



AUTOMATIC IN-FLOOR CLEANING & CIRCULATING SYSTEM
INSTALLATION MANUAL



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5,265,631, 6,301,723, 6,311,728, 6,314,999, 6,360,767 6,367,098,
6,393,629, 6,601,244, 6,810,537, 7,089,607, 7,178,179, Other Patents
Pending.

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295 East Corporate Place • Suite 100 • Chandler, AZ 85225
Toll Free: 1.800.621.5886 • Phone: 480.893.7607 • Fax: 480.753.3397
Paramount@1Paramount.com • www.1Paramount.com



FORWARD

The Paramount Cyclean® IN-FLOOR CLEANING SYSTEM is the culmination of years of extensive testing and engineering which provides your customers with the most advanced and trouble-free system available. The information contained in this manual is intended to answer some of the most common questions associated with the installation of the System. We urge you to take time to review it thoroughly.

If you have any questions call Toll Free 1.800.621.5886 or visit www.1Paramount.com

IMPORTANT NOTICE

The Paramount In-Floor Systems and other optional Paramount products are protected patented products and the “methods and installation” of said products are patented. An installer of these products must be trained and licensed by Paramount. This manual and documents contained within have been copyrighted and any reproductions are illegal without the written permission of Paramount Pool and Spa Systems.



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NOTES

DESIGN & LAYOUT

PRINCIPLE OF OPERATION

The CYCLEAN IN-FLOOR SYSTEM cleans by injecting pressurized water through a series of nozzles located throughout the pool. The pressurized water flow keeps dirt in suspension for removal by the pool filtration system, an active main drain, a skimmer, and an optional in-deck debris canister.

The water flow is directed to various cleaning nozzles in a sequential manner by Paramount's patented water-actuated distributor valve. The flow is constant and lasts for approximately 60 seconds. When the flow stops, the nozzle will retract and rotate slightly to a new position so that when it is energized again it will clean a different portion of the pool.

BENEFITS OF THE SYSTEM

- Reduction in chemical costs due to enhanced water circulation
- Reduced electrical costs due to reduced pump time due to increased water circulation
- Reduction of heating costs
- Elimination of unsightly devices
- Lifetime warranty and replacement under warranty conditions of cleaning nozzles
- Elimination of large leaves and debris with one of Paramount's patented optional VGB Compliant Debris Drains and Debris Containment Canister

BRUSHING IS NOT COMPLETELY ELIMINATED. Although the system GREATLY reduces the time and cost of maintaining a pool, it DOES NOT ELIMINATE the need to:

- **MAINTAIN A PROPER CHEMICAL BALANCE**
- **BRUSH THE POOL PERIODICALLY**
- **CLEAN BASKETS AND FILTERS ON A REGULAR BASIS**

In conclusion, the IN-FLOOR SYSTEM is not a 100% cleaner and should never be presented as such.

DESIGN & LAYOUT

SURFACE RETURNS

Surface returns used in conjunction with the IN-FLOOR SYSTEM are a builder's option. If all six ports of the water valve are not required, the use of surface returns (particularly in areas with excessive surface debris) is highly recommended.

If all six ports of the water valve are utilized for the floor, steps and/or spa, and automatic surface returns are desired, we recommend a separate pump and filter. Another option is to oversize the pump and plumb a manual return. The flow through the manual return would have to be regulated in order to ensure adequate flow through the floor system.

Surface returns are also advisable in shallow "game" pools. They enable people to use the pool and have the filtration system operating without the possibility of stepping on the cleaning nozzles.

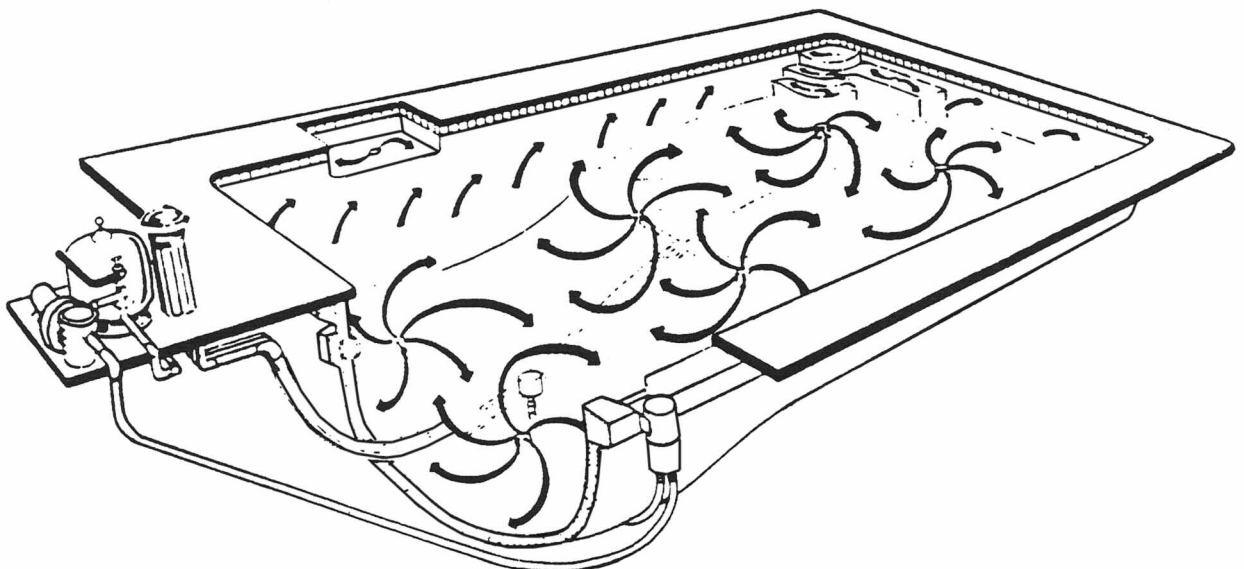
PROPER NOZZLE PLACEMENT

Proper nozzle placement is the single most important item in making the SYSTEM clean properly. As a general rule, one head is required for each 60 square feet of surface area (in pebble - 50 sq. ft.). Pools with breaks and free form pools will generally require two (2) additional nozzles. This formula does not include nozzles required for steps and benches. The exact total cannot be determined until a scaled drawing has been made and nozzles have been properly placed.

NOZZLE PLACEMENT CRITERIA

1. 6' RADIUS CLEANING IN PLASTER, 5'6" IN PEBBLE
2. DISTANCE FROM VERTICAL SURFACES (WALL OR STEP)
MINIMUM 2' - MAXIMUM 3 1/2'.
3. MAXIMUM DISTANCE FROM CORNER (4 FEET).
4. ALL AREAS MUST INTERSECT OR OVERLAP.

NOTE: Calculations based on a 1' radius dig in the shallow end and a 5' radius in the deep end (assuming maximum depth of 4' shallow and 9' deep.)



DESIGN & LAYOUT

NOZZLE PLACEMENT

STEP 1 - DRAW POOL SHAPE (FIG. 1.1 - FIG. 1.4)

A scaled drawing of the pool must be made including the following details:

- A. Outline of pool shape**
- B. All steps, benches, offsets, etc.**
- C. Normal main drain location**
- D. Break or transition point between shallow and deep end (if applicable)**
- E. Any other items that may affect the water flow from the nozzles - i.e., in pool umbrella or tables**
- F. Water line on zero entry beach entries**

Use either 1/8 in. = 1 ft. scale or 1/4 in. = 1 ft scale

Use either 1mm = 100mm scale or 1mm = 50mm scale

Fill out a cover sheet and fax with drawing to Paramount and we will layout your pool cleaning system.

- How to submit plans
 1. E-Mail - cad@1Paramount.com (scalable electronic files – .dxf, .dwg)
 2. Fax 480.893.7621

Paramount **DRAWING REQUEST FORM** **CYCLEAN**
 Pool Life Simplified. Please Allow 2 Business Days For Layout. AUTOMATIC REFUGERY CLEANER
 1.800.621.5886 or 1.480.893.7621 x: 1.480.893.7621 cad@Paramount.com www.1Paramount.com

If You Would Like Information On E-mailing Drawings Please E-mail Us At: cad@Paramount.com

Pool Builder Information **Pool Owner Information**

*Company _____ *Job Name _____
 *City _____ *State _____ Address _____
 Contact Name _____ City _____ Zip _____
 *Sales Person _____
 Telephone _____
 Fax _____
 E-mail _____

Revision _____ Previous Drawing # _____
 What is Revised? _____

Length-Width Measurements, Breakline & Diagonal Measurements **Be Shown On A Scaled Pool Drawing**

Pool Dimensions: _____ Square Feet: _____ Pool Depth: _____
 Distances in Feet: _____

***Check Corresponding Boxes to Best Describe the Cleaning System Requested

Pool Finish: ☐ Tile ☐ Plaster ☐ Other _____
 Pumps Information: ☐ Boosting System ☐ Pool And Spa Heating ☐ Solar Heating (Resistive or pump) ☐ Indoor / Screened Pool ☐ Zero Entry You (Indicate in Pool) ☐

Filter Pump Brand: _____ HP: _____
 Booster Pump Brand: _____ HP: _____
 Skimmer Quantity: _____

Nozzle Placement: ☐ Pool Floor ☐ Steps ☐ Benches ☐ Spa ☐ Basin ☐

MDX-R3 ☐ MDX2 ☐ Buzztop ☐ Canister ☐ Canister w/ Fuse ☐ Deck Fuse ☐ Swnglet ☐ Swnglet Zone Quantity: _____
 (Swnglet zones consist of 3 Swnglets and will be plumbed thru the water valve.)

Clear OS ☐ Airport ☐

SDX 2-Pack Quantity: _____
 Paralevel Quantity: _____
 Parascopes Fountain Quantity: _____
 Additional Deck Fuse Quantity: _____
 Additional Canister Fuse Quantity: _____
 Niagara Waterfall Quantity: _____
 Jet pack Quantities: _____
 Oscillator ☐ Cluster spray ☐ Splinal' sage ☐

Customer Service Product Ordering Section
 (Completing this section will result in an Order being processed being shipped based on the Bill of Materials in the drawing.)

