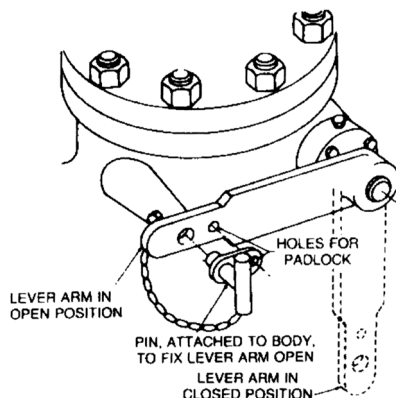
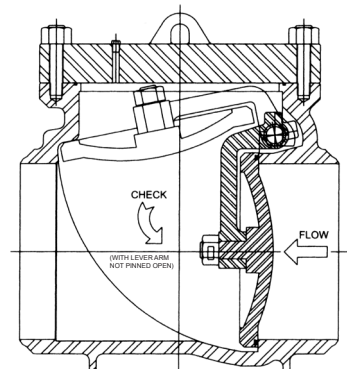


### Lever Lock Assembly



The external lever lock clapper assembly enables the user to control the clapper motion with the valve under pressure. The clapper can be locked in the open position for reverse flow or when the user wants to eliminate the clapper action.



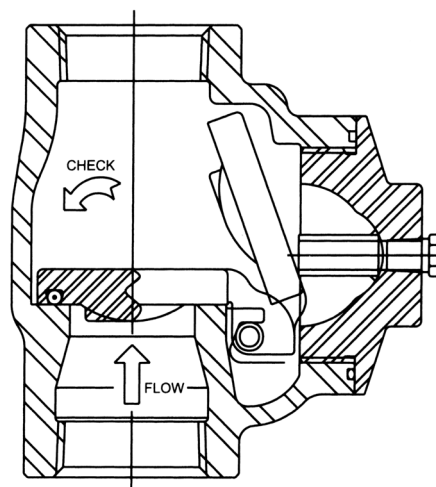
The clapper can be locked in the closed position to hold small amounts of upstream pressure for a short time; however, it is not recommended to replace gate valves as too much upstream pressure will shear the shaft keys. The external lever also serves as a clapper position indicator at all times.

### Crown Swing Check Valves for Vertical Flow-Up

Crown swing check valves can be ordered for use in vertical flow applications; however, it is necessary to specify on your order if the direction of flow is up or down.

Vertical flow-up requires the addition of a pin through the cover to prevent the clapper from moving out of the flow stream. Vertical flo-pins are available for Crown-swing check valves already in service. When ordering, please specify valve size, pressure, model and bolted or screwed-top configuration.

Vertical flow-down requires the use of external counterbalance arms and weights to keep the clapper in position to catch the stream on flow reversal. Valves in service usually cannot be converted to flow-down service. Please consult our Engineering department for details.



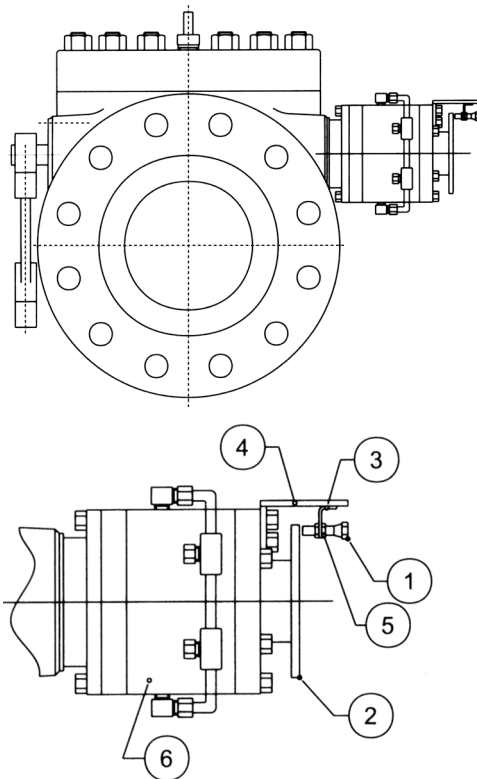


## Crown Swing Check Valve with Proximity Switch

### Proximity Limit Switch

The switch utilizes both reaction forces of magnetic power attraction and repulsion in its operating principles. It provides an input signal to a process control of either open or closed indication. The sensing range between the switch and the ferrous actuator is .090" (2.25 mm) to .110" (2.76 mm).

The switch has been designed and built to rugged specifications for use in most industrial and environmental applications. Each switch is totally enclosed, hermetically sealed, and capable of operating in hazardous locations.

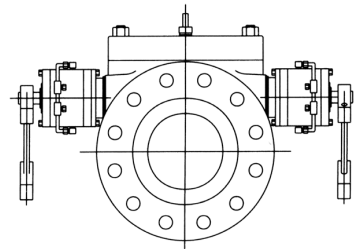
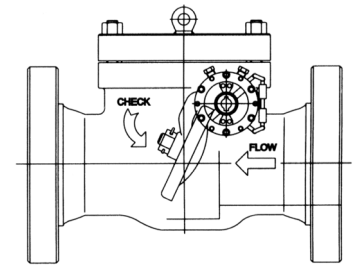


### Parts List

No.	Part
1	Proximity switch
2	Adapter
3	L-bracket
4	Mounting plate
5	Lock nut
6	Rovane slam retarder

## Rovane Slam Retarders

The Stream-Flo rovane slam retarder provides a dependable and efficient torque for controlling clapper slam and flutter. Long trouble-free service is assured through the simple and rugged construction and the basic engineering premise of these rovane slam retarders. The rovane slam retarder can be equipped with a limit switch to indicate the clapper open position at any angle.

