MEDIA BLAST
& ABRASIVE, INC.
591 WEST APOLLO ST., BREA, CA 92821
(714) 257-0484 | MEDIABLAST.COM

MADE IN USA

OPERATOR'S MANUAL

AquaBlast Pro

NEVER ALLOW TO FREEZE

INSTALL 20 AMP. GFI CIRCUIT

AquaBlast Pro Installation Information

1. Locate a 3/4 pipe x 3/4 pipe fitting or the right fitting to be used with customer supplied water inlet hose and install in the water supply line inlet valve at the side of the cabinet, #9 (machine control diagram page 5). Always use two wrenches, one to hold the valve and one to tighten the fitting using Teflon tape to seal. DO NOT ATTACH THE WATER SUPPLY HOSE AT THIS TIME…. THE WATER FLOW TEST IS FIRST!

2. The AquaBlast Pro machine has a 1-1/2" wastewater drain located high on the side of the unit and any number of fitting can be used on the drain. This permits installation of the best customer waste-water outlet using any combination of plumbing fittings and supplies.

3. Glue a 90-degree elbow or forty-five elbow to the drain outlet, clamp a rubber flexible pipe reducer to the drain pipe assembly to permit discharge into any open or closed drain outlet….this may require an added piece of pipe… Do not connect any water drain lines using all rigid connection lines. This machine includes wheel casters and slight movement can occur…lock all caster wheels using the caster brakes when the unit if ready for operation.

4. At this time you want to perform the simple water supply flow test found on page 6 and 7 of the manual **"Know the water supply flow volume".** This is a simple test and must be performed before attachment of the water supply hose to the unit. The hose ID and length can be different sizes but the supply hose must flow more than the machine usage of 2-1/4 gallons per minute. If your test shows any volume above 2-1/2 gallons per minute the units will still only use 2.25 gpm during the washout cycle…the machine does not use a storage tank for machine operation and water flow stops at the end of the washout cycle.

3. Last to be attached is the electrical power source. The unit has been shipped with 6' grounded power cord for operation on any 120 volt single phase GFI service outlet. It must be treated as a single service outlet with no other power usage using the same service. If a percentage of the service outlet is already being used it is possible the circuit breaker my trip as an overloaded circuit. Never use extension cords but if needed the cord must meet the machine amperage rating of 16 amps.

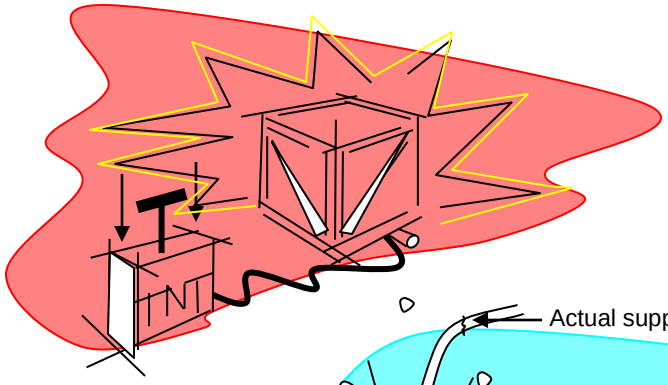
Tools

NEVER ALLOW TO FREEZE

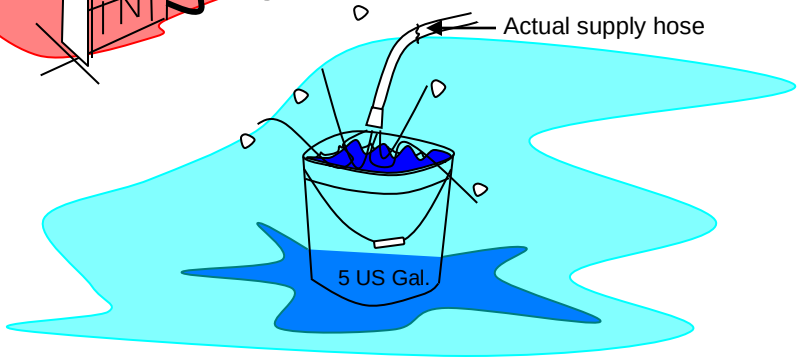
20 AMP. GFI CIRCUIT

SETTING UP THE AQUABLAST PRO WASHOUT MACHINE

1= Remove machine from crate and locate using machine caster wheels

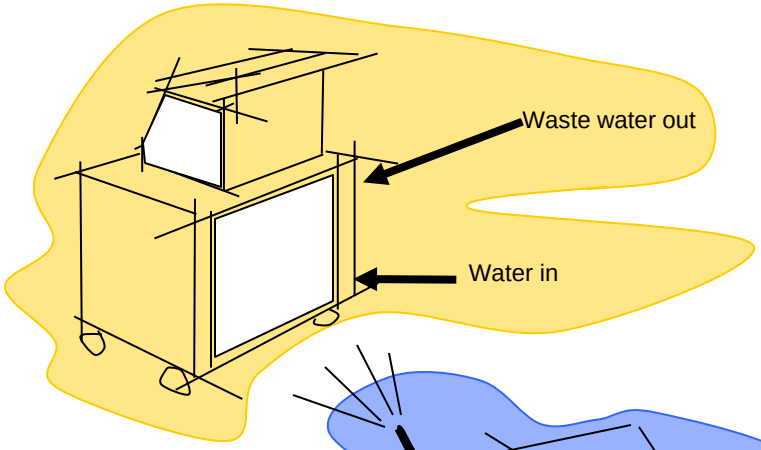


2= Check the water flow rate at the machine using actual supply hose at the installation location



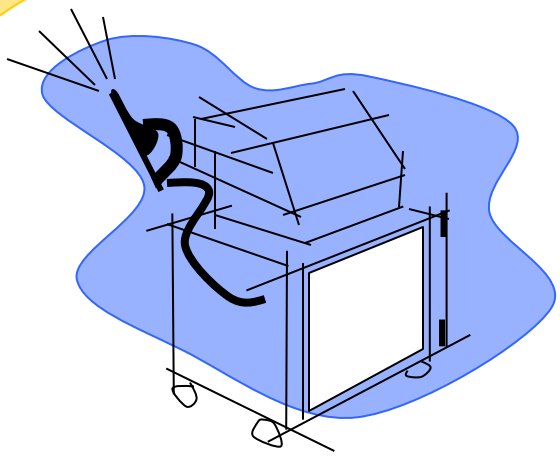
4= Connect washout drain and water supply using flexible drain section and hose

3=



4= Fill water lines using manual washout gun for air escape, one time event this takes about 5-10 seconds

Winter shipping requires the pump, lines and any tanks be drained to prevent damage



5= Make electrical connection to machine, 120 single phase 20 amp dedicated GFI service outlet

