



# Simply Unique

## Unique 7000 Series Y-body

### General Information

The Unique 7000 Series is an innovative new generation of Tri-Clover® single seat valves that are designed to meet the highest process demands of hygiene and safety. They're built on a well-proven, platform from an installed base of more than one million valves.

### Application

The Unique 7000 is a sanitary air-operated seat valve with a flexible design. The Y-body version offers a straight through product flow path and is designed for gentle product treatment. The main use for these valves is in applications involving high viscosity or large particulates.

### Working principle

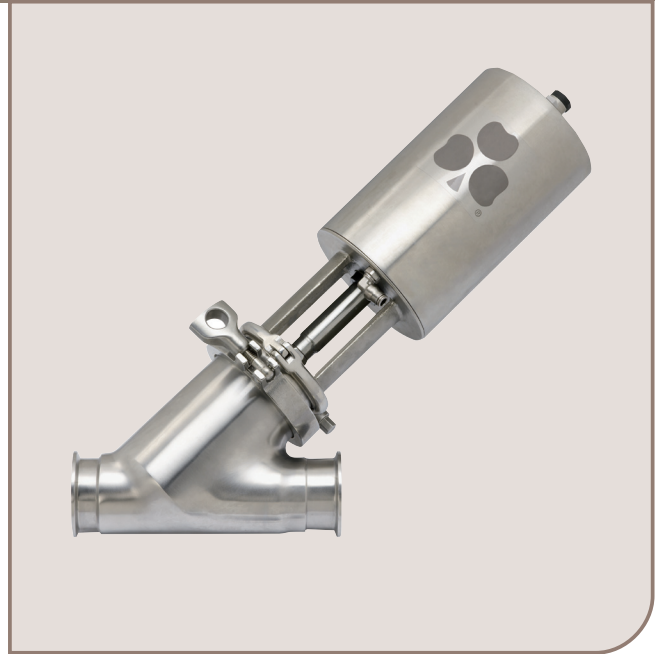
The valve is remote-controlled by means of compressed air. It has few and simple moveable parts which results in a very reliable valve with low maintenance cost.

### Standard design

The Unique 7000 valve is designed to deliver years of reliability and performance you've come to expect with all Tri-Clover® products. The TR2 seat ring with enhanced CIP capabilities and hygiene comes standard with all Unique 7000 series valves. The standard actuator comes with a five year warranty. The Unique 7000 Y-body valve sizes range from 2" to 4".

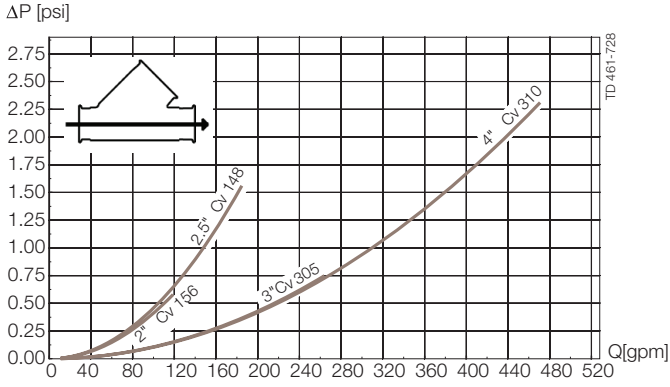
### Other valves in the same basic design

- Single seat valve.
- Reverse acting valve.
- Long stroke valve.
- Manually operated valve.
- Aseptic valve.

