

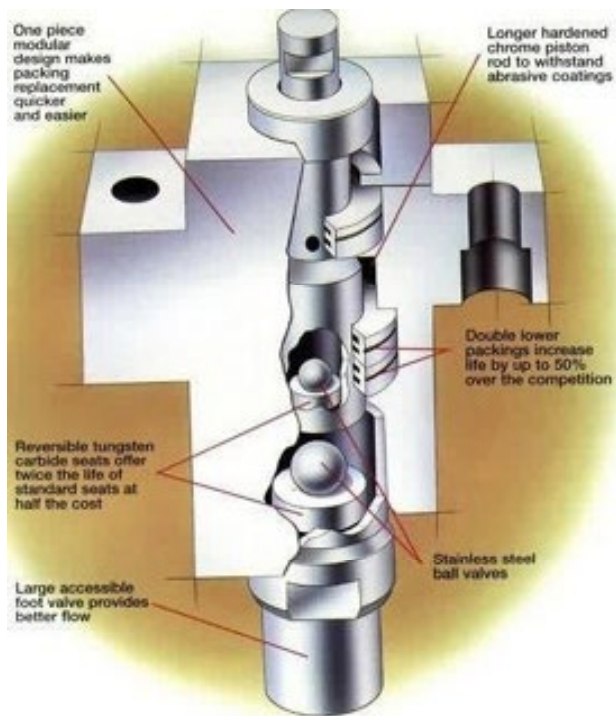
# REDGARD® WATERPROOFING AND CRACK PREVENTION MEMBRANE SPRAY APPLICATION SPECIFICATIONS

The concept of airless fluid delivery is a very simple one; the idea is to move the material from the bucket to the substrate in as little time as possible. Using the proper equipment with the proper set up is essential in the success of the operation. The steps are easy to understand and follow.

The concept of airless is spraying materials without conventional air-powered systems. This eliminates the need for air compressors, fluid tanks, and bulky hoses. The diagram below shows the basic components of a Titan Tool Epic Series fluid section. Most airless spray units are similar in design and will accomplish the same thing. On all units, there is an inlet valve, and an outlet valve within the piston. The piston is held in a sleeve or with packings that will not allow fluid to leave the chamber under pressure. As the piston goes down, the upper and lower valves open, allowing fluid into the inside of the piston. When the piston goes up, the valves close and the material is pressurized and forced into the manifold. There is a pressure switch in the manifold that will tell the controls to either stop the piston movement or continue, depending on the desired pressure.

In the manifold, there is usually an interchangeable filter and the connections for the hoses.

As you see, the piston is in the center of the fluid section, and the notch at the top is where the output of the motor or gears connects to the section. In this case, the packings are stationary. The material is pressurized in the piston as it travels up and down. This motion forces the material through the small opening at the top of the piston and into the manifold, creating pressure within the manifold. From the manifold, the material is filtered and directed to the hose outlet and into the spray gun.



LX 80 Spray Gun

Gun filters



L 70 In Line Spray Gun



Gun extensions

CUSTOM® recommends the two spray guns shown here. The LX 80 (shown with both four-finger and two-finger trigger set ups) is for use when applying material to walls. Combining the L 70 In Line with a three-foot extension and swivel head is the best assembly for floor work. Both of these spray guns allow for filtering in the gun handle. For RedGard®, a coarse (green tip) filter should be installed. Filters will have to be cleaned occasionally to ensure proper flow of material to the tip.

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The most important part of the system is the spray tip.

## UNDERSTANDING AIRLESS TIPS

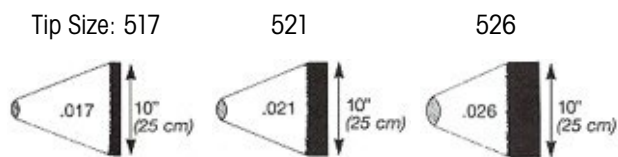
Airless spray tips are a key component to the successful operation of an airless spray system. They define the spray pattern, control the flow of the coating being sprayed and ultimately tell the pump how hard it must work. A proper understanding of airless tips is critical to the success or failure of any airless application.

### Airless Spray Tip Characteristics

It is important to remember that the orifice size, in conjunction with the fan width size, determines the spray characteristics of the tip.

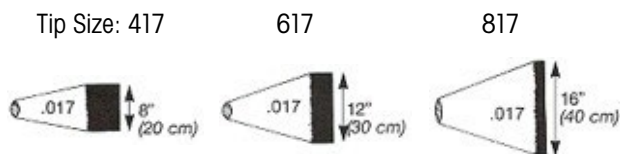
Examples: As the orifice size increases, while maintaining the same fan width size, the greater the volume of coating will be applied to the same area.

