

## BUTTERFLY VALVES, GROOVED

### MODEL: SDBV-GTEC-175

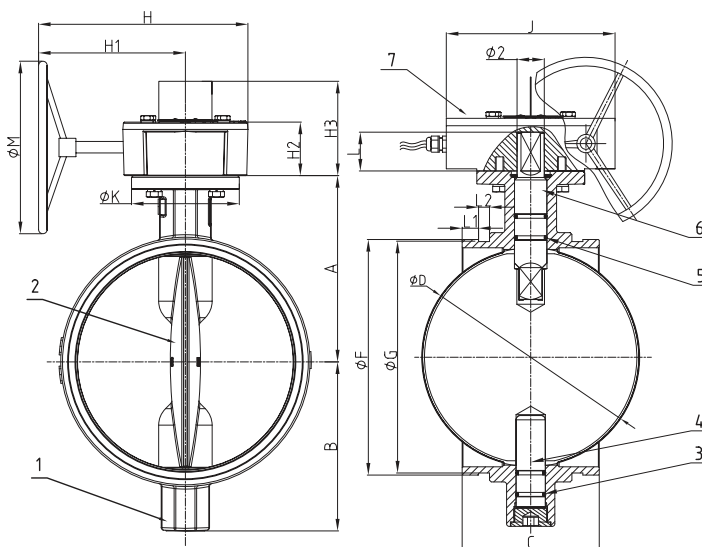


- Design Standard: MSS SP-67
- Connection Ends: Groove to AWWA C606
- Top Flange Standard: ISO 5211 Stem drive by keys, parallel or diagonal square or flat head
- With integrated tamper switch
- Working Pressure: 175 PSI
- Temperature Range: 0°C - 80°C
- Coating: Fusion Bonded Epoxy Coating in accordance with ANSI/AWWA C550 or painting upon request



### MATERIAL SPECIFICATION

Part No.	Part	Standard Specification
1	Valve Body	ASTM A536, 65-45-12
2	Disc	ASTM A536, 65-45-12 + EPDM
3	O-Ring	NBR
4	Stem	AISI 431
5	O-Ring	NBR
6	Stem	AISI 431
7	Signal Gear Box	ASTM A536, 65-45-12



DN		Dimensions																
Inch	mm	A	B	C	Φ D	Φ F	Φ G	L1	L2	L	Φ K	H	H1	H2	H3	J	Φ M	Φ 2
2"	50	89	65	81	50.3	60.3	57.15	15.88	7.93	32	90	208	151	65	108	147	150	14
2.5"	65	102	71	97	60.8	73.0	69.09	15.88	7.93	32	90	208	151	65	108	147	150	14
3"	80	109	81	97	76	88.9	84.94	15.88	7.93	32	90	208	151	65	108	147	150	14
4"	100	128	95	116	98.5	114.3	110.08	15.88	9.53	32	90	208	151	65	108	147	150	16
5"	125	141	111	148	122.6	141.3	137.03	15.88	9.53	32	90	208	151	65	108	147	150	16
6"	150	153	133	148	148	168.3	163.96	15.88	9.53	32	90	208	151	65	108	147	150	20
8"	200	184	164	133	199	219.1	214.4	19.05	11.10	45	125	303	239	73	115	190	250	26
10"	250	216	196	159	252	273.1	268.28	19.05	12.70	45	125	303	239	73	115	190	250	26
12"	300	254	226	165	300.5	323.9	318.29	19.05	12.70	45	125	303	229	73	120	190	250	28

