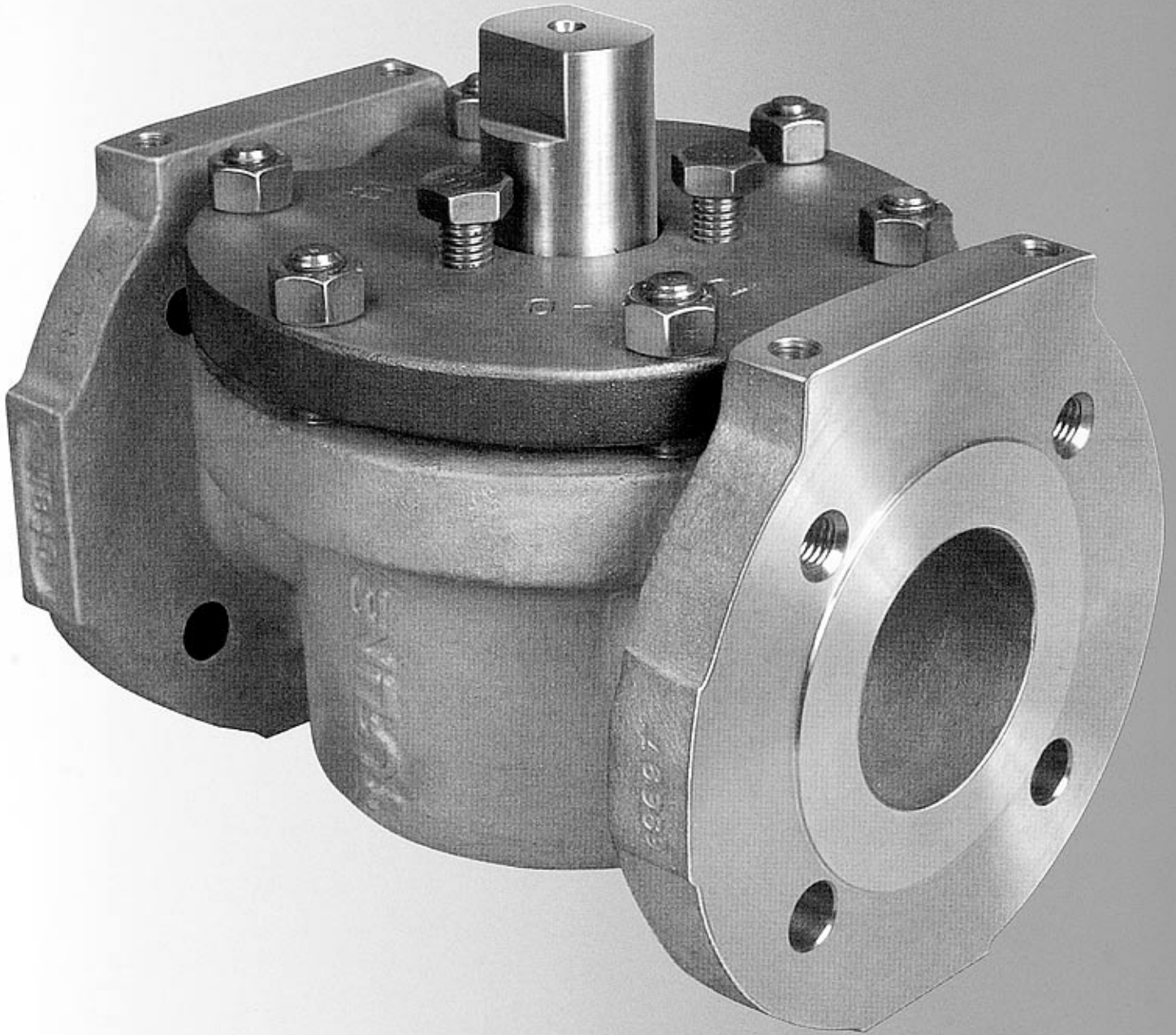
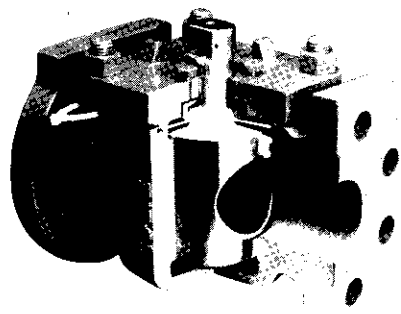


