

EVOTEC



Fume and Dust Extraction

FEX 1000.1

FEX



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**INNOVATIVE
EXTRACTION TECHNOLOGY**



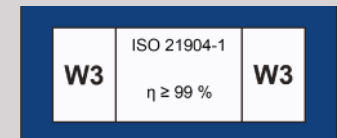
Mobile fume extraction FEX 1000.1

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- Process-adaptable extraction system for extracting fume, fumes, or airborne dust
- Powerful EC fan suitable for continuous operation (24/7), large air volume, stepless volume flow control
- Due to its low height, can also be used as an under-table device
- Modern control technology with device status display and filter notifications
- Reliable filtration through a graduated combination filter system
- Connection for on/off remote control

Versions:



Process-adaptable extraction system for extracting fume, soldering fumes, vapors, or airborne dust

High quality standards – suitable for **3-shift operation**.

Convenient filter replacement through **2-cassette system** with independently replaceable filter cassettes.

Reliable filtering of airborne particles through the use of a graduated combination filter system. The activated carbon content in the main filter reduces odors in the exhaust air. **For extraction of laser fume, welding and soldering fumes, cutting fume as well as various vapors and solvents.**

EC fans suitable for continuous operation for extracting large air volumes to capture airborne dust.

Extraction with up to two hoses or extraction arm, hose connection at the rear or on top.

Easily and conveniently adaptable to individual requirements via **intuitive control panel**.

Clear graphic display and large, multi-colored LEDs for a quick **overview of device status** or settings.

Standard version:

Initial filter equipment set consisting of:

- Storage filter empty frame with F9 insert
- HEPA filter H13/H14

Upgrade: EX protection ATEX Zone 22:

Device equipment and device parts are electrostatically dissipative for safe extraction in Zone 22. Initial filter equipment set (with grounding lug) consisting of:

- Expanded metal filter
- Storage filter empty frame with F9 insert
- HEPA filter H13/H14

Upgrade: W3-compliant version incl. expanded metal filter as spark arrestor to prevent fire hazard. Initial filter equipment set consisting of:

- Expanded metal filter
- Storage filter empty frame with F9 insert
- HEPA filter H13/H14

Upgrade:

ESD version - EX-protected with ESD powder coating and ESD rollers. Initial filter equipment set consisting of:

- Storage filter empty frame with F9 insert
- HEPA filter H13/H14

Model		FEX 1000.1
Voltage at 50/60 Hz. ***)	Volt	100 - 240
Motor power	Watt	1.100
Maximum air volume in operating condition *)		
with 3m suction hose Ø 50	m³/h	210
with 3m suction hose Ø 80	m³/h	280
with 2 x 3m suction hose Ø 50	m³/h	2 x 140
Max. negative pressure in operating condition *)	Pa	9.000
1st filter stage storage filter frame F9	m²	2,2
2nd filter stage: HEPA filter H13/H14	m²	5,6
Optional filter stage: AK adsorption filter	kg	3,0/ 6,0
Max. air volume <i>turbine output at free outlet</i>	m³/h	350
Maximum negative pressure <i>at the closed suction nozzle</i>	Pa	10.000
Sound pressure level <i>(depending on power setting)</i>	dB(A)	52 - 69
Weight	kg	22 (+12 filters)
Dimensions L x W x H	mm	400 x 430 x 709
Suction connection Ø	mm	50 (optional 80 on top)
Exhaust connection Ø	mm	80
Protection class		IP 55
Operating temperature	°C	5-40
Operating humidity (non-condensing)	%	10 - 90
Color		RAL 7035
Housing		Steel, powder-coated
Standard version	Art. No.	710-1116
Upgrade: Cyclone pre-separator	Art. No.	074-2120
Upgrade: EX-protected for ATEX Zone 22	Art. No.	054-8049
Upgrade: W3-compliant version **)	Art. No.	054-8050
Upgrade: ESD version	Art. No.	054-8051

*) **Operating data** including standard filter equipment in factory condition without further options such as Activated carbon filter, spark trap, piping, etc. The effective performance depends on the respective operating point, which is determined by power setting, pipe dimension (Ø, length), and capture at the suction point.

