MULTIBLAST
PERFORMANCE BLASTING

Cartridge Filter Dust Collector

Instructional Manual

Table of Contents

1. Design Sketch

The Flow Type Cartridge Dust Collector is designed to efficiently capture suspended dust and particles, making it suitable for both air pollution control and production processes. It ensures continuous, reliable dust collection during operation. With features like stable performance, high airflow capacity, compact size, and easy maintenance, it is ideal for use in industries such as metallurgy, machinery, casting, and chemical processing.

2. Operating Principle

A. Normal Operation

During normal operation, dust enters the HL-type dust collector through the bottom inlet and flows upward through the filter. Particles are captured on the surface of the filter, while clean air passes through the filter's center into the air cleaning chamber. Finally, the purified air is expelled through the outlet pipe.

B. Cartridge Filter Cleaning

Filter Cleaning Instructions

1. The filter cleans automatically and intermittently using two filters for offline cleaning.
2. During cleaning, the pulse injection control device activates an electromagnetic pulse valve, releasing high-pressure air to dislodge dust from the filter.
3. The dust falls into the hopper and collects in the ash bin.

Compressed Air Pressure Guidelines:

- Recommended pressure: 6-7 kg/cm²
- Optimal: 6 kg/cm² to balance cleaning efficiency and gas consumption.
- Do not exceed 7 kg/cm² to avoid damage.
- Pulse Cleaning Settings:
- Default: One column filter cleans every 10 seconds.
- To increase cleaning, adjust air pressure within the recommended range.

Follow these settings for efficient and safe operation.

3. Structural Overview

Cartridge dust collectors can be customized to meet specific requirements and are available in various configurations: HL2-8, HL2-12, HL3-12, and HL4-16 (single-module types); HL2-16, HL2-24, HL3-24, and HL4-32 (two-module types); HL2-36, HL3-36, and HL4-36 (three-module types); as well as larger options like HL3-36, HL4-64 (four-module types), and even five- or six-module configurations, among others.

Each cartridge dust collector contains 8 cartridge filters. The air inlet is typically on the side but can also be positioned at the top. The air outlet is located at the top of the air-cleaning chamber but can alternatively be placed on the side or top, depending on design preferences.

Technical Parameters

1	Size of Cartridge Filter	Φ360 × 660
2	Material of filter	Polyester
3	Single cartridge filter area	15 ㎡
4	Single cartridge air volume	192m3/h
5	Filtered wind speed	≤0.85m/min
6	Pulse-jet compressed air pressure	6kg/㎡～7kg/㎡
7	Pulse-jet interval	2～3min
8	Pulse-jet period	20min
9	Single tube pulse-jet gas consumption	0.3m3
10	Pulse-jet time	2～3s

4. Usage Guidelines

4.1 Avoid mixing flammable materials (e.g., cloth, paper, wood, magnesium powder, black metal) with dust in the grinding process.

4.2 Do not throw burning objects, like cigarettes, into the hood or ducts.

4.3 For flammable or explosive dust, install the dust collector outside the workshop and consult fire safety experts for proper fire equipment.

4.4 If required, install explosion vents leading outside to prevent secondary explosions. Consult experts for setup.

4.5 Standard dust collectors do not include venting doors unless specified when ordering.

5. Maintenance Instructions

Before working on any electrical device, ensure the power supply is disconnected, the gas supply is turned off, and compressed air pipes are emptied. Welding on the machine body should only be performed if proper fire prevention measures are in place.

5.1 Filter Change

A. Start by opening the repair access at the top of the unit to prevent dust from escaping the hopper.
B. Turn the knob counterclockwise to loosen the bolts, remove the maintenance door, and set it aside.
C. Remove the filter carefully and peel off the sealing gasket connecting it to the filter plate. Rotate the filter halfway so any debris on top falls through the repair opening into the dust collector.
D. Handle the filter gently—don't knock it or drop it on hard surfaces, as this could cause damage and air leaks.
E. Check the ash storage area for buildup and clean it if needed.
F. Ensure the bearing plate is properly positioned around the filter for a reliable seal. Clean any ash from the filter cover and access doors to maintain optimal performance.

5.2 Filter Installation

A. Align each frame and make sure all filter sealing gasket tails face the cleaning area before inserting the new filter. Press the filter firmly into place.
B. Then, clean the access hole sealing gasket, turn the knob clockwise, and attach the access door to the frame threads. Hand-tighten it to ensure a proper seal. Keep in mind that if the filter sealing gasket isn't compressed enough, it could cause leakage.
C. 5.3 Ash Cleaning
D. To remove ash, shut down the dust collector if needed to minimize the dust in the hopper.
E. If your dust hopper has an insert plate valve, close the valve before cleaning. Then, remove the ash bucket, empty it, put it back in place, and reopen the valve. This process allows you to clean the hopper without turning off the dust collector fan.