VACUUM EXTRACTION UNIT

blue-vent

# MD-295

## Capacity: 8000 m³/h

MD-295 B

MD-295 P

MD-295 RV

MD-295 C

Atex-certified

RESULTS THROUGH TECHNOLOGY

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The MD-295 belongs to a new generation of extraction systems for woodworking machinery – the MD series. blue-vent is setting a new standard in wood dust extraction systems with the introduction of its new MD series. These units are unique thanks to:

- **Low-noise emission levels**
- **A large filtration surface resulting in longer up-time**
- **Ultra-fast start-up, ideal for automatic switching in unison with other machinery**
- **Variable power consumption depending on the number of open shutters, without the need for a frequency regulator, thus saving without any additional costs**
- **Effective filter cleaning (no compressed air connection required)**
- **Constant suction due to use of fans with horizontal volume/pressure curve**
- **Four versions for various means of waste collection and disposal**
- **Guaranteed minimal exposure to wood dust and noise**
- **Power consumption savings**
- **Improved workplace comfort**
- **Compliance with government and insurance company requirements**

# Safety and regulations

The MD-295 is fitted with every conceivable safety system for combating fire and dust explosions:

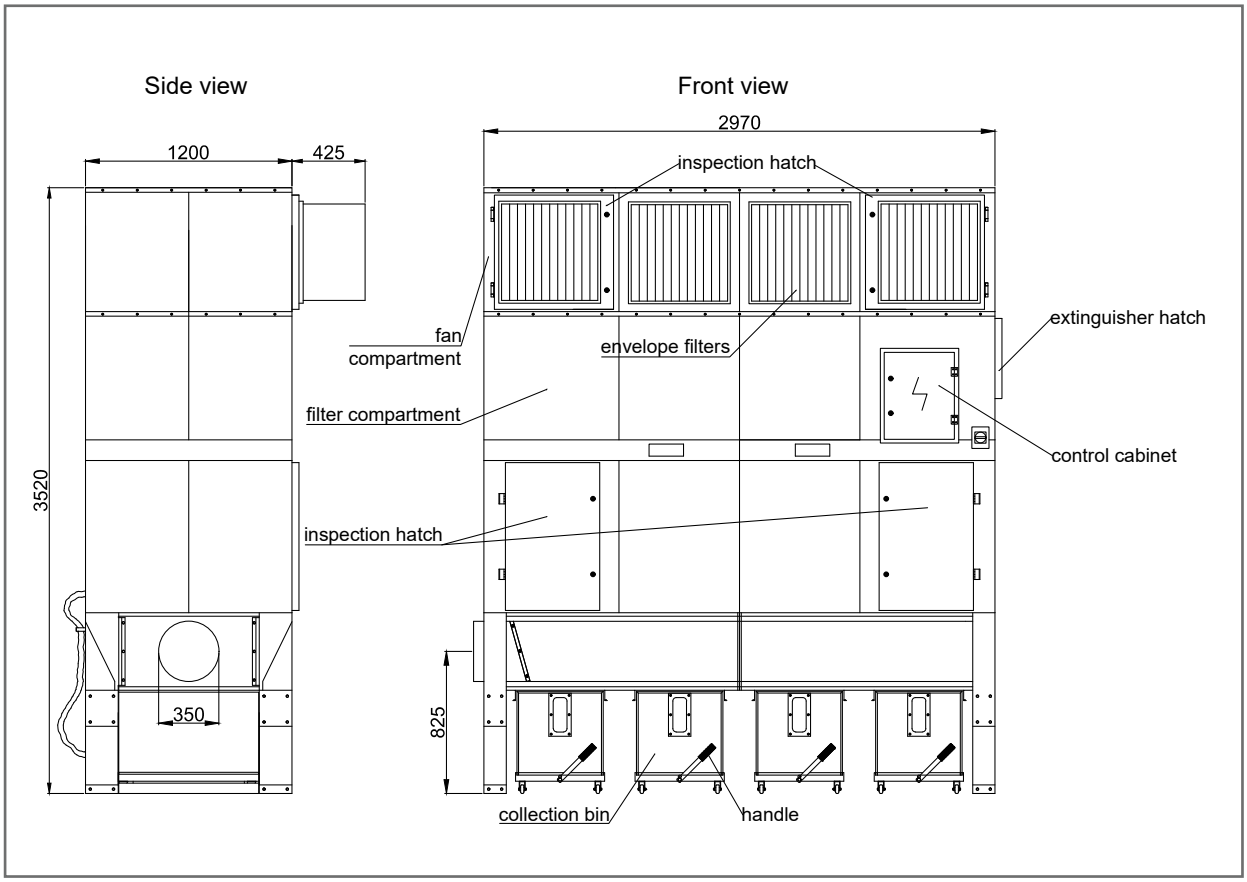
- pressure surge-resistant assembly, no internal ignition sources
- explosion-proof back pressure flap on the inlet
- automatic powder extinguishing system with fire alarm contact
- dry sprinkler system
- explosion relief panels

