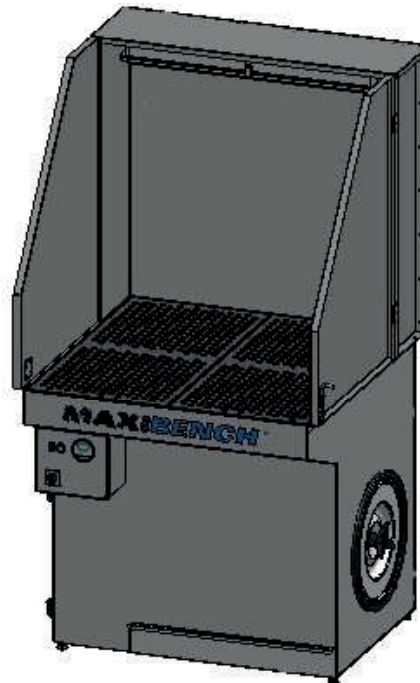




DUST COLLECTION
& SOURCE CAPTURE

Owner's manual for installation,
use and maintenance



MAXIBENCH™

MB-1000, MB-1000-CP, MB-3000, MB-4000

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.

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1 INTRODUCTION

This manual refers to the MAXIBENCH dust collector. It includes important information on the installation, function and maintenance of your downdraft table. You must read this manual thoroughly and apply all directives. You must also inform the personnel using the dust collector about the safety measures and maintenance instructions.



WARNING!

MAXIBENCH is not designed to be used with combustible dust such as aluminum, magnesium and other reactive powders. An explosion would travel back through the grille and cause bodily injury to the worker. Contact A.Q.C. Inc. if you have any doubt as to the use of your dust collector.

Injuries or material damages may occur if the directives are not applied and/or followed.

2 INFORMATION ON THE DOWNDRAFT BENCH

Model: _____ Serial number: _____

Delivery date: _____ Date of installation: _____

Name of customer: _____

Address: _____

Accessories: _____

Other: _____

3 PRESENTATION

The Maxibench downdraft table is a self-contained, intermittent-duty dust collector, designed as a workstation for grinding, polishing, hand sanding and dry buffing applications.

Direct-drive, fan provides 200 fpm minimum face velocity across the punched steel work surface designed to hold up to 50-lb per square foot. Hinged side panels open to accommodate larger work pieces and manually operated pulse cleaning allows on-demand filter cleaning.

3.1 Each MAXIBENCH units include:

- Welded reinforced steel cabinet
- Filters and pre-filter metal mesh
- Fan/Blower
- Control panel for the fan and automatic cleaning system (if ordered)
- 3 step paint preparation: degreasing, primer and polyurethane base paint final coat.

In option:

- Prewired controls
- Swing side and back panels
- Fluorescent light fixture
- Pulse cleaning system



WARNING!

Combustible materials such as buffing lint, paper, wood, metal dusts, weld fume, or flammable coolants or solvents represent potential fire and/or explosion hazards. Use special care when selecting, installing, and operating all dust, fume, or mist collection equipment when such combustible materials may be present in order to protect workers and property from serious injury or damage due to a fire and/or explosion. Consult and comply with all National and Local Codes related to fire and/or explosion properties of combustible materials when determining the location and operation of all dust, fume, or mist collection equipment.

4 PURPOSE AND INTENDED USE



WARNING!

Misuse or modification of this equipment may result in personal injury. Do not misuse or modify. The Downdraft Bench provides excellent efficiency on nuisance dust generated in industrial operations, such as grinding, buffing and polishing, and hand-sanding operations.

Grinding: The Downdraft Bench has a baffle and filter that limits particles from directly impinging with the filter, reducing the risk of filter damage.

Buffing and Polishing: Buffing and polishing operations without rouges.

Hand Sanding: Light-duty hand sanding only. Avoid applications with explosive dust or welding operations. **Explosive Dust:** Not intended for use with explosive dust.

5 INSTALLATION

5.1 Inspection of the material

1. Inspect unit on delivery.
2. Report any damage to the delivery carrier.
3. Request a written inspection report from the Claims Inspector to substantiate claim.
4. File claims with the delivery carrier.
5. Compare unit received with description of product ordered.
6. Report incomplete shipments to the delivery carrier and you're A.Q.C representative.
7. Remove crates and shipping straps. Remove loose components and accessory packages before lifting unit from truck.
8. Check for hardware that may have loosened during shipping.
9. Use caution removing temporary covers.

