

EVOTEC

Central Extraction System EP 2830-28110



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**INNOVATIVE
EXTRACTION TECHNOLOGY**



Central extraction system EP 2830-28110

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EP 2855

- Strong suction power suitable for pipe systems with multiple openings for connection
- Automatic volume flow- Control (PID)
- Remote on/off possible
- Practical handheld
- Full safety equipment
- Fill level monitoring dirt container

Versions:



Powerful stationary extraction system with high air volume for capturing and filtering dry and health-hazardous dusts

Optimal for extracting free-flowing, dry dusts and fumes during welding, grinding, polishing, cutting metals or plastics, or at transfer stations.

High quality standards – **maintenance-free energy-efficient IE3 medium-pressure turbine** suitable for 3-shift operation.

Optimal for extracting large air volumes to capture airborne dusts – **e.g. from laser cutting.**

Convenient lowering of the dust container for easy disposal of the collected material.

Modern cartridge filter system: durable polyester filters with large filter area in **dust class M.**

Dust class H available as an upgrade.

On the control side, including monitoring and display of filter status.

Automatic time-controlled cleaning of the cartridge filters by compressed air (external compressed air connection required).

Integrated impact separator for pre-separation of coarse collected material.

Configure the extraction system according to your requirements:

Upgrade EX protection: Device completely grounded as a preventive safety measure for safe use according to ATEX in Zone 22.

Optional further safety measures, e.g. relief valve or bursting disc available on request.

Upgrade ESD version

- completely grounded
- ESD powder coating
- ESD feet/casters

Energy-efficient and customer-process-adaptable control:

Speed control

The system's output is set to a fixed speed (Hz display).

or

Suction pressure control (PID)

Sensors in the system determine the required air volume and the frequency converter automatically regulates to the appropriate negative pressure (mbar display).



