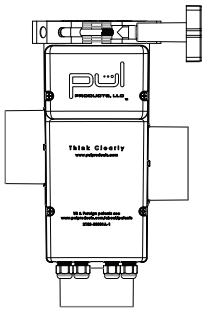
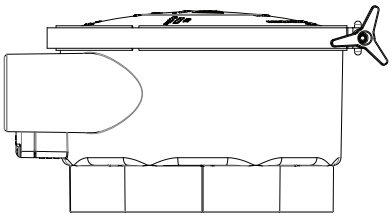
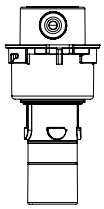
PRODUCTS, LLC

SMART CLEANING POOL

INSTALLATION & OPERATION GUIDE







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Unprecedented Innovation. Impeccable Performance.

I speak on behalf of the entire PUL team when I say we are grateful you are here. Our passion runs deep for what we do, and I believe it is evident in the innovative, quality products we create, and how we seek to positively impact those we partner with.

PUL Products was formed from a deep-rooted history, and generations of experience in leading swimming pool technology development. Growing up the son of a brilliant inventor of swimming pool technology, I remember him working on multiple hand-sketched expressions of the next innovative design he was refining in his mind. Because of that heritage and commitment to innovation, our Visioneering Team members are the inventors and the brilliant engineering minds behind over 100 US patents, as well as many of the pool industries' leading and most successful products.

Our focus as a company is to provide disruptive technologies and products that will greatly enhance the ownership experience for pool users, while bringing value and success to our partners.

Our greatest asset is the incredibly gifted individuals that we work with every day, and those that have chosen to partner with us. We win collectively when our people and partners are individually successful.

We would like to invite you into the PUL family and see what's happened when the freshest, most innovative company with the richest experience, challenged ourselves to create the industry's most effective and intelligent in-floor cleaning system.

Jim Goettl

Using the Builder Portal (app.pulproducts.com), PUL Partners can upload proposed pool plans to our Engineering team to provide a customized system layout. If you need to contact customer service, please email customerservice@pulproducts.com.

OBTAINING A POOL ENGINEERED DESIGN FROM PUL PRODUCTS:

1. Log in to your Builder Portal at app.pulproducts.com (if it is your first time logging in please set up a password).
2. Go to the “Jobs” tab on the left and select “New Job”
3. Complete the Engineering form
    a. Includes questions about system requirements
    b. Submit Pool plan in CAD/pdf format
4. Receive your completed design within 2 business days
    a. Plans will be uploaded to Builder Portal under “Ready”
    b. Deliverables include:
        i. Complete dimensioned Head layout for specific pool
        ii. A keyed Nozzle schedule detailing exact head configurations
        iii. PUL Conekt 8-Port Valve/Controller specs & riser detail
        iv. Complete PUL product materials list
        v. Quote - based on dealer agreement, an image of pool for easy app. viewing
        vi. PUL Program for cleaning schedule that can be uploaded to Conekt system in the field via QR code
5. Approve design
    a. Review Bill of Materials and adjust if required
    b. Add or delete items as necessary
    c. Process for revisions
        i. If the design changes with the pool design or system color, please upload the proposed changes to the portal, listing job name and specific changes and a revision number and we will provide the updated design and bill of materials within 24 hours.
    d. Place Order/Shipment. Orders received will be processed and shipped within 24 hours.
    e. Checkout to schedule delivery and purchase orders. Options include: Choosing delivery of 2 separate orders (rough-in package and start-up package), or ship all at once.
    f. Both credit card or account purchases are available.

SYSTEM REQUIREMENTS, DESIGN CONSIDERATIONS, & RECOMMENDATIONS

FILTER

When selecting filter sizes, if the filter requirements fall in between available sizes, select the next larger filter. Refer to Equipment Spec Chart for required rate.

EQUIPMENT SPECIFICATION CHART

	Single pump	Dual pump
Flow rates	65 GPM @ 70 TDH	60 GPM @ 60 TDH
Minimum filter	4.9 Sand Cartridge 200 sq ft [Cartridge filters are rated at .25 GPM per square foot of filter area.] 48 sq ft. [D.E. filters are rated at 2 GPM per sq. ft. foot of filter area]	3.1 Sand 36 sq ft DE Cartridge 200 sq ft
Notes	Bypass on heater / ozone	Debris canister recommended No bypass on heater / ozone req

- Anytime the valve is further than 30 ft. from the pump/controller or booster system to the 8-port valve and all suction and return lines, the pipe sizes must be increased to min. 2½".
- GPM stated are the requirements of the in-floor system only.
- Additional equipment such as chlorine generators, spa overflows, water features, and solar systems etc. will require additional flow, adjust GPM requirements accordingly

SAND FILTER NOTE: Rates in excess of 20 GPM per sq. ft. can cause channeling of the filter bed.
CARTRIDGE NOTE: Excess flow rates of over 125 GPM per sq. ft. can cause the fibers of a cartridge to become impacted.
NOTE: External conditions may affect cleaning system effectiveness and require increased run time and [pressure, cycles]. External conditions include weather conditions, landscaping, and debris load.

PUMP

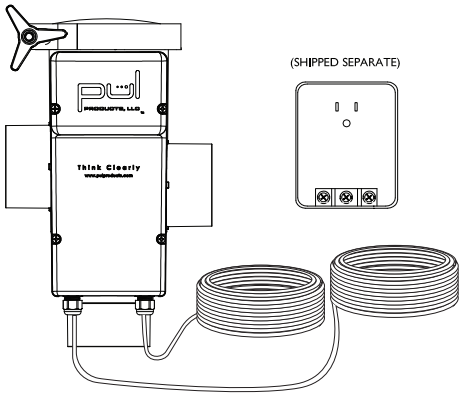
In order to determine the appropriate pump size for your pool application, the gallons per minute and total dynamic feet per head need to be calculated.

The HP required for the pump can be calculated as follows:

1. Determine GPM and Ft./Head. requirements from Equipment Specification Chart.
2. Refer to manufacturer's pump curve of equipment you use. Mark where the both the lines for both the required GPM and Ft./Head intersect. This will give you the pump HP required
3. Compare Part # and Model #. Ensure you use the THP value for sizing your pump.

POWER SOURCE & AUTOMATION

Provide 120V power source within 10 feet of controller in weather proof enclosure between controller and valve, either Install ½" conduit with wire or cable. The Conekt Controller requires a 120V power source within 10 feet of controller. The Conekt Controller will arrive pre-wired with a 15' wire whip for future power connection and should be left coiled as delivered until start up. The transformer required for final connection will be delivered as part of the Equipment Trim Out shipment.

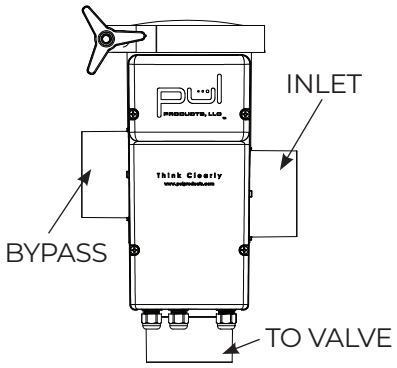


CONEKT CONTROLLER PLUMBING

The Conekt Controller body is ready for installation once it is removed from packaging, no prep is required.

The Conekt controller is used to control water flow to the Conekt 8-Port Valve. A bypass line is required per the system diagram for the system type being provided.

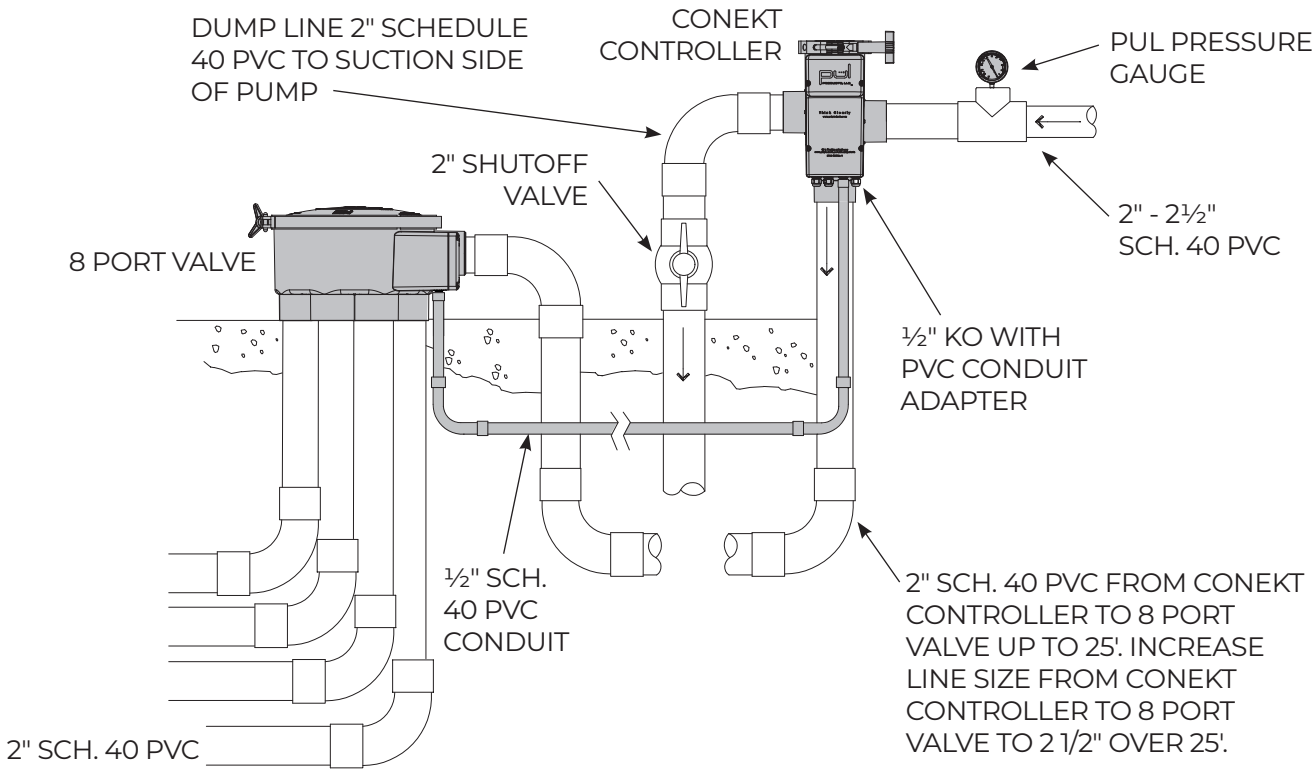
IMPORTANT: CPVC COMPATIBLE GLUE MUST BE USED TO GLUE CONTROLLER TO PVC PIPES



2½" O.D. / 2" I.D. FOR RETURN LINE, INLET, AND TO VALVE

PLUMBING THE PRESSURE GAUGE
Use PVC primer and PVC glue on the ports and pipes.
(IPS WELD-ON P68 Primer and 711 Glue or 705 Glue or equivalent).
Install pressure gauge prior to the PUL Conekt Controller with a 2" x ½" or 2½" x ½" SCH. 40 tee socket. Optimal operating pressure for the PUL in-floor cleaning system is indicated by the green zone on the pressure dial (between 18 - 24 psi).

NOTE: The Controller should be plumbed down stream to any chlorinator/ozone generator and/or heater, must be installed within 8 feet of the system pump, and plumbed in bypass configuration eliminate pressure drop.

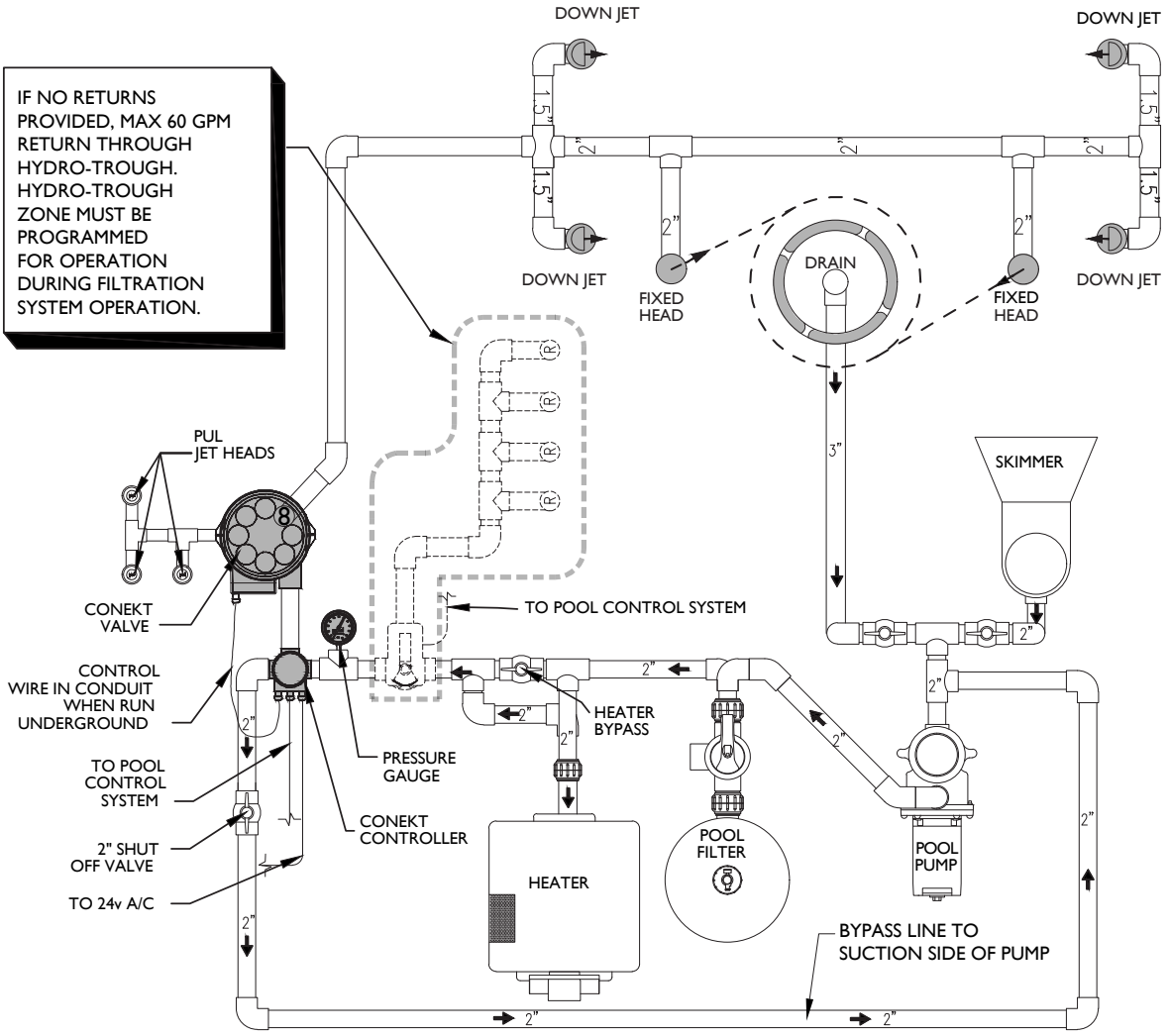


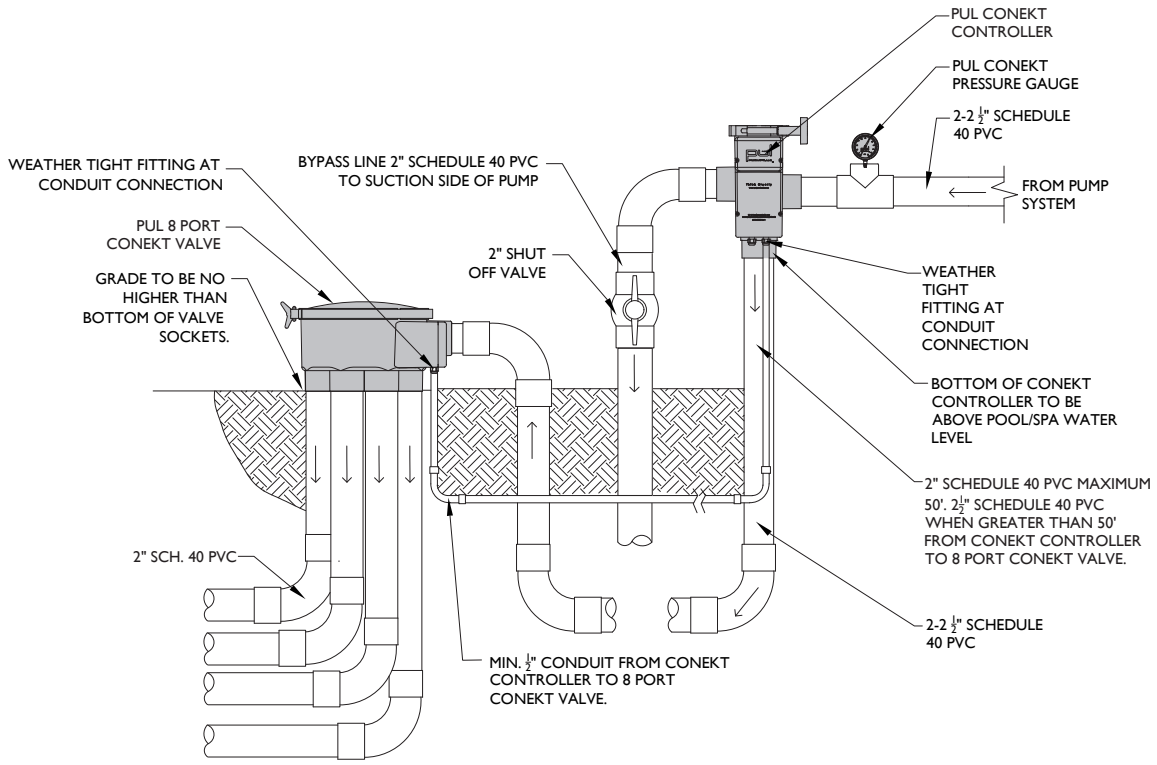
EQUIPMENT PAD APPLICATION

The PUL Conekt Controller should be installed at the equipment pad if the proximity to the pool allows. PUL recommends keeping the Conekt Valve within 15' of pool to reduce the amount of piping to zones.