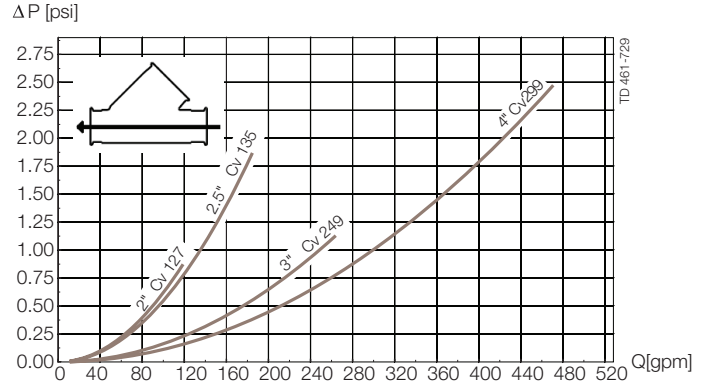


Unique 7000 Series Y-Body

# Pressure drop/capacity diagrams



For the diagrams the following applies:



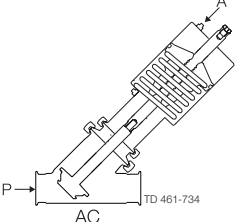
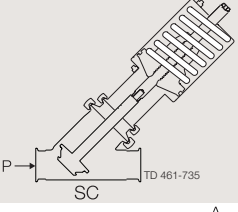
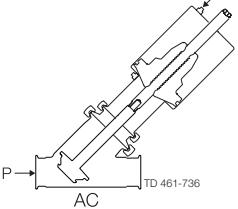
Medium: Water (68° F/20° C)

Measurement: In accordance with VDI2173

## Pressure data for Unique 7000 Series valves Y-body

Table 1

Max. pressure in psi without leakage at the valve seat

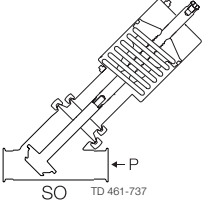
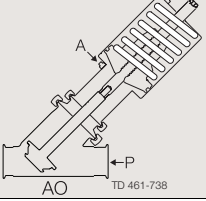
Actuator / Valve body combination and direction of pressure	Air pressure [psi]	Plug position	Valve size			
			2"	2½"	3"	4"
 AC TD 461-734	87	NO	71	40	55	31
 SC TD 461-735		NC	64	35	55	31
 AC TD 461-736	87	A/A	145	103	137	78

A = Air  
P = Product pressure

AC = Air closes  
SC = Spring closes

Table 2

Max. pressure in psi against which the valve can open.

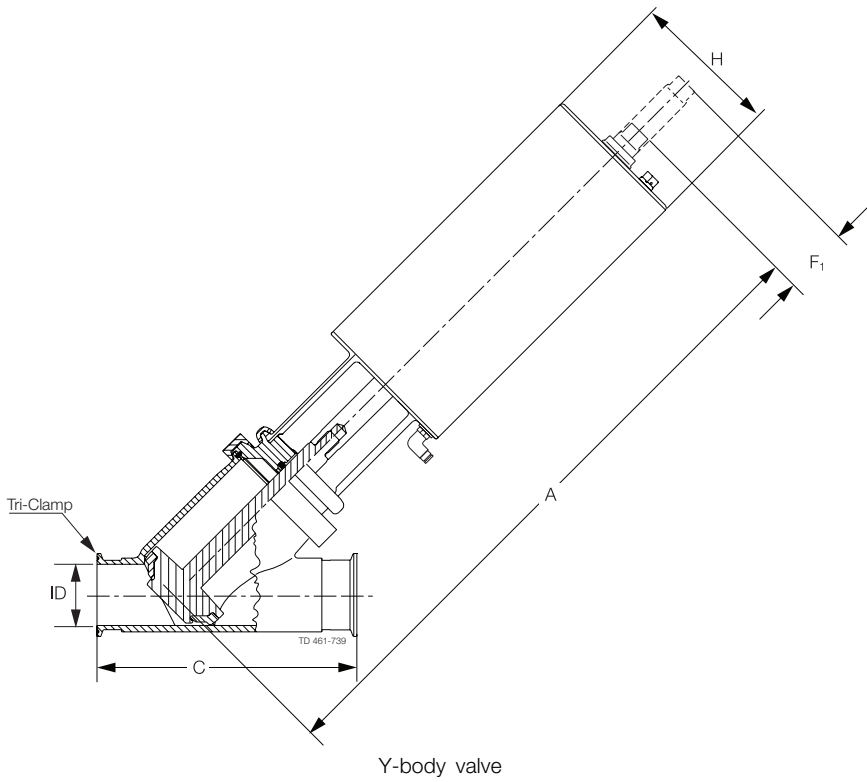
Actuator / Valve body combination and direction of pressure	Air pressure [psi]	Plug position	Valve size			
			2"	2½"	3"	4"
 SO TD 461-737		NO	133	74	94	54
 AO TD 461-738	87	NC	142	79	95	54

