DELFIN · II 1/3D EX H IIC T80°C DA/DC

Delfin DM AIREX 19V 1/3D

The Delfin DM AIREX 19V 1/3D is the large pneumatic model -- 100-litre tank, double venturi unit with 19 elements and maximum vacuum of 5000 mmH■O (approx. 490 mbar) -- markedly higher than the smaller AIREX models. The 30,000 cm² star-pocket filter and 26,000 cm² HEPA H14 give long run time between cleanings even at high dust volume. Notified-body certified to ATEX II 1/3D Ex h with internal Zone 20. Suited to heavy industrial tasks where both airflow and vacuum need to be high, and where compressed-air capacity is available.

APPLICATIONS

- Heavy industrial cleaning at large facilities in Zone 22
- Collection of grinding or machining dust with high-vacuum requirements
- Production lines with fixed placement where a 100 L tank gives long intervals
- Refineries and chemical plants with compressed-air infrastructure
- Simultaneous operation through multiple suction points in a central system

Technical specifications

ATEX marking	II 1/3D Ex h IIIC T80°C Da/Dc
Internal / external zone	20 / 22
Motor type	19 venturi-enheder, pneumatisk drift (trykluft)
Airflow	465 m³/h
Vacuum	490 mbar (5000 mmH_2O)
Container	100 L
Sound pressure	74 dB(A)
Filter class	H class
Filter type	HEPA H14 (EN 1822-5), 99,995 % ved MPPS, 26.000 cm² filterflade
Primary filter	Antistatisk polyester klasse ANT M (star/lommefilter, 30.000 cm², diameter 500 mm). Option: PTFE klasse M antistatisk.
Cleaning system	Manuel ryste-rensning af lommefilter
Collection system	Plastic bag
Material	Malet staal (AISI 304 som option)
Air consumption	1530 nl/min
Supply pressure	6 bar
Air supply hose	Diameter 12 mm
Venturi units	19 pcs
Inlet	Diameter 80 mm
Dimensions (L x W x H)	620 x 620 x 1600 mm
Weight	80 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 1530 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 does DM AIREX have higher vacuum than the smaller models?

The double venturi unit with 19 jets produces a significantly larger pressure drop and hence higher vacuum -- 5000 mmH■O (approx. 490 mbar) versus 3700 mmH■O (approx. 363 mbar) on the 7V/14V. This matters for tasks with long hoses, heavy material to pick up, or heavily loaded filters where suction must hold up even under pressure drop.

Contact and advisory

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