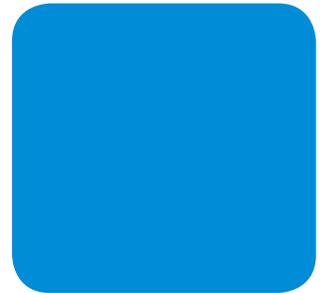
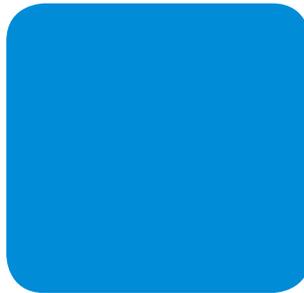
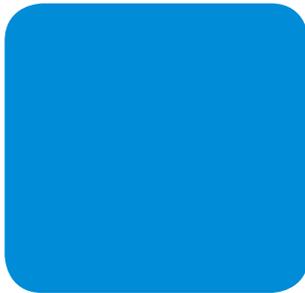
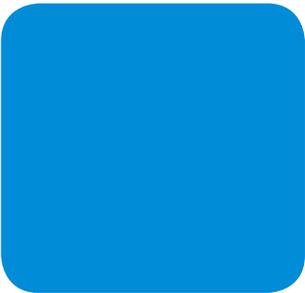
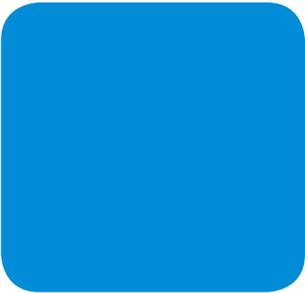




Fivalco[®] Inc.

Trusted For Quality For Over 20 Years

Fire
Protection
Products





General Information

Fivalco is a US company in our 25th year of manufacturing Fire Protection Valves of uncompromising quality for our discerning customers.

All our products are FM or UL approved and most carry both UL and FM listings / approvals.

The latest edition of the NFPA code stated "products shall be listed or approved," without reference to either UL or FM although it is common practice for consultants to specify both a UL listing and a Factory Mutual approval.

UL listed means that the product has been tested, has passed all the stringent tests mandated by UL and is listed in the UL catalogue of Fire Protection Equipment

FM approved means that the product has passed all severe tests mandated by Factory Mutual and is approved by FM for use in building structures insured by Factory Mutual Insurance.

We, and all other manufacturers of similar products are subject to identical factory and product audit approvals and tests without compromise as the same approval and test criteria are applied to all producers of such products regardless of location.

All butterfly and gate valves are pressure tested for approval at 4 times the working pressure depending on valve size, and all valves must pass a cycling test of 1000 open/shut operations without failure of any part or component.

We take great care to make our products both attractive and functional and it is essential that our customers and end users do the same in order to maintain product integrity and proper function.

We draw your attention to minimum practices for handling and installation of our valves, at the end of this catalogue.

We are not content with making valves purely to meet mandatory specifications and have added quality and other features to stand out above the crowd.

All gate valves have Stainless Steel Stems for better corrosion resistance-our competitors use common brass.

All gate valves are painted true Fire Engine Red-RAL 3000-no on site painting needed.

All materials for Butterfly Valves are equal to or superior to our competitors

"The quality goes in before our name goes on"

All written material in this catalogue is copyrighted and may not be produced in part or in whole without express written permission. Violators will be prosecuted.

Fivalco, Fireriser, Fireriser HP and Firefly are our registered Trade Marks.

Use of the trade marks without written permission is illegal and all violators will be prosecuted to the full extent of the law.



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Fireriser® Gate Valve

Resilient Seated-300PSI-OS&Y Type Flanged End

Fig. No.: 3299-300-FLA

Valve Standard:

Conforms to AWWA C515 / BS5163



Working pressure:

21 BARS/300PSI.

Fusion Bonded Epoxy Coated Interior and Exterior RAL3003

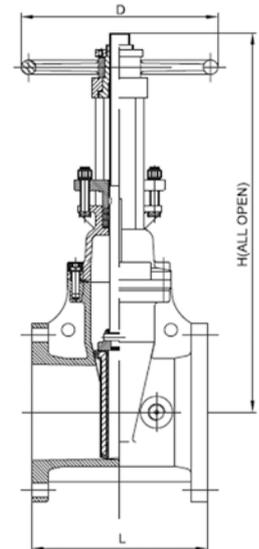
Flanged Ends:

ANSI B16.1 Class125/150/250, EN1092-2 PN10/PN16,BS10 Table E

Stainless Steel Stem

Materials List:

Name	Material
Body	Ductile Iron ASTM A536 65-45-12
Wedge	Ductile Iron ASTM A536 65-45-12 +EPDM
Wedge Nut	Stainless Steel AISI 304
Stem	Stainless Steel AISI304
Bonnet	Ductile Iron ASTM A536 65-45-12
Gasket	EPDM
Packing	Graphite
Stem Nut	Bronze ASTM B62
Handwheel	Ductile Iron ASTM A536 65-45-12



Dimensions (In/mm):

Size	2-1/2"/65	3"/80	4"/100	5"/125	6"/150	8"/200	10"/250	12"/300
L	7.50/191	8.00/203	9.00/229	10.0/254	10.50/267	11.50/292	13.00/330	14.00/356
H	16.46/418	19.21/488	21.18/538	25.75/654	29.13/740	36.81/935	44.33/1126	51.81/1316
D	7.20/183	9.96/253	9.96/253	12.05/306	12.05/306	13.98/355	17.52/445	17.52/445

Notes:

1. Design and dimensions conform to AWWA C515.
2. Flanged to ANSI B16.1, 125#. other flange types available.
3. Fusion bonded epoxy coated interior and exterior.
4. Valve is rated at 300PSI for Fire Protection Service.
5. Design and materials are subject to change without notice.
6. Manufactured by FIVALCO LTD who have the UL and FM approvals.

Fireriser® Gate Valve

Resilient Seated-300PSI-OS&Y Type Flange-Groove Ends

Fig. No.: 3299-300-FG

Valve Standard:

Conforms to AWWA C515 / BS5163



Working pressure:

21 BARS/300PSI.

Fusion Bonded Epoxy Coated Interior and Exterior RAL3003

Flanged Ends:

ANSI B16.1 Class125/150/250, EN1092-2 PN10/PN16/PN25

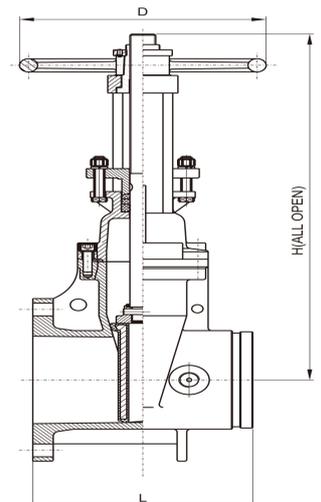
BS10 Table D/Table E

Grooved Ends to suit ANSI/AWWA and BS Pipe

Stainless Steel Stem

Materials List:

Name	Material
Body	Ductile Iron A536 65-45-12
Wedge	Ductile Iron EPDM Coated
Wedge Nut	Stainless Steel AISI 304
Stem	Stainless Steel AISI304/302
Bonnet	Ductile Iron A536 65-45-12
Gasket	EPDM
Packing	Graphite Non-asbestos
Stem Nut	Bronze ASTM B62
Handwheel	Ductile Iron A536 65-45-12



Dimensions (In/mm):

Size	2"/50	2-1/2"/65	3"/80	4"/100	5"/125	6"/150	8"/200	10"/250	12"/300
L	7.00/178	7.50/191	8.00/203	9.00/229	10.00/254	10.50/267	11.50/292	13.00/330	14.00/356
H	16.46/418	16.46/418	19.21/488	21.18/538	25.75/654	29.13/740	36.81/935	44.33/1126	51.81/1316
D	7.20/183	7.20/183	9.96/253	9.96/253	12.05/306	12.05/306	13.98/355	17.52/445	17.52/445

Notes:

1. Design and dimensions conform to AWWA C515.
2. Fusion bonded epoxy coated interior and exterior.
3. Valve is rated at 300PSI for Fire Protection Service.
4. Design and materials are subject to change without notice.
5. Manufactured by FIVALCO LTD who have the UL and FM approvals.

Fireriser® Gate Valve

Resilient Seated-300PSI-OS&Y Type Groove-Groove Ends

Fig. No.: 3299-300-GG

Valve Standard:

Conforms to AWWA C515 / BS5163



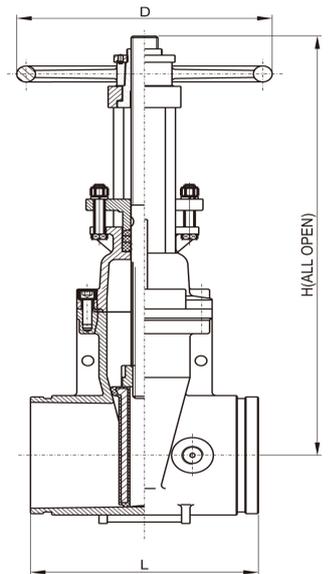
Working pressure:

21 BARS/300PSI.

Fusion Bonded Epoxy Coated Interior and Exterior RAL3003

Grooved Ends to suit ANSI/AWWA and BS Pipe

Stainless Steel Stem



Materials List:

Name	Material
Body	Ductile Iron A536 65-45-12
Wedge	Ductile Iron EPDM Coated
Wedge Nut	Stainless Steel AISI 304
Stem	Stainless Steel AISI304/302
Bonnet	Ductile Iron A536 65-45-12
Gasket	EPDM
Packing	Graphite Non-asbestos
Stem Nut	Bronze ASTM B62
Handwheel	Ductile Iron A536 65-45-12

Dimensions (In/mm):

Size	2"/50	2-1/2"/65	3"/80	4"/100	5"/125	6"/150	8"/200	10"/250	12"/300
L	7.00/178	7.50/191	8.00/203	9.00/229	10.0/254	10.50/267	11.50/292	13.00/330	14.00/356
H	16.46/418	16.46/418	19.21/488	21.18/538	25.75/654	29.13/740	36.81/935	44.33/1126	51.81/1316
D	7.20/183	7.20/183	9.96/253	9.96/253	12.05/306	12.05/306	13.98/355	17.52/445	17.52/445

Notes:

1. Design and dimensions conform to AWWA C515.
2. Fusion bonded epoxy coated interior and exterior.
3. Valve is rated at 300PSI for Fire Protection Service.
4. Design and materials are subject to change without notice.
5. Manufactured by FIVALCO LTD who have the UL and FM approvals.

Fireriser® Gate Valve

Resilient Seated-300PSI-NRS Type-Flanged End

Fig No.: 3288-300-FLA

Valve Standard:

Conforms to AWWA C515 / BS5163



Working pressure:

21 BARS/300PSI.

Fusion Bonded Epoxy Coated Interior and Exterior RAL3003

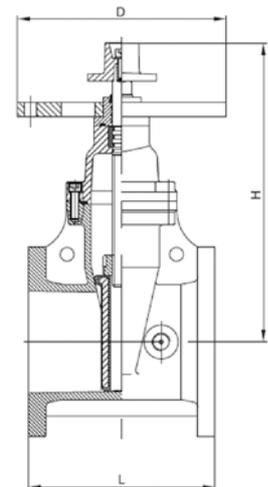
Flanged Ends:

ANSI B16.1 Class125/150/250, EN1092-2 PN10/PN16/BS10 Table E

Stainless Steel Stem

Materials List:

Name	Material
Body	Ductile Iron ASTM A536 65-45-12
Wedge Disc	Ductile Iron ASTM A536 65-45-12 +EPDM
Disc Nut	Bronze ASTM B62
Stem	Stainless Steel AISI 304
Gasket	EPDM
Bonnet	Ductile Iron ASTM A536 65-45-12
Thrust Collar	Bronze ASTM B62
Gland	Ductile Iron ASTM A536 65-45-12
Wrench Nut	Ductile Iron ASTM A536 65-45-12
Post Plate	Ductile Iron ASTM A536 65-45-12



Dimensions (In/mm):

Size	2- ¹ / ₂ "/65	3"/80	4"/100	5"/125	6"/150	8"/200	10"/250	12"/300
L	7.50/191	8.00/203	9.00/229	10.00/254	10.50/267	11.50/292	13.00/330	14.00/356
H	11.61/295	12.72/323	13.46/342	16.06/408	17.32/440	21.14/537	25.20/640	28.46/723
D	12.01/305	12.01/305	12.01/305	12.01/305	12.01/305	12.01/305	12.01/305	12.01/305

Notes:

1. Stainless steel stem.
2. Design and dimensions conform to AWWA C515.
3. Flanged to ANSI B16.1, 125#. other flange types available.
4. Fusion bonded epoxy coated interior and exterior.
5. Valve is rated at 300PSI for Fire Protection Service.
6. Design and materials are subject to change without notice.
7. All valves Provided with 2"(50mm) operating Nut.
8. Manufactured by FIVALCO LTD who have the UL and FM approvals.

Fireriser® Gate Valve

Resilient Seated-300PSI-NRS Type-Flange-Groove Ends

Fig No.: 3288-300-FG

Valve Standard:

Conforms to AWWA C515 / BS5163



Working pressure:

21 BARS/300PSI.

Fusion Bonded Epoxy Coated Interior and Exterior RAL3003

Flanged Ends:

ANSI B16.1 Class125/150/250, EN1092-2 PN10/PN16/PN25

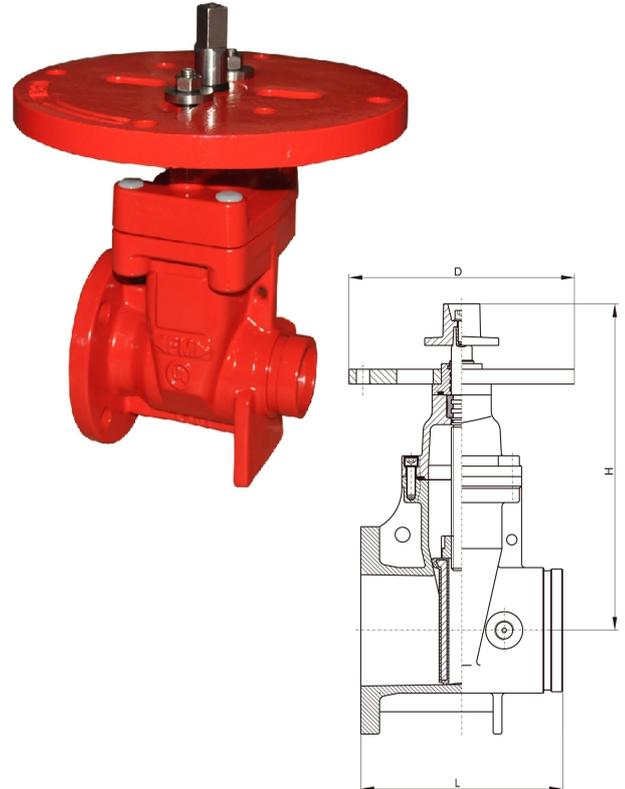
BS10 Table D/Table E

Grooved Ends to suit ANSI/AWWA and BS Pipe

Stainless Steel Stem

Materials List:

Name	Material
Body	Ductile Iron A536 65-45-12
Wedge Disc	Ductile Iron EPDM Coated
Disc Nut	Bronze ASTM B62
Stem	Stainless Steel AISI 304/302
Gasket	EPDM
Bonnet	Ductile Iron A536 65-45-12
Thrust Collar	Bronze ASTM B62
Gland	Ductile Iron A536 65-45-12
Wrench Nut	Ductile Iron A536 65-45-12
Post Plate	Ductile Iron A536 65-45-12



Dimensions (In/mm):

Size	2"/50	2-1/2"/65	3"/80	4"/100	5"/125	6"/150	8"/200	10"/250	12"/300
L	7.00/178	7.50/191	8.00/203	9.00/229	10.00/254	10.50/267	11.50/292	13.00/330	14.00/356
H	11.61/295	11.61/295	12.72/323	13.46/342	16.06/408	17.32/440	21.14/537	25.20/640	28.46/723
D	12.01/305	12.01/305	12.01/305	12.01/305	12.01/305	12.01/305	12.01/305	12.01/305	12.01/305

Notes:

1. Stainless steel stem.
2. Design and dimensions conform to AWWA C515.
3. Fusion bonded epoxy coated interior and exterior.
4. Valve is rated at 300PSI for Fire Protection Service.
5. Design and materials are subject to change without notice.
6. All valves Provided with 2"(50mm) operating Nut.
7. Manufactured by FIVALCO LTD who have the UL and FM approvals.

