



A-T Controls' Series LB ball valves feature the latest technology in PFA. These fully lined ball valves are available with stainless steel or epoxy coated carbon steel body. The superior PFA lining is able to withstand temperatures up to 400°F and demonstrates greater durability than PTFE. This high purity PFA has extremely low gas permeability and outperforms other materials in critical services.

These split body valves feature adjustable packing. The lining thickness is at least 3mm. throughout the body and ball. One-piece ball and stem design reduces side loading and extends stem and packing life.

VALVE SIZE	VALVE Cv
1/2"	20
3/4"	20
1"	55
1-1/2"	210
2"	310
2-1/2"	310
3"	684
4"	1,546
6"	3,262
8"	4,565

Excellent for:

- Pharmaceutical
- Food and Beverage
- Paints and Solvents
- Caustics and Acids
- Deionized Water and Semiconductor

Easy to Automate!

See automated data sheets for pre-sized assemblies



Pneumatic



Electric

A-T Controls, Inc.

Series LB

PFA Lined Split Body Flanged Ball Valve

Available in 316SST or WCB

Sizes 1/2"-8"

Flanged Ends • ASME Class 150

Full Port Design

Superior Packing System

PTFE Seats Standard

Lockable Manual Handle

Spark Test Standard (20 kV)

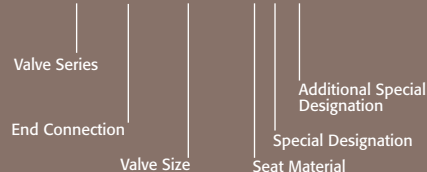
STANDARDS

Design & Manufactured	API 608
Face to Face Dimensions	ASME B16.10
Flange End Connections	ASME B16.5
Pressure Testing	API 598
Material Certification	EN 10204-3.1
Quality Assurance	ISO 9001:2015

HOW TO ORDER MANUAL VALVES

SAMPLE PART #

LB-F1-0300-LXX



See part number matrix for itemized options

A-T Controls, Inc.

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Cincinnati, Ohio 45246
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sales@atcontrols.com

Series LB

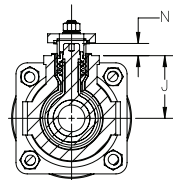
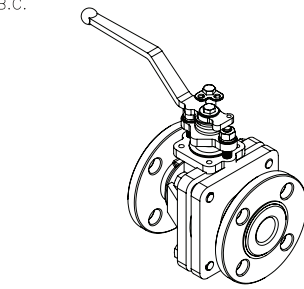
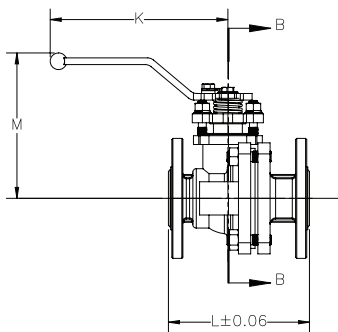
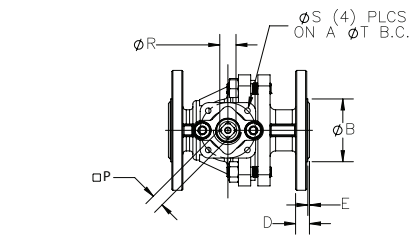
High Performance, Full Port PFA Lined, Split Body Ball Valve ASME Class 150 Flanged Ends