EP 28110



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Technical data



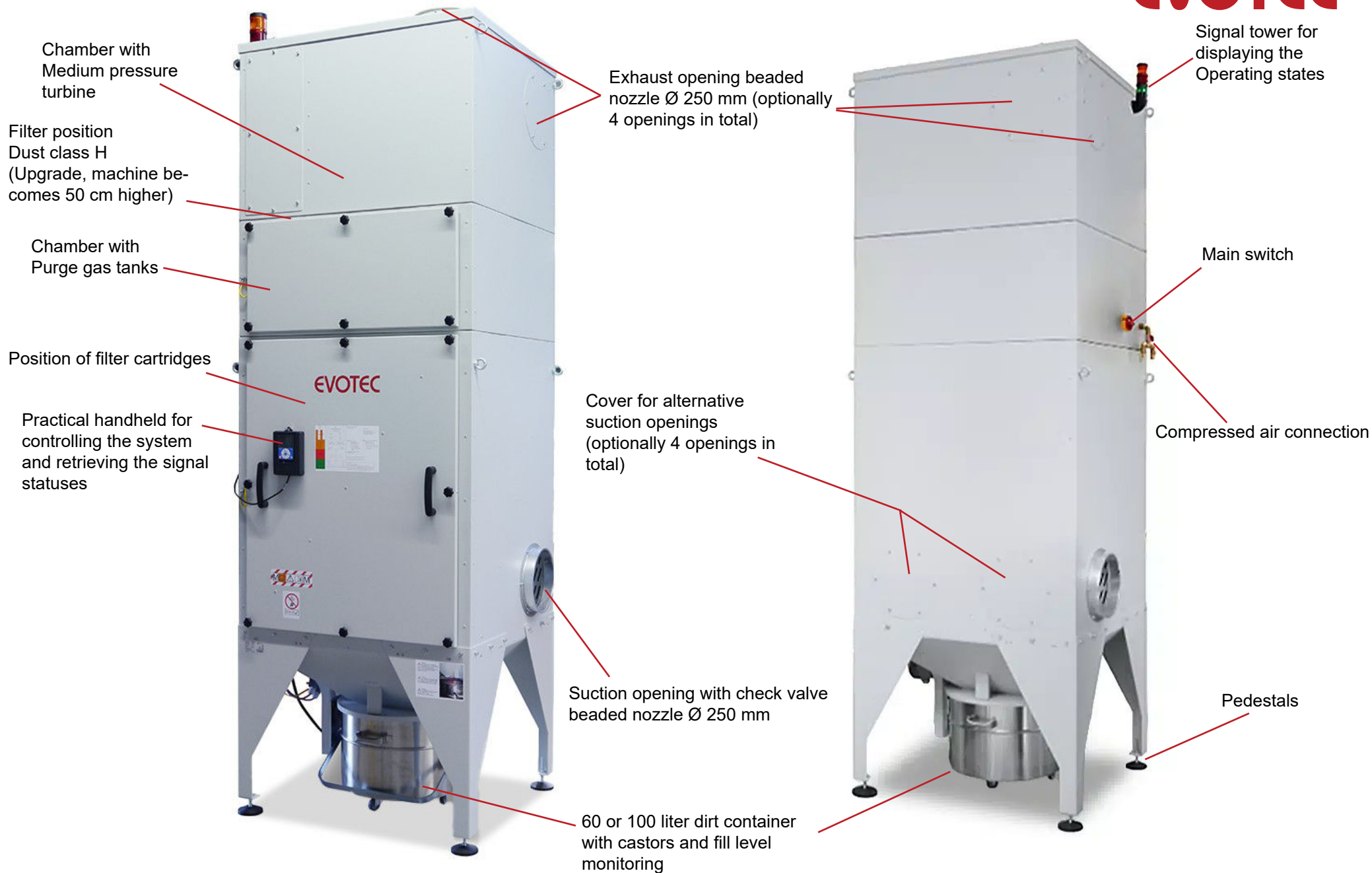
Model		EP 2830-40	EP 2830-64	EP 2855	EP 2875	EP 28110
Voltage at 50/60 Hz.	Volt	400				
Motor power	Watt	3.000		5.500	7.500	11.000
Motor rated current max.	Amp	5.3		10.4	13.4	19.3
Maximum air volume turbine output at free outlet	m³/h	3.830		6.200	7.200	9.000
Maximum vacuum at closed suction nozzle	Pa	3.900		3.900	4.500	6.000
Maximum air volume in operating condition *)	m³/h	3.300	3.500	5.500	6.300	7.900
Maximum negative pressure in operating condition *)	Pa	3.800		4.200	5.000	6.000
Sound pressure level (depending on power setting)	dB(A)	68		70	72	74
Purge gas tank	l	2 x 10				
Filter area dust class "M"	m²	4 x 10 = 40	4 x 16 = 64			4 x 19 = 76
Dirt container	l	60 (optional 100)				
Weight**)	kg	480	585	520	540	600
Dimensions L x W x H**)	mm	980 x 1020 x 2850	980 x 1020 x 3250			1420 x 1020 x 3600
Suction connection Ø	mm	250 (position and number selectable)				400
Exhaust air connection Ø	mm	250 (position and number selectable)				300
Protection class		IP 54 (when exhaust air is connected)				
Operating temperature	°C	5 - 35				
Operating humidity (non-condensing)	%	10 - 70				
Standard version	Art. No.	251-4220	251-4221	251-4240	251-4250	251-4261
Upgrade EX protection	Art. No.	054-8042				
Upgrade ESD version	Art. No.	054-8044				
Upgrade 100-l dirt container	Art. No.	053-1095				
Upgrade split version	Art. No.	054-7313				-
Upgrade dust class "H" 20 m²	Art. No.	054-7330			-	-
Upgrade activated carbon module	Art. No.	054-7320				

*) **Operating data** including standard filter equipment in factory condition without additional 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 detection at the suction point.

