BI–TORQ®
EMERGENCY SHUTOFF VALVES

PRODUCT OVERVIEW

THERMAL SHUTOFF VALVES

THERMAL SHUT OFF ASSEMBLIES FOR QUARTER-TURN VALVES



STRAHMAN® GROUP

an fch business

FLP SERIES
COMPLETE ASSEMBLIES

BI-TORQ Valve Automation's complete line of API 607 certified quarter-turn valves suit a wide range of applications. Carbon and stainless steel ball valves are available in 1/4" through 6" sizes with ANSI flanges and NPT or socket weld ends. Fire safe high performance butterfly valves come in 2" through 24" sizes.

ONE VALVE DOES IT ALL

Our unique design allows a single valve to be used as an armed fail safe assembly *AND* as a manually operated valve, saving money, space and maintenance time. Smaller valves use the standard handle while larger ball valves and all butterfly valves have a declutchable manual override.

FL SERIES
AML & SPECIFIED VALVES

In addition to our own valves, we manufacture customized assemblies for a range of customer-specified quarter turn valves. In addition, a retrofit assembly can be used where safety regulations dictate the addition of a fusible link on valves currently installed.



BI-TORQ fusible link assemblies are used in a wide range of applications, including:

- TANK FARMS
- REFINERIES
- CHEMICAL PRODUCTION
- AIRPORT AND TRUCK FUELING STATIONS
- PETROCHEMICAL AND BIOFUELS
- PAINT AND TOXIC CHEMICALS

BI-TORQ'S THERMAL SHUTDOWN FIRE SAFE VALVES HELP MEET INSURANCE REQUIREMENTS

FEATURES

- AUTOMATIC SHUT-OFF IN CASE OF FIRE
- API 607 FIRE SAFE APPROVAL ON ALL BALL AND BUTTERFLY VALVES
- VALVE CAN BE OPERATED EVEN WHILE SPRING PACK IS ARMED (LT & MT SERIES)
- UL OR FM-APPROVED LINKS AVAILABLE
- HEAVY DUTY ARMING DEVICE
- FACTORY ASSEMBLED AND TESTED
- LINK TEMPERATURES FROM 165°F TO 360°F
- FAIL OPEN OR FAIL CLOSED ORIENTATIONS FOR A VARIETY OF APPLICATIONS

FLP-LT Series 1/4" through 1" NPT



FLP-LT series fusible link shown with FM approved actuator

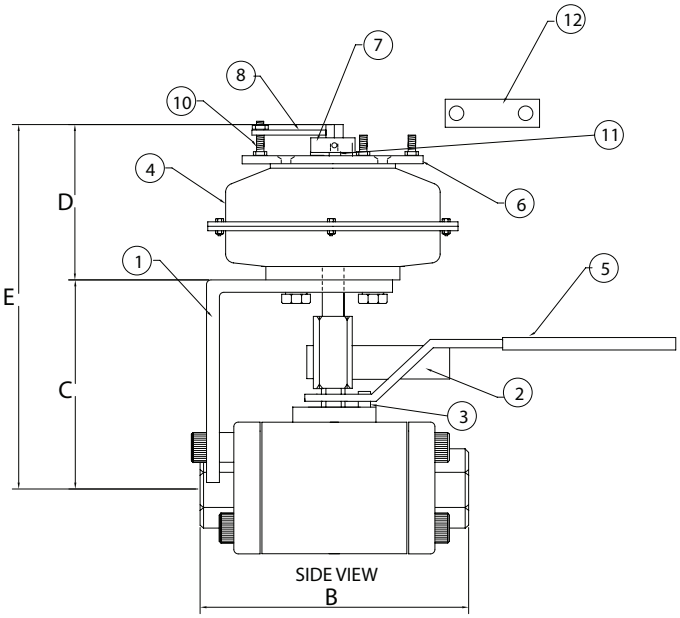
PART NUMBERS	
FLP-LT-059-***-XXX-BV-FS	includes 316SS 3-piece API 607 fire safe valve
FLP-LT-059-***-XXX-BV-FW	includes WCB/SS 3-piece API 607 fire safe valve

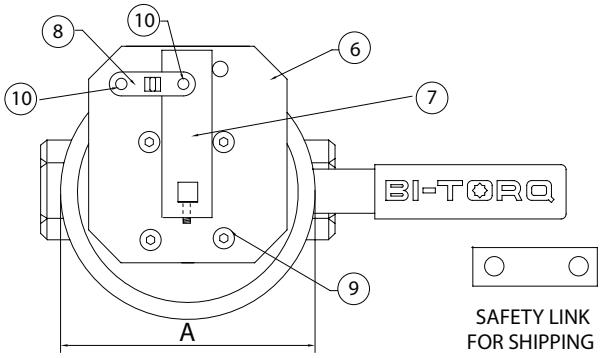
***: Select a link temperature from the chart below.

XXX: valve size (i.e., 005=1/2", 007=3/4", 010=1")

LINK PART NUMBER	LINK YIELD TEMPERATURE	MAXIMUM AMBIENT TEMPERATURE
FL-1-165	165°F/74°C	100°F/38°C
FL-1-212	212°F/100°C	150°F/66°C
FL-1-286	286°F/138°C	225°F/107°C
FL-1-360	360°F/182°C	300°F/149°C

NOTE: Links should be replaced on an annual basis as part of a regular maintenance program. Links are not rated for use in corrosive atmospheres.





TOP VIEW ARMED

SAFETY LINK FOR SHIPPING PURPOSES ONLY

DIMENSIONS

SIZE	1/4"-3/8"	1/2"	3/4"	1"
A	4.25	4.25	4.25	4.25
B	2.55	2.95	3.14	3.54
C	3.75	3.75	4.00	4.63
D	2.50	2.50	2.50	2.50
E	6.25	6.25	6.50	7.13
WEIGHT (LBS.)	9.62	9.62	10.75	12.05

BILL OF MATERIALS

1	SPRING PACK MOUNTING BRACKET	*CARBON STEEL*	7	TRIGGER ARM	*STAINLESS STEEL*
2	TRIPPER ARM	*CARBON STEEL*	8	FUSIBLE LINK	*SOLDERED METAL*
3	VALVE OPEN/CLOSE STOP	*STAINLESS STEEL*	9	FUSIBLE LINK STUDS	*STAINLESS STEEL*
4	057-030 SPRING PACK	*EPOXY COATED STEEL*	10	LEVER RETAINING ARM	*STAINLESS STEEL*
5	VALVE HANDLE	*PLATED STEEL*	11	SPACER	*STAINLESS STEEL*
6	FL MOUNTING PLATE	*STAINLESS STEEL*	12	SAFETY LINK	*CARBON STEEL*

The policy of BI-TORQ Valve Automation is one of continuous improvement. We reserve the right to alter the product as described and illustrated without notice.