Order Type: ☐ Pre-Quote Order ☐ Complete Order

Color Selections

Nozzle / Drain / Fountain: ☐ White - 01 ☐ Tan - 04 ☐ Beige - 07
☐ Grey - 02 ☐ Blue - 05 ☐ Light Grey - 08
☐ Dark - 03 ☐ Light Blue - 06

Canister / Paralevel Lid: ☐ White - 01 ☐ Grey - 02 ☐ Beige - 07

Jet Pack: ☐ Pearl - 51 ☐ Mirage - 52 ☐ Onyx - 53
☐ Cobalt - 55 ☐ Graphite - 56 ☐ Tanzanite - 57

Shipping Priority: ☐ Ground ☐ 2-Day ☐ 3-Day
☐ Next Day AM ☐ Next Day PM ☐ Will Call Desk

Notes From Pool Builder: _____

* This Form Must Be Filled Out COMPLETELY And LEGIBLY To Receive Points For Incentive Trip *

06/11

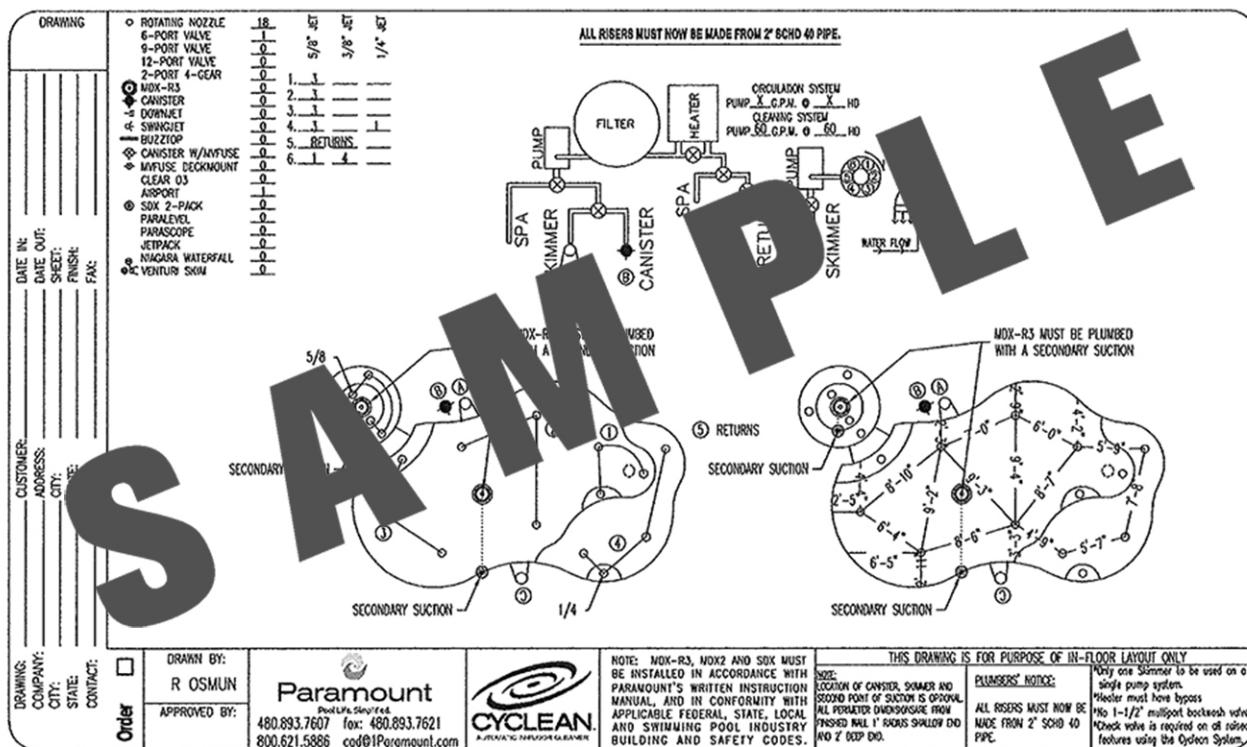
DESIGN & LAYOUT

DIMENSIONED NOZZLE PLACEMENT DRAWING

After the nozzle placement has been determined, a scaled drawing will be made with dimensions clearly indicated. The dimensioned drawing should be the plumber's guide and a part of the superintendent's check sheet to insure proper placement.

As stated earlier, proper nozzle location is critical. Should the pool's configuration change (i.e., step location, break location, overall dimension) the nozzle placement must also change. A revised plan must be drawn. Choose one nozzle to use as a starting point and indicate dimensions to outer walls. This will enable the plumbers to find location of first nozzle and then use triangulation to locate the remaining ones.

The sequencing order, from a cleaning aspect, is immaterial. Since the cleaning nozzles operate on a random principle, the need for sequencing is eliminated. However, sequencing from shallow to deep is recommended for ease of plumbing, installation and trouble-shooting.



DESIGN & LAYOUT

PUMP REQUIREMENTS

Selecting Proper Pump Size

1. Determine GPM and Ft./Hd. requirements from Specification Chart below.
2. Refer to manufacturer's pump curve of equipment you use.
3. Compare Part # and Model #. Do not rely on horsepower. Most manufacturers make both full-rated and up-rated pumps. This also relates to low and high service factors.
4. Most pump curves will show Total Head in Feet on the left side vertically. Gallons per Minute are indicated horizontally across the page.
5. Draw an X where the two lines intersect. This will give you the pump required.

In-floor System Specification Chart

SINGLE PUMP	MIN. FILTER
*60 GPM @ 80 TDH	4.9 Sand
or	48 Sq.Ft. D.E.
*40 GPM @ 60 TDH	200 Sq.Ft. Cart.
Filter/ Cleaner Pump	

DUAL PUMP	MIN. FILTER
*40 GPM @ 60 TDH	3.1 Sand
or	36 Sq.Ft. D.E.
*60 GPM @ 60 TDH	200 Sq.Ft. Cart.
Cleaner Pump	

No Multi-Port Filter Valves
Bypass On Heater

Size Filter Pump to pool
turnover.

Multi-Port OK.
No Bypass On
Heater Required

* Any time the equipment is more than 50 ft. away from skimmer, special engineering is required. Submit a copy of the proposed plan indicating the specific information to Paramount Pool & Spa Systems.

* GPM stated are the requirements of the in-floor system. Additional equipment such as chlorine generators, spa overflows, etc., require more water flow. Adjust pump GPM requirements accordingly.

DESIGN & LAYOUT

FILTER REQUIREMENTS **Selecting Proper Filter Size**

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.

Diatomaceous Earth (D.E.)

D.E. filters are rated at 2 GPM per square foot of filter area.

Sand

Sand filters are rated at 20 GPM per square foot.

1-1/2" MULTI-PORT VALVES ARE NOT RECOMMENDED BECAUSE HEAD LOSS IS GREATLY INCREASED. PARAMOUNT RECOMMENDS THE USE OF 2" PUSH/PULL OR 2" MULTI-PORT VALVES ON SINGLE PUMP SYSTEMS.

NOTE: Filter rates in excess of 20 GPM per sq. ft. can cause channeling of the filter bed.

Cartridge

Cartridge filters are rated at .25 GPM per square foot of filter area.

NOTE: Excess flow rates can cause the fibers of a cartridge to become impacted.

1-1/2" MULTI-PORT VALVES ARE NOT RECOMMENDED BECAUSE HEAD LOSS IS GREATLY INCREASED. PARAMOUNT RECOMMENDS THE USE OF 2" PUSH/PULL OR 2" MULTI-PORT VALVES ON SINGLE PUMP SYSTEMS.

DESIGN & LAYOUT

IMPORTANT TECHNICAL NOTICE REGARDING MULTIPLE SKIMMERS AND CLEANING EFFICIENCIES

The usage of more than one skimmer with any In-Floor systems may create conditions where the main drain and skimmers are not effective. This is particularly true with Paramount's line of VGB Compliant Debris Drains.

When the pool incorporates a single pump design with up to a 2 hp (2-1/2 hp up rated) pump and an In-Floor system, the maximum flow of water through the hydraulic system is only 60-75 GPM.

The Paramount optional VGB Compliant Debris Drains require 35 GPM to operate properly. The remaining suction flow is through the skimmer.

When a second skimmer is added, the flow then becomes reduced. Having only 17-20 GPM over a skimmer weir is not effective. Traditionally, consumers adjust the skimmers to effectively pull water and surface debris and thus reduce the suction upon the main drain.

We have found that with an In-Floor system the best rule of thumb is "One skimmer and one main drain with a one pump system".

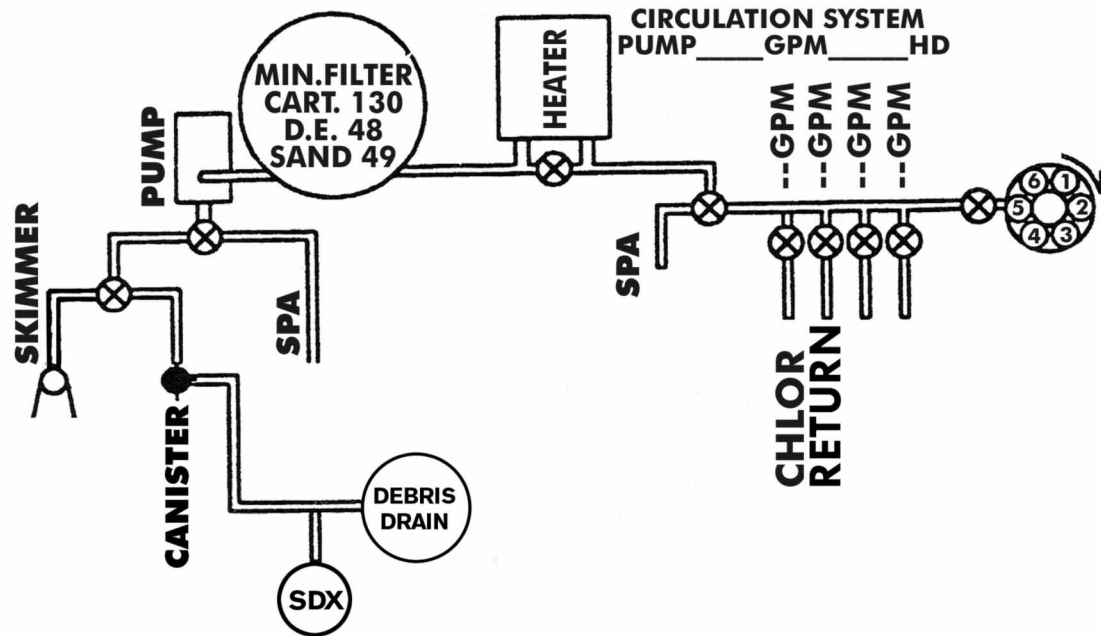
On pools over 500 sq. ft., we recommend the design include a two-pump system. Because of the energy savings, faster clean up and less stringent equipment requirements, multiple skimmers may be incorporated.

The second pump may be plumbed with the filter pump to share a single skimmer which, in effect, super-charges the skimmer. Alternatively, the second pump may be plumbed to a second skimmer. This design allows both skimmers to separately draw a minimum 35 GPM and the main drain to effectively operate as designed.