Unit : mm

## BUTTERFLY VALVES, GROOVED

### MODEL: SDBV-GTEC-200

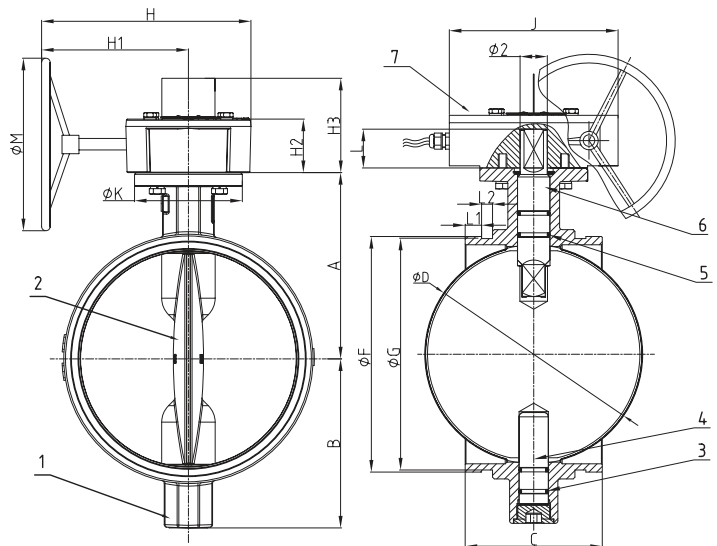


- Design Standard: MSS SP-67
- Connection Ends: Groove to AWWA C606
- Top Flange Standard: ISO 5211 Stem drive by keys, parallel or diagonal square or flat head
- With integrated tamper switch
- Working Pressure: 200 PSI
- Temperature Range: 0°C - 80°C
- Coating: Fusion Bonded Epoxy Coating in accordance with ANSI/AWWA C550 or painting upon request



### MATERIAL SPECIFICATION

Part No.	Part	Standard Specification
1	Valve Body	ASTM A536, 65-45-12
2	Disc	ASTM A536, 65-45-12 + EPDM
3	O-Ring	NBR
4	Stem	AISI 431
5	O-Ring	NBR
6	Stem	AISI 431
7	Signal Gear Box	ASTM A536, 65-45-12



DN		Dimensions																
Inch	mm	A	B	C	Φ D	Φ F	Φ G	L1	L2	L	Φ K	H	H1	H2	H3	J	Φ M	Φ 2
2"	50	89	65	81	50.3	60.3	57.15	15.88	7.93	32	90	208	151	65	108	147	150	14
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3"	80	109	81	97	76	88.9	84.94	15.88	7.93	32	90	208	151	65	108	147	150	14
4"	100	128	95	116	98.5	114.3	110.08	15.88	9.53	32	90	208	151	65	108	147	150	16
5"	125	141	111	148	122.6	141.3	137.03	15.88	9.53	32	90	208	151	65	108	147	150	16
6"	150	153	133	148	148	168.3	163.96	15.88	9.53	32	90	208	151	65	108	147	150	20
8"	200	184	164	133	199	219.1	214.4	19.05	11.10	45	125	303	239	73	115	190	250	26
10"	250	216	196	159	252	273.1	268.28	19.05	12.70	45	125	303	239	73	115	190	250	26
12"	300	254	226	165	300.5	323.9	318.29	19.05	12.70	45	125	303	229	73	120	190	250	28

Unit : mm

## BUTTERFLY VALVES, GROOVED

### MODEL: SDBV-GTEC-250

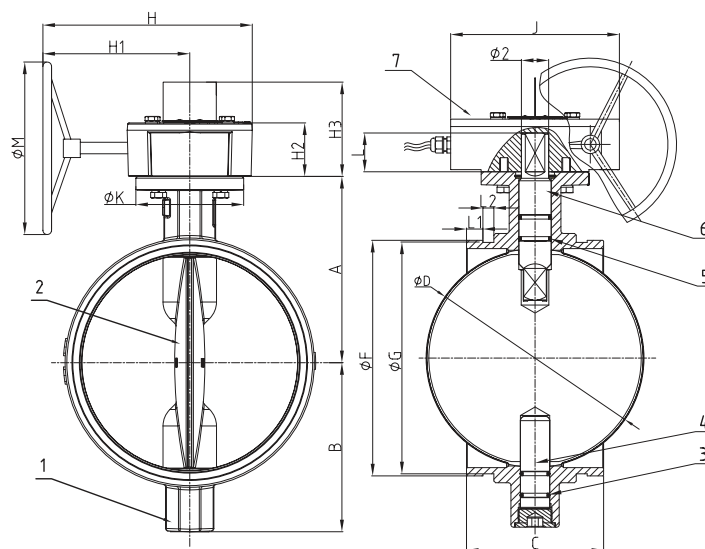


- Design Standard: MSS SP-67
- Connection Ends: Groove to AWWA C606
- Top Flange Standard: ISO 5211 Stem drive by keys, parallel or diagonal square or flat head
- With integrated tamper switch
- Working Pressure: 250 PSI
- Temperature Range: 0°C - 80°C
- Coating: Fusion Bonded Epoxy Coating in accordance with
- ANSI/AWWA C550 or painting upon request



