

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

Delfin 452 AIREX 7V 1/2D



The Delfin 452 AIREX 7V 1/2D is the more robust dust-certified variant of the 452 AIREX -- notified-body certified to ATEX II 1/2D Ex h (internal Zone 20, external Zone 21) and also carries a 2/2G gas marking, although Delfin places it in the dust series based on the model name. Built in AISI 304 stainless (except trolley) with a PTFE antistatic 20,000 cm² pocket filter and a 45-litre tank. 7 venturi units deliver 150 m³/h airflow at 729 nl/min air consumption. Used in Zone 21 where an explosive dust atmosphere is likely during normal operation -- and where pneumatic drive is preferred over electric.

APPLICATIONS

- Production with frequent explosive dust atmosphere (Zone 21)
- Pharmaceutical and food plants where stainless steel is required
- Collection of fine wet powder in Zone 21 with antistatic requirements
- Process plants with compressed-air infrastructure and hygiene requirements
- Cleaning of dosing equipment and filling machines with fine powder

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	45 L
Sound pressure	68 dB(A)
Filter class	H class
Filter type	HEPA H14 (EN 1822-5), 99,995 % ved MPPS, 11.000 cm ² filterflade (Diameter 220 mm)
Primary filter	Antistatisk polyester klasse ANT M PTFE (star/lommefilter, 20.000 cm ² , diameter 420 mm).
Cleaning system	Manuel ryste-rensning af lommefilter
Collection system	Plastic bag
Material	AISI 304 rustfrit staal (undtagen vognstel/trolley)
Air consumption	729 nl/min
Supply pressure	6 bar
Air supply hose	Diameter 12 mm
Venturi units	7 pcs
Inlet	Diameter 80 mm
Dimensions (L x W x H)	700 x 550 x 1270 mm
Weight	50 kg

Questions and answers

Why pneumatic venturi drive instead of an electric motor?

Venturi units have no moving parts, no brushes and no motor windings. That eliminates two things at once: a potential ignition source in an explosive atmosphere, and the maintenance burden of motor, bearings and cooling. The vacuum can run continuously for as long as compressed air is supplied, and there are no electrical components to certify or inspect. The trade-off is air consumption -- venturi makes most sense where compressed air is already available (production plants, refineries, pharmaceutical facilities).

What does II 1/2D plus II 2/2G mean at the same time?

The machine carries two parallel markings. "II 1/2D" means internal category 1 (Zone 20 inside) and external category 2 (Zone 21 outside) for dust. "II 2/2G" means internal and external category 2 (Zone 1) for gas. So the machine is built to operate where gas Zone 1 and dust Zone 21 can occur simultaneously. Temperature class is T85°C (dust) and T6 (gas, i.e. <85°C surface). When combined the unit is sometimes called a 1/2GD machine, although Delfin applies the two markings separately.

What compressed-air installation is required?

The unit requires clean, dry compressed air at 6 bar with a 12 mm ID supply hose. Air consumption at full load is 729 nl/min, which corresponds to a mid-range industrial compressor, so the installation must be able to sustain this. Always fit an air filter upstream to protect the venturi nozzles.

Why is the 452 AIREX 1/2D placed under ATEX Dust when it also has a 2/2G gas marking?

Technically, the 452 AIREX 1/2D could be placed as a combi machine, as it carries double certification. We follow Delfin's own model naming: where "2/2G" appears in the model name (as on the 802 WD AIREX 1/2D-2/2G 7V), the machine is placed under ATEX Combi. Where the name only mentions "1/2D" (as here), it is placed under ATEX Dust, even though the full ATEX marking on the nameplate includes "II 2/2G Ex h IIB T6 Gb/Gb" alongside the dust marking. Customers needing combi capability still get it -- the certificate is the same.

Contact and advisory

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