Tufline® Full Port Sleeved Plug Valves

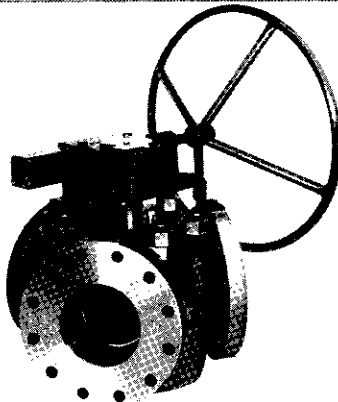


XOMOX[®]
Tufline Valves & Matryx Actuators

Tufline Full Port Sleeved Plug Valves



*Two-Way
Full Port Sleeved Plug Valves*



*120° 3-Way Full Port
Sleeved Plug Valves*

Full port design advantages.

With the full-area round port there is no diminished or constricted flow. Ideal wherever low pressure-drop and high-flow efficiency are important.

No pockets or cavities.

Unlike full port ball valves, Tufline valves have no cavities to entrap contaminating media. This is an important consideration for food and pharmaceutical applications.

For applications such as polymers, chemicals, salts, slurries, brines, muds, plastics, or sewage, there are no cavities where the flow media can collect and solidify.

Easy cleaning.

The full port permits mechanical cleaning with a pipeline pig. This facilitates processing of heavy, viscous substances such as tar and pitch.

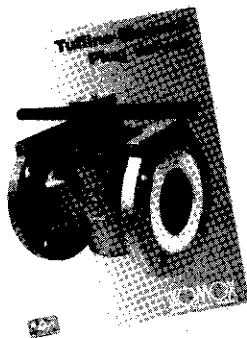
Ease of cleaning is also important when handling condensable media such as sulfur, polyvinylchloride, phthalic-anhydride, and vinylchloride monomer.

Self cleaning.

Metal lips completely surround the valve ports. With each rotation of the valve, any scale which may have collected on the plug seal surface is broken-up and wiped away.

Standard features that assure exceptional performance.

Superior sealing, fugitive emissions control, greatly extended service life, economy of operation, and ease of automation are all standard features of Tufline Sleeved Plug valve configurations.



The full 20-page Tufline Sleeved Plug Catalog includes additional technical data, performance characteristics, and a variety of options. To receive a copy call 800-749-1735.

General specifications appropriate for both valves

ANSI Classes:

150, 300, & 600

Other pressure classes available upon request.

Temperature rating:

-20°F to +600°F

Materials:

Typically, body material is CF8M (316 stainless steel) or WCB (carbon steel), Plugs are CF8M (316 stainless steel).

PTFE sleeves are standard.

A wide variety of other materials and options are available.

See the How To Order table on page 7.

End connections:

Raised face flanges with phonographic serrations are standard. Other flange facings are available on request.

Actuation:

All valves can be supplied with a variety of manual, pneumatic, or electric actuators.

Tufline can provide reliable, single-source responsibility for your complete valve package.

Quality assurance:

