MD-500

Air flow: 20000 m^3/h

MD-500 P

MD-500 RV

MD-500 C

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The MD-500 belongs to a new generation of extraction systems for woodworking machinery – the MD series. Riedex 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

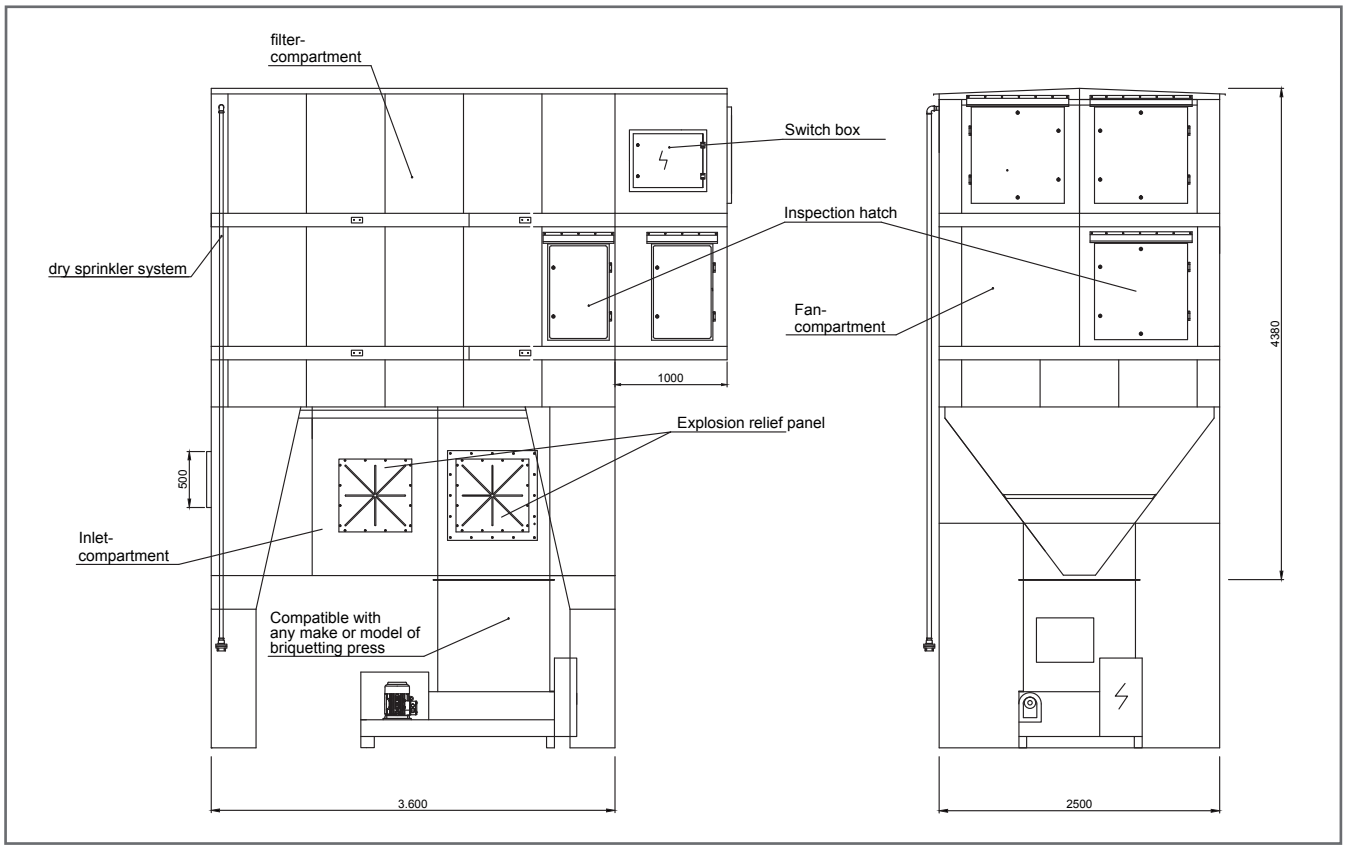
The MD-500 is fitted with every conceivable safety system for combatting fire and dust explosions:

- 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-500 is manufactured in accordance with the European EN 12779 standard and is **fully compliant with ATEX directives**. According to EN 12779 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 185 m^2 surface area guarantee residual dust emission levels of less than 0.1 mg/m^3. The outlet filters ensure smooth emission of the filtered air.

The MD-500 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.

