

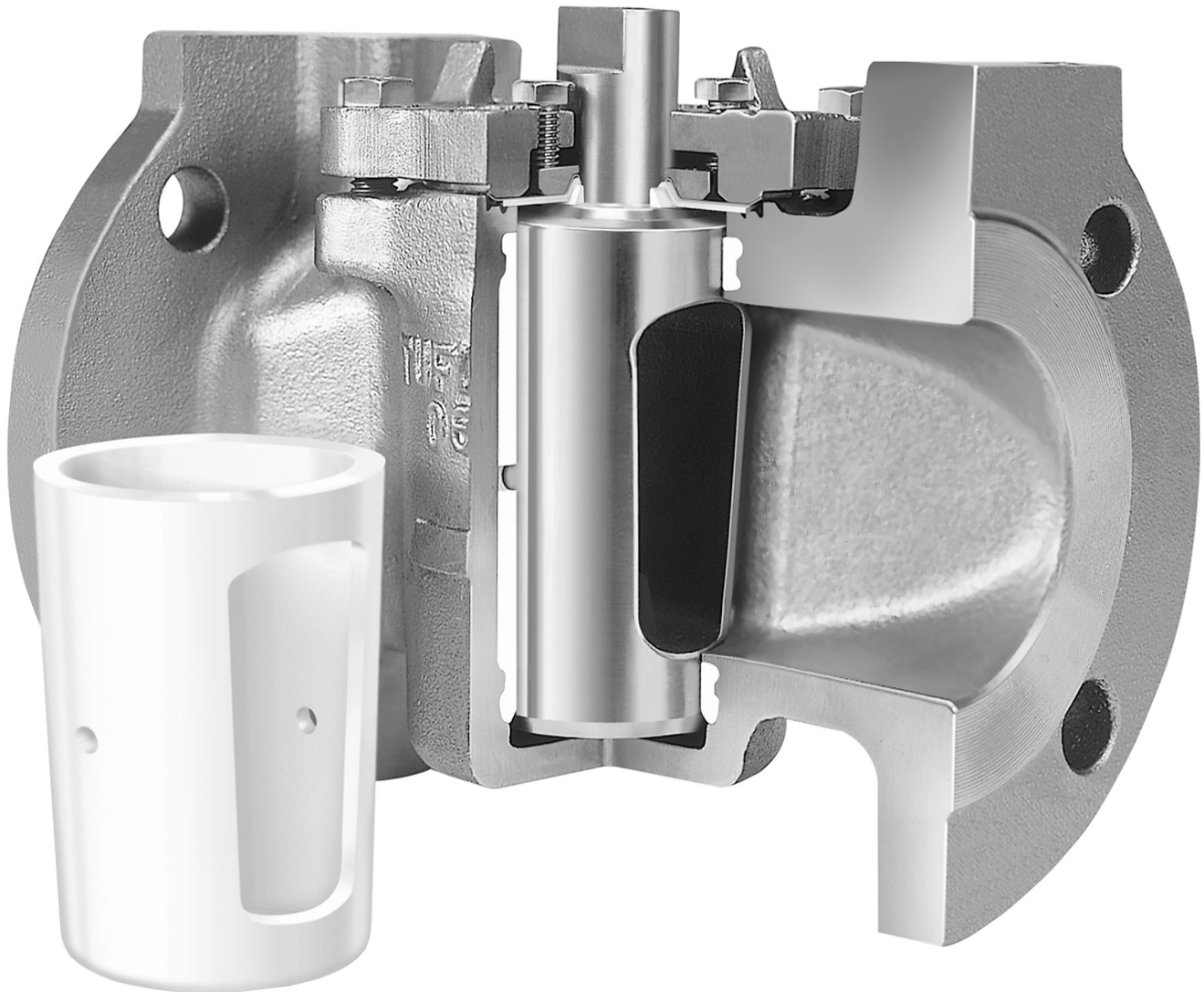
NEW! MOST COMPACT AUTOMATED SPV* PACKAGES IN THE INDUSTRY

*Sleeved Plug Valves

L-TORQ by XOMOX® Sleeved Plug Valves



Why Sleeved 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.

