

Central Extraction Systems Tailored to Your Application

Side Channel
Blowers

High and Medium
Pressure Fans

Rotary Piston
Blowers

Filter Cyclones

Modular
Filter Systems

Ventilation of
Production Facilities

Extraction Hoods

Soundproofed Cabins



Application Range

- » Aerospace Engineering
- » Agricultural Processing
- » Aircraft Industry
- » Automotive Repair Shops
- » Automotive Supplier Industry
- » Construction Industry
- » Electronics Industry
- » Engine Manufacturing Plants
- » File Shredding
- » Food Processing Industry
- » Machine Building Industry
- » Metalworking Industry
- » Mills
- » Paper Industry
- » Pharmaceutical Industry
- » Plastics Processing Plants
- » Precision Mechanical Industry
- » Printing Industry
- » Processing Facilities
- » Recycling and Waste
- » Research and Development
- » Ship Building Industry
- » Shoe Manufacturing Plants
- » Tobacco Companies
- » Vacuum Systems
- » Vehicle and Auto Body Plants
- » Welding Facilities

Central Extraction Systems

Introduction and Product Overview



Introduction

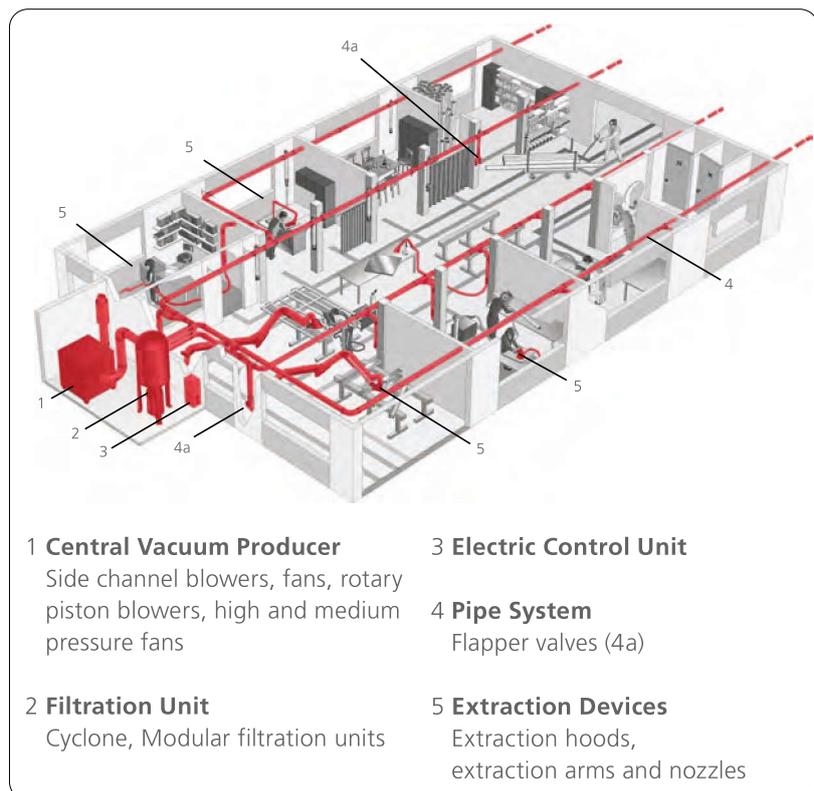
Central extraction systems can extract dust simultaneously from multiple nozzles or machines through a suitable pipe system. Whether you need to extract coarse or fine dust, wet or dry, vapours or smoke - ESTA extraction systems can be adapted to the requirements of each specific application. The modular design of ESTA central dust extraction systems makes it possible to offer systems that are customized to your specific application. Our sales engineers will configure the optimal system including a suitable pipe system, filtration unit and a central vacuum generator.

ESTA central extraction systems offer many advantages:

- Very high efficiency of the vacuum generator
- Quiet operation through sound insulation and if necessary special sound dampening enclosures
- Wear resistant and maintenance free design
- Low operating costs through cleanable long life filters and high energy efficiency of the systems
- Modern control cabinets in all variants
- Complete service – from design through installation to start-up operation and maintenance



Benefit from our over 50 years of experience with extraction technology.



Switch cabinets for every requirement

The complete switch cabinet construction is part of our core disciplines along the valuecreation chain. The construction of the emergency circuit diagrams are created with EPlan.

We manufacture exclusively in our factory in Germany. We attach the utmost importance to excellent quality, national, international and customer-specific standards.



Variations

Control cabinet BASIC up to 22 kW

- Central control of the plant
- Optical indication of the operating status
- Separate optical display in the event of a fault at the cleaning control
- Optical indication of malfunctions

Control cabinet KOMFORT up to 22 kW

- Central control of the plant
- Optical display Operation ON
- Information output and operation via panel
- Maintenance indicator
- Faults and warnings with text
- Operating hours display
- Free floating contact for Start/Stop
- Free floating contact signal for operation/fault

Operating panels

In addition to the classic, mechanical operating elements, we install also components such as touch panels. This ensures maximum user-friendliness and visualisation of the necessary operating data.



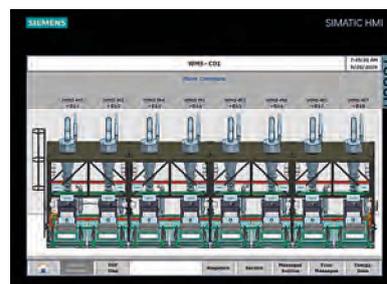
Further features

- Supply voltage 324 - 572 V AC
- No N conductor necessary
- Cable entry system
- Integrated system protection



Individual production

Many of our customers require special solutions in unique designs. Thanks to our experience, we are able to manufacture control cabinets individually and efficiently from a single piece. Whether individual lacquering, production of customer-specific housings or design and large-area attachment of labelling foils, we tailor all elements exactly to your requirements.