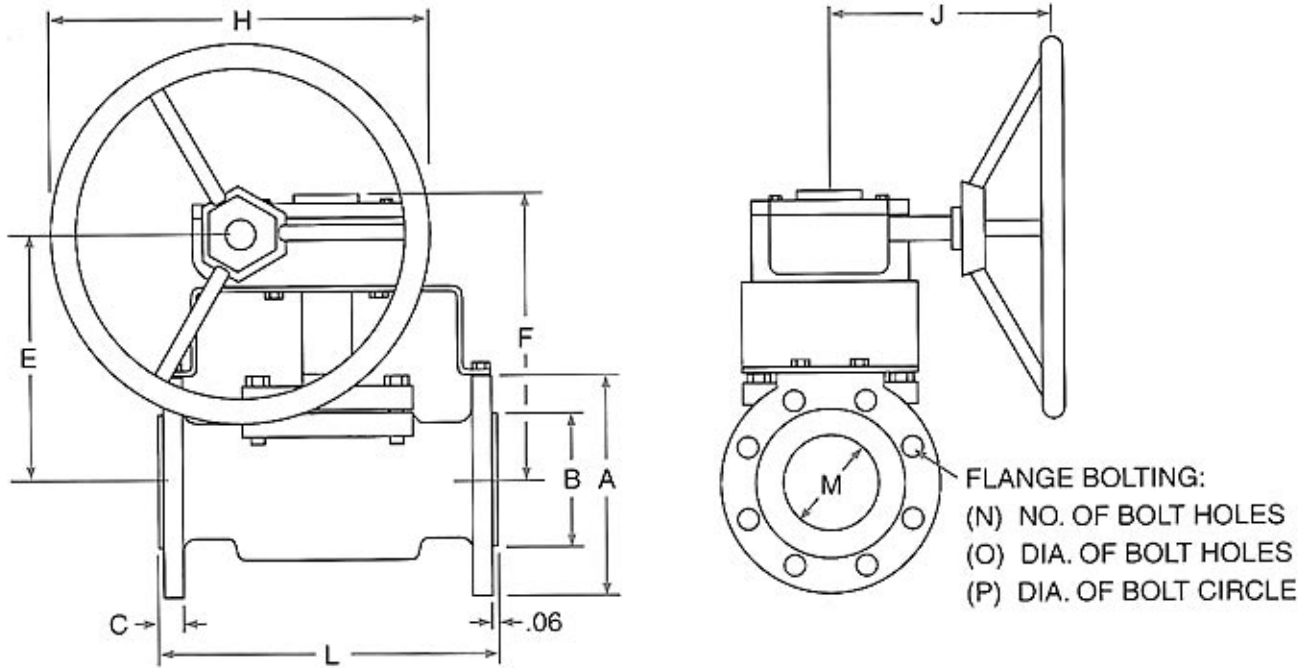
At every step in the foundry, machining, manufacturing, and assembly processes, valve parts are inspected to assure high quality. Every valve is pressure tested for tight shutoff.

Valves are available specifically tested and tagged to indicate conformity to ANSI-B16.34 shell tests and MSS-SP-61 seat test requirements.

© Copyright Xomox Corporation 1985, 2001. All rights reserved. Xomox®, Tufline®, and Matryx® are registered trademarks of Xomox Corporation. Xomox XRP is a trademark of Xomox Corporation.

Tufline Full Port Sleeved Plug Valve Dimensions

Dimensions are in inches. Weights are in pounds.



Class 150 - Figure No. 2067 / Class 300 - Figure No. 20367

Size	A	B	C	E	F	G	H	J	M	L	Wts.	Cv	Torque*
3/4	4.62	1.69	.63						.83	6.00	20	50	400
1	4.88	2.00	.69						1.05	6.50	28	100	500
1 1/2	6.13	2.88	.81						1.56	7.50	35	270	1000
2	6.50	3.63	.88						2.06	8.50	54	450	1440
3	8.25	5.00	1.12	9.69	11.28	2.63	18.00	11.12	3.06	11.13	135	1130	3600
4	10.00	6.19	1.25	10.38	12.32	3.50	30.00	14.59	4.03	12.00	205	2200	4800
6	12.50	8.50	1.44	12.69	19.95	5.38	30.00	15.06	6.00	15.88	475	5350	17,000
8	15.00	10.63	1.62	14.38	24.08	5.43	24.00	17.25	7.98	19.75	875	10400	32,000
10	17.50	12.75	1.88	18.65	24.59	6.25	36.00	18.76	9.84	22.38	1600	15850	75,000
12	23.00	15.00	2.00	21.67	29.17	9.33	18.00	23.72	11.78	28.00	2500	22000	100,000

Valves 1/2 through 2 inch are typically not supplied with enclose gear drives.

Class 150 Figure No. 2067

Size	N	O	P
3/4	4	.63	2.75
1	4 ¹	.63	3.13
1 1/2	4	.63	3.88
2	4	.75	4.75
3	4 ¹	.75	6.00
4	8 ¹	.75	7.50
6	8 ³	.88	9.50
8	8 ²	.88	11.75
10	12	1.00	14.25
12	12 ²	1.00	17.00

Class 300 Figure No. 20367

Size	N	O	P
3/4	4	.75	3.25
1	4	.75	3.50
1 1/2	4	.88	4.50
2	8	.75	5.00
3	8 ¹	.88	6.63
4	8 ¹	.88	7.88
6	12 ³	.88	10.62
8	12 ²	1.00	13.00
10	16	1.12	15.25
12	16 ⁴	1.25	17.75

* Valve break torque in in-lbs with PTFE sleeve.

