

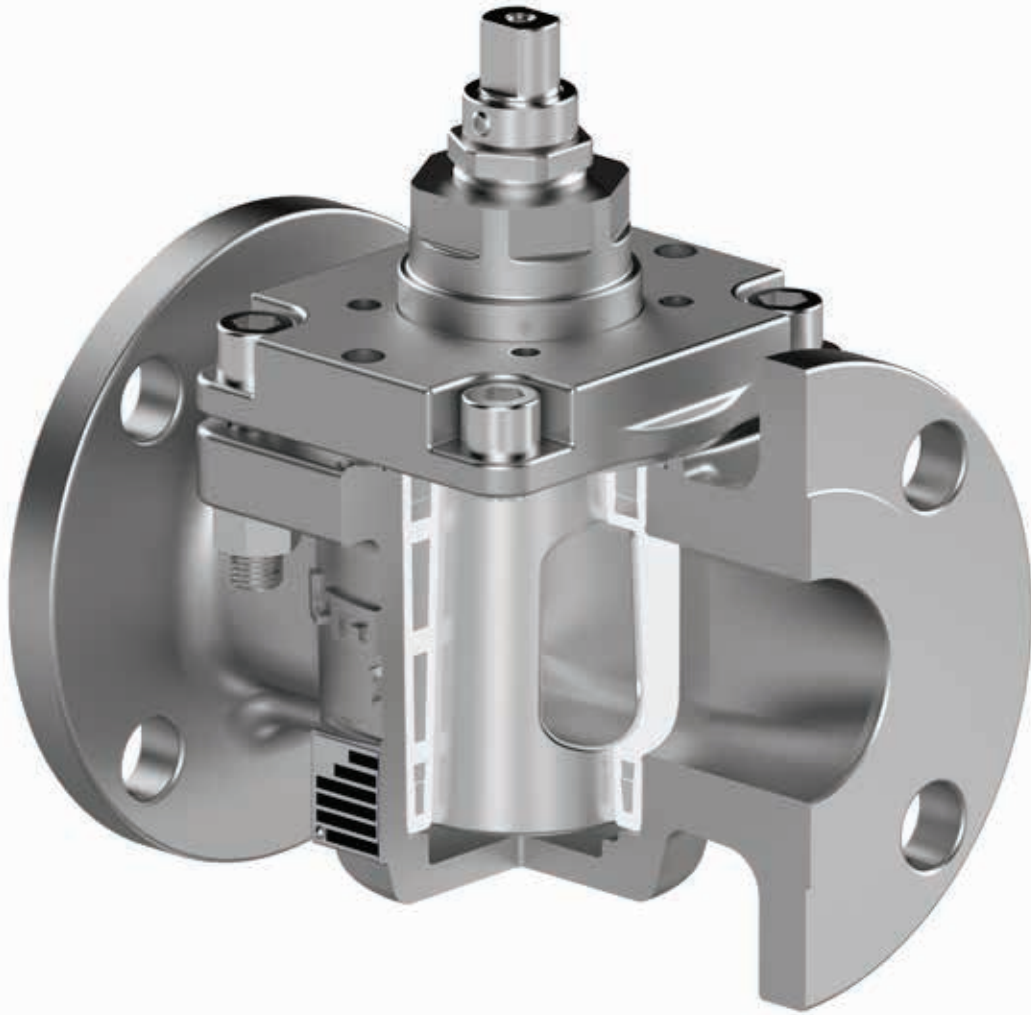
**MOST COMPACT AUTOMATED SPV PACKAGES IN THE INDUSTRY**

**L-TORQ XOMOX®**  
Sleeved Plug Valves

**CRANE**

**v in** [www.cranecpe.com](http://www.cranecpe.com)

## Why XOMOX® Plug Valves



### **No Cavities**

No scaling media  
– Torque does  
not increase  
during service

### **Large Sealing Area**

Small scratches do  
not affect the seal. No  
concern of leakage

### **Inline Adjustable**

Inline and external seals  
can be adjusted while the  
valve is installed.