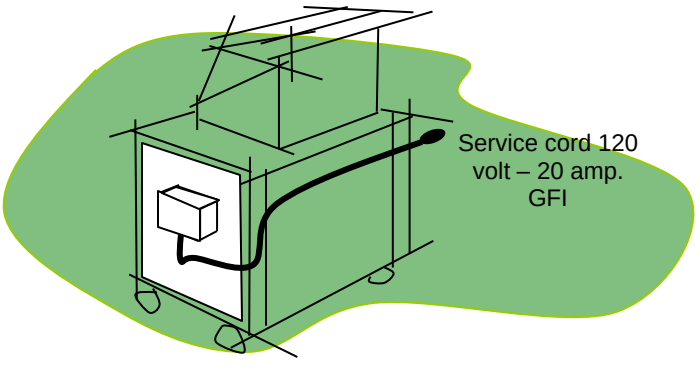


TABLE OF CONTENTS

Installation parts & supplies needed

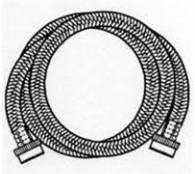
PVC primer & glue

Sized PVC fittings for drain

Short PVC pipe piece for drain

Flexible drain coupling machine drain to line

3/4 x 3/4 NPT water in fitting

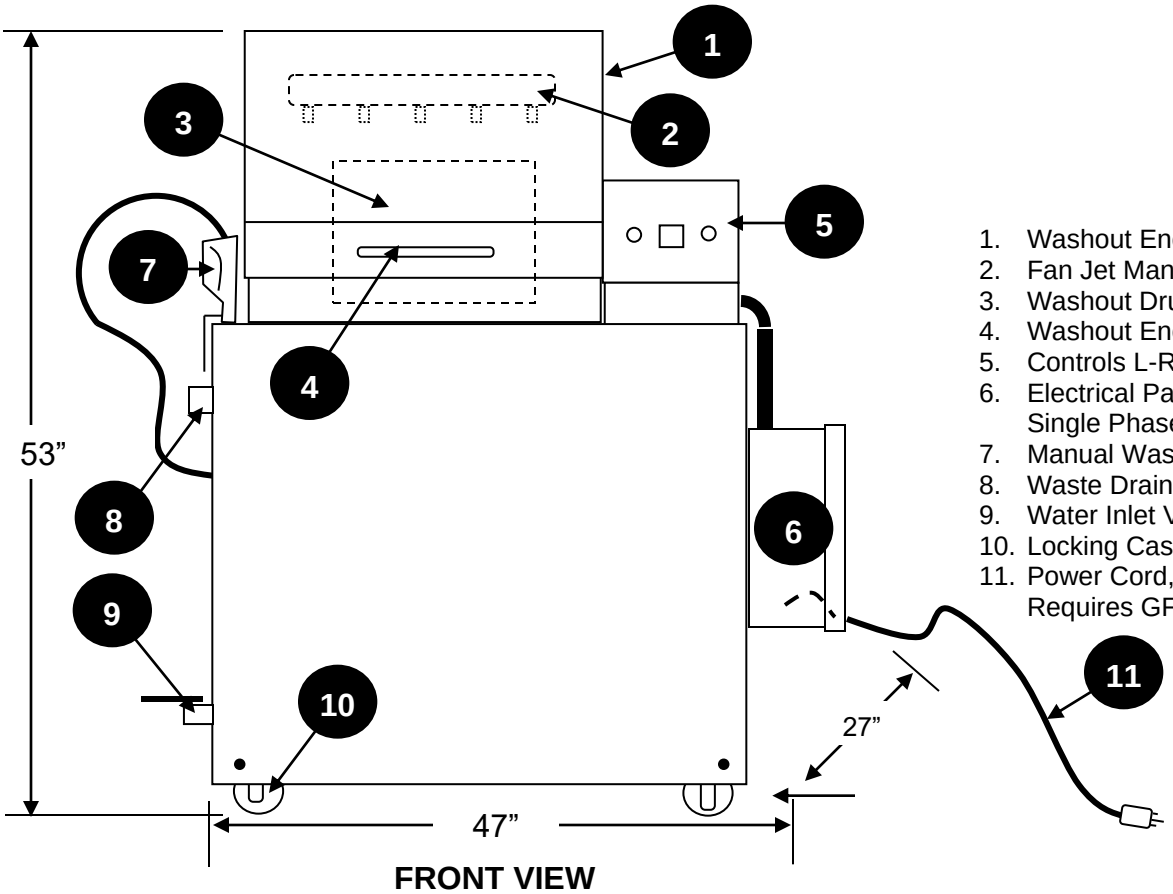


Water supply hose flow tested, 3/4" recommended

Tools

Teflon tape

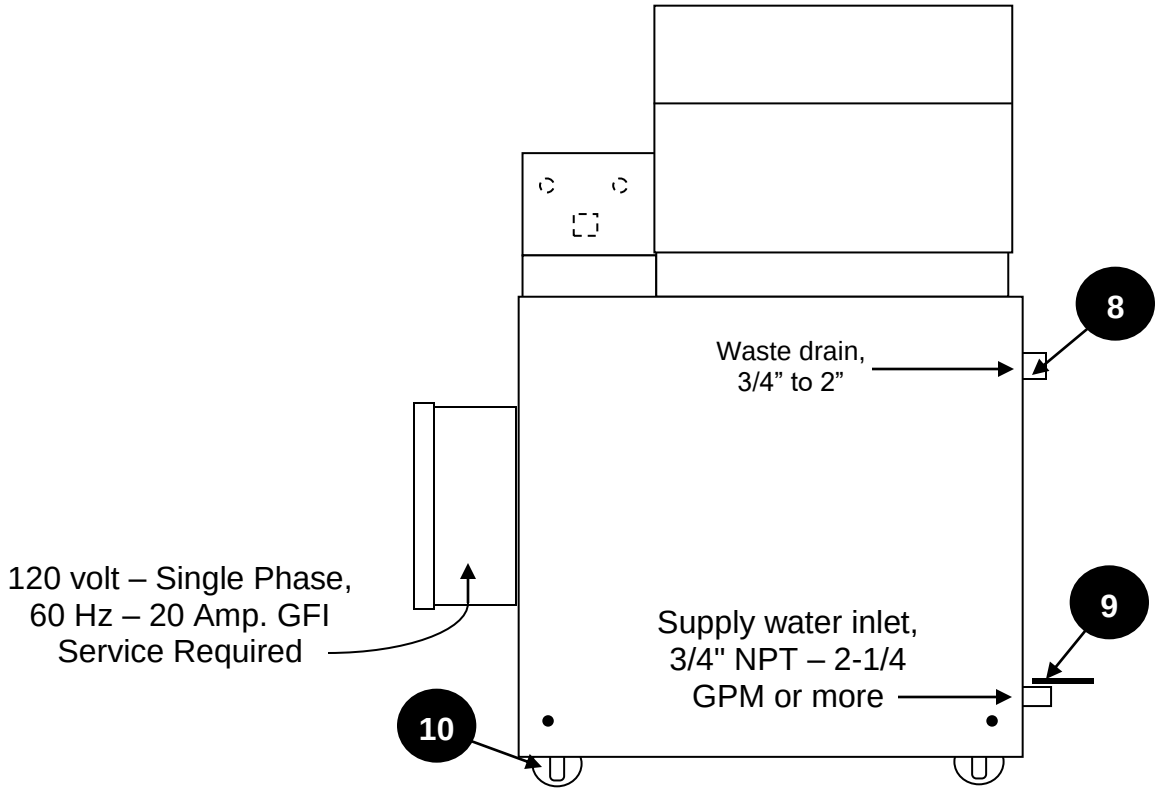
MACHINE CONTROL DIAGRAM



KEY

1. Washout Enclosure Cover
2. Fan Jet Manifold with low flow jets
3. Washout Drum
4. Washout Enclosure Cover Handle
5. Controls L-R, Power, Time & Cycle
6. Electrical Panel Box, 120 Volt-Single Phase, 20 Amp. Service GFI
7. Manual Washout Gun
8. Waste Drain
9. Water Inlet Valve
10. Locking Casters
11. Power Cord, 120 volt grounded, Requires GFI service outlet