OUR HERITAGE EMBODIES TRUST AND CREATIVITY
OUR FUTURE IS DEFINED THROUGH INNOVATION
XOMOX® IS A PIONEER AND A REFERENCE MARKET
LEADER IN SLEEVED PLUG VALVE TECHNOLOGY
OUR PURPOSE IS TO PROVIDE YOU SOLUTIONS THAT
ENSURE SAFETY, QUALITY AND HIGH PERFORMANCE

XOMOX® Sleeved Plug Valves

More than 65 years experience in variety of applications

- 1 Reliable shutoff and throttling service devices**
- 2 Provide safety in a wide range of severe and highly demanding services**
- 3 Show excellent performance in traditional ball and gate valve applications**
- 4 Offer a cost-efficient solution for tight shutoff and throttling of gases, vapors and slurries**

Product Overview

Materials of Construction

- WCB, CF8M // PFA Sleeve

Size Range

- 1/2" - 6"

Pressure Ratings

- ASME Class 150, 300,

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
- Mining
- AA
- Chlorine
- HCN
- Sulfuric Acid
- HF
- Coffee



L-TORQ by XOMOX®

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

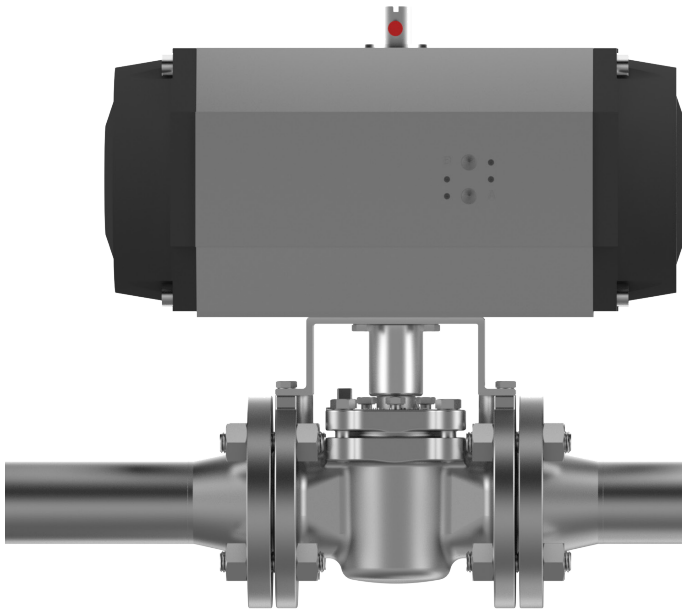
Features and Benefits

50%↓



TORQUE REDUCTION

**Conventional
Sleeved Plug Valve**



L-TORQ



Smaller Actuator

Lighter Weight
(Actuated Valves)