## Product Overview

### Materials of Construction

- WCB/CF8M/CN7M/CD4MCuN with PFA Cartridge
- 1.069/1.4408/1.4500/1.4470 Duplex with PFA Cartridge

### Size Range

- ½" - 6"
- DN15 - DN150

### Pressure Ratings

- ASME Class 150, 300
- EN Class PN 10-40

### Sealing and Packing

- Cover Joint: 50% PTFE - 50% Graphite Spiral Wound Gasket with Monel or SS trim.
- Stem Seals: PTFE or Graphite

### Actuator Mounting

- ISO 5211 Mounting

### Applications

- MDI, TDI
- Fertilizer
- Ammonia
- Caustic
- Crude
- Oil Sands
- AA
- Chlorine
- HCN
- Sulfuric Acid
- HF
- Coffee



## L-TORQ XOMOX

Brings remarkable benefits in torque, reparability and emissions performance, while maintaining the primary properties of a sleeved plug valve.

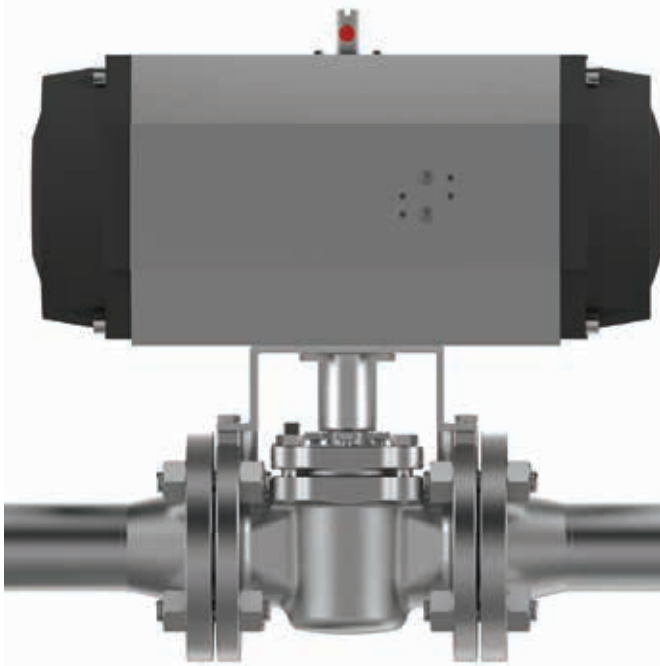
## Features and Benefits

50%↓



**TORQUE REDUCTION**

**Conventional  
Sleeved Plug Valve**



**L-TORQ**



**Smaller Actuator**

**Lighter Weight**  
(Actuated Valves)

**Longer Lifetime**

## Features and Benefits

### **SIMPLIFIED REPAIR**



**Simplified  
Repair**

**Compact Sleeve  
cartridge design**

**Cover, Plug  
and Sleeve Cartridge  
Separate components**

## Features and Benefits



### FUGITIVE EMISSIONS



**ISO 15848-1**  
2015

**TA-LUFT**  
2021

**ANSI/API**  
**STD 607**  
8<sup>th</sup> EDITION 2022

## Design Features

### SLEEVE CARTRIDGE DESIGN

- Structure that supports the sleeve by giving more dimensional control.
- Fully encapsulated metal cage port lips in PFA – eliminating the crevice region that exist in conventional SPV design



### INVERTED PLUG

- Provides effective control on sleeve compression
- Plug adjustment done by plug lifting
- Separated stem packing and plug adjustment