FLP-MT Series 1-1/4" and 1-1/2" NPT



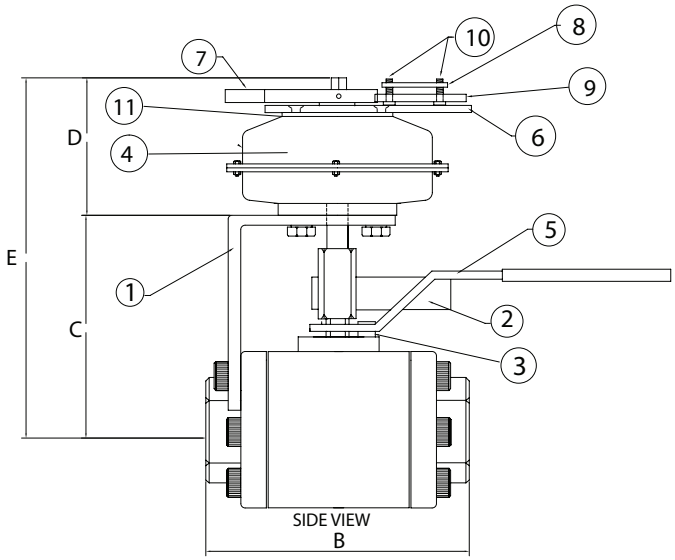
FLP-MT series fusible link shown with FM approved actuator

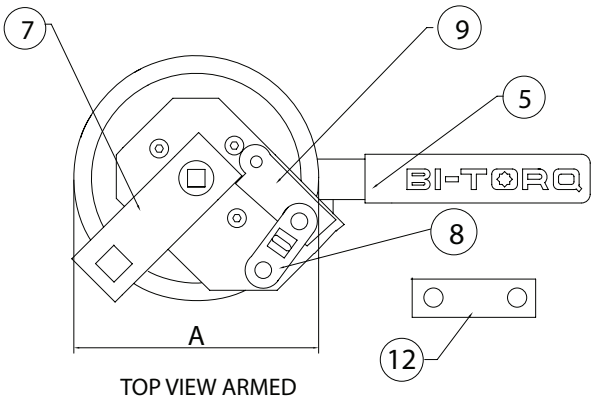
PART NUMBERS	
FLP-MT-079-***-XXX-BV-FS	includes 316SS 3-piece API 607 fire safe valve
FLP-MT-079-***-XXX-BV-FW	includes WCB/SS 3-piece API 607 fire safe valve

***: Select a link temperature from the chart below.
XXX: valve size (i.e., 012=1-1/4", 015=1-1/2")

LINK PART NUMBER	LINK YIELD TEMPERATURE	MAXIMUM AMBIENT TEMPERATURE
FL-1-165	165°F/74°C	100°F/38°C
FL-1-212	212°F/100°C	150°F/66°C
FL-1-286	286°F/138°C	225°F/107°C
FL-1-360	360°F/182°C	300°F/149°C

NOTE: Links should be replaced on an annual basis as part of a regular maintenance program. Links are not rated for use in corrosive atmospheres.





TOP VIEW ARMED

12: SAFETY LINK FOR SHIPPING PURPOSES ONLY

DIMENSIONS

SIZE	1-1/4"	1-1/2"
A	6.00	6.00
B	4.33	4.72
C	5.50	5.83
D	4.75	4.75
E	10.25	10.63
WEIGHT (LBS.)	23.96	26.73

BILL OF MATERIALS

1	SPRING PACK MOUNTING BRACKET	*CARBON STEEL*	7	TRIPPER ARM	*CARBON STEEL*
2	TRIPPER ARM	*CARBON STEEL*	8	FUSIBLE LINK	*SOLDERED METAL*
3	VALVE STOP	*STAINLESS STEEL*	9	LEVER RETAINING ARM	*STAINLESS STEEL*
4	077-030 SPRING PACK	*EPOXY COATED STEEL*	10	FUSIBLE LINK STUDS	*STAINLESS STEEL*
5	VALVE HANDLE	*PLATED STEEL*	11	SPACER	*STAINLESS STEEL*
6	FL MOUNTING PLATE	*STAINLESS STEEL*	12	SAFETY LINK	*CARBON STEEL*

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FLP-MT Series 2” NPT



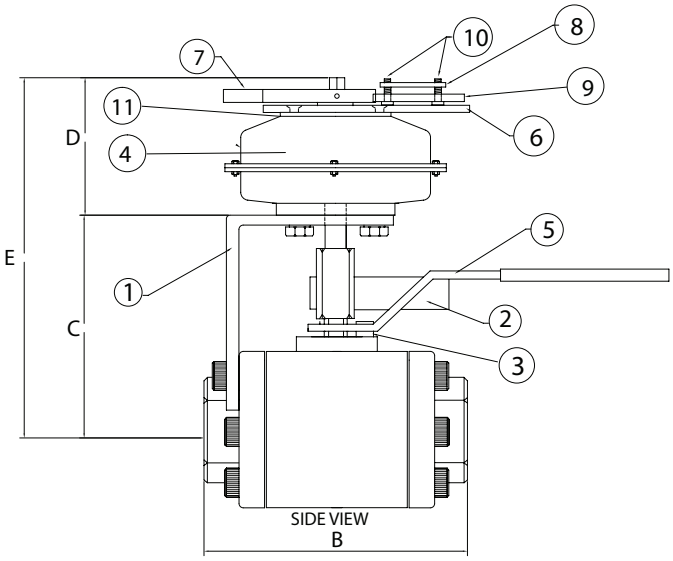
FLP-MT series fusible link shown with FM approved actuator

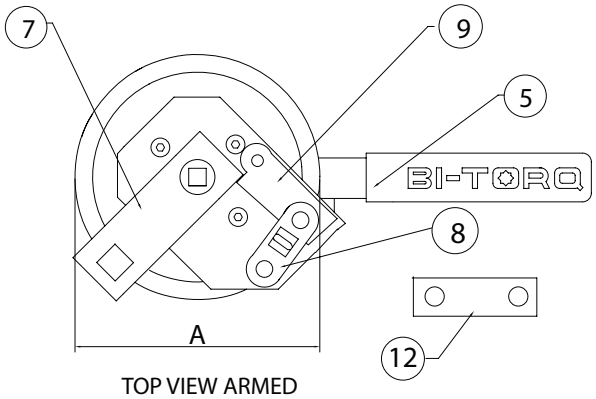
PART NUMBERS	
FLP-MT-089-***-020-BV-FS	includes 316SS 3-piece API 607 fire safe valve
FLP-MT-089-***-020-BV-FW	includes WCB/SS 3-piece API 607 fire safe valve

***: Select a link temperature from the chart below.

LINK PART NUMBER	LINK YIELD TEMPERATURE	MAXIMUM AMBIENT TEMPERATURE
FL-1-165	165˚F/74˚C	100˚F/38˚C
FL-1-212	212˚F/100˚C	150˚F/66˚C
FL-1-286	286˚F/138˚C	225˚F/107˚C
FL-1-360	360˚F/182˚C	300˚F/149˚C

NOTE: Links should be replaced on an annual basis as part of a regular maintenance program. Links are not rated for use in corrosive atmospheres.