FRONT VIEW



REAR VIEW

SET-UP MANUAL & OPERATION GUIDE

Never store the machine in any location susceptible to freezing conditions

AquaBlast Pro Automatic Washout Machine

Important Issues

GRUN

The AquaBlast Pro washout machine is a low maintenance pressurized unit designed for automatic production film washout. It has been designed to accomodate 1-4 100' rolls per month. The unit can be used for any daily production but the washout time is slower than the AquaBlast Elite model. There are a few important issues which you should know and understand: The unit is a low water usage, high pressure design unlike existing automatic washout machines in the market today. Operation is not the same as other machines, the AquaBlast Pro does not use a onboard water storage tank that loses heat or humidity and only uses water during the actual washout cycle. The new AquaBlast Pro address the water recycle question by using up to 80 percent less water than other automatic washout units on the market today. Built for water supplies under 3 gallons, 2-1/4, per minute usage on an on-deman basis.

- **WATER REQUIREMENTS:** The new Pro offers the user the lowest cost of operation and faster washout times using the Patent Pending enclosed pressurized low water flow with high pressure design. The Pro does not use an open to atmosphere water storage buffer tank or an on board water storage tank because of the low water usage design. This type of construction eliminates possible tank overflows, loss of humidity and or valve failures that can result in a flooded mess not to mention the high hot water demand and cost. The pressurized low flow design allows operation of the unit to stop at any time and continue hours later with no loss of tank holding temperature or water volume. This permits intermitent and constant film washout with minimum water usage keeping the washout times constant. Another plus with the Patent Pending pressurized system is the elimination of humidity and heat loss often found with other older open to atmosphere water storage designs.

  The AquaBlast Pro operates with a customer supplied total water loss system. This is a requirement to eliminate contamination maintenance and maintain consistant washout cycle times. Only limited usage manually operated units for very low production can operate with any % of recycled water. Because an operator is always present with manually operated units a plugged nozzle will be found during any manual washout.

  The exact water supply required for the AquaBlast Pro, measured in gallons flow per minute, requires no open buffer tank with on-board water storage. See and refer to Duty Cycle Chart located on page twelve for total cycles per hour vs. washout time. Water flowing into the unit during machine cycle is regulated by water flowing out the manifold during washout. The standard AquaBlast Pro ultra-low-flow manifold requires less than 3 gallons of water per minute, (2.25 gpm).… The unit can never flow more than cycle jet demand, supplying large volumes of water is not required and this eliminates the large water storage buffer tank and high water usage…more will be listed about water usage later.

  It is advised the heated water supply source, customer supplied hot water tank or generator, be set at a lower temperature to maximize total capacity by reducing recovery time if cold and hot water is not blended at the machine water inlet. Call and discuss the blended water supply option, hot and cold water blending valve, or the On-Demand hot water supply that works with the new AquaBlast Pro low-flow design. The AquaBlast Pro does not lose water temperature when standing idle like other units in the marketplace.

KNOW THE WATER SUPPLY FLOW VOLUME: The standard AquaBlast Pro with low flow manifold requires a water supply flow of less than 3 gallons per minute, 2.25 actual. Because this is an advanced design, pressurized to create faster washout using less water and higher washout pressures, the volume of water you supply into the unit is very low but important. The AquaBlast Elite and AquaBlast Pro offer two different washout manifolds, standard flow on the Elite for fastest production and low flow used on the Pro model. Same pressurized design for low and ultra low water usage and or supply. Units can operate for production washouts but it is important to know the low flow Pro unit is built for applications when water supply flow is very limited and high production is not required. The AquaBlast Pro has a slightly longer cycle time for film washout but it also uses less than 3 gallons per minute. Supplying more water flow does not mean the unit will flow more water…the most the Pro model will use is 2.25 gallons per minute even if the supply measures 10 gallons per minute. Always check the supply before making any final supply line connections making sure the supply meets or exceeds the machine manifold requirements listed above.

- After the water inlet hose has been installed, slowly open the customer supplied safety inlet shut off valve and slowly open the machine water inlet valve located at the side of the unit marked "Water Inlet". Use the manual water washout gun to allow the lines to fill by simply pulling the trigger and holding it open allowing the air inside the lines and to bleed off air being replaced with water. You must allow all the air out of the Pro machine before you use for the first time. This is a **one time event**. Knowing the water supply flow in gallons per minute is a simple and quick test. The factory testing filled the pump with water but cold weather shipments require the lines and pump are drained… if the first cycle does not spray withing two (2) seconds turn the power off and check the water supply line making sure it is open.
- **WASHOUT CHAMBER:** This chamber has been constructed to prevent water escape using the hinged cover. You may leave the cover open if the unit is not be used to help keep the inside dry.
- **POWER REQUIREMENTS:** The Pro is a single phase 120 volt unit designed to operate on any dedicated 20 amp GFI service outlet. Make sure no other power is being used on the circuit or the breaker may overload. Power is not required when first filling the water llines….never use extension cords..
- **CYCLE DRAIN REQUIREMENTS:** Because this unit only uses the water once, the cycle drain capacity must be large enough to handle the standard water flow during machine washout cycle. The unit has a standard discharge drain size of 1-1/2" that can be expaned to or reduced to 3/4" using simple plumbing supplies found at any local hardware store. Water being discharged is located high on the side of the unit for maximum gravity drop into the drain. Always check any drain connection for leaks…..a vertical air draw, **air admitance circuit**, has been included with the AquaBlast Pro to allow fast efficient waste water draining.

