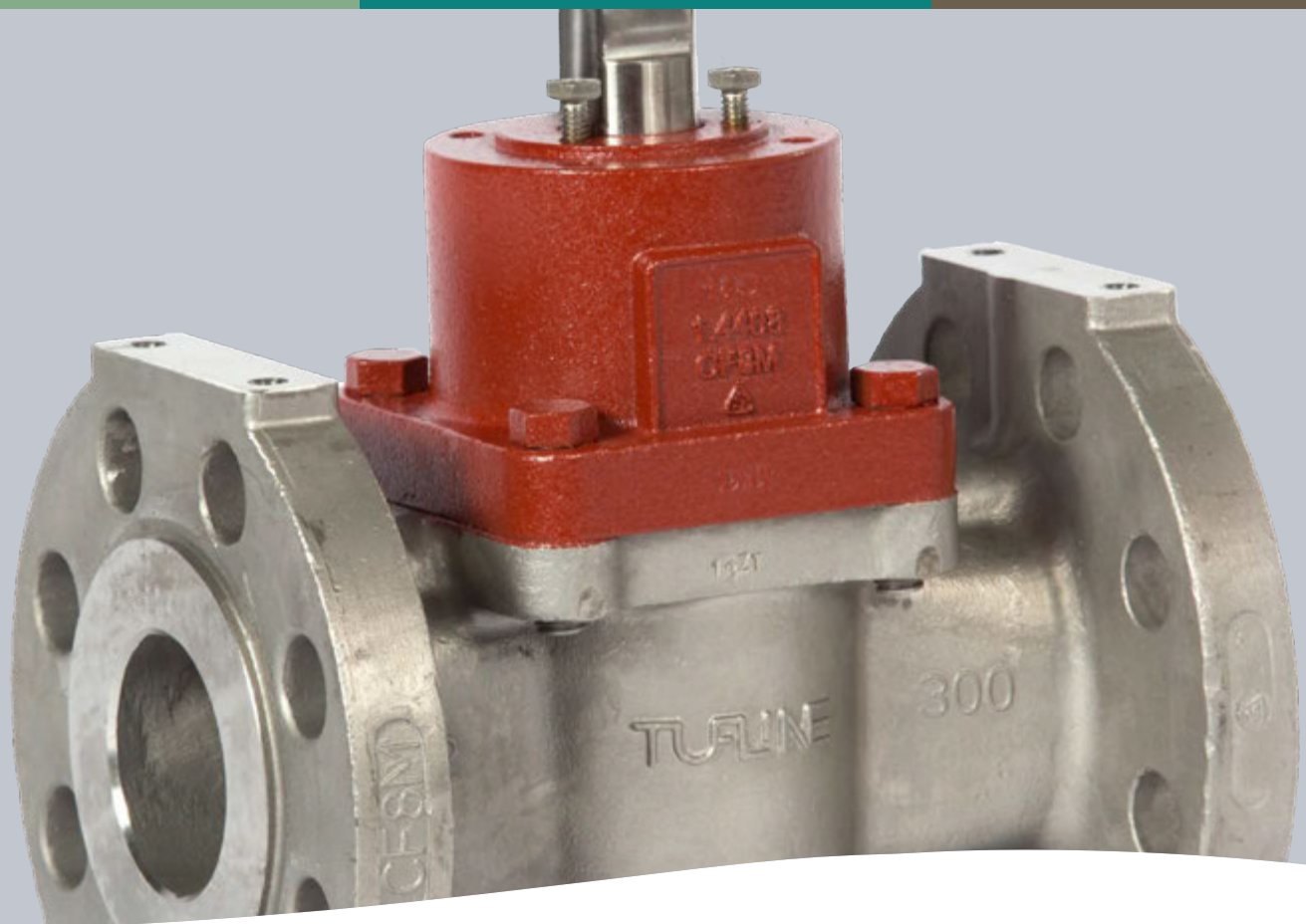


# XOMOX<sup>®</sup>

brands you trust.



