



DUST  
COLLECTING  
SYSTEMS

Owner's manual for installation,  
usage and maintenance



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**MINIFLO™**

This manual is property of the owner. Leave with the unit when set-up and start-up are complete. *AQC Dust Collecting Systems Inc.* reserves the right to change design and specifications without prior notice.

## Introduction

This present manual refers to the *Miniflo* dust collector equipped with air pulse cleaning system. It includes important information concerning the installation, usage and maintenance of your collector. Read this manual thoroughly and apply the directives and procedures. Staff and personnel using the system will have to be trained on safety measures and maintenance instructions.



### **Warning!**

**Not following directives and procedures could cause injuries or property damages.**

## Information on the *Miniflo* dust collector

Model :	_____	Date of	_____
Delivery date :	_____	installation :	_____
Name of customer :	_____		
Address :	_____		
	_____		
Type of filter :	_____		
Accessories :	_____		
Other :	_____		
	_____		

## Index

Introduction .....	3
Information on the <i>Miniflo</i> dust collector .....	3
Index.....	4
Presentation .....	5
Normal usage .....	6
Model numbers .....	6
Operation and purpose .....	6
Cartridge cleaning .....	6
Components .....	7
Installation.....	7
Inspection of goods .....	7
Technical specifications .....	8
Fume arm installation.....	9
Location .....	9
Electrical .....	10
Performance .....	10
Check list .....	10
Performance instructions .....	11
Performance instruction (pulse cleaning system) .....	11
Replacement of the filter cartridge.....	11
Replacement/cleaning of aluminum spark trap filter .....	12
Maintenance and inspections .....	12
Troubleshooting .....	13
Service notes .....	13
Limited Warranty.....	14

## Presentation

The *Miniflo* is a cartridge dust collector with air pulse cleaning system which cleans the entire surface of filtration. The down flow type dust collector obtains high efficiency filtration while requiring low energy consumption. The cartridge is cleaned by means of a manually activated pulse of compressed air into the single cartridge.

The *Miniflo* dust collector is largely used in areas where dust is a nuisance. Main applications are for welding, buffing, pharmaceutical operations, handling of volatile dusts, etc.

Each *Miniflo* unit includes:

Fully welded steel cabinet with reinforcements.

- cartridge with specific media for your application.
- Air deflector to protect the cartridge from large debris.
- Cartridge cleaning system by air pulsation and electronic sequencer.
- Factory prewired cleaning valves.
- Differential pressure indicator showing the status of the cartridge.
- 3 steps paint finish: degreasing, prime coat and polyurethane final coat.

The *Miniflo* unit is usually shipped assembled for immediate installation.

Plumbing connections for the cleaning system will be performed at the job site upon the collector final installation.

## Normal usage

The *Miniflo* unit is designed to remove dust from the air resulting from a fabrication process. Each *Miniflo* dust collector is built as per the criteria and information supplied by the customer for a specific application and should not serve any other application without the approval of *A.Q.C. Inc.* supplied by the customer for a specific application and should not serve any other application without the approval of *A.Q.C. Inc.*

## Operation and purpose

During normal operation, the *Miniflo* unit vacuums dust laden air into the collector inlet. Smaller particles are vacuumed into the cartridge and larger particles fall toward the dust storage section. Dust is trapped within the cartridge leaving clean air crossing the filter toward the collector outlet.

## Model numbers

MODEL	# OF CARTRIDGE	FILTRATION SURFACE SQ.FT / SQ.MT	MAX. AIR VOLUME CFM / LS	MAX. HP / KW	MOTOR RPM	WEIGHT LB / KG	AIR PRESSURE REQUIRED (PULSE CLEANING)
DPF-C01	1	260 / 24	800 / 375 (6 w.g.)	1.50 / 1.10	3000	380 / 172	60-80 psi