Also available:

- 90° 3-way and 4-way configurations.
- Configurations specially approved for HF-alkylation.

1. Two top holes in flanges are tapped.
2. Two top and two bottom holes in flanges are tapped.
3. Four top holes in flanges are tapped.
4. Four top and four bottom holes in flanges are tapped.

Tufline 120° 3-Way Full Port Sleeved Plug Valve

Facilitates more efficient and more economical system design.

The Tufline 120° Full Port 3-way Sleeved Plug Valve replaces conventional and cumbersome pipe "T" and twin block valve arrangements.

Improved flow characteristics.

In addition to the improved flow provided by the full port configuration, the 120° flow pattern provides greater flow efficiency than 90° 3-way valves.

Additional design features.

In addition to the unique design features found in the standard-port and 2-way full port configurations, this valve offers:

- Configuration for cleaning with a mechanical pig.
- 120° and 240° manual or automated operation.
- Visual indication of flow direction.
- Allows transflow when switching.

Appropriate applications.

This valve is ideal for dual safety relief valve switching and other applications where low pressure drop and high flow efficiency are important.

This design offers significant advantages for handling slurries, diversion, or blending where full flow and the ability to scrape or "pig" the line to remove solids buildup are desirable.

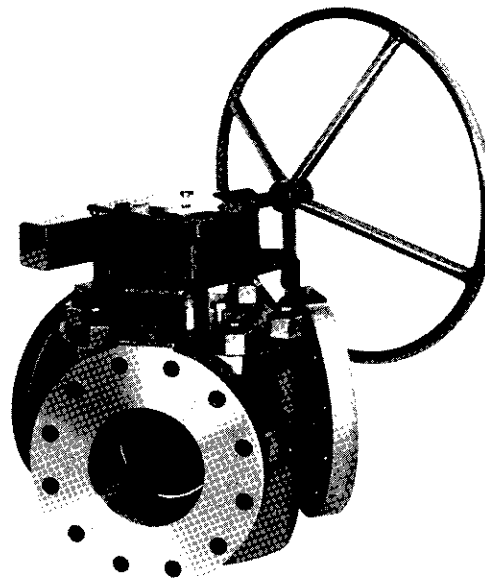
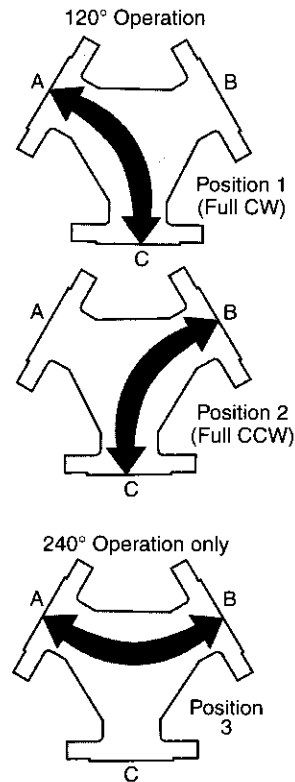
Port arrangements.

In the diagrams at the right, the color indicates the path of fluid flow.

Cv and torque values.