Fireriser® Gate Valve

Resilient Seated-300PSI-NRS Type-Groove-Groove Ends

Fig No.: 3288-300-GG

Valve Standard:

Conforms to AWWA C515 / BS5163



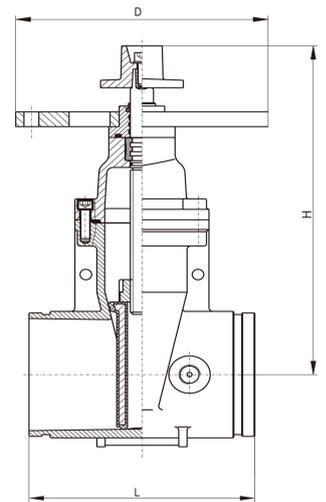
Working pressure:

21 BARS/300PSI.

Fusion Bonded Epoxy Coated Interior and Exterior RAL3003

Grooved Ends to suit ANSI/AWWA and BS Pipe

Stainless Steel Stem



Materials List:

Name	Material
Body	Ductile Iron A536 65-45-12
Wedge Disc	Ductile Iron EPDM Coated
Disc Nut	Bronze ASTM B62
Stem	Stainless Steel AISI 304/302
Gasket	EPDM
Bonnet	Ductile Iron A536 65-45-12
Thrust Collar	Bronze ASTM B62
Gland	Ductile Iron A536 65-45-12
Wrench Nut	Ductile Iron A536 65-45-12
Post Plate	Ductile Iron A536 65-45-12

Dimensions (In/mm):

Size	2"/50	2-1/2"/65	3"/80	4"/100	5"/125	6"/150	8"/200	10"/250	12"/300
L	7.00/178	7.50/191	8.00/203	9.00/229	10.00/254	10.50/267	11.50/292	13.00/330	14.00/356
H	11.61/295	11.61/295	12.72/323	13.46/342	16.06/408	17.32/440	21.14/537	25.20/640	28.46/723
D	12.01/305	12.01/305	12.01/305	12.01/305	12.01/305	12.01/305	12.01/305	12.01/305	12.01/305

Notes:

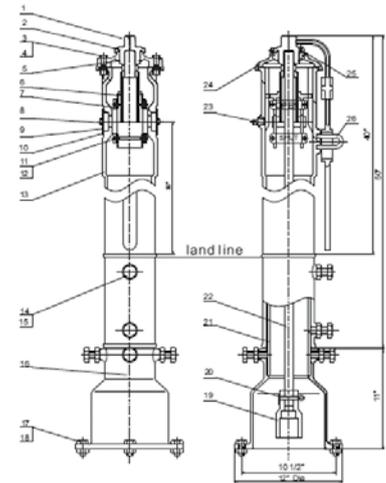
1. Stainless steel stem.
2. Design and dimensions conform to AWWA C515.
3. Fusion bonded epoxy coated interior and exterior.
4. Valve is rated at 300PSI for Fire Protection Service.
5. Design and materials are subject to change without notice.
6. All valves Provided with 2"(50mm) operating Nut.
7. Manufactured by FIVALCO LTD who have the UL and FM approvals.

Fireriser® Indicator Post

Fig. No: IP0888

Materials List:

No	Name	Qty	Material
1	Locking Wrench	1	ASTM A126B
2	Operating Nut	1	ASTM B62
3	Hex Nut Screw	2	ASTM A105
4	Hex Nut	2	ASTM A105
5	Snap Ring	1	AISI 066
6	Target Carrier Nut	1	ASTM B62
7	Target	4	ASTM B108
8	Hex Cap Nut	4	ASTM A105
9	Window Glass	2	LEXAN-UN
10	Window Glass Gasket	2	PTFE
11	Hex Cap Screw	4	ASTM A105
12	Hex Nut	4	ASTM A105
13	Body	1	ASTM A536
14	Hex Cap Screw	6	ASTM A105
15	Hex Nut	6	ASTM A105
16	Base Flange	1	ASTM A126B
17	Hex Cap Screw	4	ASTM A105
18	Hex Nut	4	ASTM A105
19	Crane Coupling	1	ASTM A536
20	Cotter Pin	1	AISI 304
21	Stand Pipe	1	ASTM A53
22	Stem	1	AISI A1045
23	Plug	1	AISI 304
24	Cover	1	ASTM A126B
25	Locking Nose	1	ASTM 307 B



Field Adjustment:

1. Remove the top section from the top of the Indicator Post assembly.
2. Cut the required length off the bottom of the Standpipe for the Ground Line to match up with Standpipe Ground Line mark.
3. Set the "OPEN" and "SHUT" targets for the appropriate valve size.
4. Reattach the Top Section to the top of the Indicator Post assembly.
5. Design and dimensions are subject to change without notice.
6. Manufactured by FIVALCO LTD who have the UL and FM approvals.

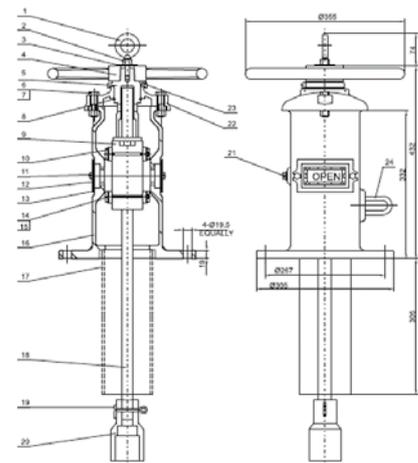
Fireriser® Indicator Post

Wall Type

Fig. No.: WP0999

Materials List:

No.	Component	Qty	Material
1	Lifting Eyey Bolt	1	ASTM A105
2	Hex Nut	1	ASTM A105
3	Washer	1	ASTM A105
4	Hand Wheel	1	ASTM A536
5	Operating Nut	1	ASTM B62
6	Hex Cap Screw	2	ASTM A105
7	Hex Nut	2	ASTM A105
8	Snap Ring	1	AISI 066
9	Target Carrier Nut	1	ASTM B62
10	Target	4	ASTM B108
11	Hex Cap Screw	4	ASTM A105
12	Window Glass	2	LEXAN-UN
13	Window Glass Gasket	2	PTFE
14	Hex Cap Screw	4	ASTM A105
15	Hex Nut	4	ASTM A105
16	Body	1	ASTM A536
17	Stand Pipe	1	ASTM A53
18	Stem	1	AISI 1045
19	Cotter Pin	1	AISI 304
20	Crane Coupling	1	ASTM A536
21	Plug	1	AISI 304
22	Cover	1	ASTM A126B
23	Locking Nose	1	ASTM 307 B



Field Adjustment:

1. Remove the top section from the top of the Indicator Post assembly.
2. Set the "OPEN" and "SHUT" targets for the appropriate valve size.
3. Reattach the Top Section to the top of the Indicator Post assembly.
4. Design and dimensions are subject to change without notice.
5. Manufactured by FIVALCO LTD who have the UL and FM approvals.

Fireriser®

Indicator Post Adjustment

Installation

NOTE: Ensure that the Non-rising Stem Gate Valve is in the fully open position before installing the Vertical Indicator Post.

1) Disassemble the Indicator Post

Take off the Locking Wrench(11). slide off the Top Section(20 together with the Operating Nut(19) and the square Stem(9) as well as the Crane Coupling(3) and ensure that all other accessories attached from the end of the Body(10) by loosening two Hex Cap screws(24) and Square Nut(23), slide off the Body(10) from the Standpipe(8) by loosening two Hex Cap Screws and Hex Nut, Loosen the two Hex Cap Screws and Hex Nut, Slide off the Standpipe(8) from the Base Flange(5).

2) Install the Base Flange and Standpipe

Attach the Base Flange(5) together with the Standpipe(8) to the Post Flange of the Non-rising Stem Gate Valve using the four Cap Screws(1) and Hex Nut(2).

3) Adjust the Grade Line Mark

Pull in and lower the Body(10) over the Standpipe(8) until the Ground Line Mark on the Body(10) is the same height as ground level. TIGHTEN THE Two Hex Cap Screws and Hex Nut.

4) Adjust the Square Stem

Lower the Stem(9) into Body (10) Standpipe(8) such that the Crane Coupling(13) fits over the Operating nut of the Nonrising Stem Gate Valve Ensure that the Stem(9) engages the Operating Nut(19) a minimum of 2 inches but no more than 4,5 inches, To check for correct engagement, the end of stem should be from 2 to 4, 5 inches below the top of the Body(10).

5) Adjust the Targets

Remove the Target Carrier Assembly(12+13+14) from inside the Body(10) by rotating the Operating Nut(19) counterclockwise. The Open Target(16) and Shut Target(not shown) are adjusted up or down on the Target Carrier Assembly(12+13+14) by pull-ing the middle section of the Target(Open and Shut) a small distance away from

the Target Carrier As-sembly(12+13+14) and sliding the Target(Open and Shut) up or down as desired.

If the Non-Rising Stem Gate Valve is opened left: move the two Open Targets(16)to the very top of the Target Carrier Assembly(12+13+14). Locate the two Shut Targets(not shown) according to the Non-rising Stem Gate Valve size(stem) turning distance. If the Non-rising Stem Gate Valve is opened right: move the two Shut Targets(not shown) to the very top of the Target Carrier Assembly(12+13+14). Locate the two Open Targets(16) according to the Non-ris-ing Stem Gate Valve size(stem) turning distance.

6) Final Assembly and Test

Insert the Target Carrier Assembly(12+13+14) back into the Top Section (20) by rotating the Operating Nut(19) clockwise, Rotate until the Open Target(16) is centered in the window of the window of the Body(10) which corresponds with the Nutrising Stem Gate Valve being in the open position. Lower the Top Section(20) with Target Carrier Assembly(12+13+14) onto the Body(10), assuring that the Stem(9) Engages with the Operating Nut(19) at least 2 inches but not more than 4.5inches. Secure the Top Section(20) to the Body(10) by tightening the Cap Screw(24) and Square Nut(23) Close the Non-ris-ing Stem Gate Valve and make sure that the Shut Target(not shown) is properly centered in the window of the Body(10) and adjust as necessary.

Maintenance

Oil the bearing in the Top Section(20) at least once per year by adding several drops of oil in the hole located on the top of the Operating Nut(19).

Fireriser® Swing Check Valve

Resilient Seated 300PSI Flanged End

Fig.No.:5201-300-FLA

Valve Standard:

Conforms to AWWA C508, Clear Waterway

Fusion bonded epoxy coated RAL3002

Working pressure:

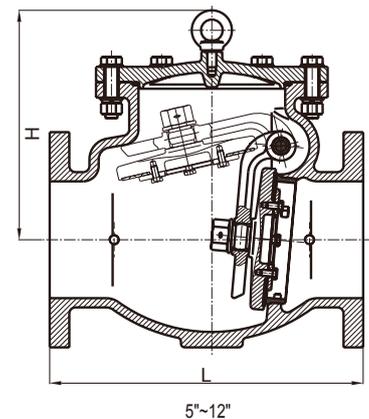
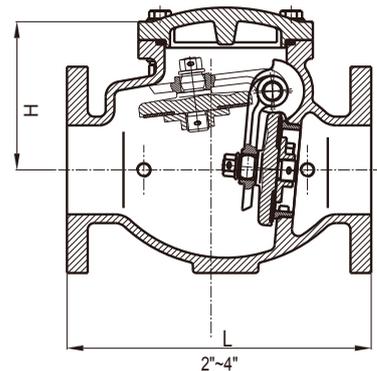
21 Bar / 300 PSI

Flanged Ends:

ANSI B16.1 Class125/150/250,

EN1092-2 PN10/PN16/PN25

BS10 Table E



Materials List

Part Name	Material	ASTM Specification
Seat Ring	Bronze	ASTM B62
Plug Washer	PTFE	Commercial
Hinge Pin	Stainless Stee	AISI 304
Retainer Washer	Bronze	ASTM B62
Disc	Ductile Iron	A536 65-45-12
Clapper Arm	Ductile Iron	A536 65-45-12
Gasket	EPDM	Commercial
Cover	Ductile Iron	A536 65-45-12
Body	Ductile Iron	A536 65-45-12

Dimensions(mm/inch)

SIZE	mm	50	65	80	100	125	150	200	250	300
	inch	2	2 1/2	3	4	5	6	8	10	12
L	mm	203	254	279	330	356	406	495	559	660
	inch	8	10	11	13	14	16	19.5	22	26
H	mm	122	133	136.5	162.5	296	298.5	357	410	465
	inch	4.80	5.23	5.37	6.40	11.65	11.75	14.06	16.14	18.31

Fireriser® Grooved Check Valve

Fig.No.:DCG

Specifications

Working Pressure : 300 PSI (21 Bars)

Max. Test Pressure: 500 PSI (34.5 Bars)

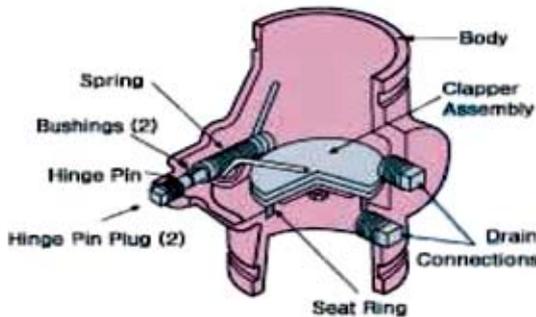
Max. Working Temp : 250°F (120°C)



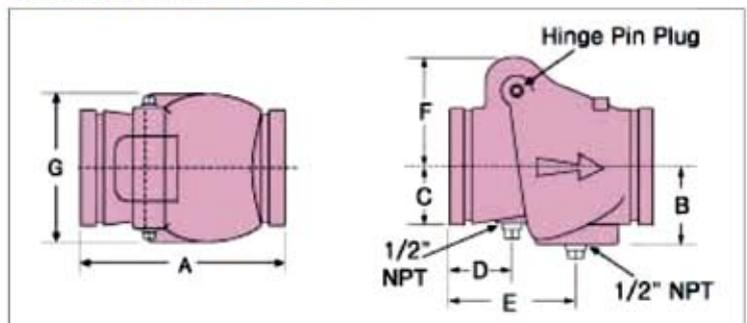
Primary Materials:

Component	Material
Body	Ductile iron conforming toASTMA-536 epoxy coated
Color	Red or black (optional)
Clapper	2"-5" type 304 or 302 stainless Steel to ASTMA-167 6"-8" ductile iron conforming to ASTMA-536, grade 65-45-12
Clapper Facing	Grade E EPDM -40°F to 230°F (-40°C to 110°C) Service Temperature range
Seat Ring	Type 304 stainless steel to ASTMA-123 ASTMA-213 ASTMA-312 or ASTMA-269
Spring	Type 302 stainless steel to ASTMA-313
Hinge Pin	Type 304 or 302 stainless steel to ASTMA-580
Hinge Pin Bushings	Sintered bronze to ASTMB-438

Flow Date-Friction Los (Ft. Pipe)							
Valves	Pipe		C=100			C=120	
Size	OD	Sch.10	Sch.30	Sch.40	Sch.10	Sch.30	
Sch.40							
In/mm	In/mm	Ft/m	Ft/m	Ft/m	Ft/m	Ft/m	Ft/m
2	2.375	10	--	8	14	--	11
50	60.3	3.0	---	2.4	4.3	----	3.4
2-1/2	2.875	14	--	10	20	--	15
65	73.0	4.3	---	3.0	6.1	---	4.6
3	3.500	17	--	12	23	--	17
80	88.9	5.2	---	3.7	7.0	--	5.5
4	4.500	17	--	13	23	--	18
100	114.3	5.2	---	4.0	7.0	--	5.5
5	5.562	14	--	11	20	--	15
125	141.3	4.3	---	3.4	6.1	---	4.6
6	6.625	23	--	19	33	--	26
150	168.3	7.0	---	5.8	10.1	---	7.9
8	8.625	35	32	30	50	43	43
200	21.9	10.7	9.6	9.1	15.2	13.1	13.7



Dimensions & Weights :



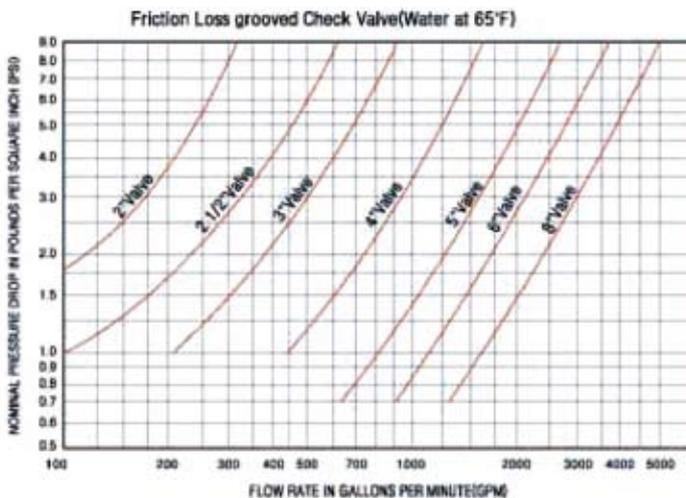
Highriser® Grooved Check Valve

Grooved Check Valves, UL/ULC Listed/FM Approved
Grooved End, Size: 2-1/2", 3", 4", 6" and 8"

Fig.No:DCG

WORKING PRESSURE 300PSI/21BARS

The Check Valve is a compact, cost effective valve offering low pressure-drop, non-slam performance the Check valve assembly is lighter and fast to install, and costs less than flanged and wafer valve assemblies. In the fully-open position the clapper is held tightly against the valve body, out of the flow stream, to provide maximum flow area and prevention of clapper flutter. The clapper design produces quick, non-slam closure before flow reversal can occur, while meeting FM requirements for an anti-water hammer valve rating. Each valve is hydrostatically tested for leak tightness to 500 PSI. The clapper-seat design permits leak free sealing of back pressures in service conditions ranging from 300 PSI to as low as 5 P I



Check Valve									
Nominal Size	Pipe 00	Nominal Dimensions							Valve Weight
In./DN(mm)	In./mm	A	B	C	D	E	F	G	Lbs./kg.
In./DN(mm)	In./mm	In./mm	In./mm	In./mm	In./mm	In./mm	In./mm	In./mm	
2	2.375	6 ³ / ₄	2 ¹ / ₈	1 ⁷ / ₁₆	1 ³ / ₄	4 ¹ / ₂	3 ³ / ₁₆	4 ³ / ₈	8.0
50	60.3	171	60	36	44	114	114	111	3.6
2 1/2	2.875	7 ¹ / ₄	2 ¹ / ₁₆	1 ⁹ / ₁₆	1 ¹ / ₄	3 ³ / ₁₅	3 ⁵ / ₈	3 ¹ / ₂	8.2
65	73.0	184	61	39	44	44	92	44	3.7
3	3.500	7 ³ / ₄	2 ⁵ / ₈	2	1 ¹³ / ₁₆	4 ¹ / ₁₆	3 ¹¹ / ₁₆	4 ¹⁵ / ₁₆	10.5
80	88.9	197	67	51	46	103	93	125	4.8
4	4.500	8 ¹ / ₈	3 ¹ / ₈	3 ¹ / ₄	2 ¹ / ₂	5 ¹ / ₁₆	5 ¹ / ₄	6	17.0
100	114.3	206	79	57	64	128	108	152	7.7
6	6.625	12 ³ / ₄	4 ¹ / ₄	3	3 ¹ / ₆	6 ¹ / ₄	6 ³ / ₄	6 ¹ / ₂	42.5
150	168.3	324	108	84	79	159	171	216	19.3
8	8.625	14 ³ / ₈	5 ¹ / ₁₆	5 ¹⁵ / ₁₆	4	5 ¹⁵ / ₁₆	8	5 ¹ / ₄	66.0
200	219.1	365	128	100	102	102	203	250	30.0

Fireriser® Butterfly Valve

Wafer Type Butterfly Valves, UL, ULC Listed/FM Approved
Wafer Type, Sizes: 2-1/2", 3", 4", 6" and 8"

Fig.No:HPW

Specifications

Universal wafer Type Butterfly Valve Suitable for Connecting to ANSI B 16 Class 125, ISO 2084/Din 2501 PN 16 & BS 4504 PN 16 Flanges

Working Pressure: 300 PSI (21Bars)

Max.Test Pressure: 600 PSI (42.8 Bars)

Max.Working Temp: 250°F (120°C)

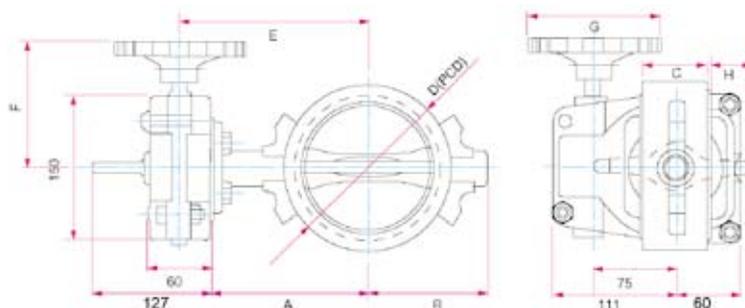
Factory installed UL, listed double Tamper Switches

Valve Approved For Indoor and Outdoor Use



Primary Materials:

Component	Material
Body	ASTM A-536 Nylon-11 Coated
Disc	ASTM B-536 EPDM Encapsulated
Upper&Lower Stems	AISI 420-SS
Worn Gear Shaft	AISI 410-SS
Housing	ASTM A-536
Hand Wheel	ASTM A-536
Flag Indicator	ASTM A-536
Shear Pin	ASTM A-510
Segment Gear	ASTM B-148 or B-548
Housing Gasket	EPDM Grade"E"
O-Rings (All)	EPDM Grade"E"



Dimensions (mm/in):

Size In/mm	A	B	C	D	E	F	G	H
2-1/2"/65	5.39(136)	3.43(87)	1.81(46)	5.89(149.4)	6.54(166)	5.31(135)	5.04(128)	0.32(8.2)
3"/80	5.63(143)	3.66(93)	1.81(46)	6.62(168.2)	6.81 (173)	5.31(135)	5.04(128)	0.57(4.9)
4"/100	6.14(156)	4.29(107)	2.06(52)	7. 89(200.2)	7.32(186)	5.31(135)	5.04(128)	0.89(22.7)
6"/150	7.4(188)	5.67(144)	2.20(56)	10.6(269.8)	8.58(218)	8.66(193)	8.66(222)	1.79(44.4)
8"/200	8.7(222)	6.54(166)	2.28(58)	13.0(330.2)	9.92 (252)	8.66(193)	8.66(222)	2.72(69.1)

Fireriser® Butterfly Valve

Grooved Butterfly Valves, UL, ULC Listed/FM Approved

Fig.No.:HPG

Specifications

Working Pressure: 300 PSI (21Bars)

Max.Test Pressure: 600 PSI (42.8 Bars)

Max.Working Temp: 250°F (120°C)

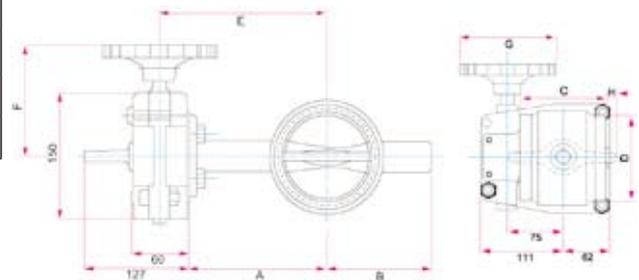
Factory installed UL, listed double Tamper Switches

Valve Approved For Indoor and Outdoor Use



Primary Materials:

Component	Material
Body	ASTM A-536 Nylon-11 Coated
Disc	ASTM B-536 EPDM Encapsulated
Upper&Lower Stems	AISI 420-SS
Worn Gear Shaft	AISI 410-SS
Housing	ASTM A-536
Hand Wheel	ASTM A-536
Flag indicator	ASTM A-536
Shear Pin	ASTM A-510
Segment Gear	EPDM Grade"E" ASTM B-148 or B-584
Housing Gasket	EPDM Grade"E"
O-Rings (All)	EPDM Grade"E"



Dimensions(mm/inch):

Size In/mm	A	B	C	D	E	F	G	H
2-1/2"/65	4.1(106)	3.3(85)	3.80(96.4)	2.8(73.0)	5.31(136)	5.04(128)	5.04(128)	
3"/80	4.4(112)	3.6(92)	3.80(96.4)	3.50(83.9)	5.99 (142)	5.04(128)	5.04(128)	
4"/100	5.7(145)	4.34(108)	4.54(115.4)	4.50(114.3)	6.89(173)	5.04(128)	5.04(128)	
6"/150	7.1(180)	5.7(146)	5.21(132.4)	6.6(168.3)	8.23(209)	8.66(220)	8.66(220)	0.28(7.10)
8"/200	8.0(204)	6.7(170)	5.80(147.4)	8.63(219.1)	9.21 (234)	8.66(220)	8.66(220)	0.9(24.0)

Fireriser® Butterfly Valve

Grooved Butterfly Valves, UL, ULC Listed/FM Approved Two Tapped Outlets

Fig.No.:HPGT

Specifications

Working Pressure: 300 PSI (21 Bars)

Max.Test Pressure: 600 PSI (42.8 Bars)

Max.Working Temp: 250°F (120°C)

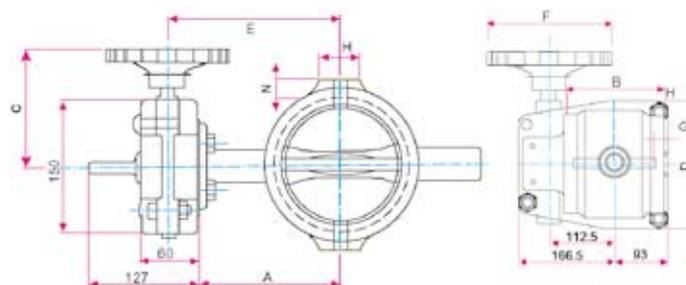
Factory installed UL listed double Tamper Switches

Valve Approved For Indoor and Outdoor Use



Primary Materials:

Component	Material
Body	ASTM A-536 Nylon-11 Coated
Disc	ASTM B-536 EPDM Encapsulated
Upper&Lower Stems	AISI 420-SS
Worn Gear Shaft	AISI 410-SS
Housing	ASTM A-536
Hand Wheel	ASTM A-536
Flag indicator	ASTM A-536
Shear Pin	ASTM A-510
Segment Gear	ASTM B-148
Housing Gasket	EPDM Grade"E"
O-Rings (All)	EPDM Grade"E"



Dimensions (mm/in):

Size In/mm	A	B	C	D	E	F	G	H	N	M
2-1/2"/65	105	127	135	73.0	135	128		30	13	4--1/2-14NPT
3"/80	112	127	135	88.9	142	128		30	13	4--1/2-14NPT
4"/100	145	127	135	114.3	175	128		30	13	4--1/2-14NPT
6"/150	179	143.5	193	168.3	209	220	6.8	40.4	15	4--3/4-14NPT
8"/200	204	152.4	193	219.1	234	220	24.2	40.4	15	4--3/4-14NPT

Fireriser® Butterfly Valve

Wafer Type Butterfly Valves,UL,ULC Listed/FM Approved
DW Wafer Type,Size: 2-1/2", 3", 4", 6", 8"

Fig.No.:DW

Specifications

Universal wafer Type Butterfly Valve Suitable for Connecting to ANSI B 16 Class 125, ISO 2084/Din 2501 PN 16 & BS 4504 PN 16 Flanges

Working Pressure: 175 PSI (12.5 Bars)

Max.Test Pressure: 350 PSI (25.0 Bars)

Max.Working Temp: 250°F (120°C)

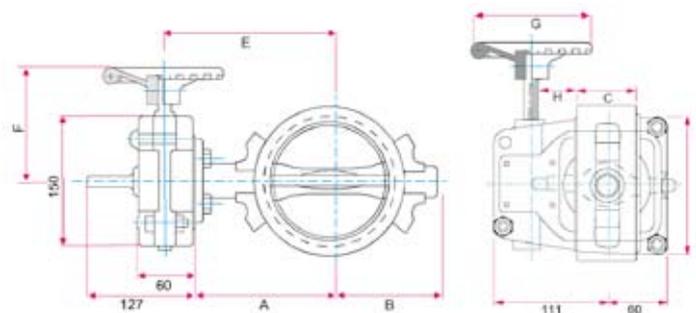
Factory installed UL, listed double Tamper Switches

Valve Approved For Indoor and Outdoor Use



Primary Materials:

Component	Material
Body	ASTM A-536 EMPE Encapsulated
Disc	ASTM B-548 or B-148
Upper&Lower Stems	AISI 420-SS
Worn Gear Shaft	AISI 410-SS
Housing	ASTM A-536
Hand Wheel	ASTM A-536
Flag indicator	ASTM A-536
Shear Pin	ASTM A-510
Segment Gear	ASTM B-148
Housing Gasket	EPDM Grade"E"
O-Rings (All)	EPDM Grade"E"



Dimensions(mm/inch):

Size In/mm	A	B	C	D	E	F	G	H
2-1/2"/65	4.1(106)	3.3(85)	1.8(46)	3.6(92)	5.3(135)	5.3(135)	4.9(125)	0.4(9.5)
3"/80	4.4(112)	3.6(92)	1.8(46)	4.2(107)	5.6 (142)	5.3(135)	4.9(125)	0.6(16)
4"/100	5.7(145)	4.34(108)	2.0(52)	5. 0(128)	6.9(175)	5.3(135)	4.9(125)	1.0(25)
6"/150	7.1(180)	5.7(146)	2.2(56)	7. 1(181)	8.3(210)	7.6(193)	8.9(225)	1.8(45.3)
8"/200	8.0(204)	6.7(170)	2.4(60)	9.2(234)	9.1 (232)	7.6(193)	8.9(225)	2.7(68.5)

