



BACA PURE Hydro-80 Water Filtration System

Proposal No. 179075

Prepared for: Marble Expressions
1573 Seminole Street
San Marcos, California 92078
Attn: Sheri Smith

Presented by: BACA Systems LLC
101 Premier Drive
Orion Township, MI 48359
www.BACAsystems.com
Ph. (855) 847-7330



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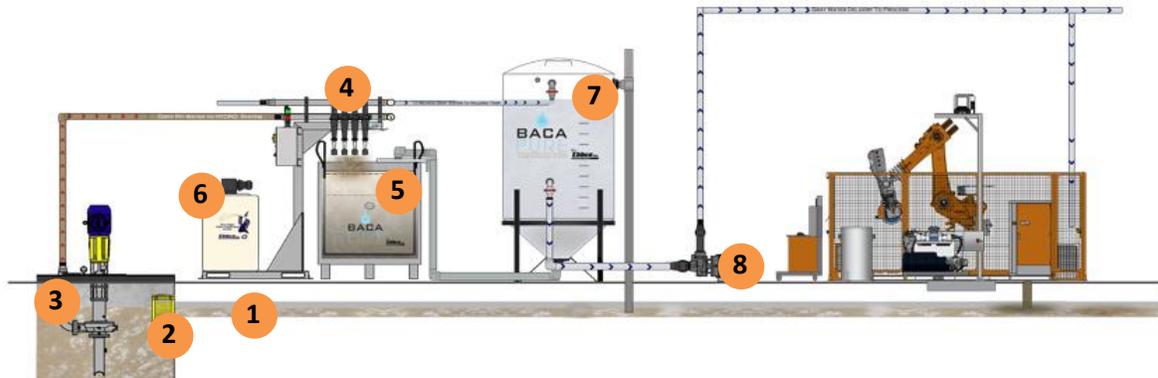
Overview

BACA PURE WATER FILTRATION SYSTEMS are designed to remove stone particulate from water. The method used to achieve this is a series of hydro-cyclones. A heavy-duty, seal-less centrifugal pump delivers dirty water from the collection pit to the hydro-cyclones at the proper flow and pressure. A Coagulant settling agent automatically injects a solution into the filtered water before entering a 1,500 US Gallon, conical holding tank, which overflows back into the dirty water collection pit and is continuously recirculated. All particles greater than 10-micron are deposited into a sludge hopper, which is lined with a heavy-duty disposable bag for easy disposal. Excess water from the sludge hopper is directed back into the dirty water holding pit. A Gray Water Delivery pump delivers the gray water to the entire shop at 75psi.

Included Features

- 80 Gallons Per Minute
- 75 psi Water Delivery to Entire Shop
- Grey Water filtered down to 10 microns
- 1500 Gallon Holding Tank
- One Lobster Pot
- Four (4) Hydro-cyclone Separators
- One (1) Cubic Yard Sludge Hopper
- 10 HP Suspended Centrifugal Pit Pump
- Wizard Clear Coagulant System
- 7.5 HP Grey Water Delivery Pump
- Upgradeable to Clear Water Filtration
- Ideal for Pre-Filtering Water Press Systems

System Components



1 - Floor Flume & Pit

Dirty water from the manufacturing process enters the Floor Flumes and gravity flows into the pit. Water is directed into the pit providing a capture point to enter the pit. This is provided by the customer and is recommended to be around 5'x5'x5'.



2 - "Lobster Pot" Flume Screen



- One (1) Lobster Pot will be provided with the system.
- Lobster pot is to be placed by the customer, at the end of the flume/trench where the dirty water dumps into the dirty water holding pit.
- Lobster pot fastens to pit, concrete wall.

Lobster Pot flume screen is the first line of defense to protect the pit pump from unintentionally sucking debris into the pump causing damage to the recycling system.

**Additional Lobster Pot Flume Screen may be purchased for multiple pit entries.*

3 - Pit Pump

- One (1) 2x3x10+12 -- 10 HP Vertical Centrifugal Pit Pump to supply 80 GPM @ 45 PSI.
- Pump is vertical, seal-less, low speed, centrifugal design.
- Pump will be mounted onto 4" I-beams, supplied with the system, to support the pump over the water level in the customer's existing, dirty water pit. (NOTE: Verification of pit dimension in writing are needed at the time of order, to determine the beam length.)
- Pit pump is supplied with 20' long, wire whip to connect to the main electrical control panel.