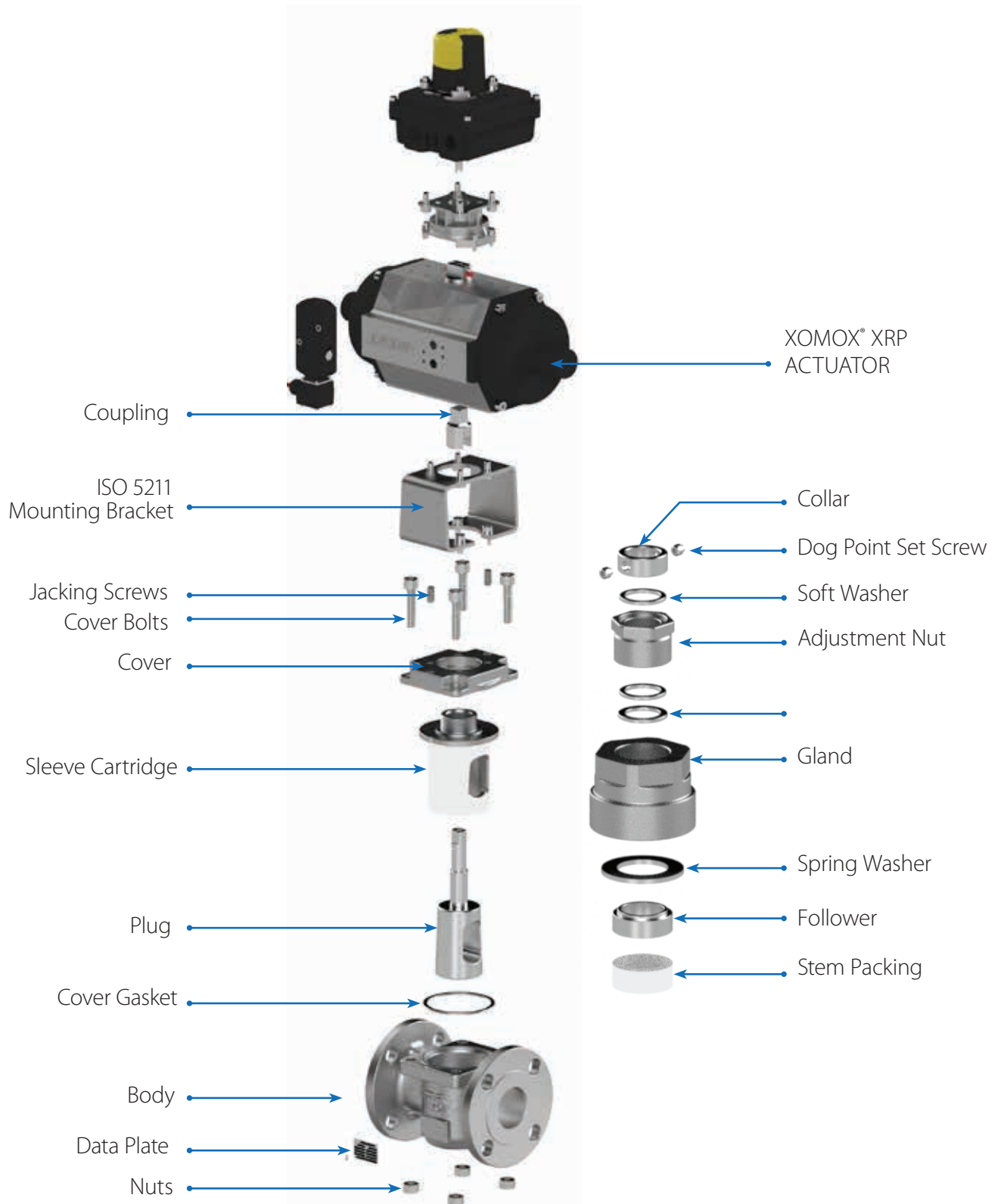


### REPAIR KIT

- Compact sleeve cartridge design
- This simplified repair process does not require highly skilled personnel nor special tooling.



