



# Cross Ventilation Cartridge Dust Collector Owner's Manual

Model MCB



ENGINEERING **YOUR** SUCCESS.

# KNOW YOUR EQUIPMENT

READ THIS MANUAL FIRST.

Your MCB system should provide many years of trouble-free service. This manual will help you understand the operation of your MCB unit. It will also help you understand how to maintain it in order to achieve top performance. For quick future reference, fill in the system and filter information in the spaces below. Should you need assistance, call the Parker customer service number shown below. To expedite your service, have the following information available when contacting Parker.

Unit Order #: \_\_\_\_\_

Unit Model #: \_\_\_\_\_

Unit Serial #: \_\_\_\_\_

System Accessories:

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Installation Date: \_\_\_\_\_

Parker Hannifin Customer Service

1-800-343-4048

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## SAFETY PRECAUTIONS

We have provided many important safety messages in this manual and on the MCB unit. Always read and obey all safety messages.

This is the safety alert symbol.



This symbol alerts you to potential hazards that can kill or hurt you and others. All safety messages will follow the safety alert symbol and the word “DANGER”, “WARNING”, or “CAUTION”.

These words mean:



Indicates a hazardous situation which, if not avoided, will result in death or serious injury.



Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.



CAUTION used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

## IMPORTANT SAFETY INSTRUCTIONS



To reduce the risk of fire, electric shock, or injury when using your air cleaner, follow these basic precautions:

- Use two or more people to move and install the MCB system.
- The air cleaner must be properly grounded.
- Disconnect power before servicing.
- Replace all access panels before operating.
- Wear protective clothing and safety glasses when handling collection components or servicing the air cleaner.
- Electrical connections should only be made by qualified personnel, and be in accordance with local and national codes and regulations.
- Do not use in explosive atmospheres.
- Use nonflammable cleaners.
- Do not collect emissions which are explosive.
- Keep flammable materials and vapors, such as gasoline, away from air cleaner.
- The unit should be inspected frequently and dirt removed to prevent excessive accumulation which may result in flash-over or fire damage.
- The MCB system should not be used for support of personnel or material.
- Operate only in safe and serviceable condition.

# COMBUSTIBLE DUST HAZARDS – SMOG-HOG<sup>®</sup> and DUST-HOG<sup>®</sup> Pollution Control Systems

Pursuant to National Fire Protection Agency (NFPA) Standards, the owner/user is required to test their dust mixtures to evaluate and understand potential combustion or deflagration hazards that may exist. In addition, NFPA standards require the owner/user to perform and have record of a Dust Hazard Analysis (DHA) if there is potentially a combustible material involved within or exposed to the process.

The DHA serves as a systematic review of the process to:

- 1) Identify where fires and explosions can occur;
- 2) Identify the potential causes and consequences, and;
- 3) Determine if existing and proposed safeguards are sufficient.

It is the responsibility of the owner/user to evaluate, interpret and document any associated risk in their process including adherence and compliance to any and all applicable local, state and federal codes, standards, laws and regulations.

It is the sole responsibility of the equipment owner/user of record to coordinate and perform sample material collection and combustion/explosivity testing of any and all dust and material that will be extracted and filtered by the Air Pollution Control (APC) filtration equipment and to notify Parker of the results prior to any discussion involving equipment specification and solution recommendation. It is recommended to utilize a Certified Industrial Hygienist (CIH) or certified safety expert that is properly trained, licensed and approved and to use a licensed and approved dust testing facility for proper dust and material analysis, testing protocol and reporting procedures. A sample of testing facilities and list of Industrial Hygiene (CIH) and other occupational and environmental health and safety (OEHS) consultants can be located through AIHA (American Industrial Hygiene Association) website.

To minimize the risk of fire or explosion, user must ensure proper installation, operation and maintenance of Parker equipment. Since application, installation, operation and maintenance are beyond the control of Parker, Parker disclaims any liability or responsibility for damage from fires or explosions regardless of origin. Parker recommends that all APC dust collection equipment, installation and application conform to any and all applicable local, state and federal standards, codes, laws and regulations including the addition of appropriate fire or explosion protection systems including but not limited to venting, mitigation, suppression and isolation when and where required. Installation of Parker equipment should be by a licensed contractor that is also experienced in potential fire and explosion hazards and adheres to related local, state and federal codes, standards, laws and regulations. Parker is not an expert nor certified design consultant in relation to spark, fire or explosion mitigation including but not limited to detection, mitigation, suppression and isolation of combustible dusts and materials. Therefore, Parker recommends that any industrial air filtration system recommendation, design or solution be reviewed, approved, stamped and signed by an industry expert consultant in air filtration systems, combustible dust/materials or certified safety expert such as a Certified Industrial Hygienist (CIH) or a Certified Professional Engineer (PE) who is a licensed and certified expert with industrial filtration system design and application including adherence and compliance to any and all applicable local, state and federal codes, standards, laws and regulations.

If requested and ordered by the Buyer or owner/user and approved by Parker IOU engineering, sprinkler connection couplers may be supplied and factory installed with certain DustHog dust collector models such as the MCB, SDC, and SFC. The buyer or owner/user is responsible to supply, install and test the sprinkler head and any related or required fire control system devices, components or accessories. It is the responsibility of the buyer or owner/user to test functionality and operation of the fire control system including but not limited to correct water pressure, water leakage, correct installation, appropriate fire control system component location, correct operation and appropriate application while strictly adhering to any and all prescribed AHJ, OSHA, NFPA, Federal, State/Provincial and Local codes, standards, regulations and instructions applicable to industrial dust collectors, fire control systems and any related or required components and processes.

Pursuant to Parker's Offer of Sale (terms and conditions) and by accepting the purchased equipment, Buyer and owner/user agree to defend, indemnify, and hold harmless Parker, its successors, assignees, suppliers, shareholders, directors, officers, employees, agents, and affiliated companies from all losses, costs, damages, demands, claims, liabilities, fines, penalties or any other expenses (including attorneys' fees, court costs, and expert fees) (collectively "losses"), caused or contributed to in any way by Buyer or owner/user's failure to follow these instructions and/or failure to properly install, apply, operate, or maintain the equipment purchased from or supplied by Parker, or losses caused or contributed to in any way by Buyer's and owner/user's failure to provide accurate information, specifications or dust explosivity values.

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## 1. Important Notice

This manual contains important safety information and precautionary measures. Read this manual thoroughly and comply with the instructions given. It is impossible to list all potential hazards associated with every dust collection system in each application. Proper use of the equipment should be discussed with Parker Hannifin, Inc. or your local representative. Operating personnel should be aware of, and adhere to, the most stringent safety procedures.

### DANGER

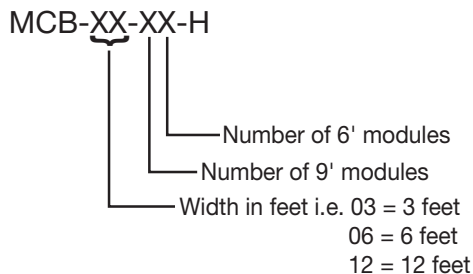
#### EXPLOSION HAZARD

- Avoid mixing combustible materials such as aluminum, paper, wood or other organic dusts with dusts generated from grinding metals. A fire hazard could develop from sparks entering the dust collector.
- When collecting emissions from spark-producing processes, care must be taken to reduce any potential fire hazards. System design should include methods to prevent sparks from entering the dust collector. Dust collectors do not contain fire-extinguishing equipment.
- Do not allow any machine operator to put lit cigarettes or any burning object into the dust collector.
- Your dust collector was selected for a particular application. Consult Parker prior to making any application or system changes.

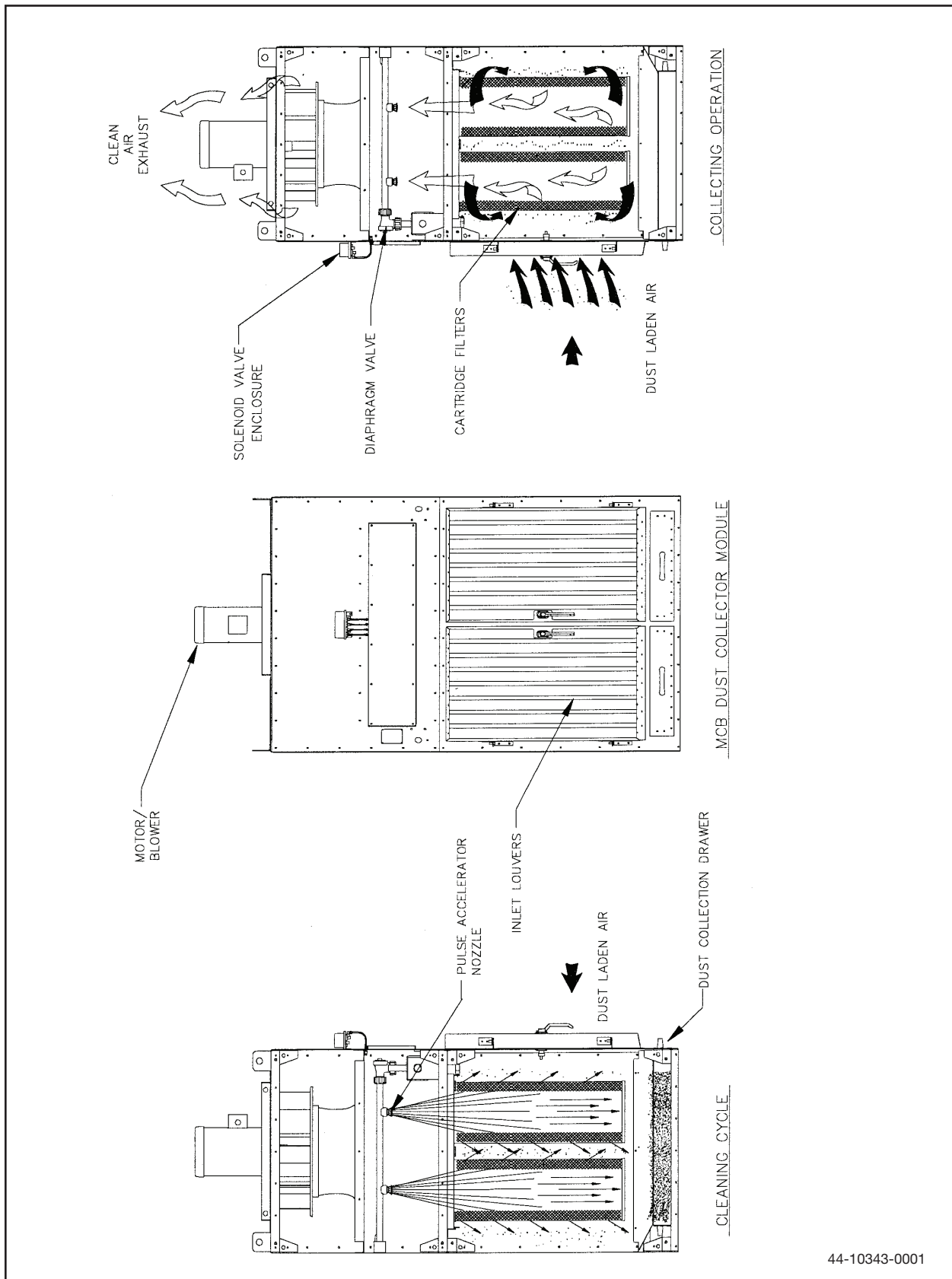
## 2. Introduction

Thank you for selecting Parker Hannifin dust collection equipment to assist you in your commitment to a clean and safe environment. We trust that in purchasing our product you have recognized our commitment to continually offer dust collection equipment engineered to each dust collection need and manufactured to the highest standards.