MATERIALS LIST

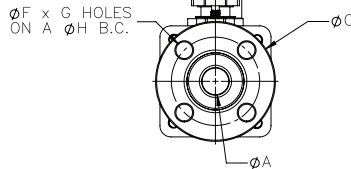
NO.	PART NAME	QTY	STAINLESS STEEL	CARBON STEEL
1	Body	1	ASTM A351 GRADE CF8M/PFA	ASTM A216 GRADE WCB/PFA
2	End Cap	1	ASTM A351 GRADE CF8M/PFA	ASTM A216 GRADE WCB/PFA
3	Ball	1	ASTM A351 GRADE CF8M/PFA	ASTM A351 GRADE CF8/PFA
4	Seat	2	PTFE	PTFE
5	Body Studs	*	ASTM A193 GRADE B8	ASTM A193 GRADE B8
6	Body Nut	*	ASTM A194 GRADE 8	ASTM A194 GRADE 8
7	Packing	1	PTFE	PTFE
8	Packing Bushing	1	AISI 304	AISI 304
9	Packing Gland	1	ASTM A351 GRADE CF8	ASTM A351 GRADE CF8
10	Anti-Static Spring	1	AISI 321	AISI 321
11	Gland Stud	2	AISI 304	AISI 304
12	Gland Flat Washer	2	AISI 321	AISI 321
13	Gland Split Washer	2	AISI 321	AISI 321
14	Gland Nut	2	AISI 304	AISI 304
15	Handle	1	ASTM A351 GRADE CF8	ASTM A351 GRADE CF8
16	Handle Washer	1	AISI 321	AISI 321
17	Handle Bolt	1	AISI 304	AISI 304
18	Handle Stop	1	AISI 304	AISI 304
19	Handle Lock	1	AISI 321	AISI 321
20	Handle Lock Bolt	1	AISI 304	AISI 304

* 1/2" THRU 2-1/2" - QTY 4
* 3" THRU 4" - QTY 6

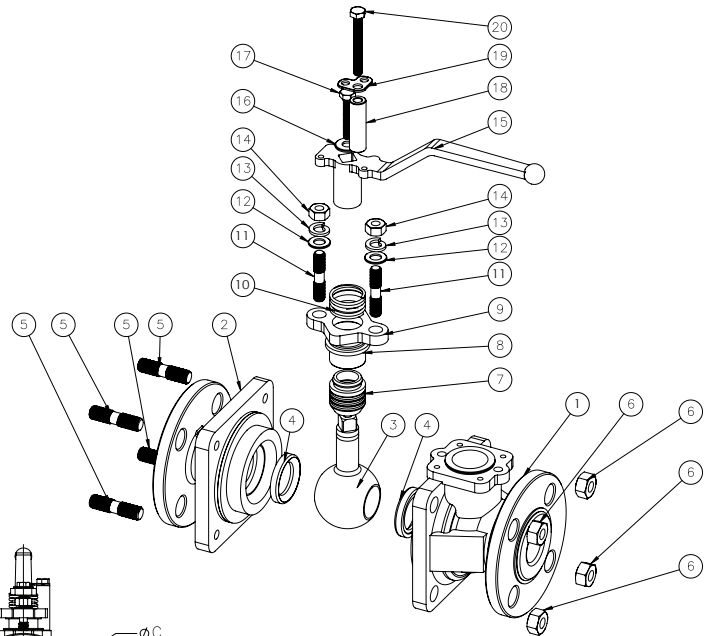
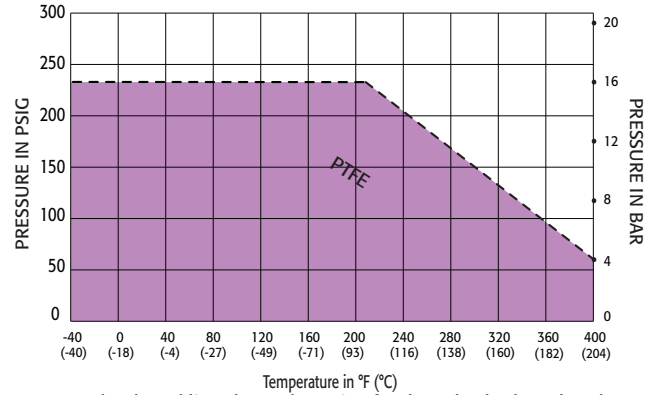
* 6" - QTY 8
* 8" - QTY 10



