



FILTER TOWER EXTRACTION PROJECT

Client:

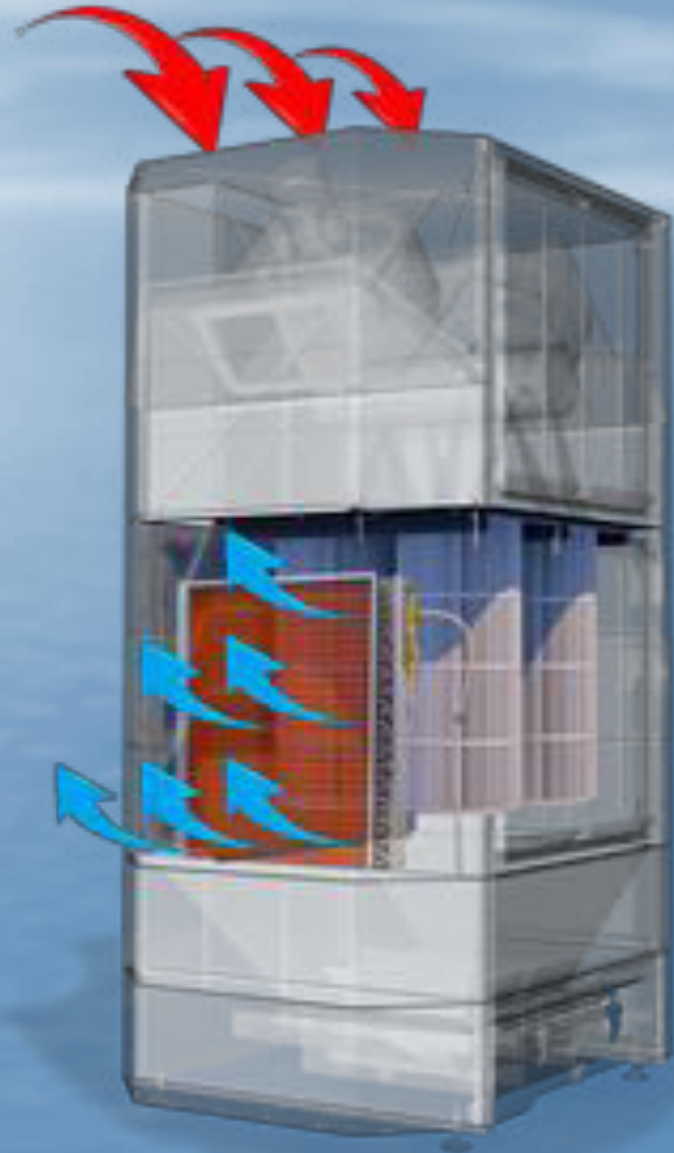
Date: /2018

FILTOWER - INTRODUCTION

- Stand-alone filtration providing general extraction without the need for ducting or installation.
 - Alternative to an direct extract unit.
- Allows filtered air to be re-circulated retaining heat – can be supplied with the option for heating and cooling the returned air.
 - High efficiency-low maintenance.
- Mobile unit allowing scope for flexibility and re-location.



HOW IT WORKS



» Diagram

- 1 Extraction of contaminated air
- 2 **Pre-separation system**** (calculated separation efficiency >80% for particles $\geq 50 \mu\text{m}$) serves as a spark pre-separation system and filters coarse particles.
- 3 Filtration of residual dust particles through long life cartridge filters with nanofibers of dust class M (99.9% separation efficiency)
- 4 Easy filter change of highly-effective long life cartridge filters thanks to the newly-developed **ESTA QuickChange filter change system****
- 5 Low-draft recirculation via outlets on side



ADVANTAGES

QUICK INSTALLATION, EASY HANDLING – FOCUS ON PRODUCTION

» Plug & play

In contrast to central hall ventilation systems, plug & play hall ventilation systems do not require a pipe system. They are supplied fully assembled and are ready for operation almost immediately – all that is left to do is connect the power and compressed air lines. They can be deployed flexibly in the workspace using a forklift or crane.

