



Introduction

Thank you for choosing the SealBoss® Concrete Repair System for your chemical injection application. You are now well on your way to a successful and permanent concrete repair solution. In the pages to follow, SealBoss® would like to provide a brief repair technique introduction. At the same time, we would encourage you to familiarize yourself with the complete brochure as we proceed to explain the advantages of the SealBoss® repair systems and what we can offer you as a valued SealBoss® customer. We hope that the following information is of value to you, and thank you again for selecting SealBoss® Corp. as your repair system.

Application Technique Epoxy Injection:

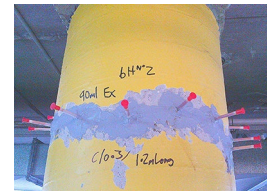
The SealBoss® Epoxy Injection Systems are primarily designed for structural concrete crack and joint repairs.

Some of the typical causes for concrete cracking include:

- Drying shrinkage
- Thermal contraction or expansion
- Settlement
- Lack of appropriate control joints
- Overload conditions that produce flexural, tensile, or shear cracks in concrete and Restraint of movement

Epoxy Injection applications are commonly found in many concrete structures such as parking structures, bridges, tunnels, load bearing columns, and many more structural substrates. The low viscosity resins are injected into standard and hairline cracks or joints and cure to form a rigid, long-lasting, structural bond-seal with a compressive strength exceeding the strength of the concrete. It is recommended to observe the steps as follows:

1. Clean the substrate with wire brush at a distance of approximately 1/2" (13mm) on both sides of the crack. Wire brush is recommended because grinders often leave concrete dust in the crack. High pressure water can also be used for cleaning.
2. Most cracks can be injected with the **SealBoss® 4040 Epoxy Resin**. For hairline cracks (<1/64", <0.4 mm) it may be of advantage to use the super low viscosity resin as **SealBoss® 4050 SLV Epoxy Resin** to increase resin flow and reduce injection pressures. Measure the width of crack in order to determine the correct product to be injected. Once the crack is exposed, clean, and dry, you may adhere surface ports. Surface ports are typically placed at 5 in (13 cm) to 8 in (20 cm) spacing, with increased spacing on wider cracks. The ports are secured to the crack with **SealBoss® 4500 F QuickSeal Epoxy Paste**. QuickSeal is to be applied 1" wide and approximately 1/8" (3mm) thick across the surface of the crack. Be sure to not cover the bottom opening of the port with paste as this will prohibit the flow of resin into the crack. Surface seal is designed to contain the epoxy resin in the crack. For this reason, best results are found when the entire backside of the crack is sealed.
3. Once the SealBoss® 4500 F QuickSeal Epoxy Paste is fully cured, you are ready to connect the cartridge or bulk applicator to the surface port. The static mixer from the cartridge or **SealBoss® PA3000 Epoxy Injection Pump**, **SealBoss® P3003-2C Injection Pump** or other bulk epoxy injection pump couples to nylon tubing which again couplers to the surface port through a series of 3/8-1/4" and 1/4"-1/4" quick disconnects. Vertical cracks are typically injected from the bottom up, while horizontal crack injections are commonly initiated at the point of widest crack width.
4. Continue to pump resin into the surface port until you see material exiting the adjacent port, called port to port travel. At this time, you may cap the port, and move on to the next. Repeat this process as you work your way along the crack.
5. A good practice when performing structural repairs of this nature is to document a quality assurance program such as monitoring the amount of material accepted at each port.
6. After all of the ports are injected, it is recommended to allow adequate time for the epoxy resin to completely cure. Following cure, the ports can be removed by cutting or grinding, and the SealBoss® 4500 F QuickSeal Epoxy Paste may be removed with a grinder. This process will leave a fully penetrated and repaired crack that is now ready for surface treatment to the applicators intended aesthetic results.





Benefits of SealBoss® Professional Starter Kits™



SealBoss® offers competitively priced Professional Epoxy Injection Starter Kits for contractors that like to turn this repair system into a business.

SealBoss® Professional Kits include everything necessary for an industrial or commercial project including bulk packaging and a high pressure, industrial grade pump such as the SealBoss® PA3000 Epoxy Injection Machine pneumatic injection machine or the versatile SealBoss® P3003-2C Injection Pump.