SECTION B-B
SCALE 1 : 3



Pressure vs. Temperature Chart



Break Away Torque for PTFE Seats

SIZE	IN-LBS.
1/2"	80
3/4"	80
1"	100
1-1/2"	185
2"	250
2-1/2"	285
3"	475
4"	805
6"	1,300
8"	3,300

NOTE: For other seat material, consult factory

VALVE DIMENSIONS														ACTUATOR MOUNTING DIMENSIONS					
SIZE	ØA	ØB	ØC	D	E	ØF	G	H	J	K	L	M	N	ØP	ØR	ØS	T	ISO 5211	(LBS)
1/2"	0.59	1.38	3.50	0.44	0.06	0.63	4	2.38	2.03	6.30	4.25	5.04	0.16	0.354	0.46	1/4"-20	1.969	F05	7.72
3/4"	0.59	1.69	3.88	0.44	0.06	0.63	4	2.74	2.03	6.30	4.62	5.04	0.16	0.354	0.46	1/4"-20	1.969	F05	10.14
1"	0.98	2.00	4.25	0.44	0.06	0.63	4	3.12	2.22	6.30	5.00	5.24	0.16	0.433	0.57	1/4"-20	1.969	F05	11.02
1-1/2"	1.50	2.88	5.00	0.56	0.06	0.63	4	3.88	2.76	7.87	6.50	6.30	0.61	0.551	0.75	5/16"-18	2.756	F07	24.25
2"	1.87	3.62	6.00	0.63	0.06	0.75	4	4.75	3.21	7.87	7.00	6.69	0.53	0.551	0.75	5/16"-18	2.756	F07	30.86
2-1/2"	1.87	4.12	7.00	0.69	0.06	0.75	4	5.50	3.21	7.87	7.50	6.69	0.53	0.551	0.75	5/16"-18	2.756	F07	41.89
3"	3.15	5.00	7.50	0.75	0.06	0.75	4	6.00	4.45	10.24	8.00	9.05	0.75	0.748	1.02	5/16"-18	2.756	F07	63.49
4"	3.86	6.19	9.00	0.94	0.06	0.75	8	7.50	5.31	12.32	9.00	10.43	0.91	0.748	1.02	3/8"-16	4.016	F10	98.77
6"	5.75	8.50	11.00	1.00	0.06	0.87	8	8.50	7.26	21.06	10.50	14.45	1.20	1.063	1.46	7/16"-14	4.921	F12	212.08
8"	7.80	11.75	13.50	1.12	0.06	0.87	8	11.75	8.96	-	11.50	-	1.36	1.417	1.97	5/8"-11	5.512	F14	260.15

*Regular Port

Pneumatic Double Acting Automated Ball Valve Package

Series LB
ASME Class 150
Flanged PFA Lined Ball Valve

Available in 316SST or WCB

Sizes 1/2"-8"

Flanged Ends • ASME Class 150

Full Port Design

Superior Packing System

PTFE Seats Standard

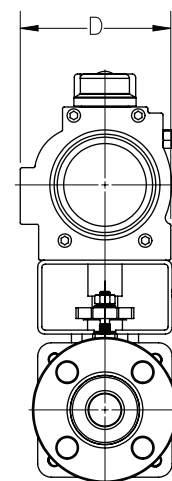
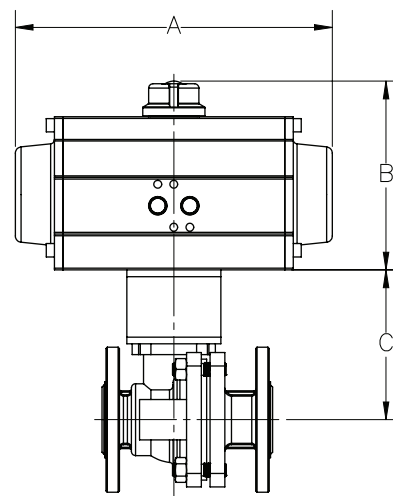
Spark Test Standard (20 kV)

STANDARDS

Design & Manufactured	API 608
Face to Face Dimensions	ASME B16.10
Flange End Connections	ASME B16.5
Pressure Testing	API 598
Material Certification	EN 10204-3.1
Quality Assurance	ISO 9001:2015