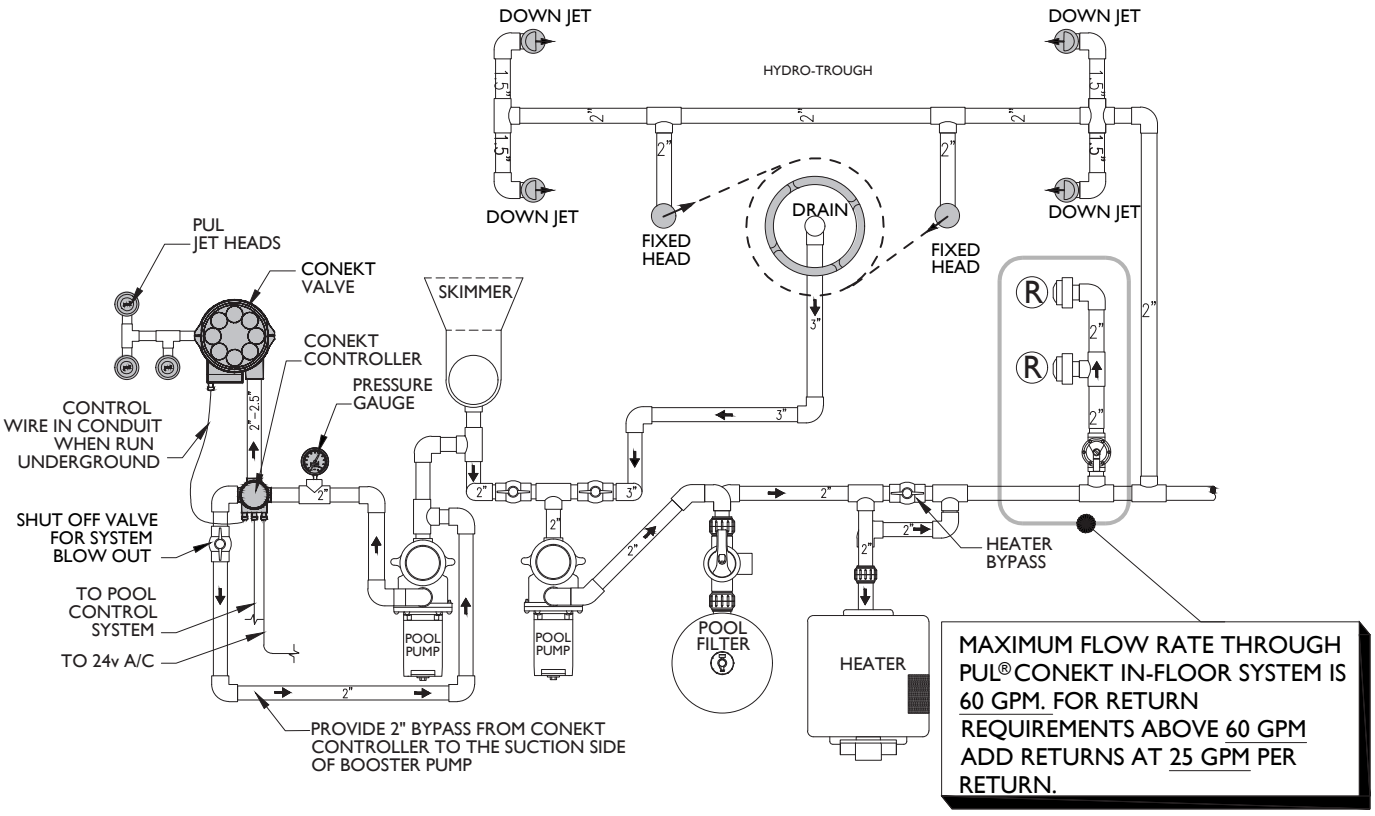
NOTE: In-floor system trenches should not be dug by an excavator. The plumber should be responsible for hand digging the trenches within the pool in order to maintain an accurate head layout.

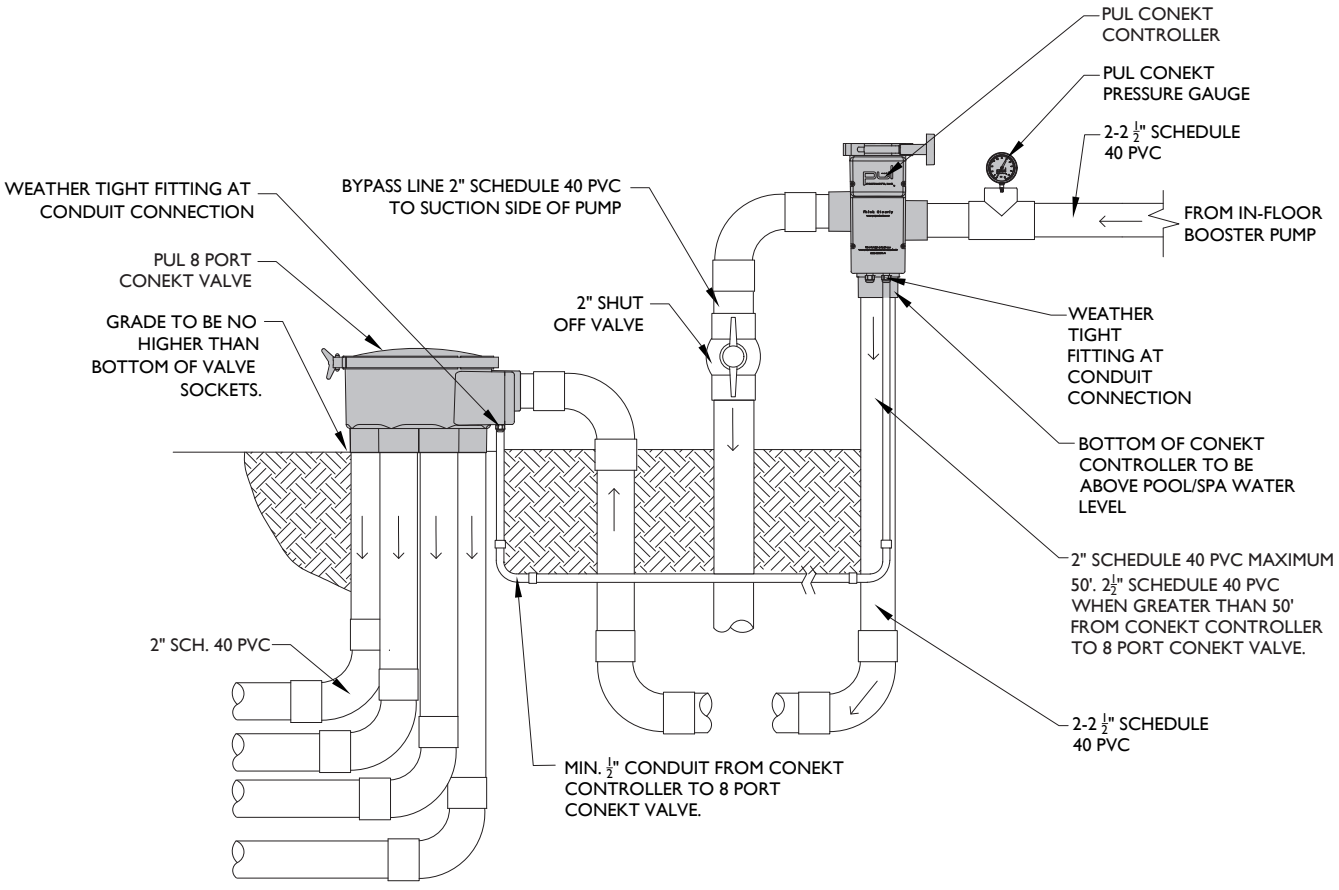
SINGLE PUMP SCHEMATIC





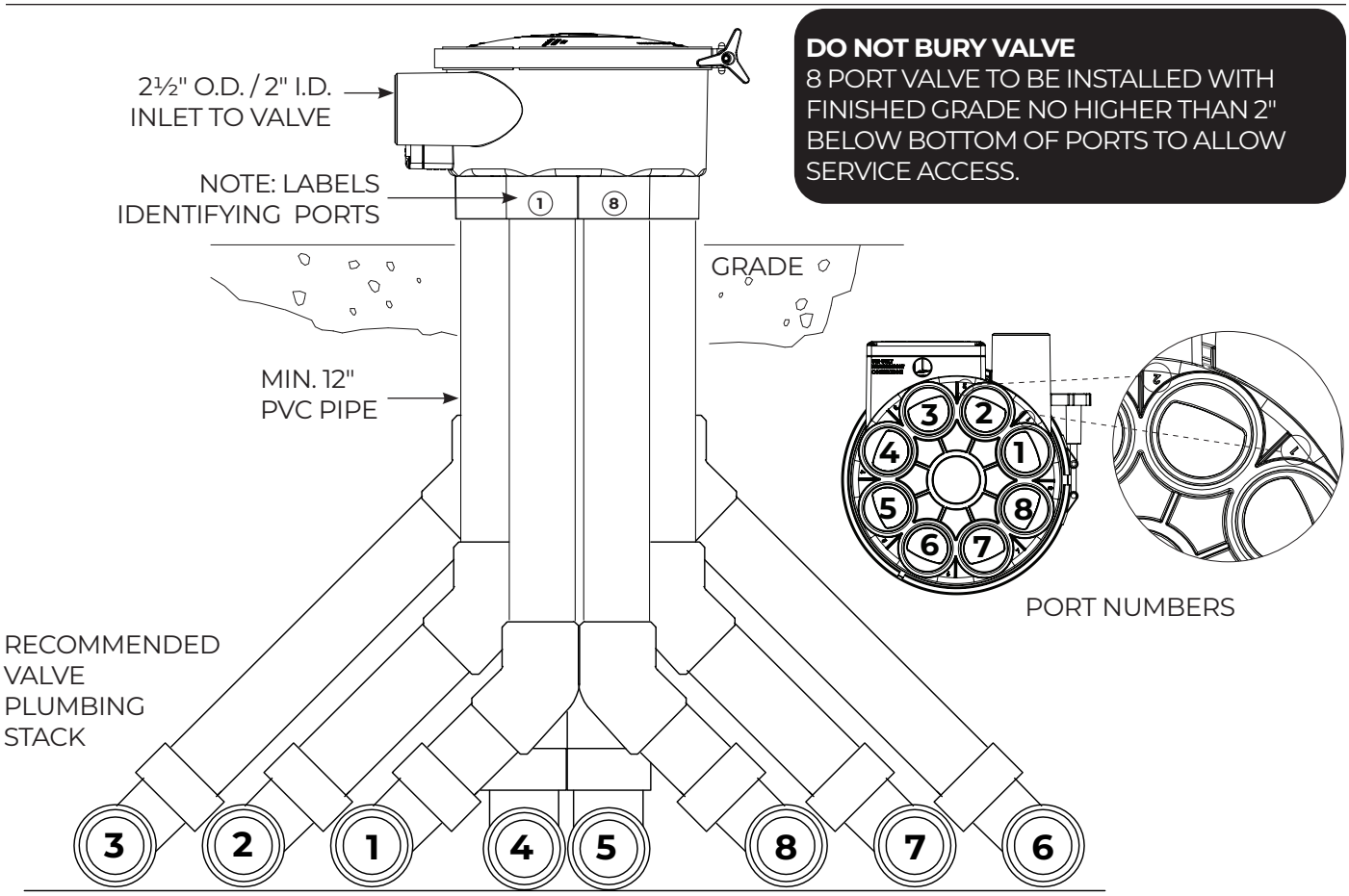
DUAL PUMP SCHEMATIC





8 PORT VALVE PLUMBING

VALVE PLUMBING STACK



DO NOT BURY VALVE
8 PORT VALVE TO BE INSTALLED WITH FINISHED GRADE NO HIGHER THAN 2" BELOW BOTTOM OF PORTS TO ALLOW SERVICE ACCESS.

Important: The valve has port numbers molded into the shell on the bottom and port 1 and 8 is identified with a sticker on the side. The valve and system **must be** plumbed in accordance with the pool plan to assure proper operation. Valve "port numbers" and cleaning system "zone numbers" are not always the same. Follow the zone configuration diagram on pool plans when plumbing zones.