### Warning!

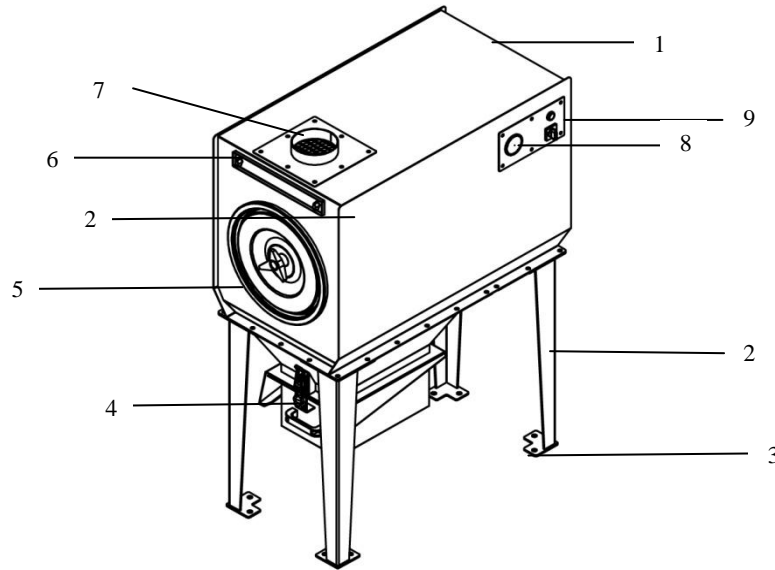
Flammable or explosive dusts and solvents present a fire or explosion hazard within the collector. Under no circumstances, those pollutants should be filtered by the collector unless it has been designed to that effect and equipped with an explosion relief venting system or fire extinguishing device. This is the reason why special attention is required with the handling or usage of dust collecting equipment in contact with flammable or explosive dusts and solvents. Any burning or flammable material such as a spark created by metal grinding, lit cigarettes, spark, etc. should not be introduced within the collector where it could cause a fire or explosion.

## Cartridge cleaning

The cleaning of the filter cartridge is performed using a reverse air pulse technology. A solenoid and diaphragm valve system is aligned toward the cartridge and the shock wave created by releasing air at high velocity cleans the cartridge.

## Components

- |   |  |
|---|--|
| <ol style="list-style-type: none"> <li>1. Filter and fan inside cabinet</li> <li>2. Support structure</li> <li>3. Pre-drilled holes for floor anchors</li> <li>4. Hopper and dust bin with quick clip and slide ramp</li> <li>5. Cartridge access door</li> </ol> | <ol style="list-style-type: none"> <li>6. Aluminum pre-filter access door</li> <li>7. Slip fit dirty air inlet</li> <li>8. Minihelic pressure gage</li> <li>9. On /Off switch</li> </ol> |
|---|--|



Drawing #1

## Installation



### Warning!

Installation of equipment must be performed as per local building laws and regulations. Structure must meet proper weight support of equipment.

## Inspection of goods

The *Miniflo* unit is usually shipped assembled. Proceed with a visual inspection upon receiving the material and check for any apparent damage

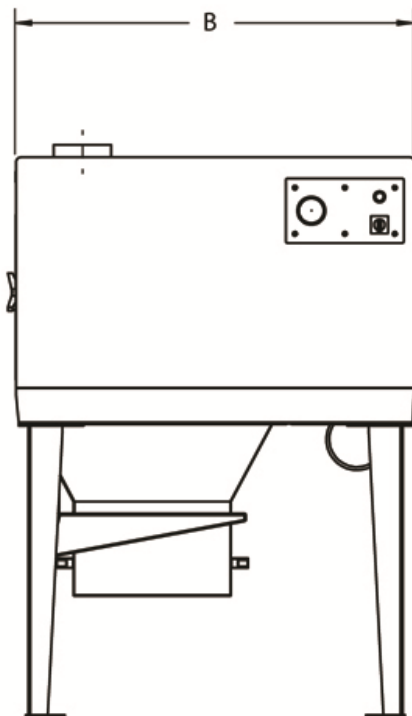
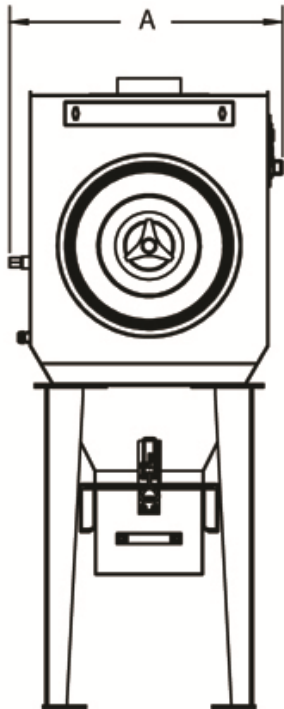


that may have occurred during freight. Generally, shipment includes the filter cabinet and the dust storage section with support structure. Other optional components such as a *Maxair* fume arm may be shipped on separate skids.

### WARNING!

THIS UNIT SHOULD NOT BE USED FOR METAL CUTTING OR GOUGING. Such operations create a lot of sparks. Not following this warning could create a fire in the unit.