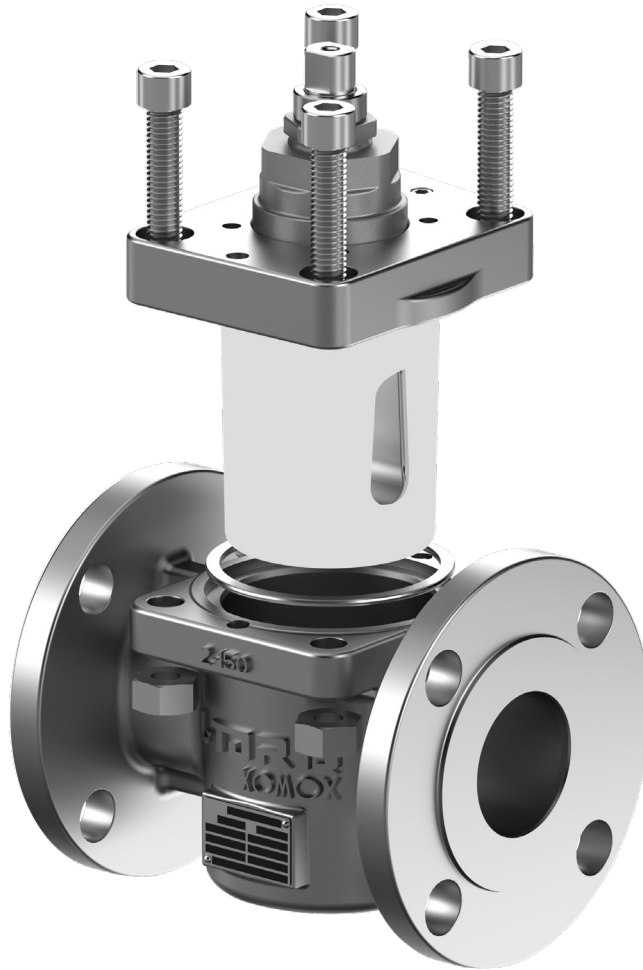
Longer Lifetime

Features and Benefits

40% ↓



REPAIRABILITY



40%
Shorter Repair
Time

Compact Sleeve
cartridge design

Cover, Plug
and Sleeve Cartridge
Separate components

Features and Benefits



FUGITIVE EMISSIONS



Meeting new
TA-LUFT

ISO 15848-1
BH CO3 200°C
SSA3 Standard

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

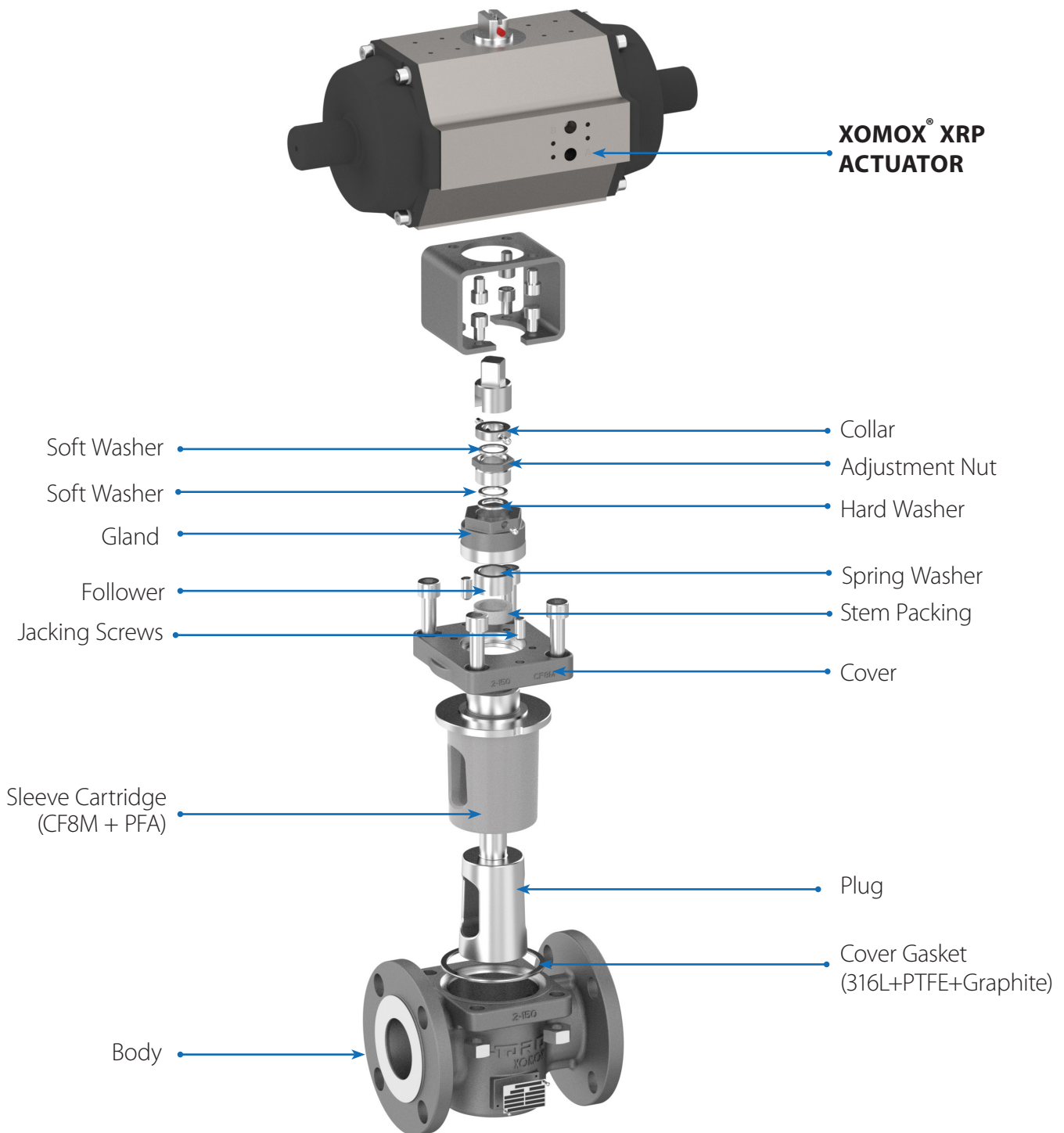
- Provides effective control on sleeve compression
- Plug adjustment done by plug lifting – engineered not to expose the water way