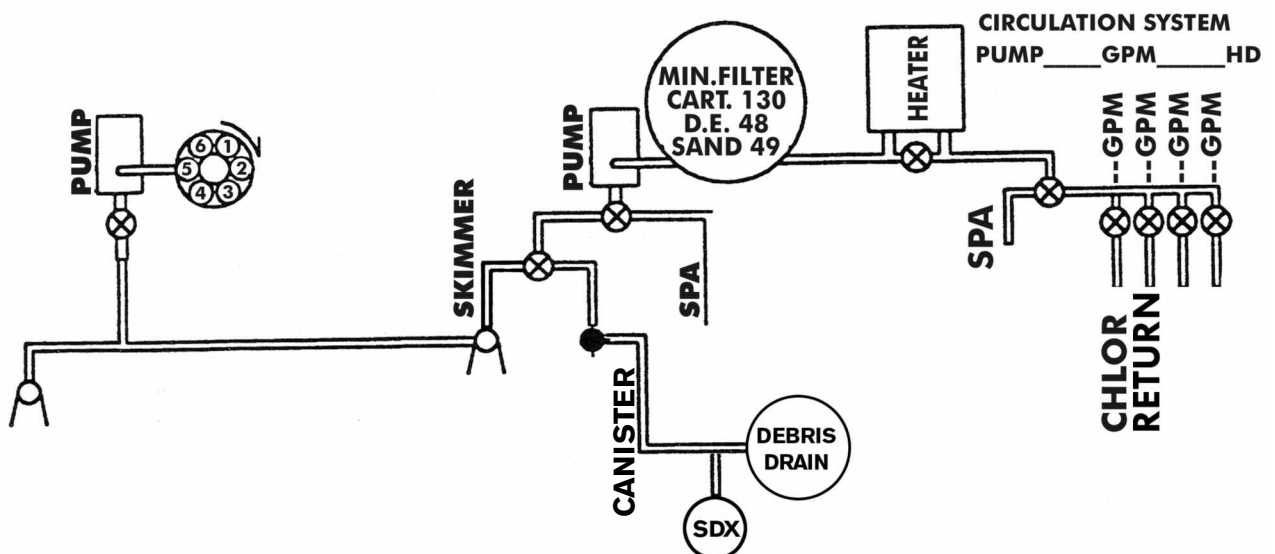
DESIGN & LAYOUT

EQUIPMENT LAYOUT

Single Pump



Dual Pump

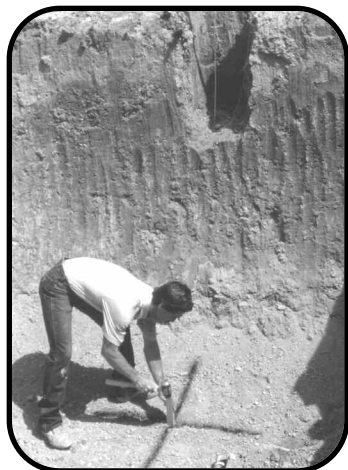
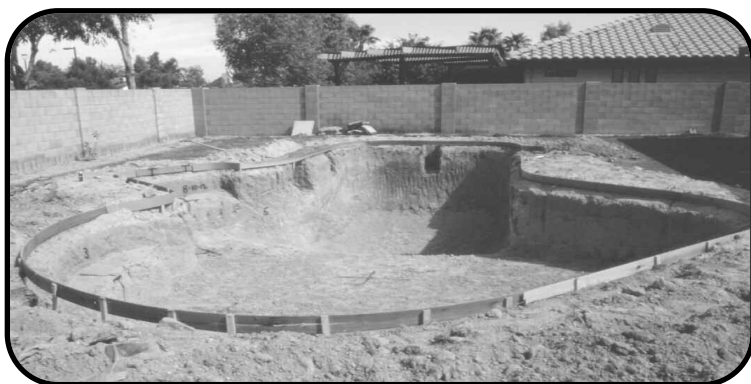


PLUMBING DETAIL

PLUMBING (FLOOR)

Install the SYSTEM with required feed lines from the water valve to banks of heads containing two or more nozzles each. The feed lines are 2" Schedule 40 PVC pipe. Paramount recommends that the lines enter at the center of length of pool. Excavate a niche to the bottom of the pool depth at that location. This large niche allows ample room for the feed lines. Generally, this will provide for the least amount of pipe. There are occasions when it may be advantageous to feed part of the lines in places other than the center. At each nozzle location, install a 2" elbow with 2" Schedule 40 PVC stubbed up 12" above the finished pool floor (except for steps and benches). Step and bench nozzles should be on a separate port. The number of nozzles per port in the floor should be constant whenever possible. All pipes should have a minimum of 2" of cover. Trenches should be backfilled and raked smooth. Paramount recommends soaking and tamping the ground after backfilling the trenches. It is imperative that the stub-up angle is 90 degrees to the finished floor angle. This must be verified and adjusted prior to placing gunite or concrete shell. Paramount recommends use of the primer on all joints underground.

Cap all lines and pressure test to a minimum of 35 psi. Install the pressure-test stack at the equipment header or on one of the stub-up pipes in the pool floor. Pressure should remain on system throughout construction.



PLUMBING DETAIL

PLUMBING (WATER VALVE)

2" VALVE BASE PLUMBING GUIDE

NOTICE: All pipe fittings MUST be staggered. (See pictures next page)

All plumbing should be 2".

The water valve is normally set 6" above water level in a convenient location poolside. This results in dramatic reduction in plumbing runs and increased cost savings.

The center port of the bottom housing is the inlet to the valve. Cut all pipes square, this allows maximum gluing surface to the bottom housing. USE PVC PRIMER AND PVC GLUE ON BOTTOM HOUSING AND ON PVC PIPES. (IPS WELDON P68 PRIMER and 711 GLUE or 705 GLUE or EQUIVALENT)

Glue pipe all the way into the stop and allow at least 24 hours drying time before pressure test. To prevent glue damage to internal ribs always glue with the valve right side up.

If not all six (6) ports are required, use one of the ports twice to feed one return line. The common ports should not be plumbed next to each other, always skip a port when double firing. The pipes from the water valve should be connected together underground.

GLUING INSTRUCTIONS

1. Remove Clamp
2. Lift off dome (save O-ring)
3. Remove pressure gauge and knob from inside valve housing assembly.
4. Primer valve base two times
5. Make sure pipes are glued all the way into the stop. Be careful not to allow glue to run into module area.*
6. The center port is the inlet to the valve and should be approximately 3" longer than the perimeter pipes.
7. Allow 24 hour before pressure testing.
8. Reposition o-ring in groove in the valve base.
9. Replace dome and V-Clamp and tighten until snug.
10. Thread the pressure gauge to the top of the dome. DO NOT USE TEFLON TAPE
11. Pressurize with pool plumbing (do not exceed 35 psi.)
12. Store the module assembly in a safe place and install after the pool has been started up.

* Pipes should be a minimum of 12" in length and should insure the valve be at least 6" above water level.

PLUMBING DETAIL

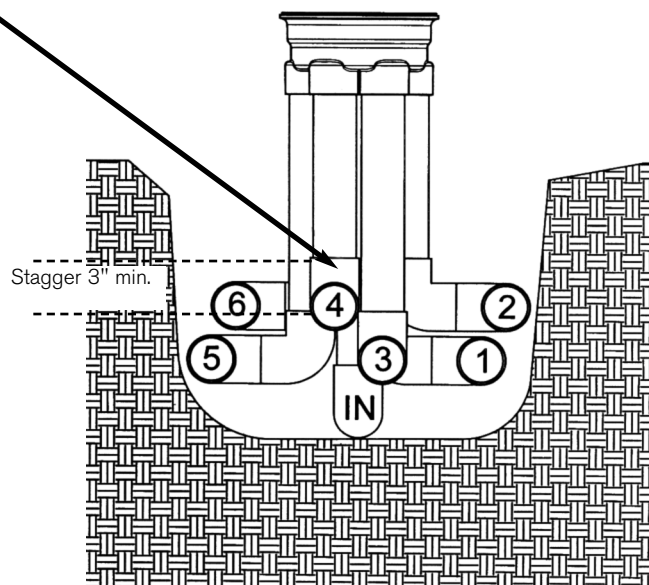
PLUMBING (WATER VALVE) 2" VALVE BASE PLUMBING GUIDE

NOTICE: All pipe fittings MUST be staggered.

PARTS NEEDED FOR ASSEMBLY OPTION ONE

- (3) 2"X12" PVC PIPE (port 2,4,6)
- (3) 2"X15" PVC PIPE (port 1,3,5)
- (1) 2"X18" PVC PIPE (port inlet)
- (4) 2"X2 1/4" PVC PIPE (port 1,2,5,6)
- (11) 2" SLIP 90° ELBOWS
- Optional: replace (4) 90° elbows and (4) 2"x2 1/4" pipes with (4) spigot 90° elbows
- Set in trench 15" deep X 19" wide

NOTE: Height of riser pipes may be adjusted as long as the 3" height differential between fittings is maintained.

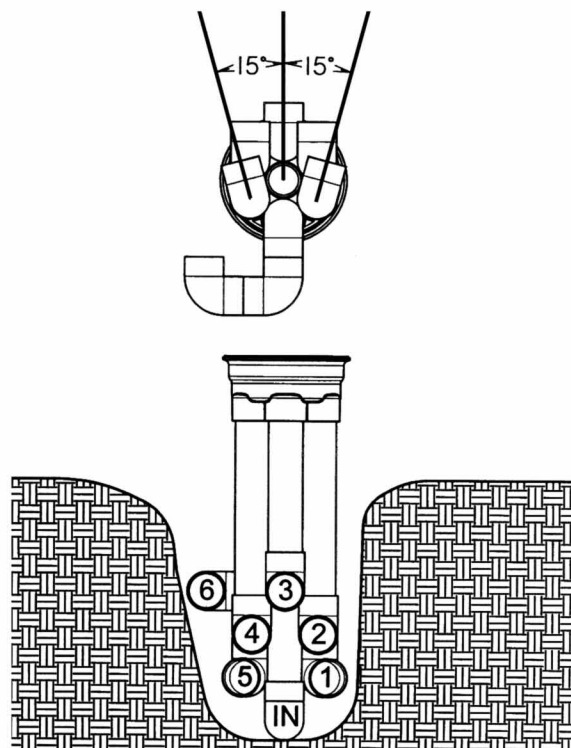


OPTION TWO

- (2) 2"X12" PVC PIPE (port 3,6)
- (2) 2"X15" PVC PIPE (port 2,4)
- (2) 2"X18" PVC PIPE (port 1,5)
- (1) 2"X21" PVC PIPE (port inlet)
- (2) 2"X2 1/4" PVC PIPE (port 6)
- (8) 2" SLIP 90° elbows
- Optional: replace (2) 90° elbows and (2) 2"x2 1/4" pipes with (2) spigot 90° elbows (port 6)
- Set in trench 19" deep X 12" wide

IMPORTANT:

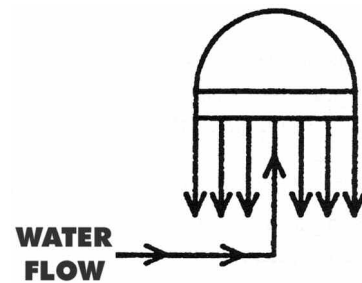
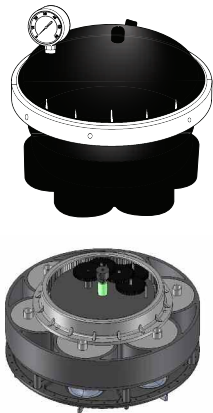
PORT 1 AND 5 MUST BE SET AT 15° OFF CENTER-LINE IN ORDER TO CLEAR