TYPICAL DETAIL

PRIMARY VALVE PORTS							
1	2	3	4	5	6	7	8
Z1	Z2	Z3	Z4	Z5	Z6	Z7	Z8

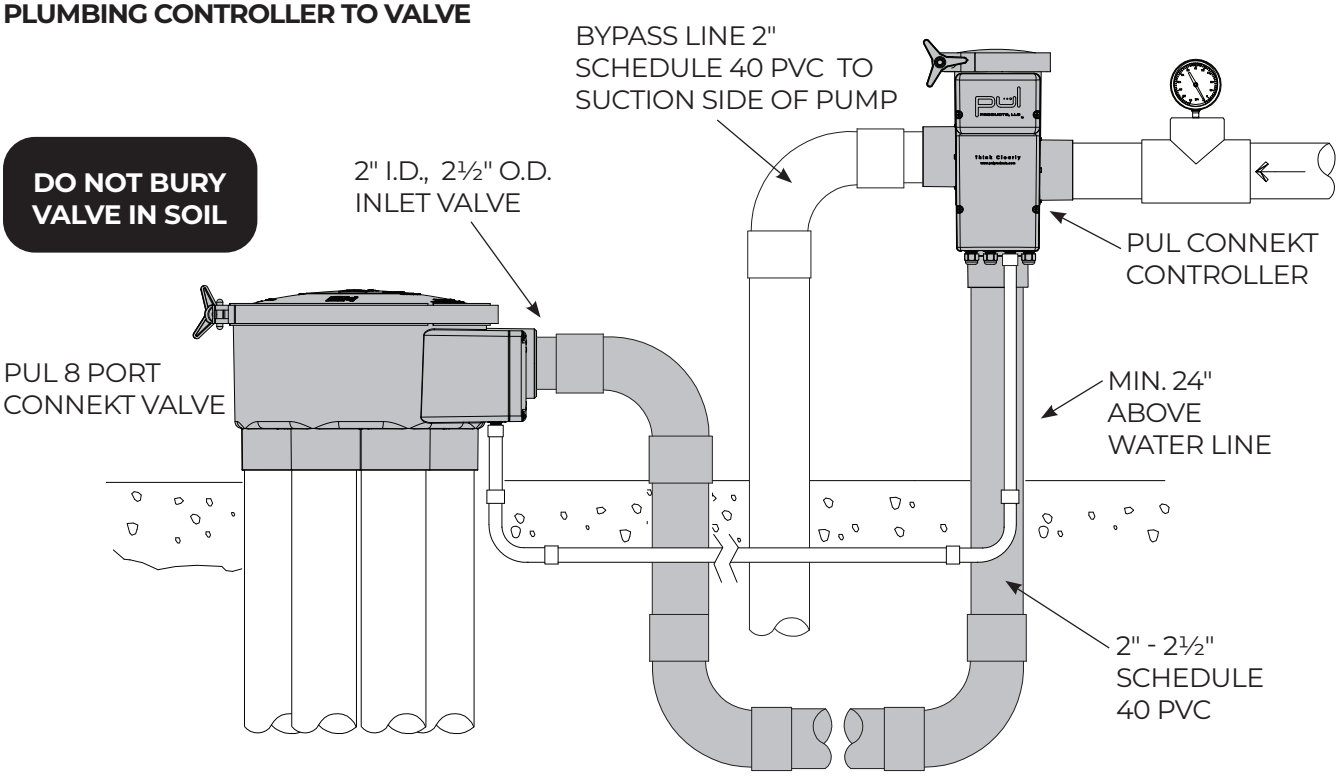
POOL ZONES

Refer to the pool plan for the number of zones and the corresponding ports. A zone mapping chart similar to the Typical Detail image on the right, identifies which port is plumbed for which zone. It varies from plan to plan.

GLUING INSTRUCTIONS

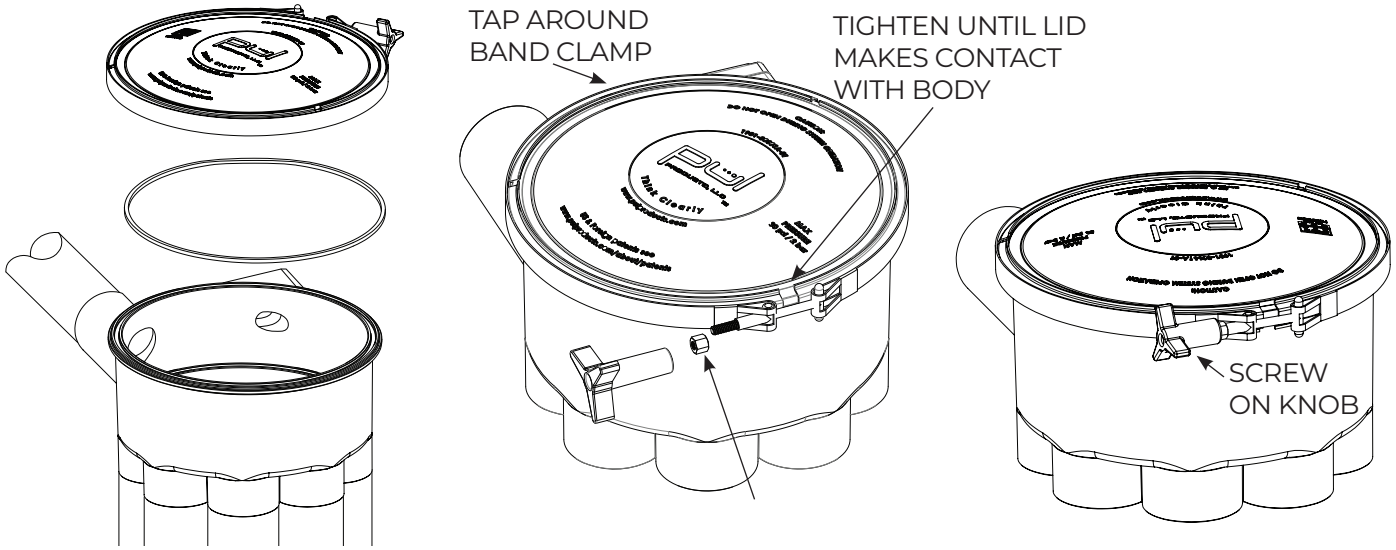
1. Remove band clamp, lid, and o-ring (save o-ring).
2. Apply PVC primer twice to the bottom ports of the valve body, then apply PVC glue to the bottom ports. **(IPS WELD-ON P68 Primer and 711 Glue or 705 Glue or equivalent)**.
3. Apply PVC primer and glue to the pipes. Push pipes into ports while making a ¼ turn until it reaches the stop.
4. Always glue with the valve body in the upright position.
   Do not allow glue to run into valve body. Wipe off excess glue.
5. Allow 24 hour before pressure testing.

PLUMBING CONTROLLER TO VALVE



REPLACING VALVE LID AND PRESSURE TEST VALVE

WARNING: DO NOT PRESSURE TEST WITH CARTRIDGE INSTALLED. BEFORE PRESSURE TESTING, ENSURE THE LID IS SECURE WITH THE SAFETY NUT PLACE. DO NOT STAND OVER THE VALVE. FAILURE TO DO SO MAY CAUSE BODILY INJURY, OR DEATH



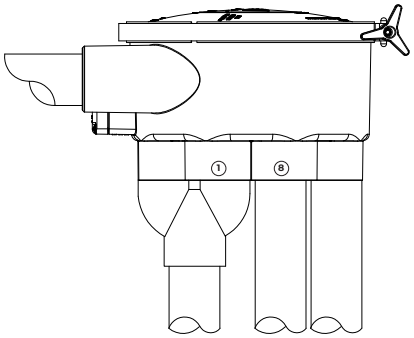
STEP 1: REPLACE O-RING & LID
Clean debris from valve body and install the o-ring. Place the lid on the valve body. Secure the band clamp to the valve body and lid.

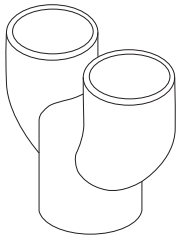
STEP 2: SECURE THE BAND CLAMP
Screw on the safety nut first. As you tighten the clamp the gap between the lid and the valve body should decrease. Tighten until the lid makes contact with the valve body. While tightening the band clamp, tap on the clamp with a screwdriver to properly secure the clamp.

STEP 3: FINAL INSPECTION
Screw on the knob.

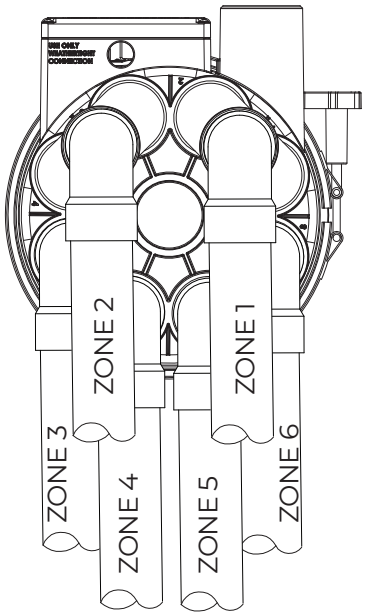
PRESSURE TEST
Max. 40 PSI
(Recommended 30-35 PSI)

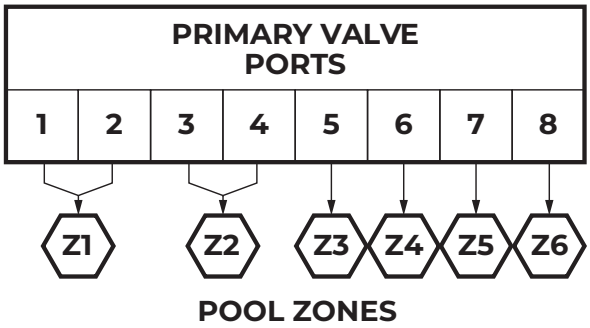
GANGING MULTIPLE PORTS





The PUL Y-fitting can be plumbed directly into the valve base





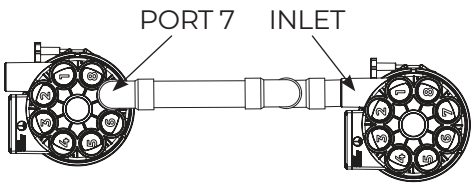
Refer to the specific pool plan for the number of zones and the corresponding ports.

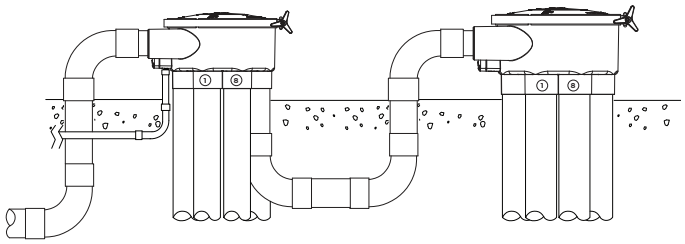
EXAMPLE: Plumbing for a 6 zone system. Ports 1 & 2, and ports 3 & 4 are ganged together with Y-fittings. The zone mapping chart above identifies which port is plumbed to which zone.

NOTE: Follow the port to zone diagram provided in the pool plan. DO NOT make modifications to connections otherwise the pool will not clean properly.

PLUMBING TO A SECONDARY VALVE

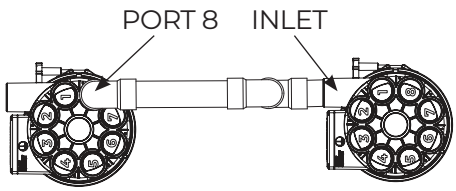
The valves will be labeled PRIMARY VALVE or SECONDARY VALVE. Verify the proper valve is plumbed in the proper position.

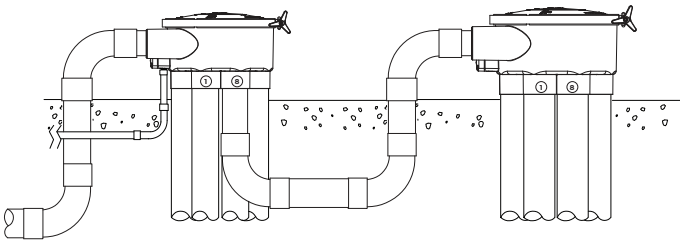




SINGLE PUMP SYSTEM

Connect the primary valve to the secondary valve by plumbing port 7 of the primary valve to the inlet of the secondary valve. Port 8 in the primary valve is for the Hydro-Trough if applicable.





DUAL PUMP SYSTEM

Connect the primary valve to the secondary valve by plumbing port 8 of the primary valve to the inlet of the secondary valve. The Hydro-Trough is supplied from the main filtration system.

IN-FLOOR LAYOUT & PLUMBING

LAYOUT & TRENCHING

NOTE: The plumber should be responsible for hand digging the trenches within the pool in order to maintain an accurate head layout.

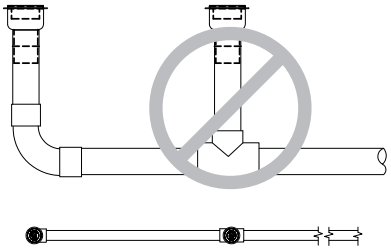
All trenches should be a minimum of 6". Excavate a niche for the feed lines near the transitional break or center of the pool to reduce the amount of piping required.

IN-FLOOR NOZZLE PLUMBING

Refer to the PUL pool plan for nozzle placements and zone mapping.

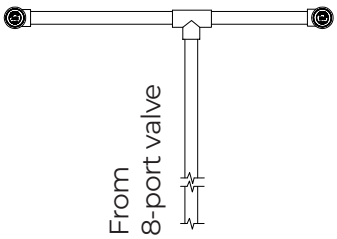
NOTE: All lines must be plumbed on a separate branch with a tee fitting. Do not plumb nozzles in line.

DO NOT PLUMB NOZZLES IN LINE IN POOL

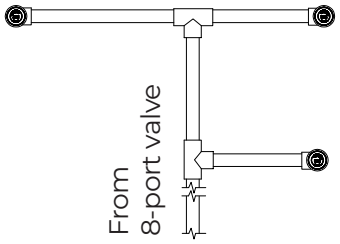


NOTE: The dimensions shown on the PUL Head Layout are from finished wall and not actual excavation. Therefore, allow for an additional 8”-12” from the excavated wall to account for structure and surface. Refer to pool design/drawings and coordinate prior to rough-in.

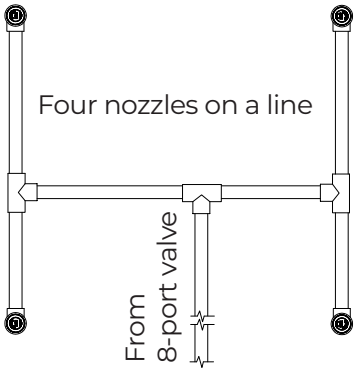
Two nozzles on a line



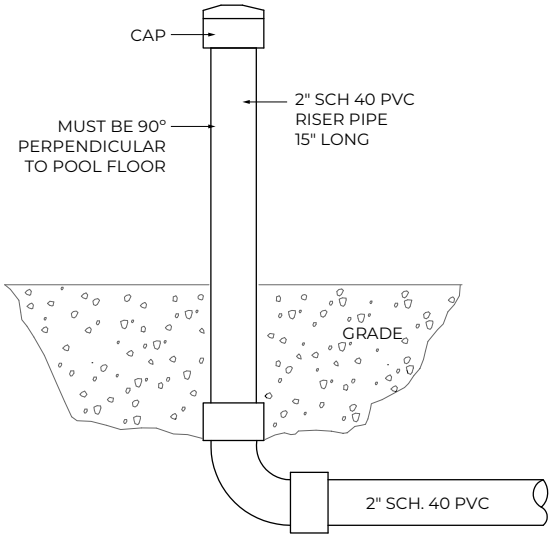
Three nozzles on a line

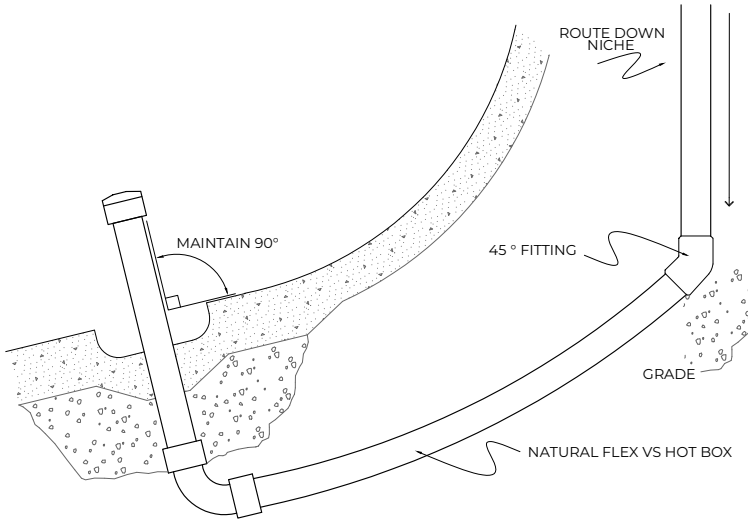


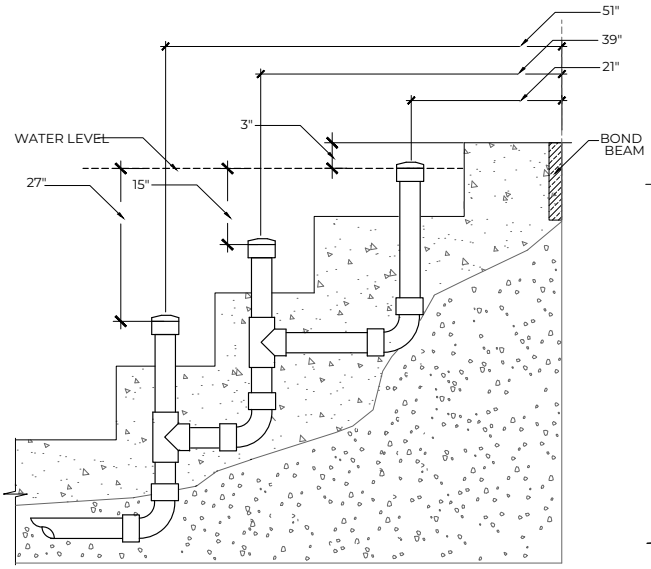
Four nozzles on a line

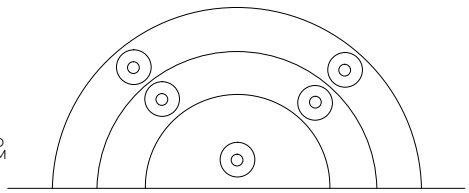


Install 2" sch. 40 PVC, 15" riser and 2"-90° elbow at each nozzle location. Risers must maintain a 90° angle to the finished pool floor. Glue 2” cap on the open end of each riser to seal for pressure test. In areas where the floor is not level, combine a 90° sweep elbow, a 45° standard elbow, and a length of pipe between the two fittings to maintain a 90°



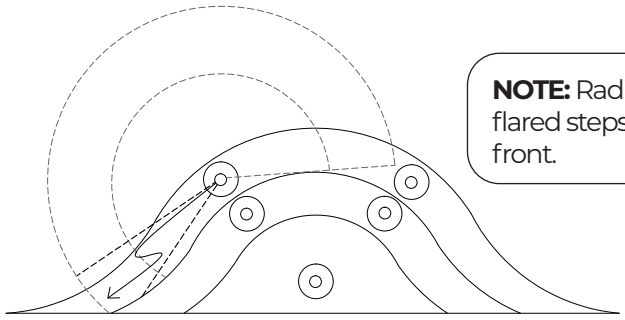






NON FLARED STEPS

NOTE: Standard steps: Center nozzle in step. Top steps: 4" from back.