  The Pro is offered with Optional Discharge Sump that includes an automatic pump and water storage receiver needed to store and remove the drained water from the unit when an adaquate drain is not located nearby. This allows the sump to conveniently move the used water to any nearby drain, sink or tub. The sump unit also includes an automatic alarm controller that sounds an alarm if for any reason the pump does not operate, this will eliminate any sump overflows that might occur with poorly designed systems. These units are sized and supplied with a pump rated at the reqired head pressure and volume needed for the application. Placement, size and pump horse power can be affected by head pressure requirements so always consult the factory for information.
- **WATER IN CONNECTION:** This unit has a set-up similar to any home opeated water heater. Water into the unit is under pressure and requires a customer inlet shut off valve on the heated water supply, this is on the cold water inlet side of the hot water supply tank and not the outlet of the hot water supply. You are required to connect a pressurized hot water line to the Pro from a customer supplied hot water source. Because the system is pressurized the hose used for machine connection must be

quality high pressure type hose rated for hot water supply. Media Blast recommends stainless braided hose for the machine inlet supply with a 3/4" ID but this ID is not required, knowing the supply flow explained later will determine if any special hose ID size is required …. The customer supplied water supply already includes a water inlet shut-off valve that can be used to shut down the supply.. The unit uses standard 3/4" NPT threads to supply water into the main water inlet located at the side of the unit. Many different types of hoses are available at any local hardware store.

- **DUTY CYCLE:** The machine Duty Cycle Chart (DCC) is based on washout times including 30 seconds for load and unload.. After the washout time has been established the Duty Cycle Chart will let you see the production capabilities of the unit listed in washout cycles per hour. The standard model is listed and a load and unload time of 30 seconds has been added to each washout event to creat the cycles per hour. Only the washout time required affects the total cycles per hour. The exact washout time needed will be established by first running a sample part and knowing the washout time required, this allows you to see the hourly cycle rate of the unit using the Duty Cycle Chart and washout time.

NOTE: It is important to know the water supply volume before connection to the AquaBlast Pro Washout Machine. Take time to accuratly measure the supply flow volume amount before making the final water supply inlet hose connection, this flow rate must be known and slightly higher than the manifold usage required, 2.25 gpm …the Pro model uses the low flow manifold design… all water flow is measured in gallons per minute. Using a watch with second hand sweep, flow water into a known water container size for one minute using the location for placement of the new Pro machine and the supply hose used to connect to the new AquaBlast Pro unit. Make sure the container has adaquate capacity to hold at least 5 measured gallons. If the water exceeds 2-1/2 gallons in one minute or less you have all the water required for operation of the AquaBlast Pro. Depending on the results there is no need to continue with the test if you exceed 2-1/2 gallons per minute flow. If a 5 gallon container is filled in 45 seconds, stop the test, you will be flowing 6.66 gallons per minute. Divide the gallons flowed by the fill seconds to know flow per second. Multiply this flow per second times 60 seconds to equal the gallons flowed per minute. It is not necessary for you to run the test for one full minute. If the supply hose used is 1/2" ID and it exceeds the required flow rate a 3/4" ID hose is not required.

- **FILLING THE UNIT WITH WATER THE FIRST TIME:** After testing for water flow the water inlet hose can be attached to the water inlet valve. Slowely open the customer supplied safety shut off valve and next slowly open the machine water inlet valve located at the side of the unit marked “Water Inlet”. Use the manual touch up gun to allow the air in the system to be replaced with water, this is a pressurized system unlike all other automatic washout units available today. You must allow air out of the enclosed system to first charge the machine…. this is a one time event …if the supply flow is 5 gallons per minute it will only take seconds to fill the lines, holding the manual gun open until you see the water exiting the gun is all that is required to prepair the unit for operation. The pump and lines were drained at the factor for winter shipping and storage.
- **REVIEW THE ENTIRE OPERATIONAL GUIDE PRIOR TO MACHINE OPERATION.** Most problems associated with the machine can be identified by simply reading this manual or consulting the Troubleshooting Guide. If your problem cannot be found in the Troubleshooting Guide, please give us a call. Nearly all equipment malfunction issues can be resolved over the telephone. Almost all problems can be eliminated by reading the manual first!
- **CUSTOMER SUPPLIED HOT WATER REQUIREMENTS:** The most common hot water supply uses a standard water heater type tank. The machine duty cycles will determine the water heater tank size needed to supply heated water to the system. Using the machine Duty Cycle Chart helps to properly size the system when knowing the number of cycles you require for daily or hourly operation. If the water tank is undersized for the duty cycle the washout cycle time may increase.

- The AquaBlast Pro model was designed for film washouts using 1-4 100' film roll per month. This with the size and area of the drum indicates an average machine cycle usage of up to 6 cycles per day. The Pro model will washout any number of washouts per day. Knowing the washout time and the true water usage, 2.25 gallons per minute, allow you to calculate heated water usage. If the machine is being cycled 6 times a day with each washout time equal to 2 minutes this equals 12 minutes of washout time using 2.25 gallons per minute. The total heated water supply required would be 27 gallons. Almost any hot water tank will supply this amount.

SET-UP SHEET AquaBlast Pro Washout Machine

The information that follows will be used to get your new AquaBlast Pro machine set-up and operational in the shortest period of time. Use this sheet for the initial machine set-up and operation. You may refer to this sheet at any time, for more detailed operational instructions and machine maintenance refer to the main operational manual or the Important Issues above.

Remove machine from crate and locate using machine caster wheels	+	Check the water flow rate at the machine using supply hose at the location for 2-1/2 gpm or more	+	Connect washout drain and water supply using flexible drain section and hose	+	Fill lines using manual washout gun allowing the air escape, one time event	+	Make electrical connection to machine, 120 volt single phase 20 amp dedicated GFI service outlet

FIRST

- Remove any lag bolts attaching the machine to the shipping pallet. Remove the machine from the shipping crate being careful to wear gloves and eye protection during the process. The standard machine weight is over 350 pounds, make sure you have adequate lifting abilities before removing from the skid and use the skid to position the unit as close to the final location as possible before removal from the skid. The unit includes castors allowing the Pro to be rolled to the final location.
- Use a forklift taking care to spread the forks to the outside next to the machine casters….lifting channels have been supplied to prevent machine damage. Do not lift from the sides marked "No Lifting". Steady the machine when lifting… lift the machine just enough to remove the shipping pallet.
- Install the machine allowing adequate clearance for machine front and rear access panel removal.
- Remove any items from inside the cabinet that might have been shipped inside the cabinet, this may include the manual, installation hoses and installation fittings and clamps when shipped with the unit.
- The water inlet valve is located low on the side of the unit; see Machine Control Diagram (MCD) for location. Before final connection of the water inlet line check the supply flow in gallons per minute using the information above in the WATER CONNECTION SECTION. Media Blast has included a master water shut-off valve, water inlet shut-off valve, on the water inlet line located at the side of the machine. The water inlet capacity is based on customer flow capacity; see Important Issues above for more information about flow requirements and model selection. The customer supply flow capacity must meet the Pro model manifold design. A manual washout gun has been supplied and also used to permit air escape during the first pump and line water charge, see Important Issues above for more information about the first filling. It is advised that you install a master water inlet valve on your hot water inlet supply to allow shut off if you have a hose failure on the supply line; this valve is standard with hot water tank installations. Set the incoming water supply temperature at 90-120 degrees ferinheight if the water is not cold water blended, ask for details about cold water blending to reduce cost of

heated water supply. Use quality high pressure hot water hose rated for both hot water and water line pressure….all internal hoses are 3/4" ID hoses. Because the unit is portable, on casters, never connect and lines, water in or waste out, using rigid supply line or ridge final drain connection.