**ASME Class 150 Flanged
PFA Lined Ball Valve**



Double Acting Assembly DIMENSIONS (IN)

VALVE SIZE	A	B	C	D	VALVE Cv
1/2"	6.50	3.62	4.20	2.82	20
3/4"	6.50	3.62	4.20	2.82	20
1"	6.50	3.62	4.39	2.82	55
1-1/2"	7.60	4.25	5.38	3.35	210
2"	7.60	4.25	5.83	3.35	310
2-1/2"	7.60	4.25	5.83	3.35	210
3"	9.29	5.09	7.07	4.18	684
4"	11.02	5.40	8.31	4.27	1,546
6"	11.50	6.07	10.26	5.78	3,262
8"	15.35	7.99	11.96	5.98	4,565

DIMENSIONS SHOWN ARE FOR ASSEMBLIES SIZED FOR 80 PSI SUPPLY

SIZED FOR 80 psi AIR SUPPLY

SIZE	MODEL
1/2"	LB-F1-050/3RDD-XX
3/4"	LB-F1-075/3RDD-XX
1"	LB-F1-100/3RDD-XX
1-1/2"	LB-F1-150/3RED-XX
2"	LB-F1-200/3RED-XX
2-1/2"	LB-F1-250/3RED-XX
3"	LB-F1-300/3RFD-XX
4"	LB-F1-400/3RGD-XX
6"	LB-F1-600/3RHD-XX
8"	LB-F1-800/3RKD-XX

SIZED FOR 60 psi AIR SUPPLY

SIZE	MODEL
1/2"	LB-F1-050/3RDD-XX
3/4"	LB-F1-075/3RDD-XX
1"	LB-F1-100/3RDD-XX
1-1/2"	LB-F1-150/3RED-XX
2"	LB-F1-200/3RFD-XX
2-1/2"	LB-F1-250/3RFD-XX
3"	LB-F1-300/3RFD-XX
4"	LB-F1-400/3RHD-XX
6"	LB-F1-600/3RJD-XX
8"	LB-F1-800/3RLD-XX

OPTIONS

SUFFIX 1	Accessories/Options	Model no.
X	No Specials	
A	TYPE 4 Solenoid 120VAC	TVCS-X411-4N-A120
B	TYPE 7 Solenoid 120VAC	TVC6-X411-7N-A120
C	Intrinsically Safe Solenoid	TVIS-X411-4N-D24
D	TYPE 4 Solenoid 24VDC	TVCS-X411-4N-D24
F	TYPE 7 Solenoid 24VDC	TVC6-X411-7N-D24
Q	TYPE 4 SST Solenoid 120VAC	TVSS-X411-4N-A120
M	TYPE 7 SST Solenoid 120VAC	TVSS-X411-7N-A120
L	TYPE 4 SST Solenoid 24VDC	TVSS-X411-4N-D24
N	TYPE 7 SST Solenoid 24VDC	TVSS-X411-7N-D24
P	Pneumatic Positioner	PPR-1200
E	Electro-Pneumatic Positioner	EPR-1000
SUFFIX 2	Accessories	Model no.
X	No Specials	
A	TYPE 4 Limit Switch	APL-210N
B	TYPE 7 Limit Switch	APL-510N
C	Intrinsically Safe Limit Switch	APL-218N
Q	TYPE 4 SST Limit Switch	APL-910N
M	TYPE 7 SST Limit Switch	APL-510S
H	NEMA 4 Std. Enc.	APL-310N

Other options available - call for details
Actuators are sized based on full differential pressure with clean water. Consult the Application Sizing Guide for assistance with sizing actuators.

SAMPLE PART #

LBC-F1-150/3RED-XX

Valve Series
Carbon Steel
End Connection
Seat Material
Valve Size
TRIAC Actuator Series
Actuator Size
Double Acting
SUFFIX 1: Voltage
SUFFIX 2: Accessories

See automated part
number matrix on back
cover for complete part
number and options.