REPAIR KIT

- Compact sleeve cartridge design
- Reduces repair time up to 40%. This simplified repair process does not require highly skilled personnel nor special tooling.



Properties and Characteristics



Design Features and Options



Available In
2-Way
Configuration
Class 150
and Class 300

Integrated Locking
Device Available
with Lever And
Gear Operators

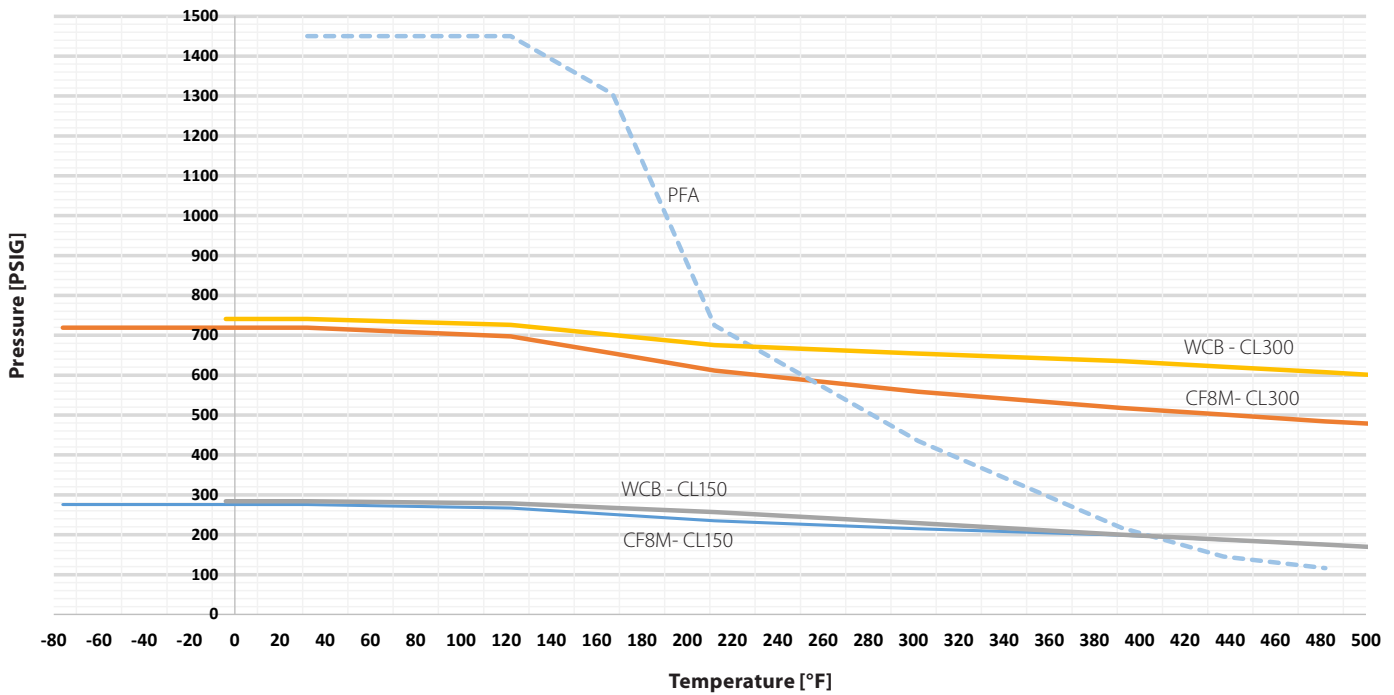
Actuator
Mounting
capabilities per
ISO 5211