### 2.1 Unit Nomenclature



# MCB Series Cross Ventilation Dust Collector



44-10343-0001

Figure 1  
MCB Operation Detail



## 2.2 Description and Operation

MCB cartridge units are used for the collection of airborne dust and particulate. The MCB cartridge system provides continuous-duty air cleaning in the work environment or as part of your manufacturing process. As you review this manual, refer to Figure 1 and 2 for assistance in locating unit parts.

## 2.3 Air Filtering Operation

During the air filtering operation, contaminated air enters the MCB dust collector through the door louvers. The inlet louvers allow heavier particles to fall into the dust storage drawer. The contaminated air then passes through the cartridge filters. The filter media strips the dust from the airstream allowing only clean air to pass through the filter. The air then passes into the clean air plenum, through the fan enclosure and is discharged from the unit. Refer to Figure 1.

## 2.4 Filter Cleaning Cycle

During normal operation, the surface of the cartridge filters become loaded with contaminants. The reverse pulse cleaning mechanism provides brief bursts of compressed air, directed through cleaning nozzles, into the interior of the cartridge filters. This pulsing action dislodges the collected particulate from the media where it falls into the dust storage drawer.

### **Refer to Figure 1.**

During the cleaning cycle, two cartridge filters are cleaned at a time. The solid-state sequential timer actuates a solenoid valve which allows an air diaphragm valve to open for approximately 100 milliseconds.

High pressure air from the air manifold reservoir is directed through the cleaning nozzles to the cartridge centers. The quick blast of compressed air induces additional air from the clean air plenum which combine to produce a shock wave, dislodging the dust from the filters being cleaned.

The dislodged dust removed from the filters falls into the dust storage drawers. The remaining filters are cleaned sequentially. The sequencing is factory preset at 10-second intervals and is adjustable to adapt to your particular cleaning needs.

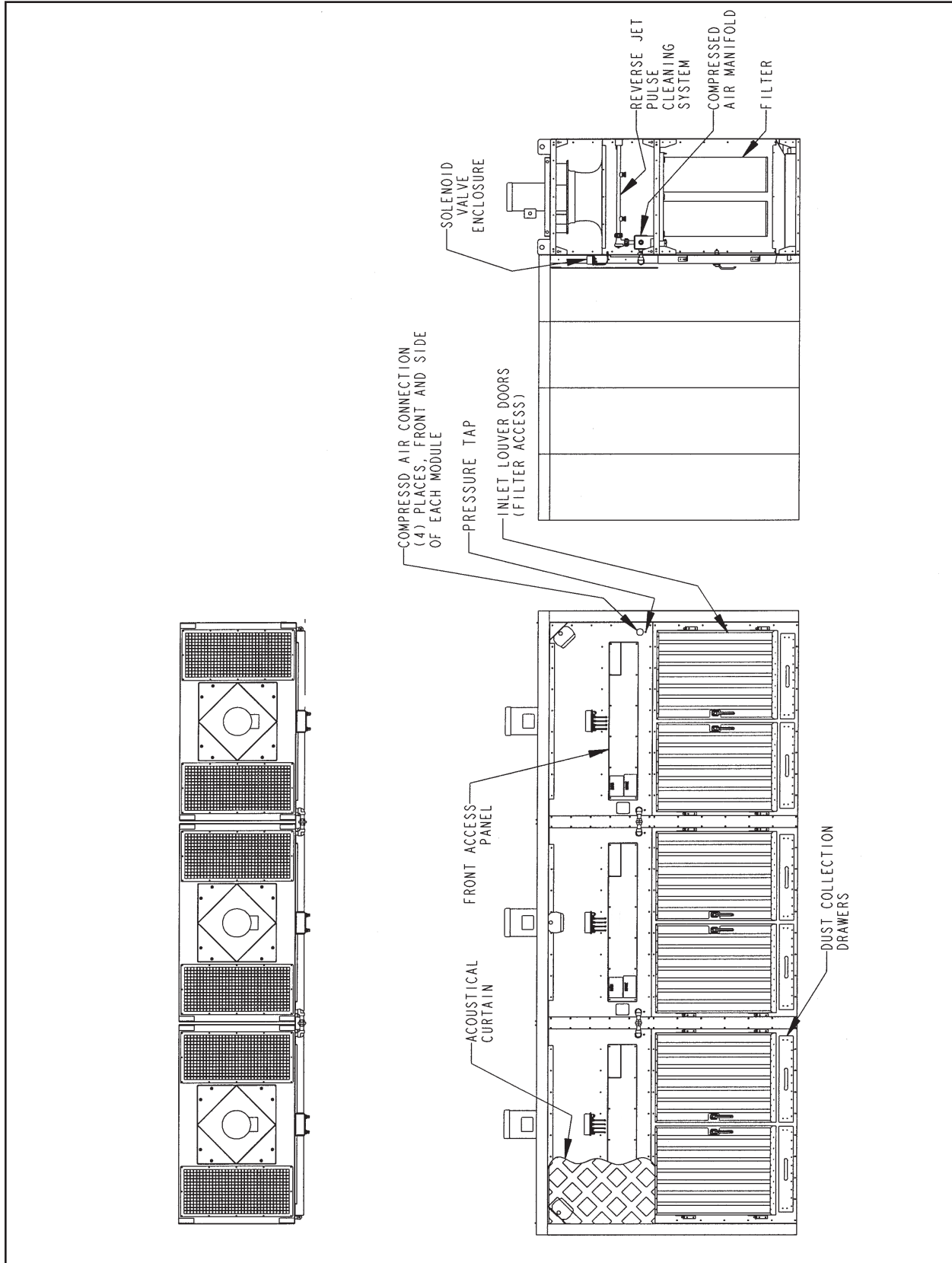


Figure 2  
Typical MCB Dust Collector With Booth Enclosure Installation

### 3. Specification Tables

#### MCB 3 Foot Modules

Unit	CFM	# Filters	Total sq. ft. of Media	Face Velocity (ft/m)	Power (HP)	Weight (lb)
MCB-03	4,000	4	1,360	200	3	1080

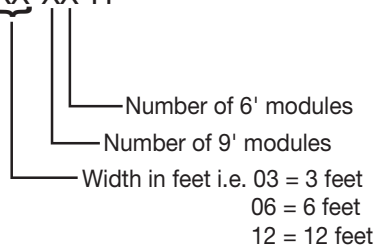
#### MCB 6 Foot Modules

Unit	CFM	# Filters	Total sq. ft. of Media	Face Velocity (ft/m)	Booth Size W'xH'xD'	Power (HP)	Weight (lb)
MCB-06-01-H	9,500	8	2,720	200	6x7.5x8	(1) 7.5	1725
MCB-12-02-H	19,000	16	5,440	200	12x7.5x8	(2) 7.5	3450
MCB-18-03-H	28,500	24	8,160	200	18x7.5x8	(3) 7.5	5175
MCB-24-04-H	38,000	36	10,880	200	24x7.5x8	(4) 7.5	6900

#### MCB 9 Foot Modules

Unit	CFM	# Filters	Total sq. ft. of Media	Face Velocity (ft/m)	Booth Size W'xH'xD'	Power (HP)	Weight (lb)
MCB-09-10-H	11,500	12	4,080	200	9x7.5x8	(1) 10	2400
MCB-18-20-H	23,000	24	8,160	200	18x7.5x8	(2) 10	4800
MCB-27-30-H	34,500	36	12,240	200	27x7.5x8	(3) 10	7200
MCB-36-40-H	46,000	48	16,320	200	36x7.5x8	(4) 10	9600

#### MCB-XX-XX-H



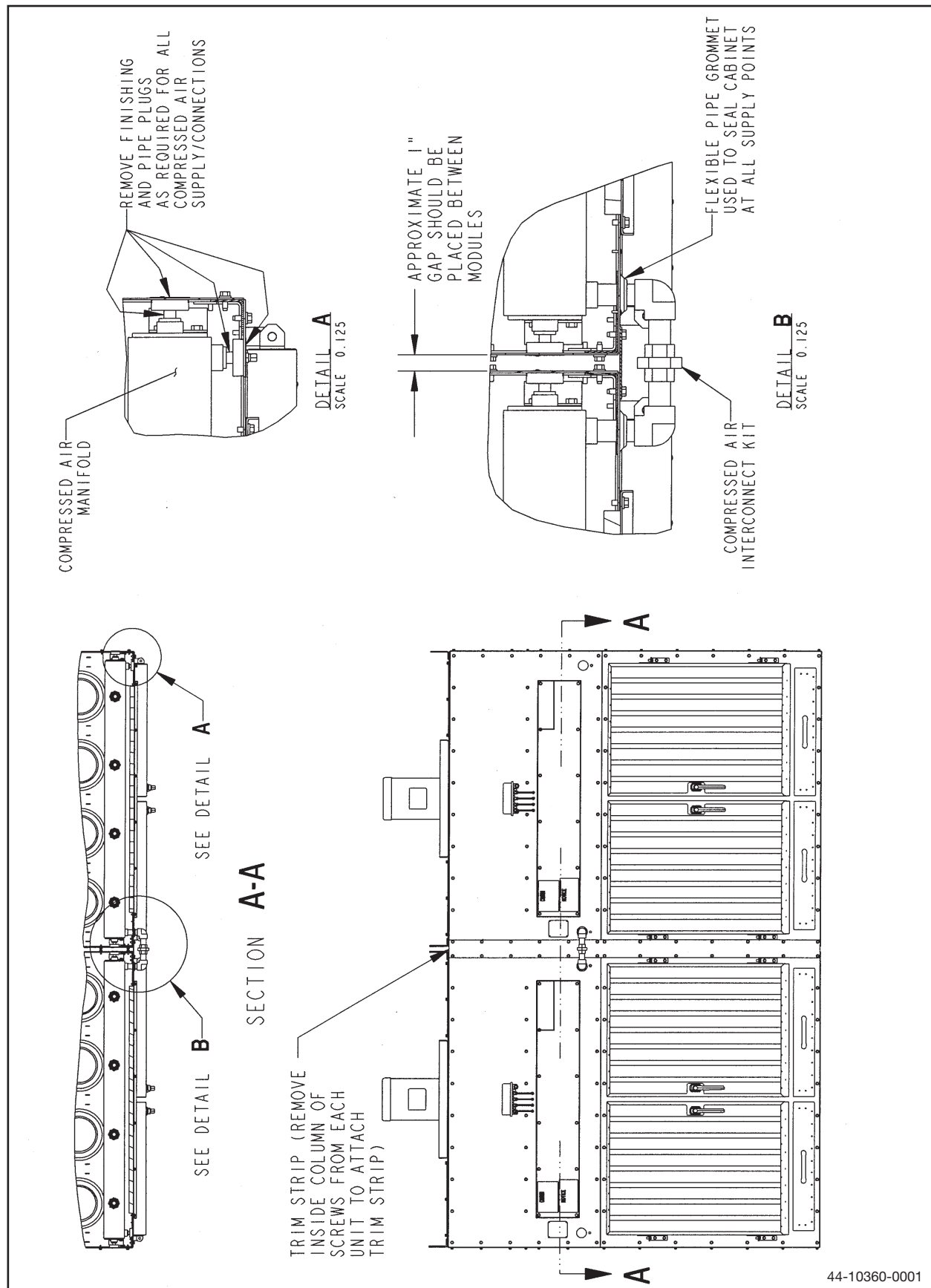


Figure 3  
MCB Installation Detail

## 4. Installation

### 4.1 Off Loading and Inspection

Parker Hannifin recommends using a forklift during unloading, assembly and installation of the MCB dust collector. A crane can be used for the individual modules. Lifting lugs have been provided for each module.

