

## UDC Technical Specification

Industrial Dust Collectors are generally used for cleaner and safer working environments. UDC dust collectors also sustain energy savings with highly efficient filtration which also leads to production efficiency increases, product recoveries and air pollution control.



**PLUG &  
PLAY**



**EXPLOSION  
RESISTANCE**



**ENERGY  
SAVER**



Dust collector units have standard parts which meets the different user requests.

- Dust Bin Mechanism
- Big Bag with Double Sliding Valve
- Continuous Linear
- BIBO Bag In Bag Out
- Industrial Internet of Things (IIOT)

**Surface Material:** S235JR ST37 Steel Grade (SS 304 / 316 versions are available)

**Capacity:** Starts from 600 m<sup>3</sup>/h

### Filtration Grade:

FCY-CB-Ø420-240-1000 : Antistatic Cellulose & Synthtetic Conductive Media

FCY-CN-Ø420-240-1000 : Nano Coated Antistatic Cellulose & Synthtetic Conductive Media

### Application Type

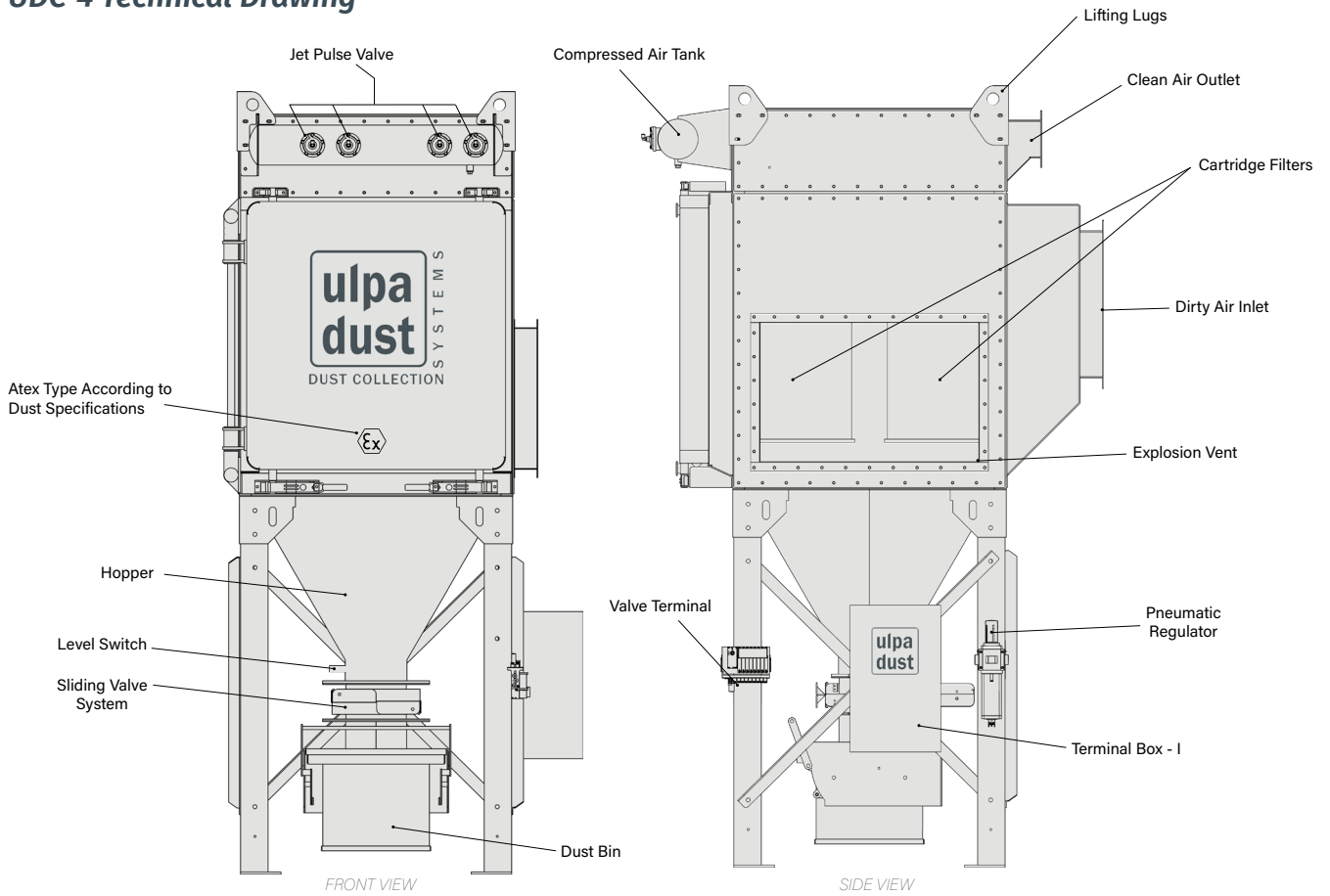
- Pharmaceutical
- Chemical
- Carbon Black
- Food
- Plastic
- Rubber
- Composites

### Accesories

- Fan
- Explosion Vent
- Level Sensor
- Ducts
- Mechanical Isolation Damper
- Motor Control Panel
- PLC Control System
- Terminal Box
- Valve Terminal (Pneumatic Board)
- Sliding Valve
- Filter Regulator