A = Air  
P = Product pressure

AO = Air opens  
SO = Spring opens

**Dimensions**

	Nominal Size			
	2"	2.5"	3"	4"
A	17.32	17.95	22.05	24.41
C	7.88	9.25	10.38	12.63
ID	1.86	2.36	2.86	3.81
F <sub>1</sub>	1.97	1.97	2.64	2.64
H	4.53	4.53	6.14	6.14
Weight (lb)	18.9	24.5	41.1	59.7



**Caution, opening/closing time:**

**Opening/closing time will be effected by the following:**

- The air supply (air pressure).
- The length and dimensions of the air hoses.
- Number of valves connected to the same air hose.
- Use of single solenoid valve for serial connected air actuator functions.
- Product pressure.

**Air Connections Compressed air:**

R 1/8" (BSP), internal thread.

## Technical data

Max. product pressure (depending on valve specifications): . . . . .145 psi (1000 kPa (10 bar)).  
Min. product pressure: . . . . .Full vacuum.  
Temperature range: . . . . .14°F to +284°F (EPDM).  
Air pressure: . . . . .72.5 to 101.5 psi (500 to 700 kPa (5 - 7 bar)).

## Actuator function

- Pneumatic downward movement, spring return.
- Pneumatic upward movement, spring return.
- Pneumatic upward and downward movement (A/A).

Size	Air Consumption (In <sup>3</sup> free air) for one stroke	
	2"-2½"	3"-4"
NO and NC	3.39 x air pressure [psi]	8.52 x air pressure [psi]
A/A	5.79 x air pressure [psi]	16.2 x air pressure [psi]

## Materials

Product wetted steel parts: . . . . .AISI 316L (internal Ra < 32 μ inch)  
Other steel parts: . . . . .AISI 304  
Plug seal: . . . . .PTFE (TR2)  
Other product wetted seals: . . . . .EPDM (standard)  
Optional product wetted seals: . . . . .HNBR/NBR or FPM  
Other seals: . . . . .NBR

## Options

- Control and Indication: ThinkTop, ThinkTop Basic and GreenTop.
- Product wetted seals in HNBR/NBR or FPM.

## Ordering

Please state the following when ordering:

- Size.
- Actuator function: NC, NO or A/A.
- Options.

## Note!

For further details, see instruction ESE00583.

Description Code Unique 7000

Valve function			Body							Actuation		Stem/elastomer		Misc.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	
7610	012	S	M	1	H40	1	S	S	S	T	Y	S	04	
			S	N	N	N	N	W	M					

- 1 Model**

Code	
-- Unique 7000	7610
-- Unique 7000 Aseptic	8610
-- Unique 7000 Tangential Outlet (Horizontal Mounting)	7620
-- Unique 7000 Tank Outlet (Vertical Mounting)	7630
-- Unique 7000 Regulating	7710
-- Unique 7000 Y-body	7610
- 2 Body style**

Code	
-- Shut-off (2 port)	200
-- Shut-off (3 port)	300
-- Shut-off TR (2 port)	208
-- Shut-off TL (2 port)	207
-- Shut-off TC (3 port)	309
-- Change Over (3 port)	210
-- Change Over (4 port)	220
-- Change Over (4 port)	310
-- Change Over (5 port)	320
-- Shut-off RA (2 port)	011
-- Shut-off RA (3 port)	021
-- Shut-off RA (3 port)	012
-- Shut-off RA (4 port)	022
-- Change Over RA (3 port)	111
-- Change Over RA (4 port)	211
-- Change Over RA (4 port)	121
-- Change Over RA (4 port)	112
-- Change Over RA (5 port)	122
-- Change Over RA (5 port)	221
-- Change Over RA (5 port)	212
-- Change Over RA (6 port)	222
-- Tankoutlet 1 port	001
-- Tankoutlet 2 port	002
-- Tankoutlet RA (1 port)	010
-- Tankoutlet RA (2 port)	020
-- Y-body	900
- 3 Build in dimension**

