USER MANUAL

MG100
Ergo Grossing Station

Serial # : _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

Install date : _ _ _ _ / _ _ _ / _ _ _ _

Mopec
Better By Design™

21750 Coolidge Highway • Oak Park, MI 48237 USA
+1 800-362-8491 • 248-291-2040 • Email: info@mopec.com

TABLE OF CONTENTS

UNPACKAGING YOUR PRODUCT……4

INSTALLATION……..……..5
PRODUCT DRAWING
MG100 ROUGH IN……..7

INTRODUCTION ……..9
PRODUCT DRAWING
MG100 ……..……..10

FEATURES……11

Option Information……..……..……12

AIR HANDLING……..26

CLEANING AND MAINTENANCE
Disinfecting and Cleaning……..……..27
Clear Disposal Jam……..……..28
Lift Reset Procedure……..……...29
Filter information and evaluation……..……..30
Stainless Steel Care and Maintenance……....31
Parts……..…33
Preventive Maintenance……..……..34

WARRANTY……..……35

SAFETY LABELS……..……36

TROUBLE SHOOTING GUIDE……..…37

ELECTRICAL DIAGRAM……..…..38

UNPACKING

1) Carefully inspect the exterior of the shipping container before opening. If the crate is damaged and the product has sustained damage then immediately contact Mopec and the freight carrier. **Never discard the shipping container even if it is damaged beyond recognition.**

2) Have the delivery driver note any suspected damage on the Bill of Lading and sign it. Mopec will help assist in filing a claim for product repair and/or replacement.

3) Carefully open the containers and inspect the equipment for concealed damage. If visible damage is noticed (i.e. broken welds, dented stainless, scratches, etc.) follow through as noted above. Do not discard the shipping material. They are important in settling claims.

CAUTION: There are loose components in the packaging of your product. Be very careful in examining the packaging material as it may contain installation parts and/or product components.

INSPECTION

1) After carefully unpacking your Mopec grossing station please inspect the items in the list below prior to installing the unit. The Grossing station should be thoroughly checked for loose screws, defects, or damage that may have occurred during shipping or packaging.

MG100 Ultimate Grossing Station Installation Instructions

Locate package of smaller items (dissection board, tissue boxes, duct hose or filters)
When removing from the shipping platform, be careful if the unit has a foot pedal. The unit should be removed from the shipping platform as to not cause damage to the copper plumbing attached to the foot pedal

Leveling and Setting Unit in Place
The unit should be off the floor and resting on the leveling pads. The unit should be leveled to ensure proper drainage. This allows water to evaporate or dry in case of a leak without getting trapped by the base of the unit Ensure there is a Minimum of 8” from the wall to the back of the unit. This allows for elevating units to move freely without any obstructions to the wall.

Utility Connections
The only connections necessary are the Electric, Cold and Hot water supply, the drain connection and the HVAC connections if in house ventilation. If the disposal option is ordered the disposal will need to be installed prior to the electrical hook up. The unit is already pre wired and plumbed for the options ordered.

Electrical Connection
All electrical, water and ventilation stubs should be prepared in accordance with our rough-in dimensions shown on rough in diagram of this manual.

Open the access pane. Elevate the unit to its maximum upper position using the Vertical Position Switch. If ordered, install the optional disposal and make all connections that apply, including the additional 115V, Single Phase, 60 Hz, 20 Amp circuit to your electrical service. (This should be on a separate dedicated line.) Replace the access panels.

Each MG100 Ultimate Grossing Station has a three foot whip for attachment to the facility, unless a plug and cord are requested. The whip leads are labeled. And depending on the options selected there are either 3 wires or 5 wires. L1 and C1 are for the unit electrical options such as lights, lifts and fans if a recirculation unit. L2 and C2 are for the disposal.
115V Info

> **Without a disposal** there are three wires:
> Black Labeled as L1
> White Labeled as C1
> Green w Yellow Stripe Ground
>
> **With the Disposal** there are five wires
> Black Labeled as L1
> White Labeled as C1
> Green w Yellow Stripe Ground
> Red Labeled L2
> White Labeled C2

The flexible water tight conduit and connections is the preferred conduit and is not provided with the unit. This is due to an unknown length needed and variances possible in the rough in process. If the disposal option is purchased there MUST be two separate circuits for the two circuits on the grossing station. You must have separate circuits for the disposal and unit.

Drain Connection
The MG100 is equipped with 1.5” Diameter drain and connection. DO NOT modify the drain line or connections without contacting MOPEC first. The Units are built in accordance with the rough in drawings specific to the unit. The drain connection provided unless specifically requested otherwise is Orion Acid Waste Pipe 1.5” Diameter. The height is per the rough in drawings provided at the time of the order.

Water Supply Connection
The water supply connections are ½" DIA copper pipe. The unit has been cleared of water and debris during the manufacturing and testing of the unit. The rough in drawing for the unit suggests a 1/4 turn valve to be connected to the wall. This is to allow the water to be localized and disconnected should the need arise to work on plumbing in the future. Before connecting the unit to the facility water supply, check the lines in the facility for debris by flushing the lines for a moment. After the connections are made remove the aerator from the faucet and turn the water on and open the faucet and other water options after the faucet to allow any debris to evacuate the system. Then one option at a time, open the valves for the other water options (i.e. Perimeter Rinse, Spray Hose and then the Disposal). This is the time to look for leaks or other plumbing issues. The plumbing is tested for leaks and function at the facility and is put under pressure for 45 minutes to check for leaks. However the plumbing is hard copper and soldier connections. During transport a unit may experience a failed soldier joint. Contact MOPEC immediately if there is a leak.

If ordered, install the optional disposal and make all connections that apply, including the additional 115V, Single Phase, 60 Hz, 20 Amp circuit to your electrical service. (This should be on a separate dedicated line.)

Ventilation Connection
Ventilation is one of two types for the MG100; In House Ventilation or Recirculation. For in house the unit is connected to the facility ventilation system via duct work. The duct work will connect via the flexible boot on top of the unit.