#### WARNING

For lifting slings, use spreader bars and clevises, not hooks. Do not lift the unit from any point other than the lifting lugs. Connect the lifting sling to the four cabinet lifting lugs to distribute the load equally.

Upon receipt of your unit, check for any shipping damage. A damaged carton indicates that the equipment may have received rough handling during shipping that may have caused possible internal damage. Notify your delivery carrier and enter a claim if any damage is found.

### 4.2 Installation Planning

#### WARNING

MCB dust collectors are not designed as explosion proof and/or spark resistant units. Do not locate dust collector near dust source in cases where the dust is explosive or a fire hazard.

For best installation and operation results, the MCB booth should be installed on a flat concrete foundation inside the factory. If the surface is not flat, modules and booth walls must be shimmed to align bolt holes.

When calculating for the foundation, the weight of the dust collector, material collected, MCB booth and all auxiliary equipment must be considered together for seismic loads. Refer to individual specification drawing for the MCB weight.

Choose the collector module location with consideration for access to the dust collector, access to the dust storage drawers located inside each module, creation of the shortest run for electrical and air connections, and ease of maintenance. If hazardous dust is involved, consult local authorities for the best location for the unit.

### 4.3 Module Installation

Each module comes in a 3', 6' or 9' module width and can be installed on either end or center interchangeably. The booth assembly builds upon the modules, therefore, it is important to locate the modules on a flat surface. Refer to Figure 3 for assistance for both the module and compressed air connection.

1. Position one of the modules as an "end unit" with the inlet louver side facing the inside of the booth. No rear or side access is required for the MCB dust collector so the modules can be placed with the rear or side against a wall if necessary.
2. If multiple modules are to be installed, the modules need to be spaced with a 1" gap between side panels. A Parker supplied trim strip will bridge the gap between the units.
3. To install the trim strip, remove all fasteners on the front panel of the adjoining corner from both cabinets. Locate the trim strip so as to match the cabinet bolt pattern and re-fasten the screws. Repeat as necessary for additional modules.

#### 4.3.1 Compressed Air Connection

### CAUTION

Shut off and slowly release the pressure in the compressed air piping and/or the MCB compressed air reservoir manifold prior to servicing this equipment.

1. Each MCB dust collector comes with four possible compressed air supply points: two on the air inlet side and two on the side panels of each module. Each cabinet connection point is covered with a removable finishing plug. To remove the plugs, remove the front access panel and simply tap the plugs out from the inside of the cabinet.
2. Within the cabinet each side of the compressed air manifold is equipped with (4) plugged, 1" NPT couplings. After selecting the appropriate connection points, remove the corresponding plug(s). Adjoining modules are supplied with a piping connection kit as shown in Figure 3 to supply air to each module. Pipe plugs can be removed using a wrench on the inside of the cabinet through the access panel or by using a 15/16" socket wrench through the cabinet holes vacated by the finishing plugs.
3. Check the nylon tubing which runs between the solenoid enclosure and bulkhead fittings then finally to the diaphragm valves to ensure the fittings hold the tubing firmly in place.

### CAUTION

Do not allow water and/or oil from the compressed air system into the compressed air manifold on the unit. To ensure a water-free air supply, a water filter with automatic drain or a condensation trap with automatic drain must be installed just before the piping enters the MCB unit.

4. Clean, dry, 90-110 PSIG compressed air is required for the pulse cleaning system to properly function. A shut-off valve, pressure regulator and pressure gauge should be installed close to the unit. Parker Hannifin recommends dedicated oil and water removal filters be used to ensure clean, dry air is delivered to the pulse system. Contact your local representative for information on the Parker Hannifin, Inc. pneumatic valve kit. Refer to Figure 3 for compressed air piping connection.
5. Parker recommends 1" diameter air line to supply the unit. A flexible pipe grommet is provided to seal the cabinet once the connection is made. Refer to Figure 3.

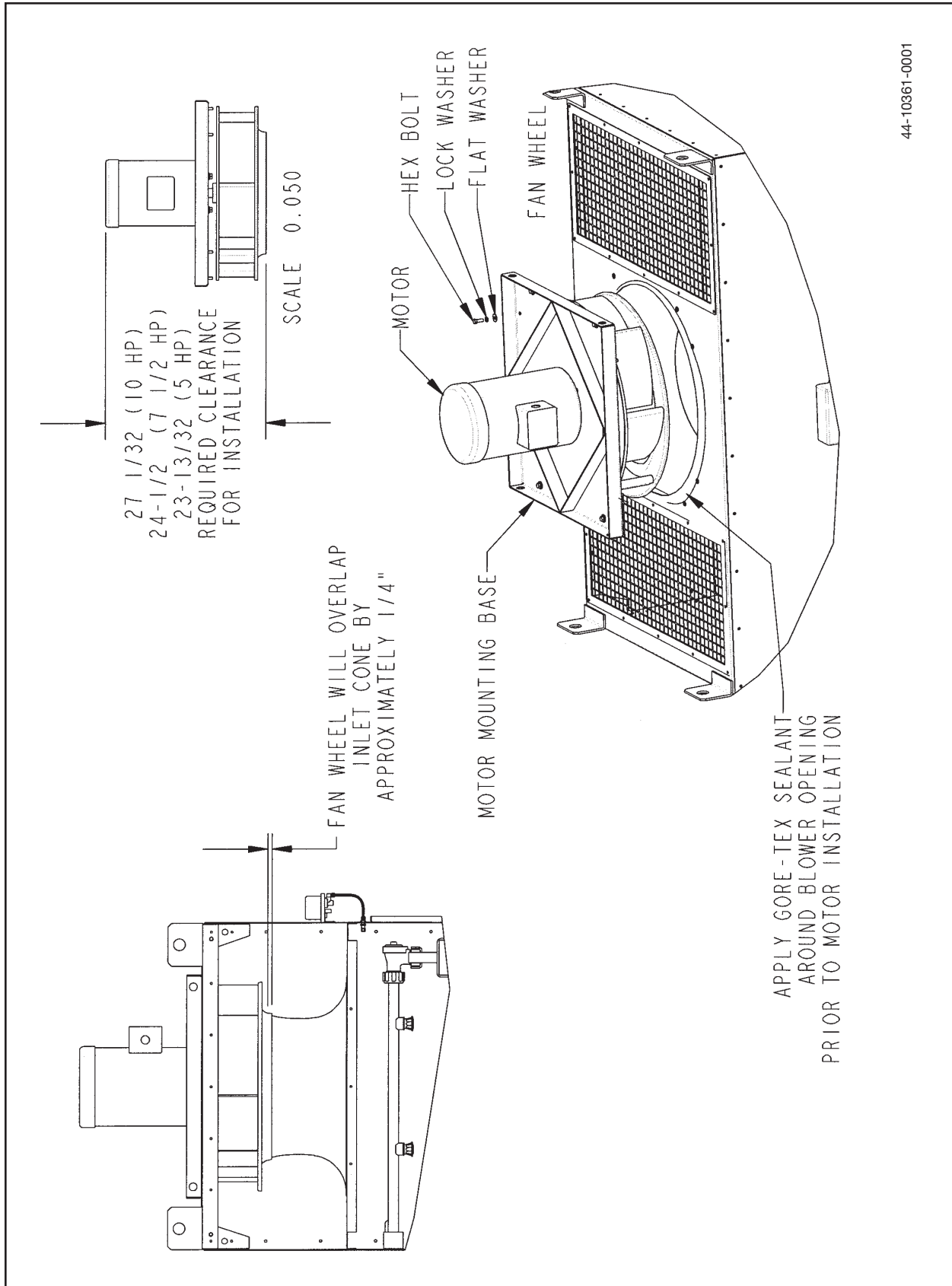
#### 4.4 Motor/Blower Installation

1. The MCB is provided with a blower that is shipped separately. The blower package contains the motor, motor mounting plate, fan wheel, gasket and mounting hardware.
2. The blower assembly mounts on the top panel of the MCB cabinet with the fan wheel inside the cabinet. Using provided hardware, mount the blower as shown in Figure 4. There should be a 1/4" overlap of the wheel and cone.
3. The motor and wheel should be rotating in a clockwise direction when looking directly down onto the motor (drive side).

### CAUTION

To avoid wheel damage, never rest the assembly on the fan wheel.

4. Note: Orientation of blower assembly. The electrical connection box should face the front (door-side) of the unit.
5. Prior to start-up, rotate the blower wheel after assembly to ensure there is no interference with the inlet cone.



