

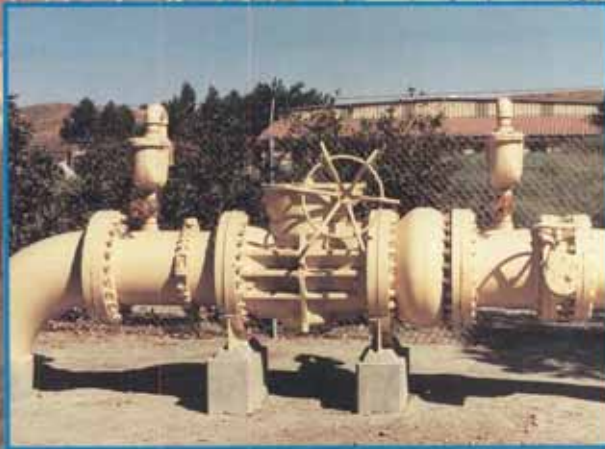
Water and Wastewater Valves



FLOWSERVE

Nordstrom Valves

Typical Applications



Water Distribution and Transmission Service

Pump station valves

- suction and discharge
- control
- shut-off

Pressure reducing stations

Flow control facilities

Mainline valves

Turnouts

Isolation valves

- blow-off
- air release
- fire hydrants



Water and Wastewater Treatment Service

Pump station valves

- suction and discharge
- control
- shut-off

Digester valves for solids (sludge) and gas isolation valves

- mainline
- sludge settling tanks

Control manifold valves

Screening facilities

Conformance to Standards

All Nordstrom Audco Plug Valves conform to the latest editions of the following standards and standard practices where applicable:

ANSI B1.20.1

Pipe Threads, General Purpose - Inch

ANSI B16.1

Cast Iron Pipe Flanges and Flanged Fittings

ANSI B16.10

Face-To-Face and End-To-End Dimensions of Valves

AWWA C110/A21.10-93

Ductile Iron and Gray-Iron Fittings, 3 in. Through 48 in. for Water and Other Liquids

MSS SP-6

Standard Finish For Contact Faces of Pipe Flanges and Connecting-End Flanges of Valves and Fittings

MSS SP-25

Standard Marking System For Valves, Fittings, Flanges and Unions

MSS SP-78

Cast Iron Plug Valves, Flanged and Threaded Ends

ISO 9001

The Quality System of Nordstrom Audco Inc. is certified to the requirements of this standard.

Coatings

In addition to standard shop primer, Nordstrom Audco Inc. provides the following special coatings for use in water and wastewater service. Valve surface preparation complies with SSPC SP-10 (near white blast cleaning). Coating thickness is 20 mil total applied in two coats.

Keysite 740 Epoxy

Scotchkote 312 Epoxy

Endcor 772 Coal Tar Epoxy

Other coatings, including NSF approved, available upon request

Sealants

Nordstrom Audco Inc. provides the following sealants for use in water and wastewater service.

Potable Water

National Sanitation Foundation approved formulations for potable water contact:

234 bulk

421 stick and bulk

Wastewater, Sludge, and Digester Gas Wastewater and Sludge

421

Digester Gas

1033

Example Purchase Specification

Figure 50169 Dynamic Balance Iron Valves

The valve shall be a lubricated, tapered plug valve, and shall be manufactured in the United States. The valve shall be a pressure balanced, bottom entry, inverted plug design. The valve shall have a gray iron body and plug with a bolted bottom steel cover. The valve shall be a Regular pattern design with a minimum port area of 89%.

The valve shall be rated for a minimum working pressure of 200 CWP for sizes 4 through 12, and 150 CWP for sizes 14 through 20. The valve shall have flanged ends drilled to ANSI Class 125 Cast Iron Flange Templates. Face to face dimensions shall conform to ANSI B16.10.

The valve shall come complete with an enclosed weatherproof worm gear operator with handwheel for above ground service. Buried service watertight gear operators shall be available upon request with 2" square operating nuts for wrench extensions.

Internal and external epoxy coating shall be available upon request. The coating shall be holiday free.