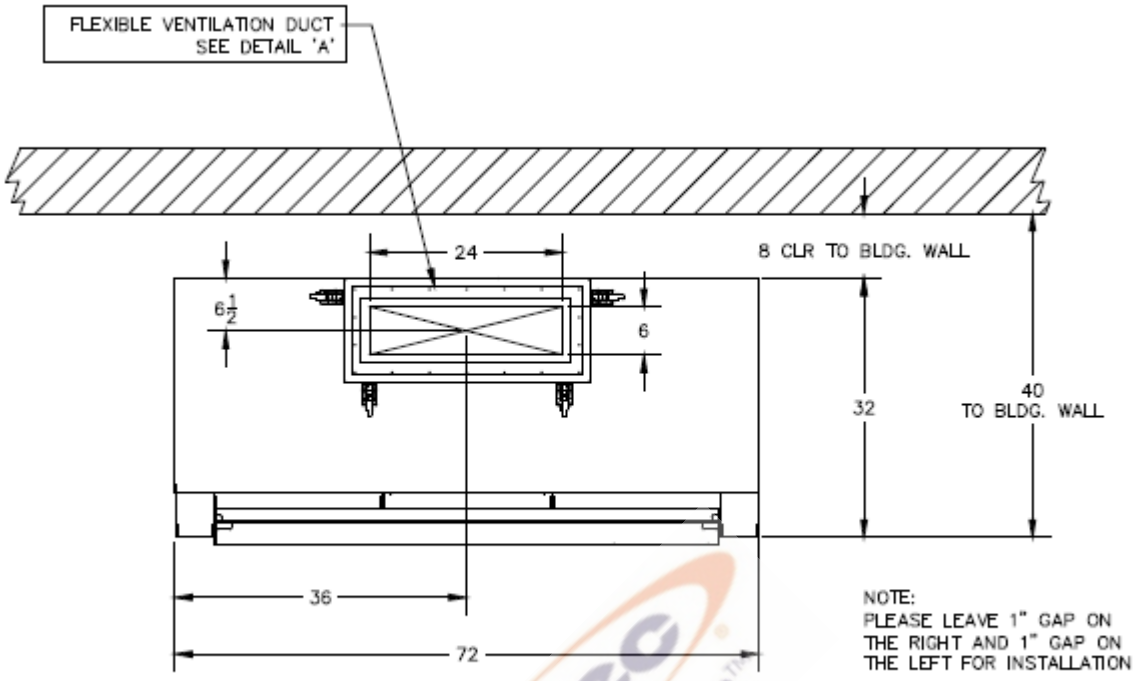
In House
The duct is connected to the grossing station chamber door on top of the unit and to corresponding stubs at the ceiling per the rough in drawing. The flexible boot is provided.

Recirculation
For recirculation models, the filters (Pre Filter and Main Filter) will need to be installed and the clearance above the unit verified. You should have a minimum of 12 inches or more above the grossing station at its highest position. Air flow is generated by an 1000 CFM fan in the recirculation models. The fan is on constantly when the unit is on.

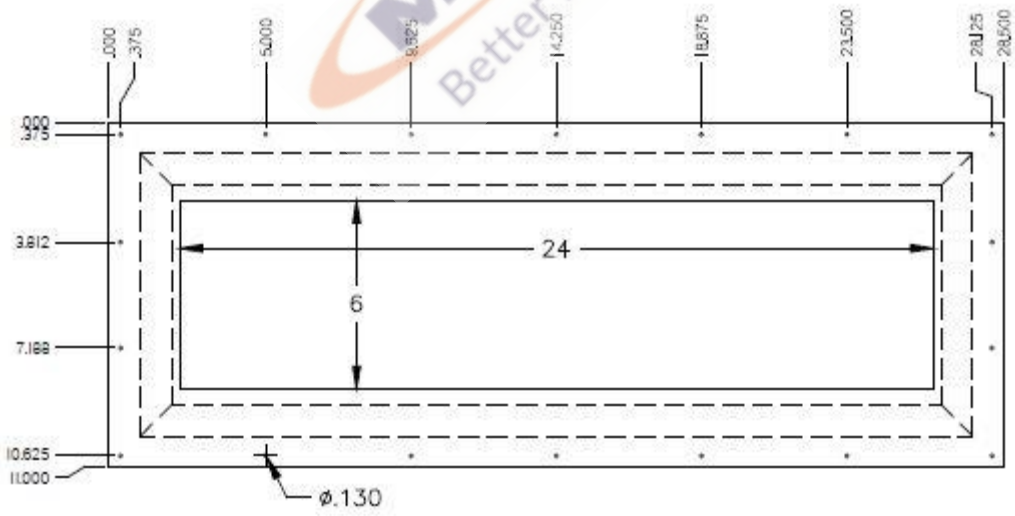
Seismic Anchoring
The MG100 has Seismic anchoring spots fabricated into the frame of the unit. Ensure you use the appropriate size and approved anchoring hardware (supplied by others) for your application.

**** Caution ** These are general guidelines and installation is specific for each MG100 unit. Professional installation is recommended.**

Rough In Drawings



VENT CONNECTION VIEW

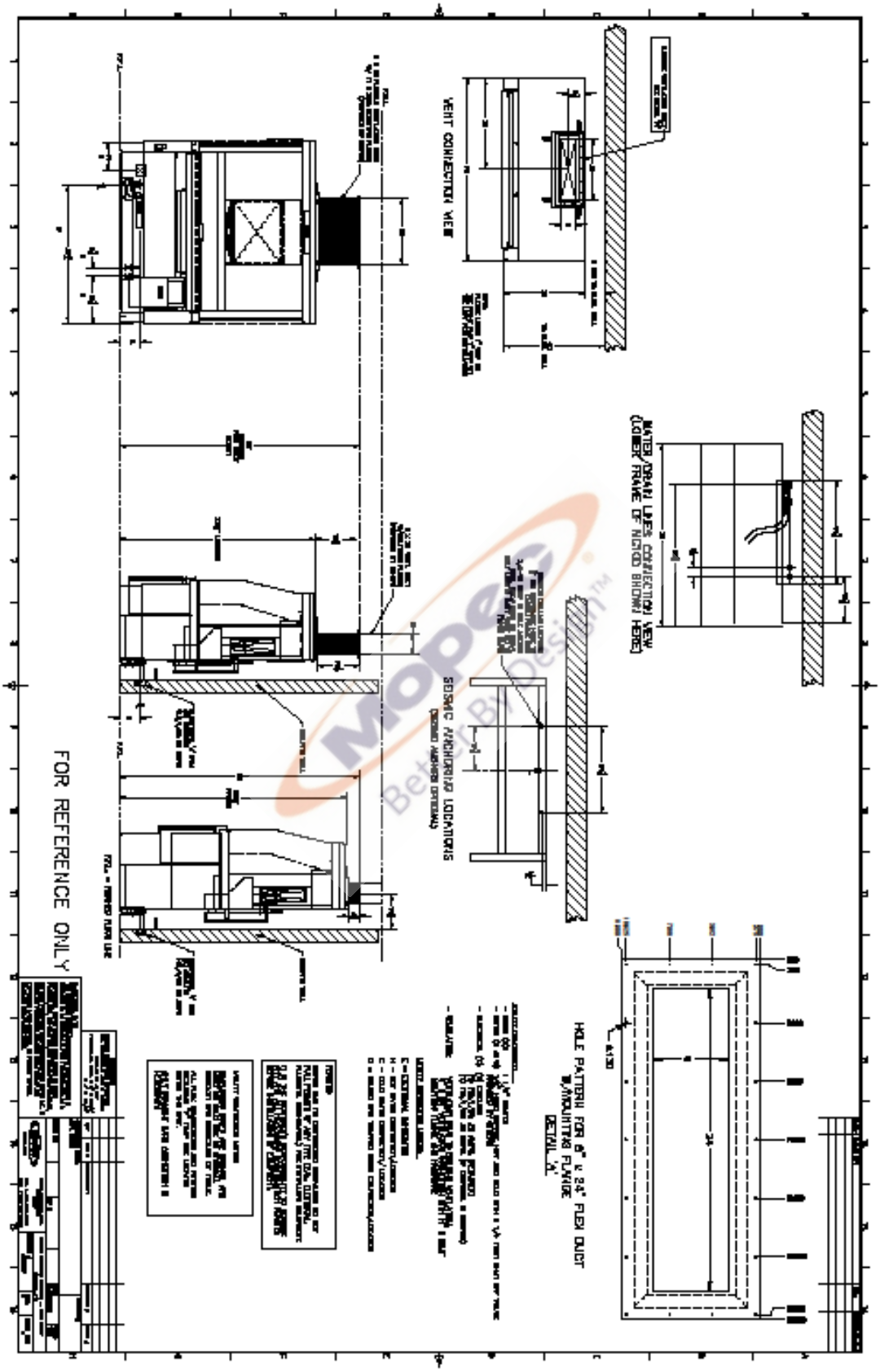


HOLE PATTERN FOR 6" x 24" FLEX DUCT
W/MOUNTING FLANGE
DETAIL 'A'