- Dust Extractors
- High Vacuum Extraction Units
- Welding Fume Filters
- Oil Mist Separators
- Carbon Filters/ Air Purifier
- Downdraft Tables
- Extraction Fans
- Extraction Arms
- Filter Towers
- Central Extraction Systems**
- Pipe Systems
- About us
- Interesting Information

Side Channel Blowers



Schematic illustration of a side channel blower with direct drive



ESTA side channel blowers are assemblies used when strong suction power is needed. This includes central dust extraction systems in production areas, power plants, trash incinerators, manufacturing areas, etc.

The compressors are also available in an ATEX-compliant design.



Central vacuum unit equipped with two side channel blowers

ESTA PLUS

Application Range

- » Extraction from multiple workstations in industrial manufacturing and processing
- » Multi-shift operation possible
- » Optional: ATEX version

Your Benefits

- » High negative pressure
- » Quiet operation through sound insulation and suitable positioning
- » Wear and maintenance free design
- » Low operating costs through high energy efficiency

Technical Data

Side Channel Blowers		TDS-13	TDS-18.5	TDS-22	TDP-11	TDP-18.5	TDP-22	TDP-26
Max. volume flow	m ³ /h	1.140	1.140	1.140	790	2.100	2.100	2.100
Intake opening	mm	140	140	140	100	180	180	180
Max. negative pressure	Pa	23.500	38.000	40.500	30.000	23.500	27.000	31.500
Mains voltage	V	400	400	400	400	400	400	400
Nominal power	kW	13.0	18.5	22.0	11.0	18.5	22.0	26.0
Motor speed	1/min	3.000	3.000	3.000	3.000	3.000	3.000	3.000
Dimensions (W×H×D)	mm	990 × 1.730 × 1.200						
Sound pressure level	dB(A)	78	96	90	85	93	88	93

Order Number **301.101 301.103 301.105 301.100 301.102 301.104 301.106**

Please inquire with us about additional units

Rotary Piston Blowers



Rotary piston blower



ESTA rotary blowers are intended for use where there is high negative pressure while air flow remains constant.

Their combination with the ESTA FZ cyclone filter is the core of a reliable high-vacuum extraction system.

Especially for process extraction systems, or for long, wide-branching pipeline systems, rotary blowers are the right choice.



Rotary piston blower application photo

ESTA PLUS

Application Range

- » Extraction from multiple workstations in industrial manufacturing and processing
- » Applications where constant negative pressure is required

Your Benefits

- » Extremely constant negative pressure
- » Quiet operation through sound insulation and remote positioning
- » Industrial strength and maintenance free design
- » Low operating costs through high energy efficiency

Technical Data

Rotary piston blowers		DKG-11	DKG-15	DKG-37	DKG-75
Max. volume flow	m ³ /h	510	840	1,860	3,720
Intake opening	mm	80	100	150	200
Max. negative pressure	Pa	40.000	40.000	40.000	40.000
Mains voltage	V	400	400	400	400
Nominal power	kW	11.0	15.0	37.0	75.0
Motor speed	1/min	2.915	2.925	2.945	2.970
Dimensions (W×H×D)	mm	1.230 × 1.306 × 1.200	1.230 × 1.306 × 1.200	1.655 × 1.820 × 1.600	2.110 × 2.330 × 1.750
Weight	kg	550	600	1.180	2.500
Sound pressure level	dB(A)	71	72	78	85
Order Number		302.101	302.102	302.103	302.104

Please inquire with us about additional units

Cyclonic Filtration Units



Cyclonic filtration unit

Application Range

- » Extraction from multiple workstations in industrial manufacturing and processing
- » As a filter for high-vacuum extraction
- » For the deposition of dust, shavings and fumes



Ideal for

- Metal dust
- Plastic dust
- Shavings of all kinds
- CRP-/GRP-dusts
- CRP-/GRP-shavings
- ... and much more

Special Version

- » ATEX version



Two cyclonic filters as part of an extraction system

ESTAPLUS

Special Features

- » Compact design
- » Suitable for continuous operation

Your Benefits

- » The dual filter system is suitable for coarse and fine dust
- » Quiet operation through sound insulation and remote positioning
- » Industrial duty and maintenance free design
- » Low operating costs through cleanable filters and high energy efficiency
- » Suitable for applications requiring high negative pressure

Technical Data

Cyclonic filtration unit	FZ-1003	FZ-1503	FZ-3003	FZ-5003	FZ-7003	FZ-11003
Cartridge filter (dia./L)	150/660	150/1.000	325/600	325/1.000	325/600	325/1.000
Intake opening* mm	159	159	355	355	400	400
Main filter quantity Pieces	4	4	3	3	7	7
Main filter surface per cartridge m ²	2.5	3.6	10	16.7	10	16.7
Main filter surface m ²	10	14.4	30	50	70	117
Collection volume l	100	100	100	100	200	200
Dimensions (dia./H) mm	674 / 2.280	674 / 2.580	1.335 / 3.120	1.335 / 3.450	1.915 / 3.866	1.915 / 4.270
Diameter mm	600	600	1.259	1.259	1.800	1.800
Order Number	300.027	300.031	300.032	300.033	300.034	300.035

Please inquire with us about additional units

* Depending on the type of application

Modular Extractors DUSTMAC



Filter unit DUSTMAC P

Application Range

- » Extraction from multiple workstations in industrial manufacturing and processing
- » As a filter unit for medium pressure systems up to 15,000 Pascal

Ideal for

- Metal dust
- Welding fume
- Concrete dust
- Plastic dust
- Fibrous materials
- ... and many more



DUSTMAC F-144 in the metalworking industry

ESTA PLUS

Special Features

- » Highly efficient filter cleaning process during operation of the system
- » The modular design makes it possible to adapt the system to each specific application
- » Special design features make use of pre-separation principles
- » Supplied with cartridge or tubular bag filter

Your Benefits

- » Modular design (expandable as your production expands)
- » Adaptable to "Your" particular type of dust
- » Customer specific system configuration
- » Low operating costs due to cleanable filter media
- » Small space requirement due to compact design

Data dependent on equipment type



DUSTMAC P (with cartridge filters)



DUSTMAC S (with tubular bag filters)

Technical Data

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DUSTMAC P with cartridge filters – Complete system	23
DUSTMAC S with tubular bag filters – Complete system	24
DUSTMAC F for welding fume – Complete system	46
DUSTMAC for custom configurations	83

Custom Configurations DUSTMAC

With DUSTMAC-series modular filter units, individual system designs can be created for central multi-user extraction – for nearly any type of dust and almost any industry.