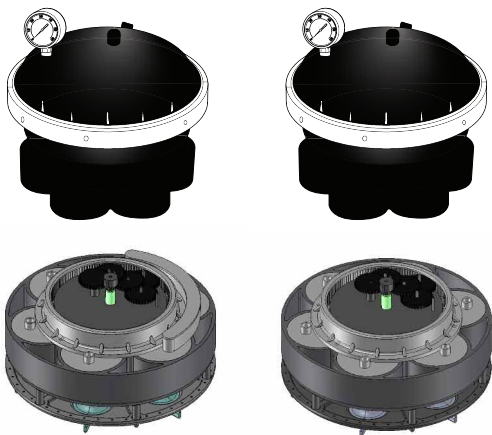
PLUMBING DETAIL

VALVE CIRCUIT LAYOUT

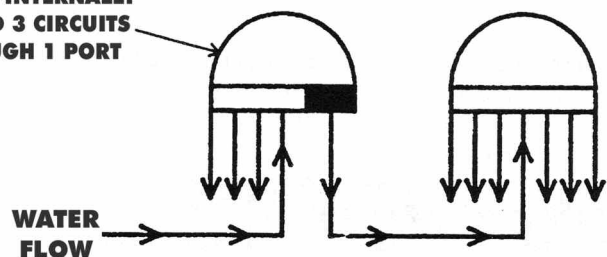
6 CIRCUIT 004-302-4184-03



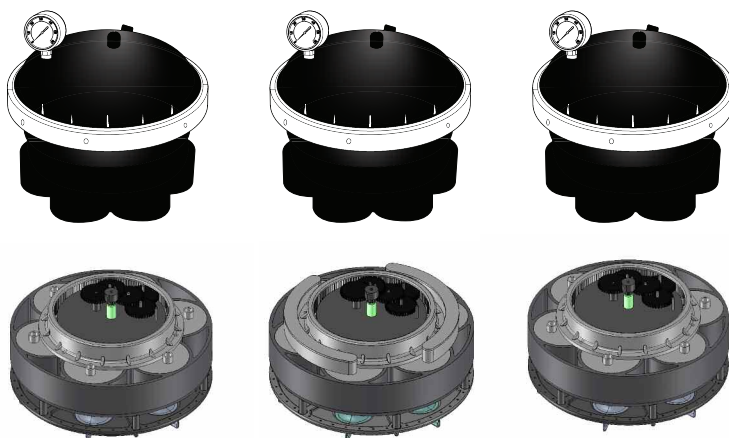
9 CIRCUIT 004-302-4190-03



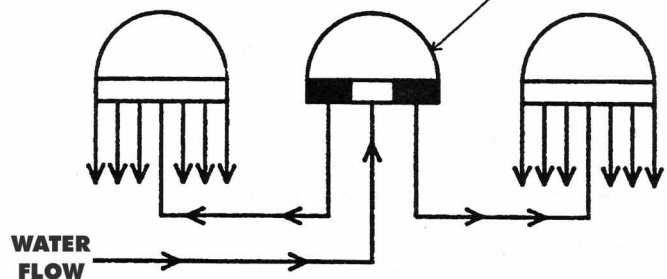
3 + 1 PORT
SPECIAL VALVE
PORTED INTERNALLY
TO FEED 3 CIRCUITS
THROUGH 1 PORT



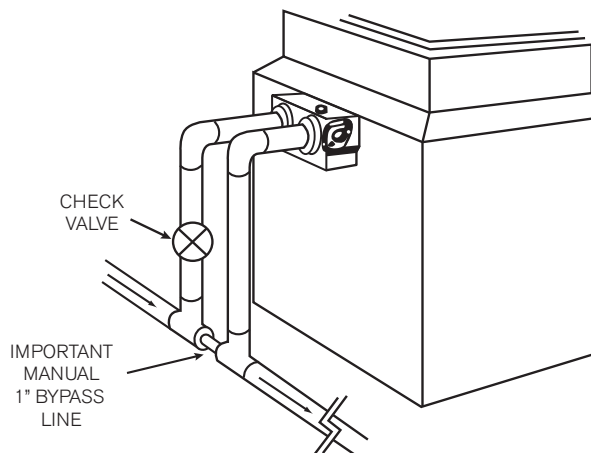
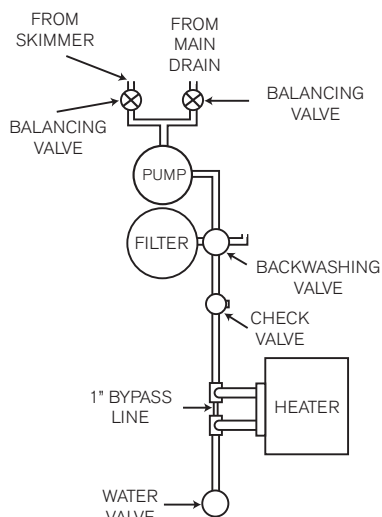
12 CIRCUIT 004-302-4194-03



1 + 1 PORT
SPECIAL VALVE
PORTED INTERNALLY
TO FEED 3 CIRCUITS
THROUGH 1 PORT



PLUMBING DETAIL

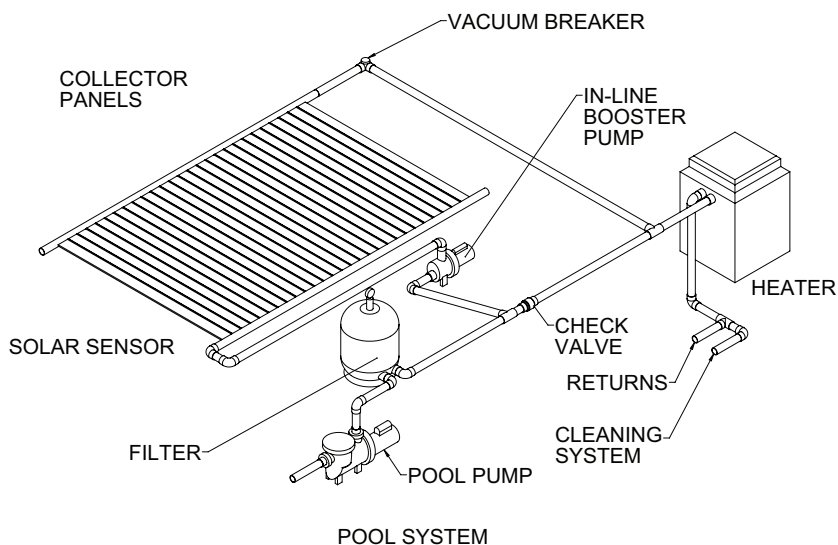


HEATERS

When installing a heater on the pool, a 1" BY-PASS TO PARTIALLY DIRECT WATER AROUND THE HEATER IS NECESSARY. This allows part of the water through the heater for heating but limits the head loss created when all the water is directed through the heater. THE IN-FLOOR SYSTEM WILL NOT FUNCTION PROPERLY WITHOUT THIS BY-PASS.

SOLAR SYSTEMS

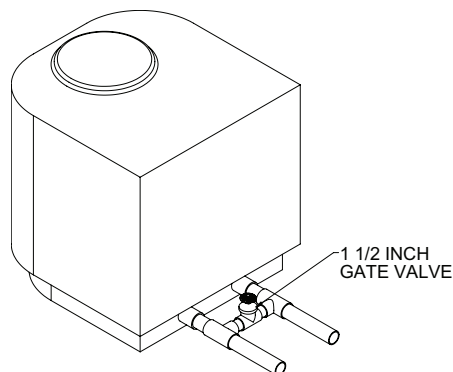
Paramount recommends solar systems be operated independently with a booster pump, separate suction, and returns, or as shown below with a secondary booster pump, and the in-floor system valve installed after the solar and heater pack.



POOL SYSTEM

HEAT PUMP

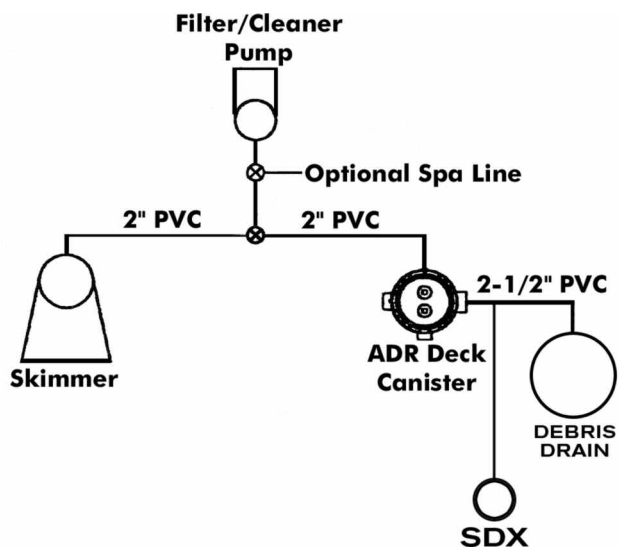
Heat pumps must have a minimum by-pass of 1 1/2" with a gate valve for adjustment. The gate valve must be set with a temperature probe to factory specs for heat rise.



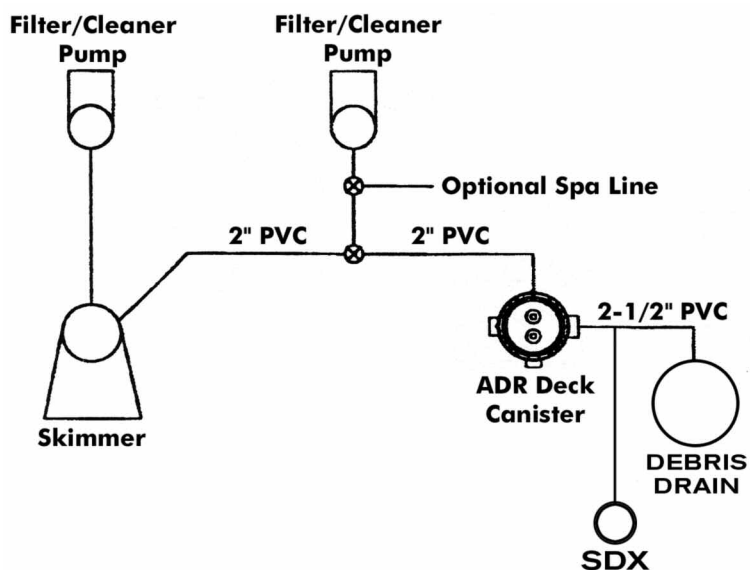
PLUMBING DETAIL

IN-DECK CANISTER REQUIREMENTS

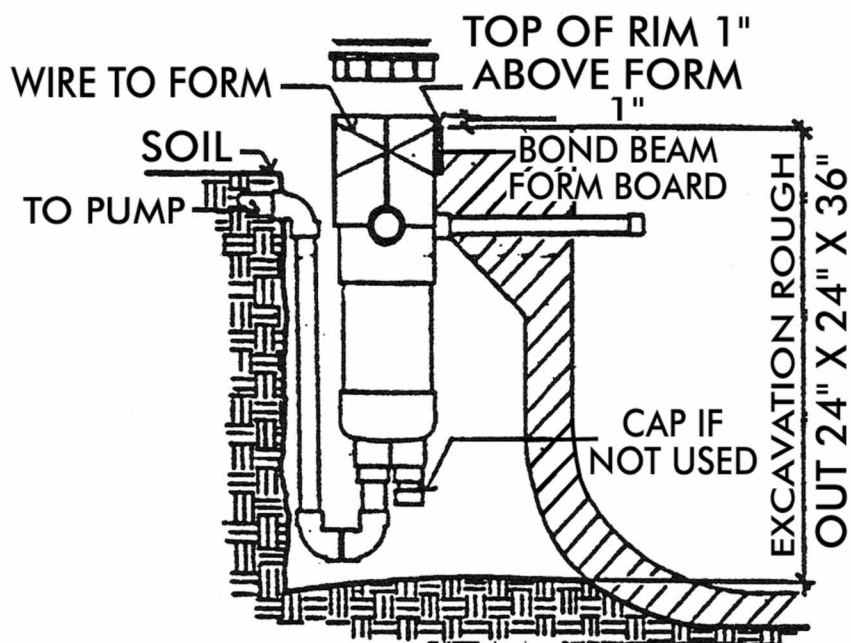
Single Pump System



Dual Pump System

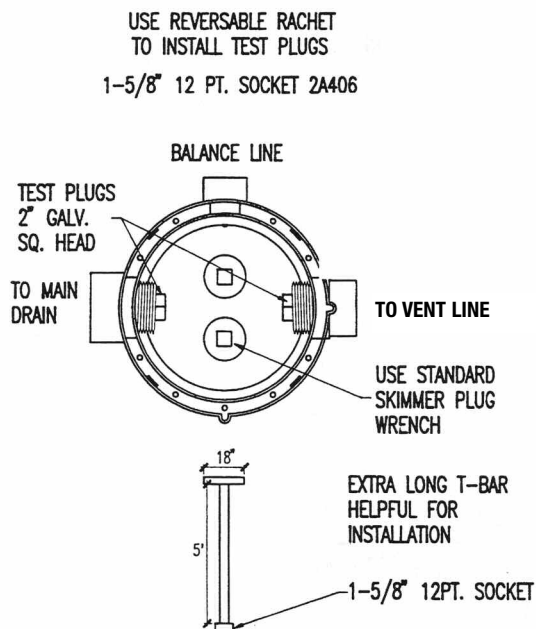


In-deck Debris Trap



PLUMBING DETAIL

PRESSURE TEST DETAIL



Notice:

Release pressure on the system before removing plugs

POOL DRAIN SYSTEM

System Design:

NOTICE:

WARNING: The drain used must be installed in accordance with the manufacturer's written instruction manual, and in conformity with applicable Federal, State, Local and Swimming pool industry building and safety codes.