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Figure 4  
 Motor Installation Diagram

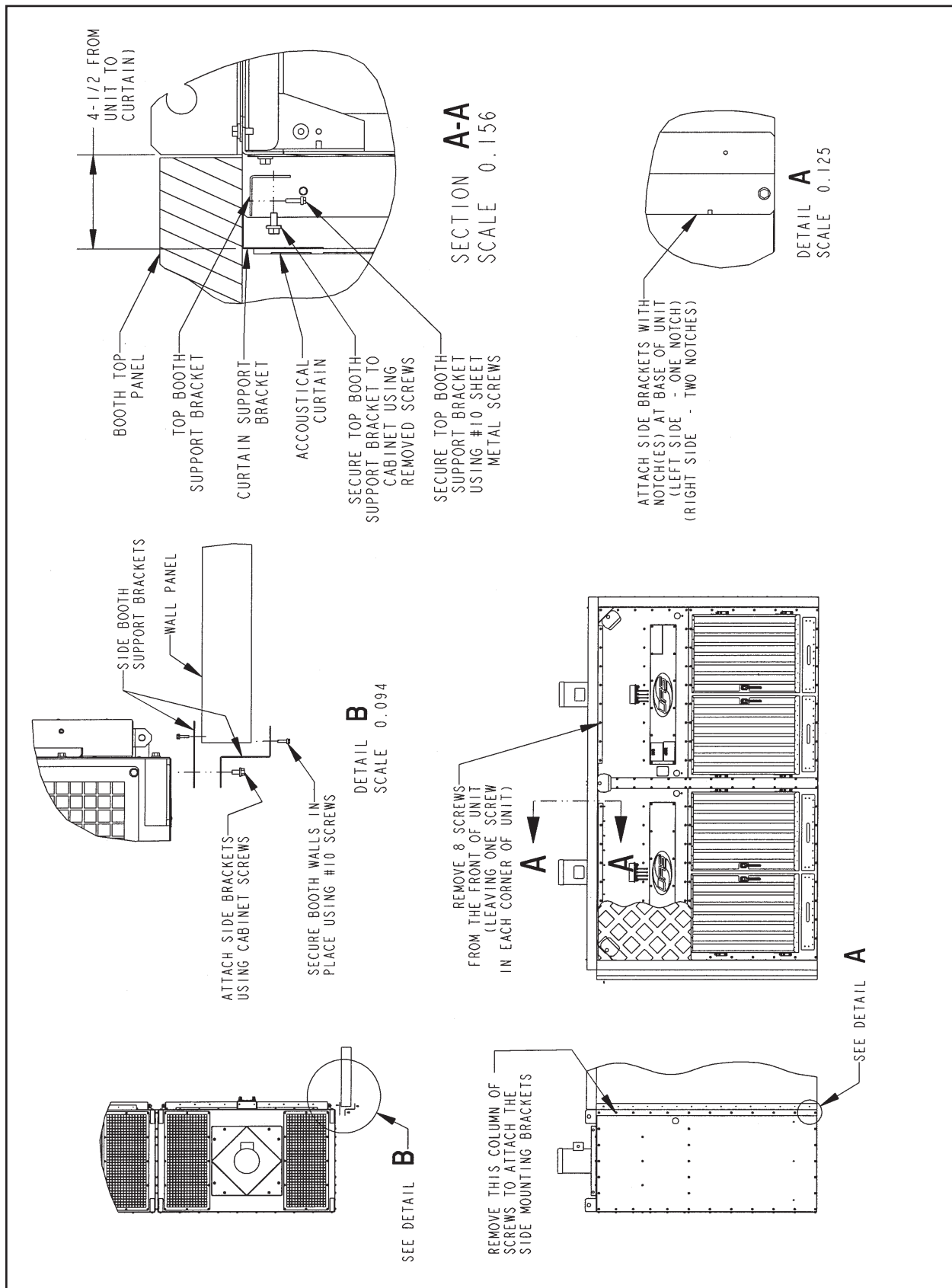


Figure 5  
MCB Booth Assembly



## 4.5 Booth Assembly/Installation

Refer to the booth installation drawing in Figure 5 for set-up and assembly.

### 4.5.1 Wall/Roof Panel Assembly

1. On the "end" modules, remove the column of fasteners towards the inlet side of the module. Place the spacer strip between the wall mounting bracket and the cabinet and then replace the fasteners. The right wall bracket has two notches near the bottom of the bracket, where the left wall bracket only has one. See Figure 5.
2. On the inlet side of all modules, remove the top row of fasteners excluding the ones holding the trim strip in place. Locate the top panel support bracket, using the fasteners attach to each module.
3. Starting at a corner, lay the wall base channel in place, squared to the unit and against the vertical corner channel. Sections of the base channel should fit tightly together. Secure with drive nails on 18" centers along the center line of the base channel. If anchor bolts are used, locate 5/16" anchor bolts on 18" centers with 3/8" bolt projection above the surface.
4. Insert wall panels into the base channel (with the perforated metal side toward the booth interior) of the first corner.
5. Insert next panel into base channel with tongue end mating with groove end on previously installed panel (refer to Figure 6). Panels are pushed together to allow snap-lock. Parker-provided caulking placed on the tongue self-locking recess will exude as panels lock together.
6. As each panel is installed, secure the base channel to each wall side panel with the Parker-provided #10 sheet metal screws.
7. Review the roof plan shown on the installation drawing provided with the unit and locate roof panels and front horizontal channel. Place roof panels in position, one at a time, and lock together in same method as side panels.

### 4.5.2 Booth Trim

1. Mount outside trim pieces in place using the Parker provided #10 sheet metal screws.
2. After all outside trim has been installed, install inside trim at wall-to-roof corners. Anchor the inside trim at all tongue and groove panel joints and at all internal panel stiffeners. Tighten all screws.

### 4.5.3 Acoustical Curtain

1. Secure the filter booth curtain bracket assembly in place on the top panel using 1/4-20 x 3/4" self-tapping screws. Tighten all screws.
2. Install acoustical curtains on the curtain bracket. Secure in place with 3/8" plastic cap nuts. Join the Velcro edges together.

### 4.5.4 Booth Lights

1. For the corner mounted lights, bolt the supplied mounting brackets through the booth roof and wall panels in four places with 5/16-18" x 2 1/2" bolts, lock washers and nuts. Place the brackets on 40-1/2" centers to match the lighting fixtures.
2. Bolt the fluorescent light fixture to the mounting brackets in two places each using 3/8" -16 x 3/4" bolts and lock washers with bolt heads inside fixture.
3. For booths wider than two modules, flat lights are provided. Bolt to roof panel in center of module with 3/8"-16 x 3/4" bolts and lock washers with bolt heads inside the fixture.

