



ECH-05D

Your small companion
with a big impact



PURE TRUST.

For your safe and reliable operations.

Intended use



The ECH-05D is the newest member of the ECH dust collector family. It is specifically designed to optimize yield and control product mass balance in tableting, capsule filling and other similar applications. The design allows precise airflow control, while integrated solutions ensure easy and safe operation with a clean working environment. With the ECH-05D »all-in-one« unit, we cover a wide range of functionalities: Dust prevention with continuous operation and precise airflow control, efficient HEPA filtration with self-cleaning primary filters, safe dust collection and product mass balance control in two separate dust bins with Bag-in/Bag-out safety bags. All this with Plug & Play process integration and low total cost of ownership.



To ensure that our dust collectors achieve the highest possible standards of filtration process, we continuously develop 5 areas.

These areas are:

- ✓ Filtration
- ✓ Containment
- ✓ Dust extraction
- ✓ Cleaning
- ✓ Control unit

Description

SECONDARY FILTER

1x up to efficiency class H14, with optional »filter-in-place« indication

PRIMARY FILTERS

2x up to efficiency class H13, with optional »filter-in-place« indication

DUST BINS

With pneumatic lowering/lifting and ergonomic pull-out mechanism



INTEGRATED FAN

With special maintenance door for easier access

SILENCER

For silent and smooth operation (in the back of the device)

CONTROL PANEL

With user-friendly interface design

OUTLET PORT

Tri-clamp connection, one on each side

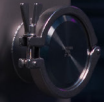
INLET PORT

Tri-clamp connection, one on each side



TRMFilter

TRMFilter



AREA 1

Filtration

Two or three stage high-efficiency filtration by two parallel primary filters, allowing continuous operation of the filter unit during regeneration by the highly efficient ROTATRONIC cleaning system. The airflow can enter the device from both sides, making the placement process easier. The filtration efficiency of the primary filters can be selected in various classes up to efficiency class H13, followed by a secondary and optional tertiary passive safety filter with filtration efficiency up to class H14. The position of the individual filter element (filter-in-place) is determined by sensors.



AREA 2

Containment

All filter stages are equipped with a Bag-in/Bag-out system that completely isolates the user from the dust processed in the device. Various bags are available, from simple bags with a separate O-ring seal, to those where the O-ring is integrated into the bag, to the most sophisticated, specially designed safety bags with an integrated O-ring seal and integrated sleeves that can reach levels as low as $1 \mu\text{g}/\text{m}^3$ following a precise filter change procedure.



AREA 3

Dust Extraction

Dust separated during cleaning is deposited in two dust bins via collection hoppers equipped with a pneumatic valve. The valve remains open during normal operation to allow the dust to fall into the dust bins and closes during the emptying procedure. Similarly to the filter elements, the dust bins are equipped with a Bag-out containment system. To ensure the most ergonomic conditions for dust removal, the bins are raised and lowered with a pneumatic lifting mechanism. A special pull-out mechanism provides additional ergonomics, as the dust bins can be pulled out for easier handling. The complete dust extraction system is housed in a glass door compartment.

AREA 4

Cleaning

To extend the lifespan of the filter elements, they must be cleaned regularly before dust permanently clogs the filter media. This is made possible by our proprietary ROTATRONIC Control and ROTATRONIC Mechanics. The first monitors all ongoing operations and acts as a processing unit, controlling and continuously calculating the optimum operating conditions and cleaning set points. The second serves as an execution unit that directs the compressed air through the filter media, thus cleaning it. The ECH-05D has been specially designed for on-line cleaning. This is made possible by two parallel primary filters with a shut-off valve in front of each filter element. Before the cleaning process begins, one valve is closed so that the entire airflow can pass through the unblocked filter.

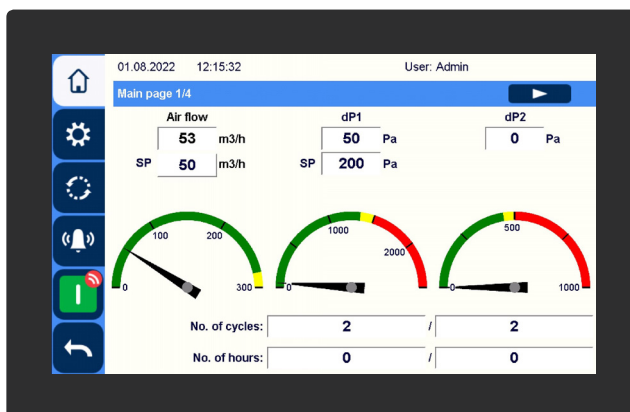


AREA 5

Control unit

The ROTATRONIC control system is operated by a control unit with a user-friendly graphic interface (touch screen) that displays the operating parameters and allows the user to set the various cleaning modes. It also allows precise control of the airflow (+/- 10%) from the powerful integrated blower.

Graphical user interface of the standard ROTATRONIC Control (the user interface of the ROTATRONIC Control offers an alphanumeric display)



ROTATRONIC
Smart filter
cleaning technology

Technical characteristics

ECH-05D	
Operating mode	on-line cleaning
Airflow	250 m ³ /h
Airflow accuracy	+/- 10%
No. of primary filter elements	2
Primary filter type	ROTATRONIC cartridge
Total filter area	5.8 m ²
Primary filter efficiency	up to H13
Filter cleaning system	ROTATRONIC Mechanics
Secondary filter type	filter cassette
Secondary filter efficiency	up to H14
Tertiary filter efficiency	up to H14
System height	1710 mm
System width	900 mm
System depth	770 mm
System mass	400 kg
Inlet size	DN65
Outlet size	DN65
Dust bin volume	2x 10 L
Compressed air pressure	6 bar
Power supply	230 V

Specifications can be changed according to your needs and requirements after consultation with our sales representative.