



# For Smooth Operation of Your HTST System

## Unique 7000 Flo-Diversion Valves

### Application

Alfa Laval's ruggedly designed Reverse-Acting and standard upright Unique 7000 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 7000 Flo-Diversion Valve closes with the flow. The Reverse-Acting Unique 7000 Flo-Diversion valve closes against the flow.

The Unique 7000 Reverse-Acting Flo-Diversion valve's patented 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. The "TR" (PTFE) of bonded stem plugs are FDA and 3A compliant material. Alfa Laval's Flo-Diversion Valves have been designed to meet all requirements of PMO and 3A. The microswitch control housing meets NEMA 4 Specifications.

### Standard Design

It is designed in compliance with current sanitary/regulatory standards. All wetted parts are type 316LSS, polished ID/OD. It comes standard with quick connect Tri-Clamp® ports for ease of assembly. The Unique 7000 Flo-Diversion valve system is available in 1½"-4" tube O.D. sizes. Low maintenance, permanently assembled actuators provide years of worry free service. The valve stem threads into the actuator stem, providing improved stem alignment so that no coupler is required. You have the choice of molded elastomer seat materials, or the popular, "TR2" replaceable seal/seat assembly.

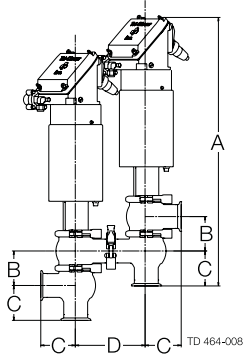
A NEMA 4 microswitch control housing, mounted on the valve actuator, allows for installation of solenoids on the valve itself, not in the remote control panel. This eliminates the need for the quick air exhaust, required in previous Flo-Diversion valve designs. Or, you have the option of locating the solenoids on the control panel.



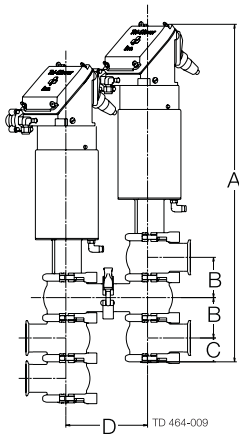
Unique 7000 Flo- Diversion Valve (Reverse Acting)

## Performance and Dimensions

Unique 7000 Individual Flo Diversion Valves



Unique 7000 Reverse Acting Flo-Diversion Valve



Performance Unique 7000 CO valves

Valve Model/Size	Maximum Product Pressure (PSI)	Air Supply Pressure Required
1½"	145	87
2"	145	87
2½"	120	87
3"	143	87
4"	95	87

Dimensions Unique 7000 CO valves (Fig.1)

Valve Size	1½"	2"	2½"	3"	4"
A	20.28	22.8	24.32	26.13	29.02
B	2.39	2.91	3.4	3.89	4.87
C	2.45	2.94	3.73	3.93	5.35
D	4.96	5.94	7.52	7.92	10.76
Stroke	0.67	0.87	0.87	1.06	1.06

Performance Unique 7000 RA valves

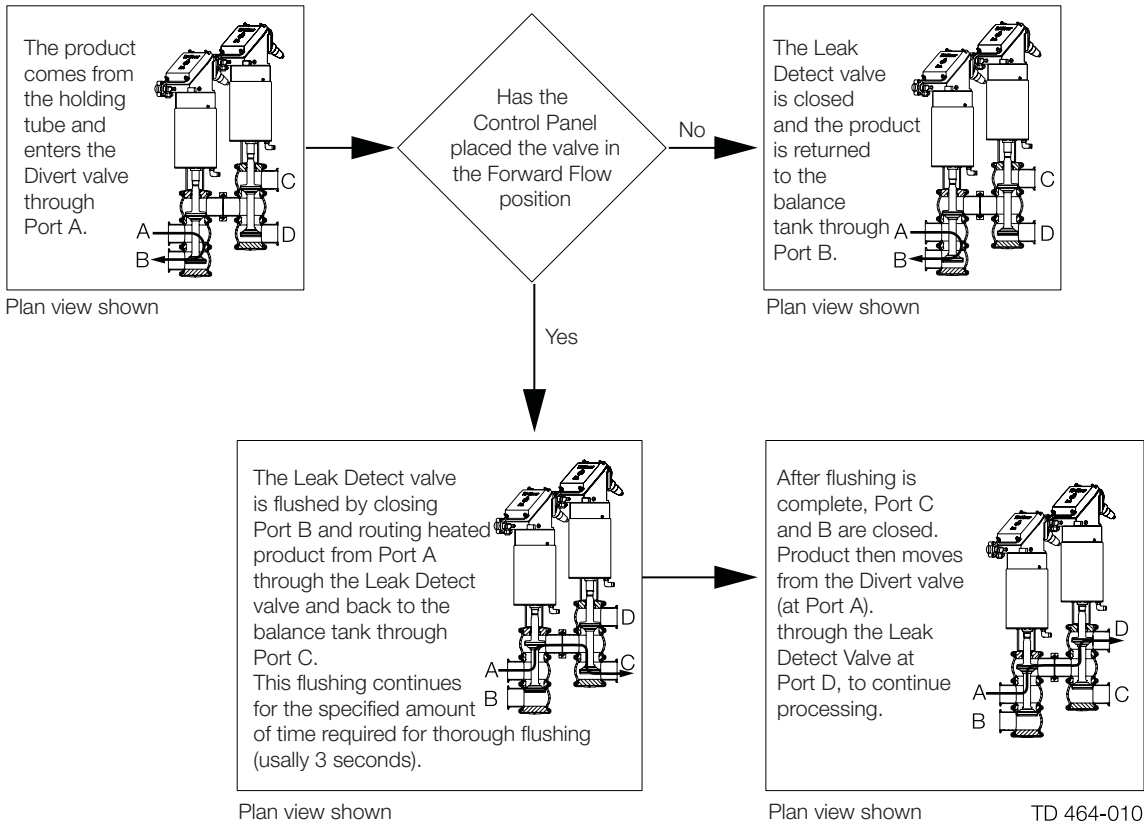
Valve Model/Size	Maximum Product Pressure (PSI)	Air Supply Pressure Required
1½"	118	87
2"	121	87
2½"	65	87
3"	98	87
4"	63	87

