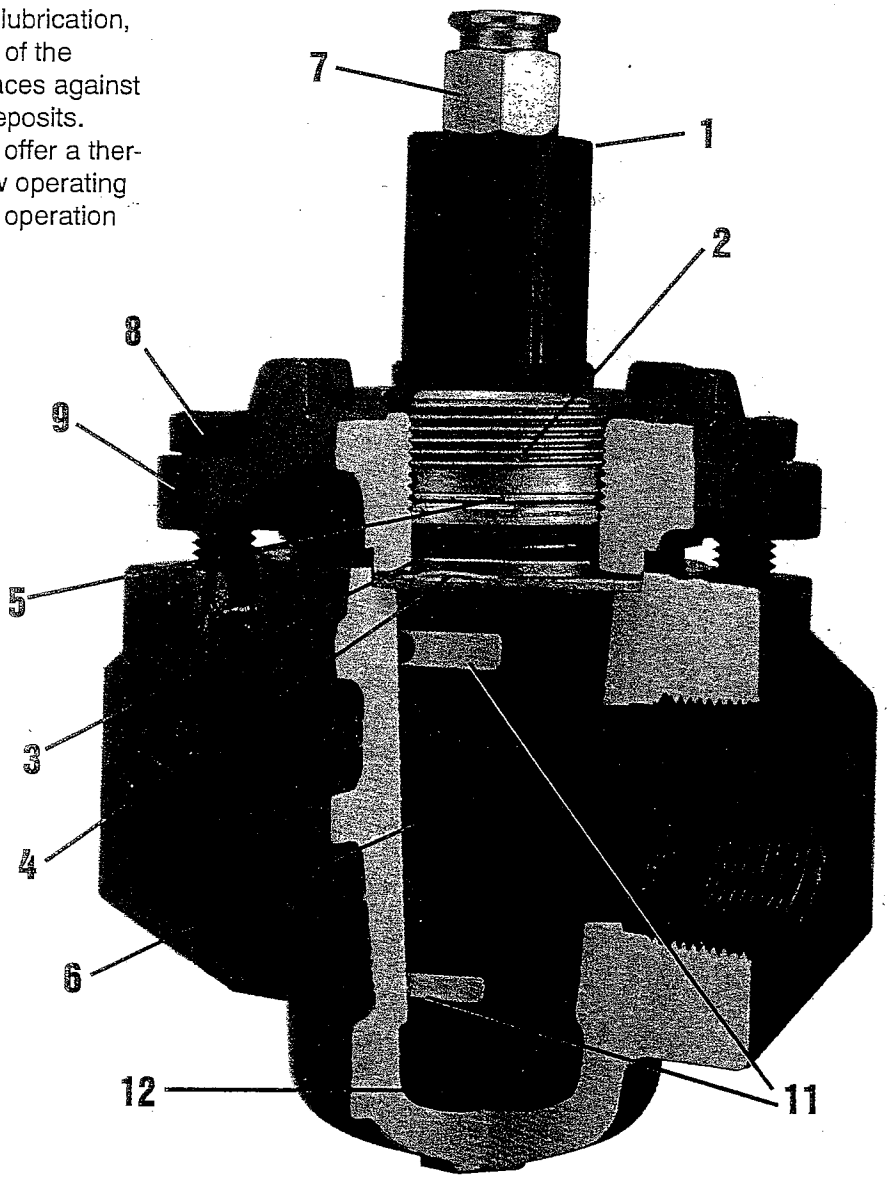
Nordstrom Screwed Gland Type Iron Plug Valves

Gas Valve

In screwed gland type valves, controlled plug motion is provided by flexing of spring washers. Once the plug has been carefully adjusted by Nordstrom personnel during valve assembly, no adjustments are needed in the field.

The tapered plug is lapped individually with its matching body, providing perfect seating contact. The sealant channels in the plug and body seats provide lubrication, which together with the positive rotary action of the tapered plug valve, protects the seating surfaces against corrosion, erosion, or accumilation of solid deposits.

Nordstrom screwed gland type valves also offer a thermally bonded, low friction plug coating for low operating torque, and sealant jacking to insure positive operation and drop-tight closure.