XOMOX<sup>®</sup> Performance Valves

Sealing Type XP3 / XP 4D

**CRANE**<sup>®</sup>

Crane ChemPharma & Energy

[www.cranecpe.com](http://www.cranecpe.com)



## XOMOX® Performance Valves Product Overview

*The new XOMOX® XP3 and XP 4D Soft Seated Sleeved Plug Valves with patent pending live loaded cartridge seal which meets the most stringent emissions standards in the industry.*

### Key Features & Benefits

- ❶ Innovative Stem Seal Design permits superior FUGITIVE EMISSIONS CONTROL (ISO 15848-1 BH CO3 392°F or 200°C SSA0) under recurrent thermal cycling without any adjustments, and REDUCES POTENTIAL DOWN TIME.
- ❷ Live loaded design optimizes seal performance and extended service life, which ensures best in class seal to atmosphere even through thermal cycling.
- ❸ Maintenance and cavity free: No costly lubrication, no sticking, and no contamination of process media.

### XP3: XOMOX® Performance 3

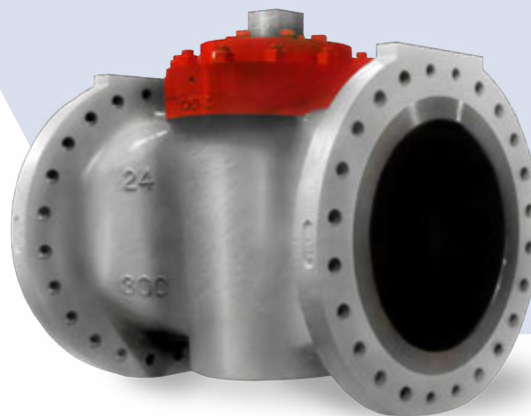
XP3 is the first Sleeved Plug Valve able to pass four Thermal Cycles without any packing adjustments

Different packing combinations will support different temperatures (392°F or 200°C / 500°F or 260°C)



### XP 4D: XOMOX® Performance 4D

XP 4D provides the same performance packing as the XP3 configuration with additional with additional 4D stem seal which allows a manual override.



#### Options:

- All options of sleeve material configurations are available
- Different packing materials available depending on temperature rating

# ISO 15848-1 Standard Introduction



International  
Organization for  
Standardization

INTERNATIONAL .....ISO  
STANDARD ..... 15848-1

ISO 15848-1 is an International standard for fugitive emissions issued by the ISO Organization. It contains both dynamic life cycles and thermal cycles and is considered one of the most demanding fugitive emission standards for soft seated valves. This standard contains different levels of acceptance based on the number of thermal and mechanical cycles, temperature, and number of adjustments. The objective of ISO 15848-1 is to enable classification of performance in different designs and constructions of valves to reduce fugitive emissions.

## Example Description Tables

ISO 15848 – 1 BH CO3 392°F – SSAO (200°C)																																
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Manufacturing valves will be subjected to the ISO 15848-2 test as described in the norm. This is a non-destructive test that intends to address the good performance of the valves (Please refer to ISO 15848 norm).

## XOMOX® XP3 Features and Benefits

The XP3 Sleeved Plug Valves are the first valves to pass all four thermal cycles without any packing adjustments, meeting the ISO 15848-1 standard at the BH BH CO3 200C SSA0. This new XOMOX® valve top seal technology is able to perform in its entire temperature range even under thermal cycle conditions. All this achieved with no stem seal adjustments. This is achieved through the patented live loaded stem cartridge.

The XP3 still contains all the features and benefits of the standard XOMOX® sleeve plug valve; maintenance and cavity-free. They require no costly lubrication and prevent accumulation or contamination of process media, reducing maintenance costs and the cost of ownership over time.

### Primary Seal to Atmosphere

The XP3 utilizes the same, proven sleeve & body design XOMOX is known for. 360° port lips and high pressure ribs inside the valve body ensure tight in-line seal & primary seal to atmosphere. Plug remains adjustable if necessary.

### Tertiary Seal to Atmosphere

New, patent-pending Live-Loaded Stem Cartridge delivers World Class Low E performance in a quarter-turn soft-seated plug valve.



