESSORIES

- Mounting tracks with A/V mounts
- Square to round transforms
- Flexible connectors
- Inverters
- Inlet spigot
- Weatherproof

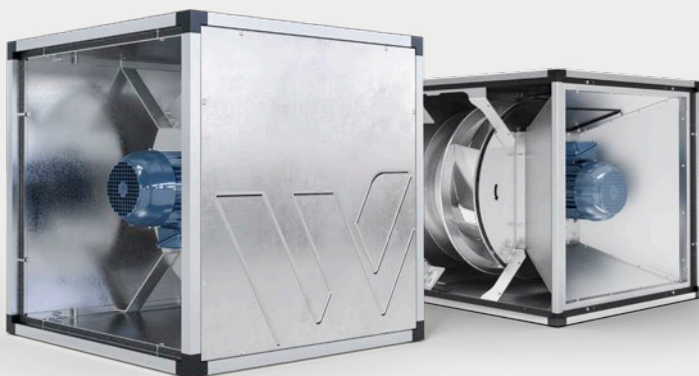
For more information and part numbers – please view our Fan Selector or our online Accessories Catalogue.



PowerBox³ & PowerBox³ T120 overview

Product name	Part number	Speed (rpm)	Electrical supply	Input power (kW)
PowerBox ³ 50-315-1	PB315140	1420	220-240V /50Hz/1ph*	0.24
PowerBox ³ 50-315-3	PB315340	1420	380-420V /50Hz/3ph	0.24
PowerBox ³ 50-355-1	PB355140	1420	220-240V /50Hz/1ph*	0.38
PowerBox ³ 50-355-3	PB355340	1420	380-420V /50Hz/3ph	0.38
PowerBox ³ 67-400-1	PB400140	1450	220-240V /50Hz/1ph*	0.65
PowerBox ³ 67-400-3	PB400340	1450	380-420V /50Hz/3ph	0.65
PowerBox ³ 67-450-1	PB450140	1440	220-240V /50Hz/1ph*	1.05
PowerBox ³ 67-450-3	PB450340	1440	380-420V /50Hz/3ph	1.05
PowerBox ³ 67-500-1	PB500140	1460	220-240V /50Hz/1ph*	1.82
PowerBox ³ 67-500-3	PB500340	1460	380-420V /50Hz/3ph	1.82
PowerBox ³ 80-560-3	PB560340	1460	380-420V /50Hz/3ph	3.14
PowerBox ³ 80-630-3	PB630340	1350	380-420V /50Hz/3ph*	4.64

Product name	Part number	Speed (rpm)	Electrical supply	Input power (kW)
PowerBox ³ T120 50-315-1	PB315141	1350	220-240V /50Hz/1ph*	0.23
PowerBox ³ T120 50-315-3	PB315341	1350	380-420V /50Hz/3ph	0.23
PowerBox ³ T120 50-355-1	PB355141	1460	220-240V /50Hz/1ph*	0.37
PowerBox ³ T120 50-355-3	PB355341	1460	380-420V /50Hz/3ph	0.37
PowerBox ³ T120 67-400-1	PB400141	1460	220-240V /50Hz/1ph*	0.65
PowerBox ³ T120 67-400-3	PB400341	1460	380-420V /50Hz/3ph	0.65
PowerBox ³ T120 67-450-1	PB450141	1440	220-240V /50Hz/1ph*	1.06
PowerBox ³ T120 67-450-3	PB450341	1440	380-420V /50Hz/3ph	1.06
PowerBox ³ T120 67-500-1	PB500141	1450	220-240V /50Hz/1ph*	1.88
PowerBox ³ T120 67-500-3	PB500341	1450	380-420V /50Hz/3ph	1.88
PowerBox ³ T120 80-560-3	PB560341	1420	380-420V /50Hz/3ph	3.09
PowerBox ³ T120 80-630-3	PB630341	1270	380-420V /50Hz/3ph*	3.87



NOTES

*Operation requires a pre-programmed speed control drive.

**For 1ph, starting current of fan is limited by inverter soft-start.
For 3ph, starting current of fan is Direct on Line (DOL), except PowerBox³ 80-630-3 which is also limited by inverter soft-start.