The MD-295 is manufactured in accordance with the European **EN 16770** standard and is **fully compliant with ATEX directives**. The unit has been tested by the TNO for fire and explosion safety. According to **EN 16770** it should be located outside.

A high-quality, BGIA-certified polyester needled felt produced by a reputable German manufacturer is used for the filter material. Use of this material and the filter's 62 $m^2$ surface area guarantees residual dust emission levels of less than 0.1 $mg/m^3$. The outlet filters ensure smooth emission of the filtered air.

# MD-295 B

The MD-295 is available in four versions depending on the means of waste collection and disposal. The MD-295B allows waste to be collected in mobile bins that contain plastic bags. A single pull of the handle suffices to unlock the bins and roll them out so the plastic bags can be changed easily and conveniently.



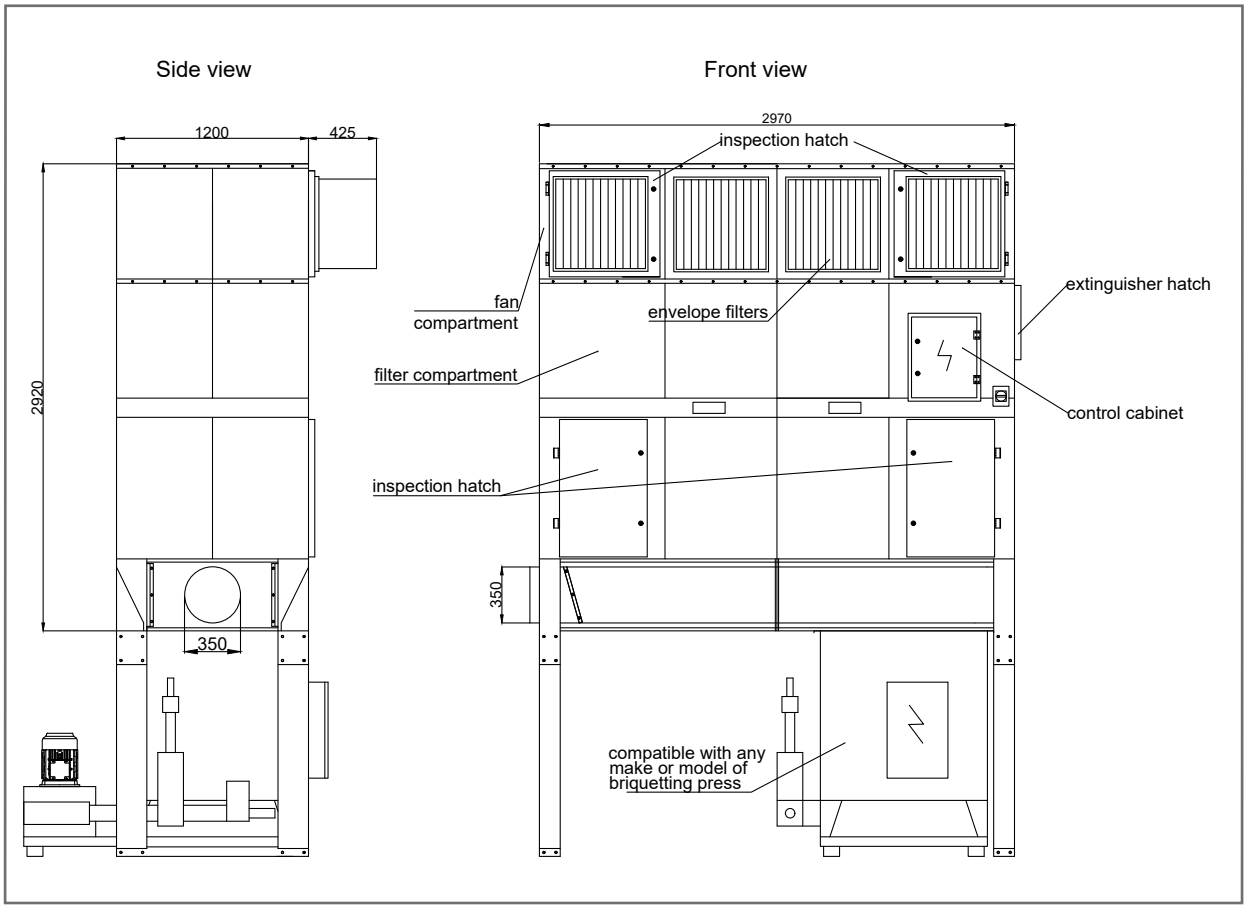

## Technical specifications

| | |
|---|---|
| Capacity | 8000 $m^3/h$ |
| Pressure | 2200 Pa (option: 2900 Pa) |
| Power | 8,2 kW 400 V IE2 |
| Suction opening | Ø 350 mm |
| Filter surface | 62 $m^2$ |
| Filter material | BGIA-certified polyester needlefelt |