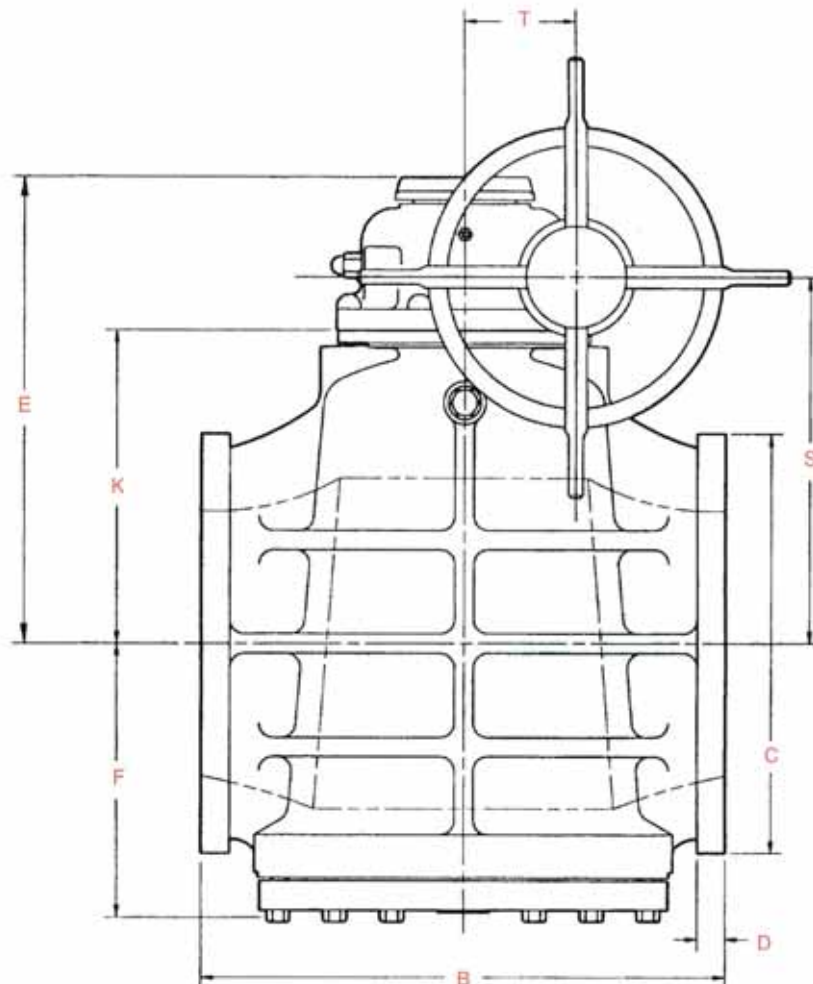
Valves shall be Nordstrom Audco Figure 50169.

Nordstrom Waterworks Valves

Dynamic Balance Iron Valve Figure Number 50169

NOMINAL VALVE SIZE		4		6		8		10		12		14	
UNIT OF MEASURE		INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM
B	END TO END, FIG 50169	12.0	305	15.5	394	18.0	457	21.0	533	24.0	610	27.0	686
C	FLANGE OUTSIDE DIAMETER	9.0	229	11.0	279	13.5	343	16.0	406	19.0	483	21.0	533
D	FLANGE THICKNESS	1.0	25	1.1	28	1.2	30	1.3	33	1.3	33	1.5	38
E	CENTER TO TOP OF GEARING	12.0	305	14.0	356	16.0	406	18.8	478	21.2	538	2.7	577
F	CENTER TO BOTTOM	5.5	140	7.5	190	9.4	239	11.6	295	13.7	348	15.3	389
K	CENTER TO TOP OF GEAR FLANGE	6.6	168	8.6	218	10.6	269	13.1	333	15.0	381	16.5	419
M	EXTREME WIDTH OF BODY	8.9	226	13.5	343	17.0	432	19.7	500	22.3	566	25.1	638
S	CENTER TO CENTER OF HANDWHEEL	8.5	216	10.5	267	12.5	318	15.0	381	17.5	442	18.9	480
T	CENTER GEARING TO CL HANDWHEEL	3.3	84	3.3	84	3.3	84	3.8	97	4.9	124	4.9	125
U	CENTER TO HANDWHEEL	9.4	239	9.4	239	9.4	239	11.9	302	11.9	302	11.9	302
W	HANDWHEEL DIAMETER	20.0	508	20.0	508	20.0	508	20.0	508	20.0	508	20.0	508
	GEARING MODEL	30:15	30:15	30:15	30:15	30:15	30:15	36:10	36:10	50:10	50:10	50:10	50:10
	HANDWHEEL TURNS TO OPEN	7.5	7.5	7.5	7.5	7.5	7.5	9	9	12.5	12.5	12.5	12.5
	WEIGHT, FIG. 50169	213 Lb	97 Kg	365 Lb	166 Kg	641 Lb	291 Kg	1014 Lb	460 Kg	1567 Lb	711 Kg	1861 Lb	844 Kg
	PORT AREA (SQUARE UNITS)	11.38	8632	25.55	16483	45.42	29303	70.78	45664	102.59	66187	126.15	81387
	MAXIMUM OPERATING PRESSURE	200 PSI	13.8 BAR	200 PSI	13.8 BAR	200 PSI	13.8 BAR	200 PSI	13.8 BAR	200 PSI	13.8 BAR	150 PSI	10.3 BAR

