ATEX COMBI VACUUM CLEANER

Tiger-Vac ATEX-10A (IT-40L) CFE HEPA

Pneumatic immersion separator for combustible metal powder – venturi drive without an electric motor, collection straight into a water bath, CFE coalescing filter of HEPA grade, SS304 tank and four-wheel dolly. Marked II 2GD to EN 17348 WT



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ATEX Directive 2014/34/EU – II 2GD Ex h IIC T6 Gb – Ex h IIIC T85 °C Db – 0 °C <= Ta <= +40 °C – file acknowledgement LCIE 16 AR 077 (Annex VIII) – EN 17348 WT · EN 17348:2022 (harmonized March 2023) · CFE coalescing filter of HEPA grade – Tiger-Vac states 99.97 % at 0.3 µm

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The Tiger-Vac ATEX-10A (IT-40L) CFE HEPA is a pneumatic immersion separator – a vacuum where the recovered powder does not land in a dry container but is drawn straight down into a water bath. Tiger-Vac describes the principle as recovery and inertisation of combustible dust into a liquid immersion bath: as long as the particles stay wetted they cannot form a dust cloud. The machine is driven by compressed air through a single venturi and has no electric motor, so it can run continuously without overheating or wear. It needs a compressor of at least 15 HP, a 1/2″ (12.7 mm) air line and 5.5 bar; the pressure regulator is included and factory set to 5.5 bar. Performance is 187 m³/h at 2790 mmH_2O, but depends on the capacity of the compressor. This model is intended for water (not oil) and needs 12.3 L of water in the recovery tank before use. Collection itself happens in a conductive disposable wet bag rated at 3 L. A degassing vent releases gas from the unit automatically, and a liquid level indicator with drain valve lets you check the bath without opening the tank. CFE stands for Coalescing Filter Element – a coalescing filter that strips moisture from the outgoing air and filters at HEPA grade, which Tiger-Vac states as 99.97 % at 0.3 micron. According to Tiger-Vac the machine meets the requirements for a liquid precipitation collector for metal dusts in NFPA 484. The tank is AISI 304 stainless steel and the machine stands on a four-wheel dolly. It is available with the standard tool kit (part no. 113116) or with a 3D tool kit for print chambers and powder handling (113116-3D).

Applications

- Recovery of reactive metal powder from SLM and DMLS printers – aluminium, titanium, magnesium
- Emptying and cleaning of build chamber, overflow container and sieving station
- Continuous operation where electrical ignition sources must be avoided and enough compressed air is available

- Zone 1 gas and Zone 21 dust, where both vapours and combustible dust may occur
- Cleaning around powder stations in additive manufacturing and metallurgical laboratories

Technical specifications

ATEX marking	II 2GD Ex h IIC T6 Gb – Ex h IIIC T85 °C Db – 0 °C <= Ta <= +40 °C – LCIE 16 AR 077 (Annex VIII) – EN 17348 WT
Internal / external zone	None / 21 (dust) and 1 (gas)
Motor type	No motor – pneumatic operation with a single venturi, no electrical parts
Duty cycle	Continuous
Airflow	187 m³/h
Vacuum	274 mbar (2790 mmH_2O)
Container	3 L
Sound pressure	68 dB(A)
Filter class	H class
Filter type	CFE coalescing filter element, HEPA grade – Tiger-Vac states 99.97 % at 0.3 micron
Primary filter	Liquid bath (immersion) – the powder is collected wet in a conductive disposable bag
Cleaning system	Liquid bath – no dry filter cleaning; the bath is changed together with the wet bag
Collection system	Water bath in SS304 tank with conductive disposable wet bag
Material	AISI 304 stainless steel
Drive type	Pneumatic – single venturi
Minimum compressor	15 HP
Compressed air	5.5 bar · 16.5–21.2 L/s
Air connection	Ø 12.7 mm (1/2″)
Inlet	Ø 38 mm
Dimensions (L × W × H)	480 x 460 x 860 mm
Weight	Available on request

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