Based on the type, volume and amount of dust, an appropriate filter is used in the system housing. Even a suitable fan (such as MDV or RG) can be integrated into the system design based on specific requirements. Then a pipe system can connect the system to any number of extraction points.



Individual plant concept with DUSTMAC filter units in the shoe industry

Dust Removal

Collection and removal of the extracted dust – with three different methods depending on your application. For additional collection and removal options kindly contact us.



Mobile dust collection container



Removal through rotary valve



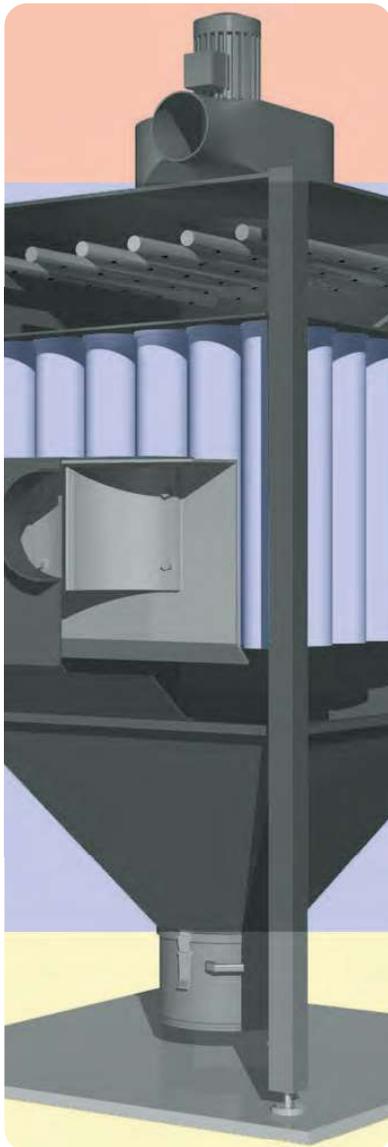
Directly into a container

Other discharge variants on request.

Cyclonic Filtration Units

The modular design of the ESTA DUSTMAC model series makes it possible to adapt these central extraction systems to the individual applications and conditions at the customer's production facilities. This guarantees that our customers receive the most suitable extraction system for their particular situation.

Our sales engineers are always available for a personal consultation at your company to determine the best possible configuration of your extraction system.



Extraction Fans

Generally there are two types of extraction fans – high and medium pressure fans. Medium pressure fans are characterized by high airflow volumes to ensure the most complete extraction of the dust or fumes to be captured.

High pressure fans produce high air velocity to capture dust or fumes at the source. Fans with an output of up to 15 kW are usually mounted on the filtration unit. Larger fans will be positioned as stand alone units next to the filtration units (see Page 78).

Filtration Unit

The filtration unit(s) is (are) the “heart” of the central extraction system. Depending on the type of dust, quantity of dust and its composition the filtration units will be equipped with different types of filters.

During and after operation the filters will automatically be cleaned with a pulse-jet cleaning system. The geometry of the filter housing is a key factor for a long filter life and for effective filter cleaning. It ensures the ventilation technologically correct airflow conditions inside the filter housing.

Dust Removal

There are several methods available to collect the material that has been filtered out. In most cases the dust will be collected in a drum that is positioned at the tapered bottom of the filtration units.

For this purpose we have drums of 50, 100 or 200 Litres capacity available. Other methods are rotary valves for continuous removal, high capacity containers, shuttle valves or pinch valves.

Modular welding smoke filter unit *WELDEX FE*



Central filter unit with extinguishing system in a welding fume extraction system



Areas of application

- » Spatial ventilation for welding-work, push-pull processes and layer ventilation
- » Welding fume extraction on hoods and extraction arms
- » Cabin extraction
- » Extraction with robotwelding and on automated production lines
- » Extraction on flame, plasma and laser cutting tables