Available in
Firesafe
Option

Torques and Pressure Temperature Ratings

TORQUE

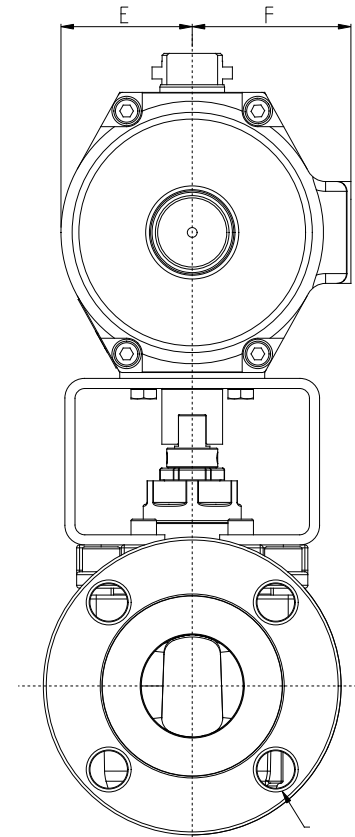
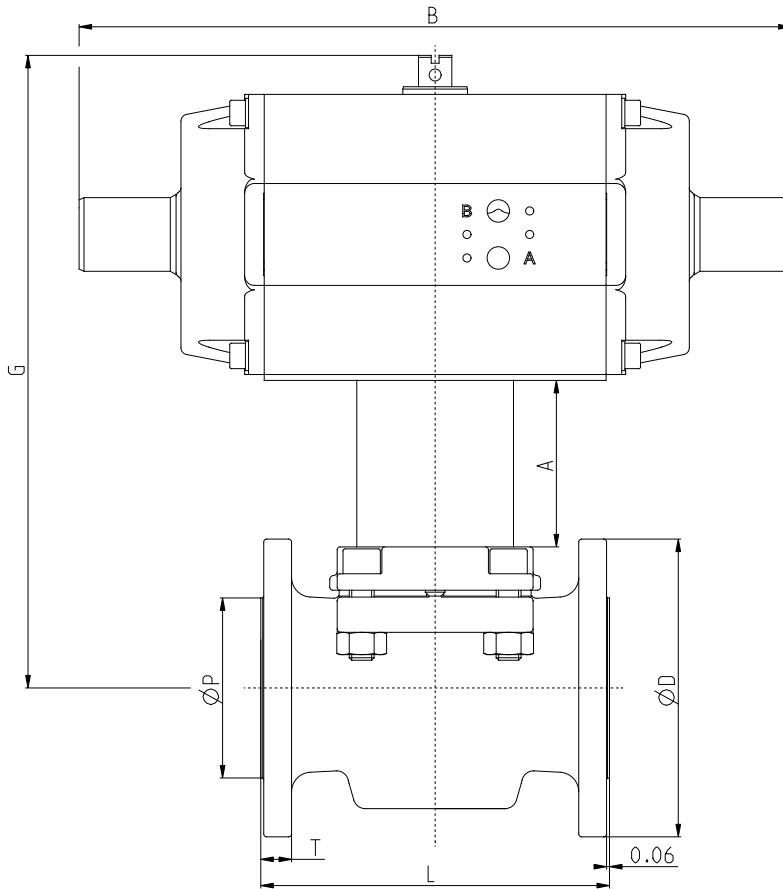
L-TORQ FIG. L067 & L0367, SIZE 1/2"-6" 2-WAY, CLASS 150 & 300