» Housing design

The sound insulated housing design and the low-draft clean air diffusers ensure a pleasant working environment, even in direct proximity to the equipment.

» Filter change system

The new, patent-pending **ESTA Quick-Change filter change system** ensures a dust-free and time-saving change of filter cartridges.



» Cleanable filter cartridges

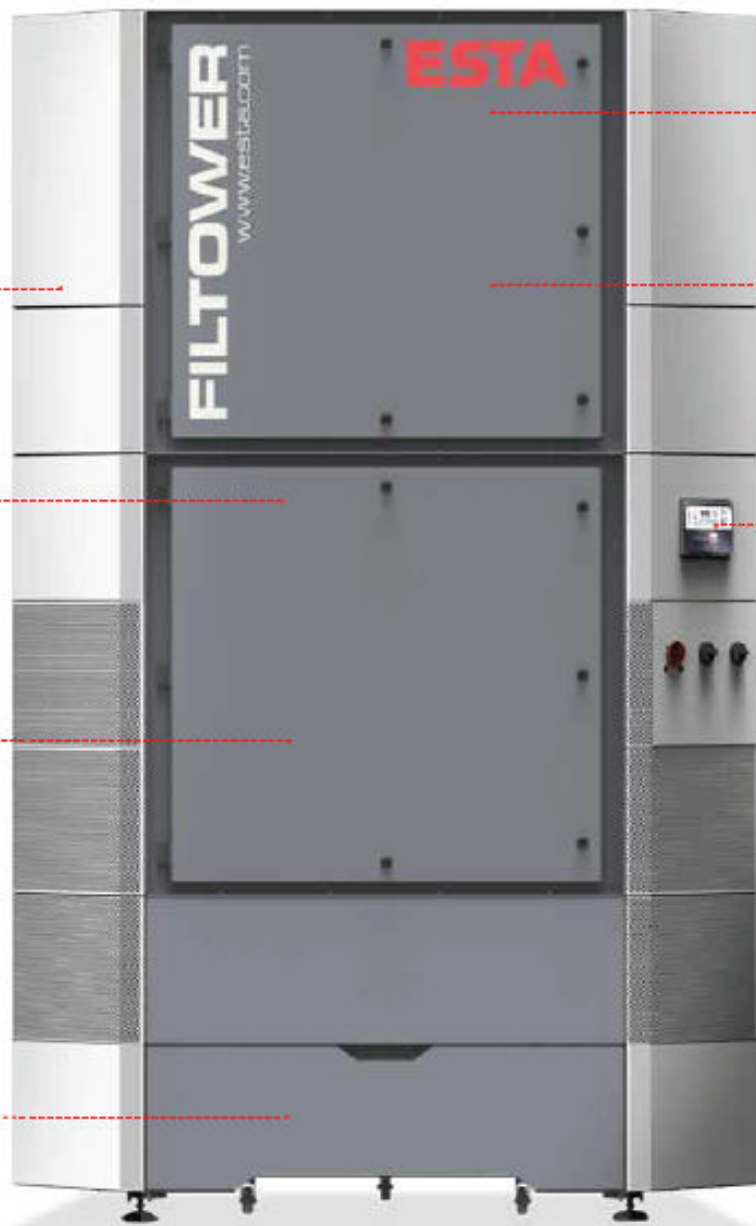
Compressed air cleans the durable filter material of dirt particles fully automatically during extraction, reducing operating costs.

This ensures continuous suction performance at low operating costs.



» Dust removal

At the end of the filtration process, the separated dust particles fall into a mobile 150-liter drawer underneath the filtration unit. The two collection boxes inside it are sealed with a cover before removal, ensuring dust-free disposal of the material extracted.*



EFFECTIVENESS & PROFITABILITY – REDEFINING EFFICIENCY



» Heating cost savings

The plug & play systems enable a full recirculation of the cleaned air into the workspace which reduces energy consumption considerably, especially in the winter. Depending on the application, up to 70% of the annual heating costs can be saved compared to exhaust air operation.