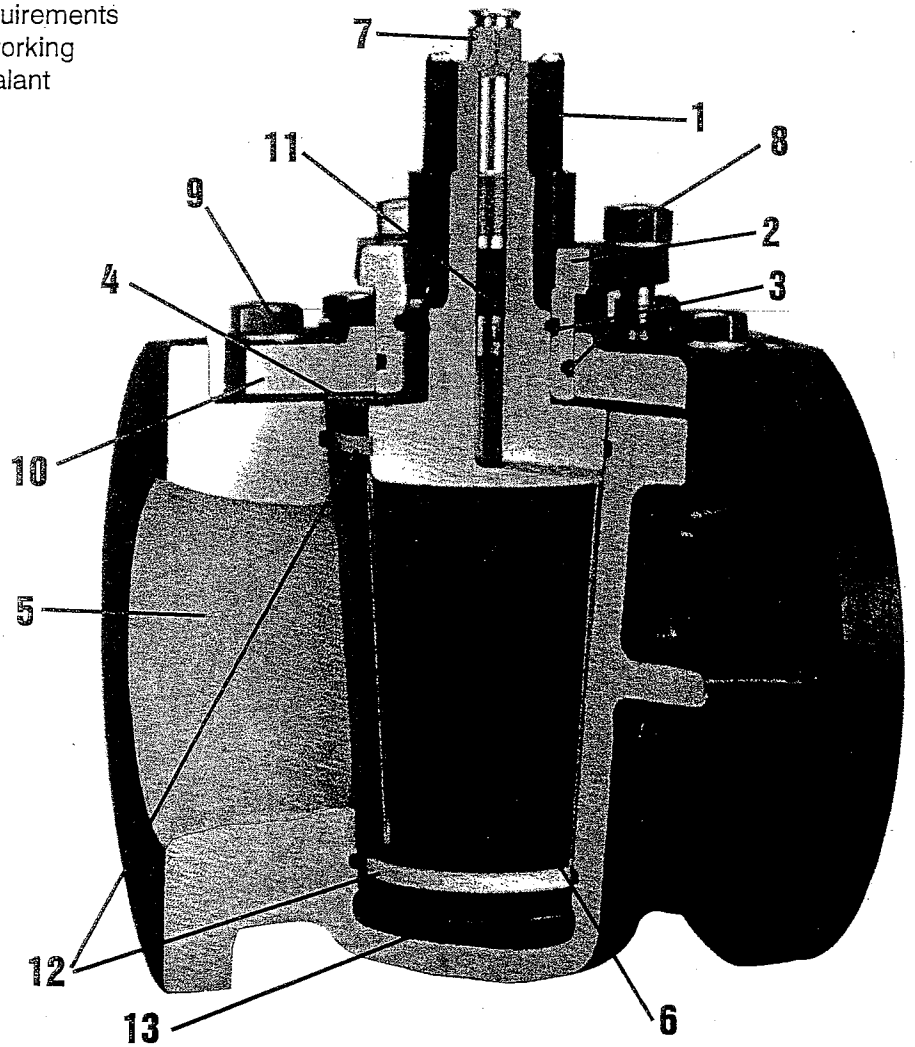


1. **Wrench Flats**
2. **Slotted Fixed Adjustment Gland**
3. **O-ring Holder With O-Rings**
4. **Flexible Metal Sealing Diaphragm and Gasket**
5. **Spring Washers**
6. **Plug**
7. **Sealant Fitting** (Combination Sealant Screw and Giant Buttonhead Fitting)
8. **Cover Cap Screw**
9. **Cover**
10. **Sealant Check Valve (not shown)** (Double Ball-Check Prevents Escape of Sealant)
11. **Sealant Grooves** (Provides "Sealdport" Sealant System)
12. **Sealant Chamber** (Provides Plug "Jacking" Force)

Nordstrom Bolted Gland Type Iron Plug Valves

In bolted gland type valves, illustrated below, controlled plug motion is provided by flexing of the gland itself. The bolted type gland valves can be adjusted, if needed, but normally require little attention for leak-free, easy turning valve performance.

The tapered plug is lapped individually with its matching body, providing perfect seating contact. The sealant channels in the plug and body seats provide lubrication which, together with the positive rotary action of the tapered plug valve, protects the seating surfaces against corrosion, erosion, or accumulation of solid deposits. This valve is designed with a heavy wall body which is constructed beyond its requirements as a pressure vessel for its maximum rated working pressure to withstand the higher-than-line sealant pressure and expected line stresses.