If you use one of the Paramount MDX 'VGB Compliant Debris Drains' consult the applicable manual for specific instruction on how to plumb.

MANUAL PART NUMBERS:

MDX-R3 Non Adjustable Concrete: 004-027-8810-00

MDX-R3 Adjustable Concrete: 004-027-8815-00

MDX² Concrete: 004-027-8793-00

PLUMBING DETAIL

RAISED SPAS

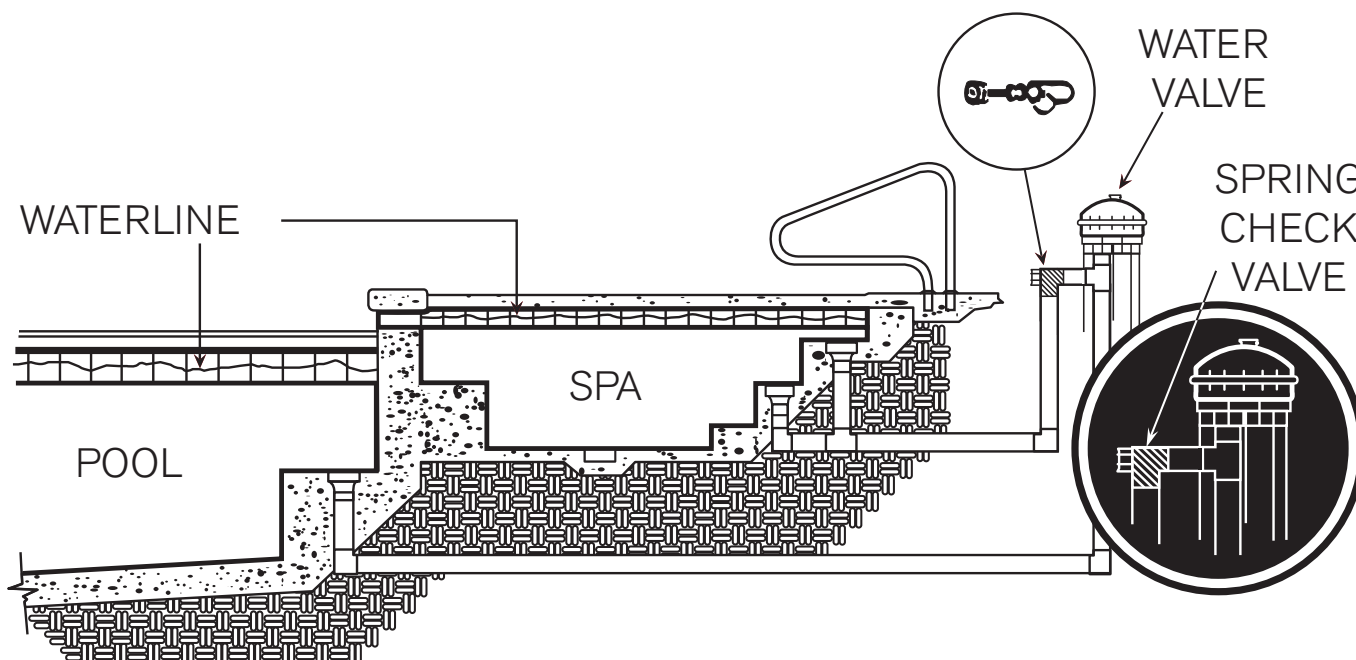
AN IN-LINE CHECK VALVE IS REQUIRED IN ALL RAISED SPAS. PLUMB THE CHECK VALVE ABOVE GROUND FOR EASE OF FUTURE MAINTENANCE.

NOZZLE PLACEMENT - SPAS

Keep in mind that if cleaning nozzles in the spa are part of the cleaning cycle of the swimming pool, consideration must be given to the additional water being injected into the spa. This water must be removed via dam wall overflow, equalizer line, etc.

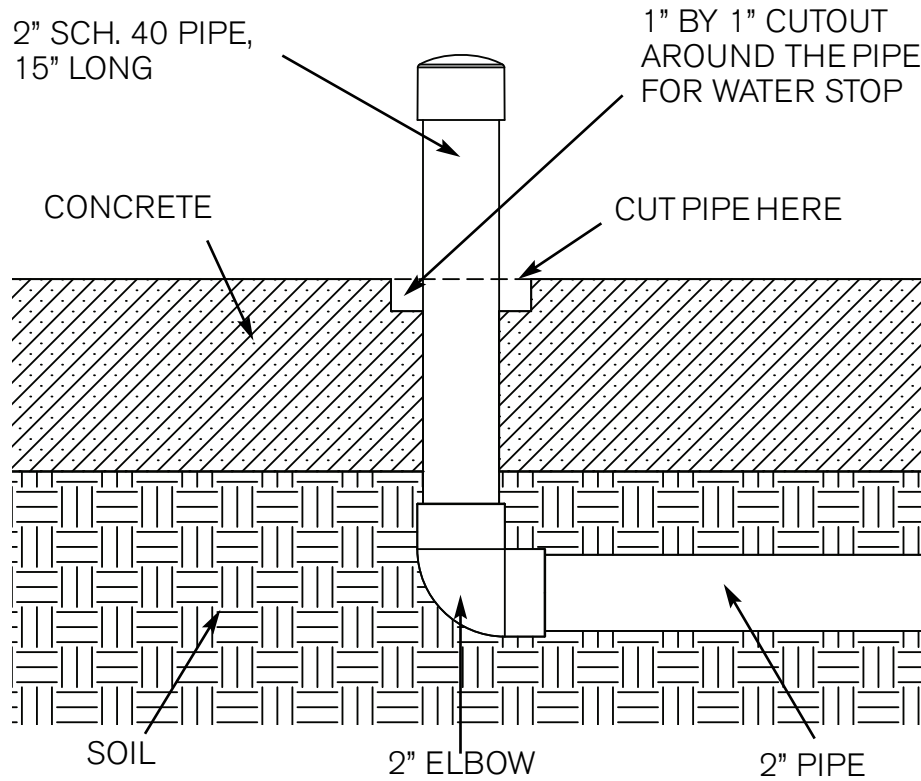
When plumbing a spa, it is recommended the nozzles be on a separate port of their own.

NOTE: Separate line with check valve required on raised water features or spas.



PLUMBING DETAIL

PLUMBING FOR FLOOR NOZZLES

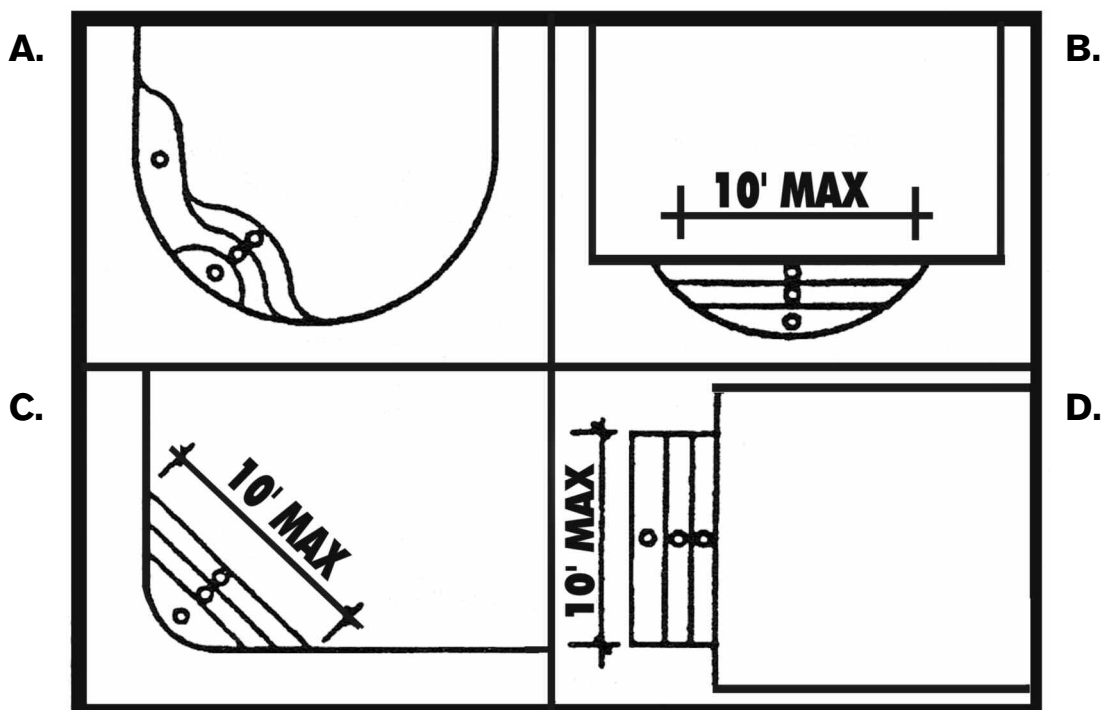


NOTE: All risers must be 90 degrees (perpendicular) to the finished floor

PLUMBING DETAIL

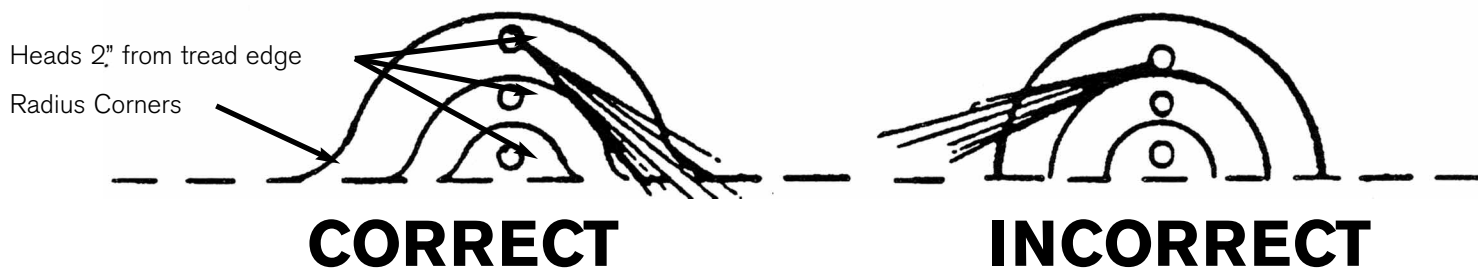
NOZZLE PLACEMENT (STEPS / BENCHES / SWIM-OUTS)

1. Using a 5' radius, indicate location of step-cleaning nozzle.



NOTE: Each nozzle will not clean more than 5' radius on steps or benches.