### Secondary Seal to Atmosphere

Enabled by the same wedge ring & plastic diaphragm design in place on our existing product, ensuring another layer of protection to stem seal and body cover joint.

### Packing Options

Stem packing can be changed depending on operating conditions / Various packing options are available.

## XOMOX<sup>®</sup> XP 4D Features and Benefits

The XOMOX<sup>®</sup> XP 4D Sleeved Plug Valve contains the same live loaded stem cartridge as XP3, while also adding a set of contingency bolting. This additional set of packing allows for a manual override of the seal to atmosphere manual adjustable 4D stem seal of the cover. If there is any emergency failure, this seal can be activated and reduce the need (in the very unlikely case) of any costly unscheduled shutdowns.

### Primary Seal to Atmosphere

Sleeve ensure inline sealing. Manual adjustments are possible.

### Tertiary Seal to Atmosphere

Live loaded cartridge provides improve stem sealing.

### Additional 4D Manual Stem Seal Adjustment

Manual 4D stem packing for adjustment in case of emergency or excessive assurance.



### Secondary Seal to Atmosphere

Enabled by the plastic diaphragm and wedge ring.

### Packing Options

Stem packing can be changed depending on operating conditions / Various packing options are available.



## XOMOX® XP3 Design Features



- Live loaded design optimizes seal performance and extended service life, which ensures seal integrity to atmosphere
- ISO 15848-1 BH CO3 SSA0
- Stem seal:
  - Tightness class: BH ( $\leq 10^{-4}$  mg/(s x m))
  - Endurance class: CO3
  - Temperature class: RT to 392°F or 200°C
  - Adjustments: SSA 0 (Zero adjustments)
- Flange pads design remains available as a standard configuration
- Actuator mounting capabilities in acc. with ISO 5211 also available
- Maintenance and cavity-free; no costly lubrication or maintenance
  - No accumulation of process media
  - No contamination of process media
- Extended lifecycle over time combined with high reliability
- Cost-efficient solution for various applications
- Reduced cost of valve ownership over time

## XOMOX® XP 4D Design Features



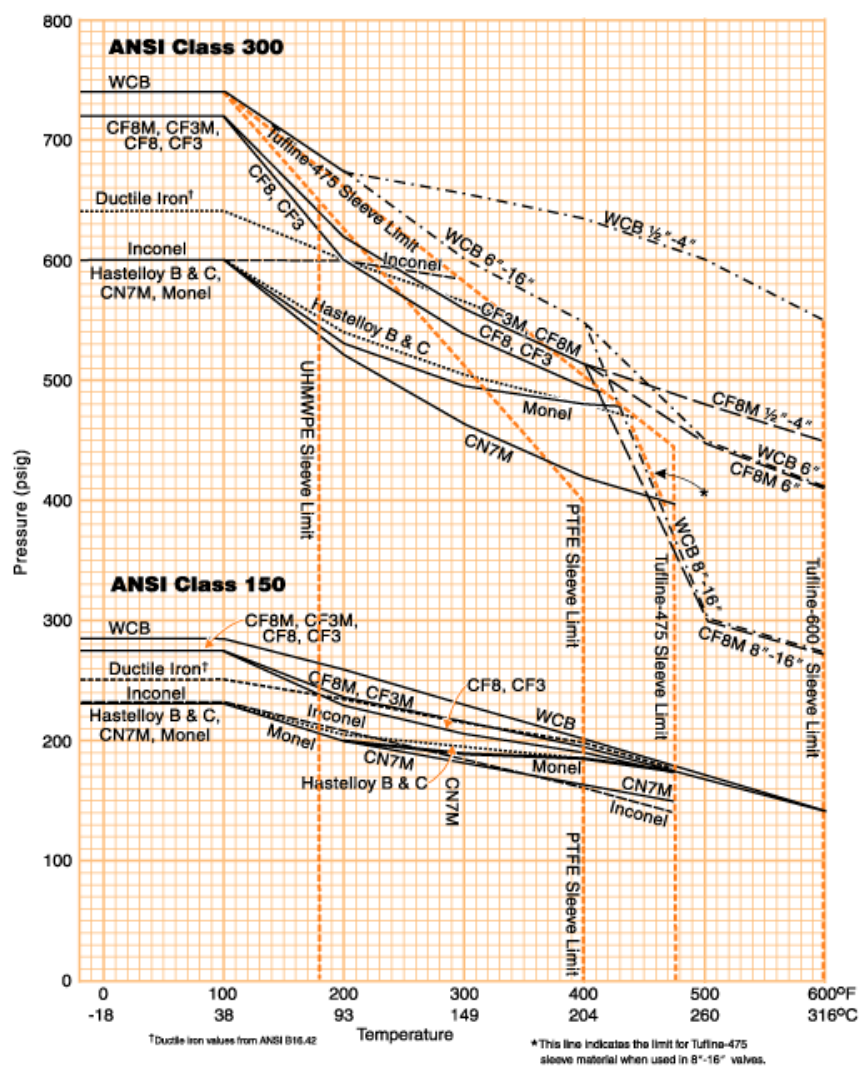
- All XP3 features and benefits
- Live-loaded design optimizes seal performance and extended service life, which ensures seal integrity to atmosphere
- Additional manually adjustable stem seal (4D) on top for excessive assurance
- XP 4D design offers manual override for the toughest applications
- ISO 15848-1 BH CO3 SSA0
- Stem seal:
  - Tightness class: BH ( $\leq 10^{-4}$  mg/(s x m))
  - Endurance class: CO3
  - Temperature class: RT to 392°F or 200°C
  - Adjustments: SSA 0 (No adjustments)
- Flange pads design remains available as a standard configuration
- Actuator mounting capabilities in acc. with ISO 5211 also available
- Maintenance and cavity-free; no costly lubrication or maintenance
  - No accumulation of process media
  - No contamination of process media
- Weather sealing provides protection against media contamination