The electrical service provided for the MG100 must include:

1.) A switch or circuit breaker for each circuit to which the wiring harnesses from the workstation will be connected.

MG100


VENT CONNECTION VIEW
WATER/DRAIN LINES CONNECTION VIEW
(LOWER FRAME OF MODEL SHOWN HERE)
SEISMIC ANCHORING LOCATIONS
HOLE PATTERN FOR 8" X 24" FLEX DUCT
W/MOUNTING FLANGE
DETAIL 'A'
FOR REFERENCE ONLY

INTRODUCTION

Mopec has extended their current extensive Grossing Station line with the newest addition-The MG100 Grossing Station. The most technologically advanced workstation available today. Mopec has designed within this station the latest advanced safety measures of grossing stations along with the ergonomic comfort a tech deserves.

Ergo Friendly Work Area

Ergonomically correct, the MG100 ErgoGross Elevating Workstation allows the user to raise or lower the station to accommodate their comfort zone. This comfort zone can be as low as desk level (31-1/4") where the user can utilize a typical desk chair and work as if sitting behind a desk. If desired, the user can stand with the work surface at chest level (43-1/4") or at a tall laboratory stool. Whether you're tall, short, sitting or standing, the grossing station can be adjusted to suite the comfortable ergonomically correct height.

Comfort Level

Large radius forming on the front edge provides the ultimate in comfort to the technician's forearms. Long tedious grossing procedures on small specimens now are accomplished by resting your forearm on the edge of the grossing station without dipping your arms or onto the cutting board. No more prolonged supporting of your arms and/or elbows above the cutting board. The radius on the leading edge provides the comfortable surface you deserve.

Safe Air Flow

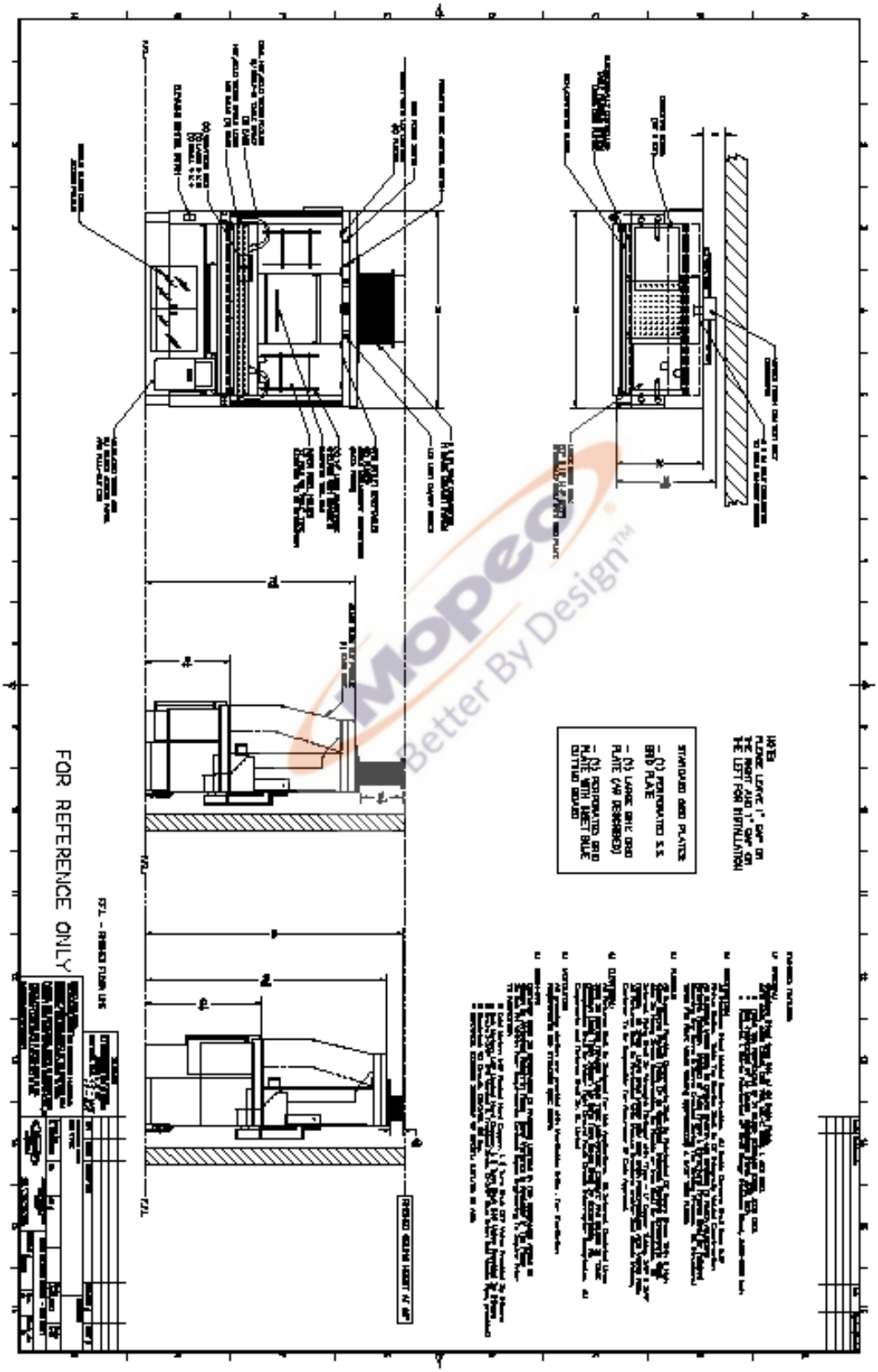
High capacity ventilation requirements allow the pathologist the unsurpassed safety deemed necessary in their working environment. The ventilation is distributed through both the back draft and down draft. In conjunction with the ventilation is a Fresh Air Supply (FAS) on the leading edge directly in front of the cutting area. This fresh air supply helps create a laminar air flow pattern and is essentially helping push fresh air over the dissecting area towards the back/down draft. Along with side safety glass panels that help protect against side drafts the air flow pattern (i.e. ventilation) is the most impressive of all open environment grossing stations. As an option, the grossing station is also available with a large front safety glass panel which will create a dissecting environment that is completely protected from room air currents and closely resembles an environmental style protection hood.