Fireriser® Grooved Butterfly Valve

UL, ULC Listed/ FM Approved

Fig.No.:DG

Specifications

Working Pressure: 175 PSI(12.5 Bars)

Max. Test Pressure: 350 PSI(25.0 Bars)

Max. Working Temp.: 250°F (120°C)

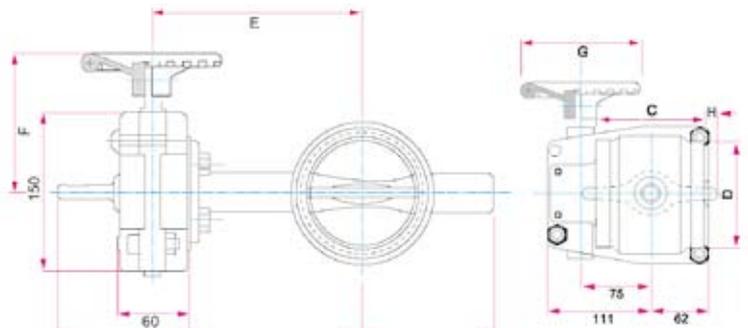
Factory Installed UL Listed Double Tamper Switches

Valve Approved For Indoor and Outdoor Use



Primary Materials:

Component	Material
Body	ASTM A-536 Nylon-11 Coated
Disc	ASTM B-536 EPDM Encapsulated
Upper&Lower Stems	AISI 420-SS
Worn Gear Shaft	AISI 410-SS
Housing	ASTM A-536
Hand Wheel	ASTM A-536
Flag indicator	ASTM A-536
Shear Pin	ASTM A-510
Segment Gear	ASTM B-148
Housing Gasket	EPDM Grade"E"
O-Rings (All)	EPDM Grade"E"



Dimensions(mm/inch):

Size In/mm	A	B	C	D	E	F	G	H
2-1/2"/65	4.1(106)	3.3(85)	3.7(94.6)	2.9(73.0)	5.3(135)	5.3(135)	4.9(125)	
3"/80	4.4(112)	3.6(92)	3.8(96.4)	3.5(83.9)	5.6 (142)	5.3(135)	4.9(125)	
4"/100	5.7(145)	4.34(108)	4.5(114.4)	4. 6(116.2)	6.9(175)	5.3(135)	4.9(125)	
6"/150	7.1(180)	5.7(146)	5.3(133.4)	6.6(168.3)	8.3(210)	7.6(193)	8.9(225)	0.28(7.10)
8"/200	8.0(204)	6.7(170)	5.8(147.7)	8.6(219.1)	9.1 (232)	7.6(193)	8.9(225)	0.9(24.0)

Firefly® Butterfly Valve

Bronze Butterfly Valve, UL, ULC Listed/FM Approved
BG Grooved End, Size: 2" and 2-1/2"

Fig.No.:BG

Specifications

Working Pressure: 175 PSI (12.5 Bars)

Max.Working Temp: 250°F (120°C)

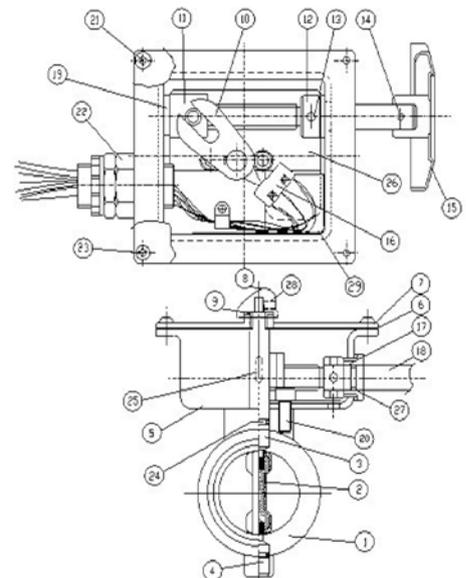
Factory Installed UL Listed Double Tamper Switches

Valve Approved For Indoor and Outdoor Use



Primary Materials:

Component	Material
Body	SS304
Disc	ASTM B-548 EPDM Encapsulated
Upper Stem	ASTM A-564 Type XM12
Lower Stem	ASTM A-564 Type XM12
Gear Housing Cover	ASTM A-619
Hand Wheel	ASTM A-619
Flag Indicator	ASTM B-16
Yoke Mechanism	ASTM A-283
Stem Bushing	ASTM B-16
Conduit Connector	ASTM A-307
O-Rings	EPDM Grade"E"
Cover Gasket	NBR



Dimensions:

Size in/mm	A	B	C	D	E	F	G
2"/50	4.56(114)	2.41(60.3)	2.29(57.15)	0.64(16)	0.32(8)	1.96(49)	3.62(90.5)
2-1/2"/65	4.56(114)	3.0(75)	2.75(69.1)	0.64(16)	0.32(8)	2.18(54.5)	3.82(95.5)

Patent Pending.

Firefly® Butterfly Valve

Bronze Butterfly Valves, UL, ULC Listed/FM Approved
BT Size: 1", 1-1/4", 1-1/2", 2" and 2-1/2"

Fig.No.:BT

Specifications

Working Pressure: 175 PSI (12.5 Bars)

Max. Working Temp: 250°F (120°C)

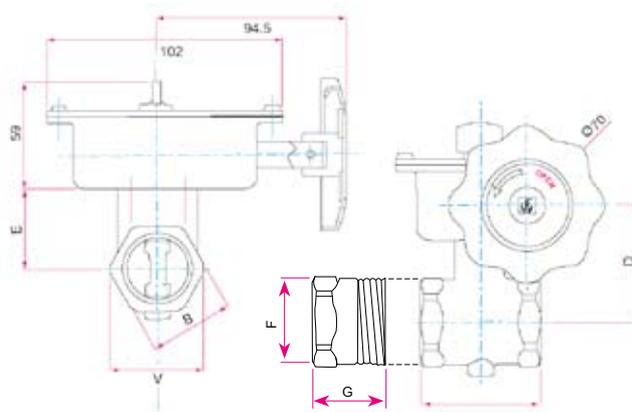
Factory installed UL Listed Double Tamper Switches Valve Approved

For indoor and Outdoor Use.



Primary Materials:

Component	Material
Body	ASTM B-506
Disc	ASTM B-548 EPDM Encapsulated
Upper Stem	ASTM A-564 Type XM12
Lower Stem	ASTM A-564 Type XM12
Gear Housing Cover	ASTM A-619
Hand Wheel	ASTM A-619
Flag indicator	ASTM B-16
Yoke Mechanism	ASTM A-283
Stem Bushing	ASTM B-16
Conduit Connector	ASTM A-307
O-Rings (All)	EPDM Grade "E"
Cover Gasket	NBR



Dimensions (Inch/mm)

Size in/mm	A	B	C	D	E	F	G
1"/25	1.75 (43.7)	1.56 (39.7)	2.16 (54)	2.08 (52)	1.48 (52)	43	34
1-1/4" 32	2.16 (54)	196 (47)	2.68 (67)	2.24 (56)	1.64 (41)	47	47
1-1/2" 40	2.4 (60)	2.24 (70)	2.92 (73)	2.36 (90)	2.45 (61.3)	50	48.6
2"/50	2.8 (70)	2.8 (70)	3.3 (82.4)	2.56 (54)	1.96 (49)	--	--
2-1/2"/65	3.6 (90)	3.36 (84)	4.16 (104)	2.78 (69.5)	2.18 (54.5)	--	--

Grooved Butterfly Valve

PN20/300PSI

Fig.No.:1352

Valve Standards:

Complies with EN593/BS5155/MSS SP-67.

Working Pressure and Temperature:

Working pressure PN20/300PSI.

Temperature from -10°C to 100°C for EPDM coated disc.

Temperature from -10°C to 82°C for NBR coated disc.

Top Flange:

Complies with ISO5211/1.

End-To-End:

Dimensions according to MSS SP-67-2002

Grooved Type:

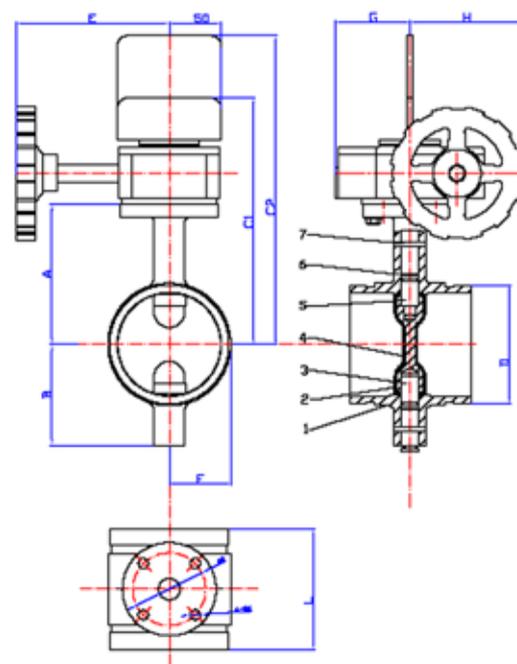
Grooved dimensions comply with Metric or ANSI Pipe Standards.

Operator:

Gear operator. With two internal CE approved switches.

Materials Specifications:

Part Name	Material	EN Spec.	ASTM Spec.
Body	Ductile Iron	EN-JS1050	A536 65-45-12
Shaft	Stainless Steel	BS970 420S37	AISI 416
Disc	DI EPDM Coated	EN-JS1050	A536 65-45-12
	DI NBR Coated	EN-JS1050	A536 65-45-12
Bushing	PTFE	Commercial	Commercial
O-Ring	EPDM/NBR	Commercial	Commercial



Dimensions (mm/In)

Size	50/2"	65/2.5"	80/3"	100/4"	125/5"	150/6"	200/8"	250/10"	300/12"
A	100.5	107	114.5	135	148.5	169	198	228.5	266
B	62	73/75	81	97	114	129	159	191	222
C1	201.5	208	215.5	236	249.5	270	299	329.5	367
C2	261.5	268	275.5	296	309.5	330	359	389.5	427
Pipe OD	60.3	73/76.1	88.9	114.3	139.7/141.3	165.1/168.3	219.1	273	323.9
E	147	147	147	147	147	147	147	197	197
F	50	50	50	59	72	85.5	112	138	164
G	71.5	71.5	71.5	71.5	71.5	71.5	71.5	75	75
H	109	109	109	109	109	145	145	166	166
L	81	96	96	116	147.6	148	135	159	165
P	70	70	70	70	70	70	70	102	102

Wafer Butterfly Valve

PN20/300PSI

Fig.No.:1353

Valve Standards:

Complies with EN593/BS5155/MSS SP-67.

Working Pressure and Temperature:

Working pressure PN20/300PSI.

Temperature from -10°C to 100°C for EPDM Seat.

Temperature from -10°C to 82°C for NBR Seat.

Top Flange:

Complies with ISO5211/1.

End-To-End:

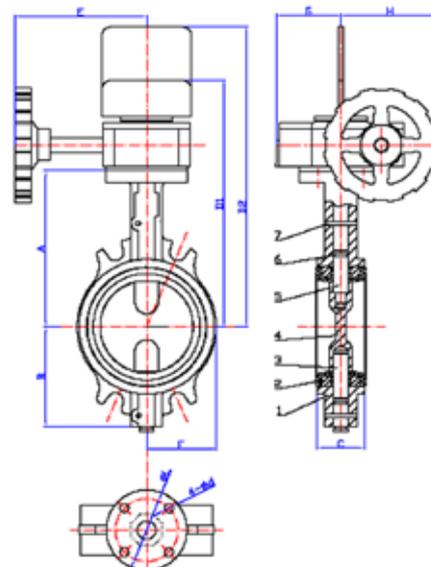
Dimensions according to MSS SP-67-2002

Flange Types:

BSEN 1092-2 PN16 ,ANSI B16.1 Class125

Operator:

Gear operator. With two internal CE approved switches.



Materials List

Part Name	Material	EN Spec.	ASTM Spec.
Body	Ductile Iron	EN-JS1050	A536 65-45-12
Shaft	Stainless Steel	BS970 420S37	AISI 416
Seat	DI EPDM Coated	EN-JS1050	A536 65-45-12
	DI NBR Coated	EN-JS1050	A536 65-45-12
Bushing	PTFE	Commercial	Commercial
O-Ring	EPDM/NBR	Commercial	Commercial

Dimensions (mm/In)

Size	50/2"	65/2.5"	80/3"	100/4"	125/5"	150/6"	200/8"	250/10"	300/12"
A	132.5	145	154.5	179	191.5	213.5	250.5	282.5	325.5
B	78	85	93	112	130	146	175	210	247
C	43	46	46	52	56	56	60	68	78
D1	233.5	246	255.5	280	292.5	314.5	351.5	383.5	426.5
D2	293.5	306	315.5	340	352.5	374.5	411.5	443.5	486.5
E	147	147	147	147	147	147	147	197	197
F	53	63	74	77.5	93	107	134	162	185
G	71.5	71.5	71.5	71.5	71.5	71.5	71.5	75	75
H	109	109	109	109	109	145	145	166	166
L	70	70	70	70	70	70	70	102	102
4-Ød	6	6	6	6	6	8	8	10	10

Fireriser® Y Strainer

Fig.No.:YS-300 - FF

Fusion bonded epoxy coated RAL3003

Working pressure

21 Bar/ 300 PSI

Flanged Ends

ANSI B16.1 Class125/150/250,

EN1092-2 PN10/PN16/PN25

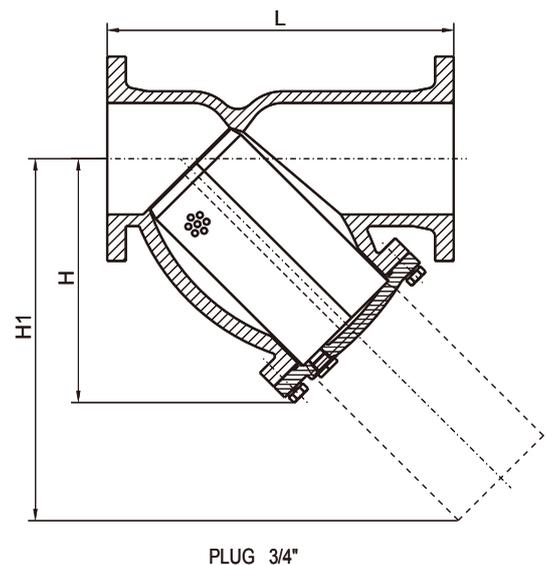
BS10 Table D/Table E



Materials List

Component	Material	Specification
Body	Ductile iron	A536 65-45-12
Cover	Ductile Iron	A536 65-45-12
Screen	Stainless Steel	AISI 304
Gasket	EPDM	
Plug	Carbon Steel	

Size In/mm	Measured Loss at 15 fps (4.6m/s)
2"/50	7.22 psi
2.5"/65	5.89psi
3"/80	8.24psi
4"/100	5.88psi
5"/125	7.63psi
6"/150	4.82psi
8"/200	5.83psi
10"/250	7.25psi
12"/300	5.73psi



Dimensions(mm/inch)

SIZE	mm	50	65	80	100	125	150	200	250	300
	inch	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"
L	mm	203	254	260	308	398	472	550	654	762
	inch	7.99"	10"	10.24"	12.13"	15.67"	18.58"	21.65"	25.75"	30"
H	mm	132	158	175	202	290	334	391	460	590
	inch	5.20"	6.22"	6.89"	7.99"	11.42"	13.15"	15.39"	18.11"	23.23"
H1	mm	195	240	270	320	425	495	570	700	840
	inch	7.68"	9.45"	10.63"	12.60"	16.73"	19.49"	22.44"	27.56"	33.07"