Code	
-- Standard	S
-- 700 Series Build Dimensions (Center-Face; shut-off only)	C
- 4 Connection Ports - all identical**

Code	
-- Weld ends - all ports	W
-- Tri-Clamp - all ports	M
-- Threaded Bevel Seat - all ports	T

**Connection Ports - mixed**

Code	
-- Mixed connection types	S
-- Weld end	W
-- Tri-Clamp	M
-- Iso Clamp	I
-- Union SMS	S
-- Union DIN	C
-- Din Clamp	D
-- Threaded Bevel Seat	T
-- No port	N
- 5 Surface Finish**

Code	
-- 3A (OD = Dust blast; ID = 32Ra)	1
-- 3A Bright (OD = Bright; ID = 32Ra)	2
-- PC (3A) (OD = Dust blast; ID = 20Ra)	3
-- PL (3A) (OD = Bright; ID = 20Ra)	4
-- PP (3A) (OD = Bright; ID = 15Ra)	5
-- PM (3A) (OD = Bright; ID = 15Ra w/EP)	6
- 6 Size (Port)**

Code	
-- 2-Inch	H20
-- 2½-Inch	H25
-- 3-Inch	H30
-- 4-Inch	H40
- 7 Actuation Mode**

Code	
-- Norm. Open/Spring to open	1
-- Norm. Open/Spring to open (RA)	2
-- Norm. Closed/Spring to close	1
-- Norm. Closed/Spring to close (RA)	2
-- Air to air	3
-- Two-step/Three Position	4
-- Manual	5
- 8 Actuator Stroke**

Code	
-- Standard	S
-- Long Stroke	L
- 9 Actuator Type**

Code	
-- Maintainable	R
-- Semi maintainable	S
- 10 Holding Pressure Capability**

Code	
-- Standard	S
-- High pressure	H
- 11 Stem Type**

Code	
-- Elastomer Plug Seal	S
-- TR/PTFE Plug Seal	T
- 12 Wetted Seal Materials**

Code	
-- EPDM	E
-- HNBR	U
-- FPM (Fluoroelastomer)	Y
- 13 Assembled Valve**

Code	
-- Assembled valve	S
- 14 Top Unit Type**

Code	
ThinkTop digital 0 Solenoid	TA
ThinkTop digital 1 Solenoid	TB
ThinkTop digital 2 Solenoid	TC
ThinkTop ASI 0 Solenoid	TE
ThinkTop ASI 1 Solenoid	TF
ThinkTop ASI 2 Solenoid	TG
ThinkTop DeviceNet 0 Solenoid	TI
ThinkTop DeviceNet 1 Solenoid	TJ
ThinkTop DeviceNet 2 Solenoid	TK
ThinkTop Digital 110V 0 Solenoid	TM
ThinkTop Digital 110V 1 Solenoid	TN
ThinkTop Digital 110V 2 Solenoid	TO
ThinkTop Basic Digital 0 Solenoid	BA
ThinkTop Basic Digital 1 Solenoid	BB
ThinkTop Basic Digital 2 Solenoid	BC
IndiTop digital 0 Solenoid	IT
GreenTop 2 Mech Switches 0 Solenoid	O4
GreenTop 2 Prox Switches 0 Solenoid	12
GreenTop 24 VDC 2 Mech Switches 1 Solenoid	18
GreenTop 110 VAC 2 Mech Switches 0 Solenoid	20
GreenTop 24 VDC 2 Prox Switches 1 Solenoid	34
GreenTop 110 VAC 2 Prox Switches 1 Solenoid	36




ESE00565ENUS 0709

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.

 Authorized to carry  
the 3A symbol