TOP VIEW ARMED

12: SAFETY LINK FOR SHIPPING PURPOSES ONLY

DIMENSIONS

SIZE	2”
A	6.00
B	5.51
C	6.56
D	5.13
E	11.69
WEIGHT (LBS.)	43.05

BILL OF MATERIALS

1	SPRING PACK MOUNTING BRACKET	*CARBON STEEL*	7	TRIPPER ARM	*CARBON STEEL*
2	TRIPPER ARM	*CARBON STEEL*	8	FUSIBLE LINK	*SOLDERED METAL*
3	VALVE STOP	*STAINLESS STEEL*	9	LEVER RETAINING ARM	*STAINLESS STEEL*
4	077-030 SPRING PACK	*EPOXY COATED STEEL*	10	FUSIBLE LINK STUDS	*STAINLESS STEEL*
5	VALVE HANDLE	*PLATED STEEL*	11	SPACER	*STAINLESS STEEL*
6	FL MOUNTING PLATE	*STAINLESS STEEL*	12	SAFETY LINK	*CARBON STEEL*

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FLP-LT Series 1/2" through 1" 150# Flanged



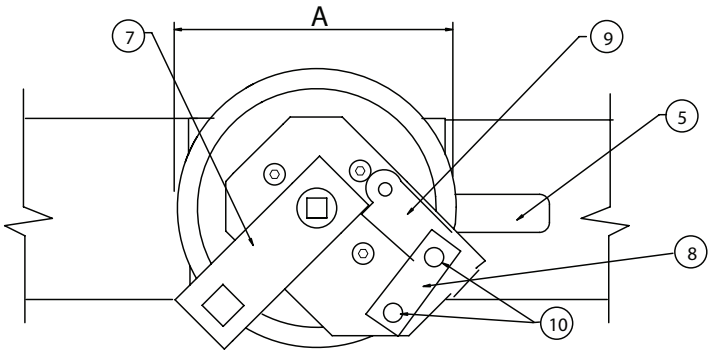
FLP-LT series fusible link shown with FM approved actuator

PART NUMBERS	
FLP-LT-059-***-XXX-BV-ED50	includes 316SS flanged API 607 fire safe valve
FLP-LT-059-***-XXX-BV-W50	includes WCB/SS API 607 fire safe valve

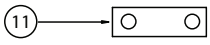
***: Select a link temperature from the chart below.
XXX: valve size (i.e., 005=1/2", 007=3/4", 010=1")

LINK PART NUMBER	LINK YIELD TEMPERATURE	MAXIMUM AMBIENT TEMPERATURE
FL-1-165	165°F/74°C	100°F/38°C
FL-1-212	212°F/100°C	150°F/66°C
FL-1-286	286°F/138°C	225°F/107°C
FL-1-360	360°F/182°C	300°F/149°C

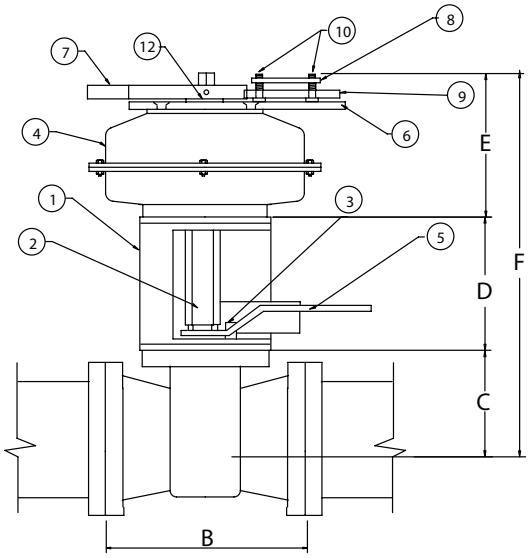
NOTE: Links should be replaced on an annual basis as part of a regular maintenance program. Links are not rated for use in corrosive atmospheres.



TOP VIEW ARMED



11: SAFETY LINK FOR SHIPPING PURPOSES ONLY



SIDE VIEW

DIMENSIONS

SIZE	1/2"	3/4"	1"
A	4.25	4.25	4.25
B	4.25	4.62	5.00
C	1.51	1.63	1.96
D	3.00	3.00	3.00
E	2.50	2.50	2.50
F	7.01	7.13	7.46
WEIGHT (LBS.)	11.00	13.00	15.00

BILL OF MATERIALS

1	SPRING PACK MOUNTING BRACKET	*CARBON STEEL*	7	ARMING LEVER	*STAINLESS STEEL*
2	COUPLER/TRIPPER ARM	*CARBON STEEL*	8	FUSIBLE LINK	*SOLDERED METAL*
3	VALVE OPEN/CLOSE STOP	*STAINLESS STEEL*	9	FUSIBLE LINK RETAINING ARM	*STAINLESS STEEL*
4	SPRING PACK	*EPOXY COATED STEEL*	10	LINK RETAINING STUDS	*STAINLESS STEEL*
5	VALVE HANDLE	*PLATED STEEL*	11	SAFETY LINK	*CARBON STEEL*
6	FL MOUNTING PLATE	*STAINLESS STEEL*	12	SPACER	*NYLON*

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FLP-MT Series 1-1/4" through 2" 150# Flanged



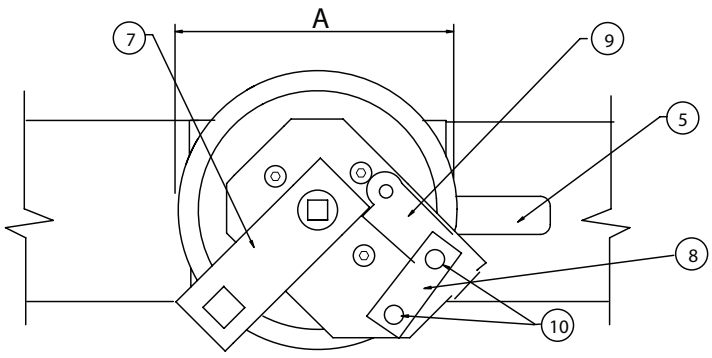
FLP-MT series shown
with FM approved actuator

PART NUMBERS	
FLP-MT-079/089-***-XXX-BV-ED50	includes 316SS flanged API 607 fire safe valve
FLP-MT-079/089-***-XXX-BV-W50	includes WCB/SS flanged API 607 fire safe valve

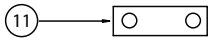
***: Select a link temperature from the chart below.
XXX: valve size (i.e., 012=1-1/4", 015=1-1/2", 020=2")
NOTE: 1-1/4" valve uses 07 spring pack; 1-1/2" - 2" use 08 spring pack

LINK PART NUMBER	LINK YIELD TEMPERATURE	MAXIMUM AMBIENT TEMPERATURE
FL-1-165	165°F/74°C	100°F/38°C
FL-1-212	212°F/100°C	150°F/66°C
FL-1-286	286°F/138°C	225°F/107°C
FL-1-360	360°F/182°C	300°F/149°C

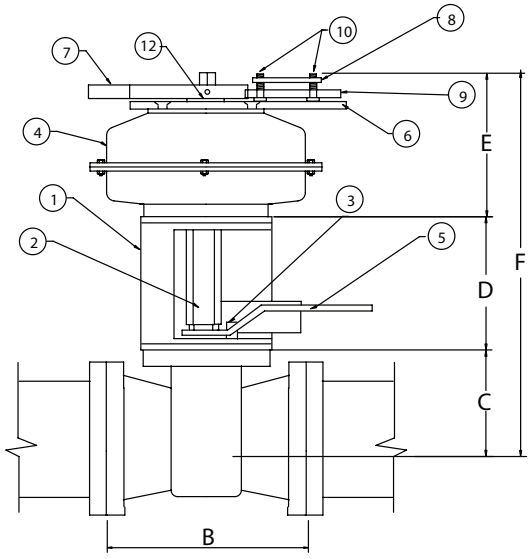
NOTE: Links should be replaced on an annual basis as part of a regular maintenance program. Links are not rated for use in corrosive atmospheres.



