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## For Smooth Operation of Your HTST System

### Alfa Laval Unique SSV Flo-Diversion Valves

#### Application

Alfa Laval's ruggedly designed Reverse-Acting and standard upright Unique SSV Flo-Diversion Valves are perfect for use with HTST (high temperature short time) systems within the dairy, beverage and food industries. It is ideal for applications where product integrity is imperative.

#### Working principle

The standard Unique SSV Flo-Diversion Valve closes with the flow. The Reverse-Acting Unique SSV Flo-Diversion valve closes against the flow.

The Unique SSV Reverse-Acting Flo-Diversion valve's design prevents hydraulic shock that can otherwise damage the valve stem, seat and other parts of the process system. All product wetted metal parts of both valves are constructed of 316L stainless steel. All elastomer and seat materials are FDA and 3A compliant material. Alfa Laval's Flo-Diversion Valves have been designed to meet all requirements of PMO and 3A.

#### Standard Design

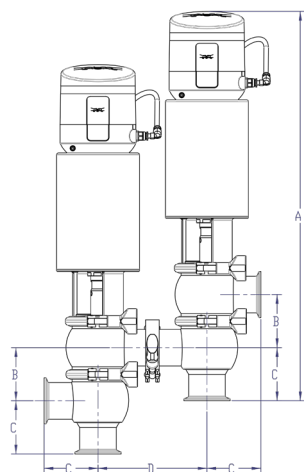
The valve's designs are in compliance with all current sanitary / regulatory standards. Based on Alfa Laval's SSV series valves, these valves come equipped with all the same design advantages as the SSV series single seat valves. The valves are available in 1-1/2" – 4" tube OD sizes. The standard valve used the same guided stem design as the SSV seat valve to insure proper alignment. The reverse acting valve stem is guided at both the top and bottom of the valve. The standard actuator offering on both style valves is fully maintainable.

The indication control top supplied with the valve is the ThinkTop V50® Digital 24 VDC. The ThinkTop V50 provides a sensor band width of 1.4 mm (0.057") accurate to 0.004". All valves are supplied with quick air exhausts to insure speed of actuation. The ThinkTops have an IP67 (Nema 4x) protection rating.



## Performance and Dimensions

Unique SSV Individual Flo-Diversion Valves



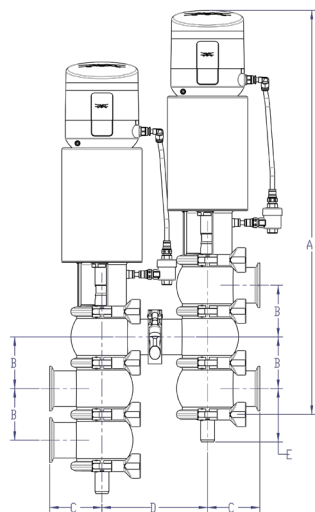
## Pressure/Capacity Limits

| Valve size | Max. Product pressure (PSI) | Required air supply (PSI) | Maximum Flow Rates |
|------------|-----------------------------|---------------------------|--------------------|
| 1½"        | 125                         | 87                        | 50 GPM             |
| 2"         | 125                         | 87                        | 85 GPM             |
| 2½"        | 100                         | 87                        | 160 GPM            |
| 3"         | 100                         | 87                        | 200 GPM            |

## Dimensions

| Valve Size | 1½"  | 2"   | 2½"  | 3"   |
|------------|------|------|------|------|
| A          | 19.5 | 20.9 | 22.4 | 24.2 |
| B          | 2.39 | 2.91 | 3.4  | 3.89 |
| C          | 3.08 | 2.94 | 3.73 | 3.93 |
| D          | 6.25 | 5.94 | 7.52 | 7.92 |
| Stroke     | .067 | 0.87 | 0.87 | 1.06 |

