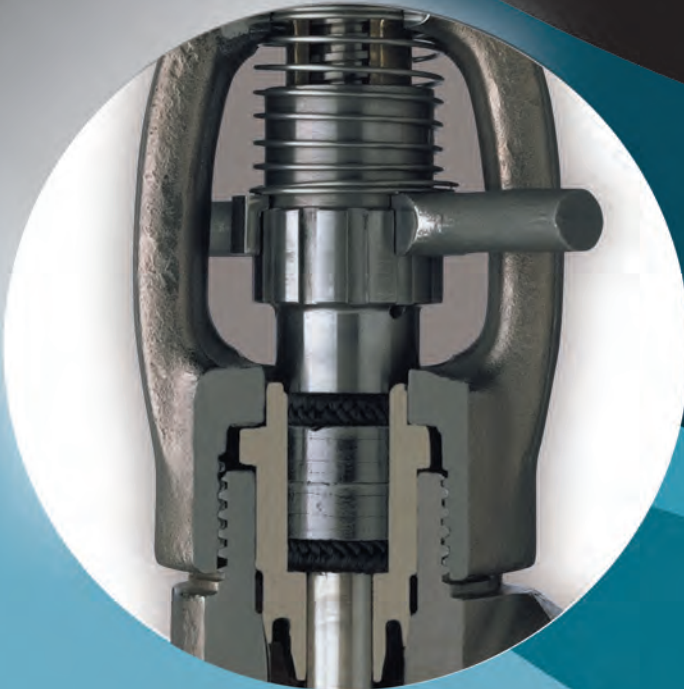


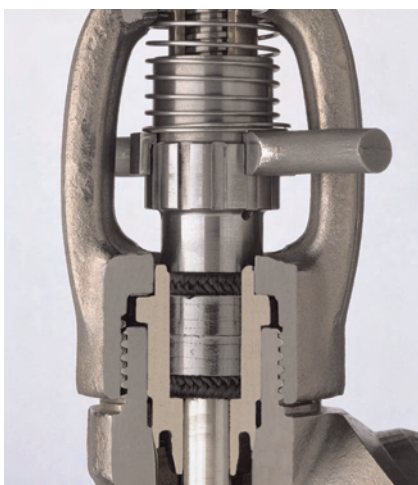


Clampseal® Valve Packing System

- *Single-piece Gland*
- *Narrow Packing Rings*
- *Integral Gland Wrench*
- *Pressure Seal Backseat*
- *Cartridge Type Packing Chamber*
- *Thermal Isolation*



The Conval Clampseal® Packing System is designed to maximize packing life in the world's most demanding high-pressure, high-temperature applications.



DESIGN FEATURES

Uniform Single-piece Gland

Proven, corrosion-inhibited, high-density graphite packing is loaded uniformly with a one-piece gland. This eliminates the potential for stem damage from gland cocking.

Surface Finishes and Close Tolerances

The stuffing box and stem are burnished stainless steel to ensure a tight seal between the system fluids and sealing surfaces. The stem and chamber provide optimal sealing surfaces and minimize wear.

Narrow Packing Rings

Narrow packing rings reduce the effect of packing shrinkage, thereby reducing the

frequency of gland adjustment. Since force = pressure x area ($F = P \times A$), by keeping the packing area to a minimum, there is less force being exerted by the system fluid, making it easier to contain.

Integral Gland Wrench

Standard on all Clampseal globe and gate valves, the Integral Gland Wrench (IGW) provides immediate gland/packing adjustment capability.

Pressure Seal Backseat

The pressure seal backseat provides maximum valve integrity by ensuring a positive internal stop for the valve step and disc assembly, and securely isolates packing from line pressure when valve is fully open, to increase packing life.

STANDARD MATERIALS

- Graphite: effective from -325F to 1200F
Lattice Braided Carbon and Die-Formed Rings
Yarn Density: 1.40 - 1.45 g/cc
Leachable Chloride: 100 ppm (max)
Total Sulfur: 770 ppm (max)
Total Chlorine: 500 ppm (max)
Total Fluorine: 300 ppm (max)
Rings are treated with a passive corrosion inhibitor

Recommended for superior sealing capability and wear resistance.

Set consists of two double-height, die-formed graphite central rings with braided end rings to prevent extrusion.

- Teflon® or reinforced Teflon® from -120F to 500F

Recommended for gas service. Molded mercury-free cup and cone arrangement produces tight sealing with minimal gland pressure.

OPTIONS

- Other packing options are available
- Live loaded gland maintains packing load for long periods of time or high cycles without routine maintenance adjustments. All Clampseal valves are available with live loaded glands, and installed valves can be retrofitted.

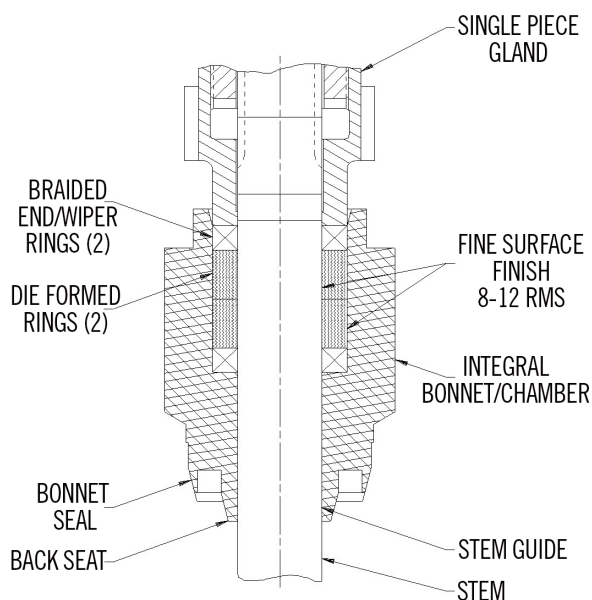
Cartridge Type Packing Chamber

With secure leakproof bonnet, this chamber allows rapid access to valve trim for inspection and maintenance. Pressure boundary is sealed at the smallest diameter possible, to ensure maximum strength and low stress.