Customization

The MG100 ErgoGross Elevating Workstation is a universal design. Can be utilized as a back draft, back/down draft, right hand sink or left hand sink unit. The conversion from whatever style is desired converts in minutes without tools. Provided with perforated stainless steel down draft grid plates, solid stainless steel grid plates and solid polyethylene cutting board plates, the grossing station can be configured in less than a minute from one person to another. This will also allow the station to be configured to suite the type of grossing procedure from small biopsies to large organs and/or limbs.

UNIT DRAWING

MG100



FEATURES

The **"MG100"** consists of the following:

Work Grid: 14 Gauge, type 304 Stainless Steel with a # 4 Satin Finish
Housing: 18 & 20 Gauge, Type 304 Stainless Steel with a # 4 Satin Finish
Electrical: 115 v / 1ph / 60 Hz Current Draw: 20 Amp maximum
Electrical: 230 v / 1ph / 50 Hz Current Draw: 10 Amp maximum

Standard Features
Back/down draft Ventilation
Hot/Cold Water Fixture
Style Configuration
In/Cm Ruler
Magnetic Instrument Tool Bar
Recessed LED Lighting
G.F.C.I. Outlet
Dissection Board
Stainless Steel Paper Towel Holder
Stainless Steel Organizer Bins
Table Flushing System
Perforated Vent Grill
Large Rinse Sink
Adjustable Storage Shelves (4)
Ventilated Trash Container
Cable management
Sliding Glass Side Panels
Stainless Steel Sink Grid Plate (1 ea Option 1 and 2)
Stainless Steel perforated Grid Plate (1 ea Option 1)
Stainless Steel Solid Grid Plate (1 ea Option 2)
Stainless Steel Perforated Grid Plate with inset Blue Polyethylene Cutting Board (Option 1 and 2)
Communication Wire Chase
Optional Features
High Capacity Self Contained Exhaust System
Safety Splash Shield
Video Camera Arm
Camera Stand
Formalin Dispensing System
Formalin Collection System
Literature / Form Holder
CPU Mounting Bracket
Computer Monitor/Keyboard Ultra
LED Gooseneck Task Lighting
LED Task Light Magnifier – Single (R/L)
Dictation Equipment Stand
Large Glass Front Panel
Stainless Steel Formalin Collection Grid Plate
1.1 HP Disposal
Communication Ports

BL800: 1HP HEAVY DUTY DISPOSAL

Heavy Duty
Includes Solenoid to supply water directly into disposal

Vacuum Breaker to prevent back siphoning of water

On/Off switch

(Requires separate power circuit other than grossing station)

Operation of Option

The BL800 disposal is an option for disposing of tissue and bone pieces that are not needed. There is no Need to turn on the faucet when using the disposal. The disposal switch activates the disposal and allows water to enter the disposal from the electric solenoid. When the disposal is turned off, the water stops. The vacuum breaker prevents back siphoning of water through the disposal. The disposal option requires one 20 amp circuit dedicated to the disposal.

DO NOT USE BLEACH OR OTHER CAUSTIC CHEMICALES IN THE DISPOSAL, THIS CAN DAMAGE THE UNIT. ENSURE ALL DISENFECTANTS ARE RINSED THOUROUGHLY.

CP001: Communication Port

2 Two port Ethernet receptacles allows for connection to in house network.

Requires facilities network tie-in. Connection B is set from the factory

MO060 Formalin Dispensing System

2.5 Gallon capacity Nalgene poly dispensing container.

Dispensing valve provided for small controlled dispensing of customer supplied formalin.

MO061 High Capacity Self Contained Exhaust System:

The air ventilation is distributed through both the back draft and down draft via a high static load fan system. In conjunction with the ventilation is a fresh air supply (FAS) on the leading edge directly in front of the cutting area. This fresh air supply helps create a

laminar air flow pattern and is essential in helping push fresh air over the dissecting area towards the back/down draft. The system is provided with a pre-filter designed to remove large dust particles, a large capacity potassium permanganate formalin neutralizing filter and MERV type high efficiency exhaust filter. Along with side safety glass panels that help to protect against side drafts the air flow pattern (i.e. ventilation) is the most efficient of all open environment grossing stations.

REPLACEMENT FILTERS

BF014 Charcoal and Potassium Permanganate filter

BF021 Potassium Permanganate filter

BF022 MERV type high efficiency filter

Filter Evaluation Video Link

Dispose of contaminated filters in accordance with your facility, state and federal procedures for hazardous materials disposal. See the SDS for the chemicals exposed to the filters for directions.

MO075 Dictation Equipment Stand

Angled surface for easy viewing of most dictation systems. Dictation stand is portable and can be placed anywhere. Stainless steel construction.

Operation of Option

The dictation stand can be placed on the shelf or any other flat surface.

Dictation Equipment Stand Video Link

MO062 Safety Splash Shield

Removable 11" x 12" Lexan® shield on flexible arm for easy positioning. Slides on front track for positioning over the work surface in almost any configuration

Splash Shield Video Link

MO063 Video Camera Arm:

Designed with a central locking knob that lock's all joints simultaneously. This camera arm is the fastest arm set-up available. Located within an aluminum extrusion, the video camera arm can be located anywhere along the length of the grossing station on the upper canopy.

MO064 Still Photography Camera arm:

Designed with a central locking knob that lock's all joints simultaneously. This camera arm is the fastest arm set-up available. Located within an aluminum extrusion, the video camera arm can be located anywhere along the length of the grossing station just above the back draft ventilation grill.

MO065 Formalin Collection System:

Includes collection funnel piped to a 2-1/2 gallon collection carboy w/easy grip handles, located under the grossing station. Quick disconnects included with safety caps provided for safe transport to disposal or recycling area.

Includes:

Pull out drawer to contain spills

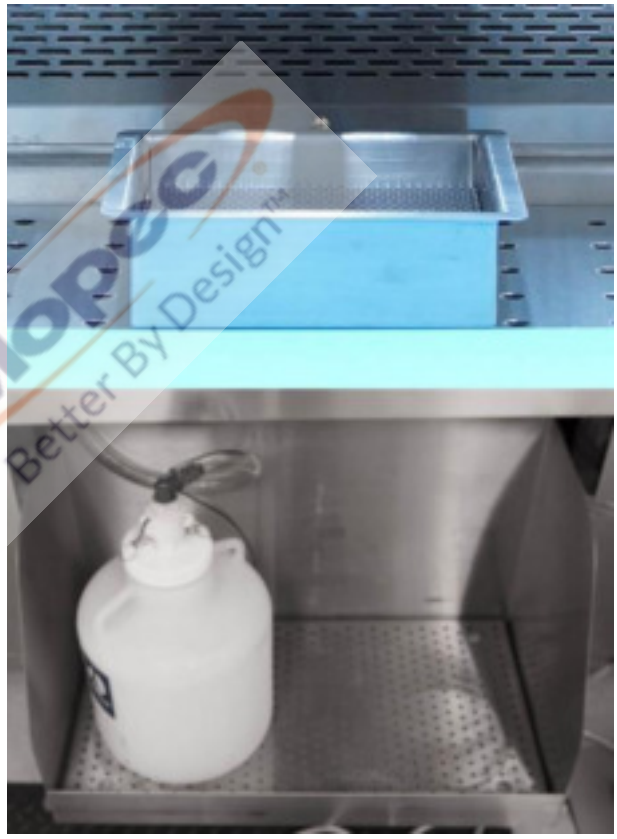
1 ea. PP0309 is the dust cap ¾" (Male for carboy)