- Make connection to 1-1/2” drain, this may be increased or decreased in size using standard plumbing drain connectors found at any hardware store. You can also use drain hose used to pump motor home graywater. The unit must include a section of flexible drain hose for final connection to the discharge drain. Never connect using rigid drain discharge line; the discharge of water on commercial property ground is normally not permitted. Check local codes for restrictions.
  The AquaBlast Pro is available with optional sump including automatic pump and pump alarm for discharge to drains that are not located next to the unit placement…ask for details.

The machine is now almost operational with the exception of the electrical hook-up. This has been left to last to insure the pump is not operated ….Make sure water inlet and cycle drain outlet are connected and open. Use the manual trigger gun to fill the machine lines by holding the trigger gun open allowing air to exit the tank and water to enter. Water will spray when the system has been charged with water. The pressurized system does not require a separate pump for the manual washout gun helping to eliminate maintenance but does use and include a pressure amplified manual washout gun. The manual washout gun can be used to first wet the drum, it can also be used for film touch up when extra washout time is required.

- The standard electrical for the Pro model washout machine is 120-volt single phase, 60hz. Check machine nametag for machine electrical service…the unit requires a dedicated 20 amperage GFI circuit and the use of extension cords is not advised unless rated for 15 amps...
- Consult a qualified electrician to make electrical connection if you are not qualified or do not understand the important issues above for power supply requirements.

NOTE:
This unit includes the pump saver design. This design is used to detect “Low Water Supply” in the supply line to the unit. The pump saver design will automatically lower the washout pressure to zero if the water flow into the machine does not match the manifold usage... This pump saver design will ensure the pump and water supply is never exceeded. Always keep the washout cover closed at all times unless the unit is not being used. Open the unit when not being used to keep the washout chamber dry. Never leave the magnets on the drum when not being used; magnets will pick up small iron particles that rust the drum surface.

Remove machine from crate and locate using machine caster wheels	+	Check the water flow rate at the machine using supply hose at the location for 2-1/2 gpm or more	+	Connect washout drain and water supply using flexible drain section and hose	+	Fill machine lines with water using manual washout gun for air escape, one time event	+	Make electrical connection to machine, 120 volt, single phase 20 amp GFI service outlet

OPERATION

- Turn the main machine on-off switch to the on position to Power Up the machine controls. The switch is located on the control panel; refer to Machine Control Diagram (MCD). Turning this switch to the on position will supply power to the low-voltage controls.
- The adjustable washout cycle timer has been factory set to a 3 minute scale….using the adjustable timer dial, set the time to 60 seconds. Now use a small piece of

developed or undeveloped film to test for proper cycle times. This manual includes a general Mask/Film washout time chart for Ikonics Imaging film. This is an estimated time only; time may vary with different inlet water temperatures and or film development times.

- With the lid open pre-wet the drum using the manual touch-up gun. Water tension will stick the film in place; make sure to remove any trapped air bubbles. After placement of the film on the drum remove two of the strip magnets from the washout tray at the front of the machine. Place one each magnetic holding strip over the top and bottom edges of the film to protect the edges of the film from the water blast. You can use film edge to edge using one magnet to hold the edges of two films.
- Close the top washout cover making sure to set the lid seal by applying a small amount of down pressure on the lid seal… press the cycle start button, see Machine Control Diagram (MCD) for location. The unit will start drum rotation, activate the high-pressure pump and continue film washout for the time setting on the cycle timer. Because this unit is an enclosed pressurized design with no water storage tank required, higher pressure and greatly reduced water flow occurs. This enclosed pressurized system is also capable of much higher processing pressure helping to shorten the washout time. The Pro has been designed for applications of 1-4 100' film washouts per month. This unit uses the extreme low-flow manifold design with a water usage on below 2-1/2 gallons per minute. After the cycle timer has timed out open and inspect the film for correct washout time setting…adjust cycle time if needed…
- Remove the part holding magnets by lifting the magnet edge on the film surface first then lift the entire magnet from the enclosure. This will prevent lifting of the film when the magnet removed. Store the part holding magnets on the bottom of the top washout pan assembly. Remove the processed film and store for drying, next re-load with new film for the next washout. **Never leave the magnets on the washout drum**, small pieces of magnetic material can rust the drum surface when trapping moisture between the magnet and the drum surface.
- Duty cycle has been determined by washout time plus 30 seconds load and unload time. The Duty Cycle Chart (DCC) has been calculated using the washout time period plus load and unload time. Low flow and High Flow manifolds will have different washout times; the Duty Cycle Chart (DCC) will show the maximum cycles per hour solely based on cycle washout time required. See the Duty Cycle Chart (DCC) for more information. Longer washout times will reduce total hourly cycles on any unit.
- Know the water supply volume meets the minimum flow before you connect the water supply line or start to process film washouts. The manifold can only flow water during film washout and only flow manifold usage measured in gallons per minute.
- Make sure to place the film between the center lines of the right and left fan jet, never use the area outside the center line of the last jet on each side of the zone for film washout... Jets overlap stops at the last jet on each side…film will be washed out past this area, but film washout occurs at a slower rate than jets with overlapping jets on each sides. The Pro has an active washout zone of 12 inches. The drum washout area size is 14 inches allowing an expansion of the washout zone if needed at any future date. This requires a manifold change with special fan jet spacing and one more fan jet. It will be necessary to order this special manifold to accommodate the location of the drum and the placement of the fan jets over the drum washout area. This will permit the washout of wider stock but slightly reduce pressure that may slightly increase washout times and demand for water flow into the unit. The drum has been oversized to allow for future film width expansion. Additional jets will affect machine water usage; ask for details before changing the manifold jet number or size.
- Never point the manual washout gun at people or pets!
- If the machine is not going to be used, turn the main power button to the off position and open the washout chamber cover.

Below is a general Duty Cycle Sheet for the AquaBlast Pro washout machine…The maximum cycles per hour is based on the film washout time and the estimated load and unloads time of 30 seconds. Using the sum of these two figures allows the hourly cycles of the equipment to be listed. You can use this chart for both extreme low flow and the standard manifold models, if the washout time is 60 seconds you can load, washout, unload and load 40 cycles per hour and not worry about ever running out of water.