FLARED STEPS

NOTE: Radius and flared steps: 4" from front.

STEPS & BENCH PLUMBING LAYOUT

The optimal placement of the nozzles should be no more than 4” from the front of the finished step, other than the top step which should be no more than 6" from the back of finished step.

The dimensions for placement of nozzles on steps should be taken from the back of the ‘bond beam form’ to the centers of the risers. The vertical dimensions should be measured from the top of the’ bond beam form’ (water level), to the top of the 2” pipe on the risers.

IMPORTANT: Do not try to set the height of the risers by measuring from the base. Always allow for extra pipe.

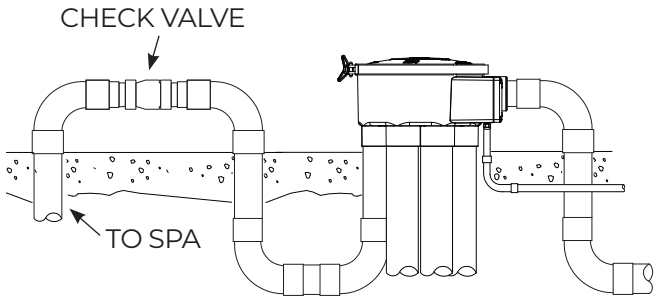
SPA PLUMBING

Refer to the PUL pool plan for spa cleaning zone.

If the spa is raised, a check valve must be installed in order to avoid draining spa back to the pool through the cleaning system.

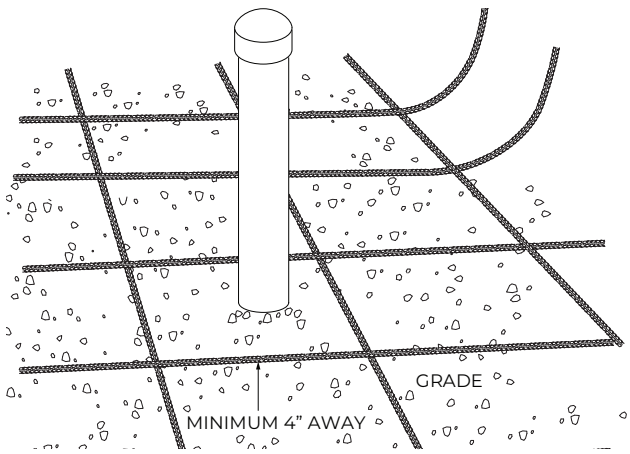
NOTE: If any water level in the pool is above the 8-port valve a check valve is required.

Programming system automation: Ensure that the spa has priority over the in-floor cleaning system. Set program to turn off the in-floor cleaning system when the spa is in operation to avoid cold water from circulating into the spa while it is in use.



REBAR

Rebar must be a minimum 4" away from the riser pipes. Bend rebar if necessary.



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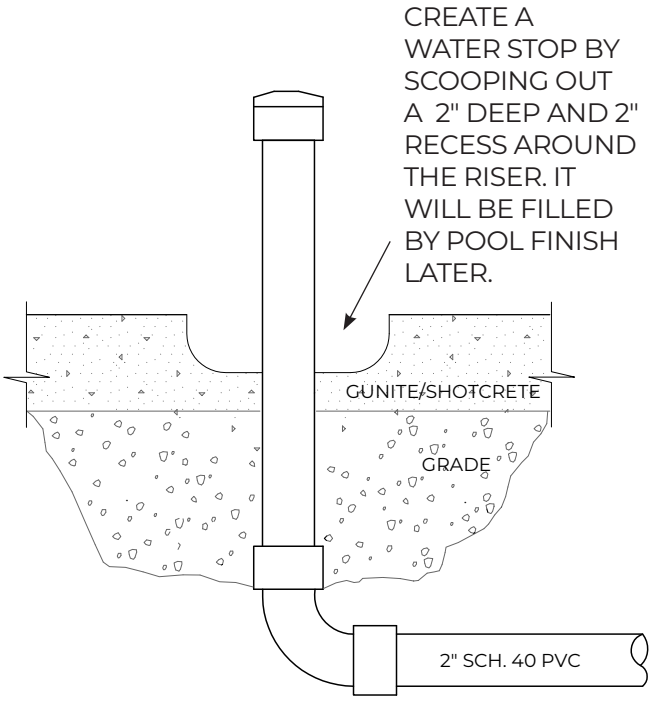
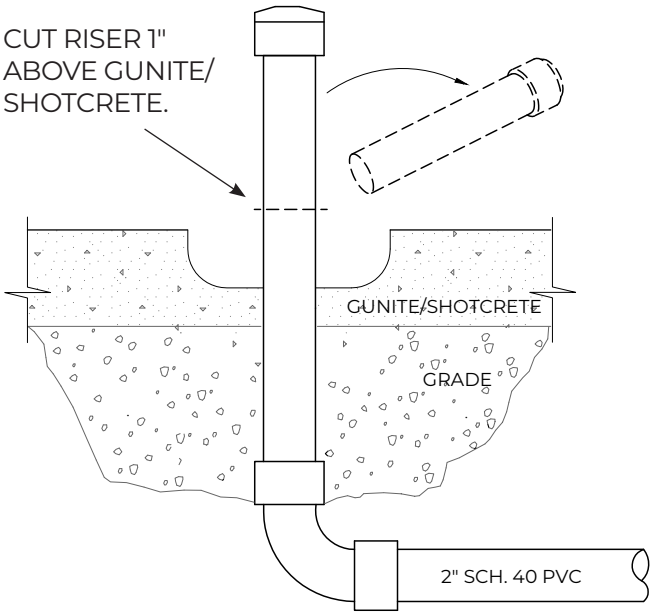
GUNITE / SHOTCRETE & NOZZLE BODY INSTALLATION

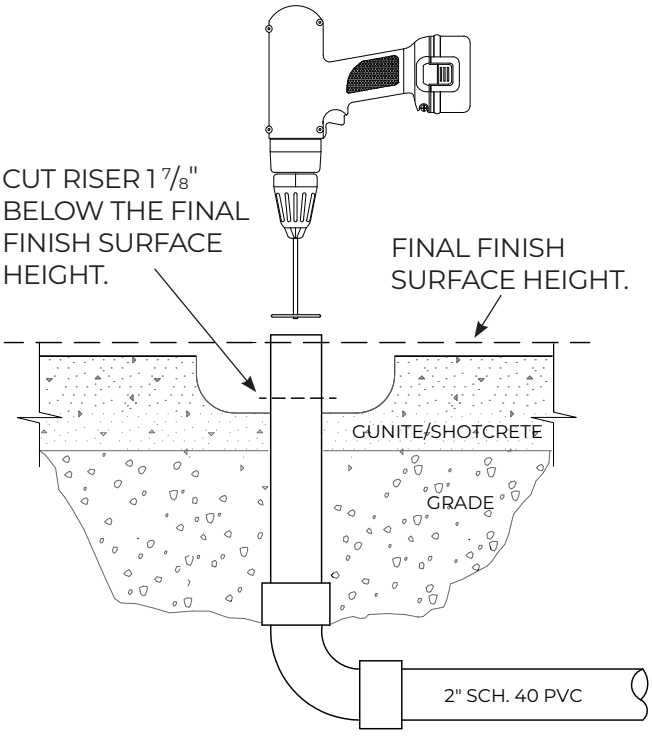
STEP 1 CUTOUT AROUND RISER



STEP 2 ROUGH CUT OF RISER



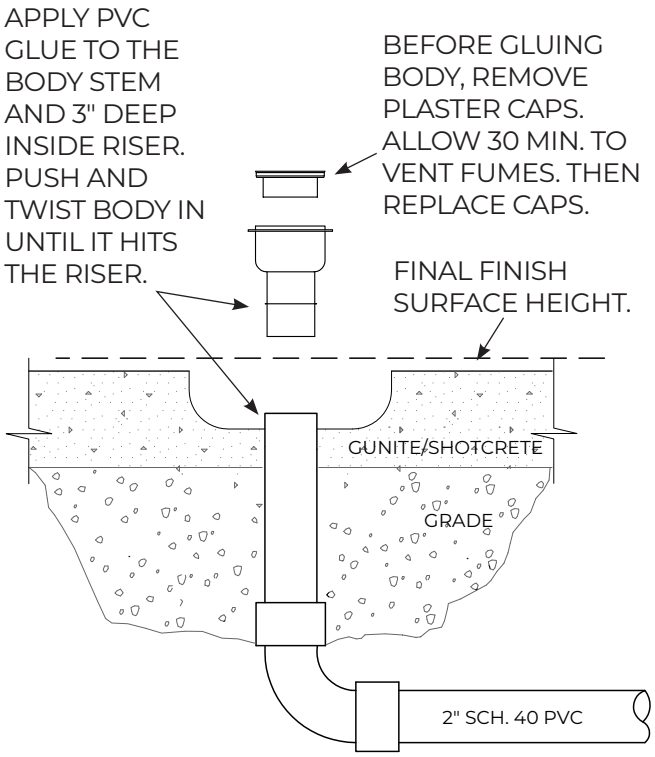
STEP 3 FINAL CUT OF RISER



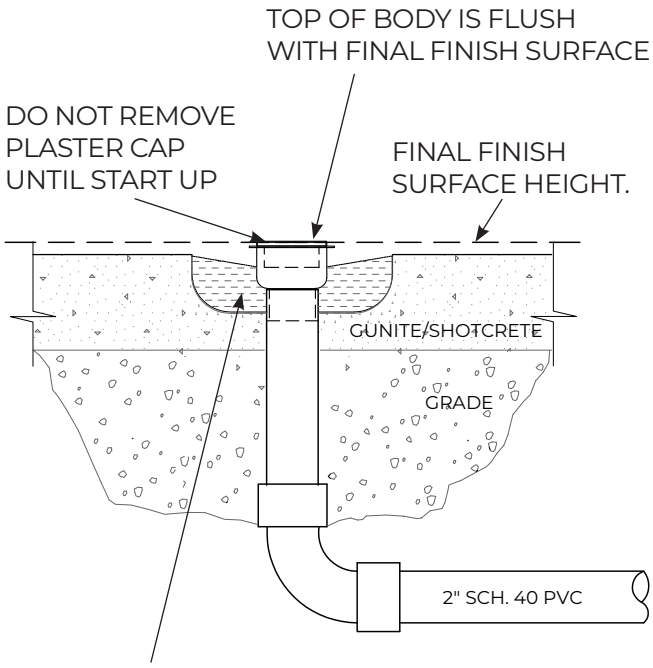
STEP 4 TEST FIT & INSTALL/GLUE NOZZLE BODY

It is recommended to twist the nozzle body to assure proper glue set.

NOTE: Wipe off any excess glue inside the body and pipe. Clear the line of any debris that could have fallen in. Plaster caps are to remain in place during finishing process. The Caps may be removed upon completion of pool finish or at system start up based on contractor preference and direction.



STEP 5 INSTALLING NOZZLE BODY



FILL WITH CONCRETE TO ½" BELOW WATER STOP FLANGE PRIOR TO INSTALLING POOL FINISH OR FILL WITH POOL FINISH

PLUMBER'S NOTE: IPS WELD-ON 711 or equivalent is recommended.

DO USE glue primer as it may heat and distort the nozzle body during the gluing process.