Dimensions Unique 7000 RA valves (Fig.2)

Valve Size	1½"	2"	2½"	3"	4"
A	21.58	24.35	25.83	28.18	31.1
B	2.39	2.91	3.4	3.89	4.87
C	1.95	2.44	3.23	3.43	4.72
D	4.96	5.94	7.52	7.92	10.76
Stroke	0.63	0.87	0.87	1.06	1.06

# Unique 7000 Reverse-Acting Flo-Diversion Valve

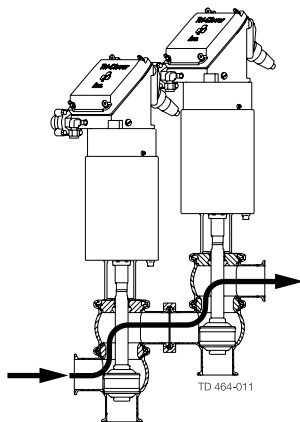
Principles of Operation



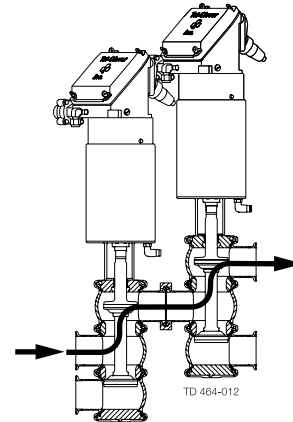
## Valve Stem Operation

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.

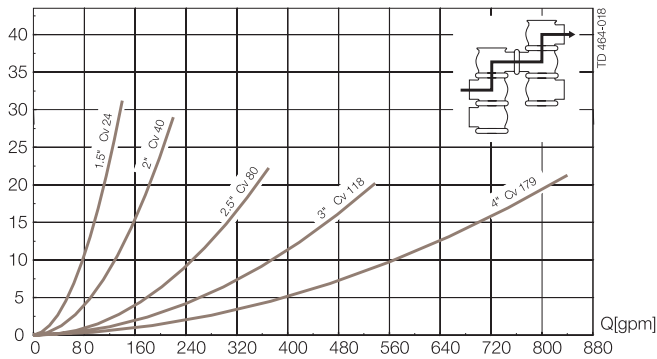
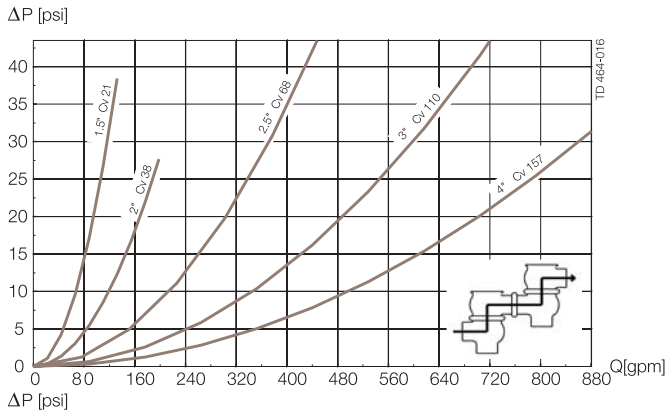


Standard Valve Flow



Reverse-Acting Flow

## Pressure drop/capacity diagrams



### Note!

For the diagrams the following applies:

Medium: Water (68° F/20° C)

Measurement: In accordance with VDI2173

### Ordering

Please state the following when ordering:

- Standard or reverse acting
- Size
- Elastomer - TR or TR2 seats

Can also be configured through CAS. for further information contact your local Alfa Laval company or visit [www.alfalaval.com](http://www.alfalaval.com).

### Materials

Product wetted metal

316L stainless steel

Other steel parts

304 stainless steel

Finish:

Product wetted seals

Elastomers

32 Ra

Buna bonded or "TR"/"TR2"

PTFE replaceable

BUNA, EPDM, SFY

(Fluorelastomer), "TR"/"TR2"

PTFE replaceable

### Note!

For further details, see instruction ESE00382-ENUS.

ESE00381ENUS 0705

The information contained herein is correct at the time of issue, but may be subject to change without prior notice.

### How to contact Alfa Laval

Contact details for all countries are continually updated on our website. Please visit [www.alfalaval.com](http://www.alfalaval.com) to access the information direct.