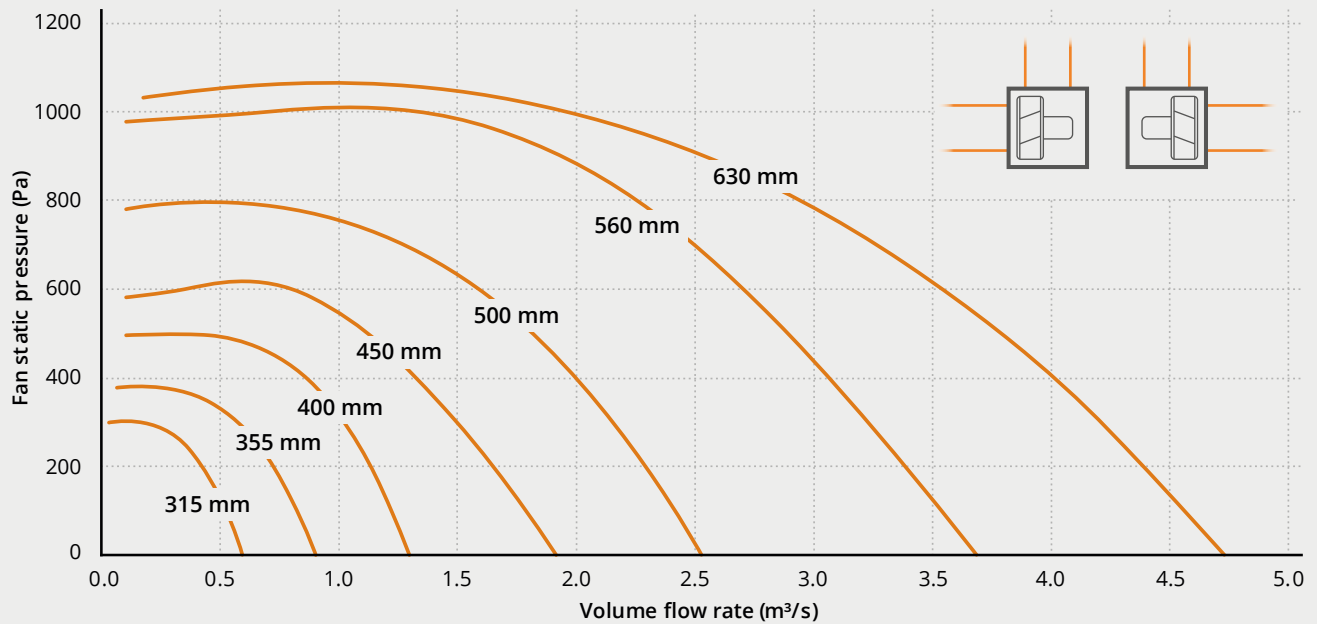
***Sound pressure levels are average dB(A) at 3 metres distance over sphere, under free field conditions and are presented for comparative purposes only.

Full load current (A)	Starting current (A)**	Max temperature (°C)	Speed controller part number	Breakout sound level (dB(A))***	Weight (kg)
3.0	4.0	50	PK920201	30	38.5
0.8	3.2	50	EA901016	30	38.5
4.3	5.9	50	PK920202	32	39.5
1.0	4.4	50	EA901016	32	39.5
6.1	8.3	50	PK920203	37	62.5
1.4	8.0	50	EA901016	37	62.5
9.1	12.5	50	PK920204	41	67
1.9	11.8	50	EA901016	41	67
16.6	22.6	50	PK920205	44	78.5
3.9	24.7	50	EA901017	44	78.5
6.2	48.0	50	EA901019	50	115.5
9.2	15.3	50	PK920398	55	119.5