Fireriser® Y Strainer

Fig.No.:YS-300-FG

Fusion bonded epoxy coated RAL3003

Working pressure

21 Bar/ 300 PSI

Flanged By Grooved End

ANSI B16.1 Class125/150/250,

EN1092-2 PN10/PN16/PN25

BS10 Table D/Table E

AWWA C 606

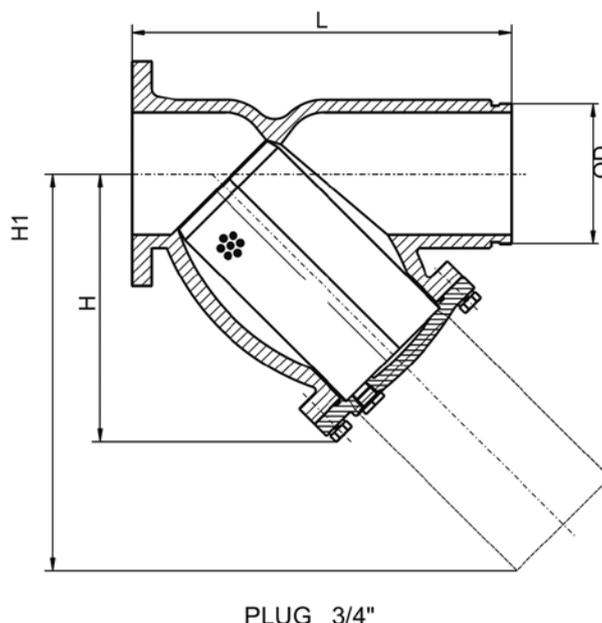
Grooved Ends To Suit ANSI Or BS Standard Pipe



Materials List

Component	Material	Specification
Body	Ductile Iron	A536 65-45-12
Cover	Ductile Iron	A536 65-45-12
Screen	Stainless Steel	AISI 304
Gasket	EPDM	
Plug	Carbon Steel	

Size In/mm	Measured Loss at 15 fps (4.6m/s)
2"/50	7.22 psi
2.5"/65	5.89psi
3"/80	8.24psi
4"/100	5.88psi
5"/125	7.63psi
6"/150	4.82psi
8"/200	5.83psi
10"/250	7.25psi
12"/300	5.73psi



Dimensions(mm/inch)

SIZE	mm	50	65	80	100	125	150	200	250	300
	inch	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"
L	mm	203	254	260	308	398	472	550	654	762
	inch	8"	10"	10.24"	12.13"	15.67"	18.58"	21.65"	25.75"	30"
H	mm	130	158	175	202	290	334	391	460	590
	inch	5.12"	6.22"	6.89"	7.95"	11.42"	13.15"	15.39"	18.11"	23.23"
H1	mm	195	240	270	320	425	495	570	700	840
	inch	7.68"	9.45"	10.63"	12.60"	16.73"	19.49"	22.44"	27.56"	33.07"
OD	mm	60.3	73.0/76.1	88.9	114.3	139.7/141.3	165.1/168.3	219.1	273	323.9
	inch	2.37"	2.87/3"	3.50"	4.5"	5.5/5.56"	6.5/6.63"	8.63"	10.75"	12.75"

Fireriser® Y Strainer

Fig.No.:YS-300-GG

Fusion bonded epoxy coated RAL3003

Working pressure

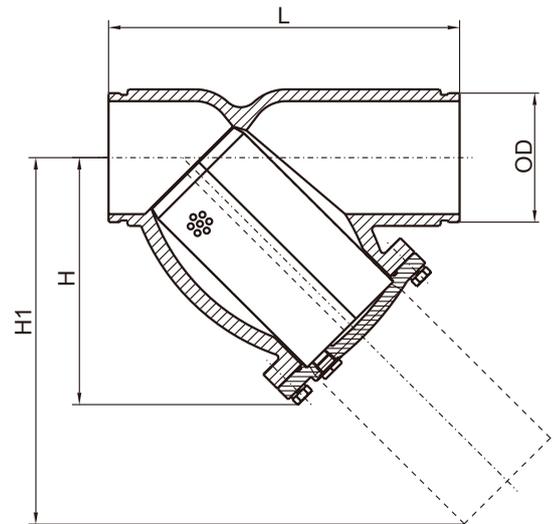
21 Bar/ 300 PSI



Grooved Ends To Suit ANSI Or BS Standard Pipe

Materials List

Component	Material	Specification
Body	Ductile Iron	A536 65-45-12
Cover	Ductile Iron	A536 65-45-12
Screen	Stainless Steel	AISI 304
Gasket	EPDM	
Plug	Carbon Steel	



PLUG 3/4"

Size In/mm	Measured Loss at 15 fps (4.6m/s)
2"/50	7.22 psi
2.5"/65	5.89psi
3"/80	8.24psi
4"/100	5.88psi
5"/125	7.63psi
6"/150	4.82psi
8"/200	5.83psi
10"/250	7.25psi
12"/300	5.73psi

Dimensions(mm/inch)

SIZE	mm	50	65	80	100	125	150	200	250	300
	inch	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"
L	mm	203	254	272.4	308	398	472	550	654	762
	inch	9.06"	10"	10.71"	12.13"	15.67"	18.58"	21.65"	25.75"	30"
H	mm	130	158	175	202	290	334	391	460	590
	inch	5.12"	6.22"	6.89"	7.95"	11.42"	13.15"	15.39"	18.11"	23.23"
H1	mm	195	240	270	320	425	495	570	700	840
	inch	7.68"	9.45"	10.63"	12.60"	16.73"	19.49"	22.44"	27.56"	33.07"
OD	mm	60.3	73.0/76.1	88.9	114.3	139.7/141.3	165.1/168.3	219.1	273	323.9
	inch	2.37"	2.87/3"	3.50"	4.5"	5.5/5.56"	6.5/6.63"	8.63"	10.75"	12.75"

Fireriser® Gate Valve

Flange type is EN1092-2 ,Epoxy Coated with Red RAL3000,With open shut Indicator
BS5163 Ductile Iron Gate Valve Type A

FIG No: BSGV3243 IND.

Fusion bonded epoxy coated RAL3000

Valve Standards:

Complies with BS5163 Type A

Working Pressure:

Temperature: from -10°C to 100°C

Flange Type :

EN1092-2 PN10/PN16

BS10 Table D/E

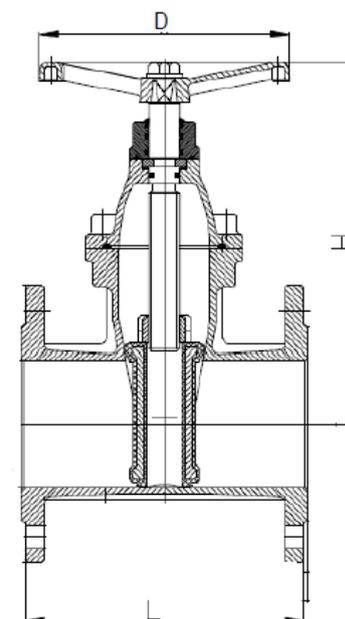
Operator:

Handwheel



Materials List:

COMPONENT	MATERIAL
Body	Ductile Iron: ASTM A536 65-45-12
Wedge Disc	EPDM NBR
Stem Nut	Brass
Stem	SS420
Bonnet	Ductile Iron: ASTM A536 65-45-12
Gland	Ductile Iron: ASTM A536 65-45-12
Dust Cap	EPDM NBR
Indicator	SS304
Indicator Plate	SS304
Handwheel	Ductile Iron: ASTM A536 65-45-12
O-Ring	EPDM NBR
O-Ring(Cover)	EPDM NBR
Gland Ring	EPDM NBR
Spacer	PTFE
O-Ring	EPDM NBR



Dimensions:(mm)

Size	50	65	80	100	125	150	200	250	300	350	400	450	500	600
L	178	190	203	229	254	267	292	330	356	381	406	432	457	508
H	210	237	247	300	364	404	497	590	667	882	956	1027	1106	1258
D	160	200	200	200	250	250	320	370	370	450	450	640	640	640

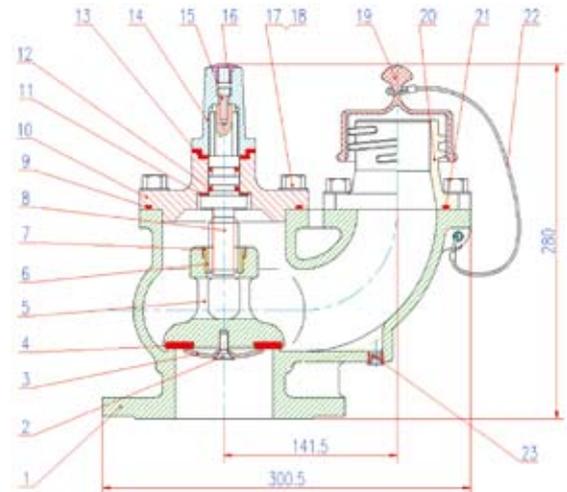
Fire Hydrant DN80

BS 750 Type II

Fig. 9207

Materials List:

Item	Part Name	Material	BS Spec.
1	Body	Ductile Iron	EN-JS1050
2	Bolt	Stainless Steel	970 304S15
3	Holder	Stainless Steel	970 304S15
4	Gasket	EPDM/NBR	
5	Disc	Ductile Iron	EN-JS1050
6	Stem Nut	Brass	2874 CZ121
7	Screw	EPDM/NBR	
8	Stem	Ductile Iron	EN-JS1050
9	O-Ring	EPDM/NBR	
10	Cover	Ductile Iron	EN-JS1050
11	Washer	Brass	2874 CZ121
12	O-Ring	EPDM/NBR	
13	Cap Gasket	Plastic	
14	Driver Cap	Ductile Iron	EN-JS1050
15	Bolt	Stainless Steel	970 304S15
16	Indicator Cap	Plastic	
17	Bolt	Stainless Steel	970 304S15
18	Washer	Stainless Steel	970 304S15
19	Dust Cap	Plastic	
20	Outlet	Bronze	1400 LG2
21	O-Ring	EPDM/NBR	
22	Rope	Stainless Steel	
23	Plug	Plastic	



Notes:

1. Inlet flange is DN80 drilled to EN1092-2 PN 10, PD 16 and ANSI B16.1 Class 125
2. Standard outlet is 2-1/2" London found Thread.
Other outlets available-Birmingham, Belfast, or instantaneous. Specify on order.
3. Hydrostatic test: Body-24Bars, Seat-17.6 Bars
4. Minimum 200 microns Fusion Bonded Epoxy coating for protection against corrosion.

Fireriser® Installation Guide

Fivalco®

Design Requirements

The Fivalco grooved butterfly valve should be connected to the piping system with approved couplings or flange adapters. Flow may be from either direction, and the valve may be positioned in any direction.

Fivalco butterfly valves have been designed with a slow close hand wheel operator which effectively minimizes water hammer. These valves feature minimum flow restriction and pressure loss when in the fully open position.

When the valves are received from the manufacture they should be handled carefully to avoid breakage and damage to the seating area. Before installation of the valve, clean piping, flange and coupling. When the valve closes hard, it is usually due to debris lodged in the sealing area. Often this may be corrected by backing off the hand wheel and closing again.

Installation

The valve should never be forced to seat by applying a wrench to the hand wheel as this may distort the valve components or score the sealing surface. The use of excessive force to open or close the valve violates all warranties whether express or implied.

The inlet and outlet pipe adjacent to the valve should be properly supported to prevent excessive stress on the valve body. The valve should not be used to force a pipeline into position as this may result in distortion of the valve body.

Conduit and electrical connections to the optional tamper switch must be in accordance with National Electrical Code (NFPA 72) and/or requirements of the local authority having jurisdiction.

Care & Maintenance

Fivalco butterfly valves require no regular maintenance, however, it is advisable to inspect and verify proper operation of the unit annually or in accordance with the authority having jurisdiction. The inspection should include a visual check for leakage at the valve pipe connection and body to operator connection.

Inspection and maintenance should be performed by a qualified inspection service.

FireRiser® Butterfly Valves Installation Guide

Switch Installaion

Fivalco butterfly valves are provided with internal supervisory position switches. The tamper switch operates by a cam connected to the vallyve stem. The switch will change positon and close within two(2) full turns of the hand wheel from the fully open position.

Switch#1:

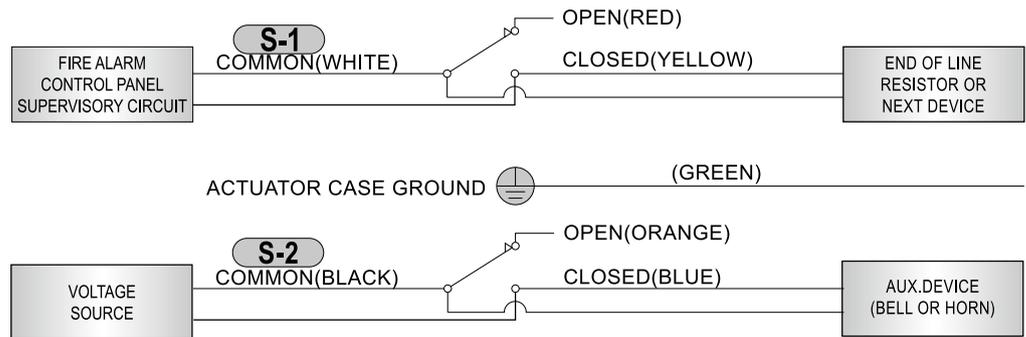
For connection to the supervisory circuit.

Normally closed : 2 Yellow
 Normally open : 2 Red
 Common : 2 White

Switch#2:

Auxiliary switch connected per authority.

Normally closed :1 Blue
 Normally open :1 Orange
 Common :2 Black
 Ground Lead :1 Green



NOTES 1.RATED:5A-1/6HP-125/250V

Fireriser® Installation, Operation and Maintenance of Resilient-Seated Gate Valves

1. GENERAL

Resilient-seated gate valves form a significant component of many fire-fighting and water-distribution systems. Failure of a resilient-seated gate valve in such systems, either due to faulty installation or improper maintenance, could result in extensive damage and costly repairs. In addition, many resilient-seated gate valves are installed in buried-service or underground applications. Problems with or malfunctions of the valves due to faulty installation or improper maintenance may result in extensive and costly unearthing operation to effectively correct or eliminate the problem. Many resilient-seated gate-valve problems and failures can be traced back to improper installation, operation, or maintenance procedures.

2. UNLOADING

All valves should be unloaded carefully. Each valve should be carefully lowered from the truck to the ground; it should not be dropped. In the case of larger valves, forklifts or slings around the body of the valve or under the skids should be used for unloading. Only hoists and slings with adequate load capacity to handle the weight of the valve or valves should be used. Hoists should not be hooked into or chains fastened around yokes, gearing, motors, cylinders, or handwheels. Failure to carefully follow these recommendations is likely to result in damage to the valve.

3. INSPECTION PRIOR TO INSTALLATION

Resilient-seated gate valves should be inspected at the time of receipt for damage in shipment. The initial inspection should be to verify compliance with specifications, direction of opening, size and shape of operating nut, number of turns to open or close, and type of end connections. A visual inspection of the seating surfaces should be performed to detect any damage in shipment or scoring of the seating surfaces. Inspection personnel should look for bent stems, broken handwheels, cracked parts, loose bolts, missing parts and accessories, and any other evidence of mishandling during shipment. Each valve should be operated through one complete opening-and-closing cycle in the position in which it is to be installed.