Dimensional Data

ACTUATED

L-TORQ FIG. L067 & L0367, SIZE 1/2"-6", Class 150



FLANGE BOLTING DETAILS
 N-NO OF BOLT HOLES
 O-DIA OF BOLT HOLES
 C-DIA OF BOLT CIRCLF

Single Acting with 80 PSIG air supply

L-TORQ FIG. L067 & L0367, SIZE 1/2"-6", Class 150

SIZE	CLASS	A	B	C	D	E	F	G	L	N	O	P	T	WEIGHT IN POUNDS
1/2"	150	2.52	7.77	2.38	3.50	1.37	1.63	7.83	4.25	4.00	0.63	1.38	0.37	9.5
3/4"	150	2.52	7.77	2.75	3.90	1.37	1.63	7.83	4.61	4.00	0.63	1.69	0.40	10.4
1"	150	2.60	10.27	3.12	4.25	1.61	2.19	8.90	5.00	4.00	0.63	2.00	0.44	17.2
1 1/2"	150	3.35	11.34	3.88	5.00	2.17	2.72	11.34	6.50	4.00	0.63	2.87	0.56	27.1
2"	150	3.35	14.31	4.75	5.98	2.64	3.19	12.71	7.01	4.00	0.75	3.62	0.62	42.3
3"	150	3.35	14.31	6.00	7.48	2.64	3.19	13.26	7.99	4.00	0.75	5.00	0.75	58
4"	150	4.13	17.78	7.50	9.02	3.07	3.78	16.07	9.02	8.00	0.75	6.19	0.94	99
6"	150	4.33	20.83	9.50	10.98	3.54	4.02	18.63	10.51	8.00	0.88	8.50	1.00	167.1

Dimensional Data

Single Acting with 80 PSIG air supply

L-TORQ FIG. L067 & L0367, SIZE 1/2"-6", Class 300

SIZE	CLASS	A	B	C	D	E	F	G	L	N	O	P	T	WEIGHT IN POUNDS
1/2"	300	2.52	7.77	2.62	3.74	1.37	1.63	7.83	5.51	4.00	0.63	1.38	0.56	11
3/4"	300	2.52	7.77	3.25	4.61	1.37	1.63	7.83	5.98	4.00	0.75	1.69	0.62	13
1"	300	2.60	10.27	3.50	4.88	1.61	2.19	8.90	6.26	4.00	0.75	2.00	0.68	20.7
1 1/2"	300	3.35	11.34	4.50	6.10	2.17	2.72	11.34	7.48	4.00	0.88	2.87	0.81	34.2
2"	300	3.35	14.31	5.00	6.50	2.64	3.19	12.71	8.50	4.00	0.75	3.62	0.87	49.2
3"	300	3.35	14.31	6.62	8.27	2.64	3.19	13.26	11.10	4.00	0.88	5.00	1.12	73.4
4"	300	4.13	17.78	7.88	10.00	3.07	3.78	16.07	12.01	8.00	0.88	6.19	1.25	123.9
6"	300	4.33	20.83	10.62	12.52	3.54	4.02	18.63	15.87	8.00	0.88	8.50	1.44	223.1