# XOMOX® XP3 & XP 4D Properties and Characteristics

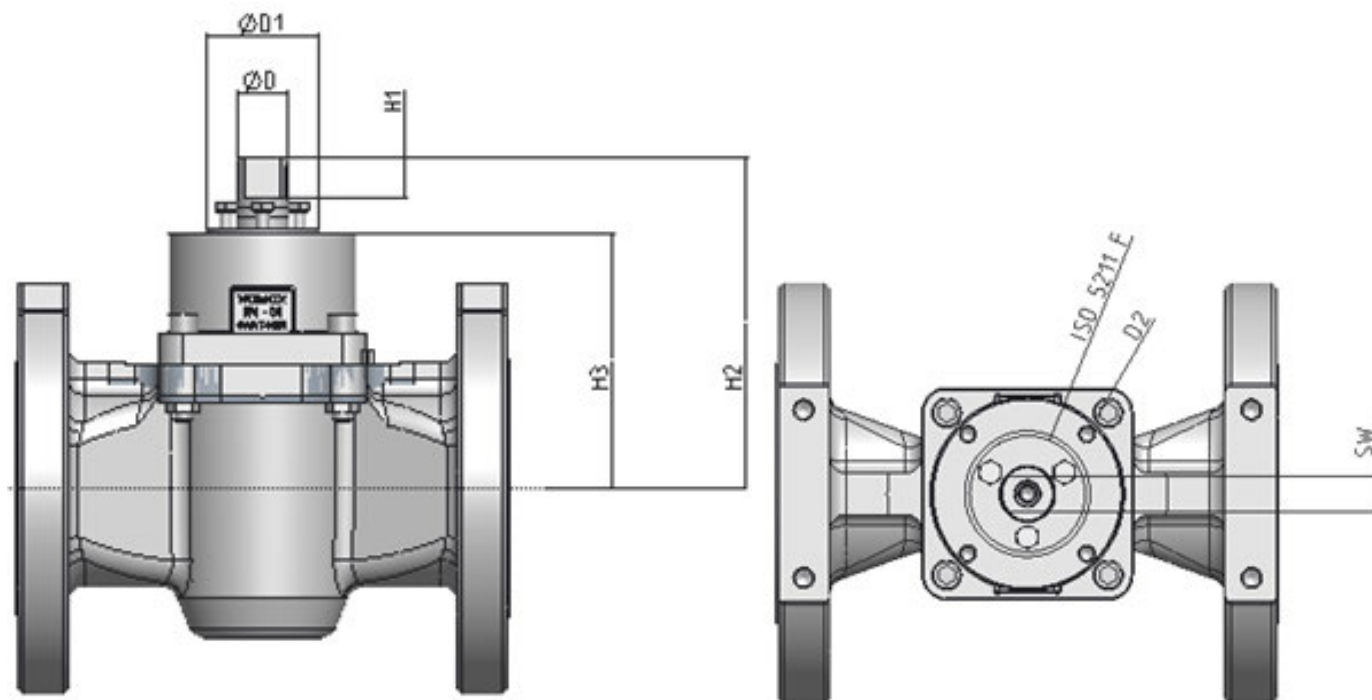
## XP3 / XP 4D Break Torque - Class 150 and 300 [in\*lbs]