4. STORAGE

Valves should be stored in the fully closed position to prevent the entry of foreign material that could cause damage to the seating surface. Whenever practical, valves should be stored indoors. If outside storage is required, means should be provided to protect the operating mechanism from weather elements. During outside storage, valves should be protected from the weather, sunlight, ozone, and foreign materials. In colder climates where valves may be subject to freezing temperatures, it is absolutely essential to remove the water from the valve interior and close the valve before storage. Failure to do so may result in a cracked valve casting and or deterioration of the resilient seat material.

5. INSTALLATION

At the jobsite prior to installation, each valve should be visually inspected and any foreign material in the interior portion of the valve should be removed. A detail inspection of the valve as outlined in Sec. 3 should be performed prior to installation.

5.1 Bolts all bolts should be checked for proper tightness and protected by the installer to prevent corrosion, either with a suitable paint or by polyethylene wrapping.

5.2 Underground Installation Valves in water-distribution lines shall, where practical, be located in easily accessible areas.

5.2.1 During installation there is the possibility of foreign materials inadvertently entering the valve. Foreign material can damage internal working parts during operation of the gate valve. For this reason, gate valves should be installed in the closed position. Each valve should be placed on firm footing in the trench to prevent settling and excessive strain on the connection to the pipe. Pipe systems should be supported and aligned to avoid damage to the valve.

5.2.2 A valve box or vault should be provided for each valve used in a buried-service application. The valve box should be installed so as not to transmit shock loads or stress to the valve. The valve box should be centered over the operating nut of the valve with the box cover flush with the surface of the finished area or such other level as directed by the owner. Valve boxes should be of such design that a traffic load on the top of is not transmitted to the valve.

5.2.3 Valves buried in unusually deep trenches should have special provisions for operating the valve – either a riser on the stem to permit use of a normal key or a notation on the valve records that a long key will be required.

5.2.4 When valves with exposed gearing or operating mechanisms are installed belowground, a vault designed to allow pipe clearance and prevent settling on the pipe should be provided. The operating nut should be accessible from the top opening of the vault with a valve key. The size of the vault should provide for easy removal of the valve bonnet and internal parts of the valve for purpose of repair. Consideration should be given to the possible entry of groundwater and /or surface water and to the need to provide for the disposal of such water.

5.3 Aboveground Installation. Valves installed aboveground or in a plant piping system should be supported and aligned to avoid damage to the valves. Valves should not be used to correct the misalignment of piping.

5.4 Inspection. After installation and before pressurization of the valve, all pressure-containing bolting (bonnet, seal plate, packing gland, and end connections) should be inspected for adequate tightness to prevent leakage. In addition, an inspection should be made for adequate tightness of all tapped and plugged connections to the valve interior. Proper inspection at this time will minimize the possibility of leaks after pressurization of the piping system.

5.5 Testing. In order to prevent time lost searching for leaks, it is recommended that the valve excavations are not backfilled until after pressure tests have been made. After installation, it is desirable to test newly installed piping sections, including valves, at some pressure above the system design pressure. The test pressure should not exceed the rated working pressure of the valve. After the test, steps should be taken to relieve any tapped pressure in the body of the valve. The resilient-seated gate valve should not be operated in either the opening or closing direction at different pressures above the rated working pressure. It is also recognized that wear or foreign material may damage valve seating surfaces and may cause leakage.

5.6 Records. On completion of the installation, valve location, size, make, type, date of installation, number of turns to open, direction of opening, and other information deemed pertinent should be entered on permanent records.

5.7 Application Hazards. Resilient-seated gate valves should not be installed in applications or for service other than those recommended by the manufacturer.

5.7.1 Resilient-seated gate valves should not be installed in lines where service pressure will exceed the rated working pressure of the valve.

5.7.2 Resilient-seated gate valves should not be used for throttling service unless the design is specifically recommended for that purpose or approved in advance by the manufacture.

5.7.3 Resilient-seated gate valves should not be used in applications that are exposed to freezing temperature unless sufficient flow is maintained through the valve or other protection is provided to prevent freezing.

5.7.4 Gate valves should not be installed at a dead end or near a bend in a pipeline without proper and adequate restraint to support the valve and prevent it from blowing off the end of the line.

5.7.5 To prevent damage, 4" and below size NPS resilient-seated gate valves should not be operated with input torques greater than 200 ft-lb (270N.m). Gate valves 6" to 12" NPS should not be operated with input torques greater than 300ft-lb (406N.m).

6. INSPECTION AND MAINTENANCE

Each valve should be operated through a full cycle and returned to its normal position on a time schedule designed to prevent a buildup of tuberculation or other deposits that could render the valve inoperable or prevent a tight shutoff. The interval of time between operations in critical locations, or valves subjected to severe operating conditions, should be shorter than that for less important installations, but can be whatever time period is found to be satisfactory based on local experience. The number of turns required to complete the operation cycle should be recorded and compared with permanent installation records to ensure full gate travel.

Maintenance should be performed at the time a malfunction is discovered to avoid a return trip to the same valve and to prevent forgetting about it altogether. Recording system should be adopted that provides a written record of valve location, condition, maintenance, and each subsequent inspection of the valve.

6.1 Inspection Each valve should be operated through one complete operating cycle. If the stem action is tight as a result of “hard-water” buildup on the stem threads, the operation should be repeated several times until the opening and closing actions are smooth and free. With the gate in the partially open position, a visual inspection should be performed, where practical, to check for leakage at all joints, connections, and areas of packing or seals. If leakage is observed, all defective O-rings, seals, gaskets, or end-connection sealing members should be replaced. If leakage can not be corrected immediately, the nature of the leakage should be report promptly to those who are responsible for repairs. If the valve is inoperable or irreparable, its location should be clearly established to save time for repair crews. The condition of the valve and, if possible, the gate position, should be reported to personnel responsible for repairs. In addition, fire departments and other appropriate municipal departments should be informed that the valve is out of service.

6.2 Record Keeping In order to carry out a meaningful inspection and maintenance program, it is essential that the location, make, type, size, and date of installation of each valve be recorded. Depending on the type of record-keeping system used, other information may be entered in the permanent record. When a resilient-seated gate valve is inspected, an entry should be made in the permanent record indicating the date of inspection and condition of the valve. If repair work is necessary, it should be indicated. On completion of the work, the nature of the repairs and date completed should be recorded.

7. Repairs

Leakage, broken parts, hard operation, and other major defects should be corrected by a repair crew as soon as possible after the defect has been reported. If repairs are to be performed in the field, the repair crews should take a full complement of spare parts to the jobsite. Provisions should be made to isolate the defective valve from water pressure and relieve internal trapped pressure prior to performing any corrective maintenance. Disassembly of the valve should be accomplished in accordance with the procedure supplied by the manufacturer. After repairing the valve, the operating mechanism should be cycled through one complete operating cycle. With full line pressure applied to the valve in the open position, an inspection should be made to detect leakage in the areas around the seal plate, bonnet, packing gland, and body-end connections. A record should be made to indicate that the valve has been repaired and is in working condition. Any markings indicating that the valve is inoperable should be removed. In addition, fire departments and other appropriate municipal departments should be informed of the satisfactory repair of the valve.

Quickconnect™ Flexible Sprinkler Connector

Anchoring components are intended for use with drop ceilings conforming to ASTM C635 and other major standards when installed in accordance with the Standard Practice for installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels, ASTM C636 or other equivalent standards

Component List:

No	Part Name	Material	Qty.
1	Flexible Tube	SS304	1
2	Nut	S10C	2
3	Isolation Ring	Nylon66	1
4	O-Ring	Silicon	1
5	Reducer	Zinc Plated Steel	1
6	Nipple	Zinc Plated Steel	1
7	Center Bracket	Zinc Plated Steel	1
8	End Bracket	Zinc Plated Steel	2
9	Square Bar	Zinc Plated Steel	1

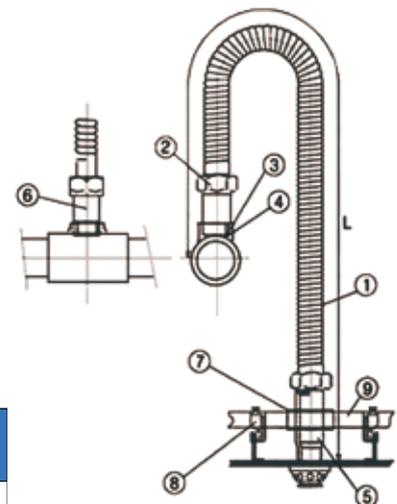


Technical Data

- Rated Pressure: 175PSI
- Maximum Ambient Temperature : 225(°F), 170 (°C)
- Maximum Sprinkler K-factor for 1/2 in. outlet: 5.6gal/mm/(psi)^{1/2}
- Maximum Sprinkler K-factor for 3/4 in. outlet: 8.0gal/mm/(psi)^{1/2}
- Designed for use in Wet and Dry Systems
- Minimum Bend Radius: 8In/200mm

Maximum Number of bends.

- 3 bends for 1200-1800mm lengths
- 2 bends for 800~950mm lengths
- 1 bend for less than 800mm



(FRICTION LOSS TEST)

Model	In/mm	Hose assembly length, ft (m)	Equivalent Length of 1in. Schedule 40 Pipe, ft (m)
FX(B)-07	1/2(15mm)	2 (0.6)	13.7(4.1)
FX(B)-08	1/2(15mm)	2.6 (0.6)	17.9(5.4)
FX(B)-10	1/2(15mm)	3 (0.8)	22.2(6.7)
FX(B)-12	1/2(15mm)	4 (0.9)	37.0(11.2)
FX(B)-15	1/2(15mm)	4 (1.2)	45.5(13.8)
FX(B)-18	1/2(15mm)	6 (1.5)	63.0(19.2)
FX(B)-07	3/4(20mm)	2 (0.6)	10.5(3.2)
FX(B)-08	3/4(20mm)	2.6 (0.6)	14.4(4.4)
FX(B)-10	3/4(20mm)	3 (0.6)	18.3(5.6)
FX(B)-12	3/4(20mm)	4 (0.6)	32.8(10.0)
FX(B)-15	3/4(20mm)	5 (0.6)	43.2(13.1)
FX(B)-18	3/4(20mm)	6 (0.6)	58.7(17.9)

Quickconnect™ Flexible Sprinkler Connector

Installation Instructions

FXB: BRAIDED TYPE FX: UNBRAIDED TYPE

NOTES: NPT + METRIC THREADS AVAILABLE: SPECIFY WHEN ORDERING

-Packing : 20 pieces per carton per each size -



Assembly Instructions

(A.Connecting The Reducer)



Disconnect the reducer by turning the Nut (not the Reducer) from the Flexible Hose.

Check that Gasket and Isolation ring are properly in place. Reconnect the Reducer to the Flexible Sprinkler by turning the Nut. Two open ended spanners (or adjustable wrenches) should be used to tighten the nut to ensure a leak proof connection.

Do not over tighten

(B.Connecting The Nipple To The Piping)



Disconnect the Nipple from the Flexible Sprinkler. Connect the Nipple to the main piping with normal sealing procedures and tighten using a pipe wrench to ensure a leak-proof connection. Do not over tighten. Connect the Flexible hose to the Nipple by finally tightening the nut. Make sure gasket and isolation ring are properly located at the end of the Flexible hose before connecting the hose to the main piping system

(C.Connecting The Square Bar To The Ceiling Structure)



Place the two End brackets properly in position. Push the end brackets into the ceiling structure rails and check the end brackets sit securely on the rails.

Fasten the wing bolts on the side of the End brackets finger tight.

Do not over tighten



Insert the reducer from the side of the center bracket in a horizontal direction (not from the top vertically). Adjust the angle of the reducer by turning it gently into the bracket.

Do not over tighten

Automatic Air Vent Valve

PN 16/Class 125/ 235 PSI

Fig. 9701

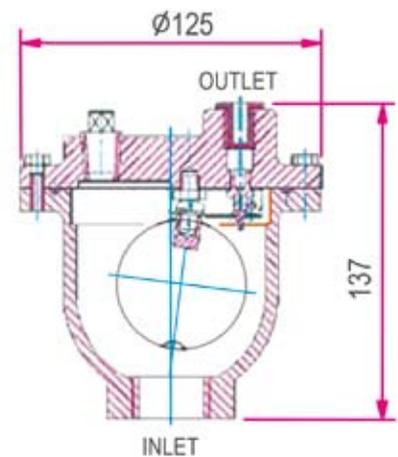
Working Pressure and Temperature

Working pressure PN16/Class 125./235 PSI

Temperature from -10°C to 120°C.

Material Specifications:

Part Name	Material	EN Spec.	ASTM Spec.
Body	Cast Iron	EN-JL1040	A126 Class B
Cover	Cast Iron	EN-JL1040	A126 Class B
Lever Frame	Stainless Steel	BS970 304S15	AISI 304
Float ball	Stainless Steel	BS970 304S15	AISI 304
Gasket	Stainless Steel	BS970 304S15	AISI 304
Cover Bolt	Carbon Steel	Carbon Steel	A307 B
Float Arm	Stainless Steel	BS970 304S15	AISI 304
Orifice Button	Viton	Commercial	Commercial
Pivot Pin	Stainless Steel	BS970 304S15	AISI 304
Pin Retainer	Stainless Steel	BS970 304S15	AISI 304
Plug	Brass	CuZn39Pb3	B16 C36000
Locator	Stainless Steel	BS970 304S15	AISI 304



Dimensions (mm):

Size	Female Threaded
1/2"	1/2" BSP or NPT
3/4"	3/4" BSP or NPT
1"	1" BSP or NPT



UL, ULC, and CSFM Listed, FM Approved, NYMEA Accepted, CE Marked

Dimensions: 6.19"L X 2.25"W X 5.88"H
15,7cm L X 5,7cm W X 14,6cm H

Weight: 2 lbs. (0,9 kg.)

Enclosure: Cover - Die-Cast
Finish - Red Spatter Enamel
Base - Die Cast Zinc

All parts have corrosion resistant finishes.

Cover Tamper: Tamper resistant screws,
Optional cover tamper kit available.

Contact Ratings:

OSYSU-1: One set of SPDT (Form C)
OSYSU-2: Two sets of SPDT (Form C)
15.00 Amps at 125/250VAC
2.50 Amps at 30VDC resistive

Environmental Limitations:

- **NEMA 4 and NEMA 6P Enclosure (IP67) when used with appropriate watertight conduit fittings.**
- Indoor or Outdoor use (Not for use in hazardous locations. See bulletin no. 5400705 OSYS-U-EX for hazardous locations.)
- Temperature Range: -40°F to 140°F (-40°C to 60°C)

Conduit Entrances:

2 knockouts for 1/2" conduit provided

Service Use:

Automatic Sprinkler	NFPA-13
One or two family dwelling	NFPA-13D
Residential occupancy up to four stories	NFPA-13R
National Fire Alarm Code	NFPA-72

General Information

The OSYSU is used to monitor the open position of an OS&Y (outside screw and yoke) type gate valve. This device is available in two models; the OSYSU-1, containing one set of SPDT (Form C) contacts and the OSYSU-2, containing two sets of SPDT (Form C) contacts. These switches mount conveniently to most OS&Y valves ranging in size from 2" to 12" (50mm to 300mm). They will mount on some valves as small as 1/2" (12,5mm).

The cover is held in place by two tamper resistant screws that require a special tool to remove. The tool is furnished with each device and should be left with the building owner or responsible party. Replacement or additional cover screws and hex keys are available. See Ordering Information.