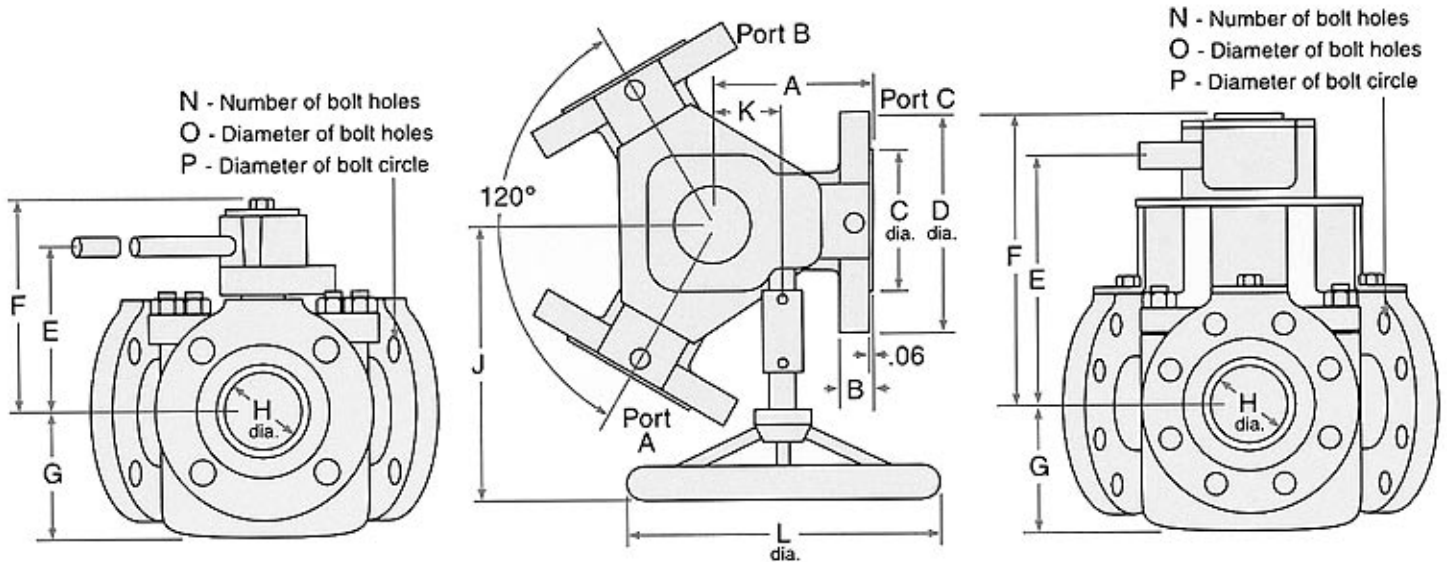
Size	Cv Factors For Valve Sizing	Valve Break Torques in.lbs* (PTFE Sleeve)
1	36	300
1½	90	1500
2	175	1500
3	400	7020
4	725	7560
6	1750	17,000
8	3200	32,000

* For Tufline-600 sleeves, multiply valve break torques by 1.35.



Tufline 120° 3-Way Full Port Sleeved Plug Valve Dimensions

Dimensions are in inches. Weights are in pounds.



Class 150 - Figure No. 9037 / With Wrench

Size	A	B	C	D	E	F	G	H	J	K	L	N	O	P	Wts.
1	3.00	.56	2.00	4.25	3.63	4.66	3.00	1.05	11.25	-	-	4	.62	3.13	21
1½	4.13	.88	2.88	6.50	4.88	6.06	3.75	1.61	29.00	-	-	4	*	3.88	44
2	4.13	.88	3.63	6.50	4.88	6.06	3.75	2.06	29.00	-	-	4	.75	4.75	47

*Tapped ½-13 UNC hole.

Class 150 - Figure No. 9037 / With Enclosed Gear

Size	A	B	C	D	E	F	G	H	J	K	L	N	O	P	Wts.
3	6.00	1.13	5.00	8.25	9.50	11.44	4.75	3.07	12.00	3.50	18.00	4	.75	6.00	135
4	7.00	1.25	6.19	10.00	10.38	12.75	5.63	4.03	11.31	4.13	16.00	8	.75	7.50	195
6	8.00	1.44	8.50	12.50	11.63	15.00	6.50	6.07	17.41	4.69	24.00	8	.88	9.50	265
8	9.50	1.62	10.62	15.00	14.50	17.81	7.50	7.98	18.71	2.11	24.00	8	.88	11.75	775

Class 300 - Figure No. 9337 / With Wrench

Size	A	B	C	D	E	F	G	H	J	K	L	N	O	P	Wts.
1	3.00	.69	2.00	4.88	3.63	4.66	3.00	1.05	11.25	-	-	4	.75	3.50	23
1½	4.13	.88	2.88	6.50	4.88	6.06	3.75	1.61	29.00	-	-	4	**	4.50	44
2	4.13	.88	3.63	6.50	4.88	6.06	3.75	2.06	29.00	-	-	8	.75	5.00	47