### MATERIAL SPECIFICATION

Part No.	Part	Standard Specification
1	Valve Body	ASTM A536, 65-45-12
2	Disc	ASTM A536, 65-45-12 + EPDM
3	O-Ring	NBR
4	Stem	AISI 431
5	O-Ring	NBR
6	Stem	AISI 431
7	Signal Gear Box	ASTM A536, 65-45-12



DN		Dimensions																
Inch	mm	A	B	C	Φ D	Φ F	Φ G	L1	L2	L	Φ K	H	H1	H2	H3	J	Φ M	Φ 2
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12"	300	254	226	165	300.5	323.9	318.29	19.05	12.70	45	125	303	229	73	120	190	250	28

Unit : mm

## BUTTERFLY VALVES, GROOVED

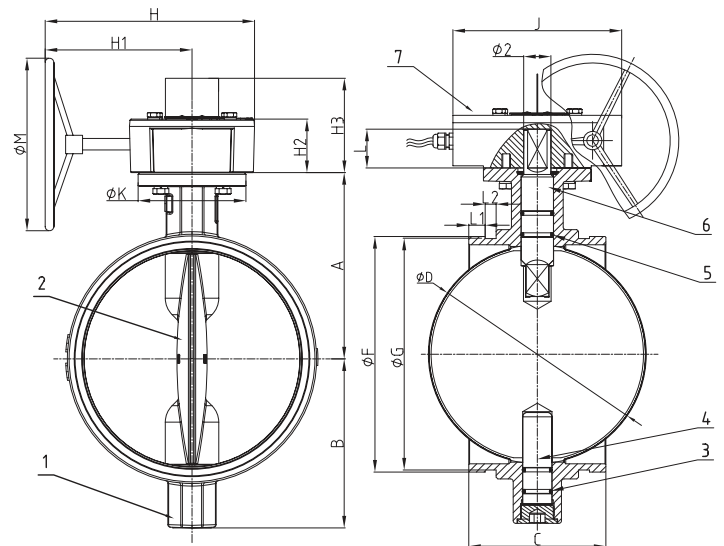
### MODEL: SDBV-GTEC-300

- Design Standard: MSS SP-67
- Connection Ends: Groove to AWWA C606
- Top Flange Standard: ISO 5211 Stem drive by keys, parallel or diagonal square or flat head
- With integrated tamper switch
- Working Pressure: 300 PSI
- Temperature Range: 0°C - 80°C
- Coating: Fusion Bonded Epoxy Coating in accordance with ANSI/AWWA C550 or painting upon request



### MATERIAL SPECIFICATION

Part No.	Part	Standard Specification
1	Valve Body	ASTM A536, 65-45-12
2	Disc	ASTM A536, 65-45-12 + EPDM
3	O-Ring	NBR
4	Stem	AISI 431
5	O-Ring	NBR
6	Stem	AISI 431
7	Signal Gear Box	ASTM A536, 65-45-12



DN		Dimensions																
Inch	mm	A	B	C	Φ D	Φ F	Φ G	L1	L2	L	Φ K	H	H1	H2	H3	J	Φ M	Φ 2
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10"	250	216	196	159	252	273.1	268.28	19.05	12.70	45	125	303	239	73	115	190	250	26
12"	300	254	226	165	300.5	323.9	318.29	19.05	12.70	45	125	303	229	73	120	190	250	28