Optional Cover Tamper Switch

A field installable cover tamper switch is available as an option which may be used to indicate removal of the cover. See Ordering Information.

Testing

The OSYSU and its associated protective monitoring system should be inspected and tested in accordance with applicable NFPA codes and standards and/or the authority having jurisdiction (manufacturer recommends quarterly or more frequently).

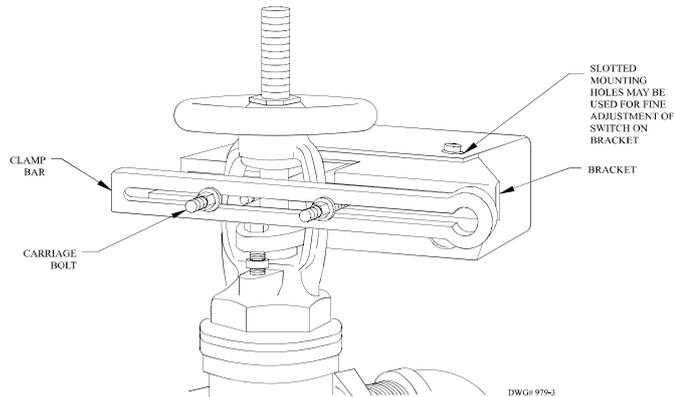
Ordering Information

Model	Description	Stock No.
OSYSU-1	Outside Screw & Yoke-Supervisory Switch (Single switch)	1010106
OSYSU-2	Outside Screw & Yoke-Supervisory Switch (Double switch)	1010206
--	Cover Screw	5490424
--	Hex Key for Cover Screws and Installation Adjustments	5250062
--	Optional Cover Tamper Switch Kit	0090131

For pressure reducer type valve installation kits (if required) contact valve manufacturer.

Fig. 1 Small Valve Installation ½" thru 2½"
(12,5mm thru 63,5mm) Sizes

These switches mount conveniently to most 2" to 12" OS&Y valves. They will mount on some valves as small as ½" (12,5mm). J-hooks may be required on valves with limited clearance.

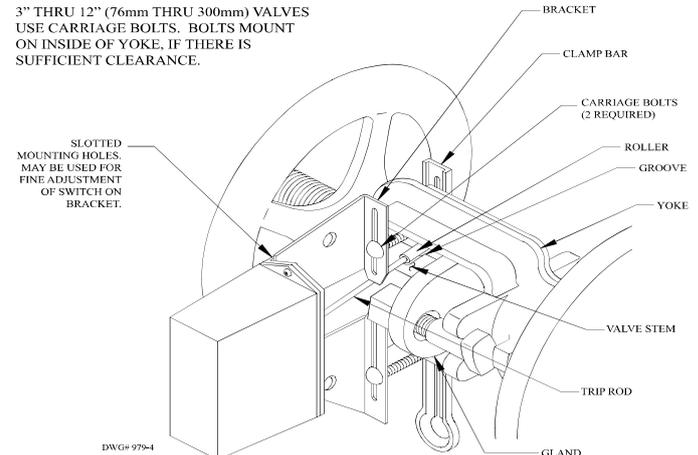


Small Valve Installation

1. Remove and discard "C" washer and roller from the trip rod.
2. With the valve in the FULL OPEN position, locate the OSYSU across the valve yoke as far as possible from the valve gland, so that the trip rod lays against the non-threaded portion of the valve stem.
3. Loosen the locking screw that holds the trip rod in place and adjust the rod length (see Fig. 4). When adjusted properly, the rod should extend past the valve screw, but not so far that it contacts the clamp bar. Tighten the locking screw to hold the trip rod in place.
Note: If trip rod length is excessive, loosen the locking screw and remove the trip rod from the trip lever. Using pliers, break off the 1" (25mm) long notched section (see Fig. 5). Reinstall trip rod and repeat Step 3 procedure.
4. Mount the OSYSU loosely with the carriage bolts and clamp bar supplied. On valves with limited clearance use J-hooks supplied instead of the carriage bolts and clamp bar to mount the OSYSU.
5. Mark the valve stem at the center of the trip rod.
6. Remove the OSYSU. File a 1/8" (3,2mm) deep groove centered on the mark on the valve stem utilizing a 3/16" (4,8mm) round, non-tapered file. Round and smooth the edges of the groove to prevent damage to the valve packing and to allow the trip rod to move easily in and out of the groove as the valve is operated.
7. Mount the OSYSU with the trip rod centered in groove.
8. Final adjustment is made by loosening 2 screws (see Fig. 1) and sliding the OSYSU on the bracket. Adjustment is correct when switches are not activated with the trip rod seated in the valve stem groove and that the switches activate when the trip rod moves out of the groove.
9. Tighten the adjustment screws and all mounting hardware. Check to insure that the rod moves out of the groove easily and that the switches activate within one turn when the valve is operated from the FULL OPEN towards the CLOSED position.
Note: Close the valve fully to determine that the stem threads do not activate the switch. The switch being activated by the stem threads could result in a *false valve open* indication.

Fig. 2 Large Valve Installation 3" thru 12"
(76mm thru 300mm) Sizes

3" THRU 12" (76mm THRU 300mm) VALVES
USE CARRIAGE BOLTS. BOLTS MOUNT
ON INSIDE OF YOKE, IF THERE IS
SUFFICIENT CLEARANCE.



Large Valve Installation

1. With the valve in the FULL OPEN position, locate the OSYSU across the valve yoke as far as possible from the valve gland, so that the trip rod lays against the non-threaded portion of the valve stem.
2. Mount the OSYSU loosely with the carriage bolts and clamp bar supplied.
3. Loosen the locking screw that holds the trip rod in place and adjust the rod length (see Fig. 4). When adjusted properly, the rod should extend past the valve screw, but not so far that it contacts the clamp bar. Tighten the locking screw to hold the trip rod in place.
Note: If trip rod length is excessive, loosen the locking screw and remove the trip rod from the trip lever. Using pliers, break off the one 1" (25mm) long notched section (see Fig. 5). Reinstall trip rod and repeat Step 3 procedure.
4. Mark the valve stem at the center of the trip rod.
5. Remove the OSYSU. File a 1/8" (3,2mm) deep groove centered on the mark of the valve stem utilizing a 3/8" (9,5mm) round, non-tapered file. Round and smooth the edges of the groove to prevent damage to the valve packing and to allow the trip rod to move easily in and out of the groove as the valve is operated.
6. Mount the OSYSU loosely with the trip rod centered in groove.
7. Final adjustment is made by loosening 2 screws (see Fig. 2) and sliding the OSYSU on the bracket. Adjustment is correct when switches are not activated with the trip rod seated in the valve stem groove and that the switches activate within one turn when the valve is operated from the FULL OPEN towards the CLOSED position.
8. Tighten the adjustment screws and mounting hardware. Check to insure that the rod moves out of the groove easily and that the switches activate within one turn when the valve is operated from the FULL OPEN towards the CLOSED position.
Note: close the valve fully to determine that the stem threads do not activate the switch. The switch being activated by the stem threads could result in a *false valve open* indication.

Fig. 3 Dimensions

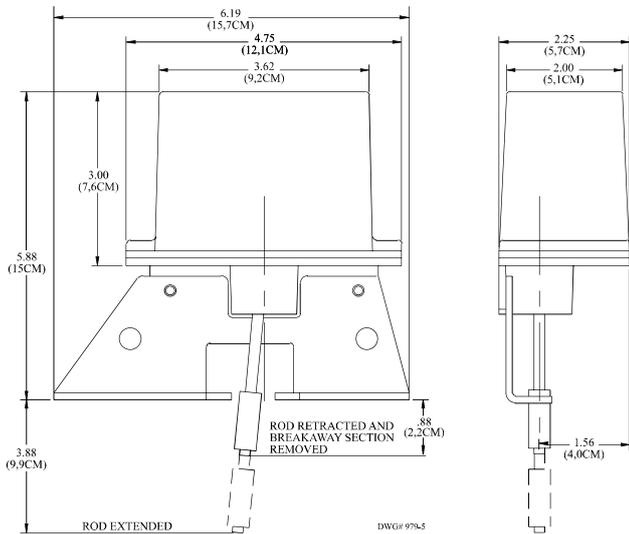


Fig. 4 Parts

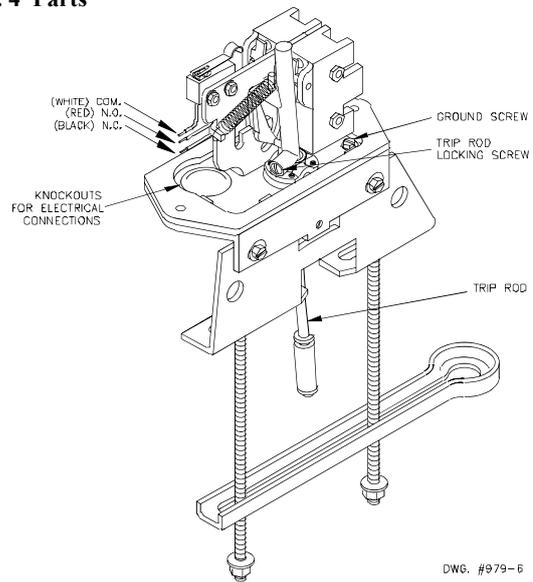
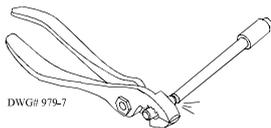
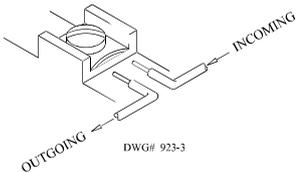


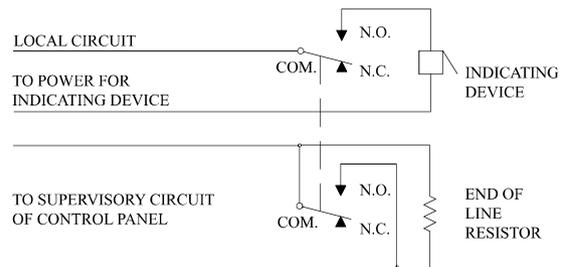
Fig. 5 Breaking Excessive Rod Length



Switch Terminal Connections Clamping Plate Terminal

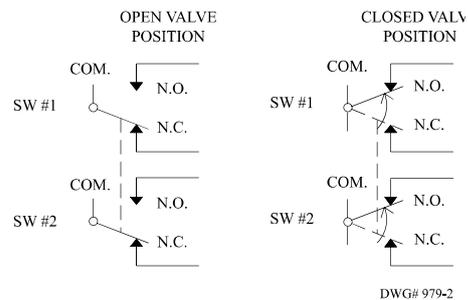


Typical Electrical Connections



Contacts shown in normal (valve open) condition.

Typical Switch Action



DWG# 979-2

CAUTION

An uninsulated section of a single conductor should not be looped around the terminal and serve as two separate connections. The wire must be severed, thereby providing supervision of the connection in the event that the wire becomes dislodged from under the terminal.



U.S. Pat. No. 3921989
Canadian Pat. No. 1009680
Other Patents Pending
Potter Electric, Rd., 1990

FM Approved

Service Pressure: Up to 450 PSI (31 BAR)

Minimum Flow Rate for Alarm: 10 GPM (38 LPM)

Maximum Surge: 18 FPS (5,5 m/s)

Contact Ratings: Two sets of SPDT (Form C)
15.0 Amps at 125/250VAC
2.0 Amps at 30VDC Resistive

Conduit Entrances: Two knockouts provided for 1/2" conduit

Environmental Specifications:

- Suitable for indoor or outdoor use with factory installed gasket and die-cast housing.
- NEMA 4/IP54 Rated Enclosure - use with appropriate conduit fitting.
- Temperature Range: 40°F/120°F, 4,5°C/49°C
- Non-corrosive sleeve factory installed in saddle.

Caution: This device is not intended for applications in explosive environments.

Sizes Available: Steel Pipe schedules 10 thru 40, sizes 2" thru 8"
BS 1387 pipe 50mm thru 200mm

Note: For copper or plastic pipe use Model VSR-CF.

Service Use:

Automatic Sprinkler	NFPA-13
One or two family dwelling	NFPA-13D
Residential occupancy up to four stories	NFPA-13R
National Fire Alarm Code	NFPA-72

Optional: Cover Tamper Switch Kit, Stock No. 0090018

GENERAL INFORMATION

The Model VSR-F is a vane type waterflow switch for use on wet sprinkler systems. It is FM Approved for use on steel pipe; schedules 10 through 40, sizes 2" thru 8" (50mm thru 200mm).

The unit may also be used as a sectional waterflow detector on large systems.

The unit contains two single pole, double throw, snap action switches and an adjustable, instantly recycling pneumatic retard. The switches are actuated when a flow of 10 gallons per minute (38 LPM) or more occurs downstream of the device. The flow condition must exist for a period of time necessary to overcome the selected retard period.

ENCLOSURE: The unit is enclosed in a general purpose, die-cast housing. The cover is held in place with two tamper resistant screws which require a special key for removal. A field installable cover tamper switch is available as an option which may be used to indicate unauthorized removal of the cover. See bulletin no. 5400775 for installation instructions of this switch.

INSTALLATION: See Fig.2

These devices may be mounted on horizontal or vertical pipe. On horizontal pipe they should be installed on the top side of the pipe where they will be accessible. The units should not be installed within 6" (15cm) of a fitting which changes the direction of the waterflow or within 24" (60 cm) of a valve or drain.

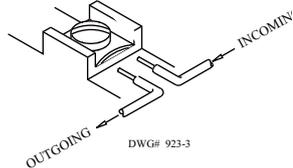
Drain the system and drill a hole in the pipe using a circular saw in a slow speed drill. The 2" (50mm) and 2 1/2" (65mm) devices require a hole with a diameter of 1 1/4" + 1/8" - 1/16" (33mm ±2mm). All other sizes require a hole with a diameter of 2" ±1/8" (50mm ±2mm).

Clean the inside pipe of all growth or other material for a distance equal to the pipe diameter on either side of the hole.

Roll the vane so that it may be inserted into the hole; do not bend or crease it. Insert the vane so that the arrow on the saddle points in the direction of the waterflow. Install the saddle strap and tighten nuts alternately to an eventual 20 ft-lbs. (27 n-m) of torque (see Fig. 2). The vane must not rub the inside of the pipe or bind in any way.

Specifications subject to change without notice.

FIG. 1
SWITCH TERMINAL
CONNECTIONS
CLAMPING PLATE
TERMINAL



CAUTION

An uninsulated section of a single conductor should not be looped around the terminal and serve as two separate connections. The wire must be severed, thereby providing supervision of the connection in the event that the wire becomes dislodged from under the terminal.