Unique SSV Reverse Acting Flo-Diversion Valve



## Dimensions

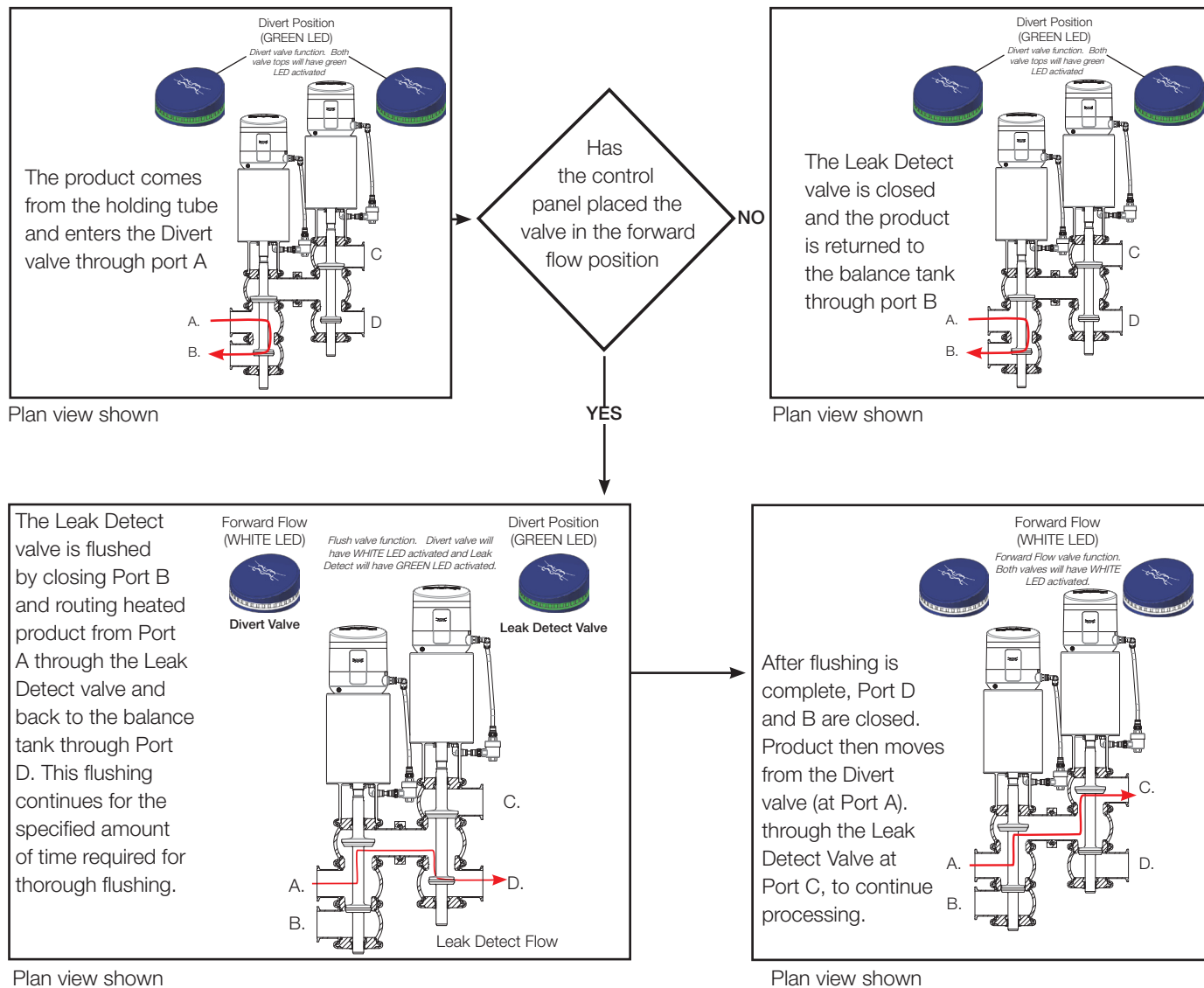
| Valve Size  | 2"   | 2½"  | 3"   | 4"    |
|-------------|------|------|------|-------|
| A           | 20.9 | 22.4 | 24.2 | 29.2  |
| B           | 2.91 | 3.4  | 3.89 | 4.87  |
| C           | 2.94 | 3.73 | 3.93 | 5.35  |
| D           | 5.94 | 7.52 | 7.92 | 10.76 |
| E Stem Up   | 2.0  | 2.2  | 2.5  | 3.0   |
| E Stem Down | 3.0  | 3.2  | 3.7  | 4.2   |
| Stroke      | 0.87 | 0.87 | 1.06 | 1.06  |

## Pressure/Capacity Limits

| Valve size | Max. Product pressure (PSI) | Required air supply (PSI) | Maximum Flow Rates |
|------------|-----------------------------|---------------------------|--------------------|
| 2"         | 125                         | 87                        | 85 GPM             |
| 2½"        | 100                         | 87                        | 160 GPM            |
| 3"         | 100                         | 87                        | 250 GPM            |
| 4"         | 45                          | 87                        | 485 GPM            |