## Technical specifications



GENERAL INFORMATION	
Electrical	115 V / 1 PH / 60 Hz
Amperage	10.0 A
Power	1.5 HP (1.10 kW)
Air volume	700-800 CFM (1189-1359 m <sup>3</sup> /h)
Sound level	68 dB(A) @ 3' (1m)
Weight (no fume arm, no option)	280 Lbs (127kg)

DIMENSIONS	
Dimension A	24.2 in (953 mm)
Dimension B	42.8 in (1085 mm)
(With pulse cleaning option)	42.8 in. (1085 mm)
(With charcoal filter)	46.2 in. (1819 mm)
(With HEPA and charcoal filter)	52.8 in. (2079 mm)
Dimension C	29.3 in (1153 mm)

USAGE REQUIREMENTS	
Temperature (min/max)	41°F (5°C) / 113°F (45°C)
Max. relative humidity.	80%

FILTRATION	
Filtration fabric	Cellulosic
Filtration surface	260 sq. ft. (24.2 m <sup>2</sup> )

Other type of cartridge available.

## Installation



### Warning!

Only qualified personnel should install and/or use the unit.



## Fume arm installation (if ordered with unit)

### Necessary tools

The following list of tools are recommended to install and adjust the *Maxair* fume arm.

Ratchet set  
Spanners and/or wrenches  
3/16 hex key  
7/8 socket



### Warning!

Ensure Miniflo unit is secured to the floor.

2. Open the *Maxair* fume arm cardboard box and take out the fume arm. Proceed with a visual inspection to ensure all components are in place.
3. Lift the arm up and position over the round 6'' (160mm) opening on the Miniflo unit. When doing so, make sure you do not "slide" the fume arm socket on the paint surface of the unit to avoid scratches and/or dents to the cabinet.



Figure 1 : Fume arm installation

4. Align the six (6) *Maxair* fume arm socket holes with the ones around the opening. Ensure the socket stopper is facing the front of the unit. Once the holes are perfectly aligned, tighten the screws using an allen key.

### Location

1. The area where the dust collector will be installed should be able to sustain the weight of such along with the accessories, ducting, blower and matter that will be stored. The construction of a flat and solid surface such as a concrete slab or platform may be required.



### Warning!

The use of improper lifting device may result in injuries or damages.

2. Ensure the fume arm pivots smoothly without grinding noise or wobbling movement.

**NOTE :** The *Maxair* fume arm does not make a full 360 degrees rotation. If you need to have the fume arm do a full rotation, remove the hex bolt from the top part of the arm socket. A maximum 4 or 5 full rotations (left or right) will then be possible before reversing the rotations. (See figure # 2 : socket)



**Figure 2 : Socket**

3. The *Maxair* fume arm joints are pre-adjusted at the factory but will require final adjustment upon installation. Using an adjustable wrench to hold the head of the bolt, tighten or loosen (as needed) the 7/8" nut with a ratchet to the desired tension. **DO NOT OVERTIGHTEN THE JOINTS.** Once all joints are adjusted, the arm should move freely in all directions without sagging or being too stiff to maneuver into position.

## Electrical

1. The unit is supplied with a 15' (4,6M) electrical cord and a three (3) prong plug 120 VAC. Plug the cord into a proper electrical outlet.
2. If you need to use an electrical extension cord, ensure the cord meets the requirements for the motor amperage.

3. Ensure you do not move the unit further than the length of the cord. This could result in breaking or ripping the cord and cause an electrical shock.
4. Start the unit and stop it immediately. Listen for unusual or grinding noises coming from the fan.
5. Start the unit again and let run for a few minutes before proceeding with the application.

## Performance

### Check list

Prior to starting the unit for the first time, follow the steps listed below in order to ensure the unit will perform adequately.

1. Remove all objects around the inlet of the unit or around the fume arm hood.
2. Make sure the cartridge access door is closed and turn knob are locked into position.
3. Make sure the electrical cord is plugged into a proper 120 VAC outlet.
4. Start the fan and shut it off immediately. Listen for any unusual noise (scraping, grinding) coming from the fan/motor assembly.
5. Start the fan again and let it run for a few minutes before using the unit as per the suggested applications described in page 5 of this manual.

## Performance instructions (pulse cleaning system)

To use the pulse cleaning system, follow the steps listed below in order to ensure the unit will perform adequately.

**NOTE : Do not operate the pulse cleaning system when filter access door is opened.**

1. Connect the compressed air line to the unit with a 3/8" NPT connection.
2. For a longer use of the cartridge, it is best to feed 60 PSI into the air tank. Max PSI is 90.
3. Press the push button to release the compressed air from the tank and to clean the cartridge.

## Replacement of the filter cartridge

The life expectancy of the cartridge is only limited by the type of dust to be filtered and number of hours used. However, it is recommended to replace the cartridge after 1500 hours of usage.

If a cartridge tears or rips open, the cartridge should be replaced as soon as possible.

Before replacing the cartridge, shut the unit OFF and remove the plug from the electrical outlet.

Follow these next steps to replace the cartridge.