Keeping the pit pump ABOVE the water pit allows for the pump to be a more reliable and robust solution to draw the water out of the pit and into the recycling system rather than using a submersible pump which has the tendency to regularly fail by keeping it under water.

4- Hydro-Cyclones

Water enters a series of Hydro-cyclones and is filtered down to approximately 10 microns. Solids are continuously purged into the Sludge Hopper. Clean fluid is delivered to the Gray Water Holding Tank.



- Four (4) Hydro-Cyclone Separators will be mounted on a custom forkable base.
- Each hydro-cyclone will process 20 GPM of dirty water.
- Hydro-cyclones will continuously purge solids into the Sludge Hopper.
- Clean Discharge from the hydro-cyclones, is sent to the Holding Tank.

5 - Sludge Hopper

The Sludge Hopper collects the sludge discharge from Hydro-Cyclones into a removable bag with four lifting straps. The excess fluid from the hopper overflows back into the pit.

- One (1) one cubic yard sludge hopper with Removable Liner.
- A stainless-steel baffle plate eliminates the migration of solids purged back to the pit.
- Sludge hopper will have, 3" overflow outlet to overflow excess water back to the pit.
- 15' of 3" hose will be provided to overflow water back to dirty water holding pit.



6 - Wizard Clear Magic Coagulant System



Before entering the Gray Water Holding Tank, the Wizard automatically injects coagulant settling agent into the gray water return line to enhance the settlement of the "fluff" inside the gray water holding tank.

7- Conical Grey Water Holding Tank

A 1500-gallon conical bottom tank stores the 10 micron gray water. The conical bottom allows for the easy settlement of the "Fluff".

- One (1) 1,500 US Gallon, polypropylene, conical bottom, holding tank.
- Includes a metal support stand.
- Tank is configured with all necessary fittings to connect the water system to the tank.
- Includes a 4" Overflow to allow excess water to return to the pit
- Manual Valve to purge the Settled Fine Particulate into the Sludge Hopper



8- Grey Water Delivery

A Heavy-Duty Horizontal Pump will deliver gray water from the Holding Tank throughout the shop at the required flow of 75psi.



- One 7.5 HP, Cast-Iron gray water delivery pump to provide 80 gpm @ 75psi water delivery to the entire shop.
- Pump has a Silicon carbide/Silicone carbide/Viton mechanical seal.
- Includes Inlet and outlet plumbing with gauge and valves.
- Pump is equipped with a minimum flow dump line for pump protection

SYSTEM OPTIONS

Hurricane Polishing Filter

For applications that require “Crystal Clear Water”, a Hurricane Polishing Unit can be added at point of use to filter gray water down less than 1 micron. The Quad Hurricane System is unique to BACA PURE. This filtration system allows for the ability to take gray water from the base unit and filter it to clear water in 20 GPM increments. Allowing the water system to provide gray water for basic operations and upgrade the water system to clear water where and when it is needed. You can add up to 4 Quad Hurricane Systems to the BACA PURE system creating a full 80 GPM of clear water if needed without having to purchase a new water system. Allowing the BACA PURE to be one of the most flexible and upgradable water systems on the market.



- One, (1) 20” x 60” carbon-steel, bent base plate, painted with RAL 7035.
- Six, (6) adjustable leveling legs.
- Four, (4) medium pressure rated, filter housings.
- Four, (4) SWF-HR-930-XXX, filter cartridges, one per housing.
- One, (1) water hammer arrestor, mounted on outlet header.
- Two, (2) 0-100 psi, pressure gauges.
- Ten, (10) feet, of suction hose and stainless-steel hose clamp.
- Ten, (10) feet, of discharge hose and stainless-steel hose clamp.
- One, (1) pressure switch to activate a red, flashing service light, to indicate, dirty filter cartridge condition.
- Filter system operates, with Uninterrupted Flow. One filter housing running, and one on stand-by.

*Hurricane Polishing Filters requires, 120V, single-phase receptacle to power system service light.

Ozone Generator



Mounted to the Holding Tank, with an ozone dispersion stone suspended inside. Ozone will help eliminate bacteria, algae and odor from forming inside the tank.

Automatic Filter Cleaning Station

Utilizing the systems gray water, the Automatic Filter Cleaning Station allows the ability to automatically clean the Hurricane Filter Cartridges without having to stop production or allocate labor. Sludge is collected into a lined Settling Weir for easy disposal and excess water is returned to the pit for reuse.