Unit : mm

## PRESSURE GAUGE

MODEL: SD-P



### TECHNICAL SPECIFICATION

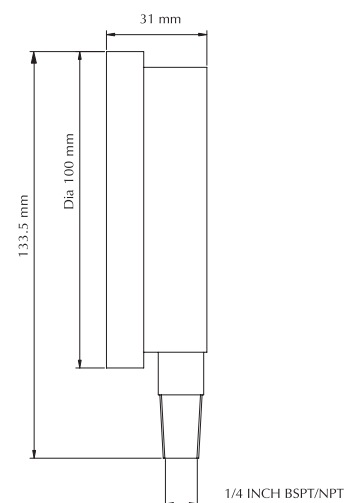
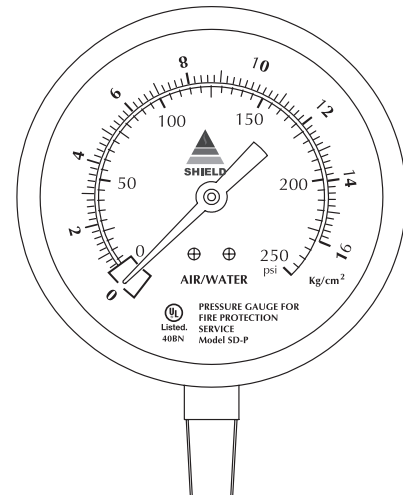
Dial Size	90mm (3½")
Connection	¼" BSPT (¼" NPT Optional)
Range	0-16 KG/SQCM & 0-250 PSI
Burdon Tube & Movement	Phosphorus Bronze Burdon tube and brass moving parts
Dial Type	White background, Black graduation scale with dual reading in KG/SQM. and PSI
Case And Bazel	Polished Stainless Steel Case Positive seal against weather moisture and dust.
Mounting	Direct
Window	Hardened Glass
Accuracy	± 2% of FSD for middle half of scale.
Reference Standard	UL 393, NFPA-13

### DESCRIPTION

SD-P Pressure Gauge are specifically designed for Fire Sprinkler Services. The pressure gauge is UL Listed. It has corrosion resistant polished stainless steel case and Bezel and Brass wetted parts. The dial has pressure reading in KG/SQCM and PSI. The gauge window is hardened glass.

The pressure gauge must be mounted by square provided for spanner grip on the socket and not by turning the case. Turning of case will damage the gauge. Use PTFE tape around male threads of the gauge for sealing. Pressure gauge must be mounted in vertical position and isolated with valve or cock. The pressure gauge must be handled with due care for best results, the gauge should be stored in the original packing in which it has been shipped. It is advisable to ship the gauge in the same package for future transit.

The pressure gauge, which is visibly damaged, should not be installed. It is recommended that the pressure gauges must be inspected regularly for possible corrosion or damage. The gauge must be periodically calibrated as per requirement or as per local authority having jurisdiction.



## PRESSURE GAUGE

MODEL: SD-P1

### TECHNICAL SPECIFICATION

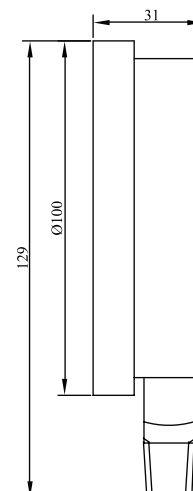
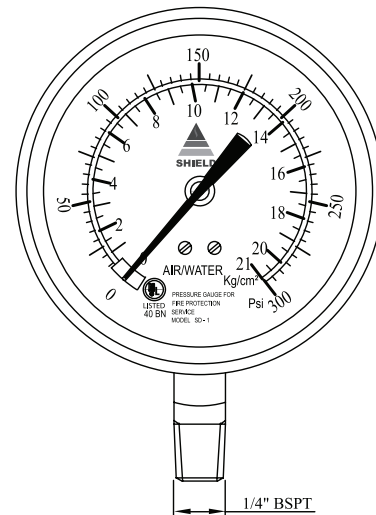
Dial Size	90mm (3½")
Connection	¼" BSPT (¼" NPT Optional)
Range	0-21 Kg/Sq. CM & 0-300 PSI
Burdon Tube & Movement	Phosphorus Bronze Brudon tube and brass moving parts
Dial Type	White background, Black graduation scale with dual reading in KG/SQM. and PSI
Case And Bazel	Polished Stainless Steel Case Positive seal against weather moisture and dust.
Mounting	Direct
Window	Hardened Glass
Accuracy	± 2% of FSD for middle half of scale.
Weight (Approx)	0.3 Kg
Reference Standard	UL 393, NFPA-13