5.2 Site Selection

The unit should be located on a secure, level surface capable of supporting the weight of the unit and the weight of materials placed on the unit.

The MAXIBENCH is a self-contained unit and requires no special installation accommodations.

5.3 Electrical connection



WARNING!

The electrical connection must be performed by a certified electrician and by following the local building rules and regulations. For safety measure, disconnect all electrical power prior to installation.

1. Make the electrical connections to the customer supplied safety disconnect switch, blower, and blower starter.
2. Turn power ON at source.
3. Turn the blower motor ON then OFF to check for proper rotation by referencing the rotation arrow located on the blower housing. A blower running in the wrong direction will still deliver approximately 40% of its rated air volume making proper rotation extremely important.

To reverse rotation, single-phase power supply: Follow manufacturer's instructions on the motor's nameplate.

To reverse rotation, three-phase power supply: Turn electrical power OFF at source and switch any two leads on the output-side of the fan motor starter.

5.4 Reverse pulse cleaning (optional)

- If the unit is equipped in option with a manual operated reverse pulse cleaning system. Compressed air is released into the filter dislodging dust and smoke. Through a blue button on the front of table.
- A solenoid-operated air valve discharges a large blast of air through the filter cartridge on automatic models.
- Reverse pulse dislodging particles embedded in the filter media.
- If MAXIBENCH is equipped with the optional manually operated reverse pulse cleaning system, compressed. This is done by depressing a blue button at the front of the table.

5.5 Compressed air connection

Supply 80-90 psi of dry compressed air to the back of the unit.

- Quick disconnects and or other connections are to be supplied by end user.
- Installation of an air dryer is recommended. Moisture in your air line can damage filter.

Pulse Duration:

- For optimal performance, it is recommended that pulsing sequences should be performed 3 times a day on tables in OFF mode.

Note: Neglecting to pulse your filter regularly will reduce filter life.

5.6 Hinged Side Panels (optional)

The MAXIBENCH is equipped with optional right and left, lift-off hinged side panels. Open or remove panels when working with items too large or awkward for the work surface. Keep the panels closed under normal operating conditions.

6 START-UP

6.1 Check list

Before starting the collector for the first time, the steps listed below should be followed to ensure the collector will work properly.

1. Remove all objects in the vicinity of collector inlet and outlet.
2. Check for proper installation of all accessories and optional equipment.
3. Check that all remote controls are wired into the control system, and all service switches are in the OFF position.
4. Check that all optional accessories are installed properly and secured.
5. Turn power ON at source.
6. Turn the fan motor ON then OFF to check for proper rotation by referencing the rotation arrow located on the motor's mounting plate.

**WARNING!**

Do not look into fan outlet to determine rotation. View the fan rotation through the back of the motor. Check that the exhaust plenum is free of tools or debris before checking blower/fan rotation. Stand clear of exhaust to avoid personal injury.

6.2 Start/Stop procedure

- Once the electrical & pneumatic connections are made, unit is ready for start-up.
- Once the unit has been turned off allow for 30 seconds of downtime. Make sure compressed air is hooked up.
- Turn unit off and press the blue button to activate the cleaning system.
- Prior to operating, the unit should run freely for 10-15 minutes.

7 SAFETY MEASURES

7.1 Workers/Staff

All maintenance staff should wear protective clothing or apparatus such as goggles, gloves, breathing equipment or such devices before working inside the collector.

7.2 Electrical components

To avoid injuries, all electrical components must be shut off prior to inspection or servicing the unit. This procedure includes getting access to the filter section.

7.3 Explosive dusts

If stored dusts have an explosion or flammable risk once stored in dust storage compartment, an explosion relief venting system or a fire extinguishing device is necessary. Should you have any doubt concerning filtered dusts, contact A.Q.C. or its representative.

8 MAINTENANCE

Instruct all personnel on safe use and maintenance procedures.

Electrical installation must be performed by a qualified electrician and comply with all applicable national and local codes.

Turn power off and lock out electrical power sources before performing service or maintenance work.

Do not install in classified hazardous atmospheres without an enclosure rated for the application.

8.1 Operational checklist

1. Monitor the physical condition of the collector and repair or replace any damaged components. Routine inspections will minimize downtime and maintain optimum system performance. This is particularly important on continuous duty applications. With the compressed air supply ON, check the cleaning valves, solenoid valves, and tubing for leaks. Replace as necessary.
2. Monitor pressure drop across filters. Abnormal changes in pressure drop indicate a change in operating conditions and possibly a fault to be corrected.
3. Monitor exhaust.
4. Monitor dust disposal.