TOP VIEW ARMED



11: SAFETY LINK FOR
SHIPPING PURPOSES ONLY



SIDE VIEW

DIMENSIONS

SIZE	1-1/4"	1-1/2"	2"
A	6.00	7.87	7.87
B	5.50	6.50	7.00
C	1.97	2.61	2.95
D	4.00	4.00	4.00
E	4.75	4.750	4.75
F	10.72	11.36	11.70
WEIGHT (LBS.)	26.88	41.60	46.60

BILL OF MATERIALS

1	SPRING PACK MOUNTING BRACKET	*CARBON STEEL*	7	ARMING LEVER	*STAINLESS STEEL*
2	COUPLER/TRIPPER ARM	*CARBON STEEL*	8	FUSIBLE LINK	*SOLDERED METAL*
3	VALVE OPEN/CLOSE STOP	*STAINLESS STEEL*	9	FUSIBLE LINK RETAINING ARM	*STAINLESS STEEL*
4	SPRING PACK	*EPOXY COATED STEEL*	10	LINK RETAINING STUDS	*STAINLESS STEEL*
5	VALVE HANDLE	*PLATED STEEL*	11	SAFETY LINK	*CARBON STEEL*
6	FL MOUNTING PLATE	*STAINLESS STEEL*	12	SPACER	*NYLON*

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FLP-HT Series 2-1/2” through 4” 150# Flanged



FLP-HT series fusible link shown with 4” stainless steel flanged ball valve

NOTE: The FLP-HT Series incorporates a declutchable manual override to arm and operate the assembly.

PART NUMBERS	
FLP-HT-109/129-***-XXX-BV-ED50-DT7	With 316SS API 607 fire safe valve
FLP-HT-109/129-***-XXX-BV-W50-DT7	With WCB/SS API 607 fire safe valve

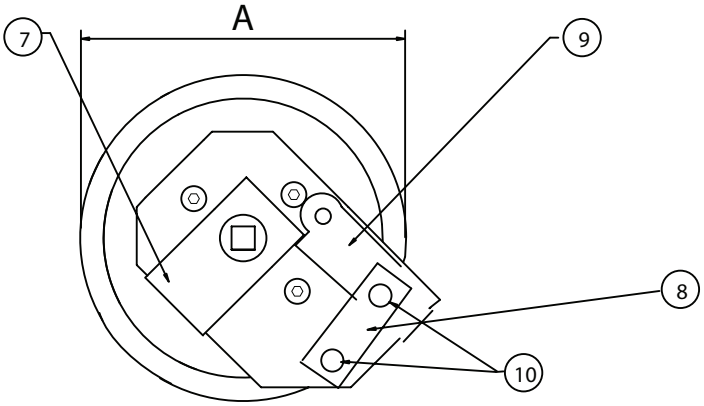
***: Select a link temperature from the chart below.

XXX: valve size (i.e., 025=2-1/2”, 030=3”, 040=4”)

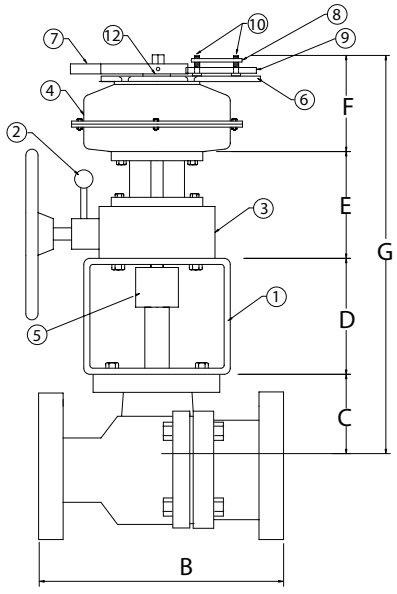
2-1/2” and 3” use 109 spring pack; 4” uses 129 spring pack

LINK PART NUMBER	LINK YIELD TEMPERATURE	MAXIMUM AMBIENT TEMPERATURE
FL-1-165	165˚F/74˚C	100˚F/38˚C
FL-1-212	212˚F/100˚C	150˚F/66˚C
FL-1-286	286˚F/138˚C	225˚F/107˚C
FL-1-360	360˚F/182˚C	300˚F/149˚C

NOTE: Links should be replaced on an annual basis as part of a regular maintenance program. Links are not rated for use in corrosive atmospheres.



TOP VIEW ARMED



SIDE VIEW

DIMENSIONS

SIZE	2-1/2”	3”	4”
A	8.11	8.11	10.16
B	7.50	8.00	9.00
C	3.52	4.23	4.84
D	5.00	5.00	6.00
E	4.77	4.77	4.77
F	5.75	5.75	6.55
G	19.04	19.75	22.16
WT.	94.40	102.40	146.33

BILL OF MATERIALS

1	SPRING PACK MOUNTING BRACKET	*CARBON STEEL*	7	ARMING LEVER	*STAINLESS STEEL*
2	DECLUTCH LEVER	*STEEL*	8	FUSIBLE LINK	*SOLDERED METAL*
3	DECLUTCH GEAR OPERATOR	*CAST STEEL*	9	LEVER RETAINING ARM	*STAINLESS STEEL*
4	SPRING PACK	*EPOXY COATED STEEL*	10	LINK RETAINING STUDS	*STAINLESS STEEL*
5	VALVE ADAPTER	*CARBON STEEL*	12	SPACER	*STEEL*
6	FUSIBLE LINK MOUNTING PLATE	*STAINLESS STEEL*			

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FLP-BT Series 6” 150# Flanged



FLP-HT series fusible link shown with 4” stainless steel flanged ball valve

PART NUMBERS	
FLP-HT-109/129-***-XXX-BV-ED50-DT7	With 316SS API 607 fire safe valve
FLP-HT-109/129-***-XXX-BV-W50-DT7	With WCB/SS API 607 fire safe valve

***: Select a link temperature from the chart below.

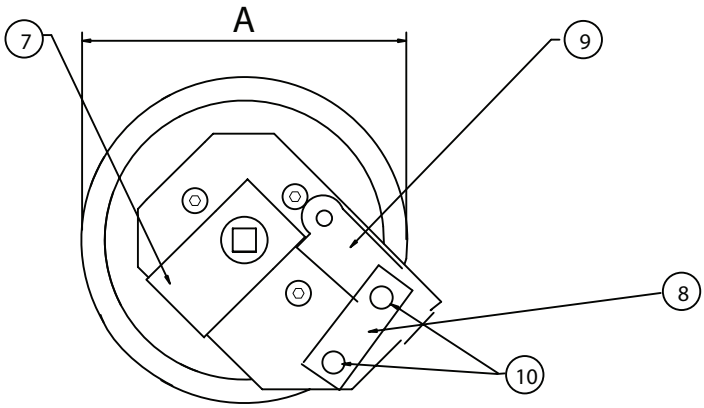
XXX: valve size (i.e., 025=2-1/2”, 030=3”, 040=4”)