## Overview





## Design Features and Options



**ISO 5211  
Actuator  
Mounting**

**Locking Device  
as standard with  
Lever And Gear  
Operators**

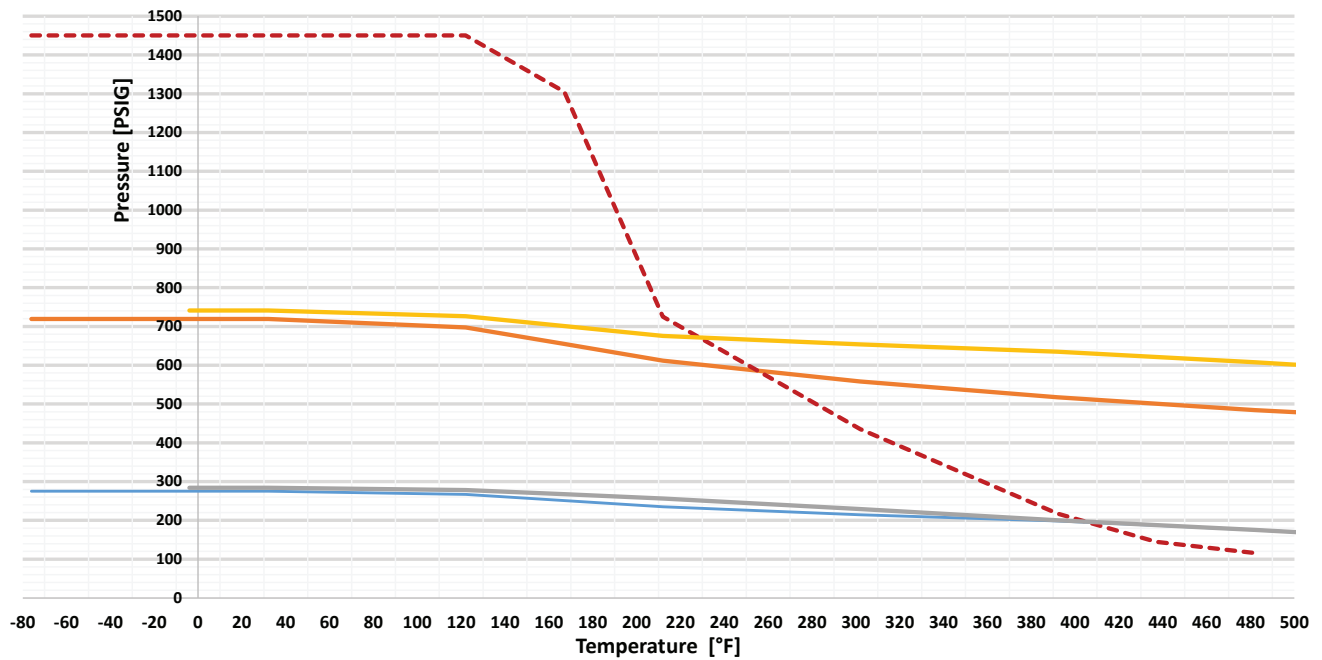
**Automated  
Packages with  
NAMUR interface  
readily available**