| Filter class | M/H3 (< 0,1 $mg/m^3$) |
| Filter cleaning | Electrical (automatic shaker) |
| Collection volume | 500 L |
| Ambient noise level | 69 dB (A) |
| Pre-fuse | 20 A |
| Dimensions L x D x H | 2970 x 1200 x 3520 mm |

Supplied in two parts, mounted on site using a forklift truck. Average assembly time: 3 man-hours.

We reserve the right to make changes without notice

The MD-295 P is suitable for connection to any brand and type of briquetting press. The unit base can be modified to fit the dimensions of the press. If required, a buffer hopper can be fitted between the extraction unit and briquetting press.




# Technical specifications

| | |
|---|---|
| Capacity | 8000 $m^3$/h |
| Pressure | 2200 Pa (option: 2900 Pa) |
| Power | 8,2 kW 400 V IE2 |
| Suction opening | Ø 350 mm |
| Filter surface | 62 $m^2$ |
| Filter material | BGIA-certified polyester needlefelt |
| Filter class | M/H3 (< 0,1 mg/$m^3$) |
| Filter cleaning | Electrical (automatic shaker) |
| Ambient noise level | 69 dB (A) |
| Pre-fuse | 20 A |
| Dimensions L x D x H | 2970 x 1200 x 2920 mm (height without press) |

Supplied in two parts, mounted on site using a forklift truck. Average assembly time: 3 man-hours.