Special features

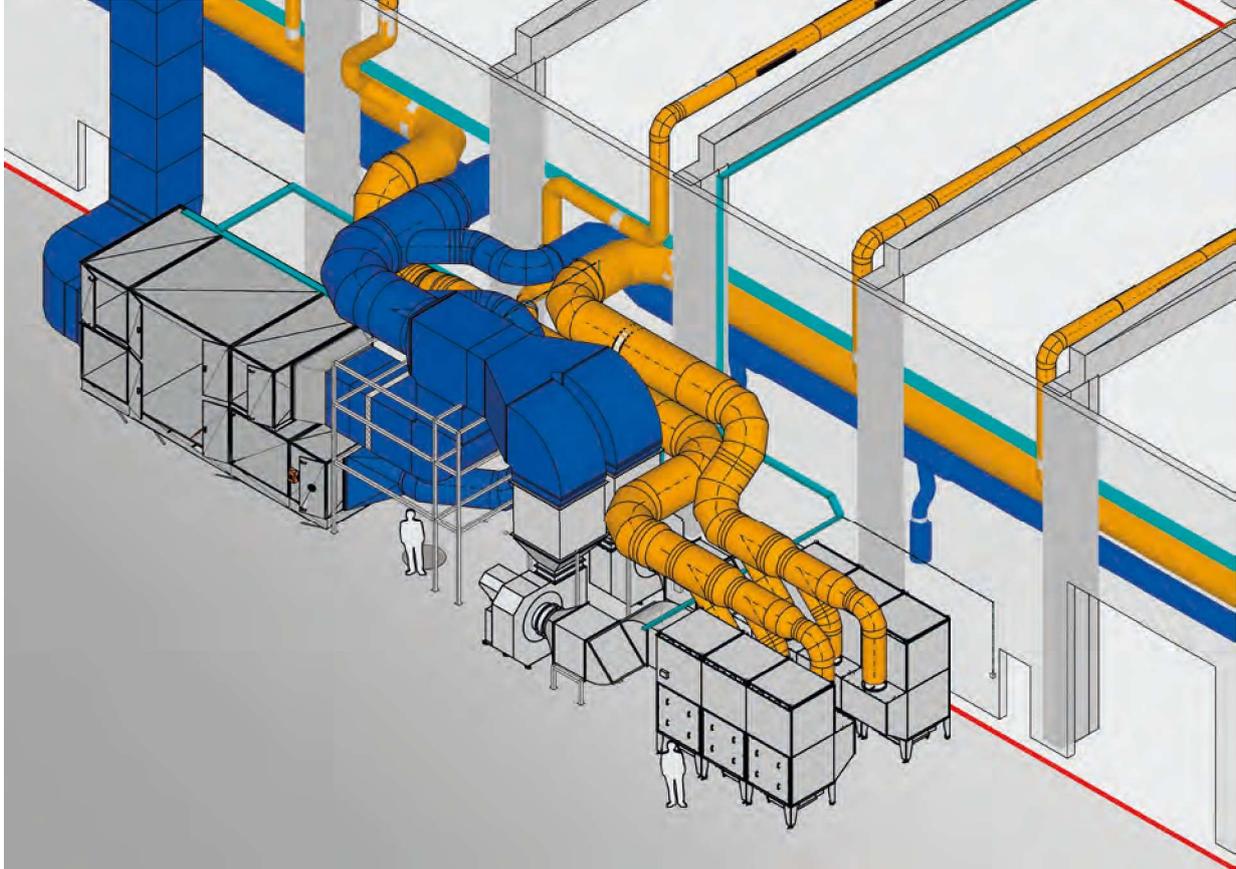
- » For welding fume extraction for air volumes up to 150,000 m³/h
- » Modular design and expandable
- » Filter materials suitable for the application
- » Pre-separator and extinguishing system to minimise fire risks
- » Can be combined with heat recovery systems

Benefits for you

- » Compact design
 - » All components are integrated in weatherproof housing
 - » **ESTA Quick-Change filter-changing system** for fast and low dust filter change
 - » Optimum accessibility of all system components
 - » Wide range of control variants including ESTA *eco*⁺ control for minimum energy consumption
- Data depending on model version

- Dust Extractors
- High Vacuum Extraction Units
- Welding Fume Filters
- Oil Mist Separators
- Carbon Filters/ Air Purifier
- Downdraft Tables
- Extraction Fans
- Extraction Arms
- Filter Towers
- Central Extraction Systems**
- Pipe Systems
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Central Extraction Systems



Two extraction systems for welding fumes with one WELDEX F450 filter unit each

Details

Modular design of WELDEX filter units



WELDEX F225 with one module



WELDEX F450 with two modules

Technical data

WELDEX filter unit		F225	F450	F675
Main filter surface	m ²	225	450	675
Main filter quantity	Unit	9	18	27
Dimensions (D/W/H)	approx. mm	2,130 × 1,510 × 2,970	2,130 × 4,150 × 2,970	2,130 × 5,600 × 2,970
Weight	approx. kg	800	1,550	2,300

Technical data per filter unit
Other model sizes on request!

Ventilation of Production Facilities

In some production areas or manufacturing processes, particle size or other production conditions make it impossible to extract fumes directly. For this, ESTA offers various concepts for hall ventilation.

Here all the air in these spaces is cleaned of smoke and dust particles to comply with applicable regulations and to create a pleasant environment in the hall.

The core of this concept is the WELDEX series. Its modular design handles any volume of air and allows combination with additional devices, such as heat exchangers,

heating and cooling registers, etc.

The ESTA FILTOWER series filter tower works as a free-standing system to clean the air in the hall without a pipe-line connection.

This allows the system to be moved anywhere within the hall, at any time, and at no cost.

Ideal for

Cleaning the hall's air of welding fumes, oil mist and airborne dusts through thermal ventilation.



WELDEX FE



FILTOWER Series



ESTA Upstream Stratification Ventilation

ESTAPLUS

Your Benefits

- » Reduction of the operating costs through energy efficient designs including heat reclamation
- » Flexibility in the work area (no changes in the pipe systems are required in the event of machine layout changes)
- » Constantly optimised fresh air quality
- » Minimal life cycle costs with ESTA filter cleaning service

ESTA Upstream Stratification Ventilation

- » Building ceiling height > 7,5 m
- » High thermal loads, welding rod consumption > 10 tons per year
- » Fresh air supply vents near the floor to generate a layer of cool air
- » Temperature control in connection with heat recovery possible
- » Low air flow rates sufficient
- » Suitable for cooling

ESTA Push Pull Mixing Ventilation

- » Building ceiling height < 7,5 m
- » Low thermal loads, welding rod consumption < 10 tons per year
- » Special long-range air jets
- » Temperature control in connection with heat recovery possible
- » Two pipe systems located opposite of each other
- » Suitable for heating and cooling