Pneumatic Spring Return Automated Ball Valve Package

Series LB ASME Class 150 Flanged PFA Lined Ball Valve

Available in 316SST or WCB

Sizes 1/2"-8"

Flanged Ends • ASME Class 150

Full Port Design

Superior Packing System

PTFE Seats Standard

Spark Test Standard (20 kV)

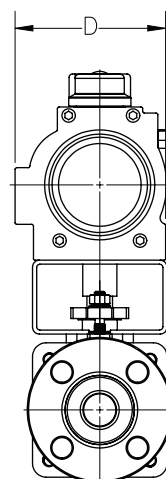
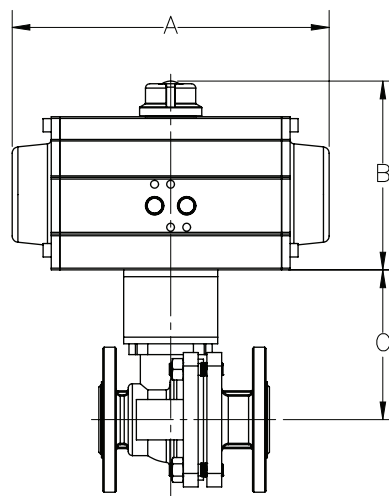
STANDARDS

Design & Manufactured
Face to Face Dimensions
Flange End Connections
Pressure Testing
Material Certification
Quality Assurance

API 608
ASME B16.10
ASME B16.5
API 598
EN 10204-3.1
ISO 9001:2015



**ASME Class 150 Flanged
PFA Lined Ball Valve**



Spring Return Assembly DIMENSIONS (IN)

VALVE SIZE	A	B	C	D	VALVE Cv
1/2"	7.60	4.25	4.03	3.35	20
3/4"	7.60	4.25	4.03	3.35	20
1"	7.60	4.25	4.22	3.35	55
1-1/2"	9.29	5.09	5.38	4.18	210
2"	11.02	5.39	5.83	4.27	310
2-1/2"	11.02	5.39	5.83	4.27	210
3"	11.50	6.06	6.65	5.78	684
4"	13.39	6.93	8.31	5.59	1,546
6"	15.35	7.99	10.26	5.98	3,262
8"	23.54	11.26	11.96	8.90	4,565

DIMENSIONS SHOWN ARE FOR ASSEMBLIES SIZED FOR 80 PSI SUPPLY

SERIES LB PFA Lined Ball Valve

SIZED FOR 80 psi AIR SUPPLY	
SIZE	MODEL
1/2"	LB-F1-050/3RES-XX
3/4"	LB-F1-075/3RES-XX
1"	LB-F1-100/3RES-XX
1-1/2"	LB-F1-150/3RFS-XX
2"	LB-F1-200/3RGS-XX
2-1/2"	LB-F1-250/3RGS-XX
3"	LB-F1-300/3RHS-XX
4"	LB-F1-400/3RJS-XX
6"	LB-F1-600/3RKS-XX
8"	LB-F1-800/3RRS-XX

SIZED FOR 60 psi AIR SUPPLY	
SIZE	MODEL
1/2"	LB-F1-050/3RE4-XX
3/4"	LB-F1-075/3RE4-XX
1"	LB-F1-100/3RF4-XX
1-1/2"	LB-F1-150/3RF4-XX
2"	LB-F1-200/3RG4-XX
2-1/2"	LB-F1-250/3RH4-XX
3"	LB-F1-300/3RJ4-XX
4"	LB-F1-400/3RK4-XX
6"	LB-F1-600/3RL4-XX
8"	LB-F1-800/3RR4-XX