1 ea. PP0310 is the dust cap ¾" (Female for hose)

1 ea. PM0140 Carboy with flat cap

1 ea. PM0140 Carboy with FP003 Carboy cap with Fittings

Formalin Collection Video Link



The formalin collection system is piped from the collection point at the sink to the storage bottle below the grossing station with vinyl tubing. The collection system has a stainless steel funnel to allow simple pouring of the formalin to be collected. The collection has a float sensor and indicator light to notify the operator the collection bottle is full. The Formalin collection bottle has quick disconnect caps for the hose and the bottle to allow for safe handling of the carboy container. Has a pull out containment tray to access the collection carboy

Formalin Collection Video Link

MO067 Formalin Dispensing System:

Includes collection funnel with fine particle screen, 2.5 gallon (9.5L) waste collection carboy with easy grip handles, piping to waste carboy, quick disconnects and safety caps for disposal or recycling. Formalin not included.

Pneumatic Foot Pedal Option

Pneumatic foot operated formalin control. Toggles on/off with the press of your foot. Requires hand operated mixing valve next to faucet.

The pump is controlled with a switch on the top display section of the MG100. The pneumatic foot pedal activates a solenoid to dispense the formalin.

You MUST turn the pump switch off when not in use

Formalin Dispensing Video Link

MO068 CPU Mounting Bracket Side Mount:

Adjustable width mounting bracket for CPU.
Two piece construction consisting of a mounted plate to the side panel of the Grossing Station and a sliding plate that adjusts to the width of the CPU. CPU holder comes with tightening knobs or nuts to secure permanently, rubber feet, spacer block and safety strap.

Computer not included.

Operation of Option

The CPU bracket is adjustable. The CPU is secured in the bracket by the rubber feet and the outside bracket sliding to hold the CPU the safety strap is to keep the CPU from accidently being knocked off the grossing station. The CPU should be centered in the bracket to support the unit properly.

MO070 Computer Monitor/Keyboard Support:

Unique support system that can be positioned over the full length of the grossing station and tilted to accommodate the technicians needs.

MO072 LED Gooseneck Task Light:

Bright white (3100° K) LED light with accurate color rendering with powerful point source of light that swivels to direct light. The most energy efficient light available with no harmful ultraviolet (UV) rays. Long life LED's (up to 60,000 hours).

MO073 LED Task Light Magnifiers:

Hands free poly magnifier with 4x magnification.

MO070: LCD Flat Screen Monitor & Keyboard Adj. Arm System

Allows positioning & of LCD display for greater visibility
Re-position your LCD with just a touch. Up, down, forward and back
Full range of motion for maximum comfort level
Keyboard Adjustable Arm
Provides vertical and side to side motion
Flat screen, monitor, keyboard and computer not included.

Operation of Option

The adjustable arms allow positioning & of LCD display for greater visibility and
re-position your LCD with just a touch. Full range of motion for maximum comfort level, up, down, forward and back

Keyboard Adjustable Arm provides vertical and side to side motion. Effortlessly position a keyboard in the most comfortable typing position, seated or standing use. Keyboard can be positioned for maximum comfort and productivity with a range of 25.6" (65cm) extend/retract motion 11-1/2" (29cm) Height adjustment
Tray tilts back at negative 5 Degree angle for ergonomic and healthy data entry
Mouse tray slides out to left or right, depending on user preference

AIR HANDLING

MG100 – ErgoGross Elevating Workstation Design Parameters:

The MG100 Workstation is designed with the basis of fulfilling one goal and that is to adequately ventilate the work surface. An adverse effect of ventilation is noise that has been considered but does not govern the ultimate design criteria. Our design criteria is the most stringent utilizing exerts as outlined from "Industrial Ventilation" by Committee on Industrial Ventilation and Escape Velocity Parameters. Design data is unfortunately based on the table as a completely flooded vat of formaldehyde. Ideal conditions in a grossing environment obviously do not warrant such a large amount of formaldehyde, yet concentration levels are on a higher extreme regarding design data parameters available. Therefore assumptions are made regarding grossing practices and ultimately formaldehyde concentrations.

Identification	Description	Ventilation System	Volume Requirements
MG100	ErgoGross Elevating workstation	In House Ventilation	1000 cfm
MG100	ErgoGross Elevating workstation	Re-circulating (Continuous running)	1000 cfm

Re-circulating (Self-contained exhaust Systems): This system is simply a self-contained exhaust system provided with the MG100 ErgoGross Elevating Workstation. Air is ventilated through the exhaust grill and circulated through potassium permanganate and charcoal filters and exhausted out the top of the Grossing Workstation. The exhaust fans are internal and are provided.

The grill for the MG100 is 8" high at an angle of 60 Degrees and 68" Long with (994) 3/16" x 5/8" holes. The vent grill is perforated with 3/16" x 5/8" slots on 13/16" x 3/8" staggered centers, yielding a 30% open area.

Both specifications for "Free Air" cfm.

GOOD PRACTICE WILL OPTIMIZE OUR PROTECTION:

1. Never block the ventilation grill.
2. Placing open containers as close to the exhaust grill as possible, yet never blocking the ventilation grill.
3. Grossing should be accomplished as close to the exhaust grill as possible.
4. Strategically locate the Grossing Station away from room air currents.
5. Practice complete rinsing of residual formaldehyde with hand held spray.

Although the Mopec Grossing Workstation can be the answer to formaldehyde exposure, Mopec cannot assume responsibility of exposure since good laboratory practices and room conditions are beyond Mopec's control.

DESIGN PARAMETERS (Non-Recirculating)

The following chart is based on actual test data with the MG100 Externally Exhausted Workstation (In-House). An optimum installation would provide 1000 CFM of draft.

CLEANING AND MAINTENANCE

DISINFECTING AND CLEANING STAINLESS STEEL SURFACES

All stainless steel surfaces can be cleaned with soap and water, which will remove debris.

The stainless steel surfaces can be disinfected with a non caustic disinfectant. We suggest using BE045 Path Cloud or BE047 Bench Wipe for cleaning purposes. We recommend you **NOT USE** a bleach solution to clean your unit. Bleach will eventually erode stainless steel if not thoroughly rinsed. The use of chlorine bleach will **VOID THE STAINLESS STEEL WARRANTY**

During the cleaning we suggest wiping the surface in the same direction as the satin finish which will help lift up dirt from the grain finish.

Most scratches can be removed simply by utilizing a "non-metallic" abrasive pad and rubbing in the same direction as the satin finish.

Since most abrasive pads vary from one supply to another, we suggest rubbing the entire surface to blend the scratch and blend the balance of the surface.