**Available in  
Firesafe  
Option  
as per API 607**

# Pressure Temperature Ratings ANSI

## PRESSURE-TEMPERATURE RATING

L-TORQ XOMOX FIG. L067 & L0367, SIZE 1/2"-6" 2-WAY, CLASS 150 & 300



## OPERATING TORQUES. (INCH-POUNDS)

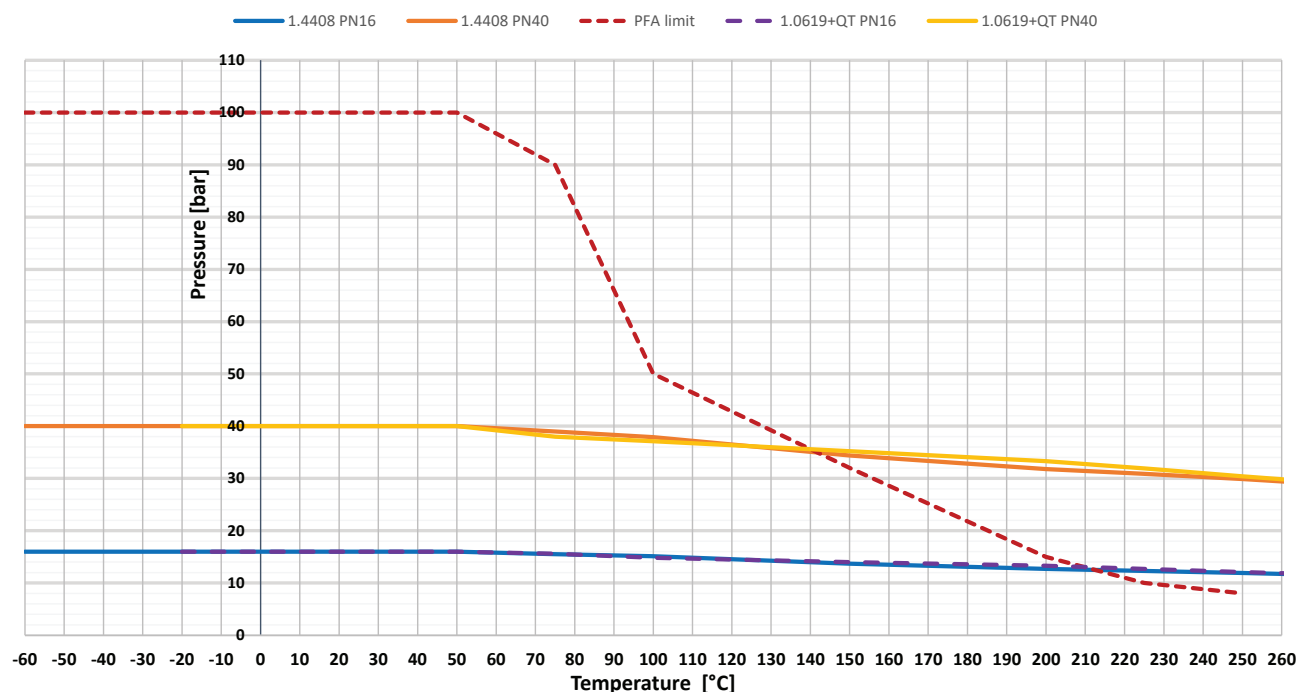
Size	Break Torque	Seat Torque	Run Torque
1/2"	70	80	71
3/4"	70	80	71
1"	190	151	133
1½"	400	319	284
2"	545	434	381
3"	660	532	461
4"	1,350	1,080	948
6"	2,700	2,169	1,877

\* Figures are for 2-Way valves with PFA Cartridge for clean media. For Chlorine, Oxygen etc. Dry Built configurations multiply the above values with 1.5

# Pressure Temperature Ratings DIN

## PRESSURE-TEMPERATURE RATING

L-TORQ XOMOX FIG. L067 & L0367, SIZE DN15 to DN150 2-WAY, PN 16 and PN40



## OPERATING TORQUES. (NM)

Size	Break Torque	Seat Torque	Run Torque
1/2"	8	9	8
3/4"	8	9	8
1"	21	17	15
1½"	45	36	32
2"	62	49	43
3"	75	60	52
4"	153	122	107
6"	305	245	212

\* Figures are for 2-Way valves with PFA Cartridge for clean media. For Chlorine, Oxygen etc. Dry Built configurations multiply the above values with 1.5

# MAST and Kv/Cv Values for US and EU

## L-TORQ MAST (ANSI/DIN)

Size		1.4408/CF8M	1.4470 (Duplex) / CD4MCuN
1/2"	DN 15	62	96
3/4"	DN 20	62	96
1"	DN 25	107	164
1 1/2"	DN 40	222	343
2"	DN 50	222	343
2 1/2"	DN 65	222	343
3"	DN 80	222	343
4"	DN 100	576	892
5"	DN 125	852	1318
6"	DN 150	852	1318


