

EVOTEC



Safety vacuums for use in additive manufacturing



**INNOVATIVE
EXTRACTION
TECHNOLOGY**



Additive Manufacturing

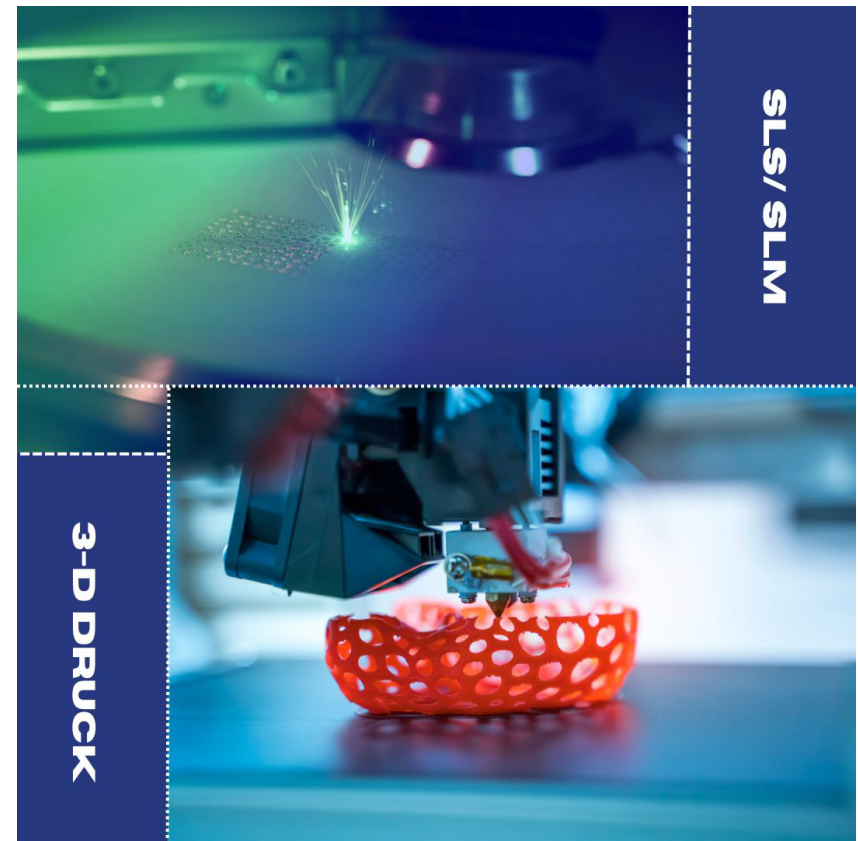
Depending on the process, different materials are used in additive manufacturing: **plastics**, such as polyamides, polystyrenes or polypropylenes, and **metals**, such as aluminium, titanium, cobalt-chrome or copper. There are a few things to keep in mind when performing maintenance cleaning of the 3-D print room: Accumulating dusts can be **reactive and/or explosive**, depending on the grain size and properties of the material. The following processes can cause dust swirls that are hazardous and dangerous:

- Cleaning the build space of 3D laser printers
- Removal of smut residues
- Separation of the workpiece from the carrier plate

Special safety vacuum cleaners are therefore required for safe extraction:

- **Inert vacuum cleaner** to extract reactive dusts, such as aluminium, copper or titanium
- **EX-protected vacuum cleaners** for use in **zone 22** to extract explosive, non-reactive fine dusts such as polyamide, polystyrene or iron dust

Below you will find our industrial vacuums specially designed for the requirements of additive manufacturing.



EP Inert-Industrial vacuum



- ★ Full safety equipment - **E.g. for Additive Manufacturing** - Many years of experience with and for renowned manufacturers in the 3D printing industry
- ★ Complies with VDI 3405
- ★ Inert process: Liquid bath for passivation of explosive and reactive dusts (e.g.: aluminium, titanium).
- ★ Degassing valve
- ★ H14-cartridge filter (2m²) and Special VA filter (1m²)
- ★ ESD hose



Image EP 2130 ECO-WB

EP 2130 ECO-WB
EP 312-100-WB
ECODust Pro 15-WB

Versions:

Zone 1 + 2
Zone 21 + 22



EP Inert-Industrial vacuum

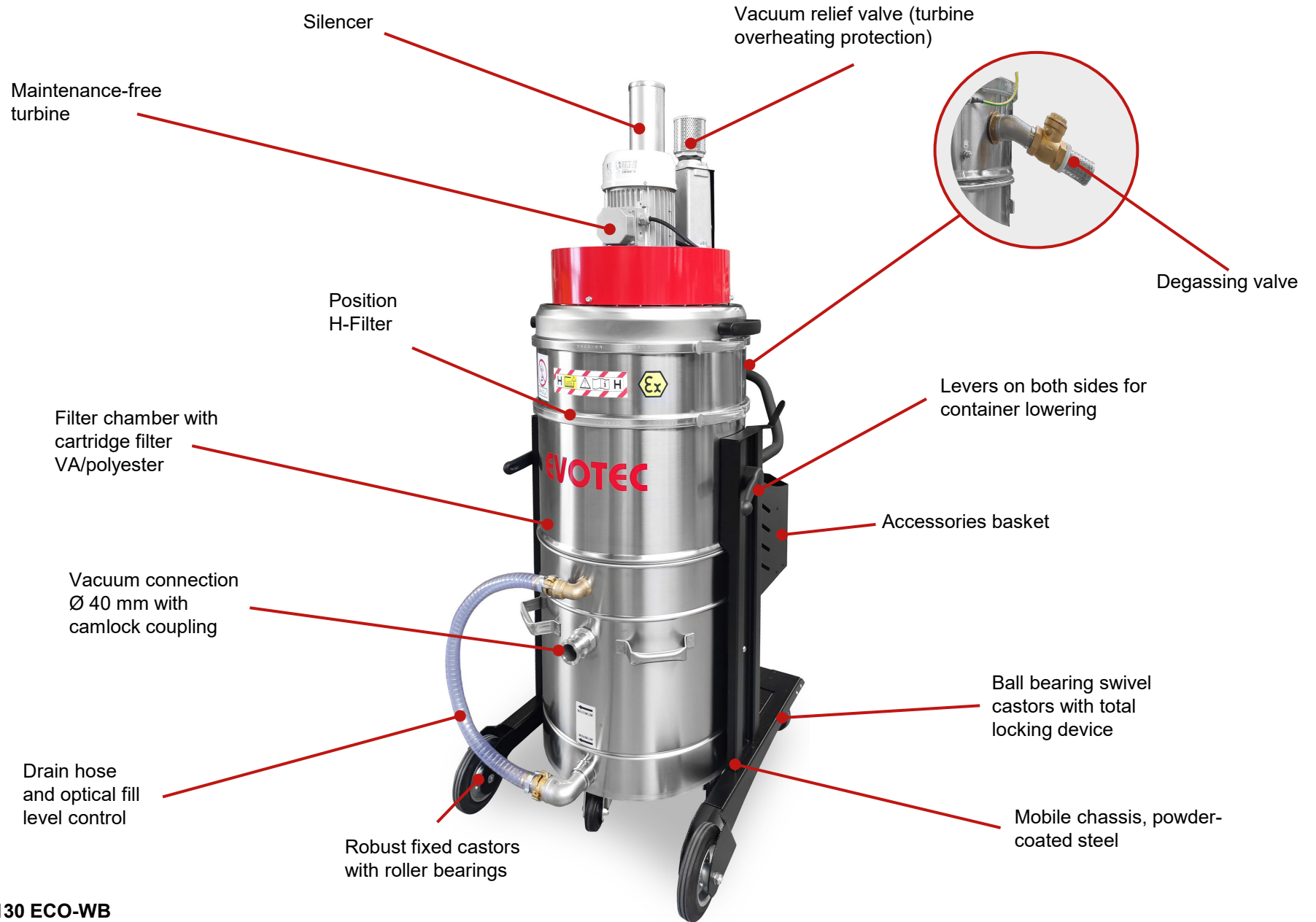


Image EP 2130 ECO-WB

EP Inert-Industrial vacuum

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Image ECODust Pro 15-WB



ECODustPro 15-WB Clean room version with enclosed motor head

Powerful industrial vacuum cleaner with liquid bath separator integrated in the dirt tank for the extraction of explosive, reactive, deposited metal dusts such as aluminum, copper, titanium.

In the inert process, the explosive as well as reactive material is **passivated** by the liquid bath.

Critical fine dusts are bound to liquid separation medium (e.g. water) - according to VDI 3405.

EP 2130 ECO-WB and EP 312-100-WB both with a large wet separator tank with safety device for passivation of vacuumed media:
 Minimum level = 25 liters
 Maximum level = 35 liters

Simple and fast optical level control (minimum and maximum filling) to ensure sufficient liquid level.