CLEANING THE GLASS

Glass surfaces will scratch if cleaned with an unsuitable cleaner and improper cleaning. Wipe dry with a clean, absorbent cloth or paper towel turning often.

CLEANING THE LEXAN DOORS

Lexan surfaces will scratch if cleaned with an unsuitable cleaner and improper cleaning. Many plastic cleaners are available and we suggest using one. Wipe dry with a clean, absorbent cloth or paper towel turning often.

REPLACING BATTERIES FOR FAUCETS

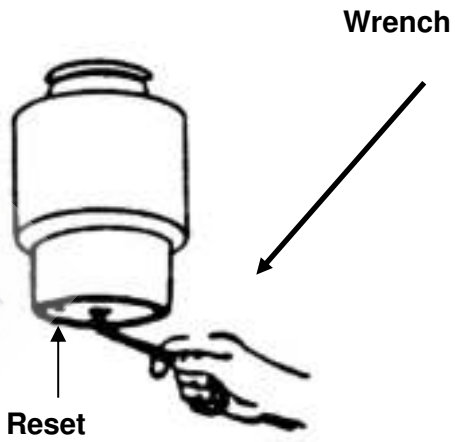
The touch faucets on the MG100 are battery operated and will need to have the batteries replaced approximately annually. Each faucet requires 4 C size batteries. The batteries are accessible from the lower front panel.

CLEAR DISPOSAL JAMS

The accidental entry of foreign material will cause any Waste Disposal unit to jam. To free jammed material, follow these steps **to avoid personal injury**.

1. Turn off Waste Disposal and shut off cold water.
2. Insert one end of your Self Service Wrench, provided with your Waste Disposal, into the center hole of the bottom of the disposer as shown (fig. 1).
3. Work the wrench back and forth until it moves freely for at least one complete revolution. **Remove the wrench before restarting the Disposal.**
4. Wait 3 to 5 minutes to allow Waste Disposal motor to cool and then push the reset button (fig. 1). **Be sure the main Disposal control switch is in the OFF position before pressing the reset button.**

Fig. 1



CLEANING DISPOSER

Over time, particles may accumulate in the grind chamber and baffle. An odor from the disposer is usually a sign of buildup, caused by insufficient water flow during and after disposer use.

DO NOT USE BLEACH IN DISPOSAL

To clean disposer:

1. Turn off disposer
2. Place stopper in sink opening and fill sink halfway with warm water.
3. Mix 1/4 cup baking soda with water. Turn disposer on and remove stopper from sink at same time to wash away loose particles.
4. Remove Quiet Collar Sink Baffle and clean by hand or in dishwasher. Do not operate disposer without Quiet Collar Sink Baffle in place.

LIFT HEIGHT PROGRAMMING PROCEDURE

The MG100 can be set up with three preset heights or adjusted anywhere in-between. To program the three preset heights.

Move the unit to the height you want as a present with the up down button.

Press and hold the memory button top left corner of hand set.

Then press and hold the numbered button you want assigned to that elevation for 5 sec.

Your unit has now been programmed for your desired height settings

LIFT RESET PROCEDURE

The following instructions can be used to perform the reset procedure on motorized lift units. These instructions should be used if a new controller is introduced to the system, the limits have changed on the controller, or if the system is simply behaving unexpectedly. To reset the controller:

- Turn the main power switch Off (Approx. 45-60 seconds)
- Turn the main power switch On
- Press and hold the up and down button on the switch for 5 seconds. An intermittent signal confirms the action
- Press and hold the down button at this point, all legs should begin slowly creeping downward to the "zero" (fully retracted) position

Your lift system should be reset to its home position at this time. To verify, try operating the system by moving it upwards with the up button, and again downwards; ensure the system returns to the home position

If this should not correct the problem please contact Mopec at 800-362-8491.

LIFT TROUBLESHOOTING AND FAULT ELIMINATION

Fault Cause	Measure to be taken
Actuator not functioning No supply voltage present	Check the supply voltage
Poor connector contact	Plug in the connecting plug correctly or check the terminal connections Plug in the control device plug correctly
Motor cable defective	Contact Mopec
Control device / control	Exchange the control element defective device/ control element
Internal fuse defective	Contact Mopec
Motor defective	Contact Mopec
Markedly reduced speed Motor, gears or nuts	Take the actuator out of defective service immediately and Contact Mopec
Very loud running noise Motor, gears or nuts	Take the actuator out of defective service immediately and contact Mopec
Play in the guidance Gliding elements worn	Contact Mopec

EVALUATING FILTERS FOR REPLACEMENT

The BF021 filter in your MG100 unit contain alumina pellets impregnated with potassium permanganate, $KMnO_4$, which is a fast oxidizer. Formaldehyde passing through the filter is converted to carbon dioxide and water.

The filter's life depends entirely on the amount of formaldehyde fumes passing through the filter.

The pellets are bright purple when new and become dark brown when spent. Once the inner part of the pellet is brown it is totally spent and must be replaced. This chemistry is very effective and essentially removes all formaldehyde as long as there is active $KMnO_4$ available. The efficiency drops off as the filter media approaches its maximum capacity. The last 15-20% capacity will exhibit some pass through of formaldehyde.

Health Hazard Data - Alumina Permanganate Filter Media

Effects of Exposure – The filter media is non-toxic upon oral, skin, and inhalation exposure and is non-irritant of the skin. Breathing of dust may cause sneezing. Skin may feel dry after contact. The filter media is an eye irritant.

PROCEDURE - EVALUATING FILTERS FOR REPLACEMENT

One side of the filter there are four tabs which can be opened to allow pellets to be removed. (see photo)

Eye protection is recommended based on the

above "Health Hazard Data".

The usefulness of the filter is approximately 80% diminished when the purple color first disappears from the core.

To determine when the $KMnO_4$ has been exhausted, remove a pellet and slice it in half. Place the sliced pellet(s) on a paper towel and add a few drops of water. The water running off the pellet(s) should be initially purple and then turn a deep iodine color. If no purple coloration is present, the $KMnO_4$ is totally spent. See Video for example

When the purple color first disappears from the core of the pellet as described above, the rate at which formaldehyde is removed from the air stream is slowed considerably.

(See Summary On Following Page)

From a practical standpoint, it may be desirable to perform the tests on the preceding page more frequently during initial usage of the filters to determine when the purple first begins to disappear from the core of the sliced pellet. Based on these early observations, the user can establish a Replacement Testing Cycle with occasional re-checks for verification.

BF014	CHARCOAL/POTTASSIUM PERMANGANATE FILTER
BF021	POTASSIUM PERMANGANATE FILTER
BF022	PRE FILTER MERV RATED

Dispose of contaminated filters in accordance with your facility, state and federal procedures for hazardous materials disposal. See the SDS for the chemicals exposed to the filters for directions.