Optional Clear Polish Advantage Package

Includes a Field Retrofittable Centrifugal Separator with stand, Automatic Pinch Valve and Controls, Pit Sweeper Package and Installation Hardware.

Centrifugal Separator with Automatic Purge Valve and Controller



Water from the pit pump enters a centrifugal separator where solids are filtered to 40 microns. The Separators clean fluid provides the flush for the Pit Sweeper Package and is filtered further by a series of Hydro-Cyclones. Sludge from the Separator is deposited into a Sludge Hopper.

Pit Sweeper Package

A PVC plumbing sweeper placed inside the pit, keeps particles suspended and swept toward the pump suction for removal. This is included in the clear water advantage optional upgrade and can be added anytime after the installation. Pit sweeping will drastically minimize the need to drain your water pit and clean out the bottom of the pit as it captures solids and fills with mud over time. Ultimately this feature saves downtime and labor to clean the pit.



Optional pH Balancing Systems



This Stone Working Filtration System (SWF) is designed to keep the process water supply above a certain value for its PH Measure.

The PH is monitored by a probe mounted in the pit. The probe sends a value signal to a meter which triggers the metering pump to dispense Clear Magic Aqua Balancer. The Aqua Balancer fluid mixes in the pit fluid and lowers the PH level of the process fluid until balance is achieved.



Electrical Control Panel

- One (1) NEMA 12 Electrical Enclosure.
- Hand-Off-Auto selector switches, to control pump motors.
- Two (2) motor contactor for the control of the Pit and Gray Water Deliver Pumps.
- The motor starter includes wiring between the switch and motor.
- The control panel will be wired for 460V, Three-Phase, 60 Hz, incoming power supply. (Electrical Control Panel retains factory paint color.)

Installation Hose and Piping

This unit will be provided with the following hose and plumbing for the installation of the equipment.

- 20' of 2" Black Con-Ag Hose, Hose Barbs and Clamps to connect the Pit Pump Outlet to Hydro-cyclone Inlet
- 25' of 2" Black Con-Ag Hose, Hose Barbs and Clamps to connect the Hydro-Cyclone outlet to the Conical Tank Inlet
- 15' of 3" Black Con-Ag Hose, Hose Barbs and Clamp to connect the Sludge Hopper Overflow to the Dirty Water Pit
- 30' of 2" Sch10, DMV pipe and fittings to connect the Conical Tank overflow back to the Dirty Water Pit

Installation and Start-Up Supervision

The services of a qualified field technician for standard time to supervise and assist in the on-site equipment start-up and commissioning. Pricing is based on normal eight (8) hour working days, excluding Saturdays, Sundays, holidays, and expenses. Operation of the filtration system during machine qualifying is the responsibility of the Purchaser.

Guarantee of Equipment

BACA Systems guarantees the construction of their equipment will be first class in every respect. Parts that fail through normal use or operation within one (1) year or 2000 Hour from the date of shipment will be repaired or replaced F.O.B. point of origin. Labor and equipment to effect repairs are to be provided by the Purchaser with supervision if required. Parts that become defective due to abuse, neglect, inattention, lack of lubrication, chemical reaction or operation at other than design condition or normal wear will be the Purchaser's responsibility. Equipment such as pumps, motors, electrical controls, etc. will carry only the warranty granted by the original manufacturer. No warranty will be honored beyond the warranty of the original component manufacturer. BACA Systems shall not be liable for Buyer's loss of profit or any special, consequential, or incidental damage or loss, not for any cost incurred by Buyer for alteration, repair or work done on the products without BACA Systems express approval in writing prior to any such alteration, repair, work or rework. BACA Systems total liability hereunder, whether based on contract or tort, in no event shall exceed the unit purchase price of the materials specified herein. All filter and pump seals have a ninety (90) day limited warranty. Any cartridge that collapses due to overloading does not qualify for warranty. Pump seals that fail due to overheating will not be covered by warranty.

Note: Failure to connect system or components to proper specified electrical source will void warranty.



System Design, Engineering and Drawings

System will include system design, engineering and drawings for the mechanical and electrical assembly, operation and maintenance of the filter system quoted herein. The drawings "For Approval" and the final drawings will be generated by Ebbco Inc in-house CAD system (Auto Cad 2018).

The drawings will include:

- Filtration system equipment (general arrangement) layouts.
- Filtration system electrical control diagrams.
- Filtration system piping schematic.