**) Based on the standard version and vary depending on the equipment configuration.

Central extraction system EP 2830-2875

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Central extraction system EP 28110

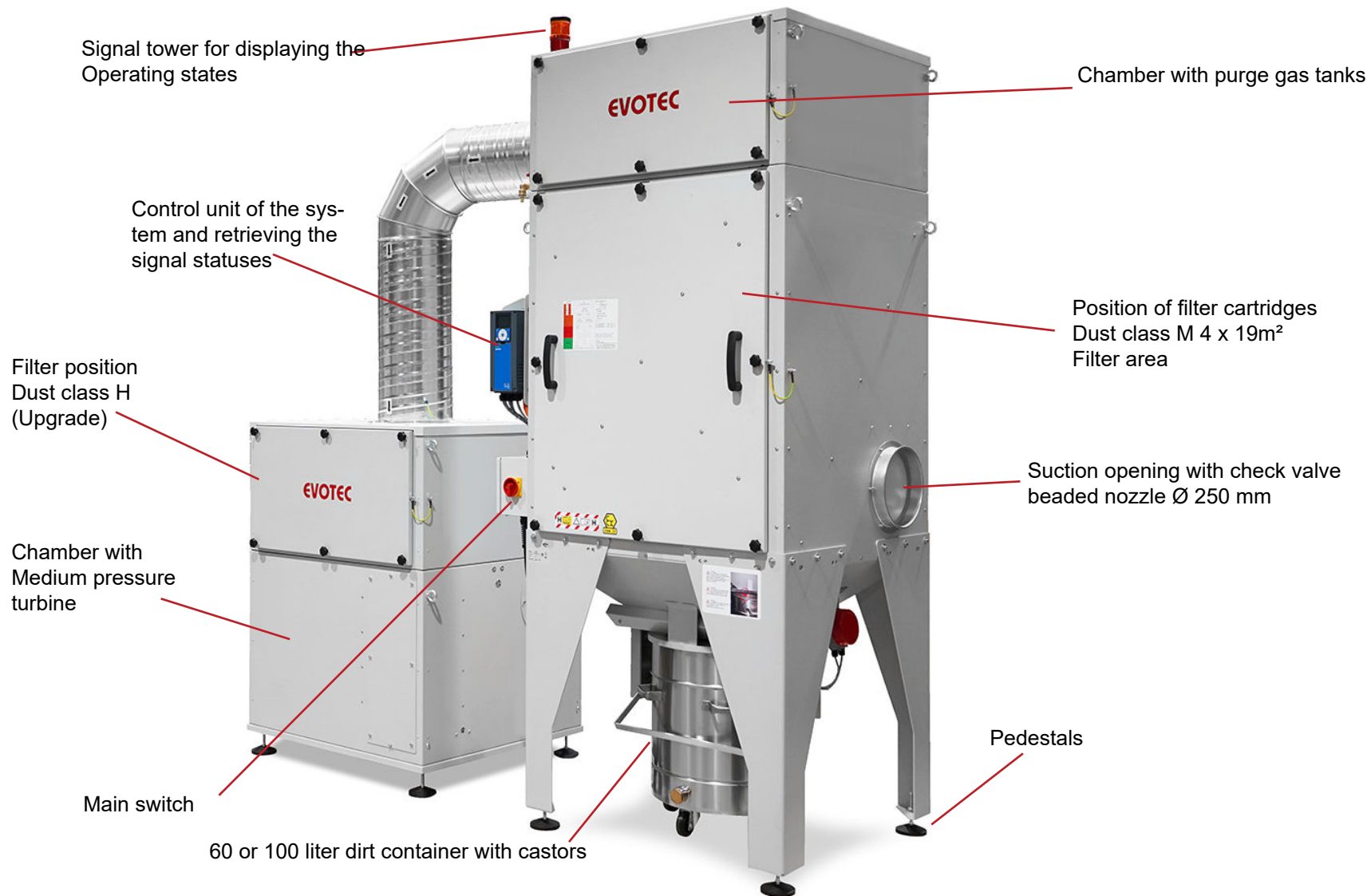
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Upgrade split version EP 2830-2875