Machine Cycles Per Hour

Maximum cycles per hour based on 30 second film unload and load time	**DUTY CYCLE CHART** cycles per hour based on washout cycle times listed					
	51	45	40	36	32	30
Washout Time	40 sec.	50 sec.	60 sec.	70 sec.	80 sec.	90 sec.
All cycles per hour based on film washout time plus 30 second load and unload time						

Maximum cycles per hour based on 30 second film unload and load time	**DUTY CYCLE CHART** cycles per hour based on washout cycle times listed					
	27	25	24	23	20	17
Washout Time	100 sec.	110 sec.	120 sec.	130sec.	150 sec.	180sec.
All cycles per hour based on film washout time plus 30 second load and unload time						

SERVICE & MAINTENANCE

MINIMUM RECOMMENDED MAINTENANCE SCHEDULE FOR YOUR MACHINE
(replacement schedule can vary depending on equipment usage and other factors)

MAINTENANCE PROCEDURE	EVERY 4 HRS	DAILY	WEEKLY	MONTHLY	SEMI-ANNUAL	ANNUALLY
Inspect Water Jet for proper spray pattern		X				
Inspect Hoses for leaks		X				
Inspect Drain Outlet for leaks		X				
Inspect pump cycle pressure, requires optional gauge		X				
Remove and clean Y-Strainer screen				X		
Visually inspect drain pan and clean	X					
Remove magnets from drum		X				
Replace manifold jets					X	X
Inspect and replace washout lid seal						X
Visual inspection with side panel removed				X		

Always Lock Out Electrical for Service

TABLE 3: MINIMUM RECOMMENDED MAINTENANCE SCHEDULE

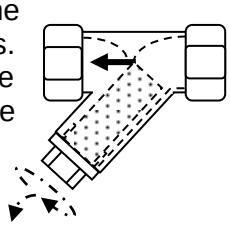
INSPECTING THE FAN JETS & SCREENS: Fan jets should be inspected on a daily basis. Use an undeveloped piece of film the same width as the washout zone and cycle the washout. Look for any areas of the film not being completely removed. When a bad pattern is noticed remove the jet and look for any obstruction in the nozzle. Many different optional nozzle patterns and materials are available on the new AquaBlast Pro machine. Always use a blow-off gun to clean and clear any nozzle found to be defective. Do not drill….dig….scratch or mutilate any jet during cleaning process. These are small high-pressure low flow nozzles, and they can be damaged when not properly cleaned.

WARNING: The Pro has a high pressure pump assembly. Operation using a worn out set of fan jets may flow more water and reduce the pump pressure to zero if inlet flow amount is marginal**.**

It is advised that fan jets be replaced in sets and not random replacement. This maintains the fan jet washout consistency and washout pressure consistency needed to maintain maximum film washout consistency. If no increase or decrease in the washout time is noticed the jets are normally OK ….continued usage of worn out jets may increase machine demand for water. Remember this unit is a low flow design and the jets determine the water usage. Worn out jets require more heated water supply and normally the cost of jet replacement will be saved in heated water cost savings and usage.

REMOVE, INSPECT AND CLEAN THE Y-STRAINER: The water inlet plate located on the side panel includes a Y-Strainer inside the cabinet used to protect the unit from small debris found in new and old water lines. The screen size supplied is used to protect the fanjets and any solenoids used for machine operation. This screen requires monthly removal and inspection. If the screen appears clean the monthly inspection may not be required.

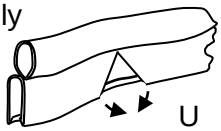
Close the water inlet valve located on the side panel and remove the front or rear panel exposing the Y-Strainer located on the inside of the lower cabinet... Use the manual washout gun to remove any pressure existing in the enclosed lines. The Y-Strainer screen can be removed and cleaned at this time. Use appropriate tools to remove the Y-Strainer screen, inspect and clean. Replace the screen, tighten the access nut and again open the water inlet valve making sure the strainer has no visible leaks. At this time, you can replace any removed panels, the unit is now ready for operation.



Always Lock-Out Electrical for Service

WASHOUT COVER SEAL: The washout cover includes a removable bladder seal used to keep the system neat and clean. The pressurized enclosed system is the cleanest design you can purchase today.

This bladder seal may wear out or become damaged during high machine duty cycle. Replacement is quick and simple and if the seal gets damaged or torn, simply replace to keep the machine operation looking neat and clean. Pull-off to remove and push-on new to replace. To turn a 90-degree corner use a simple set of nips to notch a 90-degree “V” pattern on the inside of the holding clip so it is located on the corner. This will permit a 90-degree turning of the bubble seal assembly.



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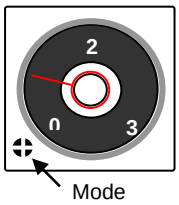
CHANGING THE JET MANIFOLD HEIGHT: The Pro includes an adjustable fan jet washout distance that can be easily changed but factory set for the best performance. The manifold can be tested at different heights depending on the fan jet spread and fan jet pattern being used. To change the distances, remove the threaded handles holding the manifold in position. After removal of the two threaded stainless bolts, it will be possible to move the manifold to the back of the unit and change the size. Make sure you locate, and use matching horizontal holes and re-install the threaded holding handles after selecting the new location. It is important to have

the jets overlapping without conflicting patterns. Always make sure the jets are slightly angled in the anodized manifold, the pattern is visible through the optional observation window if the option has been added to the unit. The fan angle can be used for additional settings of the manifold distance. The fan pattern of each jet should reach centerline of the jet next to it. Test, observe and change using an undeveloped piece of film material the same width as the washout zone.

SETTING THE CYCLE TIME: The washout cycle timer has many different time settings, the factory setting is 0–3-minute maximum cycle time. Use the movable dial to set appropriate cycle time. When the dial is set, the timer will not need to be set again unless the film thickness or type is changed. When the timer cycle ends it automatically re-sets for another repeat cycle time.

To change the dial time setting, any washout 3 minutes and under will not require changing, look for the small mode adjustment switch located in the lower left-hand corner of the timer. Using a small flat blade screwdriver, you can change the mode setting of .05 seconds to 300 hours. Make sure the adjustment switch is clicked into any new location.

Using the dial with graphic display of 0, .5, 1 to 3 indicating minutes, set the dial for the washout time required for the film being used. Simply rotate the dial clockwise or counterclockwise to change the time. This is a simple 8-pin timer that is easily replaced if replacement ever becomes necessary.



READING THE PRESSURE: A 2” liquid filled gauge has been installed on the AquaBlast Pro Unit. In order to read the pump pressure, you will need to remove the front panel of the machine by loosening the four bolts that hold the panel in place. The gauge is mounted directly underneath the drain pan. If the gauge shows no pressure when the unit is in operation, it’s an indication that the there’s a clog in the water line. Refer to page 17 for troubleshooting the unit.

