DELFIN · II 1/2D EX H TB IIIC T80°C (INT) /T95°C (EXT) DA/DB

Delfin MTL 451 1/2D INERT

The Delfin MTL 451 1/2D INERT is the ATEX-certified brushless sister to the 452 ACD INERT: same neutralising AISI 304 liquid bath, same HEPA H14 final filter, but now with notified-body certification for ATEX Zone 21 with internal Zone 20 (II 1/2D Ex h tb IIIC). The single-phase brushless motor (1.1 kW) is built for continuous operation without brush wear and delivers 215 m³/h airflow at 221 mbar. Used where both reactive metallic dust and ATEX-classified area require simultaneous protection -- for example ammunition manufacturing, 3D printing with metal powder in ATEX zones, and light-metal machining in aerospace.

APPLICATIONS

- Ammunition manufacturing in ATEX Zone 21-classified facilities
- 3D printing with reactive metal powder (aluminium, titanium) in Zone 21
- Light-metal machining in aerospace and defense
- Powder metallurgy with magnesium or zirconium in ATEX zones
- Process plants with pyrophoric metal powders and Zone 21 classification

Technical specifications

ATEX marking	II 1/2D Ex h tb IIIC T80°C (Int) /T95°C (ext) Da/Db
Internal / external zone	20 / 21
Motor type	1-faset brushless-motor (1,1 kW)
Airflow	215 m³/h
Vacuum	221 mbar (2250 mmH_2O)
Container	15 L
Sound pressure	74 dB(A)
Filter class	H class
Filter type	HEPA H14 (EN 1822-5), 99,995 % MPPS, 11.000 cm² filterflade
Primary filter	Stjerne/taske polyester ANT M-klasse antistatisk, 20.000 cm², diameter 420 mm
Cleaning system	Manuel filterrensning + indikator for tilstopning
Collection system	INERT neutralisation bath
Material	Lakeret staalkonstruktion, AISI 304 INERT-beholder
IP class	IP64
Power	1.1 kW
Current	8 A
Voltage	115/230 V / 50-60 Hz
Inlet	Diameter 50 mm
Dimensions (L x W x H)	610 x 660 x 1330 mm
Weight	52 kg

Questions and answers

What does INERT mean in this context?

INERT denotes a vacuum cleaner with a neutralising liquid bath in the collection tank. Dust is channelled directly into the liquid and inactivated immediately, so it cannot react with oxygen, heat or sparks. The technology is developed for reactive metallic dust (aluminium, titanium, magnesium, zirconium, lead dust from shooting ranges), where conventional dry collection would itself be an ignition source.

Is the INERT system tested to EN 17348:2022?

Yes. The entire Delfin INERT range is performance-tested to EN 17348:2022 -- the harmonized European standard for industrial vacuum cleaners in ATEX zones. The test confirms that the neutralisation bath actually inactivates reactive dust under real operating conditions, not just in a lab setup. Documentation available on request.

What types of dust is INERT technology intended for?

Reactive metallic dust: aluminium and aluminium alloys, titanium, magnesium, zirconium, fine iron powder, lead dust and primer residue from shooting ranges, and pyrophoric powders from aerospace and defense. For non-reactive dust (organic process dust, plastics, etc.) the INERT technology adds no further safety -- a standard ATEX or ACD model without liquid bath is selected instead.

How does the HEPA H14 final filter work together with the liquid bath?

The neutralisation bath inactivates dust at the moment of collection, but there will always be a fine aerosol fraction that passes the liquid surface. The HEPA H14 filter captures 99.995 % of particles down to 0.3 micrometres per EN 1822-5 (MPPS method) before exhaust. The combination secures both safe collection (no reactive dry particle) and clean exhaust (no health-hazardous aerosol). The filter is Included/Incluso as standard on all INERT models.

Contact and advisory

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