

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

Delfin DM AIREX 19V 1/2D - 2/2G



The Delfin DM AIREX 19V 1/2D-2/2G is the large combi-certified AIREX model -- double certificate (II 1/2D Ex h for dust and II 2/2G Ex h IIC for gas, including gas group IIC which covers hydrogen and acetylene), 100-litre tank and full AISI 304 stainless construction (tank, filter chamber and motor head). 19 venturi units deliver 465 m³/h airflow and 5000 mmH₂O vacuum. Notified-body certified by IMQ and built for the toughest combi tasks -- explosion-hazardous areas with hydrogen or acetylene atmospheres and simultaneous combustible dust.

APPLICATIONS

- Refineries and chemical plants with hydrogen or acetylene atmospheres (gas group IIC)
- Pharmaceutical factories with volatile organic substances and powder
- Process plants where both gas and dust must be handled in one task
- Central suction at large facilities with combi-zones and high dust volume
- Special applications requiring absolute spark-freedom in IIC gas group

Technical specifications

ATEX marking	II 1/2D Ex h IIIC T85°C Da/Db -- II 2/2G Ex h IIC T6 Gb/Gb
Internal / external zone	20 / 21
Motor type	19 venturi-enheder, pneumatisk drift (trykluft)
Airflow	465 m ³ /h
Vacuum	490 mbar (5000 mmH ₂ O)
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 cm ² filterflade
Primary filter	Antistatisk polyester klasse ANT M PTFE (star/lommefilter, 30.000 cm ² , diameter 500 mm).
Cleaning system	Manuel ryste-rensning af lommefilter
Collection system	Plastic bag
Material	AISI 304 rustfrit staal (helkonstruktion inkl. beholder, filterkammer og hoved)
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).

Why is the 1/2D-2/2G model categorised as ATEX Combi?

This model is double-certified: "II 1/2D" covers dust (internal Zone 20, external Zone 21), and "II 2/2G" covers gas (Zone 1 both inside and outside). Since it can operate safely in areas where dust and gas atmospheres may occur simultaneously, it belongs in the ATEX Combi category in our catalogue. Equivalent to IEC notation II 1/2GD. Typical use: refineries, chemical plants, drying processes and fuel handling where both atmospheres can occur.

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.

What is gas group IIC, and why does it matter?

Gas group indicates which type of gas the machine is certified for. IIA covers propane, butane and most hydrocarbons. IIB covers ethylene and broader hydrocarbons. IIC is the most stringent class and covers hydrogen and acetylene -- gases with the lowest ignition energy. The DM AIREX 19V 1/2D-2/2G is certified IIC, so it can be used across the full spectrum. The smaller 802 WD combi models are only certified IIB, so they cannot be used in hydrogen or acetylene atmospheres.

Contact and advisory

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