Recommended for H-upgrade or insufficient ceiling height

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Central extraction system EP 2830-28110

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Control technology:

Modern control technology with industry-standard standards facilitates the adaptation of the extraction system to customer-side peripherals:

- **Automatic suction pressure control (PID)**

Sensors in the system determine the required air volume and the frequency converter automatically and energy-efficiently regulates to the preset negative pressure (mbar display)

or

- **Speed control**

The system's output is set to a fixed speed (Hz display).
Suction power continuously adjustable during operation
Automatic time-controlled filter cleaning (initial and operational cleaning as well as post-cleaning)

Options:

- Signal interfaces for operating message and filter message
- Remote on/off
- System control via practical handheld
- Signal tower and display with status messages
- Monitoring of: maximum negative pressure,
- Maximum differential pressure (filter load)
- Control of cartridge filter cleaning
- Service hour counter (including maintenance notice)



Central extraction system EP 2830-28110

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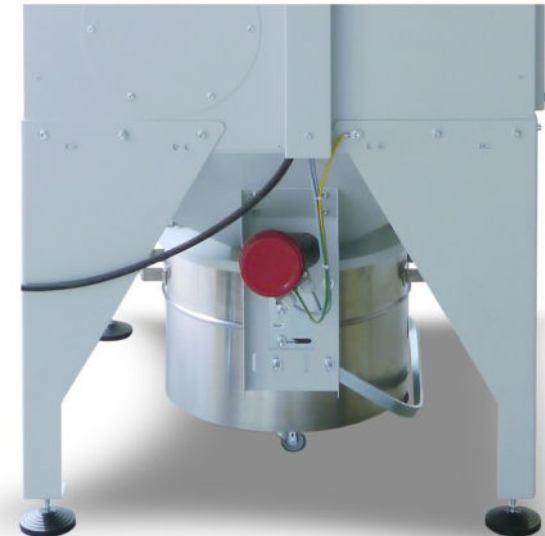
Disposal:

- V2A stainless steel dirt container 60 liter volume
- **Upgrade:** 100 liter volume dirt container
- Dirt container with swivel castors
- Dirt container can be lowered by lever for easy disposal
- Plastic disposal bags for low-contamination disposal also available in ESD quality
- Paddle switch for fill level monitoring in the dirt container

Suitable disposal bags:

Art. No. 235-1021 (60 liters)

Art. No. 235-1031 (100 liters)



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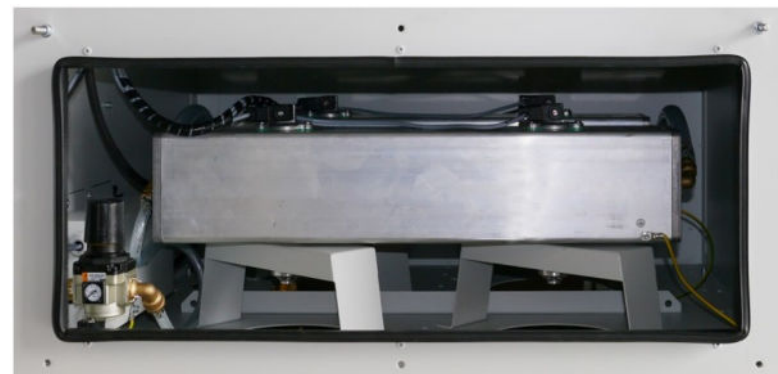
Filter technology:

- Four cartridge filters **dust class M** according to DIN EN 60335-2-69
- Filter area: $4 \times 10 \text{ m}^2 = 40 \text{ m}^2$ (Art. No. 054-20189) or $4 \times 16 \text{ m}^2 = 64 \text{ m}^2$ (Art. No. 054-20153)
- Pre-coating dosing unit **optional** Art. No. 054-7502 pretreatment for filter protection or inertization of reactive dusts
- User-friendly filter change
- For Zone 22 – explosion protection by grounding lugs

Filter cleaning technology:

- Automatic periodic compressed air filter cleaning, alternating intervals, **external compressed air required** (compressed air network performance requirement: 5 to 8 bar) Maximum operating pressure 6 bar, purge gas tanks 2 x 10 liters
- Monitoring of: → maximum negative pressure → maximum differential pressure (filter load)

When used in ATEX Zone 22, no ignition sources are permitted to be sucked in.