Class 300 - Figure No. 9337 / With Enclosed Gear

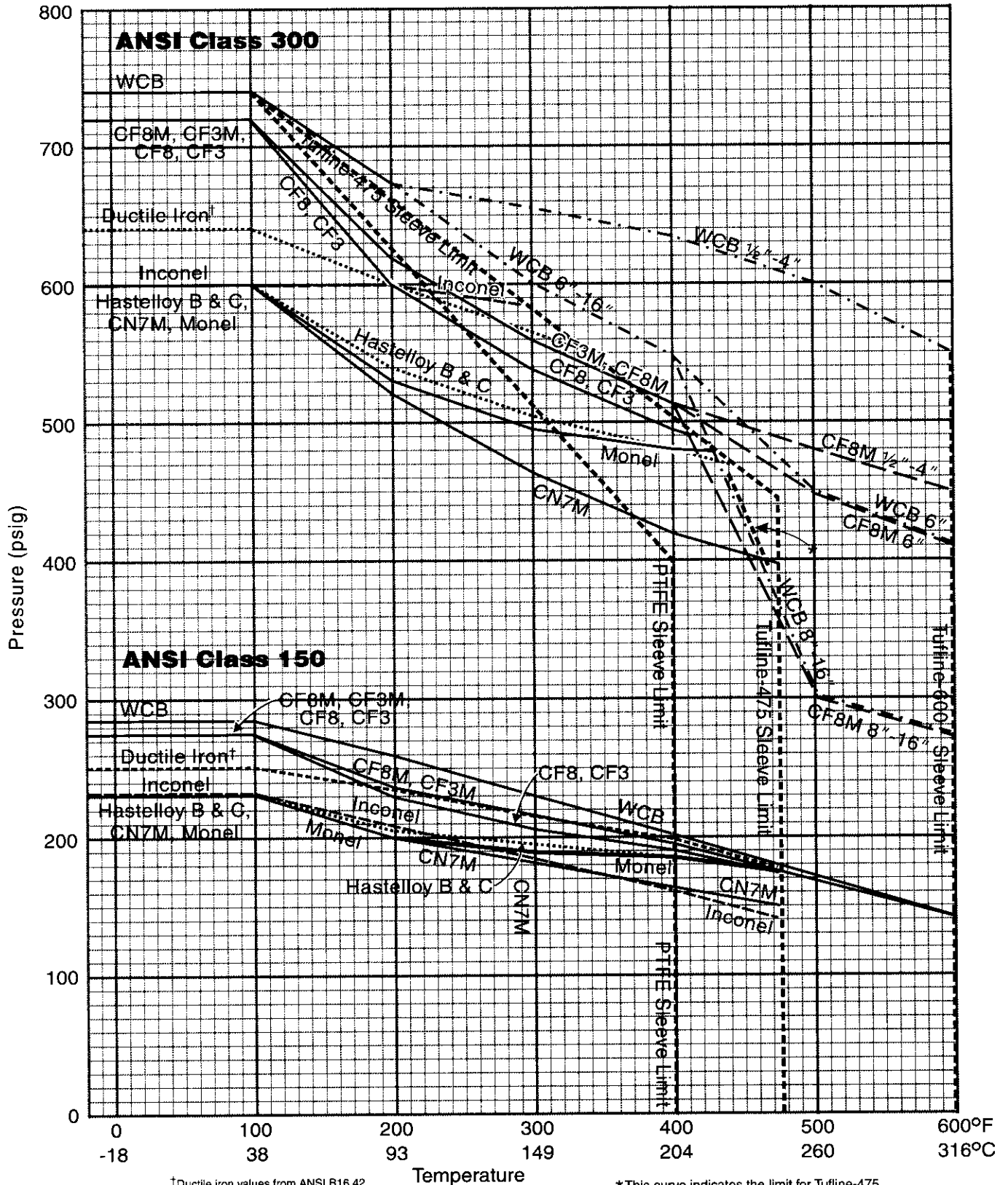
Size	A	B	C	D	E	F	G	H	J	K	L	N	O	P	Wts.
3	6.00	1.13	5.00	8.25	9.50	11.44	4.75	3.07	12.00	3.50	18.00	8	.88	6.63	135
4	7.00	1.25	6.19	10.00	10.38	12.75	5.63	4.03	11.31	4.13	16.00	8	.88	7.88	195
6	8.00	1.44	8.50	12.50	11.63	15.00	6.50	6.07	17.41	4.69	24.00	12	.88	10.63	265
8	9.50	1.62	10.62	15.00	14.50	17.81	7.50	7.98	18.71	2.11	24.00	12	1.00	13.00	775