Dust Extractors

High Vacuum Extraction Units

Welding Fume Filters

Oil Mist Separators

Carbon Filters/ Air Purifier

Downdraft Tables

Extraction Fans

Extraction Arms

Filter Towers

Central Extraction Systems

Pipe Systems

About us

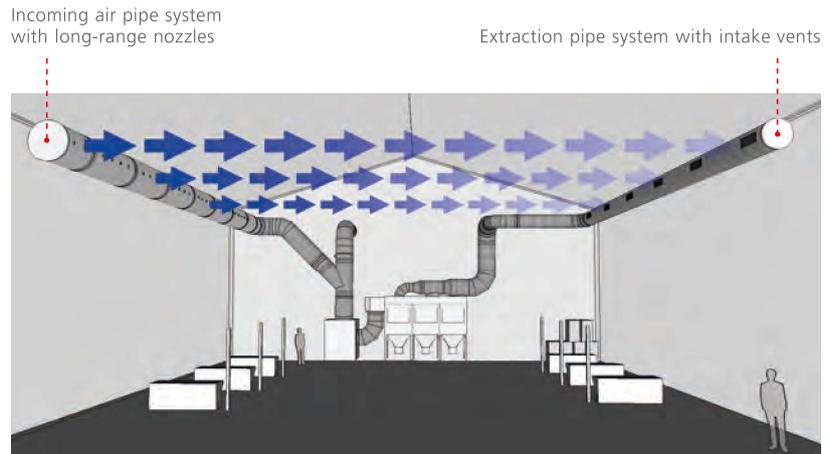
Interesting Information

Ventilation of Production Facilities

ESTA Push Pull Mixing Ventilation

Operating Principle:

- Fresh air supply and contaminated room air are mixed vigorously
- Temperature and contaminant concentration are equally distributed in the work area
- A stream of air is blown into the room from the wall on one side – horizontally to the room – and then extracted at the wall on the opposite side of the room
- The filtered air can be returned and summer /winter operation is possible through an air handling unit with optional heat reclamation, heating and cooling



Product-Video

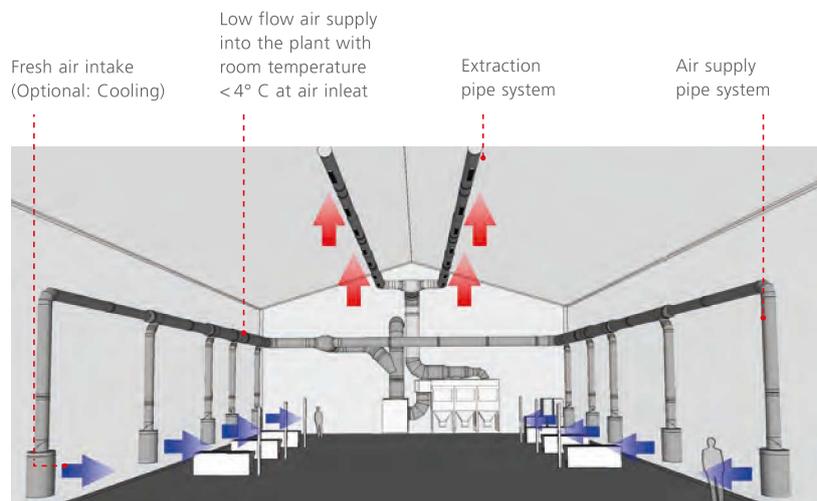
ESTA Upstream Stratification Ventilation

Operating Principle:

- The plume generated at the welding location transports heat and contaminants to the upper area of the manufacturing facility
- At the floor level of the plant the flow volume generated by the updraft is replaced by a cooler low flow air supply

- Consequently two separate layers of air are forming in the production facility – one with fresh air in the work area and one with contaminated air in the upper part of the facility

- Return of filtered air and summer/winter switchover through an air handling unit with optional heat reclamation, heating and cooling
- Fully automated control of the fresh air volume via temperature sensors



ESTA PLUS

Your Benefits

- » ESTA layout planning according to VDI/DVS guideline 6005 and TRGS regulation 528/560
- » Software supported customised consulting at the customer's premises
- » Visualisation of the ventilation system prior to the installation

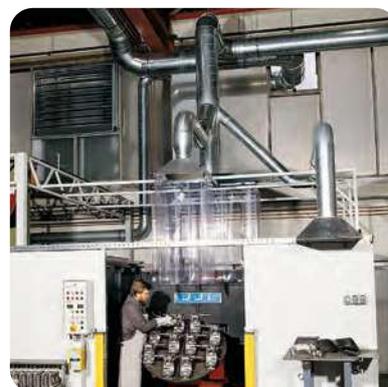
Extraction Hoods



Extraction hood with compressed air injection

Ideal for

All manufacturing processes in which dust, shavings, fumes and smoke gases to be detected and derived



Extraction at a robotic workstation

Application Examples



Slotted extraction hoods in the automotive industry



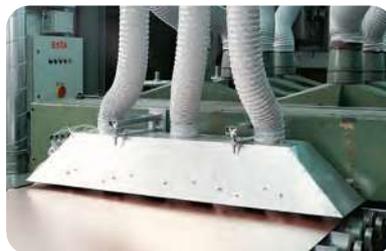
Extraction wall with perforated metal insert



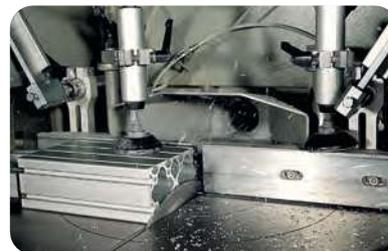
Large surface extraction hood in the concrete industry



Extraction wall on a DUSTOMAT-S



Specialized hood 120 x 30 cm



Extraction of aluminium shavings

ESTA PLUS

Special Features

- » Wide range of standard hoods
- » Individual calculation of the extraction hoods according to ventilation technologically optimised principles
- » Pipe pre-separator
- » Recommended for the best possible extraction of dust and fumes-Maßgeschneiderte Haube

