

Trotec Extraction Systems



**For You and the
Environment**

Worldwide Leading Laser Engraving Technology

trotec[®]
laser engraving technology

Extraction Systems by Trotec— A Clean Decision



A good extraction system is absolutely vital for the safe, clean operation of a laser system. The dusts and fumes arising during engraving or cutting must be extracted from the processing area for the protection of your employees and the environment. An extraction system with an adequate quantity of activated carbon also filters out odors (e.g. rubber).

Trotec offers a broad range of extraction systems for the most varied application purposes: from simple fans to high-tech filtration systems.

The Key Advantages:

- **Active environmental protection**

Efficient filtering of dusts and gases extends the service life of your laser system and protects both you and the environment.

- **Intelligent solutions**

We have worked intensively for many years on the interaction between lasers and extraction systems. As a result we are able to offer intelligent solutions such as remote control via computer screen and online filter replacement display.

- **Cost-efficient operation**

Trotec extraction systems are optimized for the most demanding use and long service life, allowing you to achieve maximum productivity with the best possible combination of laser and extraction system, to reduce service and maintenance time.

The Mistral Series



The latest generation of extraction systems from Trotec incorporates extremely simple handling, high efficiency and very low running costs. Our unique “All-in-One” filter box makes replacement clean and simple.

There are various models available depending on the intended application:

- **MistralEco plus:** with brushless (maintenance-free) motor and 30 kg activated carbon
- **MistralEco:** with brushless (maintenance-free) motor and 15kg activated carbon
- **Mistral plus:** with carbon rotor turbine and 30 kg activated carbon
- **Mistral:** with carbon rotor turbine and 15 kg activated carbon
- **Mistral Super plus:** with two permanent-rotor turbines and 30 kg activated carbon

When used in conjunction with a Trotec laser system, all Mistral laser extraction systems can be controlled and monitored from the host control computer: switching on and off, filter monitoring—filter saturation display, filter replacement display—monitoring of turbine operation, automatic motor output control (FlowControl), and much more.

Mistral—Advantages



- Powder-coated metal (inside and out) housing with four heavy duty lockable castors.
- “All-in-One” filter box: long service life (approx. 120 DIN A4 sheets of laser rubber). Simply lift up the lid to replace the filter.
- Automatic motor output control (FlowControl): Keeps the suction power steady i.e. the motor output raises automatically as saturation of the filter increases.
- Separates with quick-action snap fasteners: filter and motors are easily and quickly accessible. Undo the quick-action snap fasteners—open the lid and lift off the housing panel.
- Loosely poured activated carbon for maximum odor filtering: the activated carbon particles are poured directly into the housing. 99.9 % of unfiltered air is thus routed through the activated carbon (unlike conventional filter cassettes).
- Bi-directional control: all functions of the extraction system can be controlled from the computer screen. At the same time feedback on turbine activity and filter saturation is displayed directly on your computer.
- Internal exhaust silencer: Mistral extraction systems are extremely quiet (approx. 64 dBA) and are appropriate for use in closed spaces (offices, shops).
- Membrane control pad with illuminated display.
- Optical and acoustic signals.
- Adjustable run-on time: controls how long the motors should continue running after the end of the laser job.

Mistral—Different and Better



	MistralEco plus	MistralEco	Mistral plus	Mistral	Mistral Super plus
"All-in-One" filter box	•	•	•	•	•
Digital hours-run meter	•	•	•	•	•
Stepless output control	•	•	•	•	•
Activated carbon	30 kg	15 kg	30 kg	15 kg	30 kg
Permanent-rotor motor	1	1			2
Carbon brush motor			1	1	
Guarantee	24 months	24 months	24 months*	24 months*	24 months
Automatic motor output control (FlowControl)	•	•	•	•	•
Monitoring of motor operation	•	•	•	•	•
Connection facilities	2 x DN 50 mm 1 x DN 71 mm	2 x DN 50 mm 1 x DN 71 mm	2 x DN 50 mm 1 x DN 71 mm	2 x DN 50 mm 1 x DN 71 mm	2 x DN 50 mm 1 x DN 71 mm
Electr. connection	230V/50Hz or 115V/60 Hz	230V/50Hz or 115V/60 Hz	230V/50Hz or 115V/60 Hz	230V/50Hz or 115V/60 Hz	230V/50Hz or 115V/60 Hz

* with the exception of carbon brush motor

Even More Customer Benefits



Mistral Accessories and Equipment Options



- **“All-in-One” filter box:** a single filter for separation of coarse and fine particles. Long service life (approx. 120 sheets of DIN A4 laser rubber) saves time and money on filter replacement.



- **Cleaning set:** for cleaning the processing area and work pieces. Specially for processing of high-dust materials (e.g. rubber, wood).



- **Silencer module:** ensures additional reduction of running noise. Easy to install. Ideal for operation in offices or shopping centers.

- **Automatic motor output control (FlowControl):** with FlowControl you can adapt the air flow optimally to the material and extraction system. Set it once—always the optimum air flow rate. This means less stress on the motors and increases the system’s service life.

- **Replacement activated carbon:** the activated carbon is supplied in sacks as low-cost bulk material. Including disposable gloves for clean filter replacement.

- **Exhaust air connector:** all extractors of the Mistral series are fitted with drilled holes as standard. This enables them to be connected to an exhaust air system at any time.

- **Shut-off valve (manual or hydraulic):** full suction power for hose or cleaning set.

Other Trotec Extraction Systems



- **Pre-filter systems:** pre-filter systems are used primarily when very large quantities of dust particles are to be filtered (e.g. when engraving rubber or wood). Pre-filter systems are installed between the laser unit and the extraction system to collect large particles thus extending the life of the filter medium and carbon. Choose between manual or fully automated systems.

- **Mechanical pre-filters:** activation by means of crank handle. No electricity, no compressed air. Increases the service life of the “All-in-One” filter box and the entire extraction system. The additional flow resistance is compensated automatically by means of automatic motor output control (FlowControl).

- **Automatic pre-filters:** fully automatic dedusting using compressed air. Built-in compressed air tank with connection for external compressed air supply.

VENT fans

The Trotec fans of the VENT series ensure efficient evacuation of dusts and gases **without** filtration.

Checklist for Purchase of Your Extraction System:

- **Does the extraction system have a bi-directional connection to the laser?**

Extraction systems and lasers by Trotec create a perfectly matched unit. The extraction system can be controlled directly from the laser's PC. Important information such as turbine activity or filter saturation is integrated directly into the **Job Control** laser control software. The turbines are controlled automatically and shut down when the laser is not operating.

- **Does the extraction system have an automatic motor output control?**

Trotec *FlowControl* protects the motors of your extraction system and thus increases the system's service life. Once set, it will always provide the optimum air flow rate.

- **Is the extraction system equipped with an "All-in-One" filter box?**

A single filter box for coarse and fine particles saves money and time when replacing filters.

- **Can the extraction system be extended with accessories?**

Trotec extraction systems can be upgraded with a series of optional extras: silencer module, cleaning set and many more.

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laser engraving technology