2-1/2” and 3” use 109 spring pack; 4” uses 129 spring pack

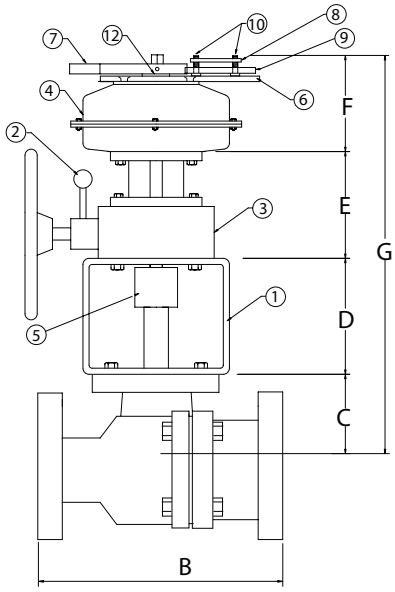
LINK PART NUMBER	LINK YIELD TEMPERATURE	MAXIMUM AMBIENT TEMPERATURE
FL-1-165	165˚F/74˚C	100˚F/38˚C
FL-1-212	212˚F/100˚C	150˚F/66˚C
FL-1-286	286˚F/138˚C	225˚F/107˚C
FL-1-360	360˚F/182˚C	300˚F/149˚C

NOTE: Links should be replaced on an annual basis as part of a regular maintenance program. Links are not rated for use in corrosive atmospheres.

NOTE: The FLP-HT Series incorporates a declutchable manual override to arm and operate the assembly.



TOP VIEW ARMED



SIDE VIEW

DIMENSIONS

SIZE	6”
A	10.16
B	15.50
C	7.02
D	6.00
E	5.65
F	10.16
G	28.77
WT.	217.30

BILL OF MATERIALS

1	VALVE MOUNTING BRACKET		9	FUSIBLE LINK RETAINING ROD	
2	VALVE COUPLER		10	FUSIBLE LINKS (8)	
3	DECLUTCHABLE OVERRIDE GEAR		11	SPRING PACK STOP ASSEMBLY	
4	SPRING PACK MOUNTING PLATE		12	LOCKING TRIGGER	
5	SPRING PACK/DECLUTCH COUPLER		13	SAFETY COVER PLATE	
6	SPRING PACK		14	ROD END BEARINGS	
7	ARMING DEVICE MOUNTING PLATE		15	shoulder bolts	
8	SAFETY STOP PIN		16	SupaLoops	

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3-piece API 607 Fire Safe Ball Valve: 1/4”-2”



PRESSURE RATING
1/4”-1”: 2000 PSI
1-1/4”-2”: 1500PSI
TEMPERATURE RATING
Dependent on seats

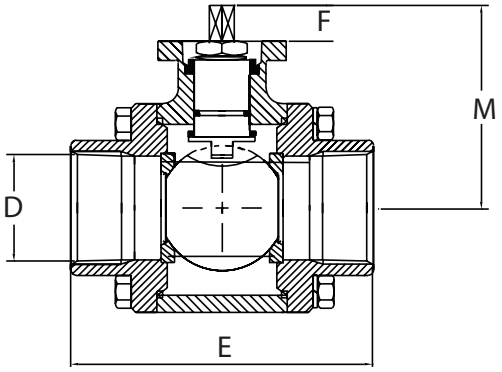
Valve Features

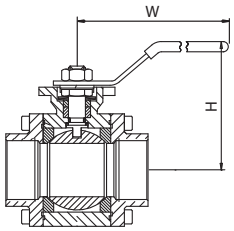
- **API 607 4th Edition fire** safe tested and designed
- **3-piece full port design**
- **high cycle live loaded** stem packing
- **ISO 5211 mounting pad**
- **built to ANSI B16.34** class **600 dimensions**
- **investment cast body**
- **locking handle**

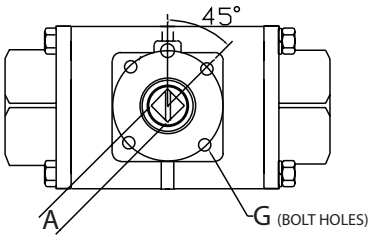
BILL OF MATERIALS

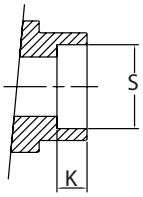
PART #	NAME	MATERIAL	QTY
1	BODY	CF8M or WCB	1
2	END CAP	CF8M or WCB	2
3	BALL	CF8M	1
4	SEAT	RTFE	2
5	BODY SEAL	GRAPHITE	2
6	THRUST WASHER	GRAPHITE	1
7	STEM PACKING	GRAPHITE	1
8	GLAND	304 SS	1
9	BELLEVILLE SPRING WASHER	301 SS	2
10	STEM	316 SS	1
11	NUT	304 SS	1
12	SPRING WASHER	304 SS	1
13	NUT	304 SS	1
14	BOLT	304 SS	4*
15	HANDLE	304 SS	1
16	HANDLE SLEEVE	VINYL	1
17	SADDLE WASHER	304 SS	1
18	O-RING	VITON	1
19	STOP PIN	304 SS	1
20	ANTI-STATIC DEVICE	304 SS	1

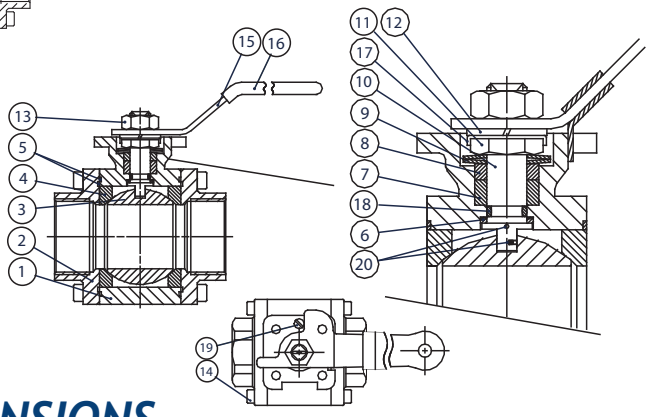
** QTY 8 on 2” valve size*







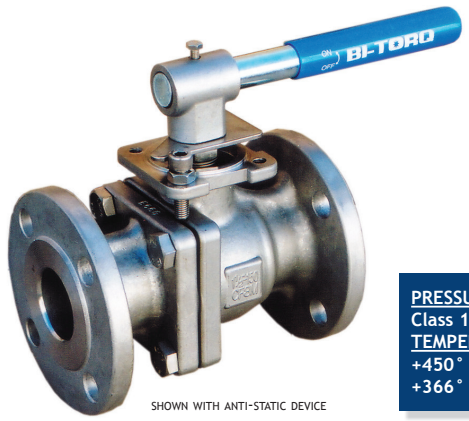




DIMENSIONS

SIZE	ISO 5211	A	D	E	F	G	H	K	M	S	W	CV	WT.
1/4"	F04	0.35	0.40	2.55	0.31	0.28	2.75	0.39	1.78	0.56	5.51	6.30	2.42
3/8"	F04	0.35	0.43	2.55	0.31	0.28	2.75	0.39	1.78	0.69	5.51	6.20	2.42
1/2"	F04	0.35	0.55	2.95	0.31	0.28	2.75	0.51	1.78	0.86	5.51	20.90	2.42
3/4"	F04-F05	0.43	0.81	3.14	0.43	0.28/0.35	3.54	0.59	2.40	1.07	7.08	49.40	3.55
1"	F04-F05	0.43	1.00	3.54	0.43	0.28/0.35	3.93	0.59	2.99	1.34	7.08	81.00	4.85
1-1/4"	F07	0.55	1.24	4.33	0.63	0.45	4.40	0.59	3.46	1.68	8.46	127.9	7.36
1-1/2"	F07	0.55	1.46	4.72	0.63	0.45	4.52	0.63	3.62	1.92	8.46	191.50	10.13
2"	F07	0.55	1.97	5.51	0.63	0.45	5.23	0.67	3.66	2.41	8.46	376	16.10