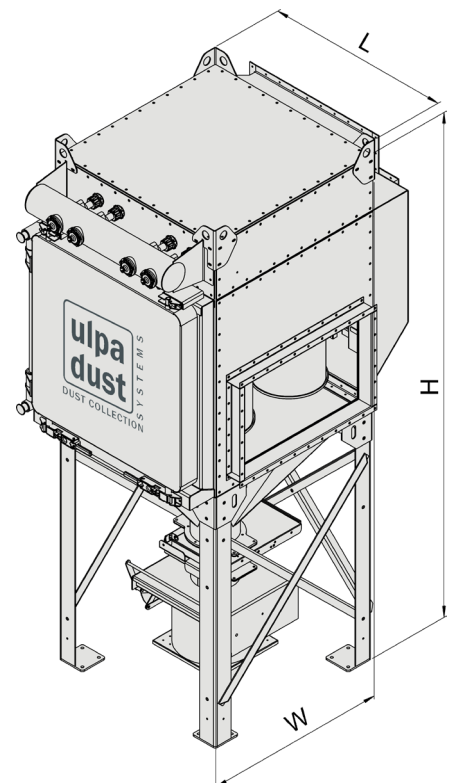


**UDC-4 Technical Drawing**



UDC - 4 MODEL REFERENCE

UDC Types		UDC-4	UDC-6	UDC-8	UDC-12	UDC-16
Nominal Airflow	<i>m³/h</i>	4.000	6.000	8.000	12.000	16.000
	Height	3.288	3.920	4.316	4.016	4.316
Dimensions <i>mm</i>	Width	1.830	2.445	1.830	2.445	2.840
	Length	1.300	1.300	2.510	2.510	2.815
Number of Nanotech Cartridge Filters		4	6	8	12	16
Filtration Area		120 m²	180 m²	240 m²	360 m²	480 m²



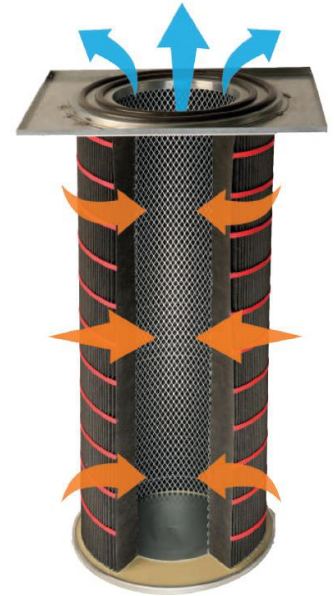
UDC-4 Model Reference

## Cartridge Filters

Cartridge filters are the filtration part of the dust collectors. Conductive cartridge filters can work continuously at 80°C. Together with the inside galvanized steel wires, galvanized steel caps, outside protective tapes, leak proof double stage neoprene sealing. All filter media have minimum efficiency of F9 EN779 / MERV 15.

Surface load (particles that accumulate rapidly on the surface of the filter) causes acceptable dust cake over the filter surface that increases the filtration efficiency. These kinds of filters have 10 times higher efficiency than the causal filters. Surface loading prevents the blockage of the filter and makes the removal of the dust cake easier.

In order to comply with the protection in environment with high risk of dust explosions, filter with conductive media which is flame retardant (F1 acc. to DIN 53438) provides superior filtration performance.



### High Efficiency Conductive Cellulose Carbon Cartridge Filters

Cellulosic Nano Coated	Outer Diameter	Inner Diameter	Height
<b>FCY-CN-Ø420-240x660</b>	420 mm	240 mm	660 mm
<b>FCY-CN-Ø420-240x1000</b>	420 mm	240 mm	1000 mm
Cellulosic Blend Standard			
<b>FCY-CB-Ø420-240x660</b>	420 mm	240 mm	660 mm
<b>FCY-CB-Ø420-240x1000</b>	420 mm	240 mm	1000 mm

### Compressed Air Specification

<b>Max</b>	7.5 Bar
<b>Maximum compressed air usage</b>	Minimum 6,2 Bar @ 54 m <sup>3</sup> /h Acc. to ISO8573-1:2010
<b>Max Oil content</b>	3 mg/m <sup>3</sup>



### **Dust Collection System Automatic Control System**

Dust Collection system will be controlled by an MCP & ACP Main Panel. The whole system is connected with Field Terminal boxes and will communicate with Profinet network based Cat6 cables.

In this way, Exhaust - Fresh Air flow rates will be adjusted automatically according to instant usage. Dust Collection Unit Terminal Box is ATEX certified since it is exposed to dust or gas during maintenance.

#### **MCP - Motor Control Panel**

The Motor Control Panel is designed to control the dust collecting fan connected to the dust collecting unit with the driver.

#### **ACP - Automation Control Panel**

The automation system controls the Dust Collection System by operating the dust collection unit and the air handling unit in conjunction. All field monitoring, temperature, damper open / close, filter monitoring are designed through this system. The automation system is a HMI Controlled system and PLC-based, and has the feature of data mining with IIOT database for the information monitoring system and should be able to provide predictive maintenance.

#### **TB - Terminal Box**

The dust collection system has profinet communication with the dust collection unit terminal boxes and provides instant data monitoring and control.

#### **IIOT - Industrial Internet Of Things**

Regarding the predictive maintenance application, the whole system will be able to communicate with IIOT as integrated.