### DESCRIPTION

SD-P1 Pressure Gauge are specifically designed for Fire Sprinkler Services. The pressure gauge is UL Listed and FM approved. It has corrosion resistant polished stainless steel case and Bezel and Brass wetted parts. The dial has pressure reading in KG/SQCM and PSI. The gauge window is hardened glass.

The pressure gauge must be mounted by square provided for spanner grip on the socket and not by turning the case. Turning of case will damage the gauge. Use PTFE tape around male threads of the gauge for sealing. Pressure gauge must be mounted in vertical position and isolated with valve or cock. The pressure gauge must be handled with due care for best results, the gauge should be stored in the original packing in which it has been shipped. It is advisable to ship the gauge in the same package for future transit.

The pressure gauge, which is visibly damaged, should not be installed. It is recommended that the pressure gauges must be inspected regularly for possible corrosion or damage. The gauge must be periodically calibrated as per requirement or as per local authority having jurisdiction.





## TEST AND DRAIN VALVE

MODEL: SD-TDV50T, SD-TDV50G



### DESCRIPTION

Test and Drain valve for sprinkler systems combines the functions of test and drain for wet sprinkler systems.

This valves have forged brass body with chrome plate brass ball valve and PTFE seats. The valves complies with the requirements of NFPA-13, NFPA- 13R and NFPA-13D. This valves are single handle ball valves with three working positions. They include tamper resistant test orifice and sight glass for the visual control.

### PRODUCT SPECIFICATIONS

Test and drain valve for sprinkler systems combines the functions of test and drain for wet sprinkler systems. complies with the requirements of NFPA-13, NFPA-13R and NFPA-13D.

Main feature as following:

- NPT threads 1" - 1½" - 1 1/4" - 2"
- Groove connections 1 1/4" - 1½" - 2"
- Forged brass body
- Chrome plate brass ball valve
- PTFE seats.
- Single handle ball valves with three working positions
- Tamper resistant test orifice and sight glass included

### VERSIONS AND PRODUCT CODES

Series	Size	Type
SD-TDV50T	1"	NPT (F) x NPT (F)
	1¼"	
	1½"	
	2	
SD-TDV50G	1¼"	Groove x Groove
	1½"	
	2	



SD-TDV50T (Threaded)



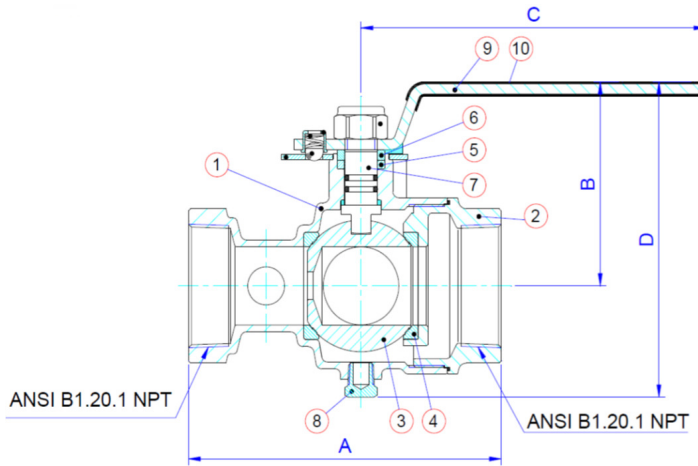
SD-TDV50G (Grooved)