» Fans

The systems are equipped with two highly-efficient IE2 or IE3 motors. These can be programmed individually and their extraction performance regulated according to demand (optional).



» Frequency converter

The filter towers can be equipped with frequency converters. This enables the extraction performance to be adapted to demand, for additional energy savings.



» Intuitive control

The system control has a generous operating panel with a display showing the most important device functions, such as differential pressure, cleaning, operating hours etc. See page 10 for more features.



ESTAeco⁺

The FILTOWER series is also available in the ESTAeco⁺ version for maximum efficiency and safety.

The newly-developed **ESTA EasyControl** device control is used here. It offers power savings of up to 50%.

Your Benefits:

- Better air quality in the workplace
- Meet statutory regulations in compliance with occupational health and safety.
- Powerful and low-noise performance
- Can be easily placed in the work area (no installation required)
- Flexible maneuverability and easy to move with forklift or crane
- Low operating costs due to cleanable and permanent filter cartridges
- Up to 70 % reduced heating costs by recirculation mode
- 18 Months warranty

Special Features:

- 3 Performance levels – 13,000 m³/h, 18,200 m³/h and 22,000 m³/h
- Regulated extraction performance by frequency converter (optional)
- Quick-Change filter system* – fast & free of dust
- Long life cartridge filters with nano fibers (99.9% separation efficiency)
- Innovative pre-separation system*
- Low-draft air return
- Dust-free disposal of the extracted material

Ideal for:

- Effective in use of welding fumes, dusts and oilmist
- Effective ventilation in large areas
- Fine floating particulate matter
- Plastic dust
- Chemical dust
- Aerosols

Special Versions:

- With frequency converter for regulating extraction performance
- Devices with IFA test certificate W3, for the extraction of high-alloy steel welding fumes are available as an option
- With activated carbon inlets for the filtration of gases and odours
- Special coating in RAL colour

Depending on the size of the hall and number of workstations, several FILTOWER systems may have to be installed, in order to achieve an effective overall improvement to the air quality.



TECHNICAL SPECIFICATION

FILTOWER F-200

(667.200)

Voltage	(V)	400	Filter surface	(m ²)	200
Motor	(kW)	2 x 7,5	No. of filter elements	(pc)	4
Ampere	(A)	20,2	Filter material		Dust class M
Rated frequency	(Hz)	50	Filter cleaning		Jet-Pulse
Fuse	(A)	C32	Weight	(kg)	ca. 1,400
Intake (L x W)	(mm)	1,295 x 295	Collection bin	(Liter)	ca. 100-150
Max. neg. pressure intake	(Pa)	2,800	Dimensions (L x W x H)	(mm)	2,060 x 1,510 x 3,910
max. airflow	(m ³ /h)	20,000	Comp. air requirement	(l/impuls)	70 at 0,120s
Soundlevel	(dBA)	77	Comp. air connection	(inch)	1/4"

Application range:

Fume extraction of dry, oil-free welding fumes arising during welding of metals
 For improving room air quality

Your benefits at a glance:

Efficient welding fume exhaust using thermal lift from the welding process
 Ready to use – the filter tower comes preassembled
 Low operating costs thanks to cleanable permanent filter cartridges
 Compact design with low space requirements
 Flexibility – can be moved any time to a different set-up location

Characteristics:

Automatic jet pulse filter cleaning system
 Cleanable long life cartridge filters (dust classification M)
 Newly designed control
 Integrated impact separator

Modification:

Activated carbon application at the outlet openings
 Control via frequency converter
 Available in a W3-tested version for exhausting welding fumes from high-alloy steel



GENERAL ARRANGEMENT



VISUAL DESCRIPTION OF OPERATION

PLEASE DOUBLE CLICK IMAGE FOR DEMO VIDEO





DEMO UNIT

We would like to invite you to come and see this unit at our Manufacturers Workshop at your next convenient time.



QUESTIONS?