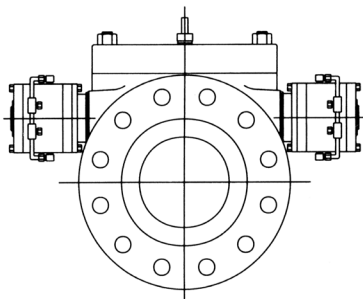
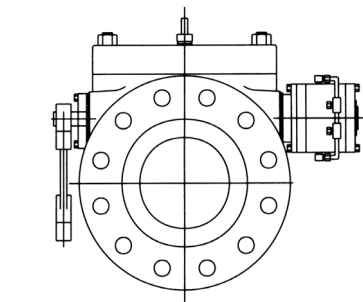


For valves size 24" and smaller, the check valve is also equipped with external counterbalance.

### Arms and Weights

The arms and weights are preset at the factory for maximum effect in closing the clapper. If there is a considerable pulsation present, it will be necessary to reposition the weights or the arms.

Loosen the set screws in the weight and slide along the arm until there is minimum of flutter visible on the arm. It is suggested that the weight be moved a short distance each time and then the valve shut down to ensure that the clapper will close.



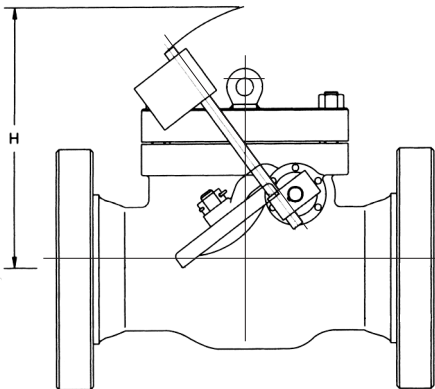
### Counterbalance Arms and Weights

Counterbalance arms and weights for use with Crown swing check valves.

Recommended for the following applications:

- assist in closing the clapper upon flow reversal
- provide a minimum amount of “back pressure”, normally 5 psi (0.5 bars) or less
- for check valves installed in vertical run-flow down
- counteract a portion of clapper weight - clapper “floats” on flow stream
- indicate clapper position
- weight is adjustable back and forth on arm to increase or decrease effective torque on the check valve clapper shaft

When ordering counterbalance arms and weights, please specify intended use as each application determines the location of the weight with respect to the clapper. Unless specified otherwise, the arm and weight will be positioned to assist the clapper in closing.



### Horizontal Installation of Valve

Standard construction has the counterbalance arms and weights positioned “downstream” to hold the valve clapper closed. The counterbalance assembly may be repositioned “upstream” to partly offset the weight of the valve clapper for special applications.

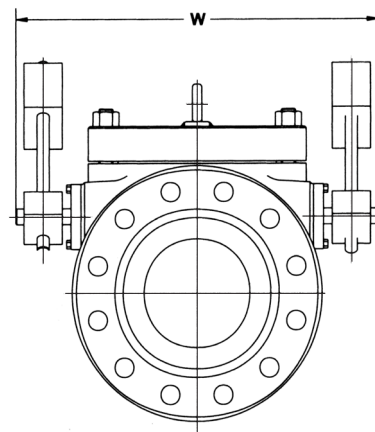
### Vertical Installation of Valve

#### Downward Flow

Counterbalance assembly is essential to bring valve clapper closed upon flow reversal.

#### Upward Flow

Standard construction has the counterbalance arms and weights positioned to hold the valve clapper closed. The counterbalance assembly may be repositioned to partly offset the weight of the valve clapper for special applications.



Valve Size in. (mm.)	Dimension “W” in. (mm.)	Dimension “H” in. (mm.)
2 (60.3)	11 <sup>1</sup> / <sub>4</sub> (285.8)	12 <sup>9</sup> / <sub>16</sub> (319.1)
3 (88.9)	13 <sup>1</sup> / <sub>8</sub> (333.4)	9 <sup>11</sup> / <sub>32</sub> (237.3)
4 (114.3)	14 <sup>5</sup> / <sub>8</sub> (371.5)	10 <sup>3</sup> / <sub>4</sub> (273.1)
6 (168.3)	19 <sup>9</sup> / <sub>16</sub> (496.9)	13 <sup>15</sup> / <sub>16</sub> (354.0)
8 (219.1)	23 <sup>1</sup> / <sub>2</sub> (596.9)	17 <sup>13</sup> / <sub>16</sub> (452.4)
10 (273.1)	25 <sup>3</sup> / <sub>4</sub> (654.1)	22 <sup>7</sup> / <sub>8</sub> (581.0)
12 (323.9)	29 <sup>1</sup> / <sub>2</sub> (749.3)	25 <sup>5</sup> / <sub>16</sub> (642.9)
14 (355.6)	35 (889.0)	27 <sup>11</sup> / <sub>16</sub> (703.2)
16 (406.4)	36 <sup>5</sup> / <sub>8</sub> (930.3)	24 <sup>9</sup> / <sub>16</sub> (623.9)
20 (508.0)	39 <sup>5</sup> / <sub>8</sub> (1006.5)	35 <sup>1</sup> / <sub>8</sub> (892.2)



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