2. Nozzles should be pulled out as far as possible in order to reach corners.



3. Reversed radius* of step corners will help to eliminate dirty steps.

* This will also help with the floor cleaning where the bottom step meets the pool wall.

STEEL DETAIL

REBAR MUST BE KEPT AWAY FROM 2" PVC RISER. REBAR SHOULD BE BENT AROUND RISER SO THAT STEEL IS MINIMUM OF 2" AWAY FROM THE PIPE.



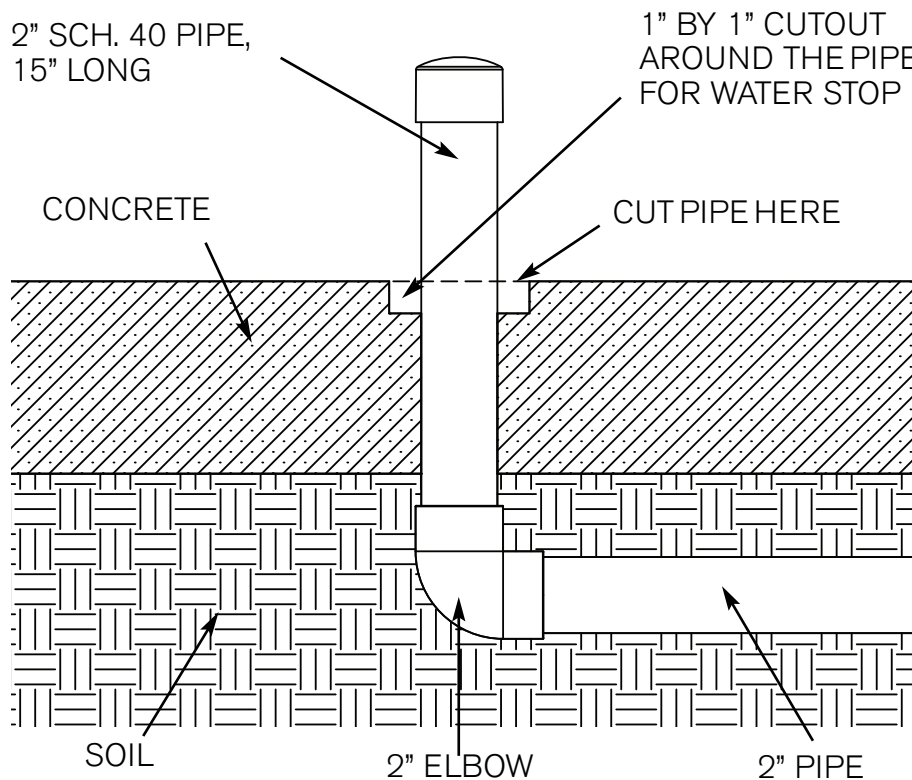
CONCRETE DETAIL

GUNITE OR SHOTCRETE PROCESS

CONCRETE:

1. Make a cutout or opening approximately 1" deep and 1" bigger than the pipe.
2. This cutout will be filled with plaster and create a water stop.

Verify the angle of the risers as it is imperative that the riser angle be 90 degrees from the finished floor angle. Check that the system did not lose pressure prior to shooting the pool and upon completion.

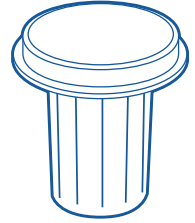


NOTE: All risers must be 90 degrees (perpendicular) to the finished floor

PRE-PLASTER DETAIL



Ribbed Body Installation Guide



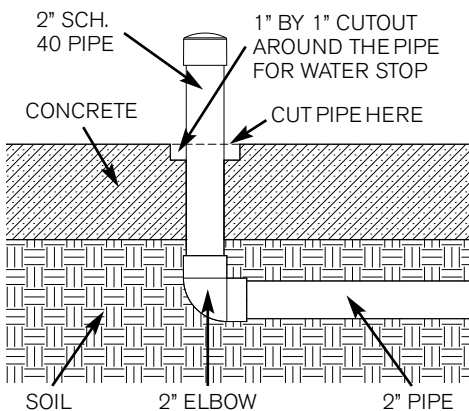
NOTICE: Heavy Body Glue Is Required

1



Make a cutout or opening approximately 1" deep and 1" bigger than the pipe.

This cutout will be filled with plaster to create a water stop.



2



Cut off riser pipes flush with concrete surface.

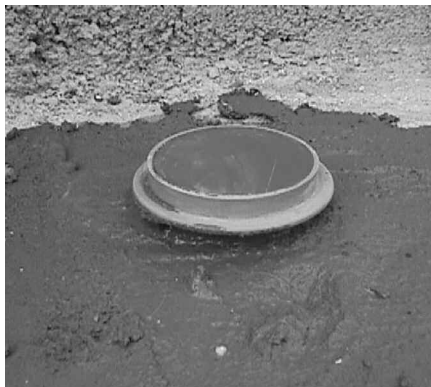
3



Remove cap. Prime the inside of the pipe. **DO NOT PRIME THE BODY.**

DO NOT ROTATE THE BODY IN THE PIPE.

4

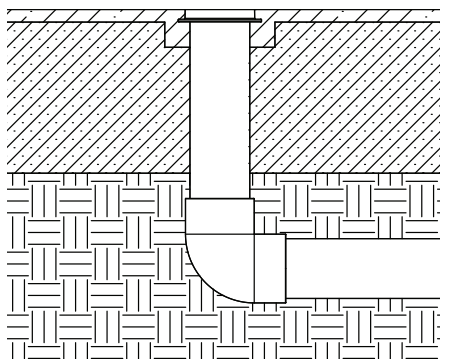


Glue the body into the pipe with a **HEAVY BODY PVC SOLVENT CEMENT.**

(IPS WELD-ON 711 or equivalent) The glue must cover the full length of the body barrel and 3" deep inside the riser pipe. Push the body into the pipe until the shoulder hits the top edge of the pipe.

Let fumes vent for 30 minutes then replace all body caps.

5



PLASTERING THE POOL

Leave all plaster caps in place for removal at start up.

NOTE: Optional, the plaster crew may remove the plaster caps as they finish.

NOTE: The body does not come with the nozzle installed.

PRE-PLASTER DETAIL



Smooth Body Installation Guide



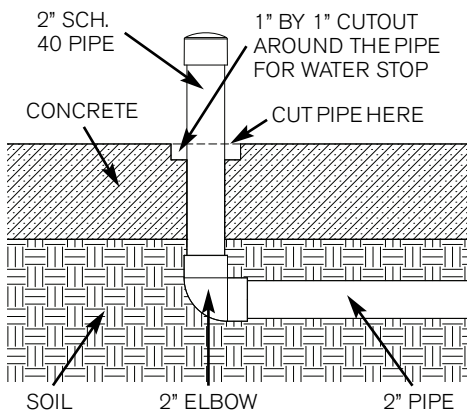
NOTICE: You can use regular PVC glue on smooth body

1



Make a cutout or opening approximately 1" deep and 1" bigger than the pipe.

This cutout will be filled with plaster or other finish coat to create a water stop.



2



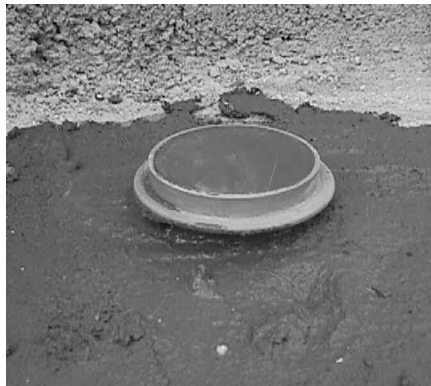
Cut off riser pipes flush with concrete surface.

3



Remove cap. Prime the inside of the pipe. **DO NOT PRIME THE BODY.**

4

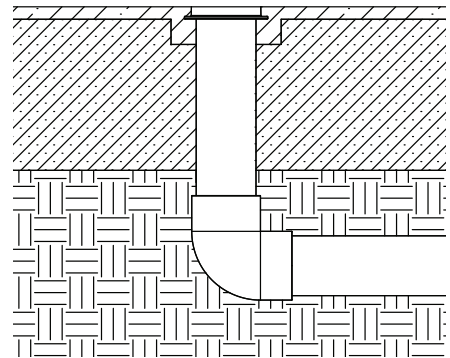


Glue the body into the pipe with a regular PVC glue.

The glue must cover the full length of the body barrel and 3" deep inside the riser pipe. Push the body into the pipe until the shoulder hits the top edge of the pipe.

Let fumes vent for 30 minutes then replace all body caps.

5



PLASTERING THE POOL

Leave all plaster caps in place for removal at start up.

NOTE: Optional, the plaster crew may remove the plaster caps as they finish.

NOTE: The body does not come with the nozzle installed.

START UP

1. Remove all pressure test plugs.



2. Install all baskets and lids.



START UP

Valve Installation

Before installing the valve, startup the pump and run without the module in place to clear any debris from the feed lines. The equipment needs to run for a minimum of ten minutes before installing the valve module.

Install the valve module assembly next. Turn off the pump. Remove the V-clamp. Install the module assembly in the housing. There are guide pins on the module that will line up with the holes in the bottom housing. (Reuse the internal o-ring.) Place the Run/Pause knob selector in the run position. Replace dome and V-clamp and tighten until snug. Lightly tap on V-clamp while tightening. Turn the pump on.

1



2



3



4



5



6



7



8



9



PARAMOUNT MODULE ALIGNMENT GUIDE

TO FUNCTION PROPERLY IT IS IMPERATIVE THAT THE MODULE BE PLACED IN CORRECT ORIENTATION TO THE BASE. TO ENSURE THIS IS DONE, PLEASE FOLLOW THESE INSTRUCTIONS.

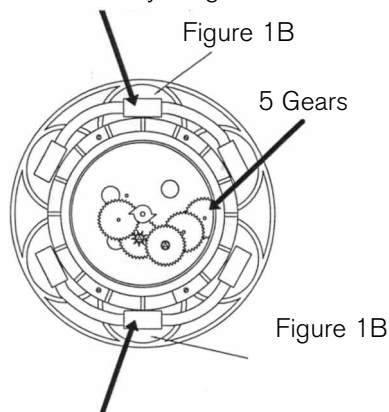
1. Look at the top of the Module - Figures 1 and 3
2. Locate the Multiport Tube Assembly - Figures 1A and 3A
3. Look at the Base - Figures 2 and 4
4. For 2 Port: Notice how four ribs in the base have been cut out to allow water to flow between two sets of three ports - Figure 2A
For 4 Port: Notice how the two ribs in the base have been cut out to allow water to flow between three ports - Figure 4A
5. One open port is centered between two plugged ports - Figures 2B and 4B
6. When installed, the port centered under the Multiport Tube Assembly (Figures 1B and 3B) on the Module must be centered over the open port in the Base - Figures 2B and 4B

If the Module is placed incorrectly, multiple zones of nozzles in the pool will fire at the same time.