Utilities Required

Electricity: 460V, 3 Phase, 60 Hz, 25amps

Important-Please Note: All field connections for electrical control panel are the sole responsibility of the Purchaser. Electrical control panels do not carry any rating (I.E.: CSA, CUL, UL, OR CE) unless otherwise indicated and quoted that way. **VOLTAGE, PHASE AND HERTZ MUST BE SPECIFIED ON THE PURCHASE ORDER.**

Note: It is highly recommended to have a minimum of a 5 ft. Long x 5 ft. Wide x 5 ft. Deep dirty water pit. Flumes should be 10 to 12 inches wide and not exceed 12" deep at the intersection with the pit wall. To optimize flow of water towards the dirty water pit, flumes should be pitched towards the dirty water pit, ¼ inch, per 4 lineal feet of flume, or 1 inch for every 16 feet, corners of flumes should have 45 degreed angles.

It is customers sole responsibility to complete the following items, before installation, or prior to system start-up.

1. Uncrate all the equipment and place it in the locations shown on the provided layout drawing, as agreed, prior to shipment.
2. All necessary electrical power drops should be in the proper locations to operate all equipment.
3. All necessary compressed air drops should be in the proper location to operate all equipment.
4. "Lobster pot/s" Flume Screens should be installed into the correct locations of the dirty water pit.
5. The Pit Pump should be placed into the dirty water holding pit and anchored properly.
6. Provisions should be made to deliver enough clean city water, to fill the entire system.
7. A qualified electrician must be on site during start up, to make final electrical connections to the system, main electrical control panel.
8. A qualified plumber must be on hand, to make all final connections from the water system/s to the shop water plumbing loop, to feed all shop equipment, and machine tools.



Proposal Summary

BACA Systems would like to take this time to thank you for the opportunity to provide you the following proposal for your BACA PURE Water Filtration System. We proudly submit the following information for your review.

Standard System Description	
BACA Pure – Hydro-80 Water Filtration System	\$ 40,000.00
Providing 80 GPM of Gray Water	
“Lobster Pot” Flume screen	
80 GPM Pit Pump	
Hydro-Cyclones – Qty. 4	
One Cubic Yard Sludge Hopper	
Sludge Bags - Qty. 6	
1,500 US Gallon Conical Tank	
“Wizard” Coagulant System	
Qty 4 - One Gallon Jugs of Coagulant – SWF-COAG-1	\$ 288.00
Qty 6 – Replacement Sludge Bags	\$ 210.00
2 Days – Installation by Qualified Service Technician	\$ 3,500.00
Estimated Freight Charges	\$ 6,500.00
TOTAL - US Dollars	\$ 50,489.00

Optional Items	
Additional Lobster Pot: SWF-LP (Page 3, #2)	\$ 1,895.00
Quad Hurricane Filter System: SWF-Q-H-UF-FSB (Page 6)	\$ 8,595.00
UV Ozone Generator to reduce odor, bacteria, & algae: SWF-OZN-UV8-50AP (Page 6)	\$ 1,695.00
Automatic Filter Cleaning Station (Page 7)	\$ 6,595.00
Clear Polish Advantage Package:	\$ 14,000.00
<ul style="list-style-type: none"> Centrifugal Separator with Automatic Purge Valve and Controller (Page 7) Pit Sweeping Kit (Page 7) 	
pH Balancing System (Page 8)	\$ 1,750.00



Terms and Conditions

- Delivery: 8-10 Weeks Upon Receipt of Order Confirmation by Baca Systems (Including System Down Payment)
- Installation: 2 Days – Installation by Qualified Service Technician
- Shipping Point: DAP to Customer – BACA responsible for Shipping (As defined in “Incoterms® 2010”) <http://www.iccwbo.org/products-and-services/trade-facilitation/incoterms-2010/the-incoterms-rules/>
- Payment Terms: 50% with Order; 50% Due Six (6) Weeks Prior to Shipment;
NOTE: All invoices beyond 30 day terms will be subject to a 1.5% monthly differential charge to be added to customers final payment responsibilities
- Project Alterations: Any and all alterations or deviations from the above specifications involving extra costs will be executed only upon written orders and will become an extra charge over and above this estimate. Additional installation services shall be quoted by BACA Systems prior to work commencement.

This proposal is valid for 30 Days from date on quote! Thank you again for the opportunity. If you have any questions, comments, and or concerns regarding this information, please feel free to contact us accordingly.

Best Regards,

Tony Russo, BACA Systems
248-881-7753
trusso@bacasystems.com
www.bacasystems.com