

3D PRINTING • ATEX ZONE 20/21 • OIL INERTING

Delfin DM2 1/2D INERT

Medium-sized oil inerting vacuum with ATEX II 1/2D certification for high-volume collection of self-igniting metal powder from 3D printing. Zone 20 internal, Zone 21 external. HEPA H14. IECEx.

- ATEX II 1/2D — Zone 20 internal, Zone 21 external • IECEx Da/Db
- HEPA H14 — 99.995 % at MPPS (EN 1822) • 26,000 cm² filter area
- Oil inerting — neutralises reactive powder before emptying
- TEFC motor 2.2 kW — 430 m³/h, 2,250 mmH₂O
- AISI 304 container — INERT tank 37 L oil / 44 L total
- 74 dB(A) • 90 kg • mobile on wheels
- Tested to EN 17348 • EN IEC 62784:2018 • EN ISO 80079-36:2016



Delfin DM2 1/2D INERT — ATEX oil inerting vacuum Zone 20/21

ATEX II 1/2D — CE EX 21 1/2D • IECEx Da/Db • HEPA H14 — EN 1822 • EN 17348:2022 • EN IEC 62784:2018 • EN ISO 80079-36:2016

Quick facts	
ATEX	II 1/2D • IECEx
Zone	Zone 20/21
Filter class	HEPA H14
Efficiency	99.995 % at MPPS
Motor type	TEFC, 2.2 kW
Airflow	430 m³/h
INERT tank	37 L oil / 44 L total
Container	AISI 304
Weight	90 kg
Noise	74 dB(A)

What is the Delfin DM2 1/2D INERT?

The DM2 1/2D INERT is the larger model in Delfin's INERT series: a medium-sized, mobile industrial vacuum built for high-volume collection of self-igniting metal powder in 3D printing environments with powder-based processes. Where the MTL 451 is sized for compact single-station setups with moderate powder volumes, the DM2 is designed for production lines with high powder mass, continuous collection from multiple extraction points, or tightly scheduled production shifts that cannot tolerate frequent container changes.

Like the MTL 451, the DM2 1/2D INERT is ATEX II 1/2D certified and attested for Zone 20 internally and Zone 21 externally. The IECEx certificate applies equally, and performance testing has been carried out in accordance with EN 17348:2022. The TEFC motor here is 2.2 kW, delivering an airflow of 430 m³/h — nearly twice that of the compact model — at the same maximum vacuum of 2,250 mmH₂O.

The larger filter area is reflected in both the primary filter at 30,000 cm² with a diameter of 500 mm, and the HEPA H14 filter at 26,000 cm² — more than double that of the MTL 451. This translates to longer intervals between filter changes and cleaning cycles, which is an operational advantage in production environments with high uptime requirements.

Important restriction: The DM2 1/2D INERT is designed for dry, reactive metal powder with oil inerting. It must not be used for liquids, slurry or wet material, and it is not certified for flammable gases or vapours (Gas zones) — exclusively for dust zones (D zones).

Filtration system and INERT technology

The filtration system uses a Star/Tasche primary filter in antistatic polyester ANT M, 30,000 cm² with a diameter of 500 mm. Manual shaking cleaning and a filter indicator are included. The HEPA H14 filter has a filter area of 26,000 cm² and retains at least 99.995 % of all particles at MPPS.

The INERT container is in AISI 304 stainless steel with a capacity of 37 L of inerting oil. The combined volume must not exceed 44 L (oil plus collected material). Reactive metal powder mixes with the oil on aspiration and is neutralised before the container is opened for emptying.

Technical specifications

Parameter	Value
ATEX marking	II 1/2D Ex h tb IIIC T80°C (Int) / T95°C (ext) Da/Db
ATEX zone	Zone 20 internal, Zone 21 external
EX category	CE EX 21 1/2D • IECEx Da/Db
Voltage	115/230 V • 50/60 Hz • single phase
Current	30 A (115 V) / 16 A (230 V)
Power	2.2 kW
Motor type	TEFC (Totally Enclosed Fan Cooled)
Airflow	430 m ³ /h
Vacuum pressure (max.)	2,250 mmH ₂ O
Suction inlet	Ø50 mm
Primary filter	Star/Tasche polyester ANT M • 30,000 cm ² • Ø500 mm
Filter cleaning	Manual shaking mechanism • filter indicator incl.
HEPA filter	H14 • 99.995 % at MPPS • 26,000 cm ²
INERT capacity (oil)	37 L
INERT capacity (oil + material)	44 L (max.)*
Container	AISI 304 stainless steel
Dimensions	77 × 66 × 168 cm (H)
Weight	90 kg
Noise level	74 dB(A) (EN ISO 3744)
Accessory kit	TA.1309.0000 — included
Standards	EN 17348 • EN IEC 62784:2018 • EN ISO 80079-36:2016

* Variable based on the vacuumed material characteristics.

Accessories and options

The DM2 1/2D INERT is supplied with accessory kit TA.1309.0000, which includes the necessary hose equipment and suction adapters for connection to 3D printers and CNC machines. All accessories have been tested and approved for ATEX use. The ATEX version with IECEx certification carries the product code DM2INERTZ21-001 (DM2 EX 1/2D — IECEx Da/Db 2BL 100L DT DS X H INERT).

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