Thermal Isolation

Thermal isolation of the packing chamber increases packing life. The stainless steel packing chamber is a separate unit from the body, and therefore eliminates the need to remove or change packing after stress relieving.

STANDARD PACKING SYSTEM

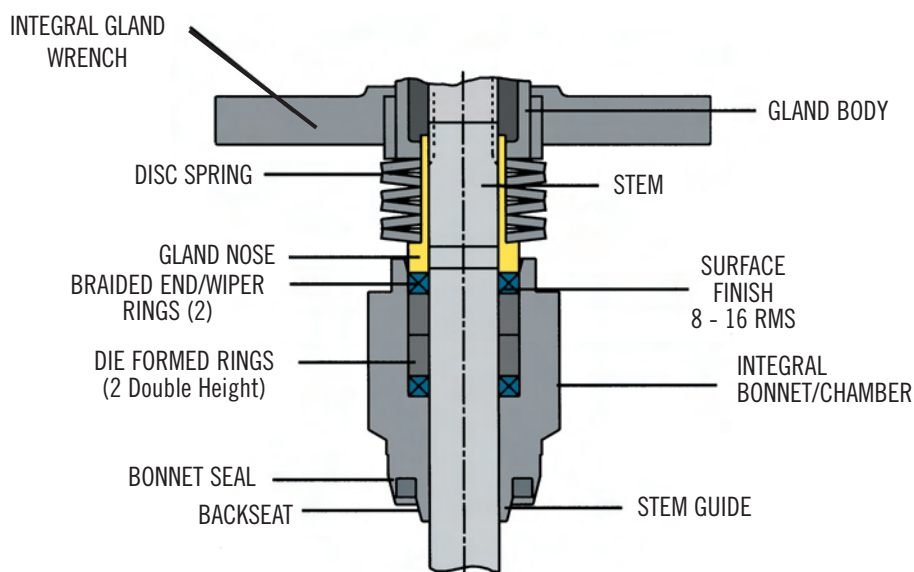


The proper packing procedure is:

1. Determine the proper torque for your application and valve. Torque the gland to the required level using the appropriate tools.
2. Cycle the stem up and down three times to set the packing.
3. Repeat steps 1 and 2 until gland torque is maintained.

Packing valves properly will substantially lengthen the cycle life of your packing. Improper installation procedure may cause leakage in high-pressure valves. Too often, the required gland torque is estimated and not checked after initial tightening. If the packing is not loaded properly, only a small area of packing will be doing all of the sealing. If the packing is not uniformly compressed, the contact pressure is eventually reduced, thus allowing packing to leak due to insufficient load. Damaged packing or valve component damage due to leakage may prevent packing from ever attaining a proper seal.

OPTIONAL LIVE LOADED PACKING SYSTEM



Optional Live Loaded Gland feature shown with the CLAMPSEAL® valve.

Ordering Information

Further information on the required gland torques, and service tools, can be obtained by contacting the Conval factory. When ordering packing sets or prepacked cartridges from Conval, please specify packing material, valve size, and figure number. Packing rings for all Clampseal valves are standard sizes, and readily available. Please consult the factory for packing dimensions and part numbers. When replacing graphite packing, die-formed rings are strongly recommended.

The Conval Story

In 1962, Mr. Chester Siver completed designs for a revolutionary line of high-pressure, forged steel valves. Hamilton Standard (now Hamilton Sunstrand), a division of United Technologies Corporation, was asked to use their then-new Electron Beam Welding technology for joining of parts into valves for subassemblies. Hamilton Standard became intrigued with the valve as an ideal application of the Electron Beam Welding technique, and negotiated a contract for the rights to manufacture and sell the valve. Mr. Siver served as manager of the valve project.



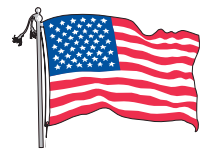
The first CLAMPSEAL® valves were introduced to the market by Hamilton Standard in 1964. However, in the mid-1960's, growing demand for the firm's popular aerospace products forced Hamilton Standard to make the decision to abandon its industrial products projects. The rights to the CLAMPSEAL valve reverted back to Mr. Siver. Since CLAMPSEAL valves were born in Connecticut, Mr. Siver founded "Conval" (short for Connecticut Valve) in 1967. Today, the valves are still manufactured in Connecticut, a state with a longstanding reputation for technological innovation and manufacturing excellence.

Conval is celebrating its 40th anniversary in 2007 with the launch of the new Camseal Ball Valve. Conval has grown into a leader in valves for the world's most demanding applications. We have a global team of experts to help to meet your most challenging needs. We invite you to contact us today.

High-pressure, high-temperature ball, bellows, bonnetless, check, gate, globe, throttling, and urea service valves for the world's most demanding applications.



1967-2007
Celebrating 40+ years of excellence!
Thank you for your business.



MADE IN USA

ISO 9001 certified since
September 11, 1992



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