Size	PTFE/PTFEX		%R-PTFE Sleeve		PTFEXC/XeniTh Sleeve		UHMWPE/PFA Sleeve	
	Std	Built Dry	Std	Built Dry	Std	Built Dry	Std	Built Dry
½" & ¾"	163	244	204	305	214	326	326	478
1"	458	692	580	865	621	936	916	1384
1 ½"	916	1384	1150	1730	1242	1863	1842	2758
2"	1262	1893	1578	2372	1710	2565	2534	3797
3"	1384	2066	1730	2585	1863	2799	2758	4143
4"	2758	4143	3450	5181	3725	5588	5517	8285
6"	5751	8621	7186	10779	7766	11644	11502	17252
8"	8967	13456	11217	16815	12112	18168	17944	26912
10"	16560	24845	20703	31054	22352	33538	33120	49681
12"	24153	36225	30189	45284	32601	48907	48296	72450

If any additional information is required, please contact your sales representative or customer service.



## XOMOX® XP3 Dimensional Data



NPS	H1	H2	H3	d	SW	F	d1	d2
1/2 3/4	0.500	3.661	2.366	0.537	0.437	F04	1.181	M5X8
1	0.500	4.134	2.854	0.620	0.437	F05	1.378	M6X10
1 1/2	0.630	5.394	3.449	0.848	0.654	F07	2.165	M8X12
2	0.748	5.394	3.819	1.102	0.755	F07	2.165	M8X12
3	0.748	5.394	3.858	1.102	0.755	F10	2.756	M10X15
4	1.000	7.283	5.433	1.260	0.880	F10	2.756	M10X15
6	1.000	8.720	6.752	2.008	1.398	F12	3.346	M12X18
8	1.000	10.689	9.488	2.008	1.398	F14	3.937	M16X24
10	1.000	12.441	11.087	2.500	1.673	F14	3.937	M16X24
12	1.000	13.583	12.138	2.992	1.969	F16	5.118	M20X30

