

## Seal Handling & Installation Instructions

### Omniseal® Spring-Energized Seal: Small Diameter, Closed Piston Gland

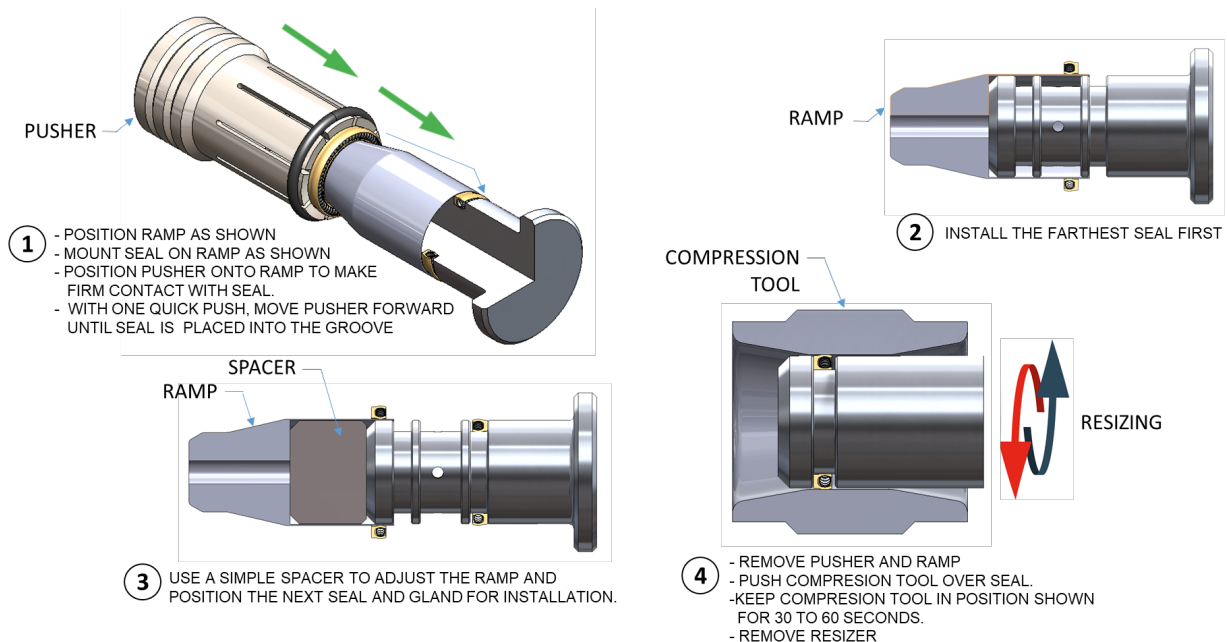
#### Handling

Unlike elastomeric and polyurethane seals, Omniseal® spring-energized seals resist stretching. Similarly, our seals can scratch and take a permanent set much more easily. Care should be taken while installing Omniseal® seals to avoid seal damage. The seals should be installed in open or split groove designs to avoid stretching or compressing the seal. To avoid seal damage when installing Omniseal® seals in closed (non-split) or partially open grooves, please use special installation tools. Omniseal Solutions can design installation tools for your specific needs. The hardware surface should be free of scratches and sharp edges that can cause permanent damage to the seal.

#### Installation

If the Omniseal® seal is installed in a piston housing, the seal must be stretched. An installation tool with a ramp and sleeve is recommended for this type of application.

1. The seal is easily transferred to the sleeve by loading from the ramp side and moved from the sleeve onto the gland using a pusher (Figure 1).
2. During the process, the seal will expand and normally will require recovery time to return to its nominal diameter. If the installation has to be done immediately, a mechanical compression tool is recommended (Figure 4). The compression tool will compress the seal to its original diameter. The compression tool should be allowed to remain in place on top of the Omniseal® seal for approximately one minute to allow the seal to return to its original diameter (Figure 4).



**Note:** To install two or more Omniseal® products into closed glands on a common shaft, install the farthest seal first (Figure 2). Use a simple spacer to adjust the ramp and position the next seal and gland for installation (Figure 3). Larger diameter seals may not require a special installation tool if the seal can be pushed onto the housing with minimal force. When allowed, lubricants (grease, oil, etc.) compatible with the media to be sealed can ease assembly. Omniseal® 400A, APS and 103A seals can be installed into closed glands if needed. Spring Ring II and RP II seals are not recommended for closed gland installation because of possible damage to the spring. Similarly, small diameter 400A type seals are not recommended for installation in closed grooves. Seals with larger diameters are typically easier to install in closed grooves. For seals that have a diameter to cross-section ratio smaller than 20:1, please consult our Technical Support team at [help@omniseal-solutions.com](mailto:help@omniseal-solutions.com) or [contact your local site](#).

**Warning:** To avoid damage to the jacket and spring, do not use hand tools such as screwdrivers to force Omniseal® seals into closed glands. Please contact our Technical Support team using the above contact info when working with a closed gland design.