OPTIONAL WINDOW REPLACEMENT if purchased: The new AquaBlast Pro does not include the observation view window. If this option has been added for show demonstration, follow this information below to replace the window. The window uses a positive locking window molding to eliminate leaks and permits washout viewing. You can use this window to check for proper placement of the fan-jet distance, proper fan jet angle and also check for proper fan-jet function. The following steps outline window replacement:

1. Locate locking strip end and remove strip from window molding.
2. Holding one hand firmly against the outside of the window, push the window from inside to outside and remove the window from the molding.
3. Apply silicone spray or equivalent to the locking strip slot and the window slot. Soap will work if sprays are not available.
4. Place lower left-hand corner of the window into the window slot at mid-window (FIGURE 4a).
5. While the window is being pushed toward the left side of the cabinet, bring the window to level position and guide the top left window corner into the top molding window slot (FIGURE 4b).
6. Push the window into the left side of the window molding slot. Use the plastic stick from the Window Molding Tool Kit (part no. 100-18-123) if necessary.
7. With the aid of the plastic stick, install the second half of the window into the molding slot by inserting the stick between the outside of the window and the window slot. Move the stick around the perimeter to the lower half of the window (FIGURE 4c).
8. With the aid of the window locking strip tool (Window Molding Tool Kit), install the locking strip (FIGURE 4d).
9. Locate locking strip end and remove strip from window molding.
10. Holding one hand firmly against the outside of the window, push the window from inside to outside and remove the window from the molding.
11. Apply silicone spray or equivalent to the locking strip slot and the window slot. Soap will work if sprays are not available.
12. Place lower left-hand corner of the window into the window slot at mid-window (FIGURE 4a).

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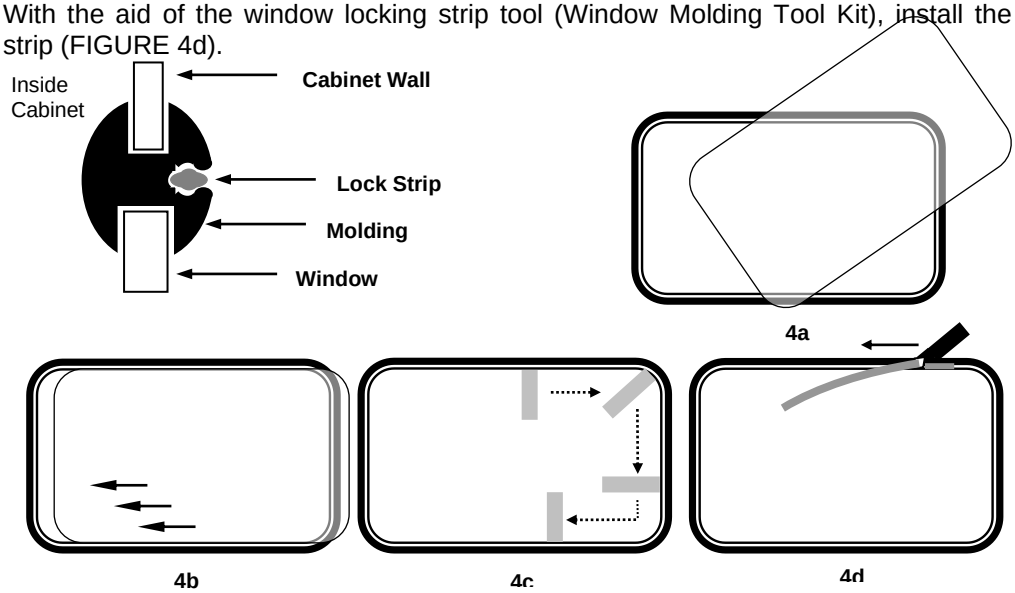
13. While the window is being pushed toward the left side of the cabinet, bring the window to level position and guide the top left window corner into the top molding window slot (FIGURE 4b).
14. Push the window into the left side of the window molding slot. Use the plastic stick from the Window Molding Tool Kit (part no. 100-18-123) if necessary.
15. With the aid of the plastic stick, install the second half of the window into the molding slot by inserting the stick between the outside of the window and the window slot. Move the stick around the perimeter to the lower half of the window (FIGURE 4c).
16. With the aid of the window locking strip tool (Window Molding Tool Kit), install the locking strip (FIGURE 4d).



SAFETY VIEW WINDOW REPLACEMENT

FLANGE BEARING: The Pro unit uses both permanently lubricated and lubricated bearing on the left side of the inside cabinet wall… this bearing normally requires no service, if equipped with grease fitting use fitting to grease the bearing yearly.

OPTIONAL SETTLING TANK with AUTOMATIC PUMP & ALARM: Many types and sizes for optional settling tanks can be used with the new Pro washout machines. The material construction, automatic pump head pressure and alarm controls are commonly used when a drain is not located is close proximity of the washout unit.
Call and discuss this available option with Ikonics Imaging or Media Blast Sales department.

PUMP SOLENOID VALVE: The Pro is a pressurized system for higher performance using less water and includes a master solenoid water valve. This valve requires no maintenance. If the cycle stops and the fan jets continue to emit low pressure water flow the solenoid may have a piece of debris under the diaphragm and require cleaning. Make sure the washout cover is closed and power and water has been locked out and removed, valve location is on the water circuit plate with the Y-strainer and water inlet valve. It will be necessary to disassemble the valve to clean the diaphragm and valve body…. An optional high flow panel mounted sediment filter can be added to the unit that includes a manual purge valve for quick cleaning…ask for details.

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MANUAL WASHOUT GUN: The manual washout gun is also used to fill and pressurize the lines for the first-time allowing air out and water in. This gun requires no service, replace when faulty or leaking.

MAGNET STORAGE: The magnets are stored in the front of the top washout pan assembly. Never store the magnets on the drum….moisture is trapped between the two surfaces and small

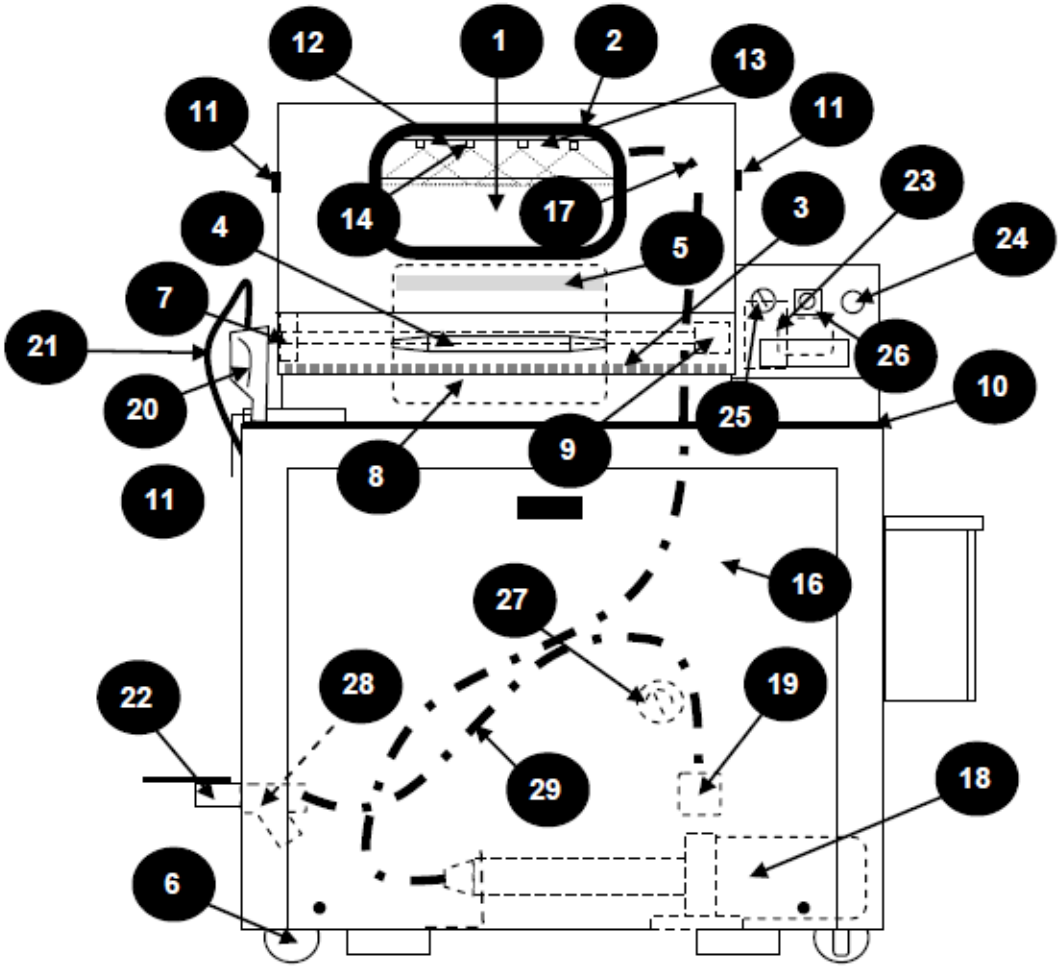
magnetic particles will attach to the magnets rusting the drum surface. No service or maintenance for magnet storage is required.