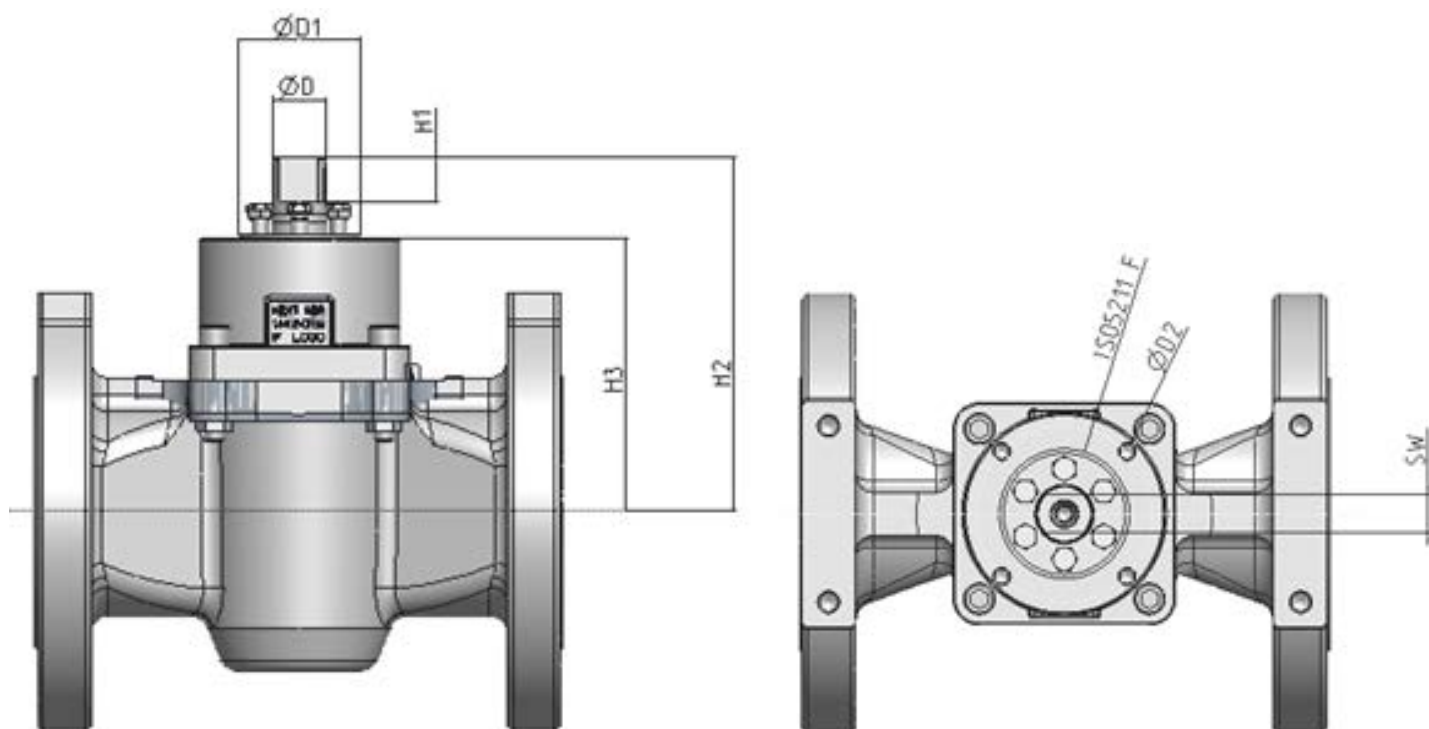
All dimensions in inches. If any additional information is required, please contact your sales representative or customer services.

**Registered patent  
pending no. 299 03 320  
Applied for European  
and international patents**

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# XOMOX® XP 4D Dimensional Data