Double Acting with 80 PSIG air supply

L-TORQ FIG. L067 & L0367, SIZE 1/2"-6", Class 150 and 300

SIZE	CLASS	A	B	C	D	E	F	G	L	N	O	P	T	WEIGHT IN POUNDS
1/2"	150	2.52	6.53	2.38	3.50	1.00	1.30	7.05	4.25	4.00	0.63	1.38	0.37	9.5
3/4"	150	2.52	6.53	2.75	3.90	1.00	1.30	7.05	4.61	4.00	0.63	1.69	0.40	10.4
1"	150	2.60	7.78	3.12	4.25	1.37	1.63	8.35	5.00	4.00	0.63	2.00	0.44	17.2
1 1/2"	150	3.35	10.27	3.88	5.00	1.61	2.19	10.16	6.50	4.00	0.63	2.87	0.56	27.1
2"	150	3.35	11.34	4.75	5.98	2.17	2.72	11.71	7.01	4.00	0.75	3.62	0.62	42.3
3"	150	3.35	11.34	6.00	7.48	2.17	2.72	12.26	7.99	4.00	0.75	5.00	0.75	58
4"	150	4.13	14.31	7.50	9.02	2.64	3.19	14.90	9.02	8.00	0.75	6.19	0.94	99
6"	150	4.33	17.78	9.50	10.98	3.07	3.78	17.59	10.51	8.00	0.88	8.50	1.00	167.1
1/2"	300	2.52	6.53	2.62	3.74	1.00	1.30	7.05	5.51	4.00	0.63	1.38	0.56	11
3/4"	300	2.52	6.53	3.25	4.61	1.00	1.30	7.05	5.98	4.00	0.75	1.69	0.62	13
1"	300	2.60	7.78	3.50	4.88	1.37	1.63	8.35	6.26	4.00	0.75	2.00	0.68	20.7
1 1/2"	300	3.35	10.27	4.50	6.10	1.61	2.19	10.16	7.48	4.00	0.88	2.87	0.81	34.2
2"	300	3.35	11.34	5.00	6.50	2.17	2.72	11.71	8.50	4.00	0.75	3.62	0.87	49.2
3"	300	3.35	11.34	6.62	8.27	2.17	2.72	12.26	11.10	4.00	0.88	5.00	1.12	73.4
4"	300	4.13	14.31	7.88	10.00	2.64	3.19	14.90	12.01	8.00	0.88	6.19	1.25	123.9
6"	300	4.33	17.78	10.62	12.52	3.07	3.78	17.59	15.87	8.00	0.88	8.50	1.44	223.1

ISO 15848 Standard Introduction



International
Organization for
Standardization

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.

INTERNATIONALISO
STANDARD 15848-1

Example Description Tables

ISO 15848 – 1 BH CO3 ^(200°C) 392°F – SSA 3

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

Number of Adjustments
0 / 1 / 2 / 3

Temperature Classes				
(T-196°C)	(T-40°C)	(T RT)	(T200°C)	(T400°C)
-320°F	-40°F	Room temperature, °F	392°F	752°F
-196°C	-40°C	Room temperature, °C	200°C	400°C

Class	Measured Leak Rate ^a mg s ⁻¹ m ⁻¹	Remarks
A ^b	≤ 10 ⁻⁶	Typically achieved with bellow seals or and equivalent stem (shaft) sealing system for quarter turn valves
B	≤ 10 ⁻⁴	Typically achieved with PTFE based packings or elastomeric seals
C	≤ 10 ⁻²	Typically achieved with flexible graphite based packings

^a Expressed in mg s⁻¹ m⁻¹ measured with total leakage method
^b Class A can be measured only with helium using the vacuum method