### TECHNICAL DATA

- Rated pressure: 300 psi



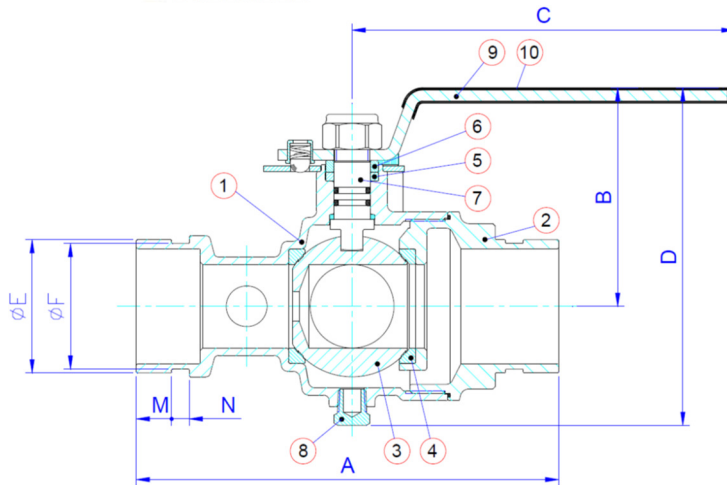
## FEMALE NPT x FEMALE NPT



NO.	PART NAME	MATERIAL ASTM	QTY
1	BODY	BRASS C85700	1
2	END PIECE	BRASS C85700	1
3	BALL	BRASS	1
4	SEAT	TFM	2
5	GLAND PACKING	TFM	1
6	GLAND	BRASS	1
7	STEM	BRASS	1
8	DRAINPLUG	BRASS	1
9	LEVER	STEEL	1
10	LEVER GRIP	PVC VINYL	1

SIZE	A±2	B±2	C±2	D±3	H
1"	128.2	68.5	130.5	112	K7/16"/ k1/2"
1¼"	128.2	68.5	130.5	112	K7/16"/ k1/2"
1½"	157.2	99.1	174	154	K7/16"/ k1/2"/ k3/4"/ k25
2"	157.2	99.1	174	154	K7/16"/ k1/2"/ k3/4"/ k25

## GROOVE x GROOVE



NO.	PART NAME	MATERIAL ASTM	QTY
1	BODY	BRASS C85700	1
2	END PIECE	BRASS C85700	1
3	BALL	BRASS	1
4	SEAT	TFM	2
5	GLAND PACKING	TFM	1
6	GLAND	BRASS	1
7	STEM	BRASS	1
8	DRAINPLUG	BRASS	1
9	LEVER	STEEL	1
10	LEVER GRIP	PVC VINYL	1

SIZE	A±2	B±2	C±2	D±3	øE	F* <sub>-0.38</sub>	M±0.76	N±0.76	K
1¼"	161.6	68.5	130.5	112	42.4±0.41	38.99	15.88	7.95	K7/16"/ k1/2"
1½"	190.9	99.1	174	154	48.3±0.48	45.09	15.88	7.95	K7/16"/ k1/2"/ k3/4"/ k25
2"	190.9	99.1	174	154	60.3±0.61	57.15	15.88	7.95	K7/16"/ k1/2"/ k3/4"/ k25



## WATER FLOW SWITCH



### MODEL: SD-WFD SERIES

#### FEATURES

- Designed for both indoor and outdoor use;
- Equipped with tamper resistant screws to prevent unauthorized entry.
- Two synchronized switches are enclosed in a durable terminal block. Terminals are easy to read and wire.
- Built-In mechanical time delay feature; minimizing the risk of false alarms due to pressure surges or air trapped in the system.
- Offers excellent performance during riser vibrations caused by large in-rushes of water.
- Designed and built for accuracy and repeatability.
- Sealed retard mechanism immune to dust and other contaminants
- Field-replaceable retard mechanism and SPDT switches
- Rugged, dual SPDT switches enclosed in a durable terminal block
- 100 percent synchronization activates both alarm panel and local bell
- Tamper-resistant cover screws