Figure 50165 (Wrench-operated) available in sizes 4, 6, and 8 – call for dimensions.



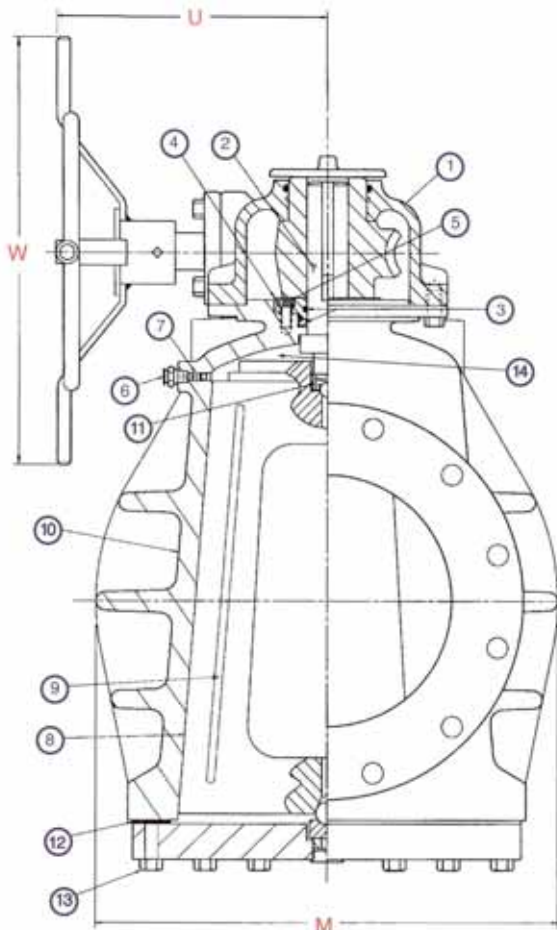
16		18		20	
INCH	MM	INCH	MM	INCH	MM
30.0	762	34.0	864	36.0	914
23.5	597	25.0	635	27.5	698
1.5	38	1.62	41	1.8	46
25.5	648	28.9	734	30.6	777
17.5	444	18.7	475	19.5	495
19.1	485	20.3	516	22.0	559
30.0	762	32.0	813	33.0	838
21.5	546	22.7	577	24.4	620
6.0	152	8.2	208	10.4	262
14.3	363	14.9	378	17.1	434
26.0	660	26.0	660	32.0	813
64.10	1641.0	80.10	2039.0	96.10	2444.0
16	16	20	20	24	24
2937 Lb	1332 Kg	3482 Lb	1579 Kg	4004 Lb	1817 Kg
181.72	117238	215.65	139129	259.00	167106
150 PSI	10.3 BAR	150 PSI	10.3 BAR	150 PSI	10.3 BAR

Valve Data

Dynamic Balance Iron Figure 50169 Valves

- Sizes
 - 4 through 20 (100 through 500 DN)
- Regular Pattern
- Service Pressures
 - Sizes 4 through 12 - 200 CWP (13.8 bar)
 - Sizes 14 through 20 - 150 CWP (10.3 bar)
- Service Temperatures
 - 20 to 350°F (-29° to 175°C)
- Flanged End Connections
- Worm Gear Operated