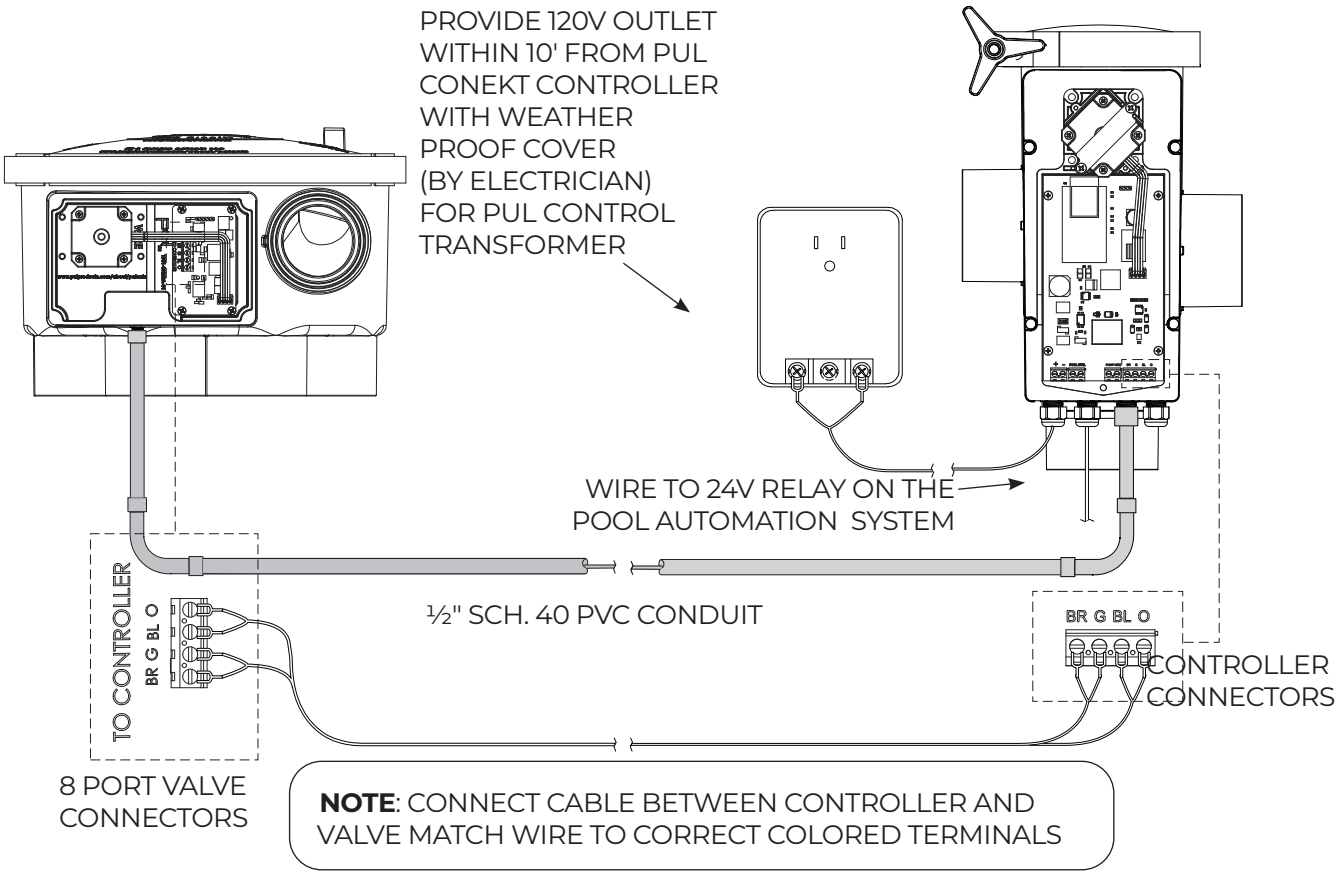
CONEKT CONTROLLER WIRING

NOTE

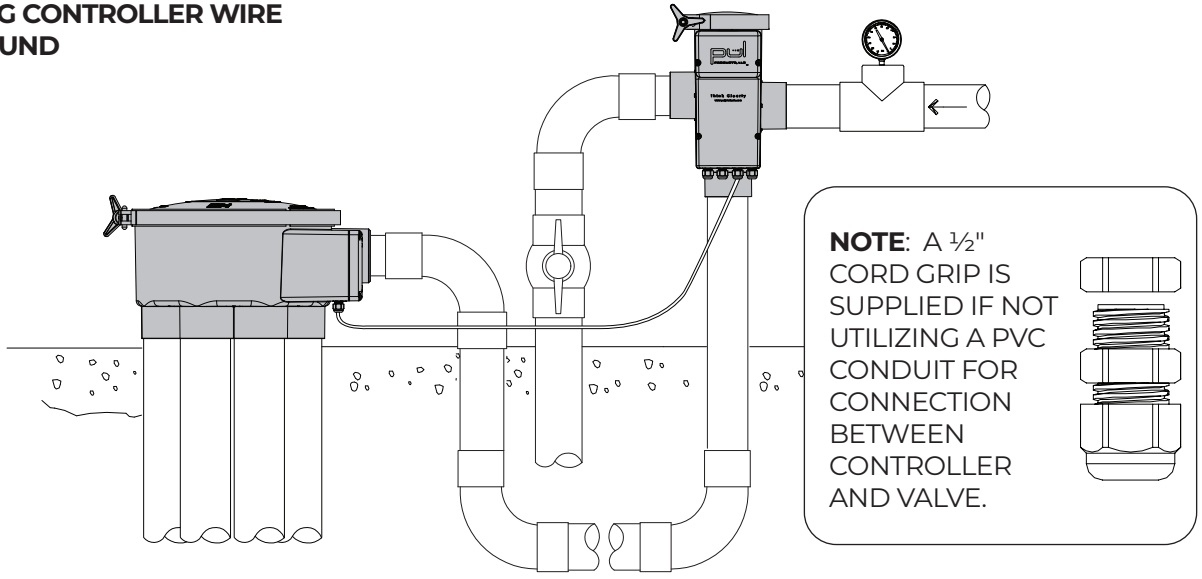
Disconnect transformer from main power source before installing or servicing the Conekt Controller and Conekt Valve.

Use 4/#16AWG wire to connect the Conekt Controller to the 8 port valve. Be sure to provide ½" electrical conduit from Controller to 8 port valve in piping trench before back fill. Weather tight connections must be provided at Conekt Controller and 8 port valve.

A constant 24 volt AC source or 120 volt receptacle with large "box type" weather proof cover to be installed within 10' of Conekt Controller for the transformer included with the Conekt components.



CONNECTING CONTROLLER WIRE ABOVE GROUND



PUL CONNECT APP INSTALLATION AND PAIRING

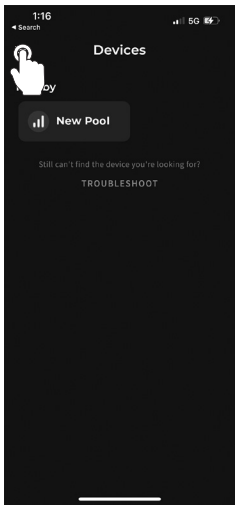
DOWNLOAD PUL CONNEKT APP AND LOAD CLEANING PROGRAM

System start up must have Internet access

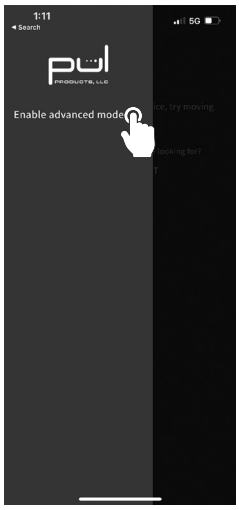
Download on the App Store

Scan QR code to install PUL Connekt App to your mobile device

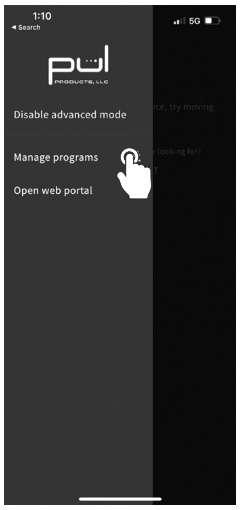
Available on the Google Play



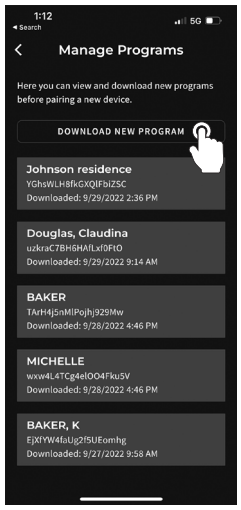
1. Tap menu in the upper left corner



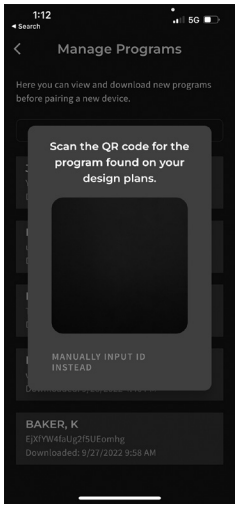
2. Tap on “Enable advance mode”



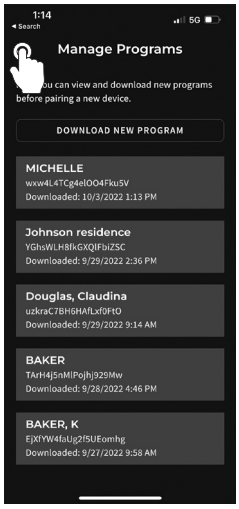
3. Tap on “Manage programs”



4. Tap “DOWNLOAD NEW PROGRAM”



5. Scan QR code from pool plan



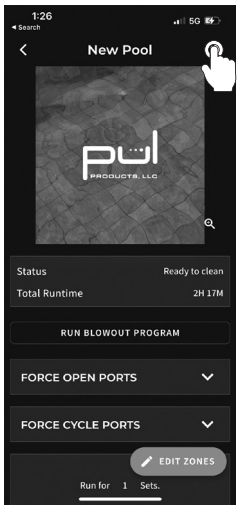
6. Tap back to home screen

PAIRING APP WITH CONTROLLER

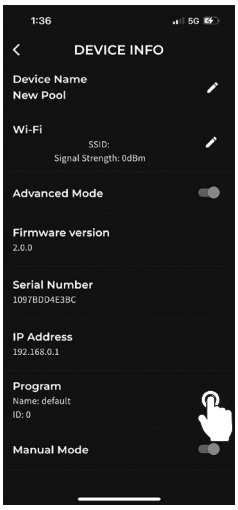
You must be in close proximity to the PUL Connekt Controller and it has power.

1. From the devices screen tap “New Pool” **NOTE**: If the controller does not appear, tap “Troubleshoot” scroll down and tap “SEARCH FOR PUL DEVICES AGAIN”

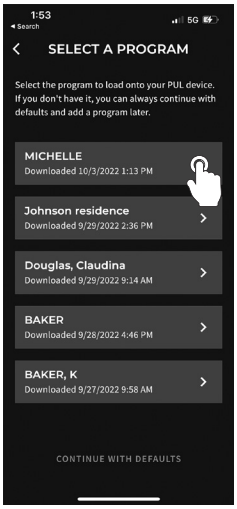
2. Uploading program to controller



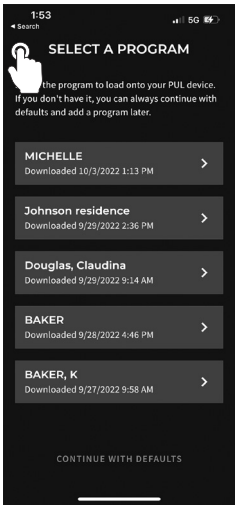
3. After program is uploaded, tap the gear in the upper right corner



4. Tap on the pencil next to “Program”



5. Select the cleaning program by job name to upload to controller



6. Tap the back button, the cleaning program is ready to use

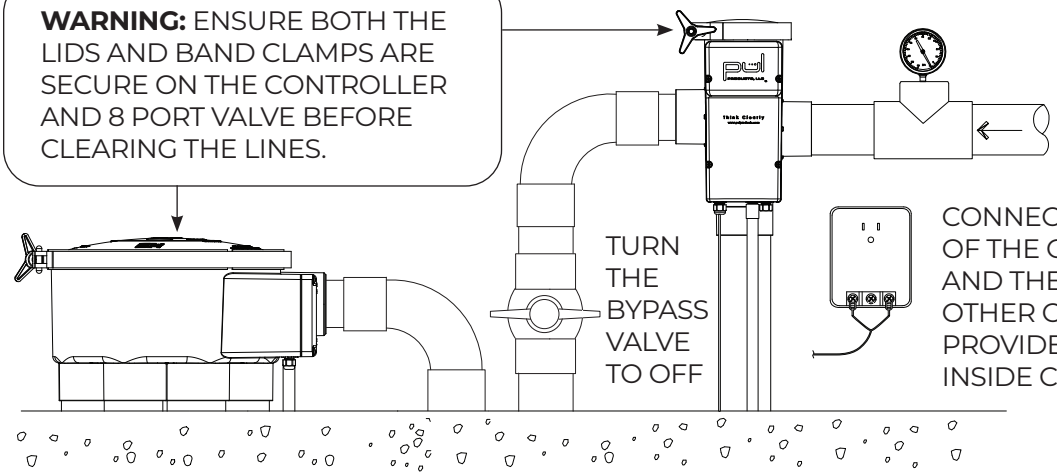
CLEARING THE LINES

It is important that all the lines for the in-floor system be cleared of dirt and debris in two separate stages during the installation process.

Connect the power wires to the transformer then plug into outlet. Before installing the Conekt Controller and 8 port valve cartridge(s), turn the bypass valve to off, startup the pump(s) and run for 3-5 minutes without the cartridges in place to clear any debris from the feed lines. The water pressure should also pop the plaster caps out. If not use pliers to remove the caps.

NOTE: Failure to clear the lines will cause additional service trips. Construction dirt and other debris can plug the head orifices and restrict the flow of water through the cleaning head.

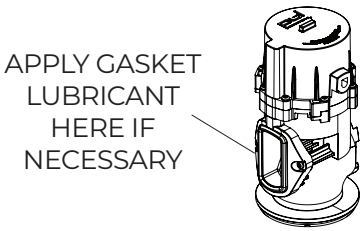
WARNING: ENSURE BOTH THE LIDS AND BAND CLAMPS ARE SECURE ON THE CONTROLLER AND 8 PORT VALVE BEFORE CLEARING THE LINES.

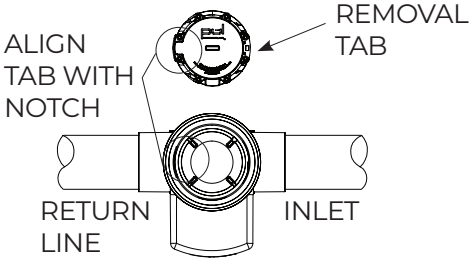


WARNING: IT IS IMPERATIVE THAT THE PUMP IS TURNED OFF AND THE SYSTEM HAS BEEN DEPRESSURIZED PRIOR TO REMOVAL OF BAND CLAMPS FROM THE CONEKT CONTROLLER AND CONEKT 8-PORT VALVE. DO NOT STAND OVER THE VALVE. FAILURE TO DO SO MY CAUSE BODILY INJURY, DEATH, OR DAMAGE TO VALVE.

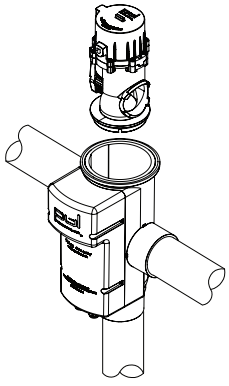
INSTALL CONEKT CONTROLLER CARTRIDGE

Unscrew the band clamp from top of controller and insert the cartridge into the controller body. The controller cartridge fits in only one way.

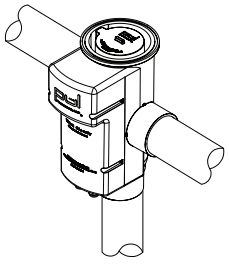




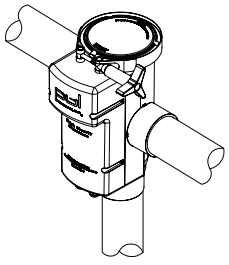
THE TAB ON TOP OF THE CARTRIDGE LINES UP WITH THE NOTCH ON THE RETURN SIDE OF THE CONTROLLER BODY.



INSERT CARTRIDGE



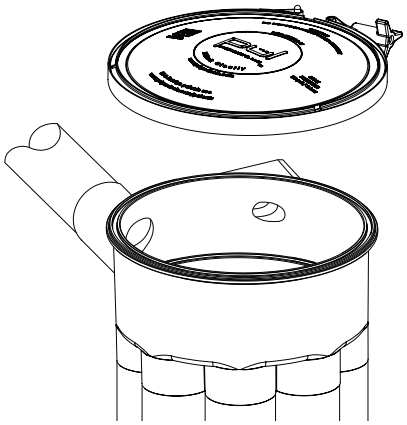
PRESS FIRMLY IN PLACE UNTIL CARTRIDGE IS FLUSH WITH THE BODY



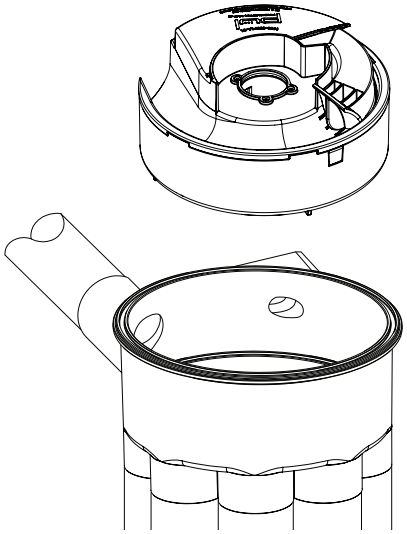
REPLACE LID AND TIGHTEN BAND CLAMP

INSTALL CONEKT 8-PORT VALVE CARTRIDGE

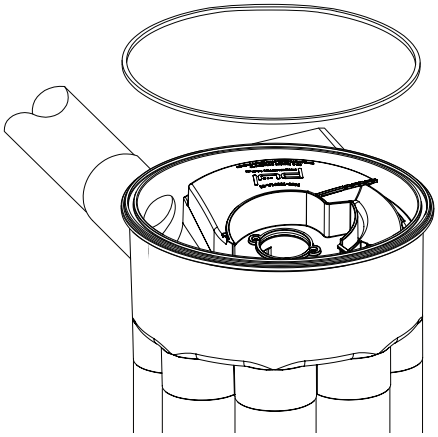
WARNING: IT IS IMPERATIVE THAT THE PUMP IS TURNED OFF AND THE SYSTEM HAS BEEN DEPRESSURIZED PRIOR TO REMOVAL OF BAND CLAMPS FROM THE CONEKT CONTROLLER AND CONEKT 8-PORT VALVE. DO NOT STAND OVER THE VALVE. FAILURE TO DO SO MY CAUSE BODILY INJURY, DEATH, OR DAMAGE TO VALVE.



