

DELFIN · OEB FACILITIES · CYCLONE SEPARATOR

Delfin SEP.DC-001

Pure cyclone separator for safe collection of high-potency APIs up to OEB 5 — without any filter stage. The cyclone retains up to 98 % of the powder in a sealed crimping bag, and the BIBO principle ensures the operator never touches the collected material. Requires an external filter and vacuum unit.

- Cyclone retains up to 98 % of the powder — polished AISI 316 inside and out
- Crimping bag (sealed disposable liner) as standard — the operator never touches collected material
- Capacity sensor (24 VDC) included as standard
- No filter — always used with an external filter unit (CANISTER or equivalent)
- No motor — vacuum unit located in the technical room, separator at the process
- WIP (Wash in Place) for in-situ cleaning of cyclone and hopper — optional



Delfin SEP.DC-001 pure cyclone separator for OEB 4-5 containment in pharmaceutical production

OEB 5 in production / OEB 4 in maintenance · Cyclone $\geq 98\%$ — placebo powder · CE — Machinery Directive 2006/42/EC · GMP compatible · AISI 316 — polished stainless steel

Quick facts	
OEB suitability	OEB 4–5
Cyclone	$\geq 98\%$
Filter	None
Collection	Crimping bag (standard)
Capacity sensor	24 VDC (standard)
Airflow (max.)	1,000 m ³ /h
Capacity	30 L
Construction	AISI 316 polished
Motor	None — requires CV
Weight	65 kg

What is the Delfin SEP.DC-001?

The SEP.DC-001 is Delfin's pure cyclone separator — a filterless pre-separator that retains up to 98 % of the collected powder in a sealed crimping bag before the air continues through the system. It serves as stage 1 in a three-component configuration together with a CANISTER filter unit (stage 2) and a CV vacuum unit (stage 3), and differs from the SEP.DC-009 by the absence of an integrated H14 BIBO filter. This provides greater flexibility in system design — the filtration level is configured separately in the CANISTER unit — and brings the weight down to just 65 kg.

Where the SEP.DC-009 combines a cyclone and H14 BIBO filter in a single unit, the SEP.DC-001 is exclusively a mechanical separator. It is designed for installations where the CANISTER filter unit is already part of the system, or where filtration takes place elsewhere, and a pure, compact and lightweight pre-separator is the right first stage.

No filter: The SEP.DC-001 must never be used as the sole barrier against hazardous APIs. It must always be combined with a filter unit — typically the CANISTER (CST.DC-001) with H14 BIBO filter — to achieve OEB 5 suitability. Contact us for guidance on the right system design for your installation.

Three-stage configuration with CANISTER

In the typical installation, the SEP.DC-001 connects to the CANISTER filter unit and onward to a CV vacuum unit via a piping system. The SEP.DC-001 receives the dust-laden process air and uses the cyclone effect to separate up to 98 % of the powder from the airstream. The remaining airflow passes to the CANISTER filter unit (stage 2) with its H14 BIBO filter, and from there to the CV vacuum unit in the technical room.



SEP.DC-001 pure cyclone separator — Stage 1

Stage 1 — This page

SEP.DC-001

Pure cyclone separator — cyclone (≥ 98 %) and crimping bag. No filter. Located at the process equipment.



CANISTER H14 BIBO filter unit — Stage 2

Stage 2

CANISTER (CST.DC-001)

H14 BIBO filter unit in AISI 304. Filter surface 100,000 cm². 99.995 % MPPS. [View product page →](#)



CV vacuum station — Stage 3

Stage 3

CV vacuum station

Standalone vacuum unit (CV series) with side-channel blower — installed in the technical room. Available from 1.8–7.5 kW.

The cyclone and collection system

Dust-laden process air enters the cyclone tangentially. Centrifugal force separates the powder particles from the airstream, and they fall into the crimping-bag collector at the bottom of the container. Up to 98 % of the powder (measured with placebo powder) is captured here before the remaining air continues to the connected filter unit.

The collection system uses a crimping bag (sealed disposable liner) placed inside the container before startup. When the capacity sensor (included as standard, 24 VDC) signals a full container, the bag is crimped with the crimping tool — mechanically sealed — and the contents are hermetically enclosed before the bag is removed. The operator never comes into direct contact with the collected powder. A spare-parts kit with 5 bags and 6 O-rings is available under part number KT.1780.0000.

WIP — Wash in Place (optional)

As an option, the SEP.DC-001 can be fitted with a WIP (Wash in Place) function that enables in-situ cleaning of the cyclone and hopper section with water. WIP is particularly relevant during product changeovers involving carcinogenic or reactive APIs, and eliminates the need to disassemble the cyclone section for cleaning. WIP is only available for the SEP.DC-001.

Technical specifications

Parameter	Value
OEB suitability	OEB 5 in production / OEB 4 in maintenance
Cyclone efficiency	≥98 % (placebo powder)
Filter	None — pure cyclone separator
Collection system	Crimping bag (sealed disposable liner)
Capacity sensor	24 VDC — included as standard
Max. airflow (compatible vacuum unit)	1,000 m³/h
Suction inlet	3" (76 mm) — AISI 316

Parameter	Value
Container capacity	30 L
Discharge	Butterfly ø150 AISI 316
Construction — cyclone and hopper	AISI 316 polished stainless steel
Construction — frame	AISI 304 brushed stainless steel
Motor	None — requires external vacuum unit (CV series)
WIP (Wash in Place)	Optional — only available for SEP.DC-001
Dimensions	72 × 70 × 240h cm
Weight	65 kg

CE marking based on: Machinery Directive 2006/42/EC • Low Voltage Directive 2014/35/EU • EMC Directive 2014/30/EU

Accessories and spare parts

Below are the key accessories and options for the SEP.DC-001.



Spare-parts kit with 5 crimping bags and 6 O-rings for Delfin SEP.DC-001

Crimping bag kit

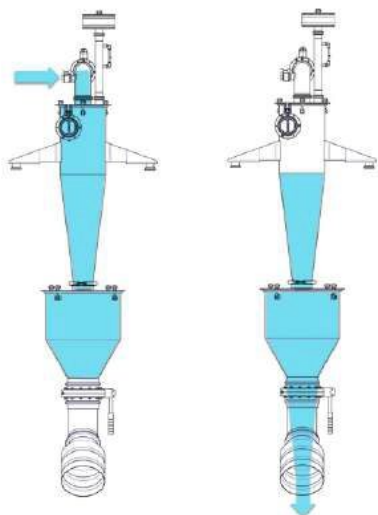
KT.1780.0000 • 5 PE ANT bags + 6 O-rings • Standard



Capacity sensor for Delfin SEP.DC-001

Capacity sensor

24 VDC signal at full container • Standard



WIP Wash in Place for Delfin SEP.DC-001 cyclone

WIP — Wash in Place

In-situ cyclone cleaning • Optional • SEP.DC-001 only

CONTACT

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