



Step & Bench Nozzle Install Manual



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US and Foreign patents and patents pending

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VANQUISH STEP & BENCH NOZZLE / METAL

Fig. 1



Fig. 1A

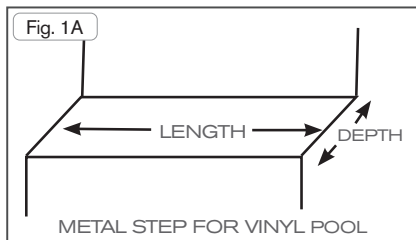


Fig. 2



Fig. 3



For Steps / Benches With A Depth Of 18" Or Less

The below sizing of step/bench nozzles is based on the 3/8" nozzle cap. The 3/8" nozzle cap is rated at 10 gpm, the 5/8" cap is rated at 20 gpm and cleans 1' further than the design criteria for the step/bench layout below. A step/bench circuit needs to be at least 40 gpm to a maximum of 55 gpm. Call Paramount with any questions you have for design criteria to lay our step/bench heads.

1. A single 3/8" nozzle will clean a 10' wide step or bench with a depth of 18" or less when centered. Measure and mark the placement of the nozzle centered on the length and depth of each step or bench. (Fig. 1, 1A)
2. If the step or bench is longer than 10' with up to an 18" depth, it will require additional nozzles. The distance from the ends of the step to the center of the first nozzles should be no more than 5'. The distance between the balance of the nozzles used must be an equal distance apart but no further than 10'.

For Steps / Benches With A Depth Greater Than 18"

1. If the step or bench has a depth greater than 18" but less than 5' the nozzles will be placed 1' off the riser of the step or bench.
2. A step or bench with a depth greater than 5' will require a second row of nozzles. These nozzles will be placed at a distance equal to half of the measurement between the edge of the step or bench and the first row of nozzles set 1' off of the step or bench riser. Install the steps and benches to the pool walls, then based on the above information or step locations on a Paramount drawing, mark all nozzle locations with a felt pen on the steps and benches

Install For Metal Steps & Benches

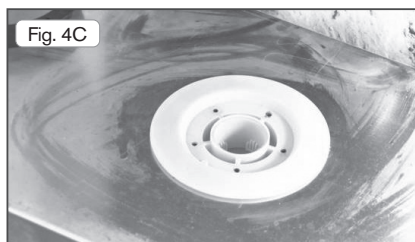
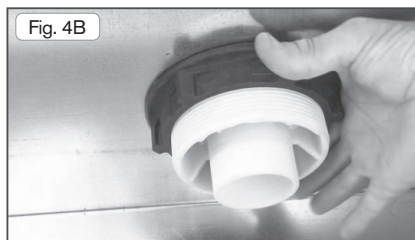
1. Drill a pilot hole for each nozzle location marked on the steps and benches. (Fig. 2)
2. Use a 4 1/2" Greenlee Punch or Drill a 4 1/2" hole using a carbide or diamond tipped whole saw. The above tools will center on the pilot hole/s on each step / bench. (Fig. 3)
3. Clean off all shavings and insert the Vanquish step body with the gasket (ribbed side up) between the top surface of the step/bench and the flange on the step body (Fig 4a) Insert the bulk head fitting through the step and install the bulkhead nut on the under side of the bulk head fitting. Secure the bulk head firmly to the step (Fig 4b) and (Fig 4c) shows the completed step/bench body installed to the metal steps.

Repeat steps 1 through 3 on the next step, and so on until all of the steps and benches that get nozzles are done.

4. Once the steps/benches are installed with the bodies then using two inch pipe, glue all of the bulk head fittings with couplers, 90's and tee's into a manifold and connect to the water valve as a port. Remember each valve port (circuit) should be 50 gpm but never lower than 40 or higher than 55 gpm.

NOTE: Pressure test plugs are available for the step/bench heads (part number 004-627-1642-00) to pressure test the plumbing which is recommended by Paramount.

Formula to calculate the number of circuits required based on nozzle quantity and required GPM per nozzle.
Number of nozzles X specific nozzle GPM requirements = total gallons required divided by 50 GPM = the number of required circuits.



VANQUISH STEP & BENCH NOZZLE / CONCRETE

Install For Concrete Steps & Benches

1. Dig a hole for the Step housing that will align for placement of the nozzle body on the step or bench.
2. Concrete steps, invert the bulkhead nut and thread halfway up the bulkhead body. (Fig. 5)
3. Protect and cover the body top with tape before concrete is poured. Pour the concrete step, be sure the bulkhead flange is level with the finished concrete. Remove the tape after concrete is dry. (Fig. 6)



PRE AND POST LINER INSTALLATION

Pre-Liner Preparation

1. Affix the 1/16" gasket to the flange aligning the notch of the gasket to the key in the bulkhead fitting. Use an adhesive to assure that the gasket stays in place and the screw holes are aligned. Allow the adhesive time to set according to the manufactures instructions before installing the liner (Fig. 7)

Post-Liner Flange, Color Ring And Nozzle Install

While the liner is being installed, with your fingers find the keyed area in the body (Fig. 8). Push the keyed gasket in place on top of the liner and the keyed flange into the body (Fig. 9). Then screw in the screws to hold the flange in place (Fig. 10). When secure you can cut the liner away from the inside of the flange (Fig. 11). At this point the pressure test plugs, if used, can be removed and saved for the next pool. The color ring can now be installed on top of the flange (Fig. 12).

Note: if for some reason you need to remove the color ring after it is installed pull it off from the inside edge.

Blow out all lines with water pressure from the water valve with the module installed. Once the lines are clean, size the nozzle caps to correspond to the plan (nozzle sizing to obtain 50 gpm per circuit)(refer to the step bench nozzle sizing 1 through 4 above or the Paramount plan for nozzle cap sizing) and place the correct cap on the nozzle. Place the nozzle inside the nozzle tool to hold it from spinning as you twist on the cap. Place the cap on the nozzle. It will go on and twist one way. Turn cap clockwise until it snaps into place. Insert the nozzle in the body with tool 004-627-5060-00 and turn clockwise to lock in place.

Fig. 7

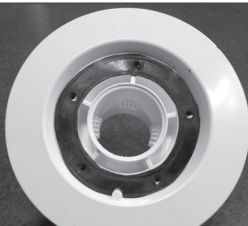


Fig. 8

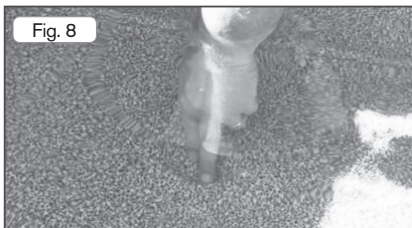


Fig. 9



Fig. 10

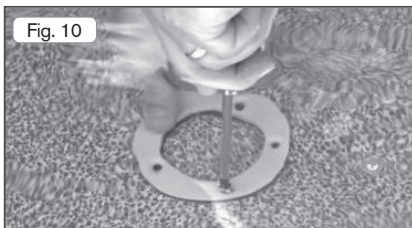


Fig. 11



Fig. 12