Pressure-temperature ratings

The useful range of PTFE sleeved plug valves is -20°F to +400°F
 Tufline-475 sleeve: -20°F to +475°F
 Tufline-600 sleeve: -20°F to +600°F
 with maximum temperature variation of 200°F.

Applications beyond these ranges can be handled effectively but may require valve adjustments at the operating temperature.

Material selections are governed by the limits imposed by ANSI B16.34, 1996 edition and B16.34A1998 edition.



[†]Ductile iron values from ANSI B16.42

*This curve indicates the limit for Tufline-475 sleeve material when used in 8"-16" valves.

How to order

Xomox® Actuators.

The valves in this catalog are available as part of complete valve packages.

Xomox automated valve packages assure you of single-source responsibility for flow control equipment.

With the Xomox family of valves, Matryx® and Xomox actuators, Xomox control accessories, and Xomox problem solving expertise, you are assured of valve packages that will provide optimum performance in your application.



Xomox Automation & Service Centers.

Xomox Automation & Service Centers are strategically located to provide comprehensive:

- Automated valve packaging.
- Valve modification.
- Valve repair.
- Application counseling.

For more information, fast response, comprehensive service, and knowledgeable technical help, call your nearest Xomox Automation & Service Center.

Size
Figure No.
Option
Body
Plug
Sleeve
Operator
Service

1" - 2067 - FT - 6 - 6 - P1 - W - C

Figure No.

2-Way

Class 150 .. 2067
 Class 300 .. 20367
 Class 600 .. 20667

120° 3-Way

Class 150 .. 9037
 Class 300 .. 9337
 Class 600 .. 9637

Options

Fire Tested FT
 Tertiary Top Seal ... TS
 Cage Control CCV
 Extended Packing . XP
 Partial Jacket PJ
 Full Jacket FJ

Port Arrangements
 for 3-Way valves
 (See page 4)

..... 120° or 240°

Body

Alloy 20 0
 WCB 2
 Monel 3
 304SS 4
 Nickel 5
 316SS 6
 Hastelloy B 8
 Hastelloy C 9
 Inconel 40
 Other (Specify) . X

Service

Chlorine .. C
 Oxygen .. O
 Vacuum .. V
 General
 Service ... Blank
 Other** ... X

Operator

Wrench W
 Gear G
 Actuator* A
 Less Operator . N

Sleeve

PTFE P1
 15% RPTFE . P2
 25% RPTFE . P3
 PFA P6
 Xomox-7 P7
 UHMWPE ... P8
 Tufline-475 . P16
 Tufline-600 . P20
 Other
 (Specify) ... PX