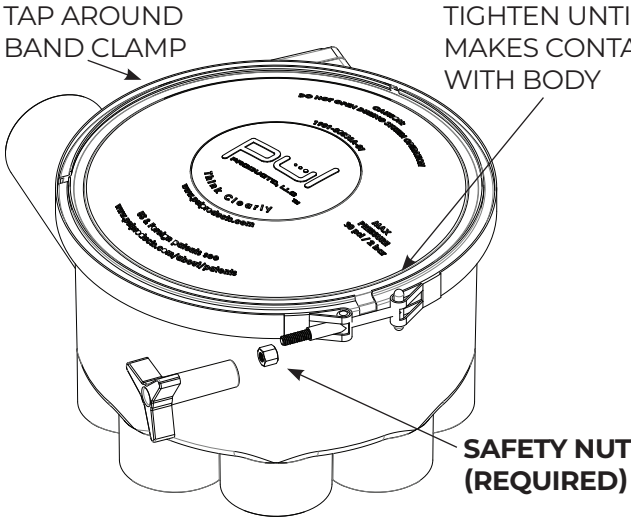
STEP 1: TURN OFF PUMP
Before unscrewing the band clamp from the valve turn off the pump and allow for the system to depressurize.



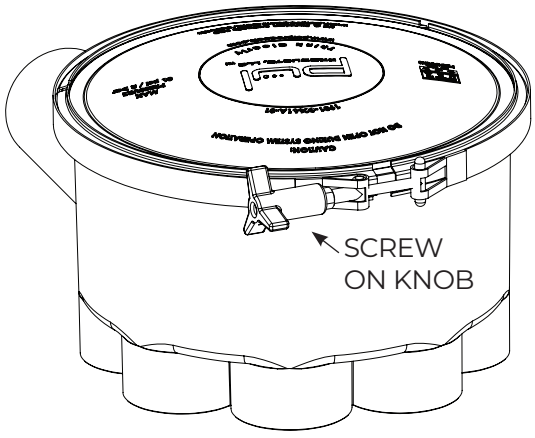
STEP 2: INSTALL CARTRIDGE
Check to be sure the pausing mechanism is not extended. Place valve cartridge into valve body and turn until it drops into place. It can only be installed in one position.



STEP 3: REPLACE O-RING
Clean debris from valve body and install the o-ring. Place the lid on the valve body. Secure the band clamp to the valve body and lid.

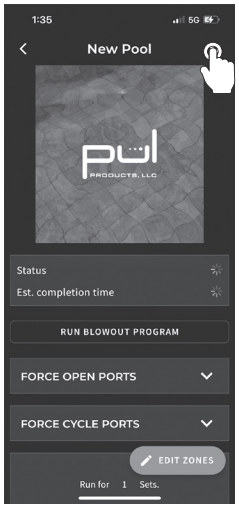


STEP 4: SECURE THE BAND CLAMP
Screw on the safety nut first. As you tighten the clamp the gap between the lid and the valve body should decrease. Tighten until the lid makes contact with the valve body. While tightening the band clamp, tap on the clamp with a screwdriver to properly secure the clamp.

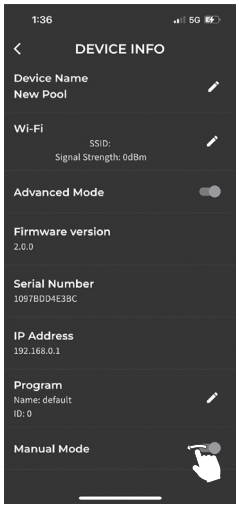


STEP 5: FINAL INSPECTION
Screw on the knob and tighten. Turn pump on and check for leaks. Run cleaning program to verify each cleaning zone is operating correctly.

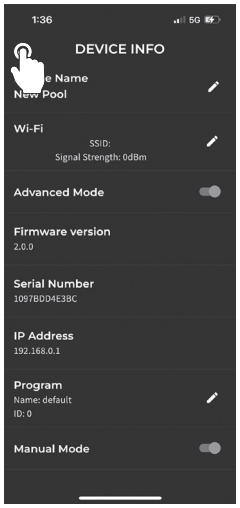
RUNNING THE BLOWOUT PROGRAM ON THE PUL CONNEKT APP



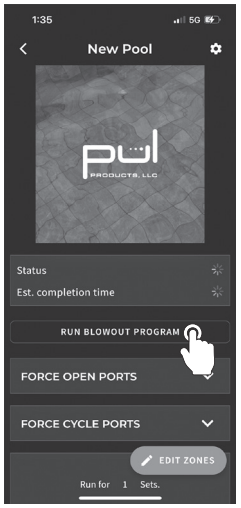
1. Open the app tap on the gear on top right



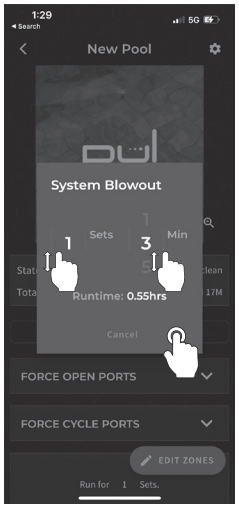
2. Toggle on “Manual Mode”



3. Tap the back arrow



4. Tap “RUN BLOWOUT PROGRAM”



5. Select the number of sets (1-12) each port runs to blowout the lines for the entire pool. Select the duration (1 min. - 60 min.) for each port to run. **NOTE:** Some pools may be plumbed with multiple ports on one zone.
   The total runtime of the blowout will be displayed.
   Then tap “Run”.

6. While the blowout program is running turn on the pump and allow the pump to prime.

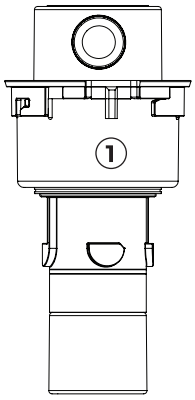
7. Once primed slowly turn the bypass valve to the open position.

NOTE: At start up, flow might not be going to the zone 1, the 8-port valve will automatically cycle until it reaches zone 1. Then the status of the blowout program will display zone 1 cleaning.

8. After the first zone is blown out and moves to the next zone, install the correct nozzles according to the pool plan (refer to the Installing Nozzles section for instructions). If there is debris or low flow in a particular nozzle body, leave that nozzle body open and install the other nozzles. Once the blowout program returns to that zone, check the open nozzle body to determine if it is clear of debris and there is a stronger flow. Once all nozzles are installed you can choose to stop the blowout program or you can let it run its entirety.

INSTALLING NOZZLES

You will receive the PUL Jet nozzles with the custom pool plan in a mailer style box. Refer to the pool plan for specific placement of each nozzle. The nozzles are individually numbered and correspond directly with the pool plan. Install using the pole mounted installation tools, to the exact location as shown on the pool plan.

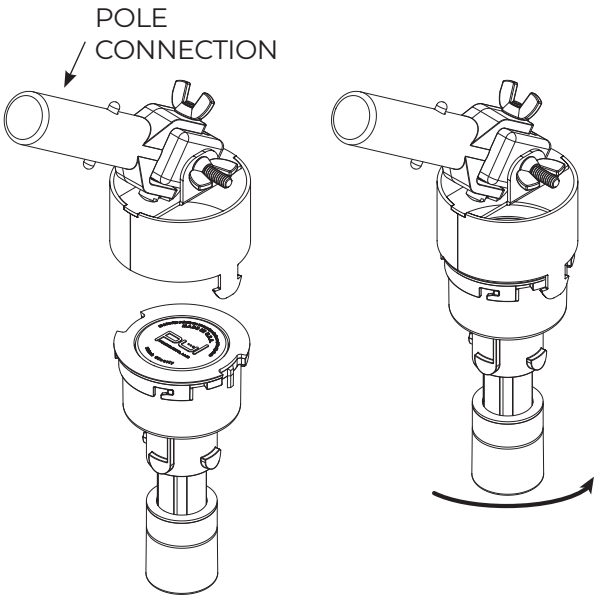


NOZZLE IDENTIFIERS.

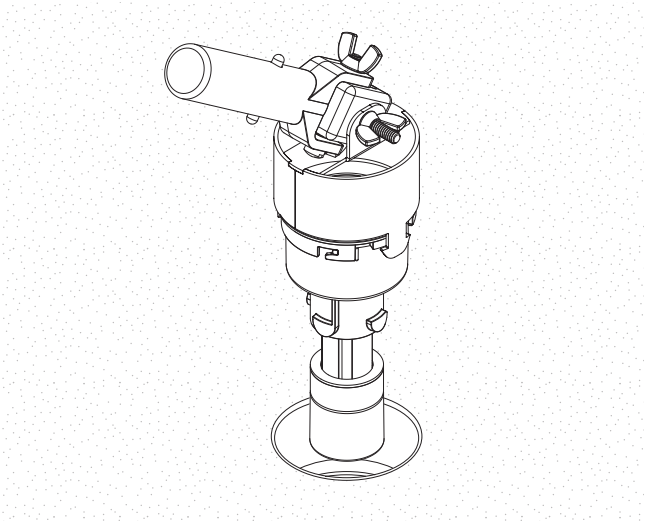
Please refer to the label on the nozzle for unique Identifier [Image]

NOTE: DO NOT REMOVE THE IDENTIFIER – THIS IS USED FOR FUTURE SERVICE AND WARRANTY INFORMATION.

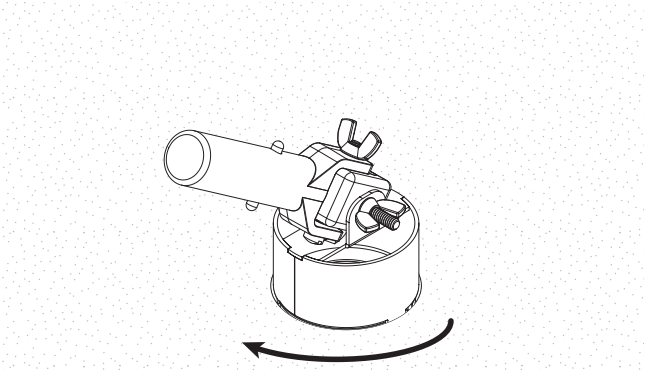
INSTALLING 360° ROTATING NOZZLES



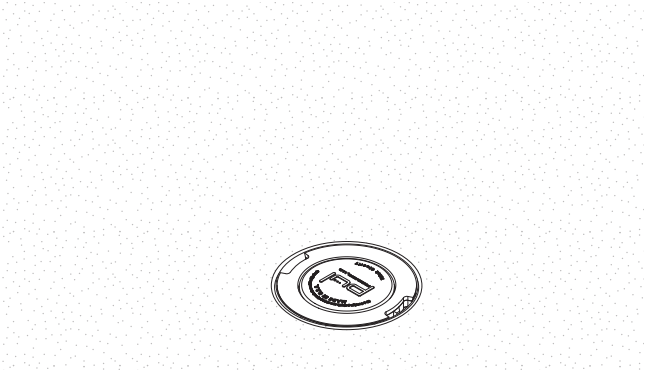
1. Attach the nozzle to the tool by aligning the tabs on the tool with the notches on the nozzle. Insert nozzle into tool and turn the nozzle counterclockwise to lock it into place.



2. Insert corresponding nozzle into the corresponding body indicated in the pool plan.



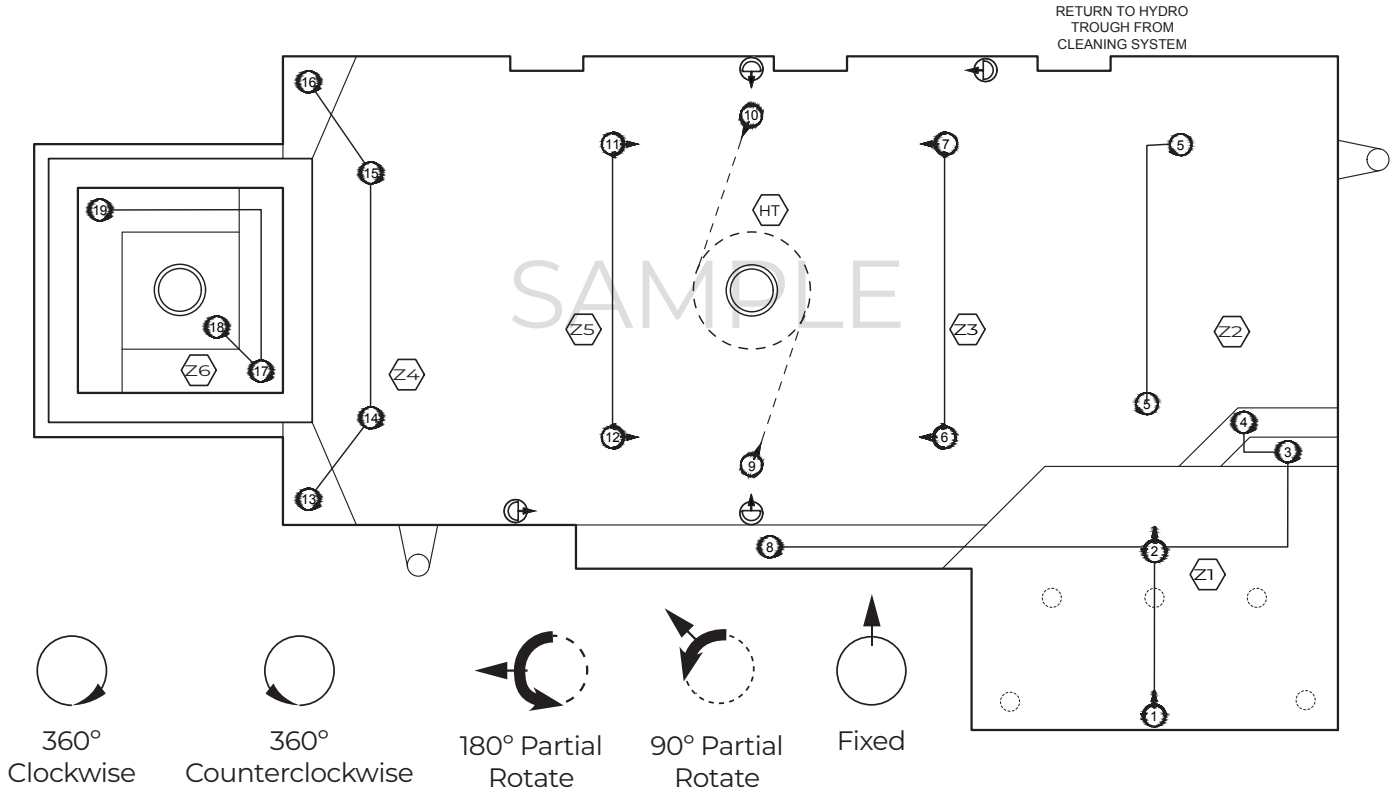
3. Turn nozzle tool clockwise until the nozzle is locked into place.