Your Benefits

- » Tailor-made hoods for almost any application
- » Wear resistant and low maintenance designs

Dust Extractors

High Vacuum Extraction Units

Welding Fume Filters

Oil Mist Separators

Carbon Filters/ Air Purifier

Downdraft Tables

Extraction Fans

Extraction Arms

Filter Towers

Central Extraction Systems

Pipe Systems

About us

Interesting Information

Soundproofed extraction cabins



Standard sanding cabin

Ideal for

Machine or robot housings

Work cabins

Grinding workstations

Welding smoke/dust

... and many more

ESTA extraction cabins offer extraction and sound insulation in one. They enclose dust and smoke generating workplaces or machines and prevent the release of pollutants into adjacent work areas. Furthermore, with the appropriate extraction technology, the exposure of employees to dust or smoke can be reduced and statutory regulations can be complied with.

The cabins are suitable, among other things, for extraction during welding, grinding, cutting, polishing and for almost all materials (metal, stone, plastic, etc.) which produce particles during processing.

Application

- » Extraction of dust and smoke particles as well as sound-reduction at workplaces or machines

Special features

- » Modular design
- » Integral construction
- » Flexible setup
- » Optionally with powder-coated exterior in RAL colour
- » Optionally with viewing windows

Benefit

- » Wide range of applications
- » Noise protection and suction in one
- » No contamination of adjacent areas
- » Easy assembly

Data depending on model version

Accessories/special equipment

- » Lamella curtain, fixed
- » Lamella curtain, slidable
- » Industrial curtain
Industrial curtain, DIN 1598 (welder) Sight window made of safety glass
- » LED lighting (IP65, ATEX)



4-fold grinding cabin with rolling doors

Soundproofed extraction cabins

Basic cabin body

Basic cabin body height 2500 mm – RAL 7035

interior height 2400 mm

Dimensions L x W in metres		Side B (width) Outer dimension					Max. Number of windows side B
		2	3	4	5	6	
Side A (width) Outer dimension	2	AN000135	AN000136	AN000137	AN000138	AN000139	2
	3	AN000140	AN000141	AN000142	AN000143	AN000144	4
	4	AN000145	AN000146	AN000147	AN000148	AN000149	5
	5	AN000150	AN000151	AN000152	AN000153	AN000154	6
	6	AN000155	AN000156	AN000157	AN000158	AN000159	8
Max. Number of windows side A		2	4	5	6	8	

Basic cabin body height 3000 mm – RAL 7035

interior height 2900 mm

Dimensions L x W in metres		Side B (width) Outer dimension					Max. Number of windows side B
		2	3	4	5	6	
Side A (width) Outer dimension	2	AN000160	AN000161	AN000162	AN000163	AN000164	2
	3	AN000165	AN000166	AN000167	AN000168	AN000169	4
	4	AN000170	AN000171	AN000172	AN000173	AN000174	5
	5	AN000175	AN000176	AN000177	AN000178	AN000179	6
	6	AN000180	AN000181	AN000182	AN000183	AN000184	8
Max. Number of windows side A		2	4	5	6	8	

Accessories

Lamellae curtain

Clear/transparent, Strip width 300/2

	Art. no.
Lamellae curtain, 2700 mm high, fixed, PVC, per metre	AN000188
Lamellae curtain, 2700 mm high, sliding, PVC, per metre	AN000189
Lamellae curtain, 2200 mm high, fixed, PVC, per metre	AN000190
Lamellae curtain, 2200 mm high, sliding, PVC, per metre	AN000191

Safety glass viewing pane

	Art. no.
Viewing pane 600 mm x 800 mm, VSG 8	AN000185
Viewing pane 600 mm x 1000 mm, VSG 8	AN000186
Front pane red, DIN 1598, Protective pane for viewing window, 600 x 800 mm	AN000187

Lamellae curtain

Bronze/transparent/Welding place (green or red), Strip width 300/2

	Art. no.
Lamellae curtain, 2700 mm high, fixed, DIN 1598, per metre	AN000192
Lamellae curtain, 2700 mm high, sliding, DIN 1598, per metre	AN000193
Lamellae curtain, 2200 mm high, fixed, DIN 1598, per metre	AN000194
Lamellae curtain, 2200 mm high, sliding, DIN 1598, per metre	AN000195

Lighting

	Art. no.
Electrical connection set for lighting	AN000196
LED Damp-proof luminaire IP65	AN000197
LED Recessed light panel IP54, approx. 600 x 600 mm	AN000198
LED ATEX Lighting	AN000199

References

Holz Carwash Systems – Senden, Germany

ESTA Sales and
Distribution Partner



Dust extraction system for cleaning car interiors at car washes, filling stations and auto dealers

Central vacuum systems are gaining increasing popularity for commercial use in cleaning the interior of vehicles.

Theoretically an unlimited number of vacuum stations can be set up whereby the vacuum performance remains constant.

Central vacuum systems make much more efficient use of your property (number of possible vehicle vacuum stations) compared to solutions with individual vacuum systems.



Central Car Cleaning System for outdoor installation



Inner workings of the CENTRAL CAR CLEANING SYSTEM



Dust extraction at multiple vacuum locations



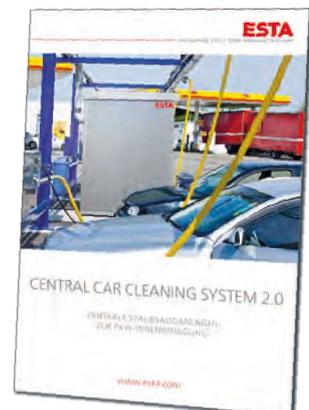
With crevice tool for easy cleaning of the interior space



The mobile dust collection container with an inserted plastic bag allows easy, dust-free disposal of extracted dirt



A rigid pipe installation connects the vacuum locations with the cyclonic filter



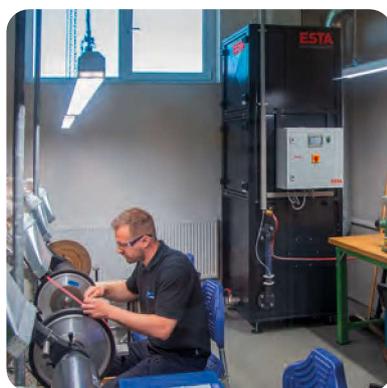
Contact us for a brochure with more detailed information.

