

DELFIN · II 3D EX H IIIC T80°C (INT) / T135°C (EXT) DC

Delfin CUBE 20 K2 PN Z22



The Delfin CUBE 20 K2 PN Z22 is the ATEX version of the CUBE 20 K2 PN deduster -- built and certified for ATEX Zone 22 classified areas (marking II 3D Ex h IIIC T80°C (int) / T135°C (ext) Dc). All mechanical and filtration specifications are identical to the ACD version: 2.2 kW centrifugal fan, 2,500 m³/h airflow at 21 mbar vacuum, 2 cartridge filters at 200,000 cm² combined surface with automatic pulse-jet cleaning during suction, 90 L detachable container with plastic liner. The difference lies in the ATEX construction: dust-tight testing of the entire enclosure, Ex-certified motor and control box, stainless steel AISI 304 electrical panel and documentation per the ATEX directive 2014/34/EU. The automatic pulse-jet cleaning here operates 'during suction' -- compressed-air pulses fire in parallel with the airflow without requiring the deduster to stop. Self-certified per the harmonised standard EN 17348:2022. Ideal for continuous operation in ATEX Zone 22 production plants where operator intervention on filter cleaning is not desired.

APPLICATIONS

- Larger central suction systems in ATEX Zone 22 with multiple collection points and continuous operation
- Multi-arm welding halls classified Zone 22 with demanding occupational health and ATEX standards
- Pharmaceutical production with dust-classified zones and strict requirements for clean exhaust (HEPA H14)
- Chemical process plants with powder handling in ATEX Zone 22 and need for unmanned operation
- Zone 22-classified MDF and OSB halls where Zone 22 discipline is required due to process environment

Technical specifications

ATEX marking	II 3D Ex h IIIC T80°C (int) / T135°C (ext) Dc
Internal / external zone	22 / 22
Motor type	Centrifugalventilator IE3 (2,2 kW, 3-faset 400 V), Ex h IIIC T135°C ekstem / T80°C intern, Ex tb Dust Tight Certified
Airflow	2500 m ³ /h
Vacuum	21 mbar (210 mmH ₂ O)
Container	90 L
Sound pressure	72 dB(A)
Filter class	H class
Filter type	HEPA H14 (EN 1822-5), 99,995 % MPPS, slutfilter -- standard inkluderet
Primary filter	2 patron-filtre i polyester med PTFE-belagt overflade, klasse ANT M antistatisk, 200.000 cm ² samlet filterflade
Cleaning system	Automatisk pulsejet-rensning (PN -- pneumatisk modstroemsskyl med trykluft under sugning), alternerende mellem patroner
Collection system	Plastic bag
Material	Malet staalkonstruktion med rustfri AISI 304 elektrisk panel og gaffeltruck-loftepunkter i bunden
IP class	IP65
Power	2.2 kW
Voltage	400 V / 50 Hz / 3~
Inlet	Diameter 200 mm
Dimensions (L x W x H)	1350 x 880 x 2550 mm
Weight	250 kg

Questions and answers

What is the difference between the CUBE 20 K2 PN Z22 and the CUBE 20 K2 PN ACD?

The two models have identical mechanical and filtration specifications -- same motor, same airflow (2,500 m³/h), same vacuum (21 mbar), same cartridge filter surface (200,000 cm²), same container (90 L). The difference is certification and construction for explosion hazard. The Z22 version is ATEX-certified for Zone 22 (II 3D Ex h IIIC) and can be used in officially classified zone areas; the ACD version is for non-classified areas with combustible dust (IEC 60335-2-69 Annex AA). The Z22 model has additional dust-tight testing of the entire enclosure, Ex-certified motor and control box, plus nameplate and documentation per the ATEX directive 2014/34/EU. The price difference reflects this extra certification effort (ca. 2,500-3,500 EUR over the ACD version).

How does the pulse-jet cleaning differ from the ACD version's?

There is a subtle but important difference. The ACD version uses an 'automatic alternating air washing system' -- pulse-jet fires in a rotating pattern while the unit runs normally. The Z22 version is specified with 'automatic filter cleaning with operated air during suction' -- same fundamental principle, but ATEX-compatibly timed so compressed-air pulses are coordinated with suction-point vacuum to avoid momentary counter-flow particles on the cartridge's clean side. For the end-user it makes no difference -- cleaning is still automatic, still continuous and still operationally independent of the operator. But the certificate requires this coordinated design to maintain dust-tight certification during pulses.

What is the stainless steel AISI 304 electrical control box for?

The AISI 304 stainless steel control box is an ATEX construction standard on Z22 models -- required by the aggressive environmental norm for Zone 22, where the atmosphere may contain corrosive substances beyond combustible dust. The stainless box withstands condensation, chemical attack from process dust (e.g. alkaline powders or corrosive organic compounds), and mechanical impact in industrial environments. The box is IP65 enclosed, which combined with the deduster's own IP65 ensures the electrical system is sealed against dust and water jets. Contactors, cables, signal circuits and control cards are all Ex-certified and installed per ATEX guidelines.

Is the deduster EN 17348:2022 tested or only declared?

The CUBE 20 K2 PN Z22 is self-certified by Delfin per the harmonised standard EN 17348:2022 (harmonised March 2023). 'Self-certified' means that Delfin as manufacturer has performed the required performance tests per the standard's annexes and issued the CE conformity declaration; it is NOT certified by a notified third party. For Category 3D products (Zone 22) the ATEX directive 2014/34/EU permits the manufacturer's own conformity assessment under certain conditions -- this applies specifically to this category. Documentation (CE declaration, EC type examination report where relevant, and controlled production procedure) is available on request. If your safety organisation requires notified third-party certification, you should consider asking for documentation or upgrading to a Category 2D model.

Contact and advisory

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