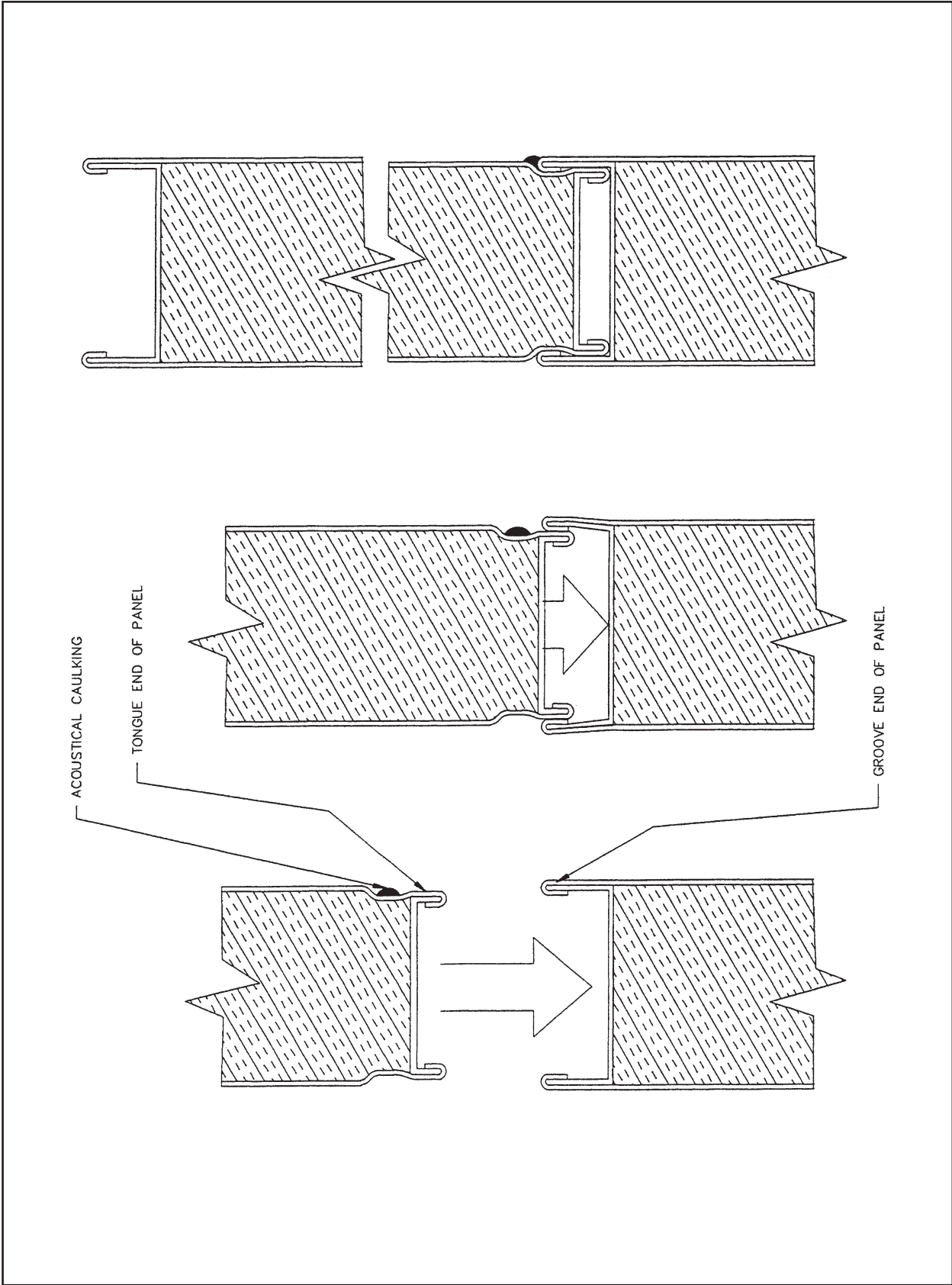


Figure 6  
Booth Panel Interlock Connection

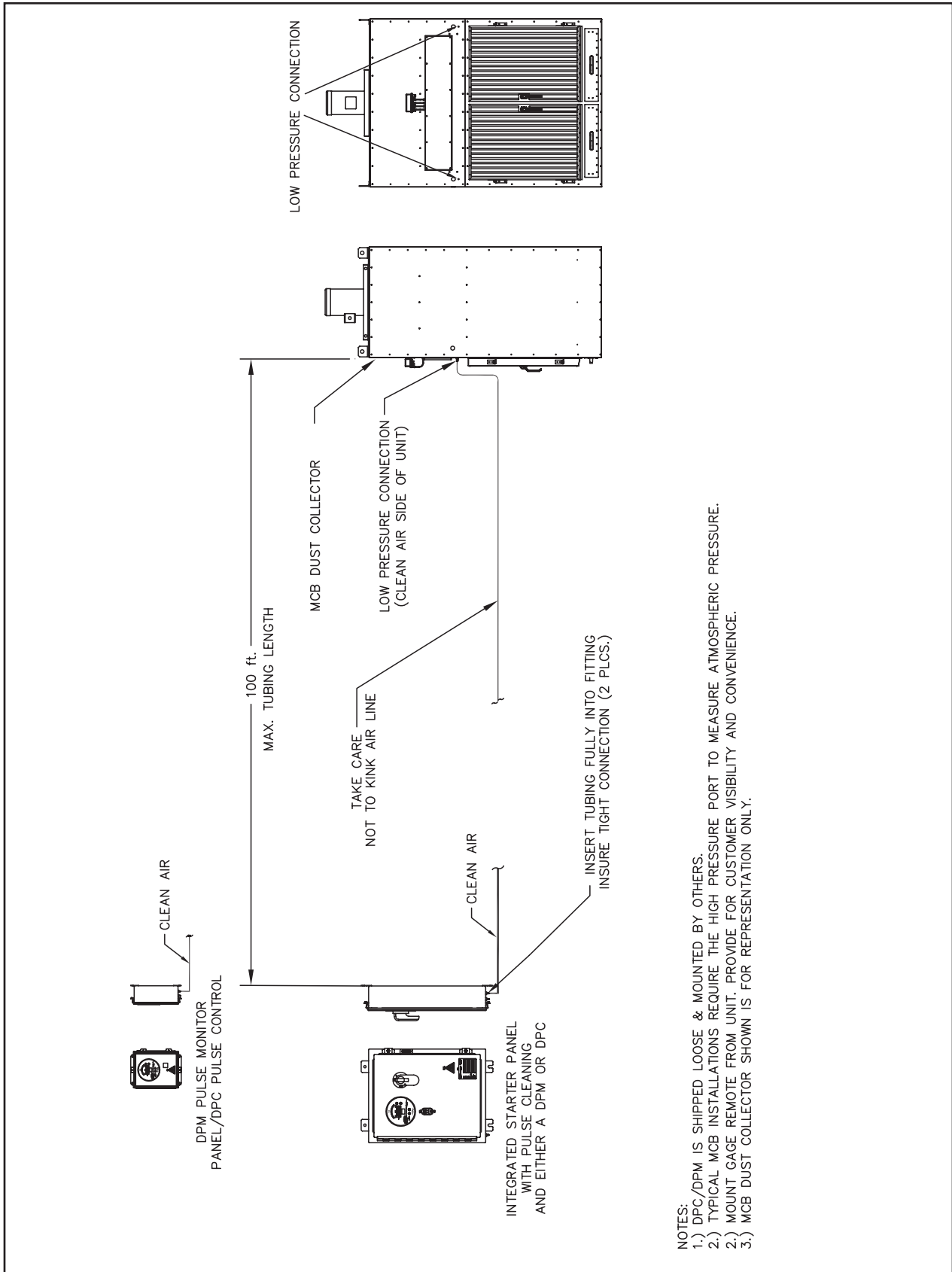


Figure 7  
MCB Pressure Gauge Installation

## 5. Electrical Installation

### CAUTION ELECTRIC SHOCK HAZARD

All electrical work should be performed by a qualified electrician in accordance with local electrical codes. Disconnect electrical power before installing or servicing any electrical component.

Several types of standard electrical components can be installed to control and monitor your MCB system, ensuring proper cleaning of the cartridge filters. A blower motor starter (combination starter panel) is required to start and stop the system. The motor starter circuit should consist of a properly sized, main fused disconnect or circuit breaker, short circuit protective device(s), contactor(s) and overload relay(s) for protection of the blower(s). A 115V/1PH/60Hz low voltage control (2 amp) circuit is required for the pulse control panel.

Any one of the following control configurations can be used:

- Motor starter(s) with a Digital Pulse Monitor for continuous pulse (DPM).
- Motor starter(s) with a Digital Pulse Control for setpoint pulse cleaning (DPC).
- VFD with DPM for continuous pulse cleaning.
- VFD with DPC for on-demand pulse cleaning.

Refer to Parker sales order to verify the number of motor branch circuits (number of modules) and the pulse control configuration purchased with your unit.

### 5.1 Mounting the Controls

#### CAUTION

Avoid mounting the cleaning panel on the collector due to vibration generated from blower assembly and the pulsing system.

Mount the combination starter panel for the fan motor control in a convenient location. The panel is provided by the customer, unless specifically ordered from Parker. Mounting hardware for a Parker combination starter panel is provided by the customer or contractor.

Mount the cleaning panel in a convenient location. It is recommended that the controls be mounted on a wall or pedestal in a convenient area subject to minimal vibration and electrical noise.

#### 5.1.1 Digital Pulse Monitor (DPM) Panel Installation

If your system was ordered with a Digital Pulse Monitor (DPM) panel, remove it from the box. Instructions for mounting and connecting the panel are available in the DPM/DPC Installation and Owner's Manual. The panel should be installed within close proximity of the unit as shown in Figure 7.

#### 5.1.2 Digital Pulse Control (DPC) Panel Installation

If your system was ordered with a Digital Pulse Control (DPC) panel, remove it from the box. Instructions for mounting and connecting the panel are available in the DPM/DPC Installation and Owner's Manual. The panel should be installed within close proximity of the unit as shown in Figure 7. The DPM/DPC panel requires field electrical connections.

#### 5.1.3 Final Connections for all Gauge Options

For all pulse control panels, connect the black, plastic pressure tubing (25' [7.5 meters] provided by Parker) from the clean air plenum of the MCB to the low pressure port (clean air) on the panel. The high pressure post/dirty air is vented to atmosphere.

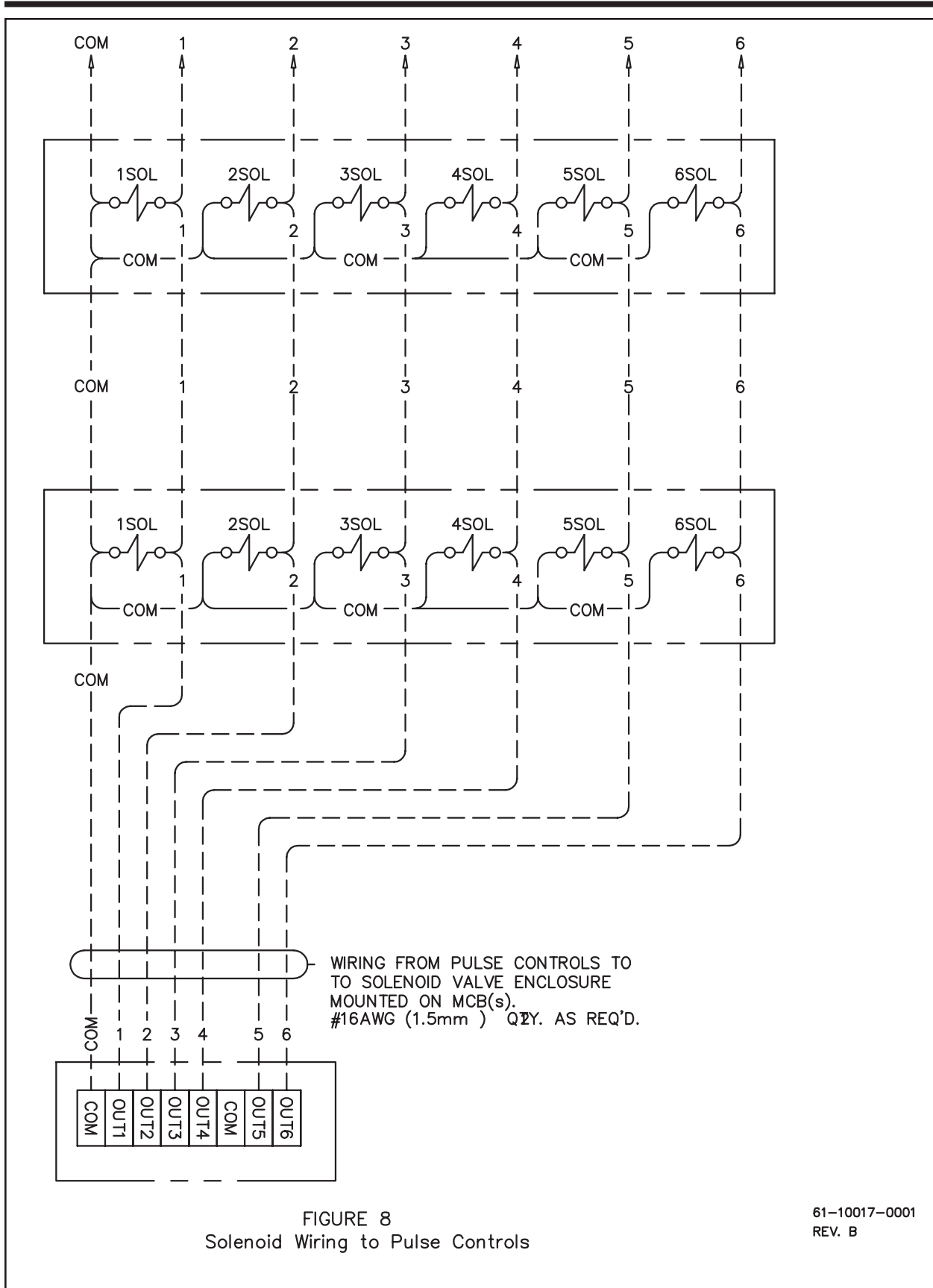


FIGURE 8  
Solenoid Wiring to Pulse Controls

61-10017-0001  
REV. B

Figure 8  
Solenoid Wiring to Pulse Controls

## 5.2 Electrical Connections for Booth Lights

Follow local codes for wiring lights in parallel. Light wiring and on/off switch are not provided by Parker. Mount the on/off switch in a convenient location.

## 5.3 Solenoid Valve Enclosure Wiring

The solenoid valves at the MCB must be wired correctly to the pulse control panel. Refer to Figure 8 when making connections from the pulse control panel to the solenoid valve enclosure(s).

The system pulses with "1" as the first pulse, "2" as the second pulse, "3" as the third pulse, etc. Unless specified on the Parker sales order, the customer will supply interconnecting material (conduit, wiring, etc.) from the pulse controls to the dust collector.

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## 6. Operation

### WARNING

Never operate the dust collector without the front access panel properly installed.

Prior to unit start-up, all installation set-up instructions must be completed as specified by this manual and DPM/DPC Controls Installation and Operation Manual, as well as any manuals supplied by other equipment manufacturers, as they apply to your dust collector.

## 6.1 Start-Up

1. Inspect the installation area and make certain no tools, parts, etc. have been left on or inside the MCB unit. Check each blower discharge to make certain it is free from all debris.
2. Open the louver doors and verify the filters are properly installed. See section 7.1 for filter installation.
3. Turn on the blower(s). On initial start-up, make certain the blower rotation is correct. All blower wheels rotate in a clockwise rotation as viewed from the drive end.

NOTE: Proper blower rotation is required to move the designed amount of air. A blower rotating in the incorrect direction will only move about 40% of design airflow.

4. Turn on the compressed air supply to the unit. Adjust the pressure regulator until the gauge reads 90-110 PSIG (6.2-7.7 BAR).
5. Check the exhaust. Exhausting air should remain visibly clean. If a leak develops, it will be first noticed after cleaning pulsation as a puff of dust.
6. Check the pressure differential reading on the pressure measurement device (DPM/DPC panel).
7. Check the cleaning system for proper operation.