API 607 Fire Safe Flanged Ball Valve



SHOWN WITH ANTI-STATIC DEVICE

PRESSURE RATING
Class 150#/300# flanged
TEMPERATURE RATING
+450° F Maximum CWP
+366° F Steam Maximum

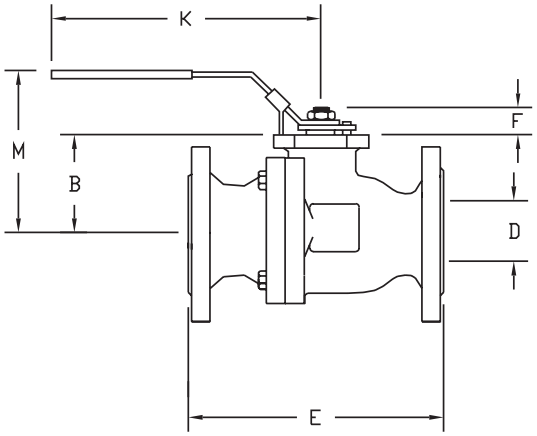
Valve Features

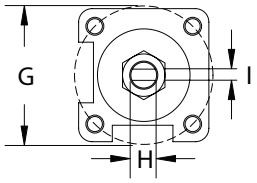
- Full port stainless steel (ED50) or WCB/SS (W50)
- 1/2" through 6"
- Class 150# OR 300# flanged designed to ANSI B16.34
- API607 fire safe approved
- ISO mounting pad
- Self-adjusting stem packing
- DIN 50049-3.1B certificate

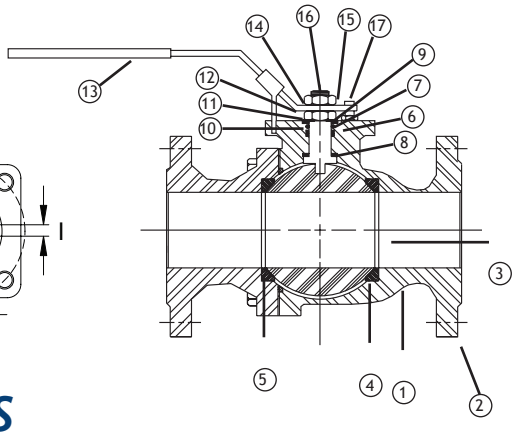
BILL OF MATERIALS

PART #	NAME	MATERIAL	QTY
1	BODY	CF8M OR WCB	1
2	ENDS	CF8M OR WCB	2
3	BALL	CF8M	1
4	SEAT	PTFE OR RTFE	2
5	BODY SEAL	SS304 SPIRAL WOUND	2
6	STEM SEAL	GRAPHOIL	1
7	STEM PACKING	GRAPHOIL	1
8	THRUST WASHER	50% PTFE + 50% SS POWDER	1
9	GLAND	304SS	1
10	BELLEVILLE WASHER	304SS	2
11	LOCK WASHER	304SS	1
12	STEM NUT	304SS	1
13	HANDLE	304SS*	1
14	LOCK SANDAL WASHER	304SS	1
15	HANDLE NUT	304SS	1
16	STEM	316SS	1
17	ANT-STATIC DEVICE	316SS	1

*handle for 2" and larger is plated steel







DIMENSIONS

SIZE	ISO 5211	B	D	E	F	G	H	J	K	M	CV	WT.
1/2"	F04	1.52	0.59	4.25	0.69	1.42	0.47	0.25	5.91	3.54	30	4
3/4"	F04	1.63	0.79	4.63	0.72	1.42	0.47	0.25	5.91	3.88	50	6
1"	F05	2.05	0.98	5.00	0.85	1.97	0.51	0.31	7.09	4.25	100	8
1-1/4"	F05	2.35	1.26	5.50	0.81	1.97	0.51	0.31	7.09	4.62	180	12
1-1/2"	F07	2.62	1.57	6.50	1.14	2.76	0.53	0.37	8.27	5.00	250	16
2"	F07	2.95	1.97	7.00	1.16	2.76	0.53	0.37	8.27	6.00	480	21
2-1/2"	F07	3.52	2.56	7.50	1.52	2.76	1.14	0.67	10.24	7.00	750	38
3"	F10	4.23	3.15	8.00	1.85	4.02	1.14	0.67	10.24	7.50	1300	46
4"	F10	4.84	3.94	9.00	1.85	4.02	1.14	0.67	12.20	9.00	2400	73
6"[1]	F12/F14	7.02	5.91	13.78	1.100	4.92	C/F	C/F	16.20	10.94	5400	135

[1] AVAILABLE IN ED50 MODELS ONLY

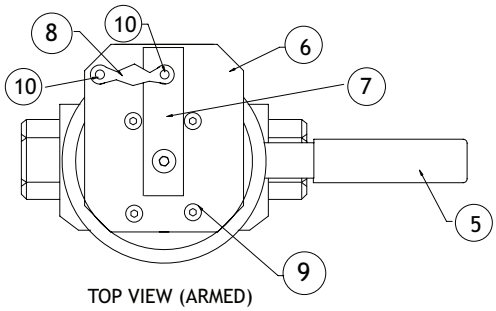
LT SERIES for Valves up to 150 inch pounds of Torque



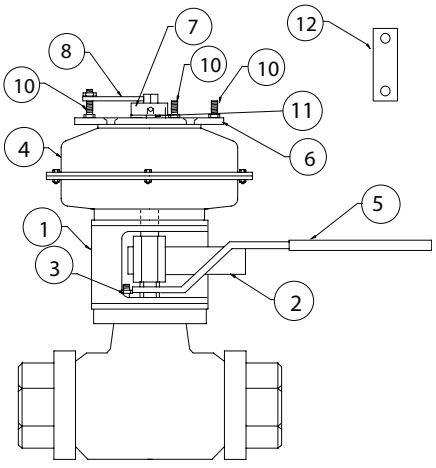
LT-Series assembly shown with red safety link installed

LT SERIES FEATURES

- For smaller fire safe ball and plug valves depending on valve torque, media and line pressure
- Provides automatic closure in the event of fire
- Valve can be operated manually even while armed
- Soldered fusible links available in a variety of temperatures
- Available with **API 607** fire safe ball valves with ANSI **150#** or **300#** flanges, socket weld or NPT ends
- **FM** approved actuator



TOP VIEW (ARMED)



SIDE VIEW

1	valve mounting bracket	7	retaining arm
2	spring closing arm	8	fusible link(s)
3	valve stop	9	mounting plate fasteners
4	spring pack (03 or 05)	10	retaining studs
5	valve handle	11	spacer/washer
6	fusible link mounting plate	12	safety link (for shipping only)

HEAVY DUTY SPRING PACK

The armed spring pack features weatherproof sealed spring housing and corrosion resistant epoxy paint. The reliable low stress clock springs assure quick closing action when the fusible links yield.