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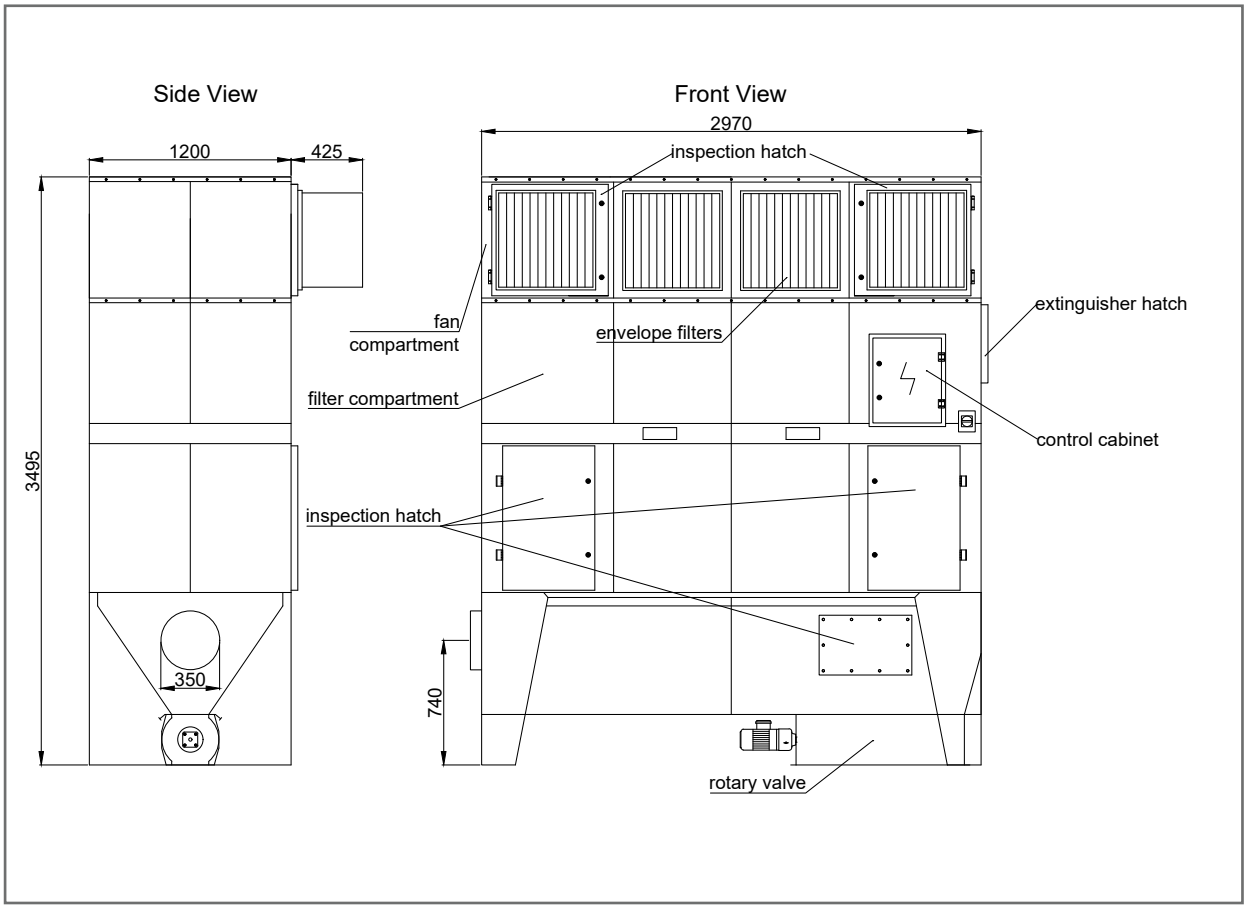
A rotary valve is fitted to the base of the MD-295 RV unit (RV = rotary valve) whereby the waste drops through under gravity without any pressurization. By placing the unit on a raised structure, it is possible to place a collection bin or container below the unit. Also suitable for unpressurized filling of silos.




# Technical specifications

| | |
|---|---|
| Capacity | 8000 $m^3/h$ |
| Pressure | 2200 Pa (option: 2900 Pa) |
| Power | 8,8 kW 400 Volt IE2 |
| Suction opening | Ø 350 mm |
| Filter surface | 62 $m^2$ |
| Filter material | BGIA-certified polyester needlefelt |
| Filter class | M/H3 (< 0,1 $mg/m^3$) |
| Filter cleaning | Electrical (automatic shaker) |
| Ambient noise level | 69 dB (A) |
| Pre-fuse | 20 A |
| Dimensions L x D x H | 2970 x 1200 x 3495 mm |

Supplied in two parts, mounted on site using a forklift truck. Average assembly time: 3 man-hours.