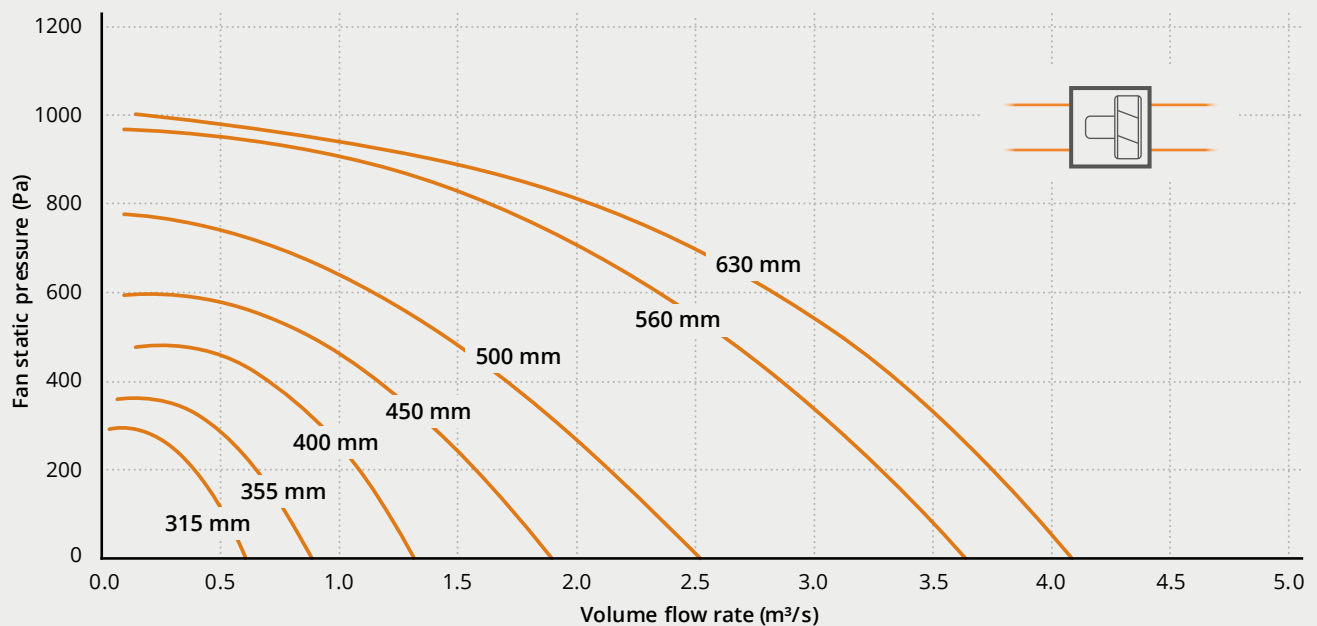
Full load current (A)	Starting current (A)**	Max temperature (°C)	Speed controller part number	Breakout sound level (dB(A))	Weight (kg)
3.0	4.0	120	PK920201	40	39
0.8	3.2	120	EA901016	40	39
4.3	5.9	120	PK920202	45	40
1.0	4.4	120	EA901016	45	40
6.1	8.3	120	PK920203	48	63
1.4	8.0	120	EA901016	48	63
9.1	12.5	120	PK920204	52	67.5
1.9	11.8	120	EA901016	52	67.5
16.6	22.6	120	PK920205	56	79
3.9	24.7	120	EA901017	56	79
6.2	48.0	120	EA901019	59	116.5
9.2	15.3	120	PK924835	62	120.5

