



The Right Connection®

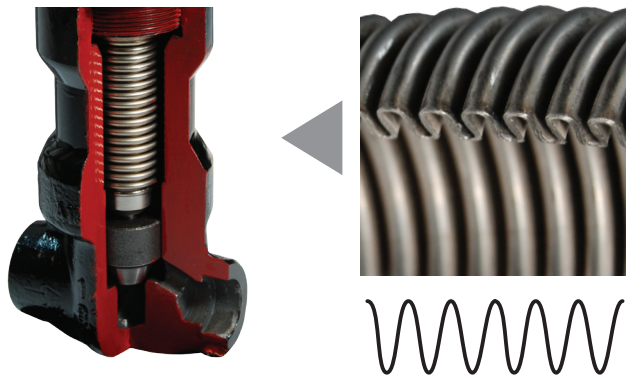
# Benefits of Bellows

*The metal bellows in Dixon Eagle's high quality globe and gate valves are maintenance free with high operational reliability and a long service life.*

These bellows are specifically designed to maintain a pressure seal within the relative motion caused by opening and closing the valve. This seal is also a safety device that prevents deadly or flammable gases from escaping into the atmosphere and provides an economical way to deter product loss. The seal also acts as a barrier to keep contaminants from entering the flow media.

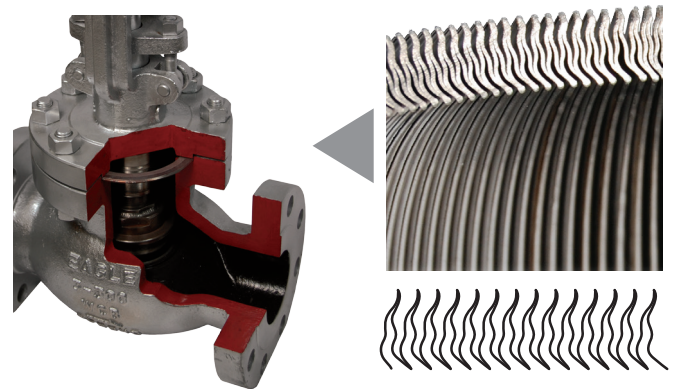
## How It Works

### Hydraulically Formed Bellows



Formed bellows are more economical but require more vertical space

### Welded Bellows



Welded piles "nest" together to create a shorter height; convenient for small spaces

## Bellow Materials

- We offer Inconel™ 625 bellows in all our valves due to its strength and added pressure and temperature resistance.
- Our welded bonnet design comes standard with a 321 stainless steel bellows, Inconel™ is optional.
- Hastelloy™ C-276 is available and commonly used for chlorine applications.
- Other exotic alloys, such as Monel™ are available.

## Testing

Dixon Eagle bellows are manufactured to have a high compressive strength, are heat and corrosion resistant, leak tight and highly flexible. They have also been emission tested per API 622 and earned the title of Low E valves. The bellows is designed to meet ASME B16.34 valve test requirements withstanding 1.5 times the working pressure of the valve. They are 100% pressure tested and 100% Helium leak tested under vacuum. The bellows leak rate must be less than 1 x 10<sup>-6</sup> scc/sec in order to pass our stringent test requirements.

Our metal bellows are designed and tested to meet or exceed the requirements of MSS SP-117 Bellows Seals for Globe and Gate Valves, and API 602 Annex C Type Testing of Bellows Stem Seals.

The bellows cycle life tests are done while the bellows are under pressure and subjected to both ambient and elevated temperatures. The minimum cycle life requirements for sizes 1/2" - 4" up to 800 class are 2,000 for gate valves and 5,000 for globe valves.

Dixon Eagle offers a **5 Year Bellows Fatigue Warranty** on all of our standard products.

## Dixon Eagle

33 Plan Way Bldg 5, Warwick, RI 02886  
ph 401.732.0333 • toll free 800.314.9246 • fx 401.732.2201  
dixonvalve.com