

DELFIN · II 1/2D EX H IIIC T85°C DA/DB -- II 2/2G EX H IIB T6 GB/GB

Delfin 452 AIREX 1/2D-2/2G INERT 7V



The Delfin 452 AIREX 1/2D-2/2G INERT 7V is the combination of two advanced technologies: pneumatic venturi drive (no electric motor, no ignition source) and INERT neutralisation bath (reactive metallic dust inactivated instantly). Double ATEX-certified: II 1/2D for dust (Zone 21 with internal Zone 20) and II 2/2G IIB for gas (Zone 1 externally and internally, gas group IIB). 7 venturi units deliver 150 m³/h airflow at 3700 mmH₂O vacuum, with air consumption of 729 nl/min at 6 bar. Full AISI 304 stainless steel construction, 15-litre INERT tank (10 L liquid + 5 L material). Used where both gas and dust risk and reactive metallic powder occur simultaneously -- typically in refineries and chemical plants.

APPLICATIONS

- Refineries with lead dust and gas zones (Zone 1 IIB)
- Chemical plants with pyrophoric powders and organic vapours
- Ammunition manufacturing with gas and dust zones simultaneously
- Process plants where electric motor is not permitted regardless of technology
- Pharmaceutical production with reactive powders and gas zones

Technical specifications

ATEX marking	II 1/2D Ex h IIIC T85°C Da/Db -- II 2/2G Ex h IIB T6 Gb/Gb
Internal / external zone	20 / 21
Motor type	7 venturi-enheder, pneumatisk drift (trykluft)
Airflow	150 m ³ /h
Vacuum	363 mbar (3700 mmH ₂ O)
Container	15 L
Sound pressure	68 dB(A)
Filter class	H class
Filter type	HEPA H14 (EN 1822-5), 99,995 % MPPS, 11.000 cm ² filterflade
Primary filter	Stjerne/taske polyester ANT M PTFE antistatisk, 20.000 cm ² , diameter 420 mm
Cleaning system	Manuel filterrensning
Collection system	INERT neutralisation bath
Material	AISI 304 rustfrit staal (helkonstruktion)
Air consumption	729 nl/min
Supply pressure	6 bar
Air supply hose	Diameter 12 mm
Venturi units	7 pcs
Inlet	Diameter 50 mm
Dimensions (L x W x H)	700 x 550 x 1270 mm
Weight	50 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

PARTICULAIR

Particulair

Højtoften 12

2690 Karlslunde, Denmark

CVR: 34129894

Phone: (+45) 70 23 12 03

E-mail: sales@particulair.com

Web: particulair.eu

Product page: particulair.eu/ex-vac/en/atex-combi/452-airex-1-2d-2-2g-inert-7v/

SMARTER THINKING • BETTER WORKING

This datasheet is generated deterministically from Particulair product data. Prices and availability provided on request. All specifications subject to change without notice.