#### TECHNICAL DATA

Flow Sensitivity Range	4-10 GPM (15-38LPM)
Contact Rating	Two sets of SPDT 8A@250VAC; 3A@24VDC; 2.5A@ 30VDC.
Working Pressure	450PSI.
Working Temperature	0°C to 68°C
Corrosion Protection	Fusion Bonded Epoxy Coated Interior and Exterior or Enamel Spray Paint, Interior and Exterior
Working Pressure	450psi.
Maximum Surge	18 FPS (5.5 m/s)
Corrosion Protection	Fusion Bonded Epoxy Coated Interior and Exterior or Enamel Spray Paint, Interior and Exterior.
Compatible Pipe	Steel water pipe, schedule 10 through 40
Conduit Entrances	Two openings for ½" conduit.
Service Use	<ul style="list-style-type: none"> <li>• Automatic Sprinkler: NFPA 13</li> <li>• One or Two Family Dwelling: NFPA 13D Residential</li> <li>• Occupancies up to 4 Stories: NFPA 13R National Fire Alarm</li> <li>• Code: NFPA 72</li> </ul>

Size		Model Number
inch	mm	
2	50	SD-WFD20
2½	65	SD-WFD25
3	80	SD-WFD30
4	100	SD-WFD40
5	125	SD-WFD50
6	150	SD-WFD60
8	200	SD-WFD80

#### DESCRIPTION

The Model SD-WFD is a vane type waterflow switch for use on wet sprinkler systems. The water flow contains two single pole, double throw, snap action switches and an adjustable, instantly recycling pneumatic retard. Vane-type waterflow detectors shall be installed on system piping as designated on the drawing and/or as specified herein. Detectors shall have sensitivity in the range of 4 to 10 gallons per minute and a static pressure rating of 450 psi for 2"–8" pipes. The flow condition must exist for a period of time necessary to overcome the selected retard period that is field adjustable.

The delay mechanism shall be a sealed mechanical pneumatic unit with visual indication of actuation. The actuation mechanism shall include a polyethylene vane inserted through a hole in the pipe and connected by a mechanical linkage to the delay mechanism. Outputs shall consist of dual SPDT switches. Two conduit entrances for standard fittings of commonly used electrical conduit shall be provided on the detectors.

## INSTALLATION

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

**Note:** Do not leave cover off for an extended period of time.

Drain the system and drill a hole in the pipe using a hole saw in a slow speed drill. 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. Take care not to damage the non-corrosive bushing in the saddle. The bushing should fit inside the hole in the pipe. Install the saddle strap and tighten nuts alternately to required torque. The vane must not rub the inside of the pipe or bind in any way.

**Caution :** Do not trim the paddle. Failure to follow these instructions may prevent the device from operating and will void the warranty. Do not obstruct or otherwise prevent the trip stem of the flow switch from moving when water flows as this could damage the flow switch and prevent an alarm. If an alarm is not desired, a qualified technician should disable the alarm system.

## TESTING

The frequency of inspection and testing for the Model VSR and its associated protective monitoring system shall 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 shall 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 is not recommended or advisable.

A minimum flow of 10 GPM (38 LPM) is required to activate this device.

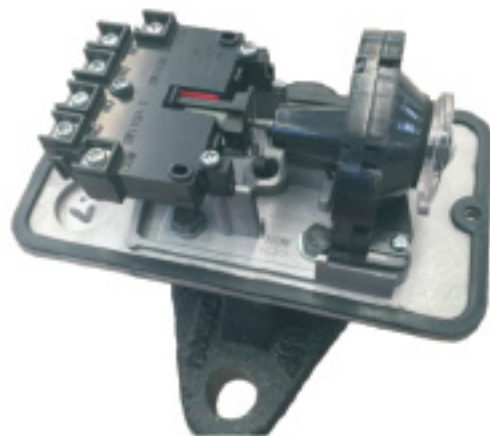
**Note:** Advise the person responsible for testing of the fire protection system that this system must be tested in accordance with the testing instructions.

