

DELFIN · OEB FACILITIES · DUST CONTAINMENT

Delfin PHARMA 40.40 DC

The Delfin PHARMA 40.40 DC is a stationary industrial vacuum for containment of highly potent APIs at tablet presses, blister machines and process equipment. With an integrated cyclonic pre-separator, H14 BIBO filtration and a sealed crimp-bag collection system as standard, it is rated for OEB 4 and OEB 5.

- Integrated cyclone retains up to 98 % of powder before the filter
- H14 absolute filter with BIBO system as standard — safe filter change without operator contact
- Crimp-bag (containment bag) as standard — BIBO principle during emptying
- Side channel blower 4 kW — designed for continuous 24/7 operation
- Suitable as dedicated machine vacuum (FETTE and similar) or centralised vacuum system
- Control panel for BMS signal output and operator HMI available to specification



Delfin PHARMA 40.40 DC dust containment industrial vacuum for OEB 4-5 in pharmaceutical production

OEB 4–5 — HPAPI direct extraction · H14 BIBO — 99.995 % MPPS · CE — Machinery Directive 2006/42/EC · EN 60335-2-69 — Class H · GMP compatible · AISI 304/316 — satin/polished

Quick facts	
OEB rating	OEB 4–5
Cyclone	≥98 %
Filter	H14 BIBO (standard)
Collection	Crimp-bag + BIBO
Motor type	Side channel blower
Power	4 kW / 400 V
Airflow (max.)	420 m³/h
Sound level	70 dB(A)
Tank capacity	30 L
Weight	160 kg
Duty cycle	Continuous
Construction	AISI 304/316

What is the Delfin PHARMA 40.40 DC?

The PHARMA 40.40 DC is the closed-containment version of Delfin's PHARMA 40.40 platform. DC stands for Dust Containment — signalling that this vacuum does not merely collect powder but actively contains it throughout the entire chain: from the cyclonic pre-separator that retains at least 98 % of the powder before it ever reaches the filter, to the BIBO system that allows H14 filter changes without the operator touching the collected material, to the crimpable containment bag that seals all collected matter before it leaves the machine. All three barriers are standard equipment, not options.

The unit can be deployed as a dedicated machine vacuum alongside a single tablet press — such as FETTE and similar platforms — or integrated into a centralised vacuum system serving multiple process lines simultaneously. For demanding integration environments, a control panel with BMS signal output is available, and operator HMI panels can be configured to specification.

The drive unit is a side channel blower — an industrial turbine cooled independently of the process air that runs continuously around the clock without thermal limitations. The construction is in AISI 304 satin-finished steel with AISI 316 on all product-contact surfaces.

OEB boundary: The PHARMA 40.40 DC is rated for direct extraction of HPAPI up to OEB 5. For processes requiring only OEB 3, the base model PHARMA 40.40 (without DC) is a more cost-effective choice. Contact us for guidance on the right OEB level and configuration for your processes.

The three containment barriers as standard

The cyclonic pre-separator is mounted upstream of the filter and retains up to 98 % of the collected powder. This significantly extends filter service life and ensures that only a minimal residual fraction reaches the H14 filter. The cyclone can be fitted with a WIP (Wash in Place) function as an option, enabling in-situ cleaning of the separator and hopper.

The filtration system consists of an upstream H14 absolute filter with BIBO system (Bag-in Bag-out) and a downstream H14 absolute filter. The BIBO system allows the spent filter to be encapsulated in a sterile single-use bag during replacement, so the operator never directly handles the collected material. The filter housing is stainless steel with a BIBO support plate as an accessory (part no. SL.5907.0017).

The collection system is a crimpable containment bag placed inside the collection container before startup. When the container is full, the bag is crimped shut using a crimping tool — also following the BIBO principle, so the operator is not exposed to the collected material during emptying. The sealed contents can then be disposed of according to the facility's hazardous waste procedure.

Technical specifications

Parameter	Value
OEB rating	OEB 4–5 (HPAPI direct extraction)
Cyclone efficiency	≥98 % (placebo powder)
Filtration system	Cyclone + H14 upstream BIBO + H14 downstream
Filter class (IEC 60335-2-69)	H14 — 99.995 % MPPS
Filter surface area	20,500 cm²
Collection system	Crimp-bag (containment bag) with BIBO during emptying
Level sensor	24 VDC — option (customer responsibility)
Motor type	Side channel blower
Power	4 kW
Current draw	4–8.4 A
Voltage	400 V, 50 Hz, three phase
Max vacuum	3,200 mmH ₂ O
Continuous vacuum	2,300 mmH ₂ O
Max airflow	420 m³/h
Suction inlet	Clamp 3" — AISI 316
Tank capacity	30 L

Parameter	Value
Exhaust	Butterfly ø150 AISI 316
Construction	AISI 304 satin — AISI 316 product-contact surfaces
Duty cycle	Continuous (24/7)
Sound level (EN ISO 3744)	70 dB(A)
Dimensions	95 × 56 × 232h cm
Weight	160 kg

CE marking based on: EN 60335-2-69 • Machinery Directive 2006/42/EC • Low Voltage Directive 2014/35/EU • EMC Directive 2014/30/EU

Options and integration

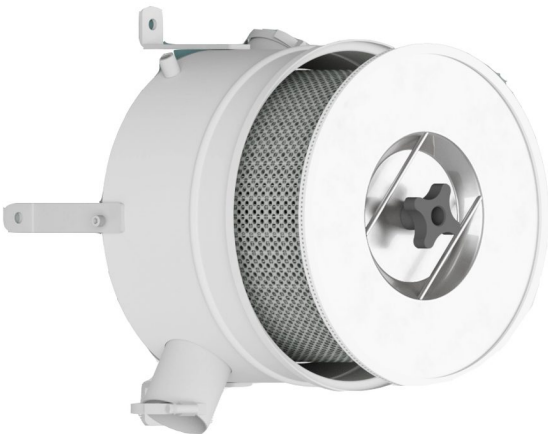
The PHARMA 40.40 DC is available with a range of options tailored to the specific installation context. The most significant are shown below.



BIBO filter replacement on Delfin PHARMA 40.40 DC

BIBO filter replacement

H14 upstream with BIBO — Standard



H14 absolute downstream filter for Delfin PHARMA 40.40 DC

H14 absolute filter (downstream)

Part no. KT.2433.0000 • Standard



Cyclone WIP (Wash in Place) for Delfin PHARMA 40.40 DC

WIP — Wash in Place

In-situ cyclone cleaning • Option



Level sensor for Delfin PHARMA 40.40 DC

Level sensor

24 VDC signal • Option



Photohelic filter indicator for Delfin PHARMA 40.40 DC

Photohelic filter indicator

Electrical signal 24 V • Option



Magnehelic visual filter indicator for Delfin PHARMA 40.40 DC

Magnehelic filter indicator

Visual pressure indication • Standard

Further options include: crimping tool and end caps for containment bag; BIBO stainless steel support plate (SL.5907.0017); BIBO H14 replacement filter kit (KT.2256.0017); F9 safety filter as a downstream option for hazardous and carcinogenic powders; inverter (ABB IP66 kW4 Z22) for airflow and speed control; ATEX Cat. 2GD Zone 21 as an option.

CONTACT

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