Performance charts

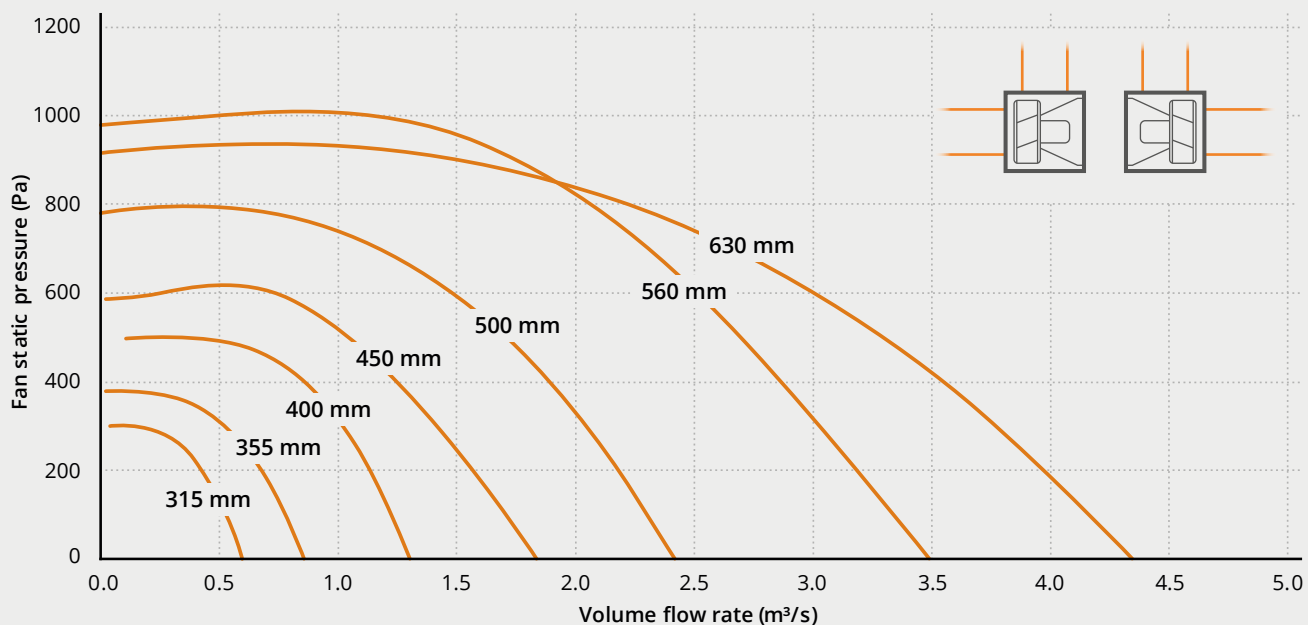
POWERBOX³ – 90° DISCHARGE



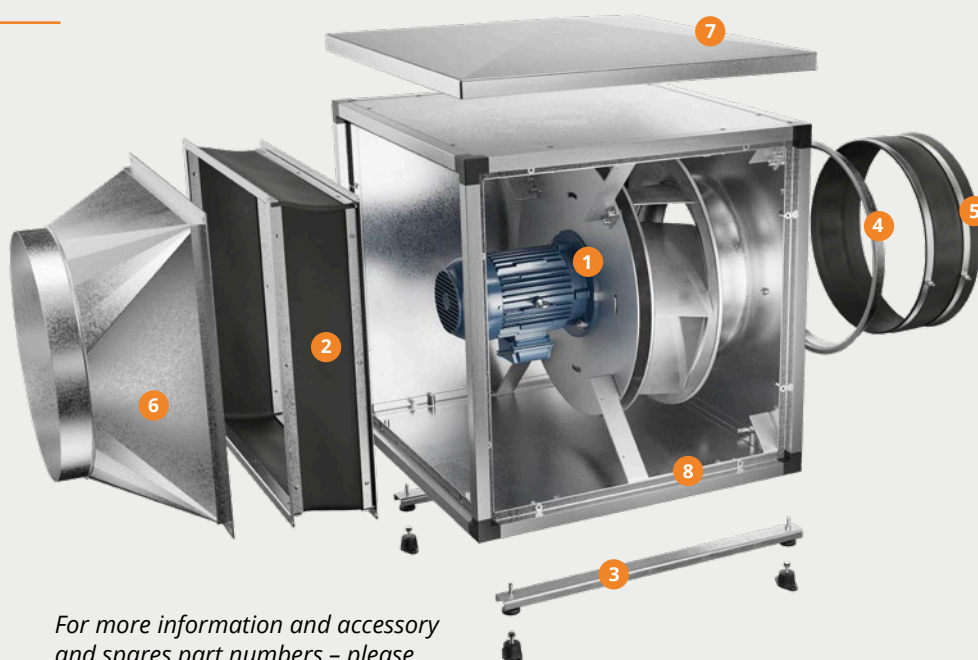
POWERBOX³ – INLINE DISCHARGE



POWERBOX³ T120 – 90° DISCHARGE



Available accessories

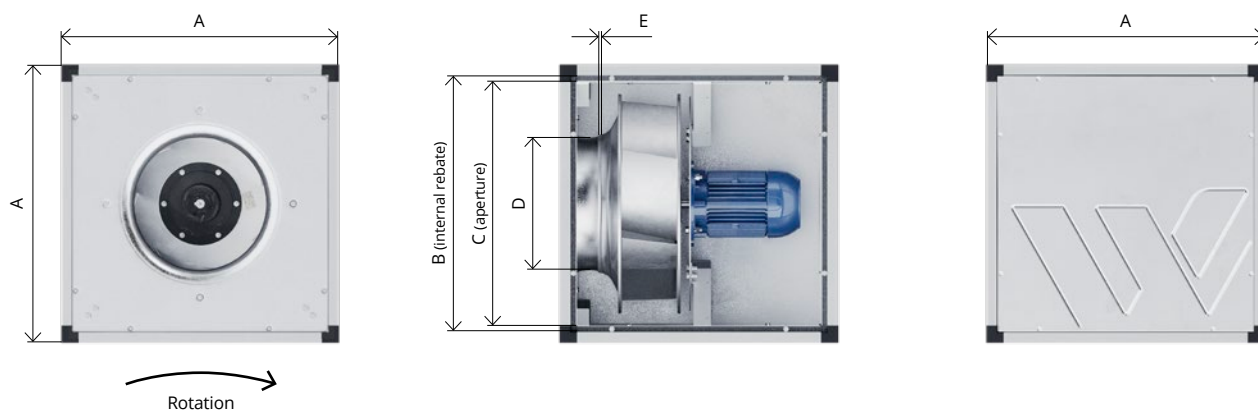


1. PowerBox³
2. Square flexible connector (please ensure the correct temperature flexible connector is used)
3. Mounting tracks complete with A/V mounts
4. Inlet spigot
5. Circular flexible connector and clips (please ensure the correct temperature-rated flexible connector is used)
6. Square to round transformation
7. Weather roof
8. Grease resistant gasket

For more information and accessory and spares part numbers – please view our Fan Selector or our online Accessories Catalogue.

