

DELFIN · II 1/3D EX H IIIC T80°C DA/DC

Delfin 802 WD AIREX 7V 1/3D



The Delfin 802 WD AIREX 7V 1/3D is a pneumatic industrial vacuum driven solely by compressed air through 7 venturi units -- no electric motor, no wear and no routine maintenance. It is certified by a notified body (IMQ / IECEX) under ATEX II 1/3D Ex h and EN 17348:2022 with internal Zone 20 and external Zone 22, built in painted steel with an 80-litre tank, both dry and wet primary filters and HEPA H14. Used in zones with combustible dust where an electric motor is undesirable -- for example refineries, pharmaceutical production or storage facilities with compressed-air installed.

APPLICATIONS

- Refineries and petrochemical plants requiring spark-free operation
- Pharmaceutical production with combustible API powder in Zone 22
- Picking up liquids and dust in the same task (wet/dry)
- Warehouses with compressed-air installed and no three-phase power
- Prolonged cleaning without thermal duty limits

Technical specifications

ATEX marking	II 1/3D Ex h IIIC T80°C Da/Dc
Internal / external zone	20 / 22
Motor type	7 venturi-enheder, pneumatisk drift (trykluft)
Airflow	150 m ³ /h
Vacuum	363 mbar (3700 mmH ₂ O)
Container	80 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
Primary filter	Antistatisk polyester klasse ANT M (sacco/pose, 5.000 cm ² , diameter 420 mm). Vaadfilter: polypropylen 300 mikron med flyder for vaesker.
Cleaning system	Manuel -- aabn og byt pose; HEPA-filter udskiftes efter tilstand
Collection system	Plastic bag
Material	Malet staal (AISI 304 som option)
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)	620 x 530 x 1080 mm
Weight	36 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 the II 1/3D marking mean?

The marking reads as two digits: "1" is the internal category (Zone 20 inside the vacuum -- continuous dust atmosphere in the collection tank), and "3" is the external category (Zone 22 in the surrounding room -- rare or short-term dust atmosphere). "D" stands for dust. The internal Zone 20 certification is exactly what EN 17348:2022 has raised the bar on, and it is only obtained through notified-body certification.

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.

Can it pick up liquids?

Yes, the 802 WD AIREX is a wet/dry model. In wet mode a float activates and automatically stops suction when the tank reaches maximum liquid level, so the liquid is not drawn into the filter chamber or HEPA. When switching from dry to wet, change the primary filter to the supplied wet type (polypropylene 300 micron, 5,000 cm²). Note: do not use AIREX for flammable or chemically aggressive liquids without first consulting Particulair.

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-dust/802-wd-airex-7v-1-3d/

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