**) For recirculation operation, country-specific requirements must be checked.

***) Other voltages on request

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Options:

- Suction hose connection Ø 80 mm (Lindab)
- Connection option for extraction arm



Filter chamber:
Independently replaceable
filter cassettes, 2-stage
combination filter system

Double suction connection
Ø 50 mm, incl. sealing plug

Recirculation hood,
also possible with exhaust air
connection



Housing powder-coated RAL
7035, optional ESD

FEX 1000.1 with filter cyclone upgrade

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Rear-mounted cyclone pre-separator



10-liter dirt container made of plastic

The **cyclone separator upgrade (074-2120)** includes a permanently rear-mounted **highly effective cyclone pre-separator** (see functional image) including a 10-liter dirt container.

This ensures the **pre-separation of larger quantities of fine dust/particles up to 3 μm** and consequently protects the filters. **This increases the filter service life and reduces consumable costs.**

The **particle discharge (up to 97%)** takes place in the removable 10-liter dirt container, which **can be emptied or replaced easily and with minimal contamination.**

High-performance extraction technology requires optimally matched control systems. For this reason, our FEX series is equipped with a **configurable control unit** that can be **precisely adapted** to your extraction process. Operation is carried out via a **clear and intuitive control panel**.

- A test routine for the motor, buttons, LEDs and more ensures comprehensive functionality for maximum safety.
- A wide range of fault notifications and filter status messages – displayed with pictograms and error codes.
- Error logging for traceability – enabling the best possible service.
- Filter fill level displayed in real time – individually for each filter.
- Different user roles with varying permission levels and individual passwords.
- Real-time fill level display, individually adjustable to your conveyed material – for maximum accuracy.
- Individually adjustable run-on time to ensure the highest possible extraction rate.
- Alarm configuration according to the relevance within your extraction process.

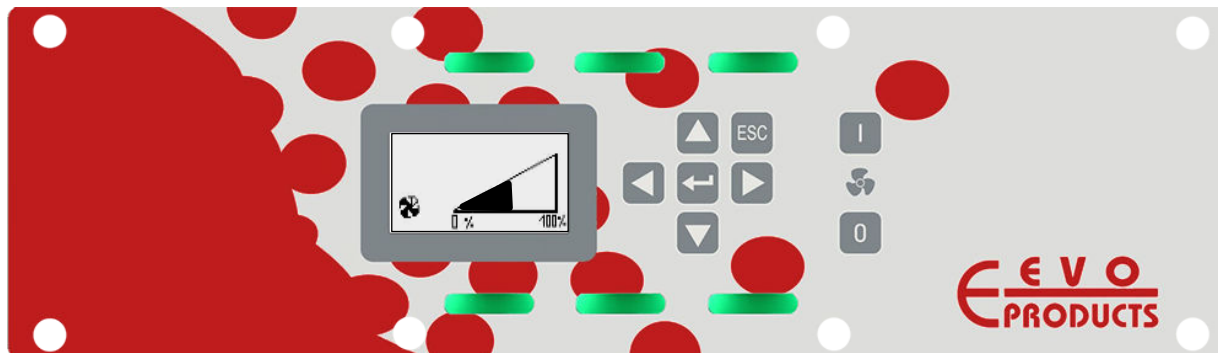
Connection for remote ON/OFF control (remote control).

Connection to external controllers or devices:
8-pin connector socket enabling remote ON/OFF switching. Operating status and fault signals can be transmitted either potential-free or with 24 V.

The matching mating connector is available as an accessory.

Upgrade (072-0618): Gas- and Particle Sensor

- Detects filter breakthrough and can initiate immediate shut-down if required.
- Sensitivity configurable in the user menu (sensor service life: 1 year).
- Test function to ensure reliable functionality.



[Learn more](#) 

Replacement filter

HEPA and adsorption filters consist of a sturdy MDF box with a seal and are fully incinerable. Due to the separate design, they can be combined as needed for the application and disposed of separately depending on the load.

As a storage filter, an empty frame can be equipped with suitable filter inserts as required. For W3 version, the use of an expanded metal filter is necessary. (In combination with storage filter empty frame + filter insert + expanded metal filter)

Combination options:

All cassettes with a height of 146 mm can be combined with each other.