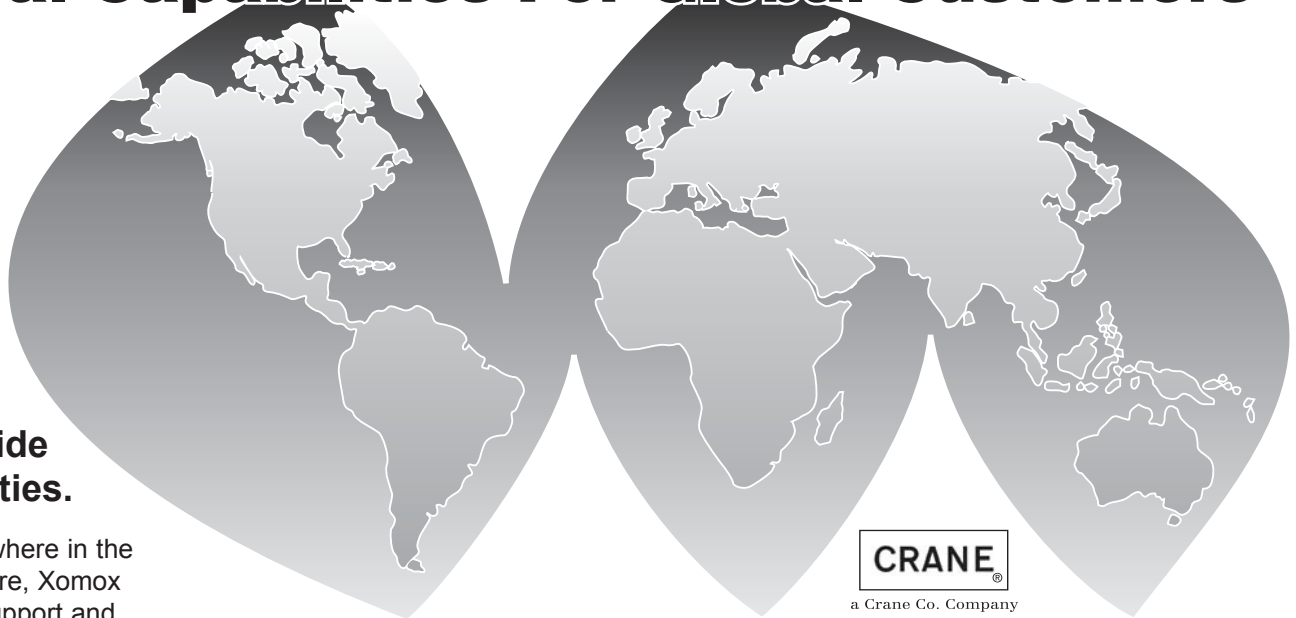
Plug

Alloy 20 0
 Monel 3
 304SS 4
 Nickel 5
 316SS 6
 Hastelloy B 8
 Hastelloy C 9
 Inconel 40
 Other (Specify) . X

* Specify actuator type and available air supply.

** Consult your Tufline Sales Engineer for a wide variety of other available service options.

Global Capabilities For Global Customers



Worldwide capabilities.

No matter where in the world you are, Xomox technical support and services are available from:

- 16 Manufacturing Facilities
- 18 Service Centers
- 50 Sales Offices
- More than 200 Xomox Authorized Distributors

Product selection.

Xomox offers the broadest line of process valves, actuators, accessories, and related services including:

- Tufline Process Valves
- Saunders Diaphragm Valves
- Matryx Rack & Pinion, Vane Actuators
- Xomox XRP™ Actuators

Product responsibility.

Xomox's concern for product performance extends to the product's period of service. We feel it is important for users to also be aware of their responsibilities. Our products are manufactured and used in numerous applications with a wide variety of service conditions. While general guidelines are often furnished, it obviously is not possible to provide complete and specific performance data for every conceivable

Global locator.

For a listing of Xomox Manufacturing Facilities, Service Centers, Regional Offices, and Authorized Distributors, visit our web site www.xomox.com.

Xomox literature.

All Xomox catalogs and technical data are available as PDF files at www.xomox.com.

Phone support.

Call your nearest Xomox Sales Office or the Xomox World Headquarters:
Phone: 513-745-6000
Fax: 513-745-6093

Corporate strength.

Xomox is a Crane Co. company. Through the Crane Co. association, Xomox offers even greater global capabilities and breadth of product lines.

Xomox Corporation

World Headquarters
4444 Cooper Road
Cincinnati, Ohio 45242

XOMOX®
Process Valves & Actuators

able service condition. Therefore, the end user must assume final responsibility for proper evaluation, application and performance of all products. The contents of this document are presented for information purposes only. Every effort has been made to ensure accuracy. This information is not intended to be construed as warranties or guarantees, expressed or implied, nor imply use applicability, for products or services described herein.

We reserve the right to modify or improve the designs and specifications of such products at any time without notice. As the manufacturer, Xomox sells its products and services pursuant to its standard terms and conditions of sale, including its limited warranty, copies of which are available upon request. Xomox limits its liability specifically to the replacement or repair of defective items, or to a refund for same. Xomox does not accept liability for