Accessories & options

Filters and options EP 2830 - 28110

	Filter cartridge – Dust class M Polyester fleece aluminum-coated, cylindrical Length: 600 mm, electrically conductive, Ø 328 mm for fastening on the raw gas side with tension anchor L 600 mm/ 10 m² 054-20189 L 1000 mm/ 16 m² 054-20153 L 1200 mm/ 19 m² 054-20196
	PTFE filter cartridge, dust class M Polyester fleece with PTFE membrane, cylindrical Length: 600 mm, electrically conductive, Ø 328 mm for fastening on the raw gas side with tension anchor L 600 mm/ 10 m² 054-20190 L 1000 mm/ 16 m² 054-20187 L 1200 mm/ 19 m² 054-20197
	HEPA filter cassette H13 in MDF frame, dust class H13 610 x 610x 292 mm 074-20114
	Upgrade activated carbon for adsorption of odors, additional housing with facility for the activated carbon module usable up to 3.0 kW 054-7320

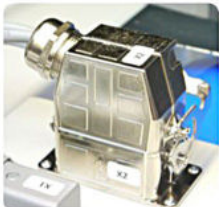
Disposal and options EP 2830 - 28110

	Plastic disposal bags, antistatic ESD for dust-free disposal of dusts of dust classes M and H. Extremely robust and “nail-test” approved. Perfect fit due to round-bottom design – no bypass required! PU = 10 pieces Suitable for: 15-l container 235-1070 25/35-l container 235-1011 60-l container 235-1021 100-l container 235-1031
	Replacement or exchange container with castors, Ø 500 enables simple and fast disposal outside the operating location 60 liters 054-3210 100 liters 054-3220 Matching lid with handle Ø 500 mm 054-20090
	Vibrating motor for filter cleaning Supports cartridge filter cleaning through addition: mechanical vibration, ideal for critical dusts that change their state of aggregation (including additional control card) 054-8047

Accessories & options

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Control technology EP 2830 - 28110

	Extension electrical box is required if the relay outputs supplied as standard with the frequency converter are not sufficient, e.g. when adding options such as PreCoat dosing unit and/or potential-free remote signaling (operation, fault, maintenance) and/or additional sensors, etc. 054-0084
	10-pin plug connection Additional detachable plug connection as communication interface 053-0067
	16-pin plug connection Additional detachable plug connection as communication interface 053-0085
	Remote ON/OFF via radio With handheld transmitter and receiver, works up to 350 m range. If not in combination with FC, a switch box is required. Without switch box 054-6933 With switch box 054-6932 Additional handheld transmitter 054-60322

Options EP 2830 - 28110

	PreCoat dosing unit Doses a filter aid into the extraction unit in defined cycles. The filters are coated with a "sacrificial layer" and thus protected from, for example, sticky deposits, which otherwise cannot be removed by the filters can be cleaned. The filter service life is extended and the filtration result improved. <i>Alternatively also suitable as an additive to reduce the reactivity of complex dusts is suitable.</i> Including fill level monitoring for PreCoat container Sensor monitors the fill level of the waste container. The evaluation is carried out via the PLC. Processing of the signals according to customer agreement. Pneumatically controlled dosing unit including 20 kg container with ready-to-use EVOMIN precoat powder 363 x 363 x 990 mm 054-7502
	Precoat EVOMIN replacement container Ready-to-use filled replacement container for Precoat dosing device, contents 20 kg 054-7501