Suspended matter filter H13/H14 cassette 5.6 m² filter area, height 146 mm with gasket
Art. No. 074-20064

Adsorption filter activated carbon cassette approx. 6 kg AC, height 146 mm with gasket
Art. No. 074-20063

Filter change kit for low-contamination disposal: cover cardboard for filter, disposal bag, disposable gloves, dust mask Art. No. 072-0632



Standard version:
Storage filter empty frame with F9 filter Free internal height = 75 mm
Total height = 146 mm
Art. No. 074-20176

F9 filter, 2.2 m²

Dissipative version: storage filter empty frame with F9 filter and expanded metal filter
Free internal height = 30 mm
Total height = 146 mm
Art. No. 074-20177

Expanded metal filter

F9 filter, 2.2 m²

Suspended matter filter H13/H14
2.8 m² filter area

Adsorption filter activated carbon
approx. 3 kg AC

Combination filter cassette H13/H14 and AC height = 146 mm with gasket
Art. No. 074-20087-02

Suitable inserts for empty frames:

Expanded metal filter
Height 15 mm - 074-20058

G4 fleece mat
Height 14 mm - 074-20082

G4-Z-Line 0.3 m² - Cardboard
frame height 48 mm - 074-20083

G4-Z-Line 0.6 m² - Cardboard
frame height 96 mm - 074-20059

M5 filter 0.8 m² - Cardboard frame
height 48 mm - 074-20084

F9 filter, 2.2 m² - plastic profile,
Height 48 mm - 074-20085

Filter technology

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Two independently replaceable cassette filters
MDF frame, completely incinerable

Filter stage 1, storage filter: F9 insert made of synthetic pleat and glass fiber fleece,
Filter area 2.2 m²

In the EX upgrade:

Expanded metal filter for providing dissipation capability, storage filter empty frame with F9 insert and expanded metal filter, equipped with grounding wire for use in ATEX Zone 22.
Optionally, the storage filter can be supplemented with replaceable exchange inserts in various filter qualities.

Filter stage 2, suspended matter filter: HEPA H13/14, filter area 5.6 m²

Alternative filter stage 2, adsorption filter: 6 kg activated carbon

In the W3 upgrade:

Including spark protection mesh to prevent fire hazard

The filters used comply at least with the dust class specified on the outside of the device. **This must be observed when changing the filter.**

User-friendly, low-contamination filter change. The cover cardboard and insert cardboard supplied with the replacement filter prevent contamination inside the device.

For easy filter replacement, a replacement kit consisting of: filter cover cardboard, disposal bag, dust mask, and disposable gloves is available separately



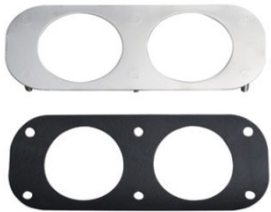
[Filter change as video](#)

Smooth lever mechanism for lowering the filter cassettes - then easy removal via grip groove and rail system



Accessories & options

Hoses and connections FEX

	Suction hose PUR black antistatic volume and surface resistance < 10⁹ ohms per running meter Ø 50 mm 072-10007 End sleeve electrically conductive for PUR suction hose, 1 piece Ø 50 mm 072-10025 
	Suction hose PP for W3 version per running meter (not suitable for EX) Ø 50 mm 072-10003 End sleeve for PP suction hose, 1 piece Ø 50 mm 072-10001
	Secondary suction connection kit Cover plate with 2 holes of Ø 50 mm each, gasket, sealing plug, for connecting additional suction hoses 2 x Ø 50 mm 072-0607
	Sealing plug for sealing unused suction openings Ø 50 mm 072-0609

Hoses and connections FEX

	Adapter for suction hose connection For mounting on the housing cover, incl. hose clamp (Lindab) Ø 80 mm 072-0656 
	Exhaust or extraction hose PUR black antistatic Can be used as exhaust or extraction hose, volume and surface resistance < 10⁹ ohms per running meter Ø 80 mm 072-10011 Ø 100 mm 072-10035 
	Exhaust hood with exhaust hose connection Exhaust device cover with connection for exhaust hose (Lindab) Ø 80 mm 072-0655 
	Wire clamps individually For extraction or exhaust hoses, galvanized steel Ø 50 mm 054-10090 Ø 80 mm 054-10091 Ø 100 mm 054-10092 