CUSTOMIZED MOUNTING HARDWARE

A heavy-duty gauge bracket and stainless steel top plate provide the durable, secure construction that BI-TORQ® Valve Automation products are known for. An all stainless bracket, coupling, arming plate and hardware kit also are available.

FACTORY ASSEMBLED

All BI-TORQ® Valve Automation fusible link valves are assembled by factory-trained personnel. The units then are armed with a protective safety link for shipping purposes.

RELIABLE FUSIBLE LINKS

BI-TORQ® Valve Automation fusible links are designed to remain secure until releasing the spring pack when the desired temperature is reached. Soldered fusible links are available in these temperature ranges:

LINK PART NUMBER	LINK YIELD TEMPERATURE	MAXIMUM AMBIENT TEMPERATURE
FL-1-165	165°F/74°C	100°F/38°C
FL-1-212	212°F/100°C	150°F/66°C
FL-1-286	286°F/138°C	225°F/107°C
FL-1-360	360°F/182°C	300°F/149°C

Please consult factory for special order links

NOTE: Links should be replaced on an annual basis as part of a regular maintenance program. Links are not rated for use in corrosive atmospheres.

The policy of BI-TORQ Valve Automation is one of continuous improvement. We reserve the right to alter the product as described and illustrated without notice.

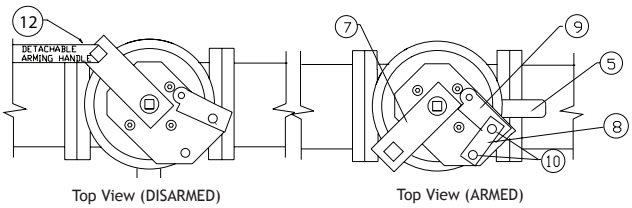
MT SERIES for Valves up to 830 inch pounds of Torque



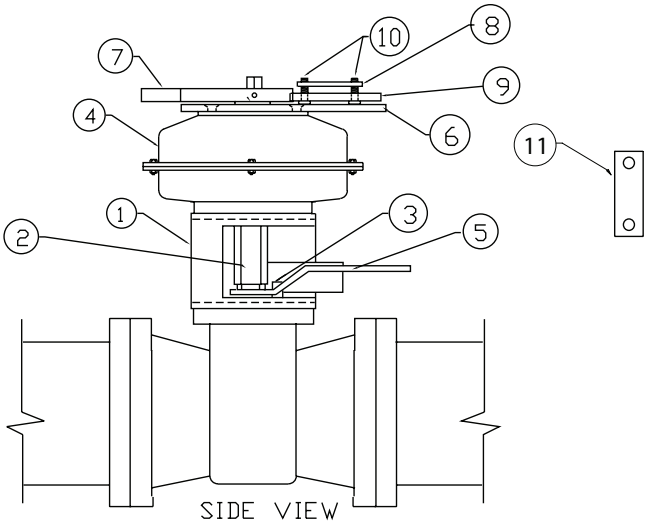
MT-Series assembly shown with red safety link installed

MT SERIES FEATURES

- For mid-sized fire safe ball and plug valves depending on valve torque, media and line pressure
- Provides automatic closure in the event of fire
- Valve can be operated manually even while armed
- Soldered fusible links available 165°F thru 360°F
- Available with API 607 fire safe ball valves with ANSI flanges, socket weld and NPT ends, or butterfly valves
- FM approved actuator



Top View (DISARMED) Top View (ARMED)



1	valve mounting bracket	7	arming lever
2	spring closing arm	8	fusible link (1)
3	valve stop	9	lever retaining arm
4	spring pack (07)	10	retaining studs
5	valve handle	11	safety link (for shipping only)
6	fusible link mounting plate	12	detachable arming handle

HEAVY DUTY SPRING PACK

The armed spring pack features weatherproof sealed spring housing and corrosion resistant epoxy paint. The reliable low stress clock springs assure quick closing action when the fusible links yield.

CUSTOMIZED MOUNTING HARDWARE

A heavy-duty gauge bracket and stainless steel top plate provide the durable, secure construction that BI-TORQ® Valve Automation products are known for. An all stainless bracket, coupling, arming plate and hardware kit also are available.

FACTORY ASSEMBLED

All BI-TORQ® Valve Automation fusible link assemblies are assembled by factory-trained personnel. The units then are armed with a protective safety link for shipping purposes.

RELIABLE FUSIBLE LINKS

BI-TORQ® Valve Automation fusible links are designed to remain secure until releasing the spring pack when the desired temperature is reached. Soldered fusible links are available in these temperature ranges:

LINK PART NUMBER	LINK YIELD TEMPERATURE	MAXIMUM AMBIENT TEMPERATURE
FL-1-165	165°F/74°C	100°F/38°C
FL-1-212	212°F/100°C	150°F/66°C
FL-1-286	286°F/138°C	225°F/107°C
FL-1-360	360°F/182°C	300°F/149°C

Please consult factory for special order links

NOTE: Links should be replaced on an annual basis as part of a regular maintenance program. Links are not rated for use in corrosive atmospheres.

The policy of BI-TORQ Valve Automation is one of continuous improvement. We reserve the right to alter the product as described and illustrated without notice.

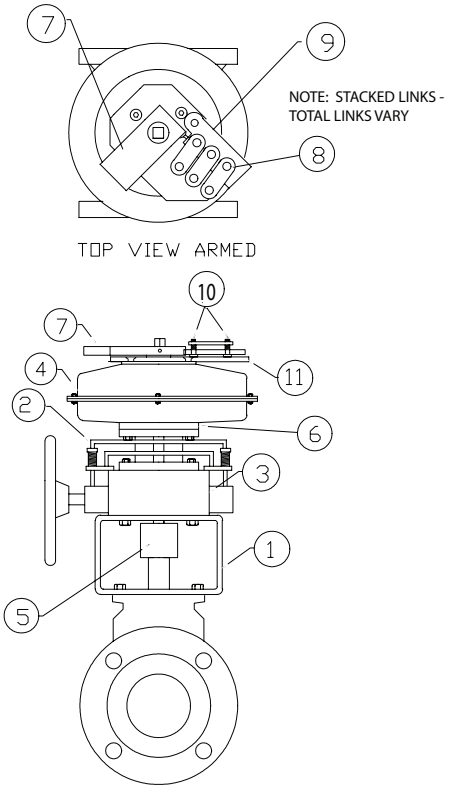
HT SERIES for Valves up to 1800 inch pounds of Torque

HT SERIES FEATURES

- for fire safe ball, plug valves, and buttefly valve sizes depending on valve torque, media and line pressure
- Provides automatic closure in the event of fire
- Valve can be operated manually with declutchable gear after disarming
- Soldered fusible links available in a variety of temperatures
- **API 607** fire safe ball or butterfly valves available as part of a package
- **FM** approved actuator



The HT (high-torque) fusible link assembly incorporates a declutchable gear operator to normally operate the valve after disarming.



1	valve mounting bracket	7	stop plate
2	declutch lever	8	fusible link (6)
3	declutch manual override	9	pivot arm
4	spring pack (10, 12)	10	mounting studs
5	valve coupler	11	fusible link mounting plate
6	declutch mounting plate		

NOTE: Links should be replaced on an annual basis as part of a regular maintenance program. Links are not rated for use in corrosive atmospheres.