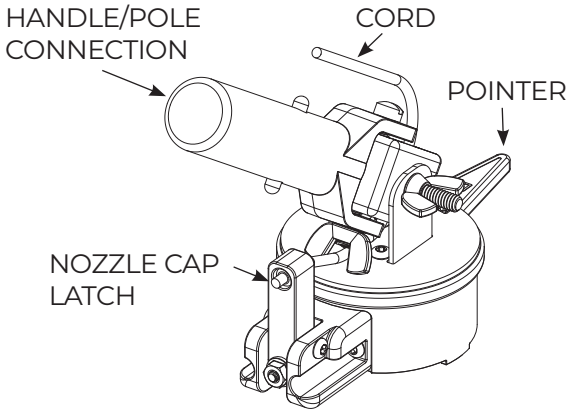


4. Nozzle is secure in body.

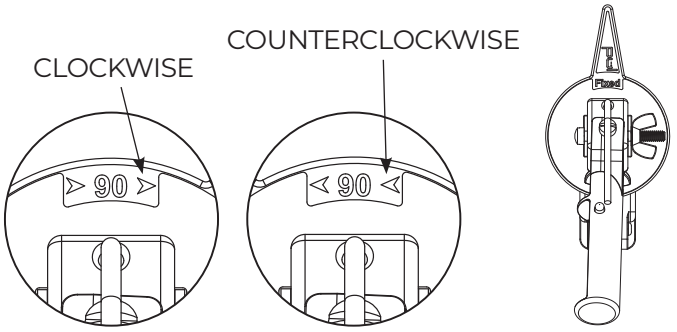
AIMING PARTIAL ROTATE & FIXED NOZZLES

Refer to the pool plan to determine which nozzles are partial rotate and the cleaning angle of the nozzle.

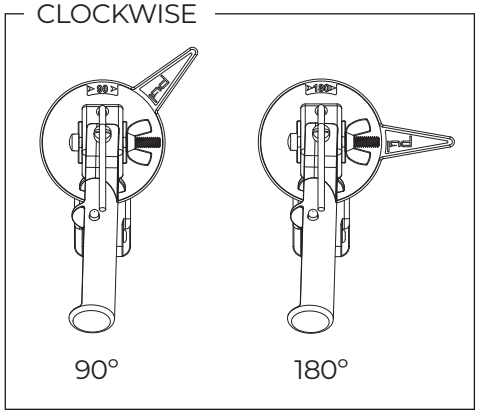


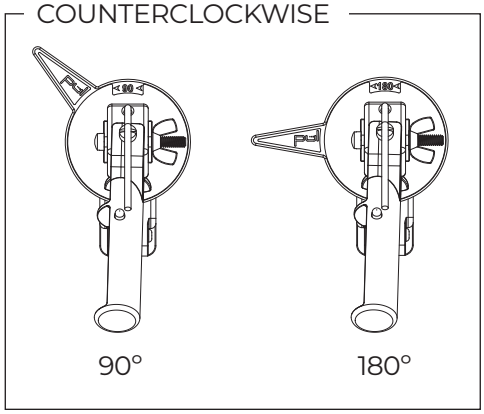


NOZZLE AIMING TOOL



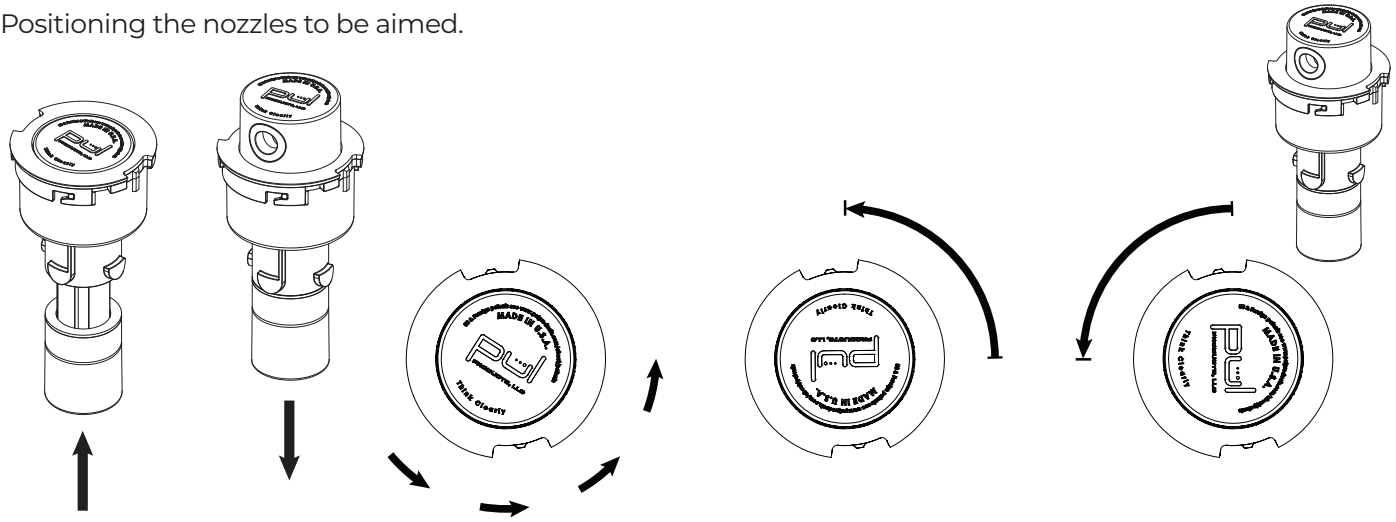
FIXED





STEP 1: SETTING UP PARTIAL ROTATE NOZZLES FOR INSTALLATION

Positioning the nozzles to be aimed.



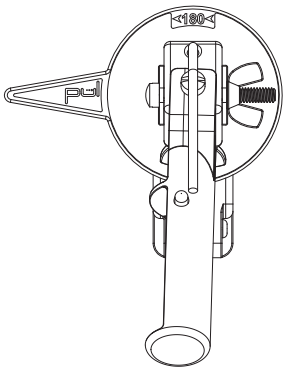
Actuate the nozzle up and down.

For example: In a counterclockwise nozzle, it will rotate in that direction every time it is actuated.

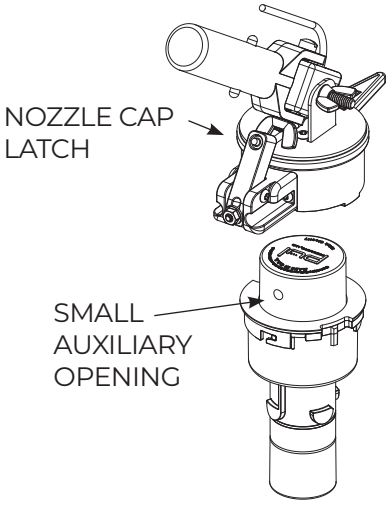
Continue to actuate until it reaches the end of the cleaning angle it will make a long sweep as the nozzle retracts.

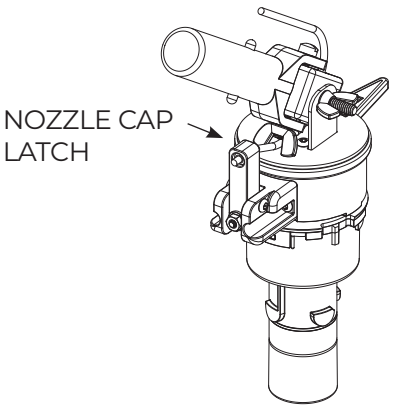
Actuate one more time and the nozzle will make a long sweep up to the beginning of the cleaning angle. Hold up and attach aiming tool.

STEP 2: ATTACH NOZZLE TO AIMING TOOL



Select the cleaning angle on the aiming tool to correspond with the rotation and cleaning angle of the nozzle specified in the pool plan.

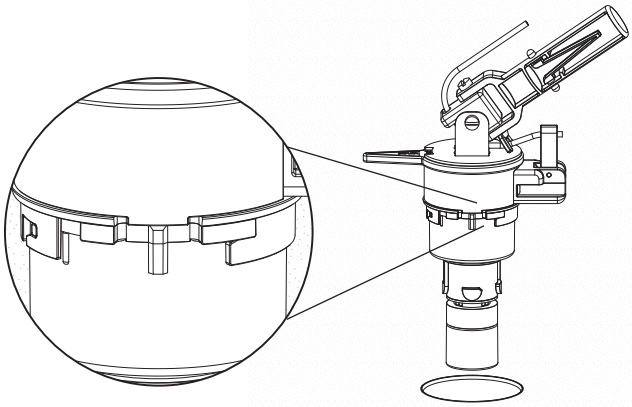




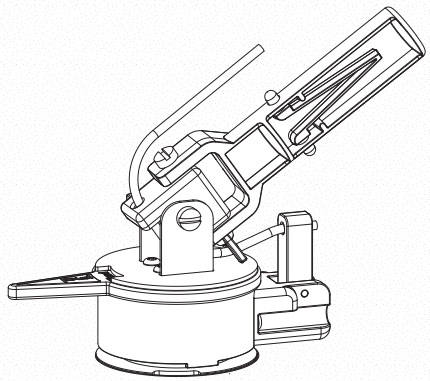
With the nozzle in the up position attach the aiming tool to the nozzle. Hold the nozzle cap latch down and aligned with the auxiliary opening on the rear of the nozzle. Release the latch and ensure it snaps and locks in place.

STEP 3: SET AND AIM NOZZLE IN POOL

It is important to aim all fixed and partial rotate nozzles as shown on the pool plan



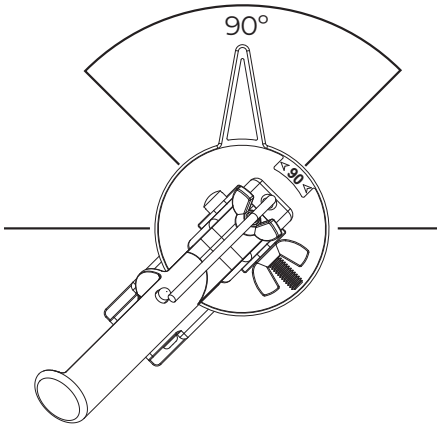
Ratchet aiming tool clockwise until the tabs align with the slot in the nozzle. Insert nozzle into the designated nozzle body, lock in place by turning tool clockwise.

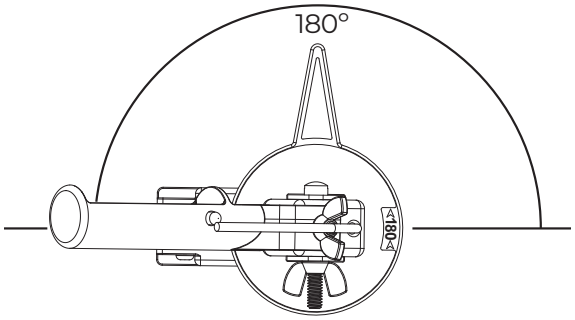


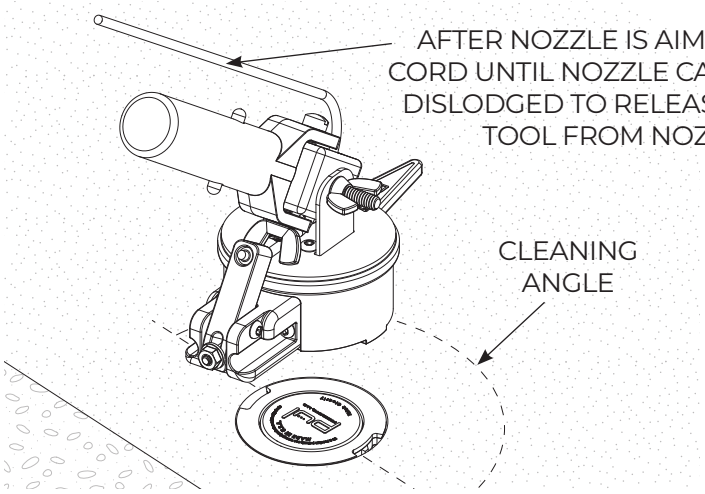
Once nozzle is locked into place, lift aiming tool up until the tab is out of the slot in the nozzle. Continue turning in a clockwise direction until the aiming tool pointer is in the specified direction.

NOTE: THE NOZZLE WILL ONLY ROTATE CLOCKWISE AND WILL CLICK WHEN TURNED.

SETTING UP THE CORRECT AIMING ANGLE

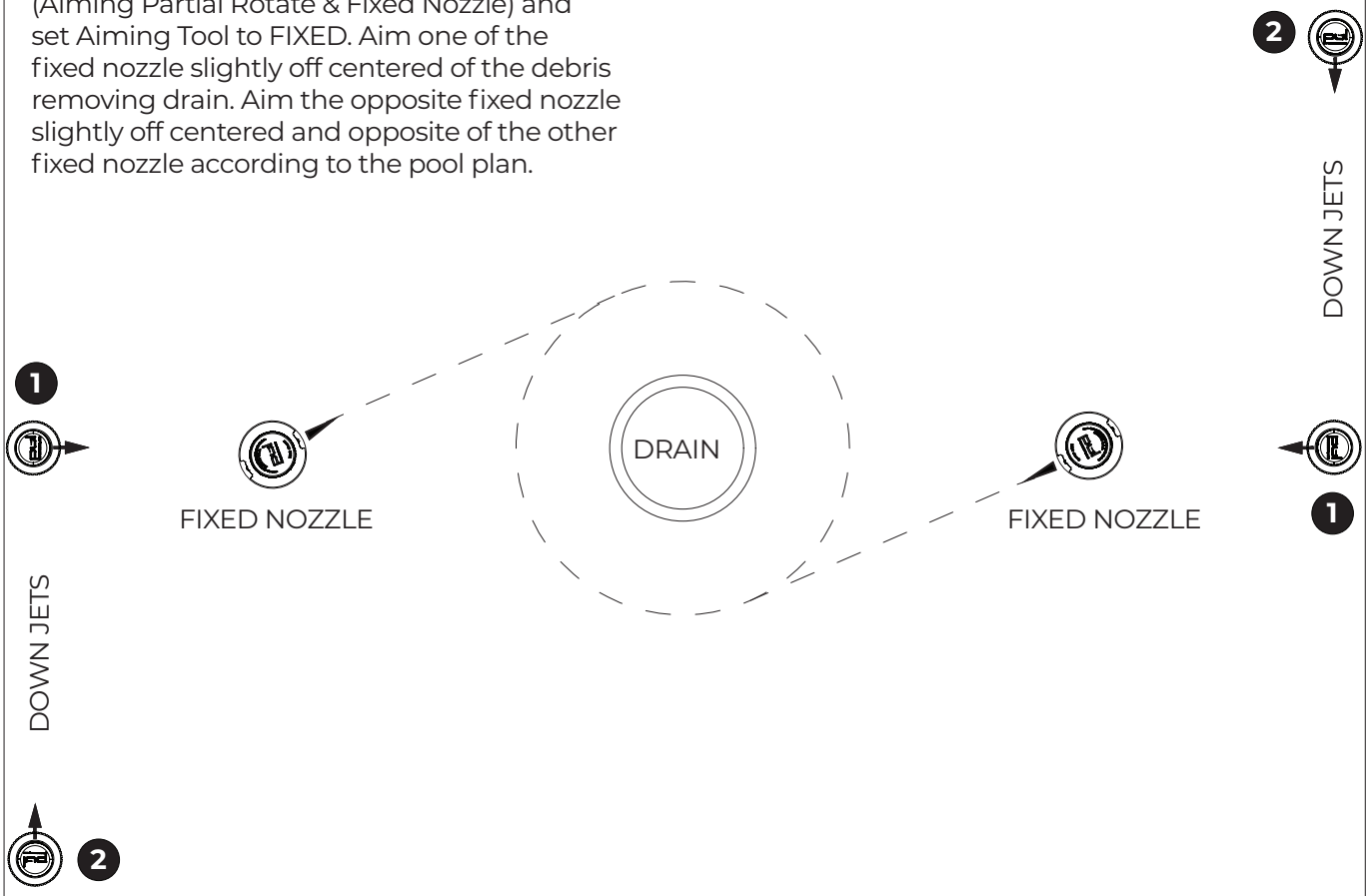


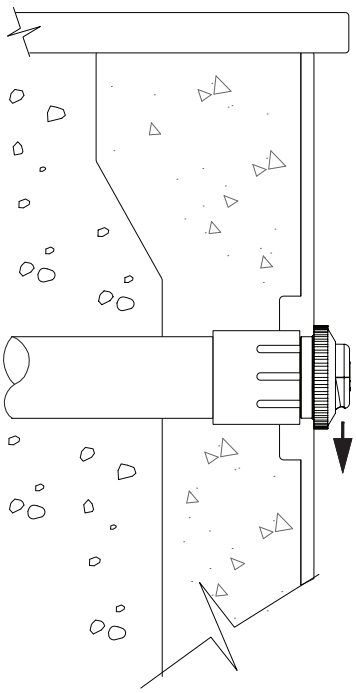




AIMING FIXED NOZZLES AND DOWN JETS FOR HYDRO-TROUGH

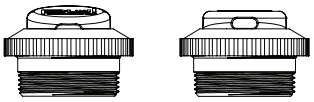
Complete Step 2 in the previous section, (Aiming Partial Rotate & Fixed Nozzle) and set Aiming Tool to FIXED. Aim one of the fixed nozzle slightly off centered of the debris removing drain. Aim the opposite fixed nozzle slightly off centered and opposite of the other fixed nozzle according to the pool plan.