Accessories & options

Options FEX	
	Spark trap with metal mesh insert prevents the intake of sparks. For integration into pipe system or suction hose. Ø 50 mm 072-0626 Ø 80 mm 072-0628 Matching metal mesh insert for Ø 50 mm 072-0626-01 Ø 80 mm 072-0628-01
	Holder for spark trap included in delivery. For variable mounting of the spark trap at any angle on supports.
	Expanded metal filter as spark arrestor to prevent fire hazard, suitable for storage filter Piece 074-20058
	Storage filter empty frame with bar for inserts Free internal height = 125 mm Total height = 146 mm Piece 074-20065

Options FEX	
	Triangular socket key for front door Piece 074-20016
	Filter cyclone upgrade FEX 1000.1 Installed at the rear, for pre-separation of larger amounts of fine dust. 10-liter dirt container with cyclone made of ESD plastic. Upgrade 074-2120
	Replacement container 10-liter replacement container for the filter cyclone upgrade piece 074-20160
	Power connection cable with angled cold appliance plug, 5 meters with EU-Schuko plug 072-0343 with open end 072-0130

Accessories and opti-

Options FEX	
	Counter plug for 8-pin socket for connection to external controllers or devices for remote control, without cable Piece 072-0621
	Gas and particle sensor as a supporting monitoring unit for damaged filters or saturated activated carbon. Suitable for gases: carbon monoxide, ammonia, sulfur dioxide, alcohol, gasoline. Attention: The unit must be ordered together with the machine. Sensor lifespan: 1 year Board unit 072-0618
	Test aerosol Test spray for functional testing of gas and particle sensor Can 072-0625
	Protective coating in the upper housing area, recommended for the extraction of acid-containing vapors Attention: Must be ordered together with the machine FEX 1000.1 072-0619-01 FEX 3000/ .1/ .2/ VA 072-0619-02 FEX 5000/ PRO 072-0619-03

Extraction arms

Extraction arms enable **point extraction** directly at the source. Thanks to **self-supporting construction** with three stable joints, easy to handle and easy to position.

Standard version: Aluminum with polypropylene joints
ESD version: for ESD areas (electrostatic discharge, certified according to IEC 61340-5-1).
 Ideal for use in laboratories, electronics manufacturing, pharmaceutical industry, etc.

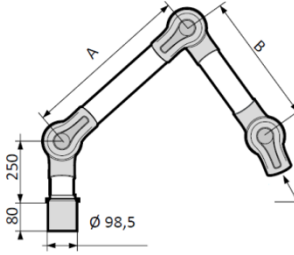
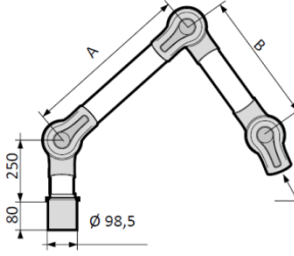
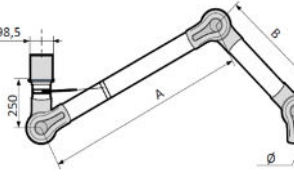
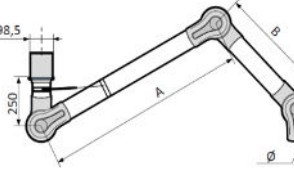
+ Energy-saving + Low noise + Low pressure loss

	Extraction arm for table mounting Including bracket for plate feed-through Illustration: Standard version Ø 50 mm – Range 1,300 mm Option: hood tube and flat hood
	Extraction arm for ceiling or wall mounting without bracket Illustration: ESD/ATEX version Ø 50 mm – Range 1,300 mm Option: hood tube and flat hood Option: small wall bracket

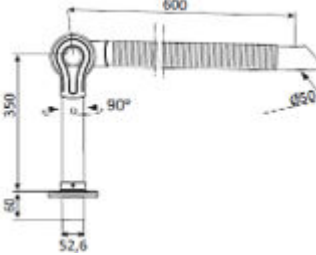
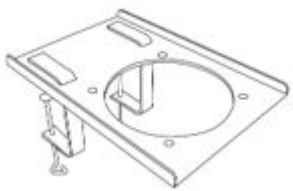
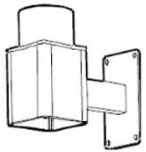
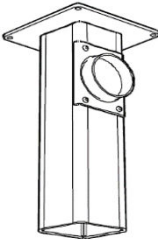
Accessories & options

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Extraction arms and brackets