STAINLESS STEEL CARE AND MAINTENANCE

To maintain your stainless steel product, follow these four steps:

1) **Never, ever use wire brushes, Brillo, steel wool or abrasive cleansers (like Ajax or Comet).** If something needs to be aggressively cleaned only use a Scotch-brite pad or similar product and only scour with the "grain" of the stainless. As an example, please reference the photo on page 2 of this document. It is clear that a very abrasive product was used in an area on the unit and that did not follow the grain of the stainless. The effects of this scratching may diminish over time with proper care but the effects of this scouring are obvious. (The use of the Scotch-brite Pad following the grain over time may help scratches such as this). Depending on the surface finish of your stainless steel, abrasive cleaners can cause scratching. Duller finishes probably won't show scratching as much as mirror or highly polished finishes. When in doubt, test in a hidden spot, and also work from the least risky type of cleaning, (i.e. water) to the heavy duty stuff.

Do not use cleaners containing chlorine. While it may be second nature to bleach everything, stainless steel and chlorine do not mix well. Do not use bleach when cleaning stainless steel. Do not allow bleach or bleach water to sit for long periods. Bleach can eventually cause staining and pitting. Bleach stains are removed with stainless steel cleaning polish.

2) **Keep the surface clean of grime, tissue and particulates.** This can be accomplished by using the "Water Hand Spray Rinse" and use of cleaning products.

3) **Rinse the surface after using disinfectant.** In Pathology and other medical areas the act of disinfecting is desired. There are a number of ways to do this including using Mopec's Bench Spray & Wipe Disinfectant. Labs use any number of different products including 10% bleach or other disinfectant sprays and wipes. For the most part, each and every one of these has high salt contents and lower PH levels to aid with disinfection. Most disinfectants must be followed up with a water rinse to remove the salts that remain after these products dry. We advise to always follow up a disinfection cleaning with a thorough rinse of water. We advise not to use diluted bleach, if you must; we stress the importance of a thorough rinse of water after use. If not rinsed properly, these salts can become visible after the disinfectant dries. They can appear with a whitish characteristic or contain light lines of white with a grainy feel when you wipe your hand across the work surface. If these residues are not removed with a thorough water rinse and wipe down they will accumulate and eventually degrade the appearance and integrity of your stainless surface. Rust is a long term possibility if salts are allowed to remain on the work surfaces over time. Gritty, dirty water or residue from cleaning solutions left on a stainless steel surface can stain or damage the finish.

4) **All stainless steel products should be protected by a polish.** As a prime example before any product leaves Mopec it is coated with WD-40 as a protecting coating for the stainless. Mopec offers a Stainless Steel Cleaner and Polish in both wipe and spray. These Mopec products will not only deep clean your stainless but will also protect their finish from chemical, low PH and salt and keep the finish looking like new.

Decal

Mopec advises that if the technicians are not taking the proper precautions when using the Decal solution the possibility of two things will occur, a brown or rust ring where the Decal resides along with a milky white substance on the surface. (As an example, reference the below photos to see the rust rings.) Decal is very harsh, even the fumes can and will cause staining on stainless steel. One thing that you might want to consider doing is to place the Decal container you currently use inside a plastic base that will help catch drips that might occur. Clean and rinse your station after every use of Decal solution.

Rust

Rust can and will occur on stainless if it is not maintained properly. The most common cause of rust is from using metal or stainless racks that are not made of 304 stainless. This is referred to as "transfer rust". Leaving of salts from cleaners or disinfectants can and will lead to possible rust areas in the long term. Always rinse all disinfectants before they dry. Decal solutions and even fumes are very aggressive and can cause rust if not cleaned up and used properly around stainless. Formalin use has not been shown to cause rust in any way.

Conclusions & Suggestions

We are confident and can assure you that if you institute the suggestions detailed above that your Mopec Grossing station will look as it did the day it arrived.

Do not assume it's the cleaner. If you do have some spotting or staining, and you've followed all of the suggestions, it may not be the cleaner. Water, especially hard water, can leave spotting and staining on stainless steel surfaces. Hard water can leave mineral deposits, resulting in whitish-colored spots and streaks. Remove hard water stains with vinegar or with stainless steel cleaning polish. Prevent hard water stains by towel-drying after every wash. Do not allow soaps and cleaners to dry on surfaces. The chemicals in many soaps and cleaners can cause staining. Never use corrosive cleaners such as mineral spirits. Use stainless steel cleaning polish and a non-abrasive scrub pad to remove dried cleaner stains. Baking soda mixed with liquid dish soap can make a good paste to gently rub on stains. Be sure to rinse the stainless steel surface thoroughly, and towel dry. If stains remain Mopec recommends trying a stainless steel cleaner and polisher. Barkeeper's Friend is a good powder formula that can clean without scratching. Be sure to follow the directions, rinse thoroughly, and towel dry. These methods should help remove any discoloration.

Fingerprints and Stains – The most common surface contaminates that occur from normal use are fingerprints and mild stains. These usually affect only appearance so fortunately they do not have an effect on corrosion resistance. They can easily be removed by a variety of simple cleaning methods. The most troublesome marks to remove from the surface of smooth polished or bright finished stainless steel are fingerprints; fortunately they can be removed with a common glass cleaner or by gently rubbing with a paste of soda ash (sodium carbonate) and water which would be applied with a soft cloth. Again, it is best to follow with a warm water rinse.

Clean Water and Wipe – The method that will do an adequate job and is the simplest, safest and the least costly is the best method. There is no surface coating to wear off of stainless steels so the surface will thrive with frequent cleaning. The first choice to clean mild stains and loose dirt and soil should always be a soft cloth and clean, warm water. Rinsing with clean water and wiping the surface dry will finish the process and eliminate the possibility of water stains.

Solvent Cleaning – To remove oils, greases and fresh fingerprints that have not had time to oxidize or decompose, use a solvent that does not contain chlorine. There are many organic cleaners on the market today that optimize safety attributes and clean ability. Spray or vapor methods or by wiping with cloths containing solvents can also clean surfaces. The wiping technique will sometimes leave the surface streaked.

Scratch Repair

A surface scratch can be repaired using the following technique. Completely removing the scratch will depend on how severe it is. Use 120 grit emery cloth or paper and firm pressure to sand the scratch. Sanding must always go in the direction of the grain. Sand in a perfectly straight line, avoiding the natural tendency to sand in an arc. Sand the surface until the scratch is gone. Polish using a very fine grade of 3M scotch-brite pads. Use the same motions as with sanding. Polish the surface until the original finish is restored.

For stubborn spots, stains, light discoloration, water marking or light rust staining use a mild, non-scratching cream or polish. Apply with soft cloth or soft sponge and rinse off residues with clean water and dry. Avoid cleaning pastes with abrasive additions. Suitable cream cleansers are available with soft calcium carbonate additions, or with the addition of citric acid. Do not use chloride or acidic solutions Nylon abrasive pads should be adequate for dealing with most deposits (DO NOT USE STEEL WOOL OR BRILLO PADS). If a more severe treatment is needed to mask coarse scratches or physical damage on a surface, use the finest abrasive medium consistent with covering the damage marks. With directional brushed and polished finishes, align and blend the new "scratch pattern" with the original finish, checking that the resulting finish is aesthetically acceptable. Silicon carbide media may be used, especially for the final stages of finishing. Avoid using hard objects such as knife blades and certain abrasive/souring agents as it is possible to introduce surface scuffs and scratches. Scratching is particularly noticeable on sink drainer areas. These are usually superficial and can be removed with proprietary stainless steel cleaners or, alternatively, with a car paint restorer, such as 'T-cut'. Rust marks or staining on stainless steels is unlikely to be the result of corrosion to the stainless steel itself (similar marks may also be found on porcelain and plastic sinks). These marks are likely to result from small particles of carbon steel from wire wool.