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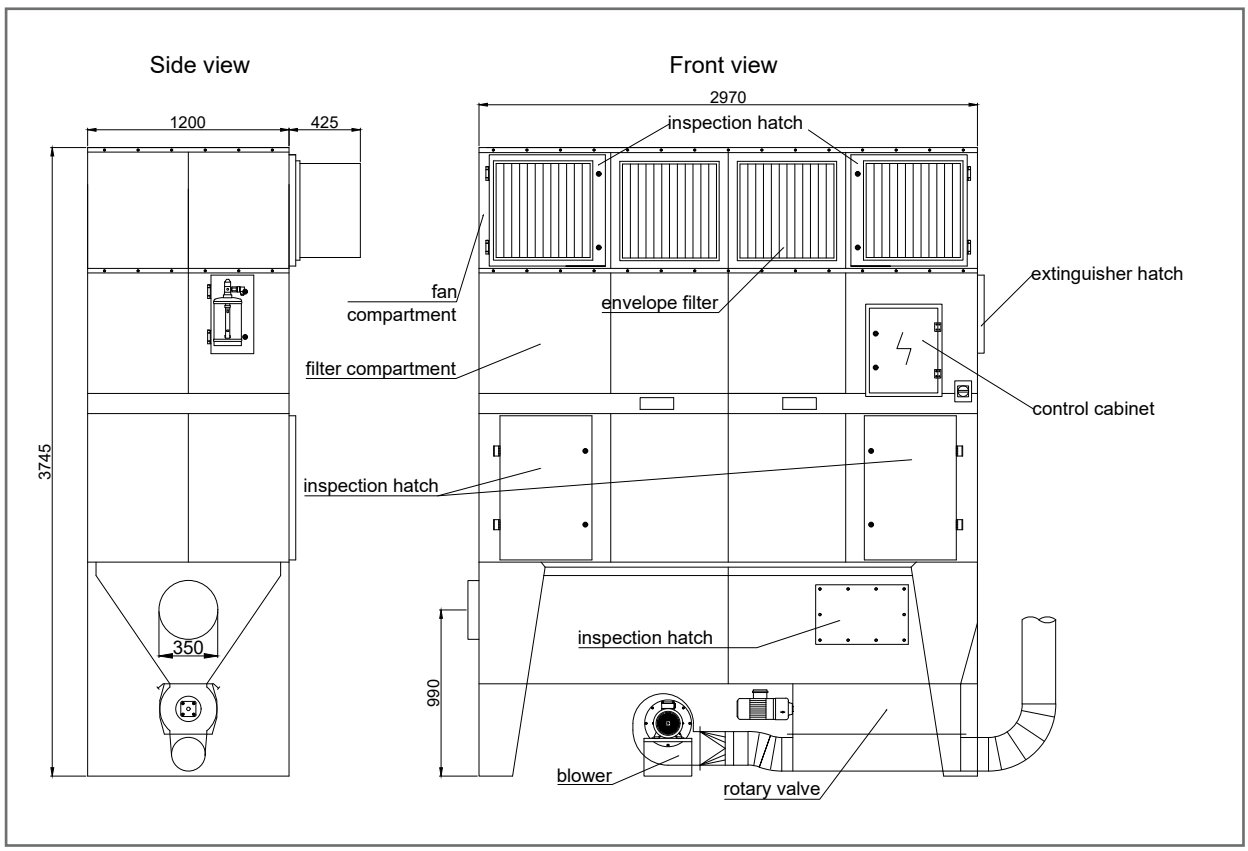
For the 295 C model we offer an optional connector for a wood chip container. This involves wood chips being transported from the unit to containers under high pressure by means of a blower. The major benefit of the C model is its large collection capacity. The container must be fitted with a filtered roofing (closed containers are no longer permitted under ATEX directives).




# Technical specifications

| | |
|---|---|
| Capacity | 8000 $m^3$/h |
| Pressure | 2200 Pa (option: 2900 Pa) |
| Power | 12,8 kW 400 Volt IE2 |
| Suction opening | Ø 350 mm |
| Filter surface | 62 $m^2$ |
| Filter material | BGIA-certified polyester needlefelt |
| Filter class | M/H3 (< 0,1 mg/$m^3$) |
| Filter cleaning | Electrical (automatic shaker) |
| Ambient noise level | 73 dB (A) |
| Pre-fuse | 25 A |
| Dimensions L x D x H | 2970 x 1200 x 3745 mm |

Supplied in two parts, mounted on site using a forklift truck. Average assembly time: 3 man-hours.

We reserve the right to make changes without notice

# Options

The MD-295 is ideally suited for automatic switching in unison with connected machinery, through use of current detection or contact switches on automatic shutters for example. Radio-controlled remote operation is also available.