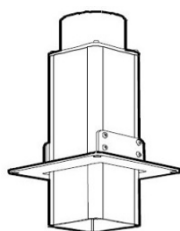
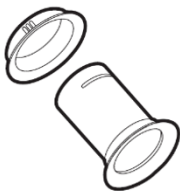
	Extraction arm <u>Standard</u> for table mounting Including bracket for plate feed-through Ø 50 mm Range 1,300 mm 072-0400 Range 1,500 mm 072-0401 Ø 75 mm Range 1,300 mm 072-0402 Range 1,500 mm 072-0403
	Extraction arm <u>ESD</u> for table mounting Including bracket for plate feed-through Ø 50 mm Range 1,300 mm 072-0400-ESD Range 1,500 mm 072-0401-ESD Ø 75 mm Range 1,300 mm 072-0402-ESD Range 1,500 mm 072-0403-ESD
	Extraction arm <u>Standard</u> for ceiling or wall mounting, without bracket Ø 50 mm Range 1,300 mm 072-0404 Range 1,500 mm 072-0405 Ø 75 mm Range 1,300 mm 072-0406 Range 1,500 mm 072-0407
	Extraction arm <u>ESD</u>, for ceiling or wall mounting, without bracket Ø 50 mm Range 1,300 mm 072-0404-ESD Range 1,500 mm 072-0405-ESD Ø 75 mm Range 1,300 mm 072-0406-ESD Range 1,500 mm 072-0407-ESD

Extraction arms and brackets

	Flexible extraction arm <u>ESD</u> for table mounting Including bracket for plate feed-through Ø 50 mm Range 600 mm 072-0400-ESD
	Flexible table bracket Flexible holder for mounting on table tops or shelves. Supplied complete with two screw clamps. Suitable for 072-0400-ESD: 072-0409-ESD Universal for Ø 50 mm and Ø 75 mm standard 072-0428 ESD 072-428-ESD
	Wall bracket Universal holder/bracket for extraction arm for wall mounting. Suitable for Ø 50 mm and Ø 75 mm Standard 072-0427 ESD 072-0427-ESD
	Ceiling bracket Bracket also serves as an exhaust duct. Universally suitable for Ø 50 mm and Ø 75 mm Standard, length 250 mm 072-0418 ESD, length 250 mm 072-0418-ESD Standard, length 1,000 mm 072-0421 ESD, length 1,000 mm 072-0421-ESD → Further versions/lengths on request

Accessories & options

Hoods and nozzles	
	Flat hood 300 x 200 mm Especially suitable for gases and vapors. High extraction efficiency in a vertical position to the table surface, including hood pipe
	Standard Ø 50 mm 072-0414 ESD Ø 50 mm 072-0414-ESD Standard Ø 75 mm 072-0415 ESD Ø 75 mm 072-0415-ESD
	Suction tip, length 300 mm For smaller, concentrated pollutant sources. Overhang of the suction tip for increased extraction efficiency
	Standard Ø 50 mm 072-0410 ESD Ø 50 mm 072-0410-ESD Standard Ø 75 mm 072-0411 ESD Ø 75 mm 072-0411-ESD
	Flexible suction tip, length 600 mm, ESD High efficiency combined with high flexibility.
	ESD Ø 50 mm 072-0412 ESD Ø 75 mm 072-0413
	Round hood Metal hood Ø 250 mm, including hood pipe
	Standard Ø 50 mm 072-0432 ESD Ø 50 mm 072-0432-ESD Standard Ø 75 mm 072-0433 ESD Ø 75 mm 072-0433-ESD

Extraction arm accessories	
	Ceiling bracket, telescopic up to a length of 1,000 mm Bracket also serves as an exhaust duct. Universally suitable for Ø 50 mm and Ø 75 mm
	Standard 072-0426 ESD 072-0426-ESD
	Straight hood pipe Spare part for hood, but also suitable as a straight inlet nozzle
	Standard Ø 50 mm 072-0429 ESD Ø 50 mm 072-0429-ESD Standard Ø 75 mm 072-0430 ESD Ø 75 mm 072-0430-ESD
	Reducer Material PP
	Standard Ø 100-50 mm 072-0416 ESD Ø 100-50 mm 072-0416-ESD Standard Ø 100-75 mm 072-0417 ESD Ø 100-75 mm 072-0417-ESD
	Protective grid For installation in Ø 75 mm joint
	Standard Ø 75 mm 072-0431 ESD Ø 75 mm 072-0431-ESD