## Unique SSV Reverse-Acting Flo-Diversion Valve

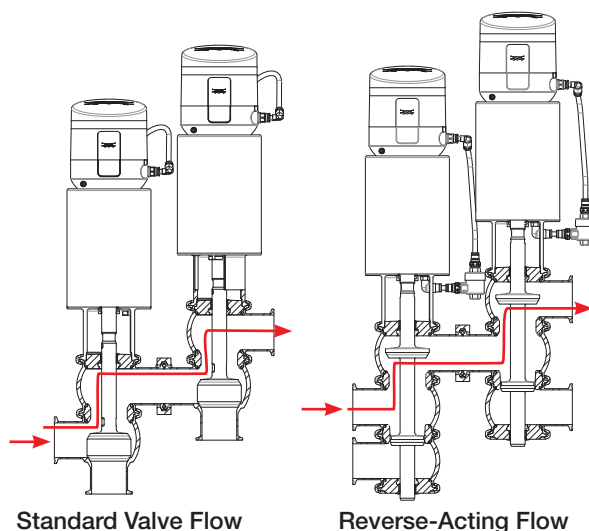
### Principles of Operation



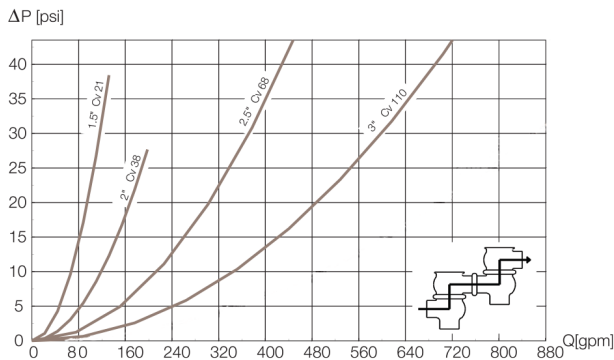
### Valve Stem Operation

In most Divert valves, the seat closes with flow, which causes the flow to “self seat” the valve, which may create hydraulic shock. Hydraulic shock can damage the valve stem, valve seat, and other parts of your processing system, such as the connected piping heat exchangers, and pumps.

The Reverse-Acting Flo-Diversion valve is designed to close against product flow. When the valve is opened, pressure from product flow aids in pushing the valve stem to the Open position. The result is a stem that glides open and shut smoothly, eliminating the damaging effects of hydraulic shock. Alternately, when the valve is closed, the seat closes against the flow and allows product to be directed to its opposite open port, eliminating hydraulic shock.



## Pressure drop/capacity diagrams

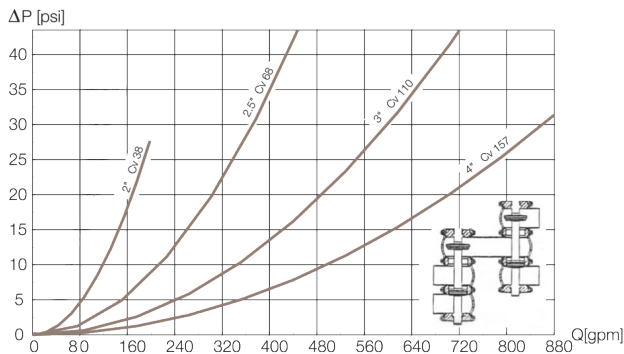


### Note!

For the diagram the following applies:

Medium: Water (68°F).

Measurement: In accordance with VDI 2173.



## Materials

Product wetted steel parts:.....AISI 316L (internal Ra < 32 μ inch)

Other steel parts:.....AISI 304

Plug elastomer seal: .....EPDM

Optional TR2 plug seal (PTFE): .....Standard Valve Only

Other product wetted seals: .....EPDM (standard)

## Options:

Elastomer plug and other wetted seals .....FPM (fluoroelastomer), HNBR

ThinkTop with Solenoid

Tangential bodies - Reverse Acting Valve for Horizontal Mounting model 7650.

## Ordering:

Size

Elastomer

ThinkTop with cable gland or M12

Standard or Reverse Acting\*


If Reverse Acting Valve – note vertical or horizontal mount\*.

Alfa Laval reserves the right to change specifications without prior notification.

## How to contact Alfa Laval

Up-to-date Alfa Laval contact details for all countries are always available on our website at [www.alfalaval.com](http://www.alfalaval.com)

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