Part Reference



1. Weatherproof Gear Operator - available in watertight construction to eliminate ground water and dirt from entering gear housing.
2. Blowout Proof Steel Stem
3. Stem Seals
4. O-Ring Gland - allows for repair of stem seal without the need for stem removal.
5. O-Ring Gland Capscrews
6. Giant Button Head Sealant Injection Fitting - for use with bulk sealants, permits restoration of seats for drop-tight shut-off when required.
7. Sealant Check Valve - prevents escape of sealant from pressurized sealant system.
8. Pressure Balanced Tapered Metal Plug - provides metal-to-metal contact surface with body, coated with permanently bonded low friction coefficient coating.
9. Sealant Grooves - provides a complete sealant system surrounding the ports.
10. Heavy Wall Body
11. Plug Balancing Spring - is designed to pre-load the plug to prevent vibration and thermal cycling from wedging the plug into the body taper regardless of installed position.
12. Flexible Gasket
13. Cover Capscrews
14. Sealant Chamber - pressurized sealant in this chamber provides plug "jacking" force.

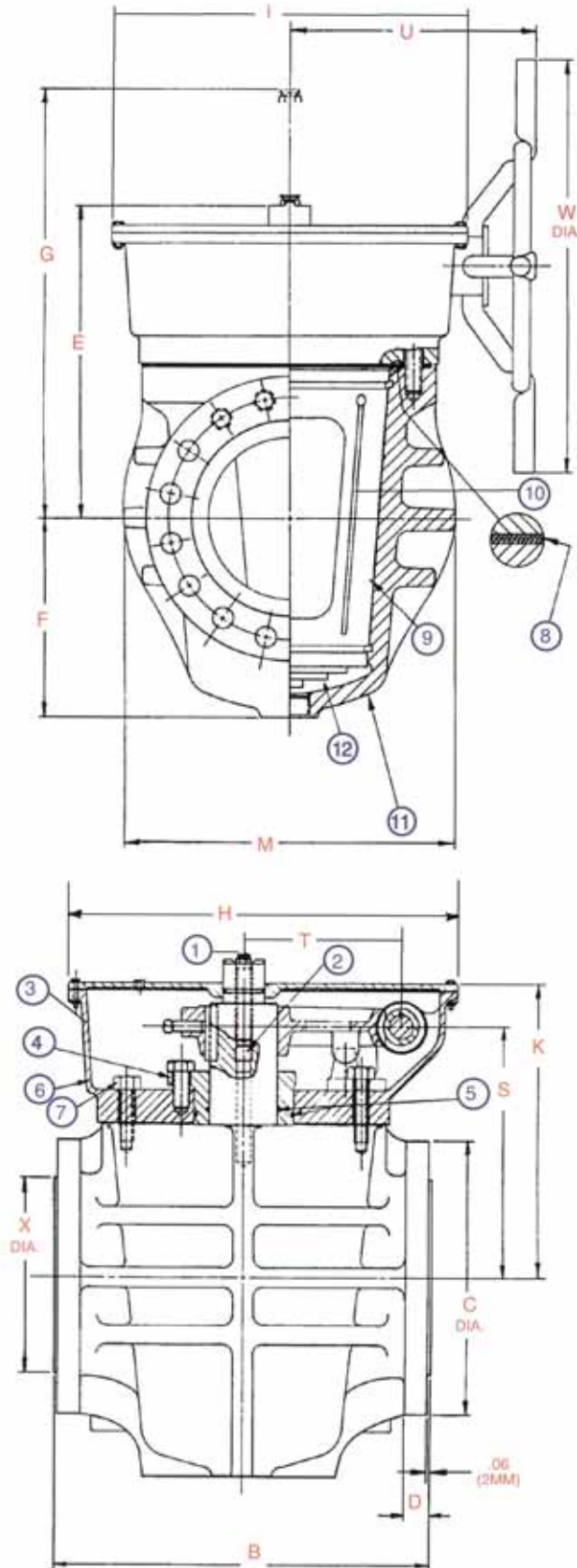
Nordstrom Waterworks Valves

Fig. No. 1489

GENERAL DIMENSIONS																
SIZE OF VALVE	6		8		10		12		16		18		20		24	
SIZE OF LUBE STICK	D		G		G		G		G		G		G		G	
HDWHL. TURNS TO OPEN	12.5		12.5		12.5		19.5		22.5		22.5		22.5		32	
UNIT OF MEASURE	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM
B END TO END	13.0	330	14.3	362	16.6	425	17.5	445	33.0	838	36.0	914	39.0	991	45.0	1143