References

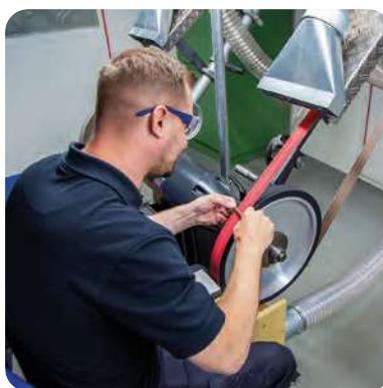
HG-Micro-Instrumente, Wurmlingen

Medical technology

Extraction of the dust produced during slag processing



DUSTOMAT Hydro wet separator in the grinding shop



Grinding the titanium parts

DUSTOMAT HYDRO

Control cabinet convenience

Ducting system for extraction at the four workplaces

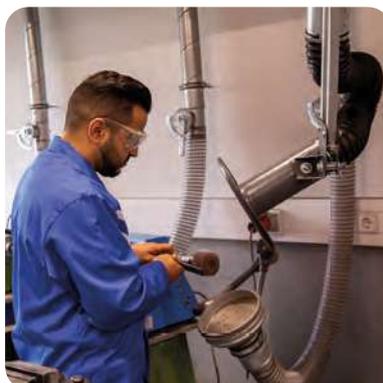
ebm-papst Mulfingen GmbH & Co. KG

Ventilation and drive technology

Extraction of aluminum dust, combustible dust, Metal dust with flying sparks during grinding processes



DUSTOMAT HYDRO ATEX



Extraction arm at the grinding workplace

Wet separator
DUSTOMAT HYDRO ATEX

1 x Extraction arm ATEX

Pipe system with butterfly valves

Central Extraction Systems

References

August Mink GmbH & Co. KG

Fiber and brush technology
Extraction of fiber dust in production

High vacuum unit
WHISPERSOG
Extraction fan RG



Infraserv Logistics

Logistic
Workplace concept for pigment dust produced during filling work

2 x Compact dust extractors
MOBEX P
4 x Downdraft tables A-Serie
4 x Extraction cabins
2 x Extraction arms



References

Dr.-Ing. Ulrich Esterer GmbH & Co. Fahrzeugaufbauten und Anlagen KG – Helsa

Vehicle and mechanical engineering

3 × FILTOWER ecotemp
5 × mobile Welding fume filters
SRF K-15



Extraction at the workplace



FILTOWER in the production hall

Hoffmann GmbH Qualitätswerkzeuge – Munich

Toolmaking

2 × DUSTOMAT 24 ATEX
Four extraction arms with hoods
Pipe system



DUSTOMAT 24 –
Extraction in robot cabin



DUSTOMAT 24
with suction arms in showroom

Dust Extractors

High Vacuum
Extraction Units

Welding Fume
Filters

Oil Mist
Separators

Carbon Filters/
Air Purifier

Downdraft
Tables

Extraction Fans

Extraction Arms

Filter Towers

Central Extraction
Systems

Pipe Systems

About us

Interesting
Information

Central Extraction Systems

Giesselmann – Bad Oeynhausen

Metalworking industry



Extraction at the workplace



MOBEX F-60 in the production hall

MOBEX F-60
with spark pre-separator
(4,500 m³/h at 3,400 Pa)

DUSTOMAT 4-10
with cyclone water pre-separator
(2,000 m³/h at 2,600 Pa)

Three extraction arms with
hoods for welding fumes

Piping system

FAIST Anlagenbau GmbH – Krumbach (Schwaben), Germany

System design

Hall ventilation system for welding fumes (ESTA Push Pull mixing ventilation)



Production hall with 24 welding workplaces



DUSTMAC Filtration unit with Extraction fan
and Supply air fan

Filtration unit DUSTMAC F-567

Extraction fan 75 kW
(45.000 m³/h bei 3.800 Pa)

Supply air fan 11 kW
(13.500 m³/h bei 1.500 Pa)

Control unit
with frequency converter

Pipe system with return air grille

References

Daimler Research Centre, Ulm

Research and Development (Automotive Industry)

Direct extraction of dust and shavings in model building applications and from different machines



Research centre, Ulm Germany



Extraction system with custom paint finish positioned outside

High vacuum extraction system with a 13 kW side channel blower and cyclonic filter FZ-1500 for general clean-up purposes and for direct extraction from different machines

Medium pressure system with 7.5 kW fan unit and cyclonic filter FZ-5000 for direct extraction of dust and shavings in model building

Laser technology Kilgenstein

Metalworking

Hall ventilation systems for resulting particulate
Welding fume wet separator for extracting aluminum dust



Two filter towers ensure clean air in the welding shop



Wet separators are installed on the four grinding booths to safely separate the partially explosive dust

2 × Filter tower FILTOWER

4 × Wet separators NA K-7000

References

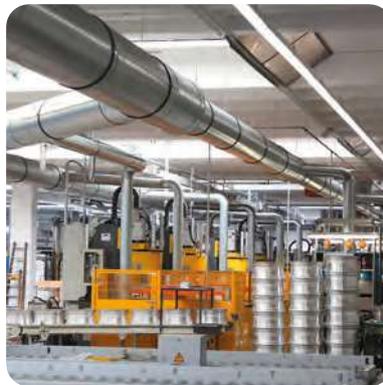
BBS – Schiltach

Automobilzulieferindustrie

Direktabsaugung an Schleif- und Bürstmaschinen sowie Handarbeitsplätzen



Absaugsystem in separatem Raum



Produktionshalle

Filtereinheit DUSTMAC F-567 mit drei Filtermodulen

Mitteldruckventilator MDV 75 kW (46.000 m³/h bei 3.900 Pa)

Schaltschrank Komfort Frequenzumrichter

3 Staubsammelbehälter mit je 50 Litern

Verzinkte Längsnahtglattrohre

PERI GmbH – Weißenhorn

Shuttering · Formwork · Engineering

Welding fumes are extracted from the air in the production hall with the extraction system attached to the roof. Hall extraction system for 23 welding workstations (ESTA upstream stratification ventilation).