## Kv / Cv Values L067 class 150 & L0367 class 300

ANSI		
	KV	CV
1/2"	14	16
3/4"	16	19
1"	45	52
1 1/2"	101	117
2"	186	215
3"	306	354
4"	538	622
6"	1066	1232

## Kv / Cv Values L127 PN10-40

DIN		
	KV	CV
DN 15	14	16
DN 20	16	19
DN 25	47	54
DN 32	47	54
DN 40	103	119
DN 50	190	220
DN 65	190	220
DN 80	350	405
DN100	615	711
DN125	615	711
DN150 SHORT	1066	1232
DN150 LONG	1109	1282

## Ltorq Data Plate



**L-TORQ XOMOX**

L-TORQ XOMOX® brings remarkable benefits in torque, reparability, and emissions performance, while maintaining the primary properties of a sleeved plug valve; 50% lower torque than current sleeved plug valves, replaceable cartridge design that equates to less costs, and it meets the new TA-LUFT & ISO-15848 standards.


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L-TORQ web  
page QR code

Data matrix for  
serial number



**CraneCPE.com**  
*"Made In" Country of Origin*

Figure No ISO FE	
Size/Class	
Break Torque	
Body Matl/Cart Seal Matl/Stem Packing Matl	
CE # / Manufacturing year	
Max Temp/Max pressure at that temp (TS)	
Max pressure/Max temp at that pressure (PS)	
Valve Part #	
Valve Serial #	

**L-TORQ Data Plate**

# ISO 15848 ( TA-LUFT 2021) 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 <sup>(200°C)</sup> 392°F – SSA0

Part Composition	
Part 1: Design  • System of classification and procedures of qualification for the tests of the valve type	Part 2: Industrial (Production)  • Acceptance tests in production of the valves • Non-destructive

Class	Measured Leak Rate <sup>a</sup> mg s <sup>-1</sup> m <sup>-1</sup>	Remarks
A <sup>b</sup>	≤ 10 <sup>-5</sup>	Typically achieved with bellow seals or and equivalent stem (shaft) sealing system for quarter turn valves
B	≤ 10 <sup>-4</sup>	Typically achieved with PTFE based packings or elastomeric seals
C	≤ 10 <sup>-2</sup>	Typically achieved with flexible graphite based packings
<sup>a</sup> Expressed in mg s <sup>-1</sup> m <sup>-1</sup> measured with total leakage method <sup>b</sup> Class A can be measured only with helium using the vacuum method		

Number of Adjustments
0 / 1 / 2 / 3

Temperature Classes				
(T -196 °C)	(T -40 °C)	(T RT)	(T 200 °C)	(T 400 °C)
-320°F	-40°F	Room temperature, °F	392°F	752°F
-196°C	-40°C	Room temperature, °C	200°C	400°C

Classification	Minimum number of mechanical cycles
CO1	800 cycles, with two thermal cycles (except for RT)
CO2	1,500 cycles, with three thermal cycles
CO3	2,500 cycles, with four thermal cycles

Test Fluid	Class
H - Helium	AH, BH, CH
M - Methane	AM, BM, CM
When the test fluid is <b>helium</b> , classes are identified as AH, BH and CH. When the test fluid is methane, classes are identified as AM, BM and CM.	

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 performance of the valves (Please refer to ISO 15848 norm).

