



**ENGINEERED
SEAL PRODUCTS®**
100% Employee-Owned

O-Ring Installation Guide

BEST PRACTICES

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PRE-INSTALLATION PREPARATION

- 1. Visual examination**
- 2. Measurement verification**
- 3. Cleanliness**
- 4. Avoid damage**



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O-RING SYSTEM DESIGN

- 1. Follow standards for stretch, squeeze, volume fill, & extrusion gap**
- 2. Select an o-ring size and material appropriate for the application**
- 3. Follow standards for surface finishes**
- 4. Avoid nicks, burrs, scratches or any other sharp edges**
- 5. Use recommended size lead in chamfers**



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LUBRICATION

■ Importance of lubrication

- Helps reduce surface friction
- Creates a smooth transition for installation
- Helps protect o-ring from damage by abrasion, pinching, or cutting
- Helps to seat the o-ring properly
- Speeds up assembly operations

1. Selection of appropriate lubricant

- Compatibility with o-ring material and fluid being sealed
- Lubricant should not soften or solidify over the service temperature range
- Lubricant should not break down and leave gummy or gritty deposits
- Lubricant should pass through any filters used in the system

2. Uniformly apply a thin coating of lubricant to the o-ring



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INSTALLATION TECHNIQUES

1. Stretch the o-ring evenly

- Rule of thumb: Do not exceed 50% of the ultimate elongation of the o-ring compound
- If this must be exceeded, allow more time for the o-ring to return to its normal diameter

2. Avoiding sharp or pointed objects

- Do not force o-ring over unprotected sharp objects like threads, keyways, slots, splines, and ports
- If unavoidable, the sharp objects should be covered

3. Alignment & centering

- Slide the o-ring during installation, avoid twisting or rolling
- When closing the gland, use straight longitudinal movement.
- Rotary or oscillatory motion could cause bunching, misalignment, pinching or cutting of the o-ring

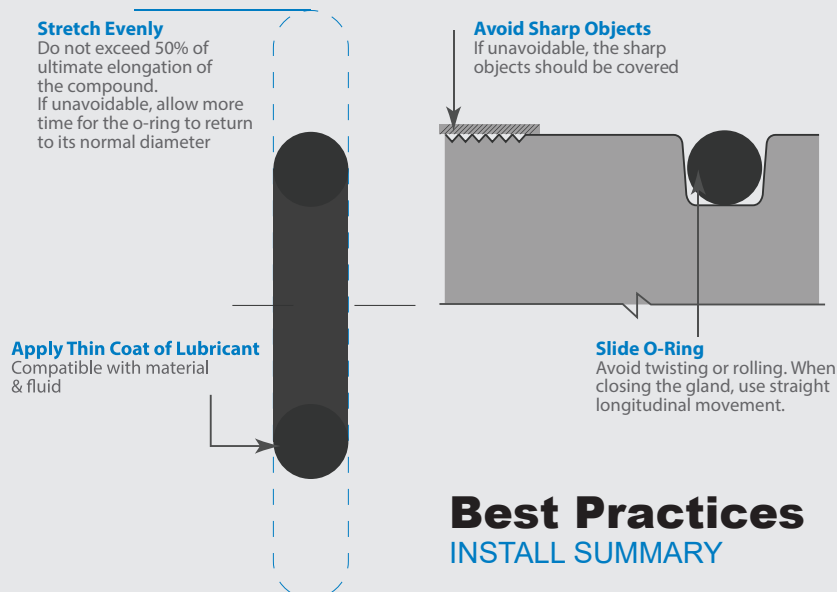


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POST-INSTALLATION VERIFICATION

■ Visual inspection of the o-ring

- Properly seated in the groove
- Returned to its normal size
- No twisting
- No damage



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