Hall ventilation system on the roof of the production hall

DUSTMAC F-945 filter unit

ATEX design

Two medium-pressure fans MDV-45 kW (75.000 m³/h bei 3.500 Pa)

Heat recovery

Pipe system with return air grille

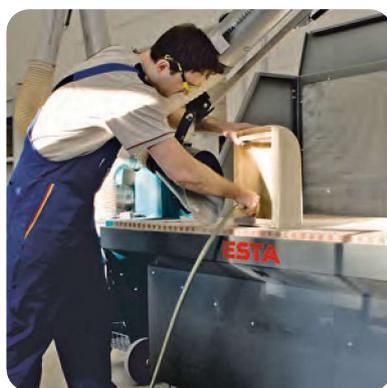
Discharge through screw conveyor

References

IVECO MAGIRUS – Ulm, Germany

Automotive Manufacturer

Extraction of plastic dust from glass fibre reinforced materials used in manufacturing automotive components



Downdraft table with wood lattice grate work surface and extraction arm



Extraction unit DUSTMAC-F-64

Filtration unit DUSTMAC F-64 (7.300 m³/h at 3.800 Pa)

Downdraft table A2080 with wood work surface

Pipe system and Extraction arm

Robert Bosch – Stuttgart, Germany

Automotive Supplier

Residual dust extraction during the cleaning of the production line



Control unit with monitoring lamps



Cyclonic filter FZ-1003 with 100Litre collection container

Cyclonic filter FZ-1003 with fill level monitoring

Side channel blower TDP-22 kW (2,100 m³/h at 27,000 Pa)

Control unit Comfort

Pipe system

Vacuum accessories

Dust Extractors

High Vacuum Extraction Units

Welding Fume Filters

Oil Mist Separators

Carbon Filters/ Air Purifier

Downdraft Tables

Extraction Fans

Extraction Arms

Filter Towers

Central Extraction Systems

Pipe Systems

About us

Interesting Information

References

SAF – Wörth am Main

Auto Body Production

Extraction of welding fumes and grinding dust from nine workstations and two welding robots



Extraction at a robotic welding station



Modular filtration unit

Filtration unit DUSTMAC-XF 432

Medium pressure fan MDV-45 kW
(22,000 m³/h at 2,800 Pa)

Pipe system
Nine extraction arms,
Total length of the pipe system:
90 m

Sunseeker – Rostock, Germany

Ship Building

Extraction of glass fibre reinforced plastic dust, in the ship building industry



Dust extraction with an application specific pipe system



Filtration unit with explosion protection

Cyclonic filter FZ-5003

Side channel blower with
Housing TDP-18.5
(2,100 m³/h at 15,000 Pa)

Control cabinet Comfort

Pipe system with 100 flapper valves

Explosion protection

References

SAF-Holland GmbH

Vehicle construction

Welding fume extraction at manual workstations and robotic systems



DUSTMAC filter units



Acoustic-protection booth

Filter unit DUSTMAC-F 567
2 x WELDEX F-150

Medium-pressure fan MDV-75 kW
2 x medium-pressure fan
MDV-15 kW

15 hoods
at robotic workstations
30 extraction arms
at welding stations

Groß Rotorblattfertigung GmbH

Wind energy sector

Extraction of GRP /CFRP dust created during the sanding of rotor blades



Mobile sanding station



DUSTMAC filter unit on sanding station

Filter unit DUSTMAC-F 144
with police filter H 13

Medium-pressure fan MDV 15 kW
ex-model in device group II, zone
22 (non-conductive dust), category
3D, temperature class T3, added
to filter unit in accordance with
explosion-protection directive
94/9/EG (Atex)

50m mobile sanding station,
soundproof, in torsion-resistant
design with static proof

Dust-free removal
with PVC bag

References

Additional References



Schwenk, Ulm, Germany



Braas, Altheim, Germany



Uhlmann, Laupheim, Germany



Thyssen Krupp Nirosta, Düsseldorf, Germany



OWB, Kisslegg, Germany



Sofragraf, Saint Ame, France

Schwenk – Ulm
Cement Industry

Braas – Altheim
Tile Manufacturing Plant

Uhlmann – Laupheim
Packaging Systems

Thyssen Krupp Nirosta – Düsseldorf
Metal Production Plant

OWB – Kisslegg
Metalworking Industry

Sofragraf – Saint Ame – Frankreich
Metalworking Industry

ZI-Jena, Jena
Metalworking Industry

Solidschuhwerk – Tuttlingen
HAIX – Mainburg
GABOR – Rosenheim
Shoe Industry

Wacker Siltronic – Burghausen
Chemical and Semiconductor Industry

EADS Deutschland – Augsburg
Aerospace Industry

Liebherr-Aerospace – Lindenberg
Aerospace Industry

Wieland Werke – Ulm
Metalworking Industry

H. C. Starck – Hermesdorf
Metalworking Industry

Daimler – Bremen
Automotive Industry

Lamilux – Rehau
Plastics Industry