FIG. 2

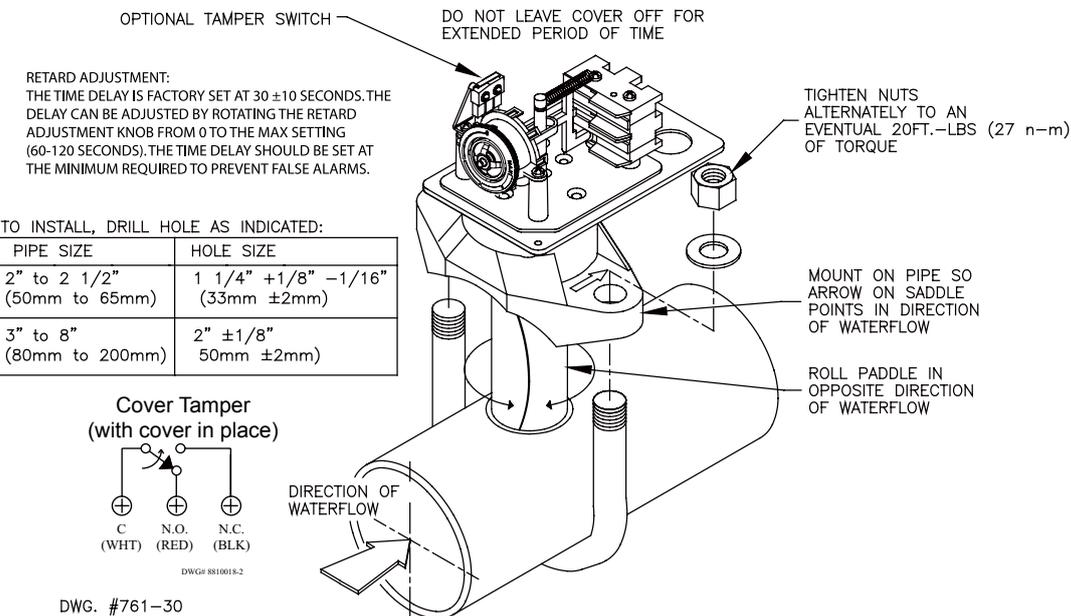
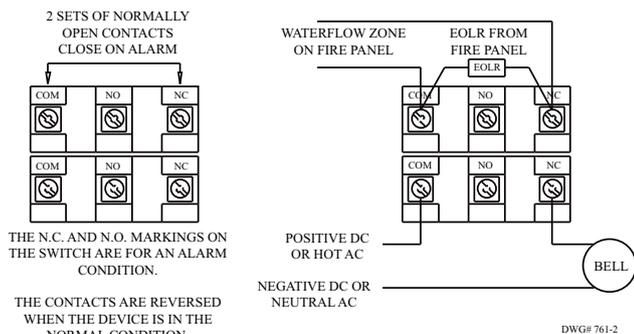


FIG. 3 TYPICAL ELECTRICAL CONNECTIONS

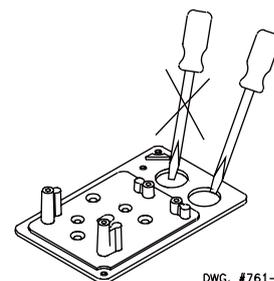


NOTES:

1. The Model VSR-F has two switches, one can be used to operate a central station, proprietary or remote signaling unit, while the other contact is used to operate a local audible or visual annunciator.
2. For supervised circuits see "Switch Terminal Connections" drawing and caution note (Fig. 1).

FIG. 4

To remove knockouts: Place screwdriver at edge of knockouts, not in the center.



CAUTION

Due to the possibility of unintended discharges caused by pressure surges, trapped air, or short retard times, waterflow switches that are monitoring wet pipe sprinkler systems shall not be used as the sole initiating device to discharge AFFF, deluge, or chemical suppression systems.

TESTING

The frequency of inspection and testing for the model VSR-F and its associated protective monitoring system should be in accordance with applicable NFPA Codes and Standards and/or the authority having jurisdiction (manufacturer recommends quarterly or more frequently). If provided, the inspector's test valve, that is usually located at the end of the most remote branch line, should always be used for test purposes. If there are no provisions for testing the operation of the flow detection device on the system, application of the VSR-F is not recommended or advisable.

A minimum flow of 10 gpm (38 Lpm) is required to activate this device.

IMPORTANT NOTICE: Please advise the person responsible for testing of the fire protection system that this system must be tested in accordance with the testing instructions.



Ordering Information

Model	Description	Stock No.
PS10-2A (FM)	Pressure switch with two sets SPDT contacts	1340102
	Hex Key	5250062
	Cover Tamper Switch Kit	0090134

FM Approved

Dimensions: 4 3/4" (12,1cm)W x 2 1/4" (5,7cm)D x 4 3/8" (11,1cm)H

Conduit Entrance: One knockout provided for 1/2" conduit.

Enclosure: Cover - Die-cast with textured red powdercoat finish
Base - Steel/Zinc plated

Pressure Connection: Nylon 1/2" NPT Male

Factory Adjustment: 5 - 7 PSI (0,34 - 0,48 BAR)

Differential: 1 PSI (0,06 BAR) typical

Maximum System Pressure: 250 PSI (17,2 BAR)

Switch Contacts: Two SPDT (Form C)
15.0 Amps at 125/250VAC, 2.5 Amps at 30VDC

Environmental Specifications:

NEMA 4/IP55 Rated Enclosure - indoor or outdoor when used with NEMA 4 conduit fittings.

Temperature range: -40°F to 140°F (-40°C to 60°C)

Tamper:

Cover incorporates tamper resistant fasteners that requires a special key for removal. One key is supplied with each device. For optional cover tamper switch kit, order Stock No. 0090134. See bulletin #5400984.

Service Use:

Automatic Sprinkler	NFPA-13
One or two family dwelling	NFPA-13D
Residential Occupancy up to four stories	NFPA-13R
National Fire Alarm Code	NFPA-72

Installation

The Potter PS10 Series Pressure Actuated Switches are designed for the detection of a waterflow condition in automatic fire sprinkler systems of particular designs such as wet pipe systems with alarm check valves, dry pipe, preaction, or deluge systems. The PS10 is also suitable to provide a low pressure supervisory signal; adjustable between 4 and 20 psi (0,27 and 1,37 BAR).

1. Apply Teflon tape to the threaded male connection on the device. (Do not use pipe dope)
2. Device should be mounted in the upright position (threaded connection down).
3. Tighten the device using a wrench on the flats on the device.

Wiring Instructions

1. Remove the tamper resistant screws with the special key provided.
2. Run wires through an approved conduit connector and affix the connector to the device.
3. Connect the wires to the appropriate terminal connections for the service intended. See Figures 2, 4, and 5.

Testing

The operation of the pressure alarm switch shall be tested upon completion of installation and periodically thereafter in accordance with the applicable NFPA codes and standards and/or the authority having jurisdiction (manufacturer recommends quarterly or more frequently).

Wet System

Method 1: When using PS10 and control unit with retard - connect PS10 into alarm port piping on the input side of retard chamber and electrically connect PS10 to control unit that provides a retard to compensate for surges. Insure that no unsupervised shut-off valves are present between the alarm check valve and PS10.

Method 2: When using the PS10 for local bell application or with a control that does not provide a retard feature - the PS10 must be installed on the alarm outlet side of the retard chamber of the sprinkler system.

Testing: Accomplished by opening the inspector's end-of-line test valve. Allow time to compensate for system or control retard.

Note: Method 2 is not applicable for remote station service use, if there is an unsupervised shut-off valve between the alarm check valve and the PS10.

Wet System With Excess Pressure

Connect PS10 into alarm port piping extending from alarm check valve. Retard provisions are not required. Insure that no unsupervised shut-off valves are present between the alarm check valve and the PS10.

Testing: Accomplished by opening the water by-pass test valve or the inspector's end-of-line test valve. When using end-of-line test, allow time for excess pressure to bleed off.

Dry System

Connect PS10 into alarm port piping that extends from the intermediate chamber of the alarm check valve. Install on the outlet side of the in-line check valve of the alarm port piping. Insure that no unsupervised shut-off valves are present between the alarm check valve and the PS10.

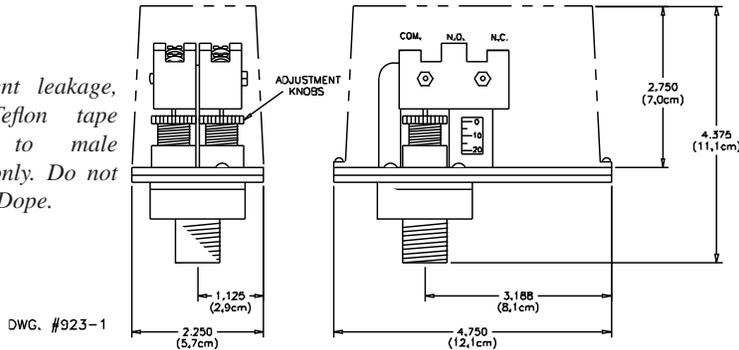
Testing: Accomplished by opening the water by-pass test valve.

Note: The above tests may also activate any other circuit closer or water motor gongs that are present on the system.

Dimensions

Fig. 1

NOTE:
To prevent leakage, apply Teflon tape sealant to male threads only. Do not use Pipe Dope.

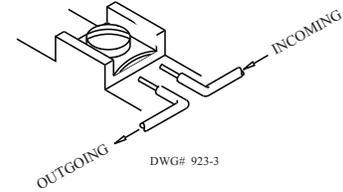


WARNING

Use of Pipe Joint Cement may result in obstruction of the aperture and loss of signal.

Switch Clamping Plate Terminal

Fig. 2

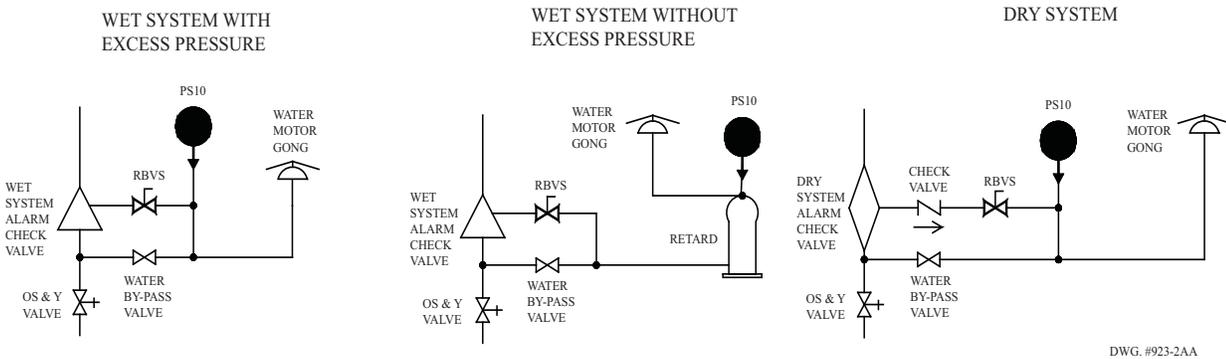


WARNING

An uninsulated section of a single conductor should not be looped around the terminal and serve as two separate connections. The wire must be severed, thereby providing supervision of the connection in the event that the wire becomes dislodged from under the terminal.

Typical Sprinkler Applications

Fig. 3

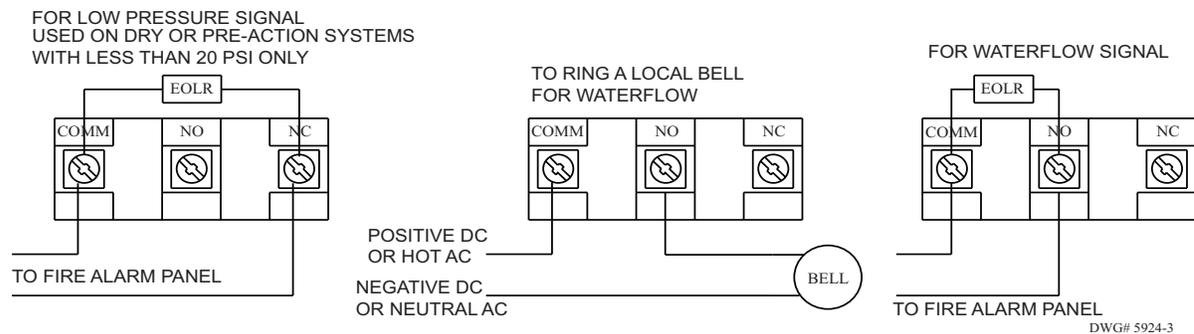


CAUTION

Closing of any shutoff valves between the alarm check valve and the PS10 will render the PS10 inoperative. To comply with NFPA-72 any such valve shall be electrically supervised with a supervisory switch such as Potter Model RBVS.

Typical Electrical Connections

Fig. 4



Switch Operation

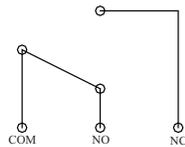
Fig. 5

Terminal

NO: Closed when installed under normal system pressure.

NC: Open when installed under normal system pressure. Closes on pressure drop. Use for low pressure supervision.

W/ PRESSURE APPLIED

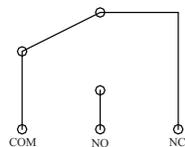


Terminal

NO: Open with no pressure supplied. Closes upon detection of pressure. Use for waterflow indication.

NC: Closed with no pressure applied.

W/O PRESSURE APPLIED



DWG#1505-1

⚠ WARNING

- Installation must be performed by qualified personnel and in accordance with all national and local codes and ordinances.
- Shock hazard. Disconnect power source before servicing. Serious injury or death could result.
- Read all instructions carefully and understand them before starting installation. Save instructions for future use. Failure to read and understand instructions could result in improper operation of device resulting in serious injury or death.
- Risk of explosion. Not for use in hazardous locations. Serious injury or death could result.

⚠ CAUTION

- Do not tighten by grasping the switch enclosure. Use wrenching flats on the bushing only. Failure to install properly could damage the switch and cause improper operation resulting in damage to equipment and property.
- To seal threads, apply Teflon tape to male threads only. Using joint compounds or cement can obstruct the pressure port inlet and result in improper device operation and damage to equipment.
- Do not over tighten the device, standard piping practices apply.

Engineer/Architect Specifications Pressure Type Waterflow Switch

Pressure type waterflow switches; shall be a Model PS10 as manufactured by Potter Electric Signal Company, St Louis MO., and shall be installed on the fire sprinkler system as shown and or specified herein.

Switches shall be provided with a 1/2" NPT male pressure connection and shall be connected to the alarm port outlet of; Wet Pipe Alarm Valves, Dry Pipe Valves, Pre-Action Valves, or Deluge Valves. The pressure switch shall be actuated when the alarm line pressure reaches 5 - 7 PSI (0,34 - 0,48 BAR).

Pressure type waterflow switches shall have a maximum service pressure rating of 250 PSI (17,2 BAR) and shall be factory adjusted to operate on a pressure increase of 5 - 7 PSI (0,34 - 0,48 BAR)

Pressure switch shall have two form C contacts, switch contact rating 15.0 Amps at 125/250 VAC, 2.5 Amps at 30 VDC.

The cover of the pressure type waterflow switch shall be die-cast and shall attach with tamper resistant screws. The Pressure type waterflow switch shall be suitable for indoor or outdoor service with a NEMA 4/ IP55 rating.

The pressure type waterflow switch shall be FM approved.

Fivalco Inc. Limited Warranty

Fivalco Inc, warrants each metal valve to be free from defects in material and workmanship under normal use and service for a period of one year from the date of purchase.

In the event that any defect is discovered which may be covered by this Warranty, the owner should contact Fivalco Inc, in writing or by telephone.

The owner may be instructed to return the valve at owner's expense to Fivalco Inc, or an authorized Fivalco location for inspection. In the case that inspection reveals that the valve is defective it will be replaced at Fivalco Inc.'s expense.

Replacements shall be shipped free of charge to the owners provided that the valve was installed in accordance with Fivalco Inc. Instructions and in accordance with the local authority having jurisdiction.

To the extent permitted by law this warranty specifically excludes incidental and consequential damages of every type and description resulting from any claimed defect in material or workmanship, including, but not limited to, personal injuries and property damages. To the extent permitted by law, implied warranties of merchantability and fitness for particular purposes are limited in duration.

Some jurisdictions do not allow exclusion or limitation of incidental damages and such limitations may not apply to you.

This warranty provides the owner with specific legal rights and owners may have other rights which vary by jurisdiction



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