Accessories & options



Connection options EP 2830 - 28110

	Spark trap with metal knit insert prevents the suction of sparks. For integration into pipe system. Easy handling thanks to quick-release clamps. (Fig. shows version in 315 mm) Ø connection: <table> <tr> <td>Ø 150 mm</td><td>072-0630</td></tr> <tr> <td>Ø 200 mm</td><td>072-0638</td></tr> <tr> <td>Ø 250 mm</td><td>072-0639</td></tr> <tr> <td>Ø 315 mm</td><td>072-0643</td></tr> </table>	Ø 150 mm	072-0630	Ø 200 mm	072-0638	Ø 250 mm	072-0639	Ø 315 mm	072-0643
Ø 150 mm	072-0630								
Ø 200 mm	072-0638								
Ø 250 mm	072-0639								
Ø 315 mm	072-0643								
	Matching metal knit insert for spark traps Running meter 072-10032 Pre-wound: <table> <tr> <td>Ø 150 mm</td><td>072-0630-01</td></tr> <tr> <td>Ø 200 mm</td><td>072-0638-01</td></tr> <tr> <td>Ø 250 mm</td><td>072-0639-01</td></tr> <tr> <td>Ø 315 mm</td><td>072-0643-01</td></tr> </table>	Ø 150 mm	072-0630-01	Ø 200 mm	072-0638-01	Ø 250 mm	072-0639-01	Ø 315 mm	072-0643-01
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	Spark trap (up to approx. 1200 m³/h air volume) prevents the suction of sparks into the vacuum. The sparks are deflected by the air deflection against the copper plates and are extinguished. Through the removable inspection plate, the spark trap can be cleaned. <table> <tr> <td>Ø 80 mm</td><td>053-4000</td></tr> <tr> <td>Ø 150 mm</td><td>053-4001</td></tr> </table>	Ø 80 mm	053-4000	Ø 150 mm	053-4001				
Ø 80 mm	053-4000								
Ø 150 mm	053-4001								
	Control of exhaust air shut-off damper Suitable for shut-off dampers in the customer-side exhaust air. Only for actuators with spring return (e.g. Belimo damper) On request								

Hoses EP 2830 - 28110

	Exhaust air or extraction hose PUR Can be used as an exhaust air, extraction, or connecting hose, chemical-resistant and suitable for food contact, electrostatically dissipative when the spiral is grounded. (Illustration: optionally available with wire clamp and hose connector) Per meter: <table> <tr> <td>Ø 80 mm</td><td>052-0323</td></tr> <tr> <td>Ø 100 mm</td><td>052-0325</td></tr> <tr> <td>Ø 120 mm</td><td>052-0328</td></tr> <tr> <td>Ø 125 mm</td><td>052-0332</td></tr> <tr> <td>Ø 150 mm</td><td>052-0326</td></tr> <tr> <td>Ø 160 mm</td><td>052-0329</td></tr> <tr> <td>Ø 200 mm</td><td>052-0330</td></tr> </table>	Ø 80 mm	052-0323	Ø 100 mm	052-0325	Ø 120 mm	052-0328	Ø 125 mm	052-0332	Ø 150 mm	052-0326	Ø 160 mm	052-0329	Ø 200 mm	052-0330
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	Exhaust air or extraction hose, PUR antistatic black Can be used as an exhaust air, extraction, or connection hose, throughput and surface resistance < 109 ohms Per meter: <table> <tr> <td>Ø 80 mm</td><td>072-10011</td></tr> <tr> <td>Ø 100 mm</td><td>072-10035</td></tr> <tr> <td>Ø 120 mm</td><td>072-10036</td></tr> <tr> <td>Ø 125 mm</td><td>072-10039</td></tr> <tr> <td>Ø 150 mm</td><td>072-10037</td></tr> <tr> <td>Ø 160 mm</td><td>072-10040</td></tr> <tr> <td>Ø 200 mm</td><td>072-10038</td></tr> </table>	Ø 80 mm	072-10011	Ø 100 mm	072-10035	Ø 120 mm	072-10036	Ø 125 mm	072-10039	Ø 150 mm	072-10037	Ø 160 mm	072-10040	Ø 200 mm	072-10038
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