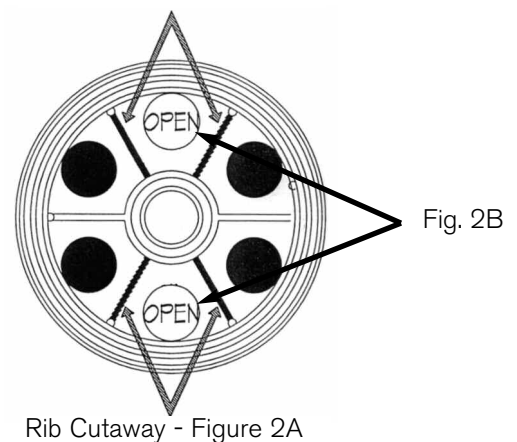
1+1 MODULE

Base - Figure 2

2 Port Multiport Tube Assembly - Figure 1A



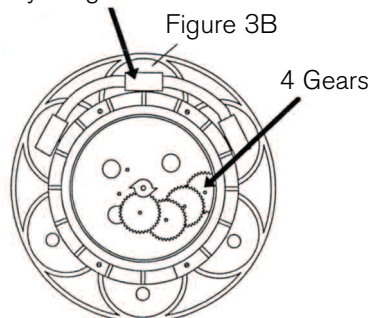
Rib Cutaway - Figure 2A



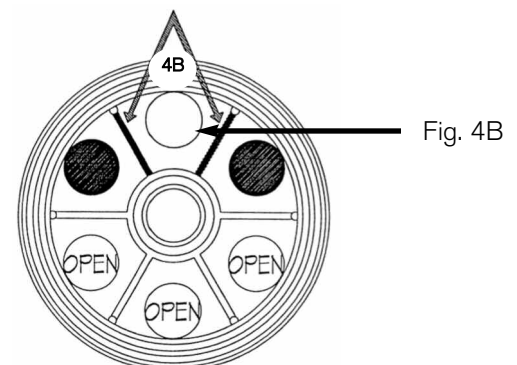
3+1 MODULE

Base - Figure 4

4 Port Multiport Tube Assembly - Figure 3A



Rib Cutaway - Figure 4A

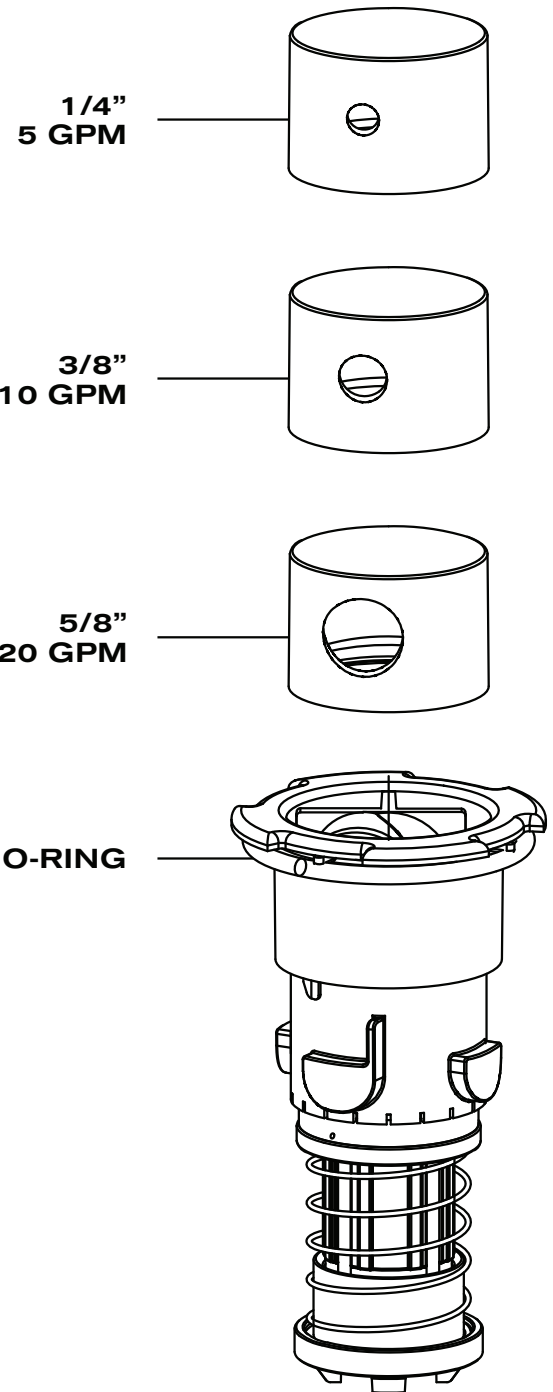


START UP

Cleaning Nozzle Installation

System Start Up

1. Before installing nozzles flush all lines by:
 - a. Start pump, run for 10 minutes before installing the water valve module.
 - b. Install the water valve module and let valve cycle to flush out any debris remaining in each line.
2. Select nozzle size from pool plan.
3. Place nozzle on a hard surface. Push firmly on cap or strike with palm of hand to snap firmly into place
4. Be sure o-ring is pushed all the way up to top flange.



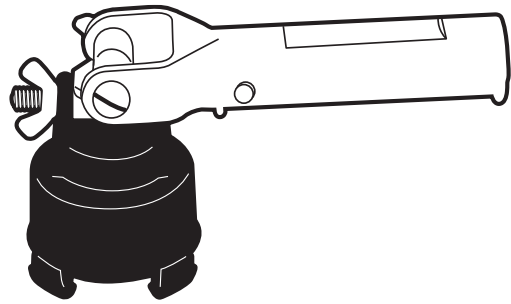
START UP

CLEANING NOZZLE INSTALLATION

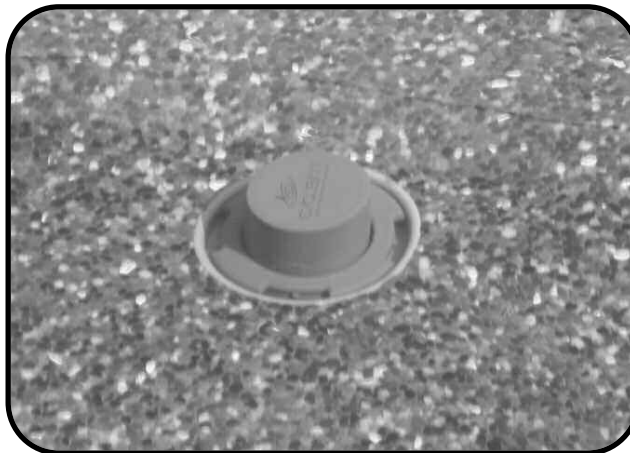


5. Start with nozzle closest to the valve and as red plaster caps blow out install nozzles.
6. Snap the nozzle onto the install tool by twisting.
7. Install nozzle in body by turning clockwise one-quarter turn.

NOZZLE TOOL



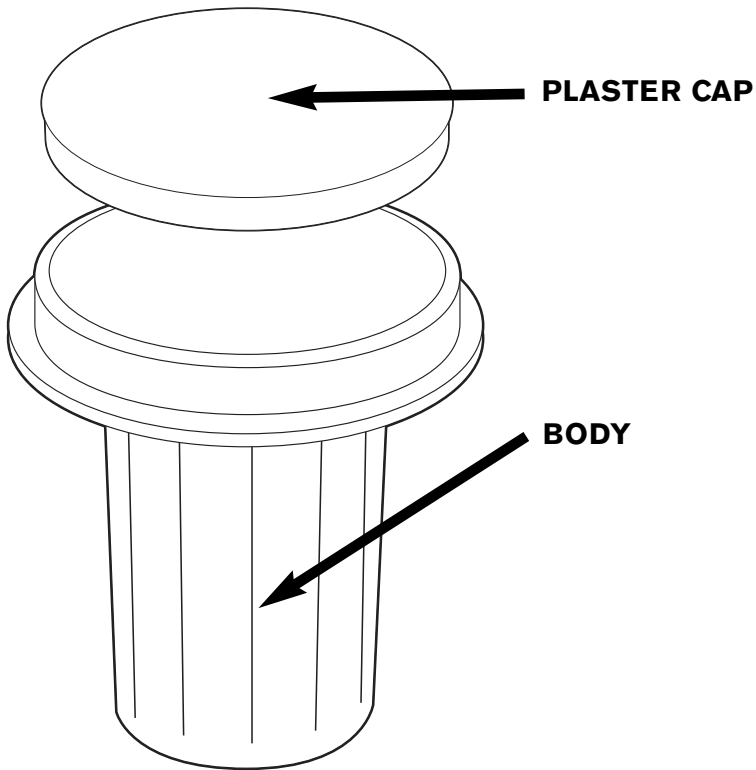
PART# #004-627-5452-00



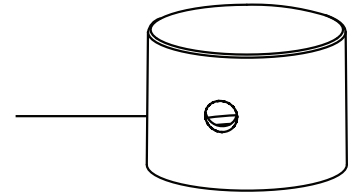
START UP

NOZZLE & BODY DIAGRAM

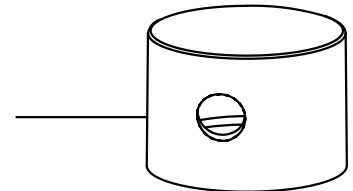
RIBBED



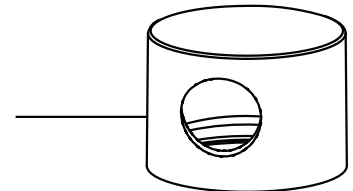
1/4"
NOZZLE CAP



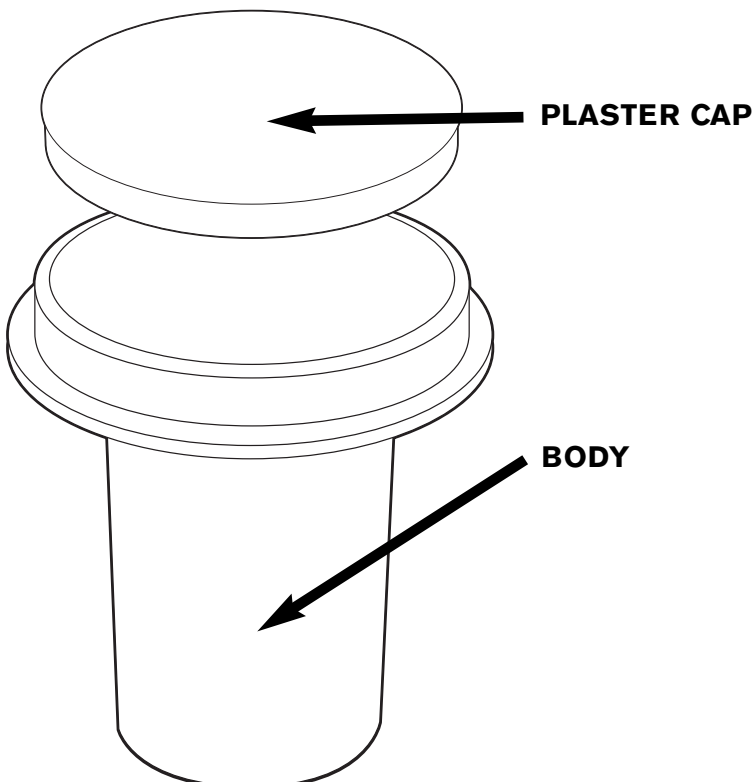
3/8"
NOZZLE CAP



5/8"
NOZZLE CAP



SMOOTH



O-RING

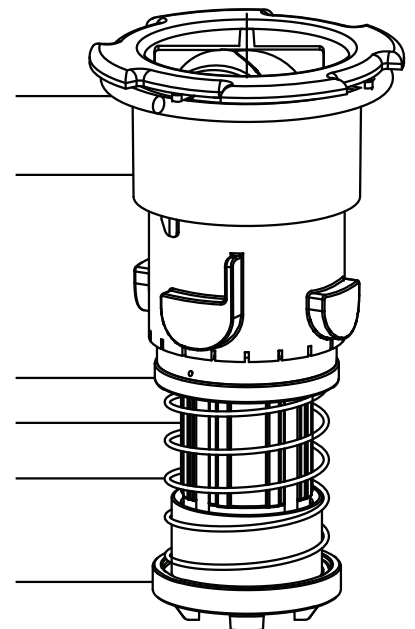
RETAINER

UPPER WASHER

STEM

SPRING

LOWER WASHER



WINTERIZING INSTRUCTIONS

Winterizing a Paramount Pool & Spa Systems in-floor pool is the same as any pool with a main drain; it just has a few more lines to winterize. These procedures are to be used in addition to standard winterization methods normally used in your area.