OPTIONS		
SUFFIX 1	Accessories/Options	Model no.
X	No Specials	
A	TYPE 4 Solenoid 120VAC	TVCS-X411-4N-A120
B	TYPE 7 Solenoid 120VAC	TVC6-X411-7N-A120
C	Intrinsically Safe Solenoid	TVIS-X411-4N-D24
D	TYPE 4 Solenoid 24VDC	TVCS-X411-4N-D24
F	TYPE 7 Solenoid 24VDC	TVC6-X411-7N-D24
Q	TYPE 4 SST Solenoid 120VAC	TVSS-X411-4N-A120
M	TYPE 7 SST Solenoid 120VAC	TVSS-X411-7N-A120
L	TYPE 4 SST Solenoid 24VDC	TVSS-X411-4N-D24
N	TYPE 7 SST Solenoid 24VDC	TVSS-X411-7N-D24
P	Pneumatic Positioner	PPR-1200
E	Electro-Pneumatic Positioner	EPR-1000
SUFFIX 2	Accessories	Model no.
X	No Specials	
A	TYPE 4 Limit Switch	APL-210N
B	TYPE 7 Limit Switch	APL-510N
C	Intrinsically Safe Limit Switch	APL-218N
Q	TYPE 4 SST Limit Switch	APL-910N
M	TYPE 7 SST Limit Switch	APL-510S
H	NEMA 4 Std. Enc.	APL-310N

Other options available - call for details
Actuators are sized based on full differential pressure with clean water. Consult the Application Sizing Guide for assistance with sizing actuators.

SAMPLE PART #
LBC-F1-150/3RFS-XX

Valve Series
Carbon Steel
End Connection
Seat Material
Valve Size
TRIAC Actuator Series
Actuator Size
Spring Return

See automated part number matrix on back cover for complete part number and options.

SUFFIX 1: Voltage
SUFFIX 2: Accessories

Electric

Automated Ball Valve Package

Series LB ASME Class 150 Flanged PFA Lined Ball Valve

Available in 316SST or WCB

Sizes 1/2"-8"

Flanged Ends • ASME Class 150

Full Port Design

Superior Packing System

PTFE Seats Standard

Spark Test Standard (20 kV)

STANDARDS

Design & Manufactured	API 608
Face to Face Dimensions	ASME B16.10
Flange End Connections	ASME B16.5
Pressure Testing	API 598
Material Certification	EN 10204-3.1
Quality Assurance	ISO 9001:2015

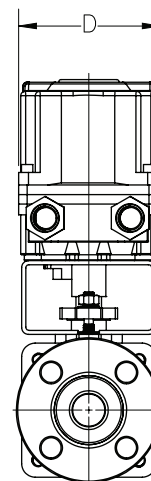
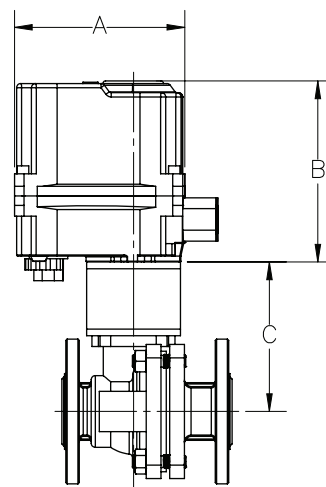


**ASME Class 150 Flanged
PFA Lined Ball Valve**

Electric Assembly DIMENSIONS (IN)

VALVE SIZE	A	B	C	D	VALVE Cv
1/2"	4.95	5.32	4.20	4.09	20
3/4"	4.95	5.32	4.20	4.09	20
1"	4.95	5.32	4.39	4.09	55
1-1/2"	4.95	5.32	5.38	4.09	210
2"	4.95	5.32	5.83	4.09	310
2-1/2"	4.95	5.32	5.83	4.09	210
3"	10.16	9.25	7.07	6.70	684
4"	13.31	10.55	8.31	9.02	1,546
6"	13.31	10.55	10.26	9.02	3,262
8"	14.49	11.97	11.96	10.20	4,565

DIMENSIONS SHOWN ARE FOR ASSEMBLIES SIZED FOR 80 PSI SUPPLY



ON-OFF	
SIZE	MODEL
1/2"	LB-F1-050/WEA1-XX
3/4"	LB-F1-075/WEA1-XX
1"	LB-F1-100/WEA1-XX
1-1/2"	LB-F1-150/WEA1-XX
2"	LB-F1-200/WEA1-XX
2-1/2"	LB-F1-250/WEA1-XX
3"	LB-F1-300/WEB1-XX
4"	LB-F1-400/WEC1-XX
6"	LB-F1-600/WED1-XX
8"	LB-F1-800/WEF1-XX