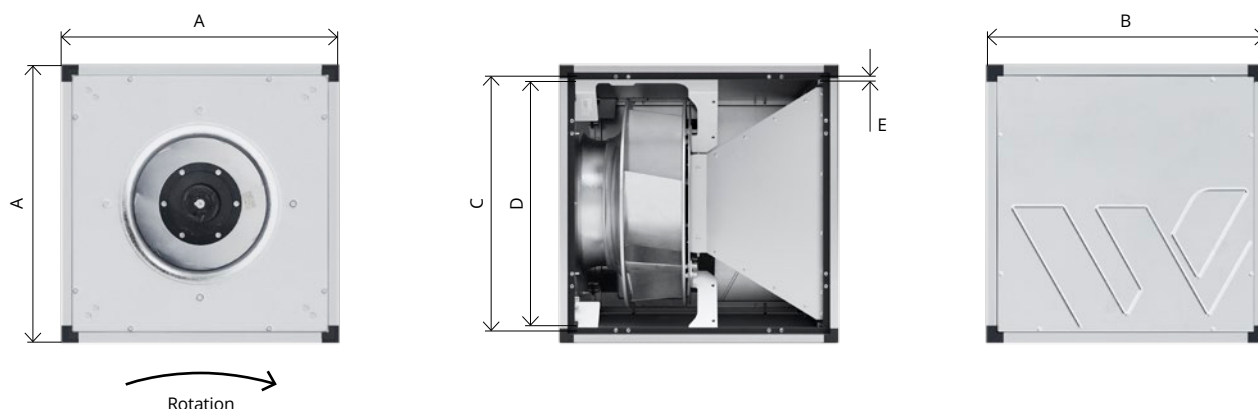
Dimensions & weights

POWERBOX³



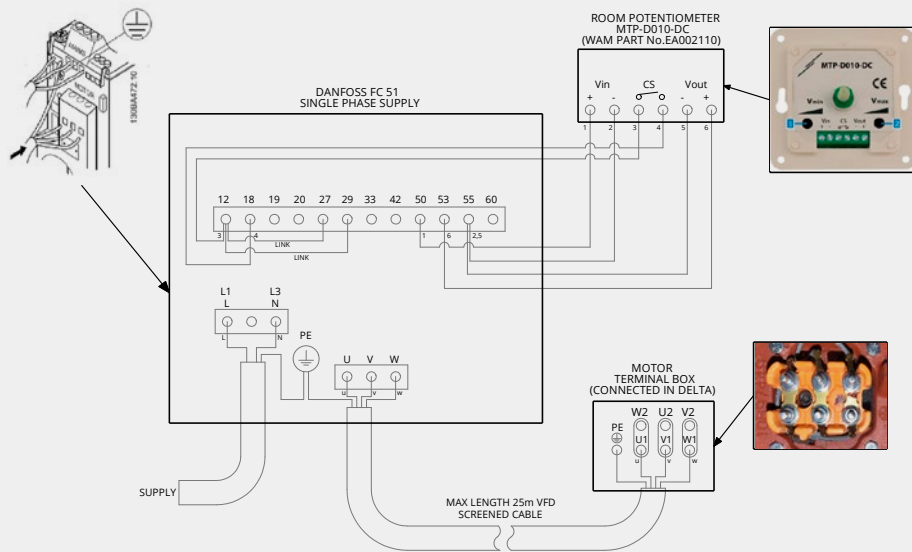
Ø	Weight (≈kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)
315	38.5	500	460	430	218	3.15
355	39.5	500	460	430	246.3	3.55
400	62.5	670	630	600	278	4
450	67	670	630	600	312	4.5
500	78.5	670	630	600	346.5	5
560	115.5	800	740	700	388.1	5.6
630	119.5	800	740	700	437	6.3

POWERBOX³ T120

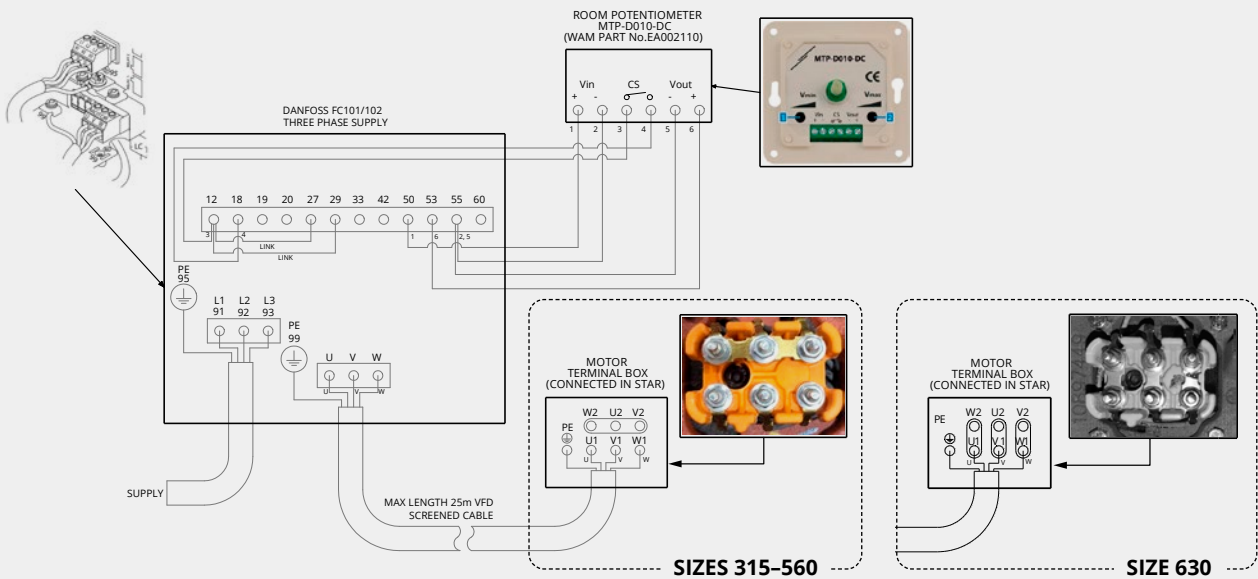


Ø	Weight (≈kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)
315	39	500	500	460	430	15
355	40	500	500	460	430	15
400	63	670	670	630	600	15
450	67.5	670	670	630	600	15
500	79	670	670	630	600	15
560	116.5	800	800	740	702	19
630	120.5	800	800	740	702	19