8.2 Cellulose Filter

The filters pulsing system is a successful way to clean the filter. Filter life is increased if system is pulsed regularly according to usage. Over a period of time, a visual inspection or a decrease in air flow may indicate that the filter be removed from the table for manual cleaning.

To manually clean the filter outside the table, follow these steps:

- Open covers on the right side of the table and slide out filters.
- Remove filter. The filter should then be held at its horizontal position so as to be tapped for removal of debris. This procedure may be done directly over a waste bag for easy disposal.
- Blow compressed air through the filter in the reverse direction of air flow. This should be done at the exterior of the shop (room) or in a well-ventilate area.
- Do not wet or clean the cartridge with any liquid, as it may cause the forming of unwanted blockage on the filter media. The filter may be weakened causing perforations to the media and ultimately damage of the blower.
- The filter needs to be replaced periodically. The filter life can range from 6 to 18 months depending on many factors ranging from type of application, density, particle size, humidity, oil, etc...

8.3 Dust Drawer

- The dust drawer should be emptied periodically. Perform visual inspections during the first few weeks of operation to determine proper dumping cycle.
- Periodically inspect the gasket to ensure proper sealing. Replace if needed.

8.4 Sparks Baffle Trays

- Spark baffle trays can be used dry, with water or sand depending on the table's application. Once a week a visual inspection should be done and trays emptied.
- Sludge may form upon contact of dirt and dust and should be removed before hardening. Removal of sludge may be performed with a spatula, and then the pans can be hosed down.
- Handle any contaminants present in the tray similarly to water or sludge. Pressure wash with hot water & detergent if needed.

Note: Use of water in the spark baffle tray is not suitable for all applications.

8.5 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 Maxibench unit. Avoid having this component may result in a fire in the filter cartridge.

1. Remove the punched steel work surface and the trays.
2. Remove the aluminum sparks trap filter.
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.

9 MAINTENANCE AND INSPECTION

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

| Frequency of inspections | Components | Procedures |
|--------------------------|-------------------|---|
| Daily | Downdraft Bench | Examine air outlet for possible dust or smoke accumulation. Refer to Troubleshooting section. |
| Weekly | Metal mesh filter | Metal mesh filters should be pulled out and either blown out with air (or washed) depending on how dirty they have become. Similar maintenance is required for spark baffle trays. |
| | Dust drawer | The dust drawer should be emptied. A visual inspection will allow you to determine the dumping cycle |
| Bi-Weekly to Monthly | Filter | Inspect the filter. Clean it or replace if needed. |
| | Fan / Motor | Verify that motor is well intact, bolts are firm, and the motor base is secured. With the machine off, manually turn the wheel to ensure no marks are seen. A minor adjustment may have to be made by a qualified technician. |

10 TROUBLESHOOTING

| Problem | Probable cause | Solution |
|-----------------------------------|---|--|
| Blower fan and motor do not start | Not wired correctly | Check if the unit is plugged. |
| | | Check and correct motor wiring for supply voltage. See motor manufacturer's wiring diagram. Follow wiring diagram. |
| | Electrical supply circuit down | Check power supply circuit for proper voltage. Check for fuse or circuit breaker fault. Replace as necessary. |
| Insufficient airflow | Fan rotation backwards | Proper fan rotation is clockwise from the top of the unit. The fan can be viewed through the back of the motor. |
| | Access doors open or not closed tight | Check that all access doors are in place and secured. |
| | Filter plugged | Check the filter. Clean or replace if needed. |
| | Dust storage area overfilled or plugged | Empty and replace the dust drawer when 2/3 full. |
| Pulse cleaning not working | Compressed air not is connected | Check the compressed is connecting to the table. The pressure must be between 80-90 PSI. |
| | Solenoids are not wired properly | Check wiring between the single shot timer and solenoids. |
| | Defective solenoids | Check if solenoids work properly. |
| | Single shot timer failure | Check the wiring diagram and verify all wires are correctly plugged. The timer must be set at 100ms. |