MODULATING	
SIZE	MODEL
1/2"	LB-F1-050/WEA2-XX
3/4"	LB-F1-075/WEA2-XX
1"	LB-F1-100/WEA2-XX
1-1/2"	LB-F1-150/WEA2-XX
2"	LB-F1-200/WEA2-XX
2-1/2"	LB-F1-250/WEA2-XX
3"	LB-F1-300/WEB2-XX
4"	LB-F1-400/WEC2-XX
6"	LB-F1-600/WED2-XX
8"	LB-F1-800/WEF2-XX

OPTIONS		
Suffix 1	Voltage / Accessory	Model No.
X	No Specials	
R	24VDC Electric Actuator	
S	220VAC Electric Actuator	
T	Other Voltage Electric Actuator	
W	12VDC Electric Actuator	
Y	24VAC Electric Actuator	
* No voltage specified on electric assemblies denotes 120VAC		
Suffix 2 Accessories		
X	No Specials	
1	HS1 High Speed Electric	
2	HS2 High Speed Electric	

Other options available - call for details.

Actuators are sized based on full differential pressure with clean water. Consult the Application Sizing Guide for assistance with sizing actuators.

SAMPLE PART #
LBC-F1-150/WEA1-XX

Valve Series
Carbon Steel
End Connection
Seat Material
Valve Size
TRIAC Actuator Series
Actuator Size
On-Off

See automated part number matrix on back cover for complete part number and options.

SUFFIX 1: Voltage
SUFFIX 2: Accessories

Series LB

HOW TO ORDER: Manual Valves

2	Valve Series
LB	PFA Lined Split Body Flanged Ball Valve

3	Body/Ball/Stem Material
Blank	Valve Series Standard (316SST)
C	Carbon Steel Body

4	End Connection
F1	150# Flanged Ends

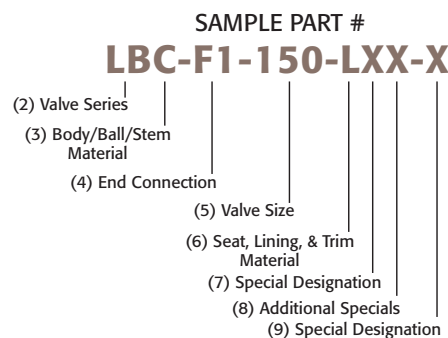
5	Valve Size		
0050	1/2"	0250	2-1/2"
0075	3/4"	0300	3"
0100	1"	0400	4"
0150	1-1/2"	0600	6"
0200	2"	0800	8"

6	Seat, Lining & Trim Material
L	PFA Lined w/ PTFE Seats

7	Special Designation
X	No Specials/Series Standard
G	Gear Operator
H	Gear Operator with Lockout Plate
4	4" Lockable Stem Extension

8	Additional Specials
X	No Specials/Series Standard
O	Oxygen Cleaned
D	Degreased & Bagged

9	Special Designation
Blank	No Designation, Valve Series Standard
X	Multiple Option Designation



HOW TO ORDER: Automated Valves

2	Valve Series
LB	PFA Lined Split Body Flanged Ball Valve

3	Body/Ball/Stem Material
Blank	Valve Series Standard (316SST)
C	Carbon Steel Body

4	End Connection
F	150# Flanged Ends

5	Seat, Lining & Trim Material
1	Valve Series Standard

6	Valve Size		
0050	1/2"	0250	2-1/2"
0075	3/4"	0300	3"
0100	1"	0400	4"
0150	1-1/2"	0600	6"
0200	2"	0800	8"

7 (A) Pneumatic Actuator - 3R, 3N, 3P Series
3RC 3R10 3RM 3R850
3RD 3R20 3RN 3R1000
3RE 3R40 3RP 3R1200
3RF 3R80 3RR 3R1750
3RG 3R130 3RS 3R2400
3RH 3R200 3RT 3R2500
3RJ 3R300 3RU 3R2700
3RK 3R500 3RV 3R3300
3RL 3R700 3RW 3R3500