# How to Order

<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <b>1"</b> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <b>L067</b> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <b>6</b> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <b>6</b> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <b>P6</b> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <b>A</b> </div> <div style="border: 1px solid black; padding: 5px;"> <b>C</b> </div>	<div> <b>Valve Size</b>  <b>NPS</b>            1/2" / DN15            3/4" / DN20            1" / DN25            1-1/2" / DN40            2" / DN50            3" / DN80            4" / DN100            6" / DN150         </div> <div> <b>Figure Number</b>  <b>ASME</b>            L067 - 150 Class            L0367 - 300 Class  <b>DIN</b>            L127 - PN 10-40         </div> <div> <b>Body Material</b>  <table border="0"> <thead> <tr> <th>Grade</th> <th>Character</th> </tr> </thead> <tbody> <tr><td>CN7M/1.4500.....</td><td>0</td></tr> <tr><td>WCB/1.069.....</td><td>2</td></tr> <tr><td>M35-1/ 2.4365.....</td><td>H</td></tr> <tr><td>CZ-100/ 2.4066.....</td><td>5</td></tr> <tr><td>CF8M/ 1.4408.....</td><td>6</td></tr> <tr><td>CW6M/ 2.4856.....</td><td>T</td></tr> <tr><td>CD4MCuN/1.4470 Duplex.....</td><td>BN</td></tr> <tr><td>CY40/ 2.4817.....</td><td>40</td></tr> <tr><td>Other (Specify).....</td><td>X</td></tr> </tbody> </table> </div> <div> <b>Plug/Cartridge Material</b>  <table border="0"> <thead> <tr> <th>Grade</th> <th>Character</th> </tr> </thead> <tbody> <tr><td>CN7M/1.4500.....</td><td>0</td></tr> <tr><td>WCB/1.069.....</td><td>2</td></tr> <tr><td>M35-1/ 2.4365.....</td><td>H</td></tr> <tr><td>CZ-100/ 2.4066.....</td><td>5</td></tr> <tr><td>CF8M/ 1.4408.....</td><td>6</td></tr> <tr><td>CW6M/ 2.4856.....</td><td>T</td></tr> <tr><td>CD4MCuN/1.4470 Duplex.....</td><td>BN</td></tr> <tr><td>CY40/ 2.4817.....</td><td>40</td></tr> <tr><td>Other (Specify).....</td><td>X</td></tr> </tbody> </table> </div> <div> <b>Service</b>            Chlorine.....C            Oxygen.....O            Vacuum.....V            General Service.....*Blank*            Other**.....X            **Consult your Xomox Sales Engineer for a wide variety of other available service options.         </div> <div> <b>Valve Operator</b>            Actuated*.....A            Gear.....G            Locking T-Wrench.....T            Locking Wrench.....Y            Locking Gear.....Z            *Specify actuator type and air supply.         </div> <div> <b>Sleeve Material</b>  <table border="0"> <thead> <tr> <th>Grade</th> <th>Character</th> </tr> </thead> <tbody> <tr><td>PFA.....</td><td>P6</td></tr> </tbody> </table> </div>	Grade	Character	CN7M/1.4500.....	0	WCB/1.069.....	2	M35-1/ 2.4365.....	H	CZ-100/ 2.4066.....	5	CF8M/ 1.4408.....	6	CW6M/ 2.4856.....	T	CD4MCuN/1.4470 Duplex.....	BN	CY40/ 2.4817.....	40	Other (Specify).....	X	Grade	Character	CN7M/1.4500.....	0	WCB/1.069.....	2	M35-1/ 2.4365.....	H	CZ-100/ 2.4066.....	5	CF8M/ 1.4408.....	6	CW6M/ 2.4856.....	T	CD4MCuN/1.4470 Duplex.....	BN	CY40/ 2.4817.....	40	Other (Specify).....	X	Grade	Character	PFA.....	P6
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\* For ordering Spare kit, please contact XOMOX Sales Representative.

\* Other ferrous/non -ferrous material consult XOMOX engineer



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### CRANE CHEMPHARMA & ENERGY

XOMOX® Headquarters  
4444 Cooper Rd.  
Cincinnati, OH 45242, USA  
Tel: +1 513 745 6000  
Fax: +1 513 745 6086

Xomox International GmbH & Co. OHG  
Von-Behring-Straße 15  
88131 Lindau/Bodensee, Germany  
Tel: +49 8382 702 0  
Fax: +49 8382 702 144

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