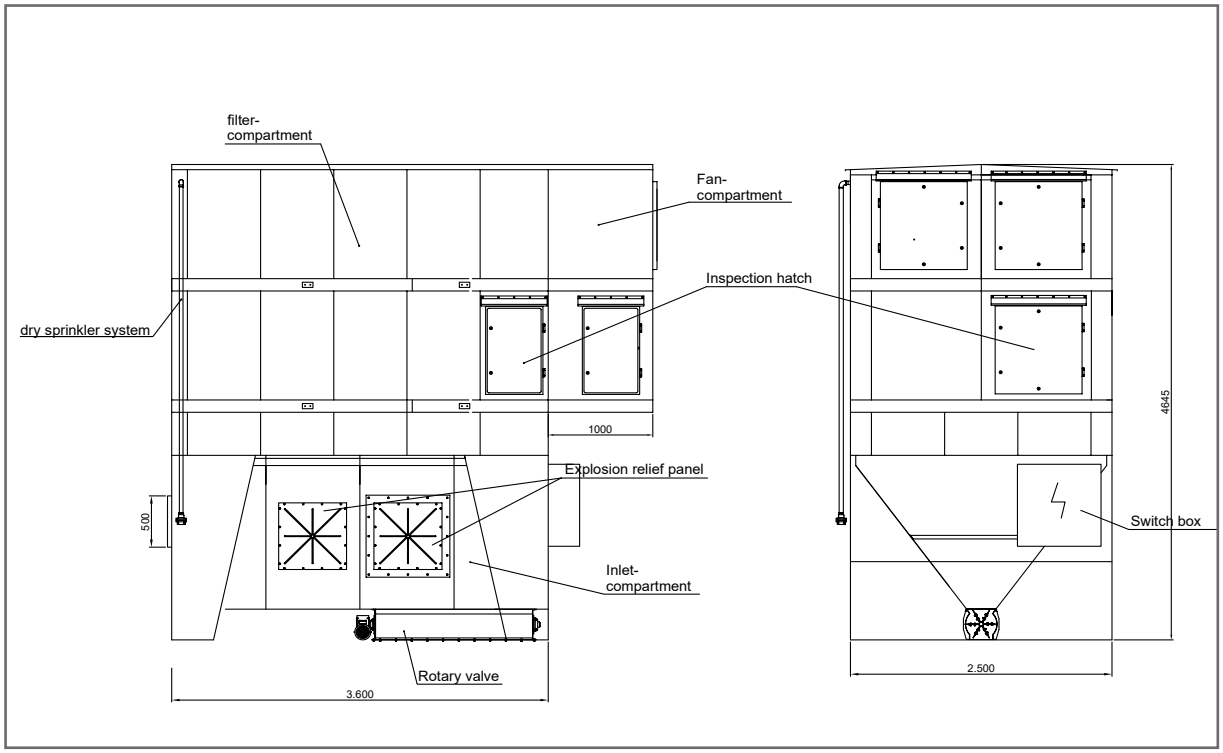


Technical specifications

Air flow	20000 m^3/h
Pressure	2500
Power	23 kW 400 Volt IE2
Suction opening	Ø 550 mm
Filter surface	185 m^2
Filter material	BGIA-certified polyester needlefelt
Filter class	M/H3 (< 0,1 mg/m^3)
Filter cleaning	Electrical (automatic, discontinuous)
Ambient noise level	69 dB (A)
Pre-fuse	50 A
Dimensions L x D x H	3600 x 2500 x 4380 mm (height without press)

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

A rotary valve is fitted to the base of the MD-500 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.