FAN WIDTH -10" (25 cm)



Conversely, the larger the fan width size, while maintaining the same orifice size, will result in the same amount of material being applied over a greater surface area.

ORIFICE SIZE -.017



## TIP WEAR

When beginning a project, choosing the right tip size and fan width will determine how profitable you will be through both coating consumption and production time. If the tip size being used is wrong – by either choice or through wear – mil thickness will be too heavy and the finish will be unprofessional. The spray pattern chart below demonstrates what happens as a tip wears. As wear occurs, the pattern size decreases and the orifice size increases. You will find that you have to make more passes to cover the same area. There is no standard rate of tip wear due to the variation of the abrasiveness of all coatings. Replace your tips after 30-50 gallons (113-189 liters), it's one of the most profitable things you can do.



In the case of applying RedGard®, it is recommended to use a tip sized at 425 to 431. The use of any smaller orifice will result in the material being atomized too much, or the tip will clog as a result of the material being heavy bodied and high solids.

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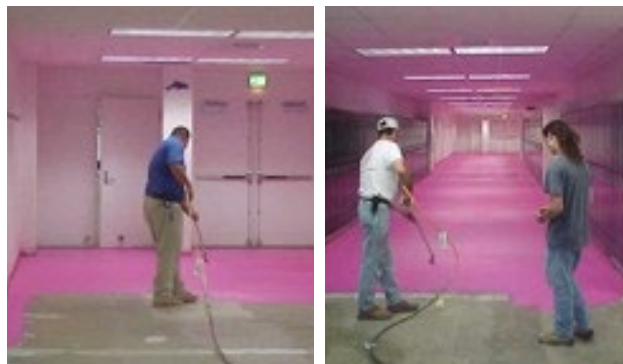
SPRAY PATTERN WIDTH			
10" – 12" (25 – 30 cm)	8" (20 cm)	6" (15 cm)	4" (10 cm)
TIP SIZE			
New 517	Worn to 419	Worn to 321	Worn to 223
FLOW RATE			
.30 gpm (1.1 lpm)	.40 gpm (1.5 lpm)	.47 gpm (1.7 lpm)	.57 gpm (2.1 lpm)
FLOW RATE INCREASE			
	33%	57%	90%
Tip Size and Flow Rates			

This application of RedGuard® has proven to be very successful; the key element is training on the equipment. The operator must understand and be able to make adjustments to the system along the way. If not, there will be loss of efficiency and time. The second man on the team must keep the unit filled and assist the operator with hose movement and equipment adjustments. This is not a difficult operation to learn, and once a team is trained, efficiency will increase.

Maintenance and cleaning of the equipment is essential. Periodic cleaning of filters throughout the day and at final clean up will eliminate problems with system clogs and down time.

Spray tip selection, pressure adjustments and hose length all have a direct effect on the system. Replace tips after applying every 20 units (100 gallons) of material (to maintain proper spray patterns and coverage). The use of wet film gauges is also recommended, to ensure that material application is not too thick or thin.

Below are a few pictures of the application at two installations in progress:



Typical spray application in hallways



Completed hall

Cut in with trowel or roller to avoid taping



Checking thickness with a wet film gauge

Pump ready to go

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## EQUIPMENT REQUIREMENTS

Speeflo PowerTwin 5500DI Direct Immersion Airless Spray Pump or equal.

- ▶ 2.0 GPM with 5.5 HP Honda gas engine or equal.
- ▶ 1.25 GPM EXL-DC 115v Electric Motor or equal.
- ▶ Titan Tool L70 In-Line Spray Gun w/3 foot extruded extension and swivel head with appropriate housing for SC-5 reversible spray tip.
- ▶ Course (green) filter in the spray gun.
- ▶ Titan Tool SC-5 Reversible Tip (.025-.029 for floor application).
- ▶ Minimum 50' and maximum 100' of 3/8" Airless Hose.

## APPLICATION

Follow all surface preparation instructions on Data Sheets.

Pump pressure: 1900psi to 2300psi depending on tip size and length of hose.

Tip size: .025 to .029 (425, 427, or 429)

Reduction: None

It is recommended to stir material just prior to use.

To achieve the required film, the coating must be free from pinholes and air bubbles; air bubbles will cause pinholes.

Apply coating in even passes to achieve 45 mils wet thickness.

Do not backroll coating.

Allow drying for a minimum of 24 hours prior to installation of tile, stone or terrazzo.

## SAFETY INFORMATION

Follow all health and safety precautions when applying by spray. A 3M dual cartridge respirator and safety glasses are recommended. See Technical Data Sheet and MSDS for complete information.

## RELATED PRODUCTS

RedGard® Waterproofing and Crack Prevention Membrane

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