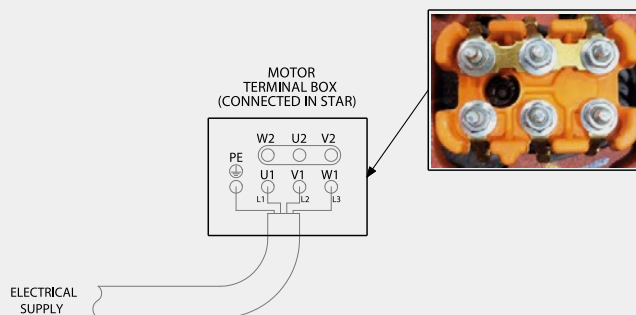
SINGLE PHASE / IEDXB20



THREE PHASE / IDDXF54, IDDXF55, IDDXF66



THREE PHASE / DOL



Woods Air Movement has a range of standard products – or designs and develops a wide range of products

We manufacture a range of air movement and ventilation products that are the most reliable and of the best quality for various applications and industries. To ensure you receive the best quality, we run various tests on our fans before they are delivered to your doorstep.

Most of our product range is available as standard or high temperature, please contact one of our sales team members to find out more technical information on our products. If any of our products do not meet your requirements then we have in-house capabilities to assist with designing, engineering and manufacturing the perfect solution for you.

ENSURING THE BEST POSSIBLE QUALITY IN EVERY DETAIL FOR OUR AXIAL FAN RANGE

- All impeller parts are X-ray inspected in accordance with ASTM E155.
- We ensure our products follow the ISO1940 Balance standards and Vibration BS848 pt 7 ISO14694.
- Our fans endure impeller strain gauge tests of speed over 125% for 15min.

> WOODSAIRMOVEMENT.COM



PRODUCT SELECTION AND CONFIGURATION HAS NEVER BEEN EASIER – OR MORE POWERFUL

We always try to make the selection of our products as easy, accurate and fast as possible. With the brand new release of our Fan Selector we have taken a huge step forward and we hope that you will enjoy the many new features and functions – including web-based multi-platform accessibility with touch interface and interactive performance charts.

Building on more than 100 years of innovation

Woods was founded in 1909 in Colchester, United Kingdom, where our products are still proudly manufactured today. We began as manufacturers of small electric motors and introduced a range of propeller fans in the 1920s.



Over the years, Woods moved away from manufacturing motors and concentrated on the design and manufacture of axial fans, developing the first aerofoil blade design. This continuous development has evolved into one of the world's largest ranges of certified axial fans for almost any application imaginable including fire safety, ventilation, industrial process, oil and gas and marine.

Woods was merged with Fläkt in 2002 to create Fläkt Woods which was subsequently merged with Denco Happel in 2016 to create FläktGroup. In 2020, Fläkt Woods changed their trading name to Woods Air Movement under FläktGroup holdings and opened offices in the United States of America, Germany and Singapore.

Woods has over 100 years of experience and knowledge in designing axial flow fans and remains a distinct brand within the FläktGroup family.



OUR FOOTPRINT

Our head office is situated in Colchester in the United Kingdom with the state of the art factory. We also have a factory and office in the United States of America and Singapore as well as an office situated in Germany. In India we have installed one of the first test rigs in the country. Our products are distributed and reach various markets globally, through strong partnerships with over 70 international distributors and agents.





Woods Air Movement delivers smart and energy efficient Air Movement and Fire Safety solutions to support every application area. We offer our customers innovative technologies, high quality and outstanding performance. The widest range of Air Movement and Ventilation products in the market, and strong market presence with over 100 years of experience and manufacturing of products, guarantees that we are always by your side, ready to deliver Excellence in Solutions.

**Contact our friendly sales team today
for more information**

Call: +44 (0) 1206 222 555

Email: quotations.woods@flaktgroup.com
www.woodsairmovement.com