NPS	H1	H2	H3	d	SW	F	d1	d2
1/2 3/4	0.500	3.661	2.366	0.537	0.437	F04	1.181	M5X8
1	0.500	4.134	2.854	0.620	0.437	F05	1.378	M6X10
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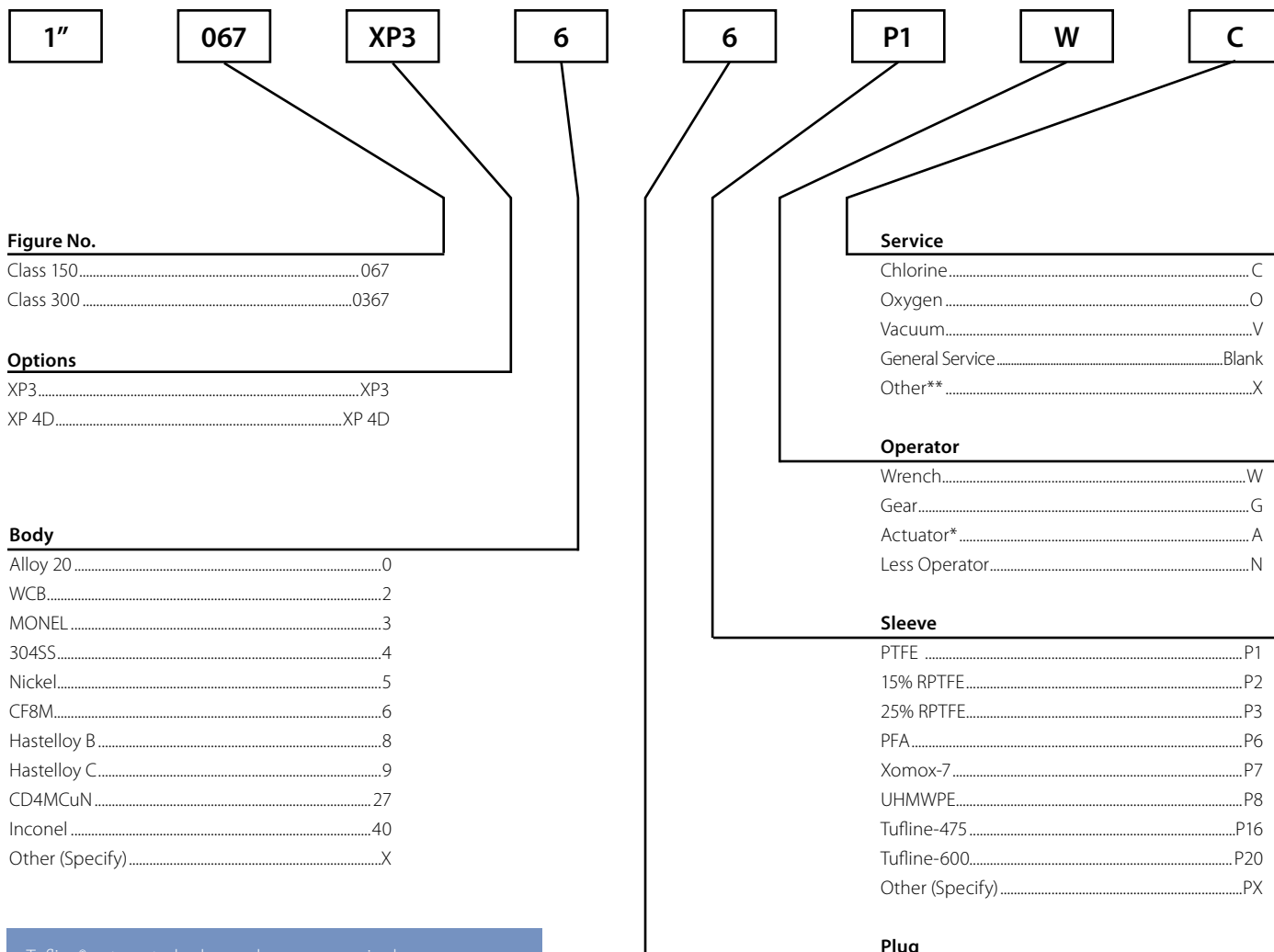
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Registered patent pending  
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# How to Order



**Figure No.**

Class 150.....	067
Class 300.....	0367

**Options**

XP3.....	XP3
XP 4D.....	XP 4D

**Body**

Alloy 20.....	0
WCB.....	2
MONEL.....	3
304SS.....	4
Nickel.....	5
CF8M.....	6
Hastelloy B.....	8
Hastelloy C.....	9
CD4MCuN.....	27
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
Tuflin-475.....	P16
Tuflin-600.....	P20
Other (Specify).....	PX

**Plug**

Alloy 20.....	0
Monel.....	3
304SS.....	4
Nickel.....	5
CF8M.....	6
Hastelloy B.....	8
Hastelloy C.....	9
CD4MCuN.....	27
Inconel.....	40
Other (Specify).....	X

Tuflin® automated valve packages assure single-source responsibility for flow control equipment.

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

**CRANE ChemPharma & Energy, XOMOX® Automation & Service Centers**

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

- Automated valve packing
- Valve modification
- Valve repair
- Application counseling

For more information, fast response, comprehensive service, and knowledgeable technical help, please contact your CRANE ChemPharma & Energy, XOMOX® Automation & Service Center.

\* Specify actuator type and available air supply.

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



# XOMOX®

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