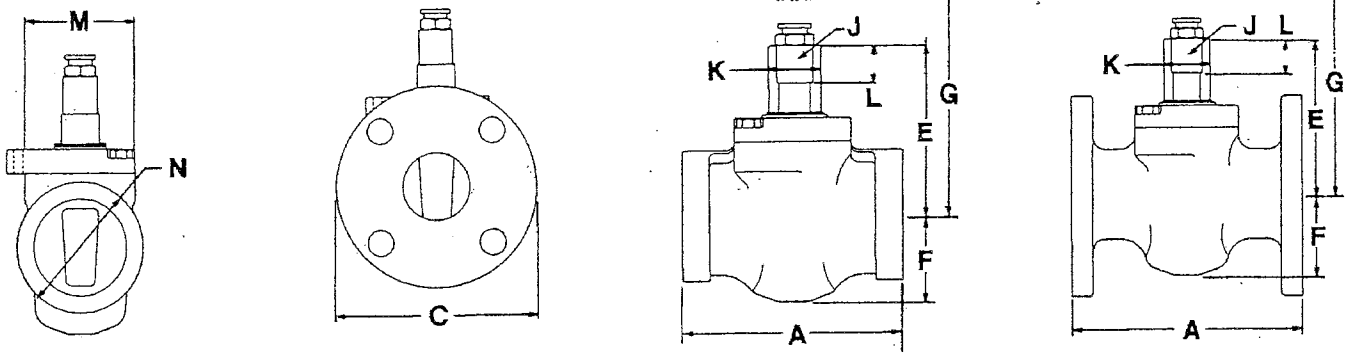
1. **Wrench Square**
2. **Fixed Adjustment Gland**
3. **O-Rings**
4. **Flexible Metal Sealing Diaphragm and Gasket**
5. **Heavy Wall Body**
6. **Plug**
7. **Sealant Fitting** (CombinationSealant Screw and Gun Fitting)
8. **Gland Cap Screw**
9. **Cover Cap Screw**
10. **Cover**
11. **Sealant Check Valve** (Double Ball-Check Prevents Escape of Sealant)
12. **Sealant Grooves** (Provides "Sealdport" Sealant System)
13. **Sealant Chamber** (Provides Plug "Jacking" Force)

Super Nordstrom Two Bolt Cover Type Iron Plug Valves

Short Pattern
(Gate Length)

200 CWP (13.8 bar)
400 psig (27.6 bar) Test

Fig. 142 - Threaded, Wrench Operated, Sizes 1/2 to 4
Fig. 143 - Flanged, Wrench Operated, Sizes 1 to 5



Size	NPS DN	1/2 15	3/4 20	1 25	1 1/4 32	1 1/2 40	2 50	2 1/2 65	3 80	4 100	5 125
End to end, threaded, Fig. 142	A	4.50 114	4.50 114	4.50 114	5.00 127	5.00 127	5.88 149	7.00 178	7.62 194	9.00 229	
End to end, flanged, Fig. 143	B			5.50 140	6.50 165	6.50 165	7.00 178	7.50 191	8.00 203	9.00 229	10.00 254
Diameter of flange	C			4.3 109	4.6 117	5.0 127	6.0 152	7.0 178	7.5 191	9.0 229	10.0 254
Center to top of stem	E	3.8 97	3.8 97	3.8 97	4.1 104	4.1 104	4.7 119	4.7 119	5.6 142	6.3 160	6.3 160
Center to bottom of body	F	1.9 48	1.9 48	1.9 48	2.1 53	2.1 53	2.4 61	2.4 61	3.4 86	4.0 102	4.0 102
Clearance required to remove sealant fitting	G	5.5 140	5.5 140	5.5 140	5.8 147	5.8 147	6.4 163	6.4 163	7.2 183	8.0 203	8.0 203
Width of stem flats	J	.81 21	.81 21	.81 21	1.00 25	1.00 25	1.00 25	1.00 25	1.25 32	1.25 32	1.25 32
Diameter of stem	K	1.06 27	1.06 27	1.06 27	1.38 35	1.38 35	1.38 35	1.38 35	1.75 44	1.75 44	1.75 44
Height of stem flats	L	.9 23	.9 23	.9 23	1.0 25	1.0 25	1.0 25	1.0 25	1.3 33	1.3 33	1.3 33
Extreme width of body, Fig. 142	M	2.6 66	2.6 66	2.6 66	3.2 81	3.2 81	3.2 81	3.2 81	4.0 102	4.8 122	
Diameter of hub, Fig. 142	N	2.3 58	2.3 58	2.3 58	2.9 74	2.9 74	3.6 91	4.3 109	5.2 132	6.4 163	
Size of Sealant Stick	-	B	B	B	B	B	B	B	B	B	B
Size of wrench	-	SN-1	SN-1	SN-1	SN-2	SN-2	SN-2	SN-2	SN-4*	SN-4*	SN-4*
Length of wrench	-	7.0 178	7.0 178	7.0 178	10.5 267	10.5 267	10.5 267	10.5 267	17.5 445	15.0 381	15.0 381
Weight (approx.) Fig. 142	-	6 3	6 3	6 3	9 4	9 4	13 6	17 8	29 13	48 22	
Weight (approx.) Fig. 143	-			9 4	14 6	14 6	20 9	25 11	38 17	65 29	80 36

Flanges are drilled to ANSI Class 125 Cast Iron Flange Standard Template. For drilling and bolting data, See page 40.
Fig: 142 and 143 valves conform to the following standards where applicable: ANSI B1.20.1; ANSI B16.1; ANSI B16.10; API 5B; ASTM A126, Class B; and MSS SP-78. See page 34.
Fig. 143 face to face lengths are interchangeable with ANSI Class 125 and API 175 CWP Cast Iron Gate Valves.
Fig. 142 and 143 valves size 5 (125 mm) and smaller are not recommended for temperatures above +200° F (+93° C).
* Use the longer SN-3 wrench for valves used in cold climates such as Canada.