

## Injection Systems - Step Three : The Right Packer

You came to the right source, we are known in the industry for our packer variety and very competitive prices.

You have decided on the grout and got the right pump. Now you move on to step three: Which packers or ports will you use for your injection job? Packers come in many sizes and shapes. Prices range from cents to dollars. But how do you decide? Is more expensive always better - is plastic as effective as metal and rubber?

Well, it all depends. The injection method and the selected material will help you to determine the hardware. Are your cracks actively leaking, are they dry, do you use epoxy or do you inject polyurethane? How much pressure will be used, how do you connect your grout line?

There are two primary categories of packers available. Insertable packers (mechanical packers) and surface mounted ports.

Mechanical packers are typically used for polyurethane injection and high pressure epoxy injection. Since they are not glued to the surface, they work well in wet areas and with decayed 'problem' concrete.

Mechanical packers come with zerk fittings and button heads (slide fittings). The zerk type is more commonly used and is less costly. It easily connects and disconnects and works nicely with medium to high injection pressures. The button head type can be of advantage in high volume applications and it offers a superior connection which is helpful for single operator injection and large applications.

Injection pressure is the keyword. To determine a quality packer it must withstand high injection pressures without leaking and moving out of its drill hole. A snug fit and solid connection are mandatory. Nobody likes packers to fail at injection pressures of 1000psi and more. Now, realistically speaking even the best packer may slightly leak at the connection at extreme pressures. But there is the difference between a drip and a gush.

Premium packers are made of metal and an expandable rubber sleeve to minimize concrete spalls and packer blow outs. A medium soft, 'made to stick' rubber that evenly expands diameter while compressed provides the best grip. Mechanical packers made of cheap plastic and a plastic sleeve are at a disadvantage at high pressures, but may suffice at lower-high volume injections. Always keep in mind, a snug and reliable fit is essential for the safety of the technician and the key factor for successful injection work.

The size of the packer selected depends on the volume to be pumped, drill depth, injection pressures to be applied as well as cosmetic and other considerations. Common diameters are 1/4inch, 6mm, 3/8 inch, 8mm, 10mm, 1/2 inch, 13mm, 5/8inch, 16mm, and sometimes 3/4 inch or even larger. (In mining applications for example, packers can be several feet long and several inches thick) For concrete injection, typically the 1/2" and 5/8" packer seem to be the best compromise in strength and size and can be called a standard. The smaller 3/8" (10mm) types have been gaining in popularity though. Long versions and extensions are also available. It is good practise to keep the drill-holes rather smaller than larger when selecting your packer size.

Design considerations such as location of an anti return valve, ease of use etc. may be of concern.

We generally recommend mechanical type packers for most jobs. Their design can cope with most demands found at an injection job and the 'problem rate' is very low - a packer for all conditions. If high product flow at lower pressures is desired, the 5/8" button head packers achieve good results. The 3/8 Hammer-In packer performs at low pressures in excellent concrete. Precise round drill holes are important for a snug fit.

Surface ports are commonly used for epoxy injection at low injection pressures. They are glued to the concrete surface. A spread out base with holes is recommended for good adhesion. The grout line can then be attached with a quick-connect system. Since most surface ports lack an anti return valve, a seal cap is provided for use after injection.

We provide unique ports for specialty applications such as a surface port with a zerk fitting to utilize single component injection systems for small epoxy and polyurethane jobs, the injection screw for the SealBoss Inject Tube System 2000 for cold joints and other specialty packers.

SealBoss is a leading supplier of injection packers. We keep a large inventory of different sizes, shapes, materials and connections. Our great turnover rate permits us to offer packers at the most competitive prices possible. Call us and request your free samples. Get the right packers for your job and save money now!

Our technical staff at is always on hand to assist you with any questions.



rev.200912