### Warning!

- Wear appropriate safety gear such as safety goggles or gloves when replacing the cartridge.
- The filter cartridge may be heavier than expected..
- Use necessary precaution when replacing the filters to avoid injuries.

1. Remove the front round access door by turning the knob counter clockwise. Ensure you do not damage the door rubber seal around the edge of the door.
2. Slowly rotate the cartridge 180 degrees to have the dust on top of the cartridge fall at the bottom of the unit.
3. Gradually slide out the cartridge from it's support yoke and out of the cabinet. Do not shake the cartridge.
4. Properly dispose of the used cartridge following existing environmental rules and regulations.
5. Slide a new cartridge onto the support yoke. Install the cartridge access door back on.

**NOTE : Ensure to use the same type of filter cartridge originally supplied with the unit.**

## Replacement/cleaning of aluminum spark trap filter

Follow these next steps to clean or replace the aluminum spark trap filter.

**NOTE :** The spark trap filter is an important component of the *Miniflo* unit. Avoid having this component may result in a fire in the filter cartridge.

1. Remove front filter access door.
2. Slide the filter out of the cabinet.
3. Wash or brush away dirt in the filter. Ensure you do not damage the mesh fabric.
4. Proceed with a visual inspection for tears or rips. Replace if necessary. Put filter back in place. **Contact your A.Q.C. representative for question.**

## Maintenance and inspections

The chart indicated below shows different inspections and the frequency at which they should be performed.

Inspection frequency	Components	Procedures
Daily	Cabinet	<ul style="list-style-type: none"> <li>• Empty dust bin.</li> <li>• Check pressure gauge. If gauge indicates 6'' or more, cartridge should be replaced.</li> <li>• Ensure motor/fan assembly runs smoothly.</li> <li>• Move the <i>Maxair</i> fume arm in different positions for stability (if supplied with the unit).</li> </ul>
Weekly	Filter elements	<ul style="list-style-type: none"> <li>• Check for proper installation of cartridge and air leaks.</li> <li>• Check for accumulation of dust or debris above and inside the filter elements. Clean if necessary.</li> </ul>
Yearly	Cabinet	<ul style="list-style-type: none"> <li>• Proceed with a complete inspection of the unit.</li> <li>• Check each filter element status. Replace or clean if necessary.</li> </ul>

## Troubleshooting

Problem	Probable cause	Solution
Smoke or dust at clean air outlet.	Cartridge is not installed properly.	Check installation of cartridge and repair if necessary. Seal all gaskets. (Refer to cartridge replacement section, page 11)
	Cartridge is not adjusted properly.	Tighten all components at the seals.
	Cartridge is damaged.	Replace any damaged filter element. (Refer to cartridge or aluminum spark trap filter replacement section, page 11).
	Damage to door seal	Check seals around the lateral side access door.
Insufficient vacuum of contaminants	Cartridge access door not closed properly	Ensure lateral side access door is closed properly.
	Damage to door seal	Check all access doors and door seals.
	Debris obstructing the blower or air outlet	Check blower and air outlet for obstruction and remove debris.
	Cartridge must be replaced	Remove used cartridge and replace with a new one. Use same filter type or media.. (Refer to cartridge replacement section, page 11)
	Obstruction in the <i>Maxair</i> fume arm.	Check for obstruction or debris in the fume arm.
	The <i>Maxair</i> fume arm damper is closed	Open the vacuum damper.

## Service notes

Date	Services performed	Notes

## Limited Warranty

AQC warrants to the original purchaser that all equipment will be free from defects in materials and workmanship for one year from the date of shipment from AQC, and that major structural components will be free from defects in materials and workmanship for ten years from the date of shipment from AQC. This warranty applies only if equipment is properly installed, maintained, and operated under normal conditions and does not apply to damage caused by corrosion, abrasion, abnormal use or misuse, misapplication, or normal wear and tear. This Warranty will be void with respect to equipment that is subject to unauthorized repairs or modifications. AQC makes no warranty as to goods manufactured or supplied by others. This warranty is subject to any limitations in AQC quotation and may not be modified except by a written instrument signed by the President or Vice President of Sales of AQC.

THIS WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, WHETHER WRITTEN, ORAL OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NONINFRINGEMENT.

As purchaser's exclusive remedy for any defects in the equipment, AQC will exchange or repair any defective parts during the warranty period, provided such parts are returned, prepaid, to AQC factory. The obligation of AQC is limited to furnishing replacement parts F.O.B. AQC factory or making repairs at AQC factory of any parts that are determined, upon inspection by AQC to be defective. In no event will AQC be responsible for labor or transportation charges for the removal, reshipment of reinstallation of the parts.

IN NO EVENT WILL AQC BE RESPONSIBLE FOR ANY SPECIAL OR CONSEQUENTIAL DAMAGES.



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