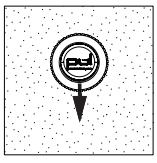


Down jets require 1½"threaded fittings.

The water flow can easily be adjusted to balance the flow.



1



AIMING DOWN JETS (#1) POSITIONED ABOVE FIXED NOZZLES

Aim the down jets vertically and position the down jet eyeball down towards the pool wall.

2

AIMING ADDITIONAL DOWN JETS (#2)

Aim the down jets at a 45° angle towards the Hydro-Trough collection zone and position the down jet eyeball down towards the pool wall.

OPERATING THE PUL CONNEKT APP

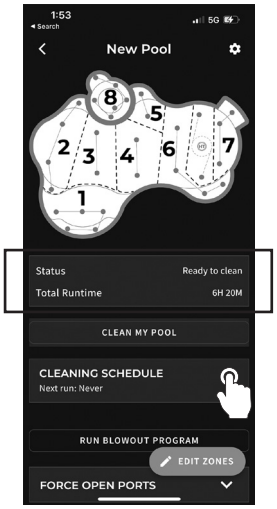
SETTING CLEANING PROGRAM SCHEDULE

IMPORTANT: SET PUMP SPEED BY CHECKING PUL PRESSURE GAUGE AND ADJUSTING PUMP RPM UNTIL NEEDLE IS IN THE GREEN RANGE (18-24 PSI).

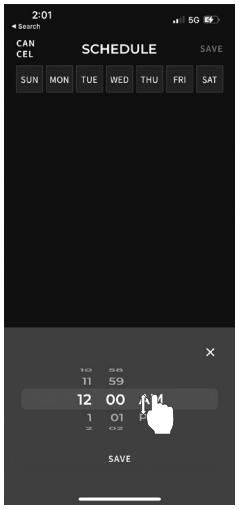
USING A POOL CONTROL SYSTEM

SET THE DAY(S) AND TIME(S) ON THE POOL CONTROL SYSTEM TO MATCH THE CLEANING PROGRAM.

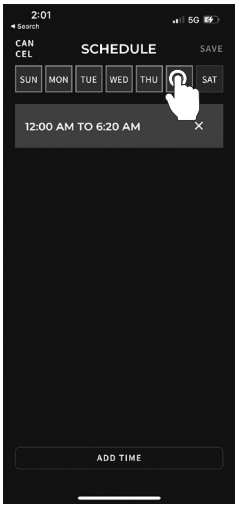
SET THE DURATION FOR THE PUMP TO THE TOTAL RUNTIME PLUS A 15 MIN. BUFFER.



1. Tap on “CLEANING SCHEDULE”



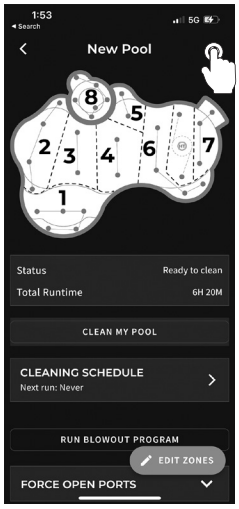
2. Tap “ADD TIME”. Scroll to set time for cleaning program to start, then tap “SAVE”



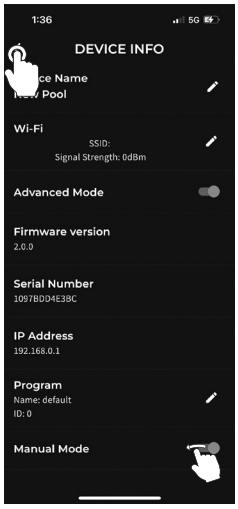
3. Select days for the cleaning system to run, then tap “SAVE”

PUMP ONLY

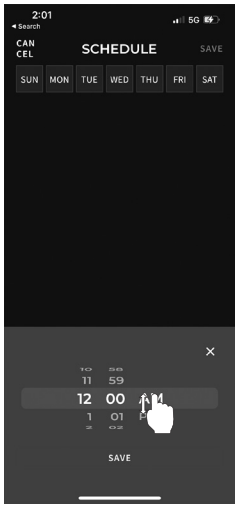
SCHEDULE THE PUMP TO TURN ON AND OFF ON THE DAY(S) AND TIME(S) DETERMINED ON THE CLEANING PROGRAM, ADD A 15 MIN BUFFER.



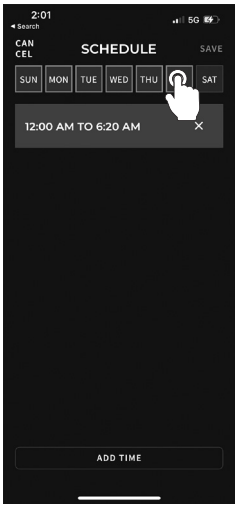
1. Tap on gear in the upper right corner



2. Toggle on “Manual Mode” then, tap the back arrow



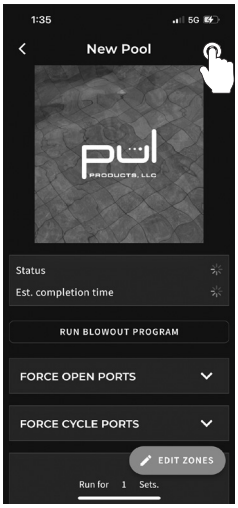
3. Tap “ADD TIME”. Scroll to set time for cleaning program to start, then tap “SAVE”



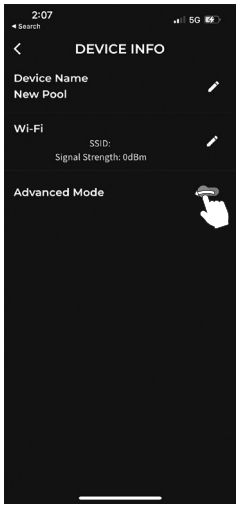
4. Select days for the cleaning system to run, then tap “SAVE”

ADVANCED MODE FUNCTIONS

Functions available with Advanced Mode enabled

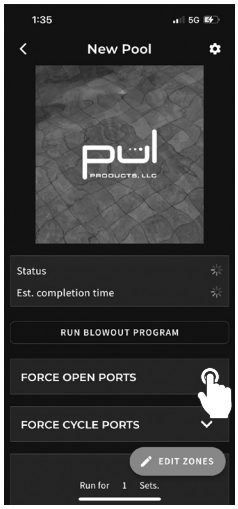


1. Tap on the gear in the upper right corner

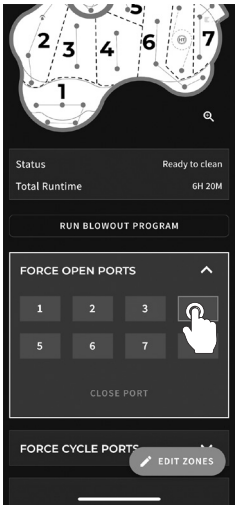


2. Toggle on "Advanced Mode"

FORCE OPEN PORTS



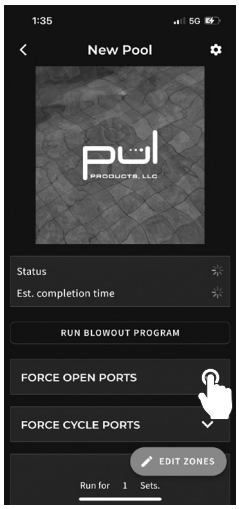
1. Force open ports is used for troubleshooting zones



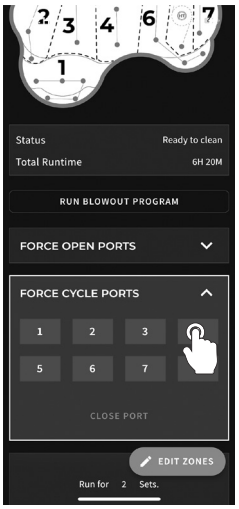
2. Select the port you want to open.

   The nozzles in the zone selected will stay up until the "CLOSE PORT" is tapped

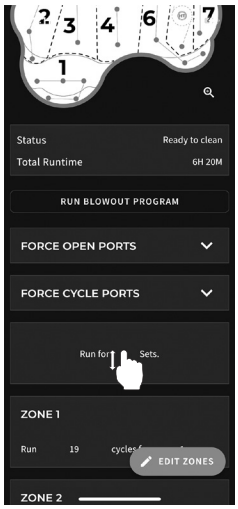
FORCE CYCLE PORTS



1. Force cycle ports is used for troubleshooting zones



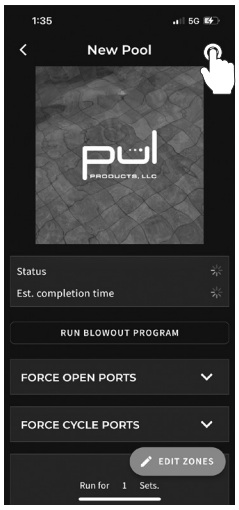
2. Select the port you want to open.



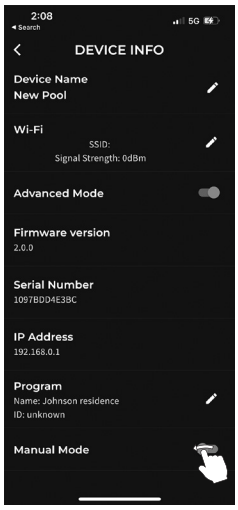
3. Scroll to select the number of sets (up to 50) the nozzle will pop up. The nozzles will pop up for 10 sec. and retract for the number of sets selected. It can be canceled any time by closing the port.

ENABLING MANUAL MODE

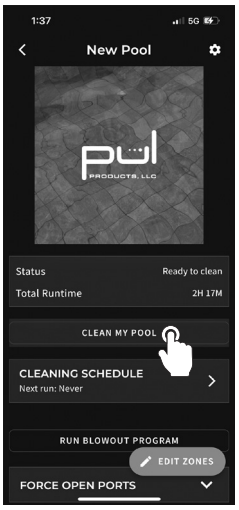
Manual mode allows you to start a cleaning program manually



1. Tap on the gear in the upper right corner



2. Toggle on “Manual Mode”



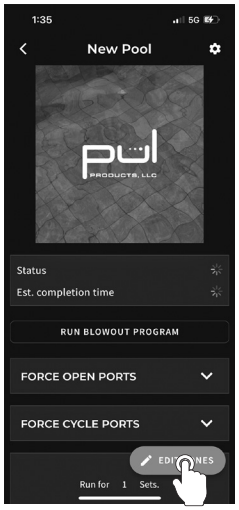
3. Tap on “CLEAN MY POOL”

NOTE: THE PUL CONNEKT APP WILL NOT TURN ON PUMP.

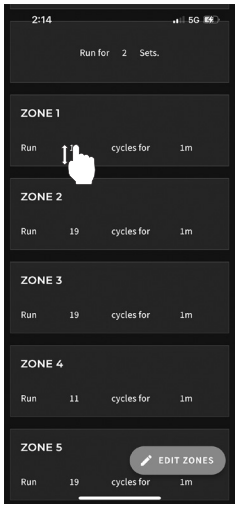
TURN PUMP ON MANUALLY OR FROM THE POOL CONTROL SYSTEM PRIOR TO CLICKING ON CLEAN MY POOL.

EDITING CLEANING PROGRAM

Must be in Advanced Mode to make changes



1. Tap on “EDIT ZONES”

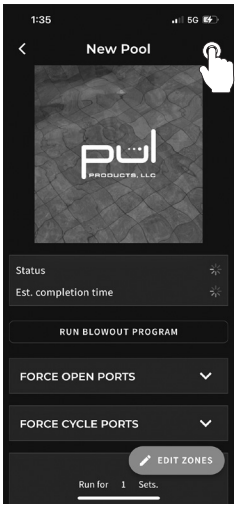


2. Scroll to the zone to edit the number of cycles and duration times. When finished, tap “SAVE”

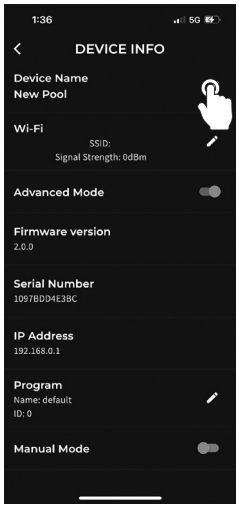
NOTE: If the total run has changed. Adjust the pool control system or pump time to match new time plus a 15 min buffer

RENAMING THE CONTROLLER

If you need to change the device name



1. Tap on the gear in the upper right corner



2. Tap on pencil next to “Device Name” Type in new name then tap done

WINTERIZING THE SYSTEM

To prepare the system for winter, and to prevent damage to the system, it is necessary to remove all water from within the Conekt Valve and Controller and all the water in the feed lines that are located above the frost line.

Proceed with the following steps

WARNING: IT IS IMPERATIVE THAT THE PUMP IS TURNED OFF AND THE SYSTEM HAS BEEN DEPRESSURIZED PRIOR TO REMOVAL OF BAND CLAMPS FROM THE CONEKT CONTROLLER AND CONEKT 8-PORT VALVE. DO NOT STAND OVER THE VALVE. FAILURE TO DO SO MY CAUSE BODILY INJURY, DEATH, OR DAMAGE TO VALVE.

1. Turn off pool pump and drain water from pool equipment.
2. Remove lid(s) the Conekt Valve(s) and remove cartridge(s). Store cartridge(s) in dry clean place until re-installation.
3. Remove the lid from the Conekt Controller and remove the controller cartridge. Store cartridge in dry clean place until re-installation.
4. Remove the nozzles from the pool and spa that are above the frost line and store them in a dry clean place. Remove any down jets or returns in pool (threaded or slip) including down jet body for a secure fit of a winterizing plug.
5. Clear the lines by using either a portable tank type air compressor or a 2 hp spa blower. Within the Conekt valve body install and secure Schrader or blow out plugs in all parts of valve(s) (except the horizontal feed port of valves when multiple valves are being used). Proceed to blow out lines.
6. While blowing out the in-floor nozzles, once a good amount of air has come through the nozzle, you have accomplished an air lock. (This procedure is similar to obtaining an air lock when blowing out the bottom drain in the pool.) While blowing out the down jets or any nozzles above freeze zone air is escaping through the in-wall hole, install and secure a regular winterizing plug. Repeat until all ports are blown out.
7. In cases where multiple valves are in use, blow out the feeder port (port 7 or 8) of the primary valve into the input port of the secondary valve then install and secure plug.
8. When necessary, pool winter anti-freeze solution should be poured into each line.
9. Valve and controller body(s) should be wiped clean and dry of water, reinstall lid(s) and secure.
10. For the feed lines that supply cleaning nozzles below the frost line, fill the lines with air and quickly install winterizing plugs in that port of the valve to create air locks. It will prevent the water from rising back up into the lines above the frost line.