HEAVY DUTY SPRING PACK

The armed spring pack features weatherproof sealed spring housing and corrosion resistant epoxy paint. The reliable low stress clock springs assure quick closing action when the fusible links yield.

CUSTOMIZED MOUNTING HARDWARE

A heavy-duty gauge bracket and stainless steel top plate provide the durable, secure construction that BI-TORQ® Valve Automation products are known for. An all stainless bracket, coupling, arming plate and hardware kit also are available.

FACTORY ASSEMBLED

All BI-TORQ® Valve Automation fusible link assemblies are assembled by factory-trained personnel. The units then are armed with a protective safety link for shipping purposes.

DECLUTCHABLE MANUAL OVERRIDE

The HT-series features a declutchable gear operator to arm the assembly or to operate the valve once the links are disengaged.

RELIABLE FUSIBLE LINKS

BI-TORQ Valve Automation fusible links are designed to remain secure until releasing the spring pack when the desired temperature is reached. Soldered fusible links are available in these temperature ranges:

LINK PART NUMBER	LINK YIELD TEMPERATURE	MAXIMUM AMBIENT TEMPERATURE
FL-1-165	165°F/74°C	100°F/38°C
FL-1-212	212°F/100°C	150°F/66°C
FL-1-286	286°F/138°C	225°F/107°C
FL-1-360	360°F/182°C	300°F/149°C

Please consult factory for special order links

NOTE: MODEL HT-129 REQUIRES K SERIES LINKS; PLEASE REFER TO THOSE PART NUMBERS FOR TEMPERATURES AND RATINGS.

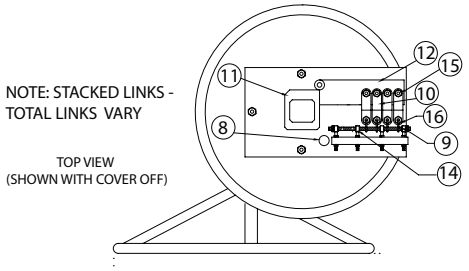
BT SERIES for Valves up to 21,000 inch pounds of Torque

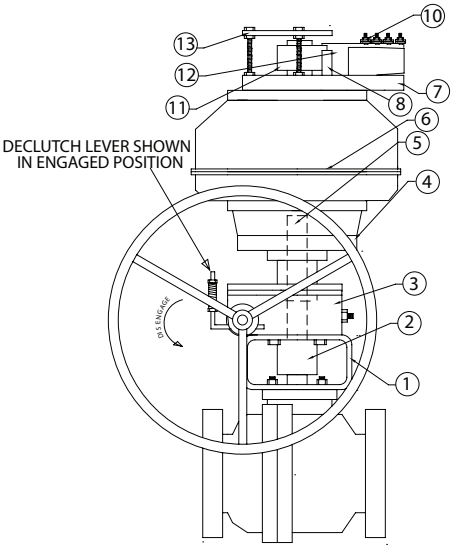
BT SERIES FEATURES

- for fire safe ball, plug valves, and buttefly valve sizes depending on valve torque, media and line pressure
- Provides automatic closure in the event of fire
- Valve can be operated manually with declutchable gear after disarming
- Soldered fusible links available in a variety of temperatures
- **API 607** fire safe ball or butterfly valves available as part of a package



The BT series assembly uses a declutchable gear to manually operate the valve after disarming.





1	valve mounting bracket	9	fusible link retaining rod
2	valve coupler	10	fusible links (8)
3	declutchable override gear	11	spring pack stop assembly
4	spring pack mounting plate	12	locking trigger
5	spring pack/declutch coupler	13	safety cover plate
6	spring pack (14X, 14, 15, 16, 18)	14	rod end bearings
7	arming device mounting plate	15	shoulder bolts
8	safety stop pin	16	SupaLoops

HEAVY DUTY SPRING PACK

The armed spring pack features weatherproof sealed spring housing and corrosion resistant epoxy paint. The reliable low stress clock springs assure quick closing action when the fusible links yield.

CUSTOMIZED MOUNTING HARDWARE

A heavy-duty gauge bracket and top plate provide the durable, secure construction that AVK Carbo-Bond products are known for. An all stainless bracket, coupling, arming plate and hardware kit also are available.

FACTORY ASSEMBLED

All BI-TORQ thermal shutdown fire safe assemblies are assembled by factory-trained personnel. The units then are armed with a protective safety link for shipping purposes.

DECLUTCHABLE MANUAL OVERRIDE

The BT-series features a declutchable gear operator to arm the assembly or to operate the valve once the links are disengaged.

RELIABLE FUSIBLE LINKS

BI-TORQ fusible links are designed to remain secure until releasing the spring pack when the desired temperature is reached. Soldered type fusible links are available in these temperature ranges:

LINK PART NUMBER	LINK YIELD TEMPERATURE	MAXIMUM AMBIENT TEMPERATURE
314165	165°F/74°C	100°F/38°C
314212	212°F/100°C	150°F/66°C
314280	286°F/138°C	225°F/107°C
314360	360°F/182°C	300°F/149°C

Please consult factory for special order links

Options for Fusible Link Assemblies

FUSIBLE LINK TYPES



FL-1: For LT, MT and HT-109 models

- Factory Mutual approved; UL and C-UL Listed
- Fusible Link Halves: Stainless Steel
- Fusible Assembly: Solder, Copper, Stainless Steel

NOTE: Model FL-1 Fusible Links are not rated for use in corrosive atmospheres.

LINK PART NUMBER	LINK YIELD TEMPERATURE	MAXIMUM AMBIENT TEMPERATURE
FL-1-165	165°F/74°C	100°F/38°C
FL-1-212	212°F/100°C	150°F/66°C
FL-1-286	286°F/138°C	225°F/107°C
FL-1-360	360°F/182°C	300°F/140°C



K: HT-129 through BT-189 models

- UL listed
- Minimum Load: 3 lbs. (1.36 kg.)
- Maximum Load : 50 lbs. (22.68 kg.)
- Corrosion resistant bronze construction

LINK PART NUMBER	LINK YIELD TEMPERATURE	MAXIMUM AMBIENT TEMPERATURE
314165	165°F/74°C	100°F/38°C
314212	212°F/100°C	150°F/66°C
314280	280°F/138°C	225°F/107°C
314360	360°F/182°C	300°F/140°C

BI-TORQ Valve Automation and our soldered fusible link manufacturers suggest the annual replacement of fusible links as part of scheduled plant maintenance.

CONTINUOUS POSITION INDICATION

This one-of-a-kind design incorporates one or two proximity switches as an integral part of the assembly, allowing a remote operator to continuously record the position of the valve. This is especially crucial in fire safe applications where valves need to be monitored as part of a process system. Special enclosures allow the switches to maintain position signal even in high temperatures.
(NOTE: Not available on all units.)



AUTOMATIC FIRING LINK

Our newest innovation allows an operator to manually trigger the armed fusible link when a voltage signal generates the heat necessary to cause the link to yield. This lets plant personnel shut down flammable liquid lines immediately even if a fire has started in another area. Please contact our technical sales personnel for more application information. (NOTE: Not available on all units.)



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STRAHMAN® GROUP

an fch business

CONTACT US

Need more information?
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