Degassing valve avoids accumulation of gases and vapors generated

Additional special VA filter plus H14 filter cartridge for reliable separation in dust class H according to EN 60335-2-69 and EN 62487.

High quality standards - EP 2130 ECO-WB and ECODustPro 15-WB with **electric drive**. Well-designed, soundproofed turbine (side channel compressor) on the exhaust air side. Or: EP 312-100 with compressed air ejectors - **Powerful compressed air version. Attention:** external compressed air required! (Operating pressure 6 - 10 bar)

Convenient lowering of the dirt container for **easy disposal** of the vacuumed material.

Vacuum bend with camlock coupling for safe connection of the hose.

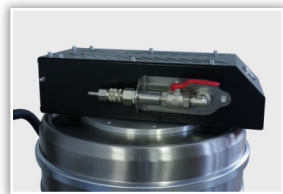



Image shows compressed air head incl. ejectors (EP 312-110 WB)

Length connection cable: 8 m

Model		ECODustPro 15-WB	EP 2130 ECO-WB	EP 312-100-WB
Drive		Voltage: 230 Volt Engine power: 1.500 Watt	Voltage: 400 Volt Engine power: 3.000 Watt	2 compressed air ejectors, consumption: 56 m³/h (at 4 bar pressure) Operating pressure: 6-10 bar
Max. air volume	m³/h	220	320	300
Negative pressure	mbar	200/ 240 max.	240/ 310 max.	200/ 280 max.
Filter area VA-Filter Filter area „H“ (H14)	m² m²	1,0 m² + 1,7 m²	1,5 + 2,0	
Dirt container: Minimum-Level Maximum-Level	Litres	50 12 15,5	100 25 35	
Protection class		IP 55		-
Noise level	dB(A)	76		
Vacuum connection	Ø mm	40 mm Kamlock connection		
Dimensions LxWxH	cm	48 x 56 x 138	83 x 68 x 165	
Weight	kg	59	100	
Dust class	 Item No.	H/Type22: 151-3099	H/Type22: 251-3081	H/Zone 1, 2, 21, 22: 053-0083

Scope of delivery includes:
 3,5 m ESD hose Ø 40 mm and scoring nozzle



You will find further suitable accessories online with the models

Industrial vacuum with ex-protection ECODustPro 15-H-Type 22



- ★ Compact design, large fixed castors suitable for use on stairs
- ★ Convenient dirt tank lowering
- ★ Extraction in zone 22
- ★ Side channel compressor for **continuous operation**
- ★ High quality stainless steel dirt tank **V2A**
- ★ Disposal options: Different container sizes 25, 35, 50 litres or with Longopac endless bag
- ★ Filter cleaning manually or via atmospheric pressure cleaning