C FLANGE OUTSIDE DIAMETER	12.5	318	15.0	381	17.5	445	20.5	521	25.5	648	28.0	711	30.5	775	36.0	914
D FLANGE THICKNESS	1.5	38	1.69	43	1.94	49	2.06	52	2.44	62	2.50	64	2.68	68	2.94	75
E CENTER TO TOP OF GEARING	11.8	298	13.2	336	15.0	382	19.0	483	20.0	508	21.8	554	23.5	597	25.4	646
F CENTER TO BOTTOM	5.6	141	6.9	175	8.9	225	10.9	276	13.0	331	14.4	366	16.0	406	17.9	456
G CLEARANCE TO REMOVE FITTING	15.5	394	18.2	463	20.0	509	24.0	610	25.0	634	26.8	681	28.5	724	30.4	773
H WIDTH OF GEAR HOUSING	N/A	N/A	15.5	394	15.9	403	19.5	495	27.3	692	27.3	692	27.3	692	37.4	949
I DIAMETER OF GEAR HOUSING	N/A	N/A	13.8	349	14.8	375	17.8	451	24.5	622	24.5	622	24.5	622	35.8	908
K CENTER TO TOP OF GEAR FLANGE	N/A	N/A	11.9	303	13.9	354	17.9	454	19.6	498	20.4	518	22.1	560	23.9	608
M EXTREME WIDTH OF BODY	10.0	254	12.5	318	14.8	375	19.0	483	22.5	572	23.5	597	25.0	635	31.0	787
S CENTER TO CENTER OF HANDWHEEL	8.9	225	10.0	254	11.6	294	15.6	397	16.6	421	17.4	441	19.1	484	21.1	537
T CENTER GEARING TO CL HANDWHEEL	5.2	132	5.25	133	5.25	133	7.5	190	11.07	281	11.07	281	11.07	281	15.09	383
U CENTER TO HANDWHEEL	12.6	319	12.6	320	13.3	337	14.5	368	17.9	454	19.7	500	19.7	500	26.1	662
W HANDWHEEL DIAMETER	20.0	508	20.0	508	23.0	584	26.0	660	26.0	660	29.0	737	29.0	737	32.0	813
X DIAMETER OF RAISED FACE	9.6	243	11.9	302	14.0	356	16.4	416	21.0	533	23.3	591	25.5	648	30.3	768
APPROX. WEIGHT	283 Lb	128 Kg	388 Lb	176 Kg	578 Lb	262 Kg	946 Lb	429 Kg	1815 Lb	823 Kg	2515 Lb	1141 Kg	3805 Lb	1726 Kg	4220 Lb	1914 Kg
NO. & SIZE OF TAPPED HOLES IN EACH FLANGE	(2) 3/4-10 UNC		(2) 7/8-9 UNC		(2) 1-8 UNC		(4) 1 1/8-7 UNC		N/A		N/A		N/A		N/A	