Upon considering the benefits of the SealBoss® Professional Kits, it is quite easy to recognize the potential offered which includes:

1. Increased service offering
2. Additional revenue stream
3. Niche system solution creating company differentiation
4. Minimal investment for industrial grade system
5. Industrial grade pump for future applications
6. Higher pressure pump = better results
7. Significant amount of referral business
8. Support of established and valued SealBoss® brand



Product Name	Application	Benefits	Image
P3003-2C	High & Low Pressure Polyurethane and Epoxy Injection	<ul style="list-style-type: none"> • Convenient • Electric Drill Operated • Pumps EP and PU Resin • 1:1 and 2:1 Ratios 	
PA3000	High & Low Pressure Polyurethane and Epoxy Injection	<ul style="list-style-type: none"> • Pneumatic • Industrial Grade • 2:1 or 1:1 operation 	

Benefits of SealBoss® Cartridge Starter Kits™

SealBoss® offers complete kit solutions for our cartridge product line. We believe in full system solutions that offer the applicator optimal products for successful repairs. We offer many SealBoss® products in convenient Starter Kit packaging for smaller repairs. Below are a few pictures of the mentioned kits. While the Kit offers significant savings, all products and materials can be reordered individually for future projects. Some of the SealBoss® Starter Kit benefits include:

1. Affordable option for beginning applicators on smaller and manageable projects
2. Smaller packaging for same industrial grade products
3. Individual item reorder options
4. Low investment for high return repair system offering
5. Great way to familiarize yourself with SealBoss® Concrete Solutions

Benefits of SealBoss® Approved Applicator Certificate

You are now more familiar with the SealBoss® epoxy injection systems, may own an industrial grade pump through the purchase of a SealBoss® Professional Kit, and may have repaired many cracks successfully and permanently! At this stage in the repair industry, it is time to consider the SealBoss® Approved Applicator Program.

SealBoss® puts a considerable amount of resources into engineer specification efforts and commercial architects and builders. It is quite common for engineers and architects to require an approved applicator for specialty repairs such as the chemical injection



Approved Applicators gain first access to SealBoss® leads and specifications.

SealBoss®

P3003-2C Injection Pump



Product Data Sheet Two Component Injection Pump Manual

SealBoss® P3003-2C Injection Pump Manual

- Very affordable two component pump system
- 2:1 ratio standard, 1:1 upon request
- Can be used as 1 Component System
- Compact & Sturdy Design
- Heavy duty for daily use
- Lightweight
- > 5000 PSI
- Easy to use, clean & maintain
- Pressure gauges
- Hoppers included
- Hose Sets (mechanical packer version / static mixer version) sold separately

The **SealBoss® P3003-2C Injection Pump** features a compact and sturdy design with integrated hoppers and stand.

This lightweight and powerful injection pump can be used for dual component epoxy and/or polyurethane injection resin with viscosities between 10 and 1000 cps. Call your SealBoss® technician for details. Please specify 2:1 or 1:1 ratio. Conversion cylinders sold separately.

Suitable for mid-size jobs and daily use this is the perfect machine for epoxy and waterproofing contractors performing commercial work and residential injection. With this pump it is a snap to get in and out of basements and confined areas as found on many job sites.

This pump is of professional grade quality for every day use. The output and pressure are exceptional for a machine of this size. The modular design keeps maintenance cost low and allows for easy cleaning.

Parts can be replaced by the savvy contractor to keep downtime at an absolute minimum.

This pump is powered by an electric drill which is sold separately by SealBoss®. The drill offers a variable speed adjustment to adjust material volume and pressure.

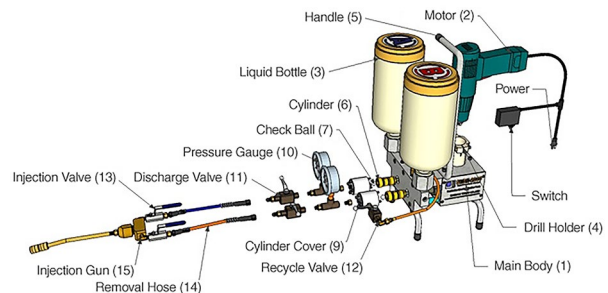
Contact your SealBoss® technician to confirm that your product can be suitable for use with this machine.

The pump can be used with our line of injection packers and ports.

Special SealBoss® applicators are available for polyurethane / mechanical packer and epoxy / two-component surface port injection can be ordered separately. Ask your SealBoss® technician for details.

North America: Standard variable speed electric drill 110V sold separately.

International Orders: Special order variable speed electric drill 220V (lead time and cost subject to availability at time of order) or voltage converter available on request. Please consult with your SealBoss® technician.



Set-up as shown for use with mechanical packers

Technical Data

Mix Ratio:	2:1 or 1:1 custom upon request
Max Pressure:	> 5000 psi
Flowrate:	30 ml to 1000 ml per min (1 quart/min)
Weight:	12 kg / 27 lbs

Electric Drill, adaptors/fitings and packers sold separately. Please ask your SealBoss® technician for suitable injection grouts. Viscosity range 10-1000 cps.

1:1 and 2:1 mix ratios with exchange of piston.

SealBoss® P3003-2C Injection Pump