3R=Standard, 3N=Electroless Nickel Plating,
3P=Teflon™ (PTFE) Coating

7 (A) Pneumatic Actuator - S2 Series
S2C S2-052 S2G S2-125
S2D S2-063 S2H S2-140
S2E S2-083 S2J S2-160
S2F S2-105 S2K S2-210

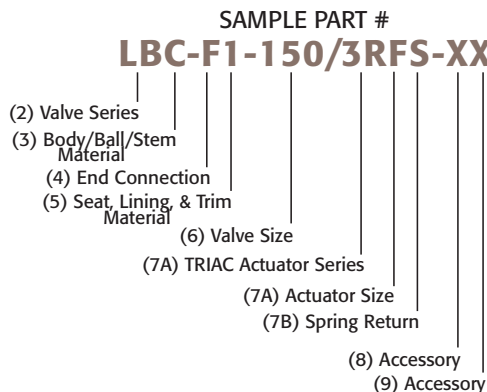
7 (B) Pneumatic Action
D Double Acting (DA)
S Spring CW (5 springs)*
O Spring CCW (5 springs)*
4 Spring CW (4 springs)**
F Spring CCW (4 springs)**
6 Spring CW (6 springs)
H Spring CCW (6 springs)

*2500 & 3500 80 psig spring

**2500 & 3500 60 psig spring

7	Actuator - Electric (On-Off)		
WEX1	WE-350	WEG1	WE-5200
WEA1	WE-500	WEH1	WE-6900
WEB1	WE-690	WEJ1	WE-10500
WEC1	WE-1350	WEK1	WE-17500
WED1	WE-1700	WEL1	WE-25900
WEE1	WE-2640	WEM1	WE-53000
WEF1	WE-4400	WEN1	WE-80000

7	Actuator - Electric (Modulating)		
WEA2	WEM-500	WEH2	WEM-6900
WEB2	WEM-690	WEJ2	WEM-10500
WEC2	WEM-1350	WEK2	WEM-17500
WED2	WEM-1700	WEL2	WEM-25900
WEE2	WEM-2640	WEM2	WEM-53000
WEF2	WEM-4400	WEN2	WEM-80000
WEG2	WEM-5200		



8	Accessories/Options	Model no.
X	No Specials	
A	TYPE 4 Solenoid 120VAC	TVCS-X411-4N-A120
B	TYPE 7 Solenoid 120VAC	TVC6-X411-7N-A120
C	Intrinsically Safe Solenoid	TVIS-X411-4N-D24
D	TYPE 4 Solenoid 24VDC	TVCS-X411-4N-D24
F	TYPE 7 Solenoid 24VDC	TVC6-X411-7N-D24
Q	TYPE 4 SST Solenoid 120VAC	TVSS-X411-4N-A120
M	TYPE 7 SST Solenoid 120VAC	TVSS-X411-7N-A120
L	TYPE 4 SST Solenoid 24VDC	TVSS-X411-4N-D24
N	TYPE 7 SST Solenoid 24VDC	TVSS-X411-7N-D24
P	Pneumatic Positioner	PPR-1200
E	Electro-Pneumatic Positioner	EPR-1000
R	24VDC Electric Actuator	
S	220VAC Electric Actuator	
T	Other Voltage Electric Actuator	
W	12VDC Electric Actuator	
Y	24VAC Electric Actuator	

* No voltage specified on electric assemblies denotes 120VAC

9	Accessories	Model no.
X	No Specials	
A	TYPE 4 Limit Switch	APL-210N
B	TYPE 7 Limit Switch	APL-510N
C	Intrinsically Safe Limit Switch	APL-218N
Q	TYPE 4 SST Limit Switch	APL-910N
M	TYPE 7 SST Limit Switch	APL-510S
H	NEMA 4 Std. Enc.	APL-310N
Z	180° Operation	
1	HS1 High Speed Electric	
2	HS2 High Speed Electric	