The compressed air pressure should be between 90-110 PSIG (6.2-7.6 BAR). Parker' pulse control panels are factory set to pulse every 10 seconds. Refer to the DPM/DPC Installation and Operation Manual specified with the dust collector to change these initial settings. Check to ensure the pulse (diaphragm) valves are "firing" at approximately 10-second intervals and delivering a "crisp" sounding pulse to each filter. The valves should not deliver a weak or lingering pulse. To check the pulse sequence for proper firing, perform the following:

  - If your system is supplied with a DPM/DPC panel, place the "Continuous Clean/PS" switch on the timer board to the "Continuous Clean" position. The MOT AUX terminals at the timer board should be field wired for the pulsing to become active. To activate, energize the motor starter to close the isolated auxiliary contact wired to the timer board MOT AUX terminals. Verify consistent pulse firing of each solenoid valve exhaust port.

## 6.2 Operating Adjustments

Confirm the type of pulse cleaning controller delivered with the system.

The system is typically provided with one of the following:

- DPM Digital Pulse Monitor Panel
- DPC Digital Pulse Control Panel

NOTE: It is important that the compressed air pressure is in the 90-110 PSIG range (6.2-7.6 BAR) immediately prior to a pulse. If the delivery capability of your compressed air source cannot return the manifold pressure to above 90 PSIG during the "Pulse Delay" (factory set at 10 sec.) interval, adjust the pulse delay at the timer board and monitor the pressure. A longer interval will raise the operating pressure, which is the pulse delay. (Adjust from position 2 or position 3 on the timer board.) Allow sufficient time for the system to stabilize after each adjustment before further adjustment is made. Adjust until the desired pressure differential is reached.

### 6.2.1 Digital Pulse Monitor Panel (DPM)

The DPM is always set to "Continuous Clean" pulse mode, which means pulse cleaning is operating continuously when the system is on line. Refer to the DPM/DPC Installation and Operations Manual for detailed information.

### 6.2.2 Digital Pulse Control Panel (DPC)

The DPC is set for "Pressure Switch" or "PS" pulse mode. With the DPC, the desired pressure can be maintained by adjusting the high and low setpoints on the panel. The factory setting is 3.0 (high setpoint) and 2.5 (low setpoint). This allows a 0.5" "deadband" where the pulse system will maintain the desired pressure. The high and low setpoints on the DPC can be adjusted as the filters season and continuous pulsing occurs. Adjust setpoints upward in 0.5" increments until pulsing stops. Continue adjustments, when required, until the high setpoint reaches 5". No further adjustments should be made above 5" w.g.

## 7. Service

### DANGER

- Disconnect all electrical power to the unit and control panel.
- Shut off and slowly bleed the compressed air supply from the manifold.
- Collected dust may be hazardous. Consult proper authorities for handling and disposal.
- Collected dust may be a potential fire hazard.
- Grinding or operations involving open flames should not be performed without fire protection measures in place. Refer to Section 1 for additional precautions.
- Wear appropriate protective clothing when servicing the dust collector.
- Disposal of collected dust must be according to state and local environmental regulations.



### CAUTION

Shut off and slowly release the pressure in the compressed air piping and/or the MCB compressed air reservoir manifold prior to servicing this equipment.

## 7.1 Cartridge Filter Removal and Replacement

1. Protura<sup>®</sup> Nanofiber cartridge filters are the only replacement filters that will provide the highest level of performance expected from the dust collector.
2. Replacement cartridge filters should be ordered when the differential pressure across the filter is consistently above 5" w.g. (127 mmAq) or system airflow is inadequate. To order filters contact Parker at 800-343-4048.



3. To remove the filters:

	<h1>CAUTION</h1>
<p>The filter may be heavy due to the weight of the collected dust.</p>	



Figure a.

Lift the right handle out of the retaining clip as shown in Figure a.



Figure b.

Once the right handle has cleared the retaining clip, lower both handles to a vertical position as shown in Figure b.

Using the tab on the underside of the filter end cap, slide the filter out of the unit (also shown in Figure 2). Once the front filter is removed, reach back into the cabinet and remove the rear filter in the same manner.

4. To replace filters:

Place the Protura<sup>®</sup> cartridge filter with the square end cap resting on the locking bar rails. Slide the rear filter until running in to backstop at rear of cabinet. Place front filter on rails and slide into cabinet until filter touches rear filter.

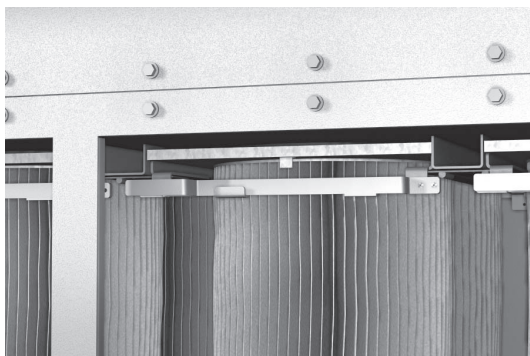


Figure c.

When both filters are in place, lift the left handle (pivoting counter-clockwise) into a horizontal position. Next, lift the right handle (pivoting clockwise) taking care that the retaining clip (on the backside of the handle) grabs the left handle. Finally, lift the right handle above the left handle retaining clip and rest in a horizontal position as shown in Figure c.

tube sheet and ready for operation.

The filters should be firmly compressed against the



## 7.2 Dust Drawer Removal



### CAUTION

Drawers may be heavy due to weight of collected dust

1. As the cartridges are cleaned, dust will collect in drawers located at the base of the module. Handles are provided on the front and rear of each drawer for easy handling.
2. When the drawers are full, simply remove from unit and empty contents.
3. To replace the drawers, align the “V-notch” (on the bottom of the drawer) with the tracks on the models base panel and slide the drawer in place.

## 7.3 Servicing the Direct Drive Motor and Blower Wheel

Periodically inspect the fan blades to ensure proper fan life. Grease the motor every 2,000 hours with high grade ball and roller bearing grease. The recommended grease is Chevron SRI#2.

Periodically inspect the fan wheel coupling mounting bolts for tightness. Re-tighten as necessary to ensure the fan wheel does not loosen and come in contact with and rub the inlet bell.

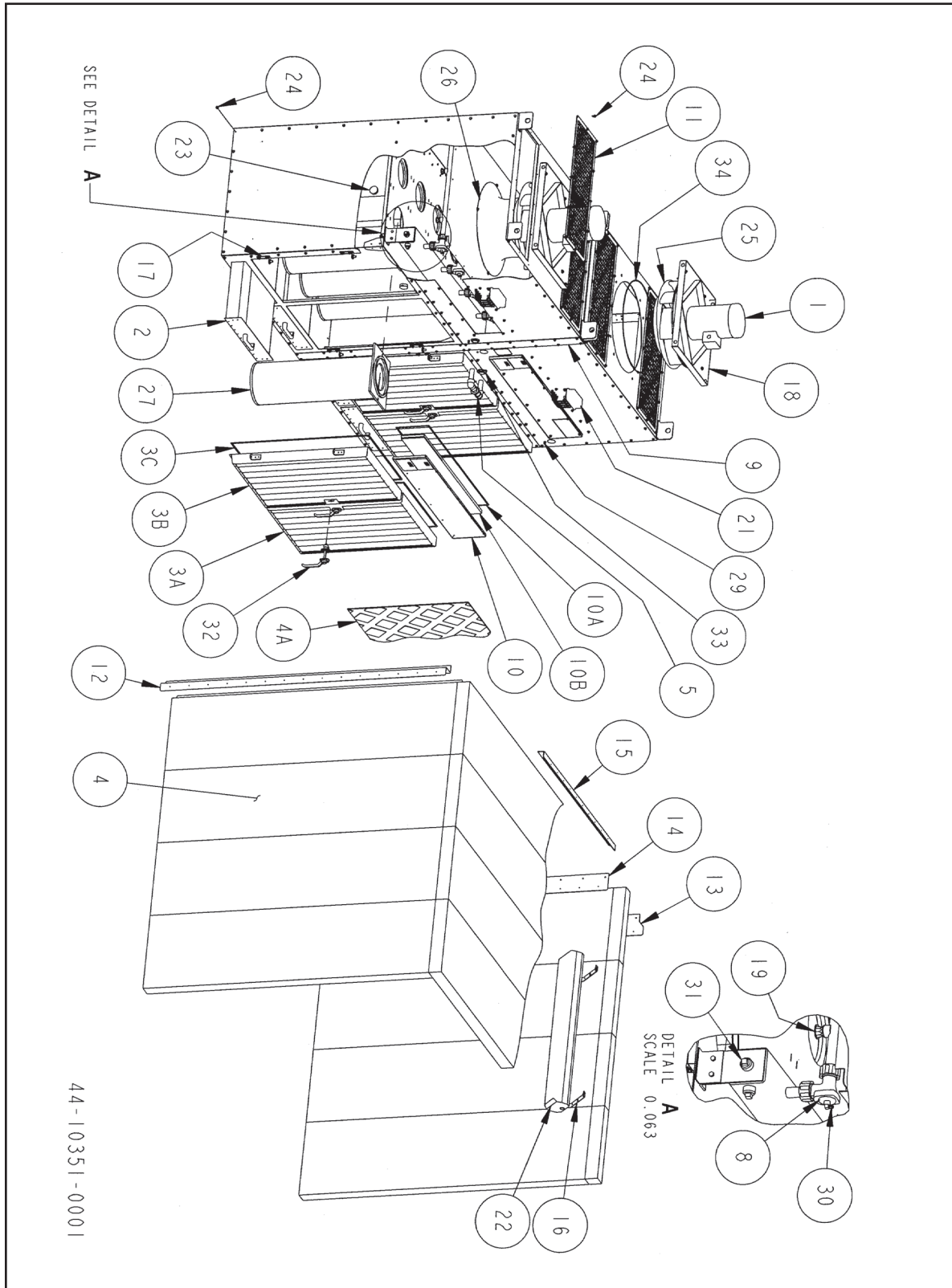
## 8. Troubleshooting Guide

Use the troubleshooting guide to correct any problems that occur with your dust collection unit. If the problem or condition continues, contact Parker customer service at 1-800-343-4048

Problem	Possible Cause	Recommended Solutions
Blower motor won't start or will not stay running	No voltage to system	Check primary voltage to motor circuits for proper voltage on all legs.
	Improper electrical wiring	Check and correct internal motor wiring for proper connections based on the incoming line voltage. Wiring diagram is found on lead access plate.
	Starter overloads tripped	Check for proper motor starter overload rating against full load amps on the motor nameplate. Adjust or replace overloads as required.
Dust emissions from clean air discharge	Filters installed improperly	Inspect and reinstall cartridge filters. Make sure the cambars are engaged.
	Filters damaged	Replace the damaged filter(s) with new Nanofiber <sup>®</sup> cartridge filters.
Insufficient airflow	Blower rotation is running in reverse	Ensure blower is circulating clockwise from drive side.
	Air inlet(s) obstructed	Inspect and clean all louver doors.
	Filters plugged	Refer to troubleshooting procedures for continual pressure drop.
Continual, excessive pressure drop (over 5") on filter monitor panel	Compressed air supply problems	Check incoming compressed air for proper pressure (90-110 PSIG [6.4-7.2 BAR]), pulse flow (1.7 SCF standard cubic feet [48.1 liters] per pulse) and pulse duration (100 milliseconds). Correct any problems.
	Pulse cleaning system not functioning properly	Check incoming 110-115 VAC power to cleaning control panel. Check for blown fuse on panel. Replace if necessary.
		Check for 110V output from timer board. If incoming voltage is correct and fuse is not blown, replace timer board.
	DPC Panel not adjusted properly	Refer to Section 6.2.2 of this manual for proper setting of DPC Panel.
	Pulse system not adjusted properly	Check for proper pulse valve operation. Replace damaged parts as required.
	Pulse settings incorrect	Adjust pulse duration to 0.100 seconds (position 3). Adjust pulse delay to 10 seconds (position 2).
	Filters are at the end of their service life	Replace filters with Protura <sup>®</sup> Nanofiber filters from Parker. Each cartridge filter has a part number affixed to the end cap.