Fig. No. 1589

GENERAL DIMENSIONS																
SIZE OF VALVE	6		8		10		12		16		18		20		24	
SIZE OF LUBE STICK	D		G		G		G		G		G		G		G	
HDWHL. TURNS TO OPEN	12.5		12.5		12.5		19.5		22.5		22.5		22.5		32	
UNIT OF MEASURE	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM
B END TO END	15.9	403	16.5	419	18.0	457	19.8	502	33.0	838	36.0	914	39.0	991	45.0	1143
C FLANGE OUTSIDE DIAMETER	12.5	318	15.0	381	17.5	445	20.5	521	25.5	648	28.0	711	30.5	775	36.0	914
D FLANGE THICKNESS	1.68	43	1.94	49	2.18	55	2.32	59	2.68	68	2.76	70	2.88	73	3.32	84
E CENTER TO TOP OF GEARING	11.8	299	13.2	336	15.0	382	19.0	482	20.0	507	21.8	554	23.5	597	25.4	646
F CENTER TO BOTTOM	5.7	144	7.0	179	9.1	230	11.1	282	13.0	331	14.5	369	16.1	409	18.5	471
G CLEARANCE TO REMOVE FITTING	15.8	402	18.2	463	20.0	509	24.0	609	25.0	634	26.8	681	28.5	724	30.4	773
H WIDTH OF GEAR HOUSING	15.6	395	15.9	403	15.9	403	19.1	486	27.2	692	27.2	692	27.2	692	37.4	949
I DIAMETER OF GEAR HOUSING	13.8	350	14.8	375	14.8	375	17.8	451	24.5	622	24.5	622	24.5	622	35.8	908
K CENTER TO TOP OF GEAR FLANGE	10.8	273	12.6	321	14.0	357	17.9	456	19.7	498	20.4	519	22.1	562	24.4	621
M EXTREME WIDTH OF BODY	10.5	267	13.0	330	15.5	394	19.0	483	22.5	572	23.8	603	25.5	648	32.5	826
S CENTER TO CENTER OF HANDWHEEL	8.8	223	10.2	259	11.6	295	15.6	397	16.6	421	17.4	441	19.3	491	21.1	536
T CENTER GEARING TO CL HANDWHEEL	5.25	133	5.25	133	5.25	133	7.47	190	11.07	281	11.07	281	11.07	281	15.09	383
U CENTER TO HANDWHEEL	12.6	319	12.6	319	13.2	338	14.5	391	17.9	454	19.7	500	19.7	500	26.6	676
W HANDWHEEL DIAMETER	20.0	508	20.0	508	23.0	584	26.0	660	26.0	660	29.0	737	29.0	737	32.0	813
X DIAMETER OF RAISED FACE	9.7	246	11.9	302	14.0	356	16.4	416	21.0	533	23.2	590	25.5	648	30.2	768
APPROX. WEIGHT	320 Lb	145 Kg	450 Lb	204 Kg	628 Lb	285 Kg	1076 Lb	488 Kg	2080 Lb	943 Kg	2800 Lb	1270 Kg	3525 Lb	1599 Kg	5730 Lb	2699 Kg
NO. & SIZE OF TAPPED HOLES IN EACH FLANGE	N/A		(2) 7/8-9 UNC		(2) 1-8 UNC		(2) 1 1/8-7 UNC		N/A		N/A		N/A		N/A	



Valve Data

Nordstrom Figure 1489 and 1589 Valves

- Sizes
 - 6 through 24 (150 through 600 DN)
- Venturi Pattern
- Service Pressures
 - Figure 1489
 - Sizes 6 through 12 - 400 CWP (27.6 bar)
 - Sizes 14 through 24 - 300 CWP (20.7 bar)
 - Figure 1589
 - Sizes 6 through 12 - 500 CWP (34.5 bar)
 - Sizes 14 through 24 - 400 CWP (27.6 bar)
- Service Temperatures:
 - 20 to 350°F (-29° to 175°C)
- Flanged End Connections
- Worm Gear Operated

Part Reference

1. Giant Button Head Sealant Injection Fitting - for use with bulk sealants, permits restoration of seats for drop-tight shut-off when required.
2. Sealant Check Valve - double ball check valve prevents escape of sealant.
3. Weatherproof Gear Operator - available in watertight construction to eliminate ground water and dirt from entering gear housing (except size 6 figure 1489).
4. Fixed adjustment gland
5. Stem Seals
6. Cover (integral with gear housing)
7. Cover Capscrews
8. Gasket and Flexible Metal Sealing Diaphragm
9. Tapered Metal Plug - provides metal-to-metal contact surface with body, coated with permanently bonded low friction coefficient coating.
10. Sealant Grooves - provide a complete sealant system surrounding the ports.
11. Heavy Wall Body
12. Sealant Chamber - pressurized sealant in this chamber provides plug "jacking" force.

Other Nordstrom Valves Suitable for Water and Wastewater Service:

Nordstrom Valves

Sizes	Iron: 1/2 - 36 (15 DN - 900 DN) Steel: 6 - 12 (150 DN - 300 DN)
Service Pressures	Iron: 120 - 800 CWP (8.3 - 55.2 bar) Steel: ANSI Class 150-300 (PN 20 - PN 50)
Service Temperatures	-20° to 350°F (-29° to 175°C)
End Connections	Iron: Flanged and Threaded Steel: Flanged and Buttwelding
Body Material	Steel and Iron
Operation	Wrench or Worm Gear
Patterns	Short, Regular and Venturi