To Do List:

- ☐ Store the Paramount valve module, canister inner lid and basket in a safe, dry place.
- ☐ Remove and store any "down-jets" located above the freeze line.
- ☐ Blowout and airlock all pool lines.
- ☐ Remove all water from the canister and replace with swimming pool anti-freeze and an empty jug, the same way you winterize skimmers.

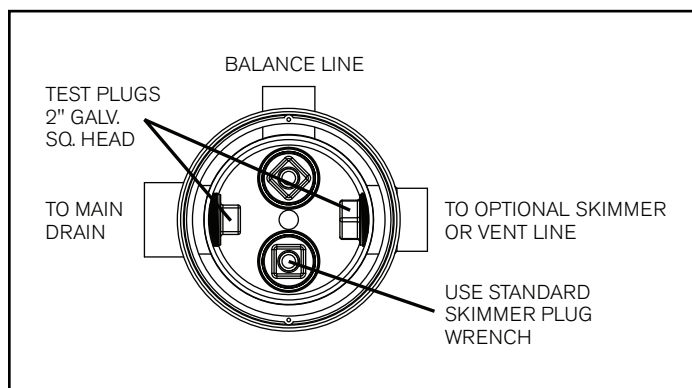
The following steps are procedures recommended for proper winterization of all Paramount In-Floor Cleaning Systems. These procedures do not replace normal winterization procedures but are instead in addition to them.

For drain winterization instructions consult manufacturer's instructions for that drain.

PARAMOUNT CANISTER WINTERIZATION

1. Remove outer lid, inner lid and basket, clean and dry off, and store in same area as modules
2. Install and secure regular winterization plug in equalizer line of canister to pool at poolside.
3. Install and secure Schrader plug or blow out plug from canister to main drain. Blow out and obtain air lock as previously described, if skimmer is tied into canister, repeat procedure to skimmer.
4. Bottom port of canister to pump may require an extended pipe for ease of blowing out. Install and blow out line from canister to pump. Install and secure plug in pump. Using a wet/dry shop vac, remove all water from within canister components.
5. Extension pipe can be removed and replaced with plug or Gizmo type container if Gizmo not used. Be sure to install device to absorb ice expansion in canister area. Failure to do this may result in potential ice freeze damage to canister.

Winterization anti-freeze is to be used as necessary or when required.



CANISTER WINTERIZATION (CONT.)

WATER VALVE

1. Turn off and drain out all pool equipment.
2. Remove valve lid or lids from valve(s). (See Fig. 1)
3. Remove module(s) from valve housing(s). Store module in dry clean area out of the winter elements for winter until reinstallation in spring. (See Fig. 2)
4. Remove any down jet returns in pool (threaded or slip) including down jet body for a secure fit of winterizing plug. Store with module(s). (See Fig. 3)
5. From valves to pool, place a Schrader plug or blow out plug as recommended
6. Install and secure Schrader or blow out plugs in all parts of valve(s) (except center feed port of second and multiple valves when multiple valves are being used). (See Fig. 4)
7. Proceed to blow out lines through Schrader or blow out plugs to pool.
8. 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.)
9. Blow out center port of first valve back to filter equipment and plug. (See Fig. 4)
10. While blowing out the down jets and while air is escaping through the in-wall hole, install and secure a regular winterizing plug.
11. Repeat until all ports are blown out. (See Fig. 4)
12. In cases where multiple valves are in use, blow out the feeder port of the first valve into the center port of the second or multiple valve(s), install, and secure plug.
13. When necessary, pool winter anti-freeze solution should be poured into each line.
14. Valve housing(s) should be wiped clean and dry of water, reinstall top lid and secure. (See Fig. 1)

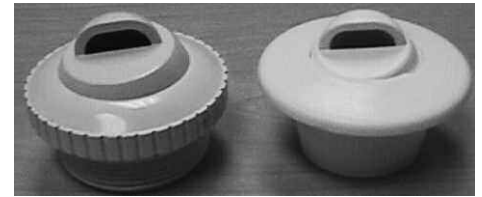
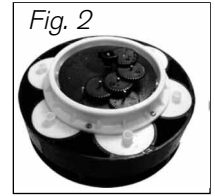


Fig. 3

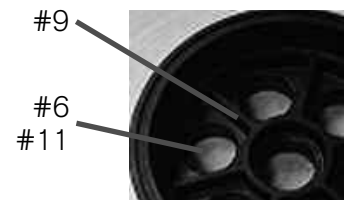
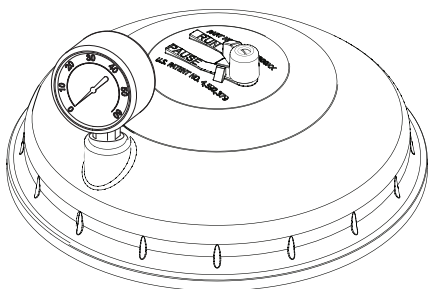


Fig. 4



TROUBLE-SHOOTING

Part Number Diagrams

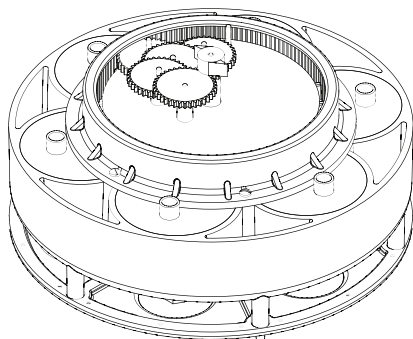


Top Dome Complete: 005-302-4300-03

(Includes: Top, Gauge & Pause Assembly)

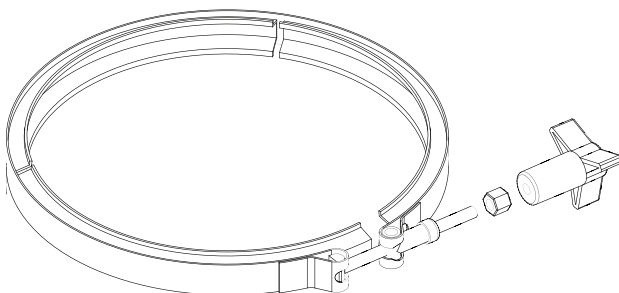
Pause Assembly: 005-302-3502-00

(Includes: Screw, Knob, O-Ring & Pawl)



6 Port

Module Complete: 004-302-4408-00

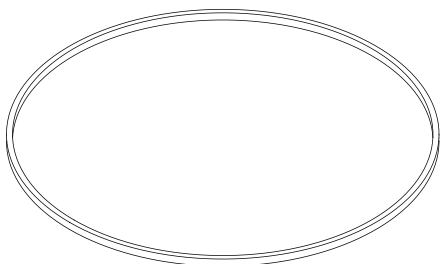


Band Clamp Complete: 005-302-3570-00

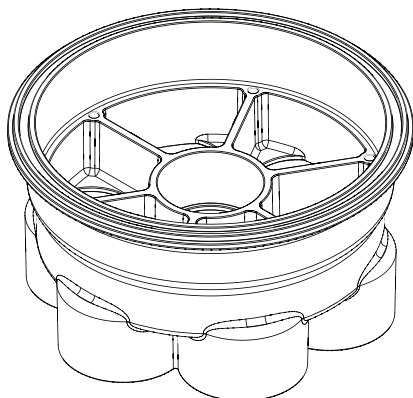
(Includes: Clamp, Nut, & Knob)

Band Clamp Nut Only: 005-302-0640-00

Band Clamp Knob Only: 005-302-3600-00



Valve O-Ring Only: 005-302-0100-00



6 Port Base 2": 005-302-4032-03

6 Port Base 1½": 005-302-4030-03

TROUBLE-SHOOTING

WATER VALVE INSTRUCTIONS

How to "Open the Water Valve"

1. TURN OFF THE PUMP.
2. To remove the Band Clamp, turn the "Tee Handle" counter-clockwise until it comes off the bolt. Note: You may have a 7/16" Nut instead of a Tee-Handle, if so use a wrench to remove it.
3. Lift the Top Dome off the Base.

How to "Close the Water Valve"

Check the "O-Ring" (or square gasket) and groove for debris, which could prevent a good seal. Remove any debris found and verify the O-Ring is in the groove properly.

Place the Top Dome on the Base. You may face it any direction you like.

Place the Band Clamp around the Valve Shells and put the Tee Handle or 7/16" Nut on the bolt.

Tighten the Band Clamp securely. Note: Tapping the Band Clamp gently around the circle will help you tighten the Bolt with less effort.

4. Turn on the pump and inspect the Water Valve for any drips. If you find drips, turn off the pump and tighten the Band Clamp more.

Note: Silicone "lubricant" makes O-Rings seal easier, but is rarely needed. **NEVER USE PETROLEUM JELLY ON PLASTIC OR RUBBER.**

Module Installation (P/N: 4-9-3189)

1. TURN OFF THE PUMP
2. "Open the Water Valve."
3. Lift the Module out of the Base.

Note: The Module is designed to seal inside the Base so it may be difficult to lift. An easy solution is to turn the pump on and off quickly.

CAUTION: make sure no one is standing nearby or he could get wet when the Module pops out of the Base.

4. Install the Module by aligning the pins on the bottom with the little holes in the Base.
5. Pool Trouble Shooting Guide

TROUBLE-SHOOTING

POOL TROUBLE SHOOTING GUIDE

[illegible]

TROUBLE-SHOOTING

ISSUE	SOLUTION
Clean Area Around One Zone Only	<p>When one set of Nozzles comes on with the pump each day, but never rotates more than once a day, the Water Valve isn't cycling.</p> <ul style="list-style-type: none"> • "Pause" Mode may be active. Turn the Knob on top of the Water Valve to "RUN". • "Turbine" may be jammed with debris. "Open the Water Valve", remove the Module, and inspect Turbine. • Look for debris. • Does Turbine move freely? - If yes, the debris may be in the pipe out of sight. Turn on the pump for a few seconds to clear the line. • Does turning Turbine turn the Gears? - If not replace Module.
All Nozzles are floating when the pump is on	<p>When all Nozzles are floating, or have water running through them all at the same time check the Module.</p> <ul style="list-style-type: none"> • Module is missing - replace Module • Module is damaged and all pistons are open. Replace module. • Module is not seated properly - remove Module, remove any debris found inside Base and on Module, reinstall Module.
Nozzle comes out of floor body	<ul style="list-style-type: none"> • Make sure O-Ring is in place and reinsert into floor body, turn clockwise 1/4 turn to seat • If nozzle continues to come out, retainer lock is worn. Read lifetime limited warranty, nozzles are covered for life if you are the original pool owner. Replace nozzle.

NOTES

NOTES