# Applications

With a capacity of 8000 $m^3$/h, the MD-295 can be connected to multiple machines for simultaneous extraction purposes. Required extraction capacities for commonly used standard machinery are listed in the adjacent table. The filter's large surface area and the high-efficiency fan mean that the system can be used to provide powerful extraction for not only standard machinery, but for specialized machinery too, such as CNC machining and panel sizing centres, even when working with MDF. For machinery requiring extra-high air velocity or extraction vacuum, the unit can be fitted with special fans.

| **Machine** | **Capacity $m^3$/h** |
|---|---|
| Four-sided | 6000 |
| CNC machining centre | 5500 |
| Tenoner | 5000 |
| Panel sizing centre | 4500 |
| Spindle moulder | 2000 |
| Sawbench | 1700 |
| Thicknessing machine | 1600 |
| Surface planer | 1000 |
| Crosscut saw | 1000 |
| Band saw | 700 |

# MD-series summary

| Type | Versions | | | | |
|---|---|---|---|---|---|
| | B | P | RV | C | Capacity $m^3$/h |
| MD-40 | + | - | - | - | 1100 |
| MD-60 | + | - | - | - | 2300 |
| MD-90 | + | + | - | - | 3450 |
| MD-150 | + | + | + | - | 4600 |
| MD-280 | + | + | + | + | 6000 |
| MD-295 | + | + | + | + | 8000 |
| MD-350 | + | + | + | + | 9000 |
| MD-450 | + | + | + | + | 12000 |
| MD-475 | + | + | + | + | 15000 |
| MD-500 | + | + | + | + | 20000 |

The MD series includes six models ranging in capacity from 2300 to 12000 $m^3$/h.

We reserve the right to make changes without notice

Power savings and noise reduction played a prominent role when designing the MD series. The extraction systems works based on the negative pressure air filtration principle whereby the fan is positioned downstream of the filter. This allows a special, self-regulating and energy-saving, high-efficiency fan to be used. Power consumption adjusts automatically to the required capacity.

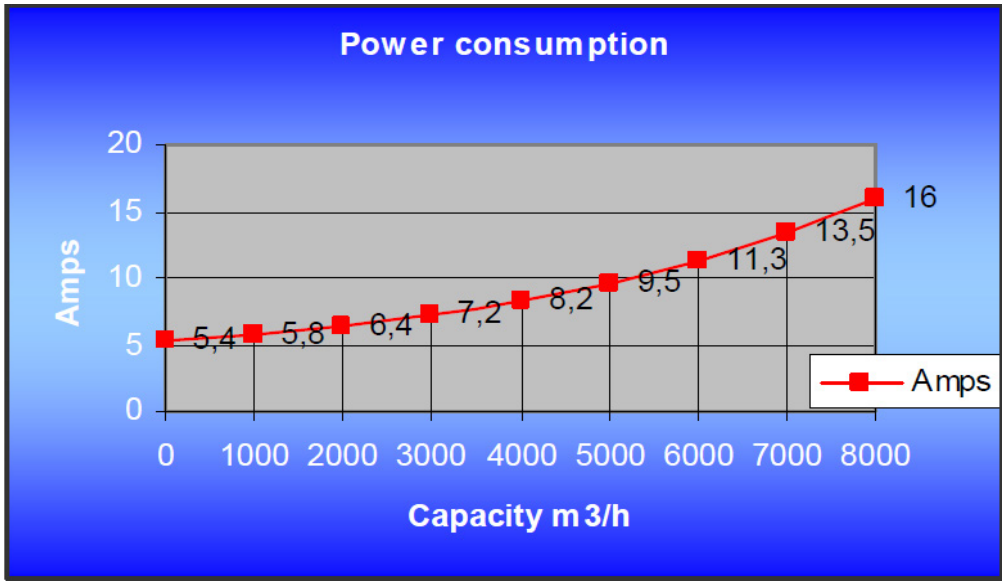
**Energy savings**

By closing shutters on unused machinery, or installing automatic shutters, power consumption can be reduced without the need for a frequency regulator. The ultra-lightweight fan wheel allows for rapid start-up, providing further power savings during starting. The immediate availability of full suction power makes the unit ideal for automatic switching in unison with connected machinery.

Filter resistance remains low due to the large filter surface area, even under intensive usage. This requires less extraction vacuum and, therefore, a fan that requires less power than used by other manufacturers. Moreover, this allows use to be made of low-energy, mechanical filter cleaning. This requires a fraction of the power consumed by compressed air cleaning systems.

**Noise reduction**

An additional feature of the fan used is its low noise emission levels that are further reduced by positioning it inside an acoustically insulated compartment. The net result is virtually inaudible, but the most important feature is that this fan performs slightly better than traditional extraction fans.




# Warranty

Riedex BV extends a two-year warranty on materials and manufacture with all its extraction systems.

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