USER PARTS

Replacement parts are available from Mopec The can be ordered by contacting Mopec at 800-362-8491.

Due to the many configurations your unit may not have some of the parts listed below:

POTASSIUM PERMANGANATE FILTER	BF021
POTASSIUM PERMANGANATE /CHARCOAL FILTER	BF014
PRE FILTER MERV RATED	BF022
LED TASK LIGHT REPLACEMENT HEAD	PE0332
HALOGEN TASK LIGHT BULB	BB039
RULER SELF ADHESIVE/CHEMICAL RESISTANT	PM0002
POLY DISSECTING BOARD 23X16X3/4" (WHITE)	BC001
ORGANIZER BIN-SMALL-STAINLESS STEEL	MB039
ORGANIZER BIN-LARGE-STAINLESS STEEL	MB040
SHELF 14" STANDARD – STAINLESS STEEL	PF1215

PREVENTITIVE MAINTENANCE CHECKS

Procedure:

1. Visually check the exterior of equipment for any signs of damage.
2. Visually check the condition of the power cord and plug(s) for cracks, cuts, bare or broken wires and signs of excessive heat (discoloration).
3. Visually inspect electronics for signs of damage and/or overheating.
4. Ensure all the receptacles and covers are operating properly (testing GFCI).
5. Verify correct operation of unit including all controls, buttons, displays and indicators when applicable.
6. Access the main pedestal to ensure no leaks, dry rotted hoses, or electrical issues under the table.
7. Check all water fixtures.
8. Operate Lifting Mechanism up and down several times.
9. Verify correct operation of all lift movements.
10. Sync the unit per instructions in the manual.
11. Verify correct lubrication of all applicable parts.
12. Clean exterior of unit.
13. Complete paper work of inspection and file in appropriate file for future reference. Complete and affix an inspection sticker, when applicable.
14. Return the unit to service.

LIMITED WARRANTY

Products manufactured by Mopec will be free from defects in material and workmanship and conform to Mopec's description or specifications. If a warranty claim is made within one (1) year from the earlier if the date of acceptance/first beneficial use, the defective or nonconforming Product or Part thereof will be repaired or (at Mopec's option) replaced free of charge, FCA Mopec's dock. All warranty claims must be in writing and received by Mopec within the warranty period. The warranty is not transferable (other than to customers of Mopec's authorized Distributors), and will not apply unless the Equipment has been properly installed, maintained and operated in accordance with all instructions; and does not apply to defects, nonconformities or other failure due to Equipment misuse, abuse, modifications, or other causes outside Mopec's control. If a warranty claim is made in writing within the warranty period, the defective or nonconforming Equipment (or Part thereof) will be repaired or (at Mopec's option) replaced free of charge, FCA Mopec's dock.

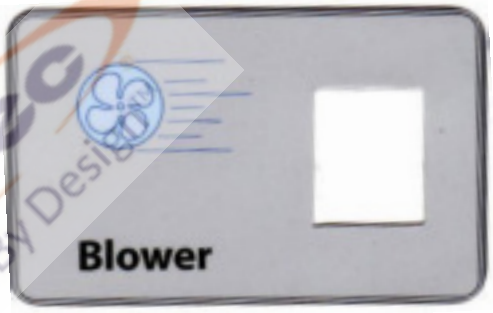
THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. THE WARRANTY AS SET FORTH HEREIN IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

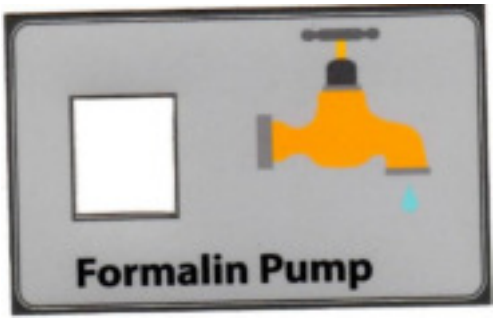
To the extent that Mopec is acting as a supplier of Products manufactured by a third party, the Products will be warranted only to the extent that they are warranted by their manufacturers and Buyer (or its customer) agrees to look solely to the Product manufacturer for all warranty claims.

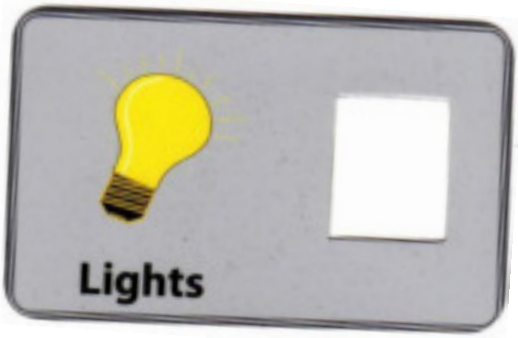
MOPEC, 21750 COOLIDGE HIGHWAY, OAK PARK, MI 48237

BEFORE SERVICING THE UNIT LOOK FOR AND HEED THE FOLLOWING LABEL

Symbols that may be found on the Equipment







TROUBLE SHOOTING

Problem	**Possible Solution**
My Unit does not turn on	Assure your facility circuit breaker has not been tripped.
	Assure the G.F.C.I. has not been tripped (off) – Reset to on.
My unit does not elevate	Assure your facility circuit breaker has not been tripped.
	Assure the G.F.C.I. has not been tripped (off) – Reset to on.
	Ensure the tray is all the way back
My unit's faucets do not work	Assure the water valve from your facility is on.
My hand spray does not work	Assure the water valve from your facility is on.
	Assure the concealed shut off valves to the hand spray are on.
	Assure hose is not kinked.
My disposal is not working	Assure your facility circuit breaker has not been tripped.
	Assure the G.F.C.I. has not been tripped (off) – Reset to on.
	Reset circuit breaker on the bottom of disposal or switch box for the disposal.
Spout Flashes a red light	If the spout flashes red and off, replace the Batteries.
Spout does not light up	Check to make sure the spout connector is attached to the spout and the wire from the solenoid/electronics kit. If loose reattach and check for normal operation.
	Replace Batteries
Spout displays correct but No water comes out	Verify the handle is in the on position Verify the water supply is turned on
Light Colors/Patterns	**Solid Blue** – Normal Operation
	Solid Red – Warning Mode; faucet operates normally, solenoid valve is open replace batteries
	Rapid Flash Red – Alert Mode; faucet will open solenoid and turn of electronics until batteries are replaced. Manual valve will continue to work
	Solid Red – Lockdown Mode; solenoid is closed and faucet will not operate until batteries are replaced
	Long Flash Red (2 seconds on and off); Board error replace Board

ELECTRICAL DIAGRAM