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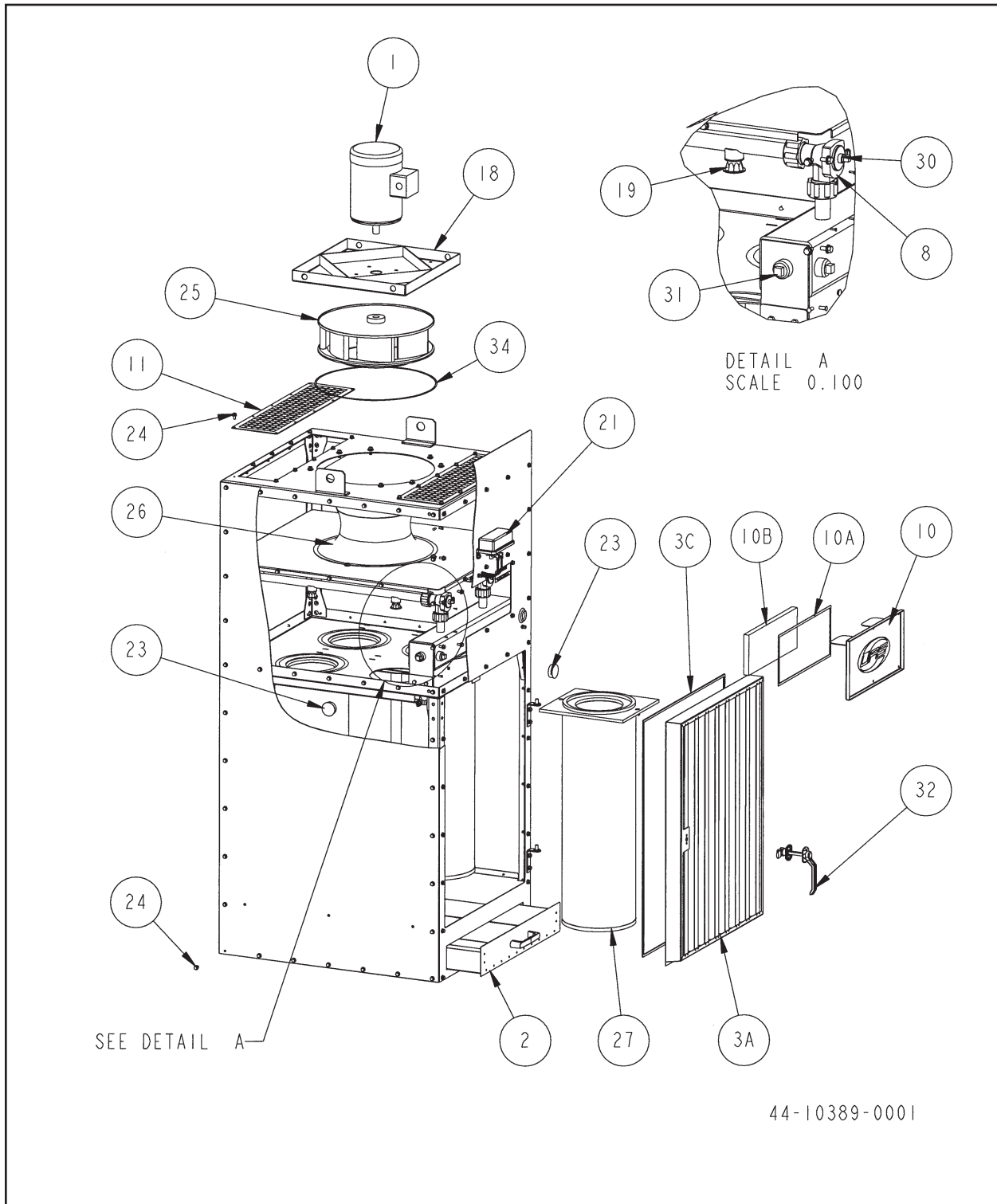
### 9. Illustrated Parts 6 and 9 Foot Wide Module



## 10. MCB Parts List For 6 and 9 Foot Wide Modules

Item No.	Part No.	Description
1	Consult Parker	MOTOR, 1750 RPM, (VOLTAGE & HORSEPOWER SPECIFIC TO UNIT)
2	02-10587-0001	DUST DRAWER ASSEMBLY
3A	02-10588-0001 02-10615-0001	RIGHT INLET LOUVER DOOR ASSEMBLY, 6' MODULE RIGHT INLET LOUVER DOOR ASSEMBLY, 9' MODULE
3B	02-10588-0002 02-10615-0002	LEFT INLET LOUVER DOOR ASSEMBLY, 6' MODULE LEFT INLET LOUVER DOOR ASSEMBLY, 9' MODULE
3C	42-0163	DOOR GASKET, NEOPRENE SPONGE
4	02-10612-XXXX	BOOTH ENCLOSURE (CONSULT Parker FOR MORE INFORMATION)
4A	(CONSULT Parker)	BOOTH ACOUSTICAL FABRIC
5	03-10419-0001	COMPRESSED AIR INTERCONNECT KIT
6	07-10010-A308	0-8" DPC GAUGE (Not Shown)
7	07-10009-A208	0-8" DPM GAUGE (Not Shown)
8	07-10002-0001	VALVE, DIAPHRAGM, 1" NPT COMPRESSION, DM25
8A	07-10003-0001	DIAPHRAGM VALVE REPAIR KIT, 1" NPT (Not Shown)
9	10-11330-0001	MODULE TRIM STRIP
10	18-10634-0001 18-10633-0001	MCB, ACCESS PANEL WDT, 9' MODULE MCB, ACCESS PANEL WDT, 6' MODULE
10A	42-0163	ACCESS PANEL GASKET, NEOPRENE SPONGE
10B	10-11347-0001 10-11347-0002	ACCESS PANEL, ACOUSTICAL FOAM, 6' MODULE ACCESS PANEL, ACOUSTICAL FOAM, 9' MODULE
11	10-11342-0001 10-11536-0001	AIR EXHAUST SCREEN, 6' MODULE AIR EXHAUST SCREEN, 9' MODULE
12	10-11457-0001	BOOTH, LEFT SIDE SUPPORT BRACKET
13	10-11457-0002	BOOTH, RIGHT SIDE SUPPORT BRACKET
14	10-11458-0001	BOOTH SPACER/SUPPORT BRACKET
15	10-11459-0001	BOOTH, TOP SUPPORT BRACKET
16	10-9774	MOUNTING BRACKET, LIGHTING FIXTURE
17	18-10525-0001	MCB, DOOR HINGE BASE
18	18-10527-0001	MOTOR/BLOWER MOUNTING PLATE
19	19-10016-0001	NOZZLE, PULSING SYSTEM
20	20-3048	PULSE TIMER BOARD (Not Shown)
21	20-1624-0504 20-1624-0806	SOLENOID ENCLOSURE, 4 POSITION SOLENOID ENCLOSURE, 6 POSITION
21A	20-10076-RPR	SOLENOID REPAIR KIT (Not Shown)
21B	20-10076-RPLC	SOLENOID VALVE REPLACEMENT (Not Shown)
22	20-1636	LIGHTING FIXTURE, 2-BULB FLUORESCENT
23	39-10015-2250	FINISHING PLUG, 2 1/4" DIA.
24	30-10054-0750	SCREW, HEX WASHER, 5/16-18 x 3/4 LG, SWAGEFORM
25	32-10032-XXXX	BLOWER WHEEL, (SIZE SPECIFIC TO UNIT)
26	32-10029-XXXX	BLOWER INLET CONE (CONSULT Parker)
27	33-10092-XX	CARTRIDGE FILTER (VIEW LABEL ON END OF FILTER AND CONSULT Parker)
28	38-0780	1/4" NYLON TUBING
29	38-0781	FITTING, BULKHEAD, UNION, 1/4" TUBING
30	38-0814	TUBE FITTING, 90 DEG ELBOW, 1/8" NPT MALE x 1/4" TUBE
31	38-0829	PLUG-PIPE, 1" NPT, BLACK IRON
32	39-10013-0001	LATCH/HANDLE, INLET LOUVER DOOR
33	42-10037-100P	FLEXIBLE PIPE GROMMET, 1" NPT
34	42-0080	BLOWER ASSEMBLY GASKET, GORE-TEX

### 11. Illustrated Parts 3 Foot Wide Module



12. MCB Parts List  
For 3 Foot Wide Modules

Item No.	Part No.	Description
1	Consult Parker	MOTOR, 1750 RPM, (VOLTAGE & HORSEPOWER SPECIFIC TO UNIT)
2	02-10587-0001	DUST DRAWER ASSEMBLY
3A	02-10588-0001	INLET LOUVER DOOR ASSEMBLY
3C	42-0163	DOOR GASKET, NEOPRENE SPONGE
6	07-10010-A308	0-8" DPC GAUGE (Not Shown)
7	07-10009-A208	0-8" DPM GAUGE (Not Shown)
8	07-10002-0001	VALVE, DIAPHRAGM, 1" NPT COMPRESSION, DM25
8A	07-10003-0001	DIAPHRAGM VALVE REPAIR KIT, 1" NPT (Not Shown)
10	18-10635-0001	MCB, ACCESS PANEL WDT, 5' MODULE
10A	42-0163	ACCESS PANEL GASKET, NEOPRENE SPONGE
10B	10-11656-0001	ACCESS PANEL, ACOUSTICAL FOAM, 3' MODULE
11	10-11657-0001	AIR EXHAUST SCREEN, 3' MODULE
18	18-10636-0001	MOTOR/BLOWER MOUNTING PLATE
19	19-10016-0001	NOZZLE, PULSING SYSTEM
20	20-3048	PULSE TIMER BOARD (Not Shown)
21	20-10076-0002	SOLENOID ENCLOSURE, 2 POSITION
21A	20-10076-RPR	SOLENOID REPAIR KIT (Not Shown)
21B	20-10076-RPLC	SOLENOID VALVE REPLACEMENT (Not Shown)
23	39-10015-2250	FINISHING PLUG, 2 1/4" DIA.
24	30-10054-0750	SCREW, HEX WASHER, 5/16-18 x 3/4 LG, SWAGEFORM
25	32-10032-31ST	BLOWER WHEEL
26	32-10029-XXXX	BLOWER INLET CONE
27	33-10092-XX	CARTRIDGE FILTER (VIEW LABEL ON END OF FILTER AND CONSULT Parker)
30	38-0814	TUBE FITTING, 90 DEG ELBOW, 1/8" NPT MALE x 1/4" TUBE
31	38-0829	PLUG-PIPE, 1" NPT, BLACK IRON
32	39-10013-0001	LATCH/HANDLE, INLET LOUVER DOOR
34	42-0080	BLOWER ASSEMBLY GASKET, GORE-TEX