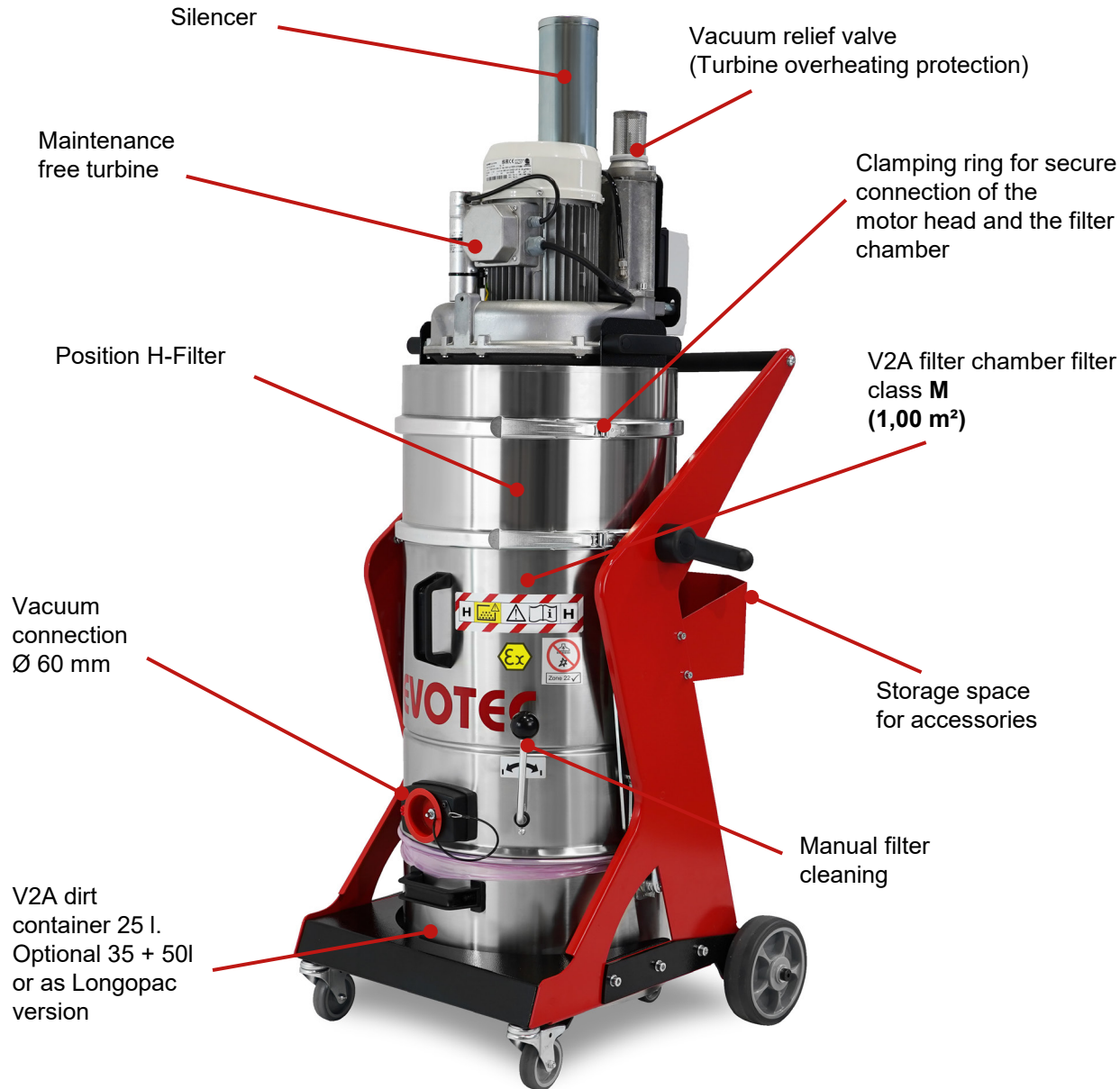
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ECODustPro 15 H-Type 22



Industrial vacuum with ex-protection ECODustPro 15-H-Type 22

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**ECODustPro 15
Clean room version
with enclosed motor
head**



**ECODustPro 15
with atmospheric
pressure cleaning**

Powerful industrial vacuum cleaners to vacuum all dry, non-reactive dusts - from coarse dirt to micro-particles (μm).

High quality standards - Well-designed by-pass units, silenced turbo fan.

Robust, smooth-running chassis for high mobility. Compact, modular design with high-quality stainless steel debris tank. **(V2A)**.

Cyclone separator for better pre-separation of fine dusts and coarse material.

1st filter stage:
Dust class M

Resistant polyester needle felt filter with **PUR membrane**, high filtering power for long service life. **Alternatively available as upgrade: Cartridge filter** VA/Polyester antistatic. (Filter area 1,6 m²)

2nd filter stage:

Dust class H

Absolute cartridge filter **(H14)**.

Effective, easy-to-use **filter cleaning, manually or via atmospheric pressure** (used together with cartridge filters) for high filter power and long working intervals without interruption.

Vacuum manometer for filter monitoring. **Patented, tool-free filter change** - simple and clean for staff/maintenance service.


Wide range of disposal options:

Dirt container 25/35/50 litres or via Longopac endless-bag.

Clean-room-upgrade: With enclosed motor head.

Length connection cable: 8 m

Scope of delivery includes: 3.5 m hose \varnothing 40 mm and scoring nozzle

Model		ECODustPro 15
Voltage	Volt	230
Engine power	Watt	1.500
Max. air volume	m ³ /h	220
Negative pressure	mbar	200 / 240 max.
Filter area „M“	m ²	1,00
Filter area „H“ (H14)	m ²	+ 1,7
Dirt container	ltr.	25
Protection class	mm	IP55
Noise level	dB(A)	72
Vacuum connection	\varnothing mm	60
Dimensions LxWxH	cm	48 x 60 x 138
Weight	kg	49
Dust class H/Type22	 I.-No.	151-3096
Upgrades:		
Dirt container 35 ltr.	I.-No.	053-4040
Dirt container 50 ltr.	I.-No.	053-4041
Cartridge filter	Filter area I.-No.	2 x 0,8 m ² 053-3001



Disposal via dirt container



Longopac version with lockable safety doors



Cartridge filter system atmospheric pressure cleaning

You will find further suitable accessories online with the models

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NOTES





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