Dixon Eagle[®] Bellows Sealed Valves

Our valves are one of the original bellows sealed valve brands and are specified in many process plants where valve stem leakage can't be tolerated. Dixon Eagle bellows sealed valves have a long history of reliability in steam, heat transfer oil, and toxic inhalation hazard applications making our technology an excellent choice when looking to reduce fugitive emissions.

1/2" - 2" Forged Steel Gate and Globe Valves API 602 Design

Features

- Options for Inconel™ or stainless steel bellows provide long life and maximum corrosion resistance
- Zero stem leakage eliminates media loss and satisfies environmental regulations
- · Zero maintenance results in lower operating costs/no downtime
- · Reduces monitoring costs
- Three stem seals for safety: metal bellows, graphite packing, backseat in open position
- · Hard-faced Stellite® 6 seating surface provides long life: soft seat available
- · Additional alloys, trims, and other end configurations available
- · Class 150 Class 800 available

Specifications

- API 602 design
- Valve tested to ASME B16.34 / API 598
- · Meets MSS SP-117
- · 5-year bellows warranty

3" - 16" Cast Steel Gate and Globe Valves API and ASME Designs

Features

- Inconel™ bellows provide long life and maximum corrosion resistance
- Zero stem leakage eliminates media loss and satisfies environmental regulations
- · Zero maintenance results in lower operating costs / no downtime
- · Reduces monitoring costs
- Three stem seals for safety: metal bellows, graphite packing, backseat in open position
- · Hard-faced Stellite® 6 seating surface provides long life: soft seat available
- · Additional alloys, trims, and other end configurations available
- · Class 150 Class 600 available

Specifications

- Valve tested to ASME B16.34 / API 598
- Meets MSS SP-117
- · 5-year bellows warranty





Dixon Eagle® Bellows Sealed Valves Technical Information

Pressure and temperature ratings show the maximum allowable working pressure at temperatures from -20°F (-29°C) to the maximum allowable for the materials. They are established by stress calculations utilizing the minimum wall thickness and the maximum allowable stress of the materials at the specified temperatures.

Because the maximum allowable stress of any kind of material always decreases as the temperature increases, the maximum allowable working pressure for the component always decreases as the temperature increases, as shown in the tables. Relevant portions of the American National Standard Institute B16.34 - 2020, pressure-temperature ratings are reproduced below:

Flanged, Threaded, and Weld End - Stainless (A182 F316L)

Temperature		Working Pressures by Class, PSIG							
°F	°C	150	300	600	800	900	1,500		
-20° to 100°	-29° to 38°	230	600	1,200	1,600	1,800	3,000		
200°	93°	195	510	1,020	1,365	1,535	2,555		
300°	149°	175	455	910	1,215	1,370	2,280		
400°	204°	160	420	840	1,120	1,260	2,100		
500°	260°	150	395	785	1,050	1,180	1,970		
600°	316°	140	370	745	990	1,115	1,860		
650°	343°	125	365	730	975	1,095	1,825		
700°	371°	110	360	720	960	1,080	1,800		
750°	399°	110	355	705	940	1,060	1,765		
800°	427°	80	345	690	920	1,035	1,730		
850°	454°	65	340	675	900	1,015	1,690		

Flange, Threaded, and Weld End - Carbon Steel (A105)

Temperature		Working Pressures by Class, PSIG							
°F	°C	150	300	600	800	900	1,500		
-20° to 100°	-29° to 38°	285	740	1,480	1,975	2,220	3,705		
200°	93°	260	680	1,360	1,810	2,035	3,395		
300°	149°	230	655	1,310	1,745	1,965	3,270		
400°	204°	200	635	1,265	1,690	1,900	3,170		
500°	260°	170	605	1,205	1,610	1,810	3,015		
600°	316°	140	570	1,135	1,515	1,705	2,840		
650°	343°	125	550	1,100	1,465	1,650	2,745		
700°	371°	110	530	1,060	1,415	1,590	2,665		
750°	399°	95	505	1,015	1,350	1,520	2,535		
800°	427°	80	410	825	1,100	1,235	2,055		
850°	454°	65	320	640	850	955	1,595		
900°	482	50	230	460	615	690	1,150		
950°	510	35	135	275	365	410	685		
1,000°	537	20	85	170	225	255	430		