FRONT AND REAR PANEL REMOVAL: The removable panels are used to service and or replace any defective parts. Removal is simple and quick….loosen the holding screws pull and remove the covers by lifting away from and slightly up on the panel. Always make sure the electrical is locked out before doing any machine service.

TROUBLESHOOTING YOUR PRO WASHOUT UNIT

PROBLEM	SOLUTION
Pump cycle pressure reads zero	❖ Water supply volume, gpm, is less than manifold demand, check supply flow making sure 2-1/2 gallons per minute is supplied... ❖ Check the flow volume (gpm) using the test on page 6 and 7 of this manual ❖ Too small water supply hose, measure supply flow for gpm using the supply hose... ❖ Water inlet valve is closed, check both customers supplied and machine inlet... ❖ Worn out fan jets, higher flow than supply will result in zero pressure, replace jets and check supply hose ❖ Plugged Y-Strainer, shut down and clean strainer screen...install sediment filter if the Y-screen requires cleaning more than yearly...
Inconsistent film washout	❖ Bad film development, consult Ikonics for reasons why ❖ Bad fan jet pattern...remove and clean fan jets... ❖ Bad fan jet angle, check using undeveloped full width film and short cycle time… ❖ Placement of film beyond the right and left fan jet centerline…reposition film location during washout... ❖ Incorrect fan jet distance, make sure the fan jets overlap centerline of fan jet on either side. Use the adjustable height to change overlap setting...use the fan jet angle for fine settings… ❖ Check fan jet manifold angles making sure the visual appearance during operation looks the same…adjust as required. ❖ Short cycling the washout; add time to the washout timer... ❖ Water temperature variation, check temperature using gauge installed at the main water inlets. This requires installation of a Tee at the water inlet valve.

AquaBlast Pro



AquaBlast ® PRO

Bubble #		DESCRIPTION	QTY	PART NUMBER
1	AB Pro	Safety window, option	1 each	115-08-125
2	AB Pro	Window molding with lock strip, option	1 each	115-08-126
3	AB Pro	Washout lid seal, per foot	1 each	101-11-147
4	AB Pro	Washout lid handle	1 each	115-09-123
5	AB Pro	14” magnet strips	6 each	100-11-605
6	AB Pro	Locking caster wheels	4 each	115-09-112
7	AB Pro	Flange bearing, drum drive	1 each	115-09-103
8	AB Pro	Drum	1 each	115-09-104
9	AB Pro	Drive coupling	1 each	115-09-106
10	AB Pro	Top plastic edge trim per ft	per ft.	115-09-107
11	AB Pro	Stainless enclosure pivot pins	2 each	115-09-108
12	AB Pro	Manifold, 12” washout zone	1 each	115-09-105
13	AB Pro	Manifold plugs, 1/4"	5 each	115-09-109
14	AB Pro	Washout fan jets, each	5 each	115-09-120
14	AB Pro	Washout fan jet strainer screen, each	5 each	115-09-121
15	AB Pro	Washout supply hose, cabinet to manifold	1 each	115-08-107
16	AB Pro	Water supply hose, pump outlet to cabinet	1 each	115-08-114
17	AB Pro	Water supply hose, main inlet to pump inlet	1 each	115-08-108
18	AB Pro	Booster pump, 3/4 hp 120 volt	1 each	115-09-101
19	AB Pro	Solenoid valve pump inlet	1 each	115-09-102
20	AB Pro	Manual washout gun	1 each	115-09-111
21	AB Pro	Manual washout gun hose	1 each	109-15-375
22	AB Pro	Water inlet valve, 3/4"	1 each	104-26-122
23	AB Pro	Gear Motor Drive	1 each	115-09-100
24	AB Pro	Cycle switch	1 each	112-09-602
25	AB Pro	Power on switch	1 each	112-09-601
26	AB Pro	Timer switch	1 each	115-09-113
27	AB Pro	Pressure testing gauge	1 each	115-08-110
28	AB Pro	Y-strainer	1 each	115-09-125
29	AB Pro	SS water supply to pump inlet	1 each	115-08-106

WARRANTY

Media Blast & Abrasives, Inc., hereinafter known as “Seller”, warrants the equipment and products sold hereunder against defects in material and workmanship for a period of one year from the date of shipment to buyer.
Equipment, products or parts manufactured by others but furnished by seller will be repaired or replaced only to the extent of the original manufacturer’s warranty (except motors).
The following conditions apply to limitations:

1. High wear parts are not covered, these parts include window, fan jets and lid seal.

2. Warranty does not apply to misuse of the machine to include improper abrasive type use and or abrasive mesh size used in the equipment. Water conditions may require the installation of a viable water filter.

3. The machine warranty is not transferable and only applies to the original buyer.

4. Replacement warranty parts will be sent at no charge to the buyer for warranty replacement. The cost of labor is not covered under the machine warranty unless preformed at the sellers facility.

5. A Returned Goods Authorization (RGA) form must be obtained before the product is returned to seller for warranty repair. Without an RGA number the product will not be accepted.

6. Seller’s entire liability, whether under warranty, contract, negligence, or otherwise, shall be limited to repair or replacement, F.O.B. Seller’s place of business, of the original equipment found to be defective within the warranty period.

MBA
MEDIA BLAST & ABRASIVE, INC.
591 WEST APOLLO ST., BREA, CA 92821
(714) 257-0484 | MEDIABLAST.COM
MADE IN USA