## MAINTENANCE

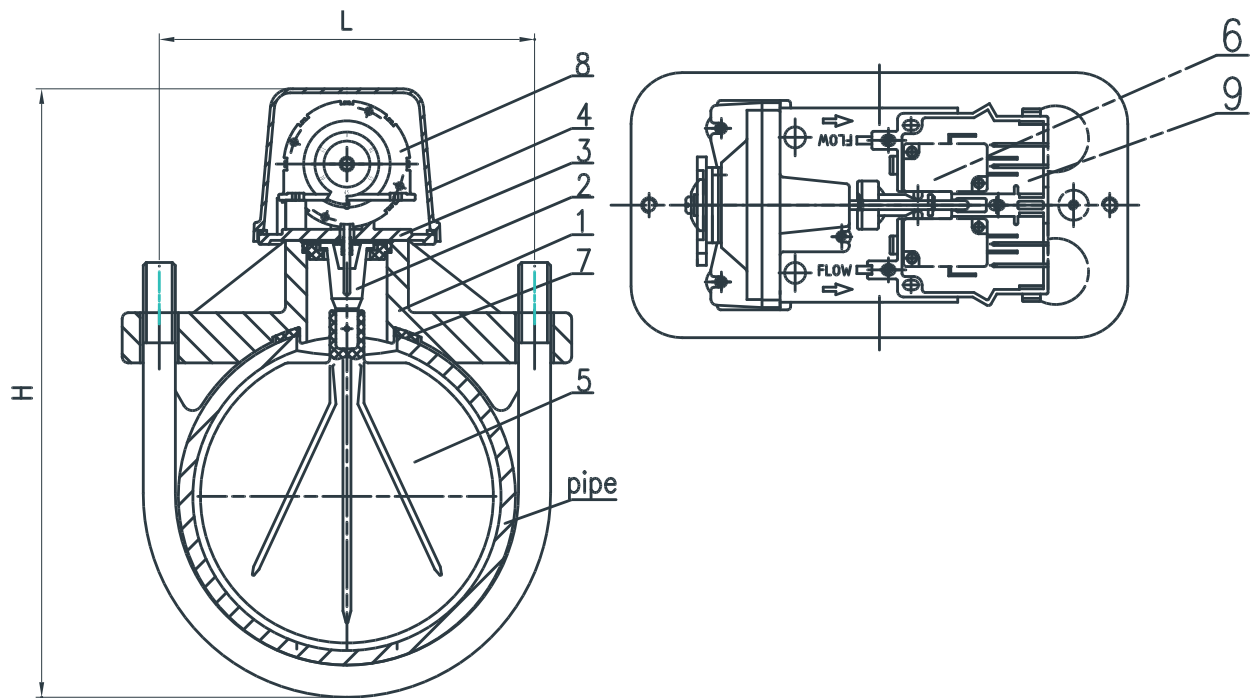
Inspect detectors monthly. If leaks are found, replace the detector. The SD-WFD waterflow switch should provide years of trouble-free service. The retard and switch assembly are easily field replaceable. In the unlikely event that either component does not perform properly, please order replacement retard switch assembly. There is no maintenance required, only periodic testing and inspection.

## REMOVAL OF WATERFLOW SWITCH

- To prevent accidental water damage, all control valves should be shut tight and the system completely drained before waterflow detectors are removed or replaced.
- Turn off electrical power to the detector, then disconnect wiring.
- Loosen nuts and remove U-bolts.
- Gently lift the saddle far enough to get your fingers under it. With your fingers, roll the vane so it will fit through the hole while continuing to lift the waterflow detector saddle.
- Lift detector clear of pipe.



## SCHEMATIC DRAWINGS



## PART LIST

Number	Part Name	Material
1	Saddle	Ductile Iron, ASTM A536 65-45-12
2	Holder	SS304 + EPDM
3	Plate	Aluminium Alloy
4	Cover	Aluminium Alloy
5	Paddle	Plastic
6	Microswitch	Plastic
7	Gasket	EPDM
8	Retarding Device	Plastic
9	Terminal Box	Plastic

## DIMENSIONS

Size	DN50	DN65	DN80	DN100	DN125	DN150	DN200
L	84	92	104	133	160	187	239
H	190	100	220	245	270	300	350
OD, nominal Size	60.3	73	88.9	114.3	141.3	168.3	219.1
Pipe Wall Thickness	2.77 to 3.91	3.05 to 5.16	3.05 to 5.49	3.05 to 6.02	3.40 to 6.55	3.40 to 7.11	3.76 to 8.18