Super Nordstrom Valves

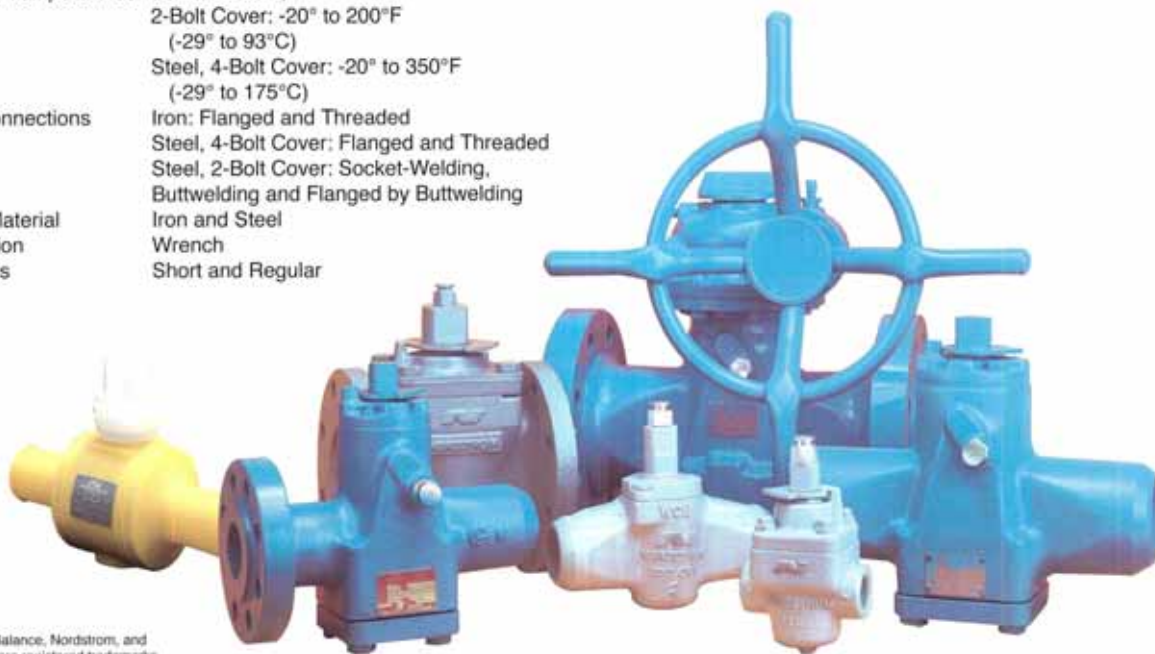
Sizes	Iron: 1/2 - 5 (15 DN - 125 DN) Steel: 1/2 - 4 (15 DN - 100 DN)
Service Pressures	Iron: 200 CWP (13.8 bar) Steel: 4-Bolt Cover: ANSI Class 150 - 600 (PN 20 - PN 100) 2-Bolt Cover: 200 CWP (13.8 bar)
Service Temperatures	Iron and Steel, 2-Bolt Cover: -20° to 200°F (-29° to 93°C) Steel, 4-Bolt Cover: -20° to 350°F (-29° to 175°C)
End Connections	Iron: Flanged and Threaded Steel, 4-Bolt Cover: Flanged and Threaded Steel, 2-Bolt Cover: Socket-Welding, Buttwelding and Flanged by Buttwelding
Body Material	Iron and Steel
Operation	Wrench
Patterns	Short and Regular

Dynamic Balance® Valves

Sizes	1 - 30 (25 DN - 750 DN)
Service Pressures	ANSI Class: 150 - 2500 (PN 20 - PN 420)
Service Temperatures	API 6D: -20° to 450°F (-29° to 232°C)
End Connections	Threaded, Flanged, Buttwelding, Flanged by Buttwelding and Socket-Welding
Body Material	Steel
Operation	Wrench or Worm Gear
Patterns	Short, Regular and Venturi

Polyvalve® Polyethylene Valves

Sizes	1/2 - 8 (15 DN - 200 DN)
Service Pressures	maximum allowable for PE materials
Service Temperatures	-20° to 100°F (-29° to 38°C)
End Connections	Heat-fusion
Body Material	Polyethylene
Operation	Wrench



Dynamic Balance, Nordstrom, and Polyvalve are registered trademarks.

For more information on valves for water and wastewater service, please contact your Customer Service Representative.

Telephones:
United States:
Eastern: (903) 885-4691
Western: (903) 885-4693
International:
(903) 885-4692
Fax:
(903) 439-3411

Address:
1511 Jefferson Street
Sulphur Springs, Texas 75482
USA

Web:
Email: nmkt@flowserve.com
or visit www.flowserve.com

FLOWSERVE

Nordstrom Valves