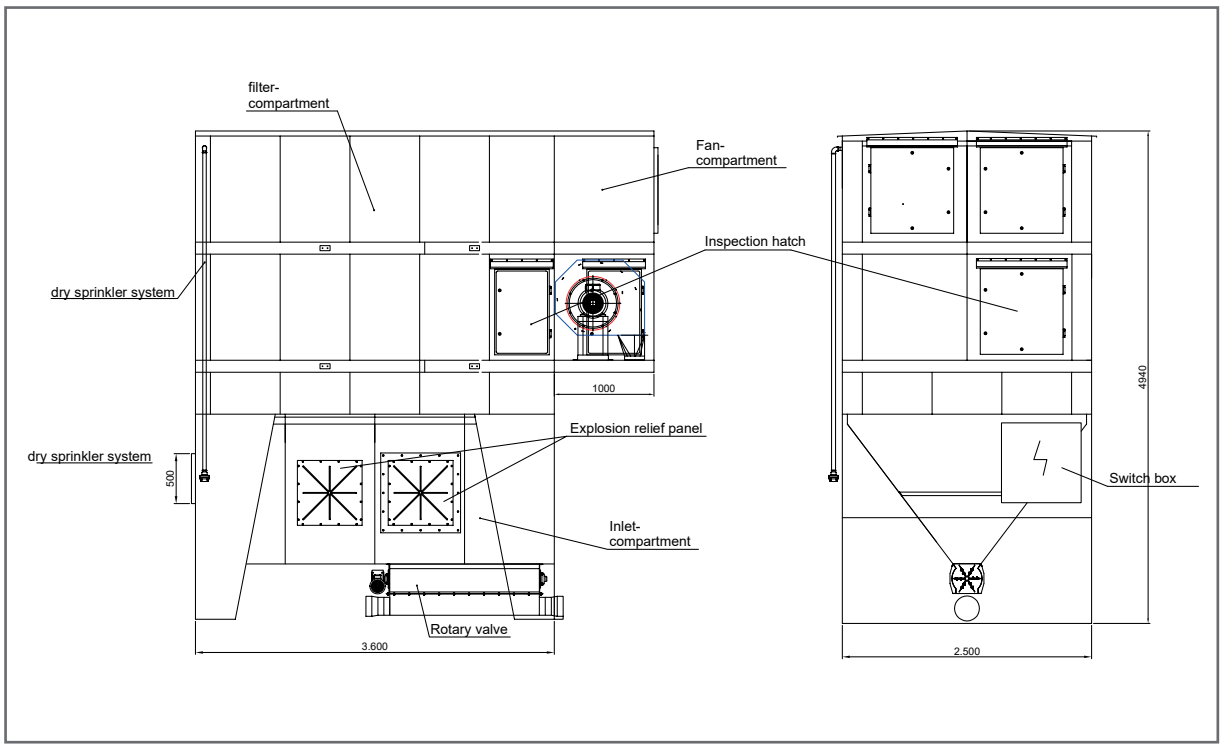


Technical specifications

Air flow	20000 m^3/h
Pressure	2500 Pa
Power capacity	30,9 kW 400 Volt IE2
Suction opening	Ø 550 mm
Filter surface	185 m^2
Filter material	BGIA-certified polyester needlefelt
Filter class	M/H3 (< 0,1 mg/m^3)
Filter cleaning	Electrical (automatic, discontinuous)
Ambient noise level	69 dB (A)
Pre-fuse	63 A
Dimensions L x D x H	3600 x 2500 x 4645 mm

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

For the 500 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

Air flow	20000 m^3/h
Pressure	2500 Pa
Power	30,9 kW 400 Volt IE2/including blower
Suction opening	Ø 550 mm
Filter surface	185 m^2
Filter material	BGIA-certified polyester needlefelt
Filter class	M/H3 (< 0,1 mg/m^3)
Filter cleaning	Electrical (automatic, discontinuous)
Ambient noise level	73 dB (A)
Pre-fuse	63 A
Dimensions L x D x H	3600 x 2500 x 4940 mm

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

Applications

With an air flow of 20000 m^3/h, the MD-500 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-350	+	+	+	+	9000
MD-450	+	+	+	+	12000
MD-475	+	+	+	+	15000
MD-500	+	+	+	+	20000

The MD series includes nine models ranging in capacity from 2300 to 20000 m^3/h.

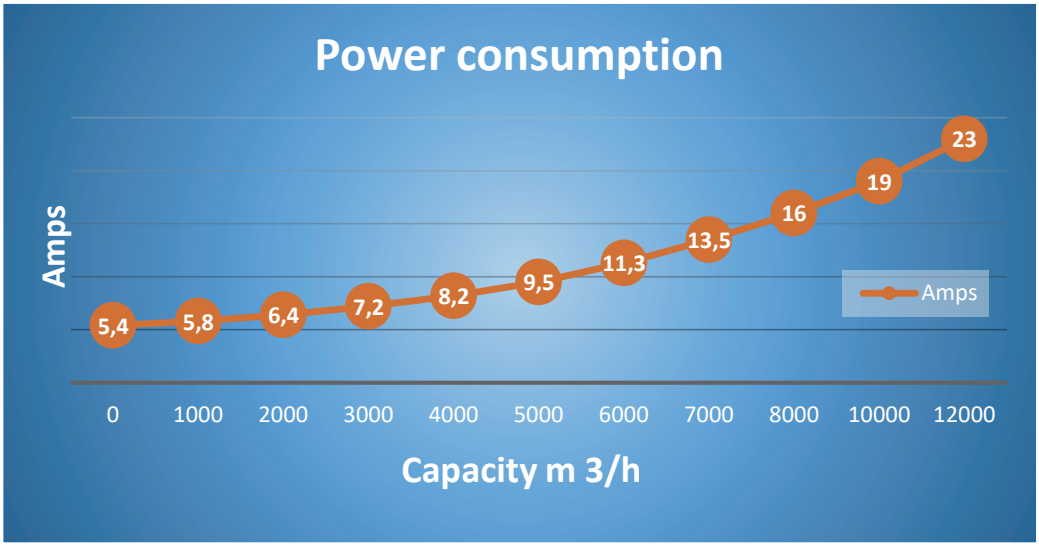
Power savings and noise reduction played a prominent role when designing the MD series. The extraction systems is based on the negative pressure air filtration principle whereby the fans are positioned downstream of the filter. This allows special, self-regulating and energy-saving, high-efficiency fans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

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 wheels allow for rapid start-up, providing further power savings during starting. Filter resistance remains low due to the large filter surface area, even under intensive usage.
This requires less extraction vacuum and, therefore, fans that require 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 fans used is its low noise emission levels that are further reduced by positioning them 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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