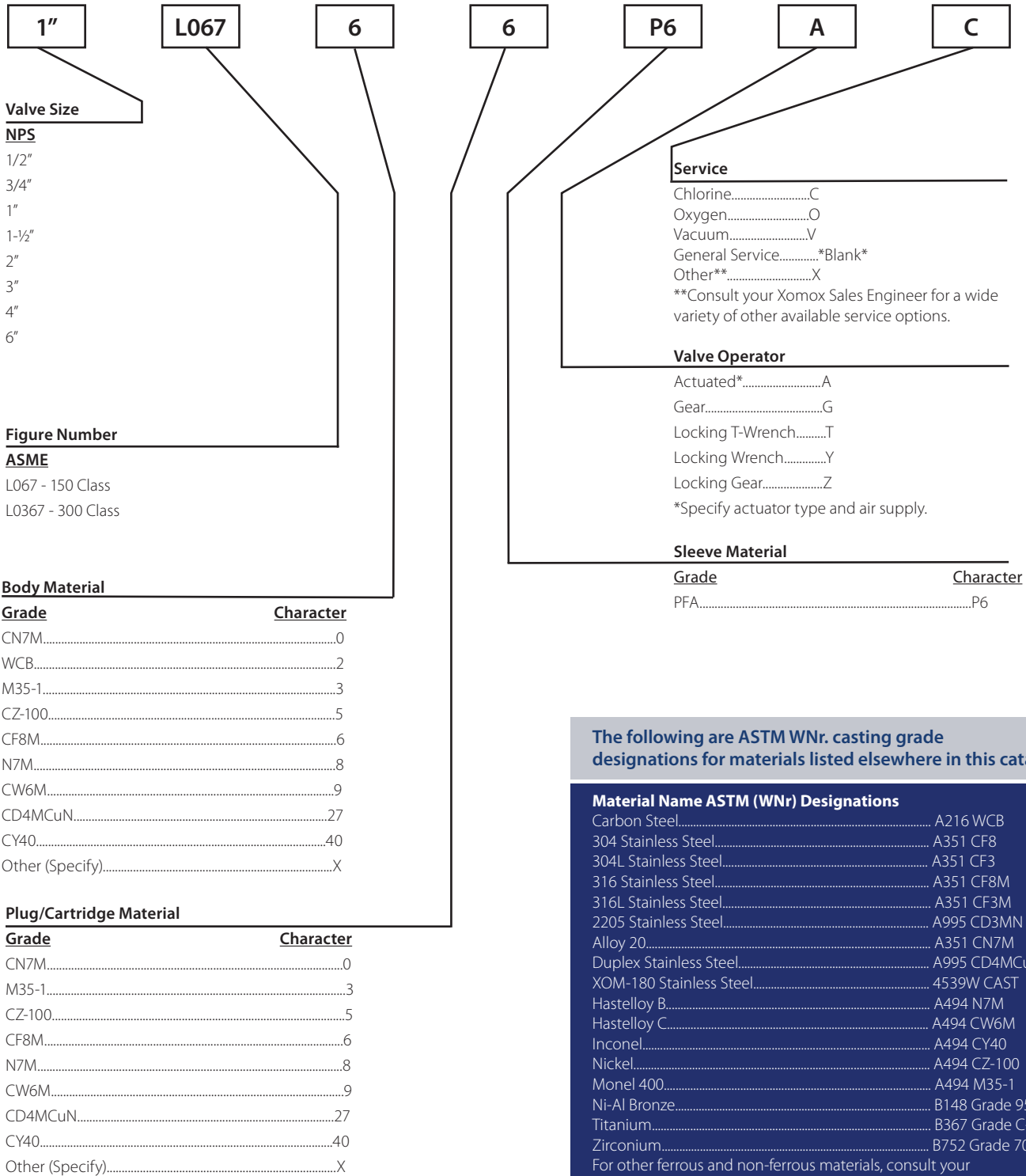
Classification	Minimum number of mechanical cycles
CO1	500 cycles, with two thermal cycles (except for RT)
CO2	1,500 cycles, with three thermal cycles
CO3	2,500 cycles, with four thermal cycles

Test Fluid	Class
H - Helium	AH, BH, CH
M - Methane	BM, CM

When the test fluid is **helium**, classes are identified as **AH, BH** and **CH**.
 When the test fluid is **methane**, classes are identified as **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



The following are ASTM WNr. casting grade designations for materials listed elsewhere in this catalog.

Material Name ASTM (WNr) Designations

Carbon Steel.....	A216 WCB
304 Stainless Steel.....	A351 CF8
304L Stainless Steel.....	A351 CF3
316 Stainless Steel.....	A351 CF8M
316L Stainless Steel.....	A351 CF3M
2205 Stainless Steel.....	A995 CD3MN
Alloy 20.....	A351 CN7M
Duplex Stainless Steel.....	A995 CD4MCuN 1B
XOM-180 Stainless Steel.....	4539W CAST
Hastelloy B.....	A494 N7M
Hastelloy C.....	A494 CW6M
Inconel.....	A494 CY40
Nickel.....	A494 CZ-100
Monel 400.....	A494 M35-1
Ni-Al Bronze.....	B148 Grade 958
Titanium.....	B367 Grade C-3
Zirconium.....	B752 Grade 702

For other ferrous and non-ferrous materials, consult your XOMOX® Sales Engineer.

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