11 WARRANTY

- 11.1 **Coverage:** Aireau Quality Control Inc. or its designated affiliate (the "Seller") selling the product (the "Product"), warrants that the Product sold by Seller will be free from defects in material and workmanship for a period of 12 months from the date of its installation or 14 months from the date of shipment by Seller, whichever date is earlier (the "Warranty Period").
- 11.2 **Exceptions:** This warranty does not apply to any Product or portion thereof that: (i) has been used in a manner not in compliance with Seller's or manufacturer's documentation and instructions, (ii) has had changes, alterations or repairs made by a person other than a person authorized by Seller, (iii) has been improperly installed or used or has been installed or used contrary to applicable codes, standards, laws and regulations, (iv) has been subjected to improper storage, accident, neglect, misuse or abuse, (v) has been damaged during shipping, (vi) has been subject to damages resulting from normal wear and tear, (vii) has not been used with appropriate fire protection systems or explosion venting when required or (viii) has not been installed by a licensed contractor with experience in fire and explosion hazards and applicable codes, laws and regulations. For greater certainty, this warranty does not apply to filters sold as part of, or for use with, the Product. Unless specifically accepted otherwise in writing by Seller, Seller does not warrant that electrical equipment will comply with any laws or regulations of the customer's jurisdiction.
- 11.3 **Claims:** To benefit from this warranty, customer must notify Seller in writing of the Product defect, which notice shall include a reasonable description of the defect, within 10 days from the date such defect is discovered or ought to have been discovered.
- 11.4 **Remedy:** During the Warranty Period and subject to the terms herein, Seller will, at its option, either: (i) repair or replace the Product or any defective parts or components (except for filters) with Product, parts or components (except filters) free from defect or (ii) credit or refund the purchase price of the Product. If Seller so requests, customer must return the defective Product to Seller's place of business determined by Seller. Shipping, installation, removal and re-installation costs will be solely borne by the customer. **The foregoing shall be customer's sole and exclusive remedy for any defect in the product, its parts and components and for any breach of the warranty herein.**
- 11.5 **Disclaimer:** Except as set forth in this section 1, each of seller, its affiliates and their directors, officers, subcontractors and representatives (the "seller parties") disclaims all representations and warranties, whether written, oral, express, implied, statutory, or otherwise, including all implied warranties of merchantability, quality, fitness for a particular purpose, non-infringement, and warranties arising from a course of dealing, course of performance, usage, or trade practice and customer hereby expressly waives any right related thereto. Without limitation to the foregoing and except as expressly set out herein, the seller parties do not represent or warrant that: (a) the use of the product will be timely, uninterrupted or operate in combination with any other hardware, software, system or data or (b) the product will meet customer's intended use, requirements or expectations.

12 LIMITATION OF LIABILITY

- 12.1 **Limitation of Liability:** Notwithstanding anything to the contrary, in no event will the seller parties' liability arising out of, or related to, the product or its parts and components, whether pursuant to contractual or extracontractual liability, tort or under any other theory of liability, exceed the price paid to seller for the product giving rise to such liability.
- 12.2 **Exclusion of Consequential and Similar Damages:** Notwithstanding anything to the contrary, in no event will the seller parties be liable for any indirect, punitive, special, exemplary, incidental, consequential or other similar damages of any type or kind (including loss of revenue, profits, use or other economic advantage, damages due to product failure, work stoppage or delays in delivery) arising out of, or in any way connected to, the product or its use, breach of contract, tort (including negligence), strict liability, product liability, or otherwise, regardless of cause, even if the seller parties had previously been advised of the possibility of such damages or could have reasonably foreseen them.
- 12.3 **Fire and Explosion and Acceptance of Risk:** Customer acknowledges that improper installation or use of the Product may result in fire or explosion. To minimize such risks, proper installation, operation, and maintenance of the Product in accordance with all applicable codes, standards, laws and regulations is critical. Prior to installation and use, customer shall ensure that the Product meets the applicable codes, laws and regulations, including those related to the addition of appropriate fire protection systems or explosion venting. Installation shall be performed by a licensed contractor with experience in fire and explosion and applicable codes, laws and regulations.

13 APPLICABILITY

- 13.1 The terms herein constitute the only warranty given by Seller with respect to the Product. No other terms and conditions, whether included on a purchase order or in any other document, shall apply or bind the Seller with respect to the Product warranty and all such terms and conditions and documents are expressly disclaimed.

14 GOVERNING LAW

- 14.1 These warranty terms will be governed by and construed under the laws in force in the Province of Ontario, Canada, excluding its conflict of law rules.