## Product Warranty – SMOG-HOG<sup>®</sup> and DUST-HOG<sup>®</sup> Pollution Control Systems

1. Subject to the terms and conditions hereof, Parker-Hannifin Corporation (PARKER) warrants that major structural components on MCB, PNP, SDC, SFC, and SHM series will be free from defects in materials and workmanship for ten (10) years from the date of shipment from Parker. Subject to the terms and conditions hereof, warrants to the original Buyer of any Parker product (PRODUCT) installed and used as recommended by PARKER in normal service, that if the PRODUCT fails or is materially defective within twenty-four (24) months from date of installation or thirty (30) months from the date of shipment (whichever is earlier), of such PRODUCT, then PARKER, at PARKER'S sole option, will replace the PRODUCT with the same or equivalent PRODUCT, repair the PRODUCT or refund the original purchase price for the PRODUCT. Such replacement, repair or payment by PARKER shall be in complete satisfaction of any and all liability of PARKER and its agents with respect to such PRODUCT. Excluded from any Parker warranty are hose, electrical motors or consumable products such as flexible hose, belts, filter cartridges, filter media, ESP cells, electrical components, gasketing, or any component defined by PARKER as a consumable item.

2. Parker IGFG's warranty policy covers defects that are due to manufacturing quality. Equipment must be installed, commissioned and maintained in accordance with Parker IGFG recommendations as documented in the specific user manual related to your dust or wet collector product. This warranty does not cover defects due to poor environmental conditions, improper installation, or wear and tear items. This warranty shall be void in case of:

- a) Any buyer's modifications not explicitly approved by Parker IGFG Division,
- b) Misuse or failure in maintenance - not in accordance with Parker's product recommendations,
- c) Use of unauthorized or non-genuine Parker replacement parts,
- d) Damage caused by corrosion, abrasion, abnormal use or misuse, misapplication, or normal wear and tear,
- e) Equipment not properly installed, operated and maintained under normal conditions and recommended applications.

As Buyers exclusive remedy for any defects in the equipment, Parker will exchange or repair any defective parts during the warranty period, provided such parts are returned, prepaid, to Parker factory. The obligation of Parker is limited to furnishing replacement parts EXW Parker factory or making repairs at Parker factory of any parts that are determined, upon inspection by Parker, to be defective. In no event will Parker be responsible for labor or transportation charges for the removal, reshipment or reinstallation of the parts. Replacement parts will be provided via INCOTERMS EXW from Parker's Lancaster NY location. Parker makes no warranty as to goods manufactured or supplied by others.

3. THE FOREGOING IS THE ONLY WARRANTY, GUARANTEE OR REPRESENTATION OF ANY KIND MADE WITH RESPECT TO THE SUBJECT PARKER PRODUCTS. NO IMPLIED WARRANTY, INCLUDING ANY IMPLIED WARRANTY OF NONINFRINGEMENT, DESIGN, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, APPLIES TO THE PRODUCT, AND NO OTHER EXPRESS WARRANTY OR GUARANTY, EXCEPT AS MENTIONED ABOVE, GIVEN BY ANY PERSON, FIRM OR CORPORATION WITH RESPECT TO THE PRODUCT SHALL BIND PARKER. PARKER SHALL NOT BE LIABLE FOR LOSS OF REVENUES OR PROFITS, EXPENSE FOR SUBSTITUTE EQUIPMENT OR SERVICE, STORAGE CHARGES, OR ANY OTHER SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES CAUSED BY THE USE, MISUSE OR INABILITY TO USE THE PRODUCT REGARDLESS OF THE LEGAL THEORY ON WHICH THE CLAIM IS BASED, AND EVEN IF PARKER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. NOR SHALL RECOVERY OF ANY KIND AGAINST PARKER BE GREATER IN AMOUNT THAN THE PURCHASE PRICE OF THE PRODUCT SOLD BY PARKER AND CAUSING THE ALLEGED DAMAGE. WITHOUT LIMITING THE FOREGOING, YOU ASSUME ALL RISK AND LIABILITY FOR LOSS, DAMAGE OR INJURY TO YOU AND YOUR PROPERTY AND TO OTHERS AND THEIR PROPERTY ARISING OUT OF USE, MISUSE OR INABILITY TO USE THE PRODUCT NOT CAUSED DIRECTLY BY THE NEGLIGENCE OF PARKER. THIS LIMITED WARRANTY IS GIVEN ONLY WITH RESPECT TO A PRODUCT PURCHASED FROM PARKER OR AN AUTHORIZED PARKER DISTRIBUTOR.



4. IN NO EVENT IS PARKER LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES ARISING OUT OF, OR AS THE RESULT OF, THE SALE, DELIVERY, NON-DELIVERY, SERVICING, NON-COMPLETION OF SERVICES, USE, LOSS OF USE OF, OR INABILITY TO USE THE PRODUCT OR ANY PART THERE-OF, LOSS OF DATA, IDENTITY, PRIVACY, OR CONFIDENTIALITY, OR FOR ANY CHARGES OR EXPENSES OF ANY NATURE INCURRED WITHOUT PARKER'S WRITTEN CONSENT, WHETHER BASED IN CONTRACT, TORT OR OTHER LEGAL THEORY. IN NO EVENT SHALL PARKER'S LIABILITY UNDER ANY CLAIM MADE BY BUYER EXCEED THE PURCHASE PRICE PAID FOR THE PRODUCT.

5. Defective PRODUCTS must be documented via PARKER support "Case Number" within thirty (30) days after the date of the alleged failure or defect and within the warranty period by contacting Parker Technical Support via email or phone:

smoghog@parker.com or dusthog@parker.com  
800-343-4048, option 2

The claim must specify in reasonable detail:

- 1) Product Serial Number or Parker Sales Order # and approximate Date of Purchase;
- 2) Where or from whom the product was originally purchased;
- 3) Description of problem symptom;
- 4) Description of troubleshooting effort details;
- 5) Description of physical location and/or environment details. The Buyer shall cooperate with PARKER in its investigation and provide full information and documentation concerning the PRODUCT and its usage.

Upon receipt of the claim, Parker IGFG will review and determine if the parts replaced need to be returned for quality evaluation and root cause investigation. If a part is required to be returned, Parker IGFG will issue a Return Material Authorization (RMA) to Return via email. Parts should be returned to Parker IGFG, freight collect, within 45 days accompanied by the RMA packing slip placed on the package. If the repaired part does not need to be returned you will be advised to field scrap it and the claim will be processed. Proof of the defect (written description and pictures of the parts units in question) is required.

NOTE: ANY PART NOT RETURNED WITHIN THE REQUIRED 45 DAYS WILL NOT BE REIMBURSED ON THE CLAIM.

On claims that require repaired parts return, the claim will be processed after the part has been evaluated by the Parker IGFG Quality Department for verification of failure mode. The claims will be paid in the form of a credit to the customer's account. Parker reserves the right to withdraw any quotation or proposal or reject any purchase order without liability.

# Worldwide Filtration Manufacturing Locations

## North America

### Compressed Air Treatment

Industrial Gas Filtration and  
Generation Division  
Lancaster, NY  
716 686 6400  
[www.parker.com/igfg](http://www.parker.com/igfg)

Haverhill, MA  
978 858 0505  
[www.parker.com/igfg](http://www.parker.com/igfg)

### Engine Filtration

Racor  
Modesto, CA  
209 521 7860  
[www.parker.com/racor](http://www.parker.com/racor)

Holly Springs, MS  
662 252 2656  
[www.parker.com/racor](http://www.parker.com/racor)

### Hydraulic Filtration

Hydraulic & Fuel Filtration  
Metamora, OH  
419 644 4311  
[www.parker.com/hydraulicfilter](http://www.parker.com/hydraulicfilter)

Laval, QC Canada  
450 629 9594  
[www.parkerfarr.com](http://www.parkerfarr.com)

Velcon  
Colorado Springs, CO  
719 531 5855  
[www.velcon.com](http://www.velcon.com)

### Process Filtration

domnick hunter Process Filtration  
SciLog  
Oxnard, CA  
805 604 3400  
[www.parker.com/processfiltration](http://www.parker.com/processfiltration)

### Water Purification

Village Marine, Sea Recovery,  
Horizon Reverse Osmosis  
Carson, CA  
310 637 3400  
[www.parker.com/watermakers](http://www.parker.com/watermakers)

## Europe

### Compressed Air Treatment

domnick hunter Filtration & Separation  
Gateshead, England  
+44 (0) 191 402 9000  
[www.parker.com/dhfn](http://www.parker.com/dhfn)

Parker Gas Separations  
Etten-Leur, Netherlands  
+31 76 508 5300  
[www.parker.com/dhfn](http://www.parker.com/dhfn)

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+49 2054 9340  
[www.parker.com/hzfd](http://www.parker.com/hzfd)

Padova, Italy  
+39 049 9712 111  
[www.parker.com/hzfd](http://www.parker.com/hzfd)

### Engine Filtration & Water Purification

Racor  
Dewsbury, England  
+44 (0) 1924 487 000  
[www.parker.com/rfd](http://www.parker.com/rfd)

Racor Research & Development  
Stuttgart, Germany  
+49 (0)711 7071 290-10

### Hydraulic Filtration

Hydraulic Filter  
Arnhem, Holland  
+31 26 3760376  
[www.parker.com/hfde](http://www.parker.com/hfde)

Urzala, Finland  
+358 20 753 2500

Condition Monitoring  
Parker Kittiwake  
West Sussex, England  
+44 (0) 1903 731 470  
[www.kittiwake.com](http://www.kittiwake.com)

### Process Filtration

domnick hunter Process Filtration  
Parker Twin Filter BV  
Birtley, England  
+44 (0) 191 410 5121  
[www.parker.com/processfiltration](http://www.parker.com/processfiltration)

## Asia Pacific

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+66 2186 7000  
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Filtration Division  
Sao Paulo, Brazil  
+55 12 4009 3500  
[www.parker.com/br](http://www.parker.com/br)

Pan American Division  
Miami, FL  
305 470 8800  
[www.parker.com/panam](http://www.parker.com/panam)

## Africa

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