



Small Single Seat Valve

Unique 7000 Small Single Seat Valve

Application

The Small Single Seat Valve with its sanitary and flexible design is applicable for a wide range of tasks either as a stop valve with two or three ports or as a change-over valve with three to five ports. The valve is suitable for use in food, beverage, dairy and pharmaceutical industries.

Working principle

The valve can be manually or pneumatically actuated. The SSSV maintains a simple design with only a few moving parts, making it a reliable component in any flow system.

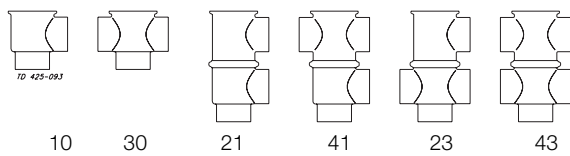
Standard Design

The SSSV is available in 1/2" and 3/4" OD tube. The design is comprised of an actuator, lip seal, plug, and one or two valve bodies. The unique plug design is made from PVDF and the valve body interior has a 20 µinch Ra surface finish for high cleanability. The valve maintains an open yoke design and is authorized to carry the 3A Symbol. Valve bodies and actuators are connected via a clamp connection. The piston and valve plug maintain a threaded connection. Tri-Clamp or weld connections are standard.

Actuator function

- Pneumatic downward movement, spring return (NO).
- Pneumatic upward movement, spring return (NC).
- Manually operated.

Valve body combinations

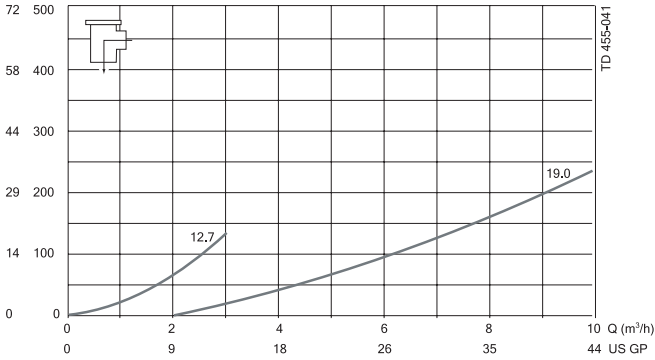


Pneumatic and manual Small Single Seat Valve.

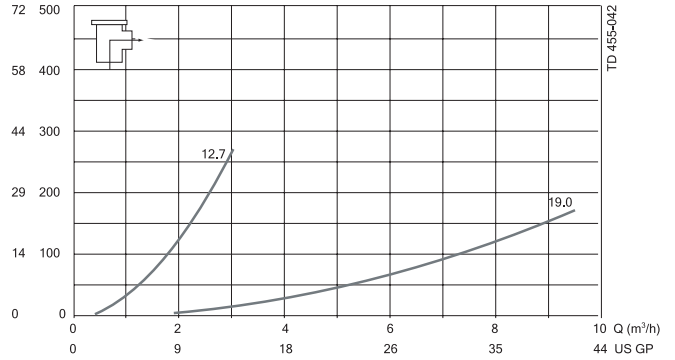
Pressure drop/capacity diagrams

Stop valve

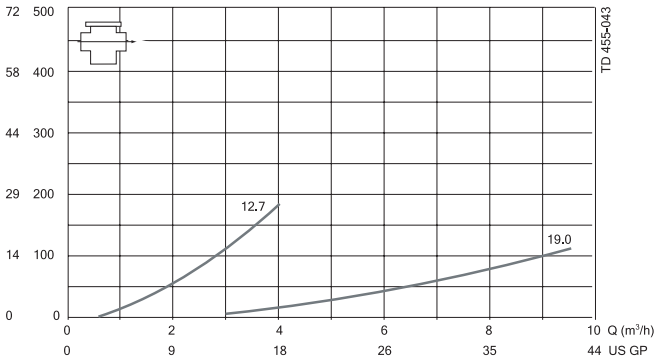
PSI ΔP (kPa)



PSI ΔP (kPa)

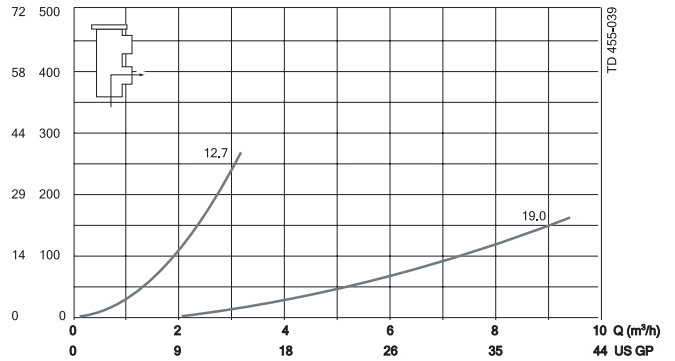


PSI ΔP (kPa)

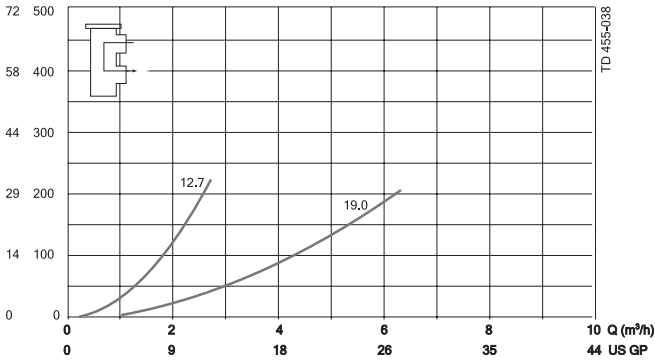


Change-over valve

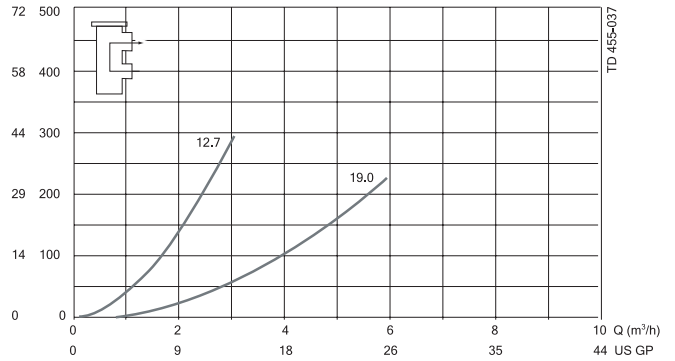
PSI ΔP (kPa)



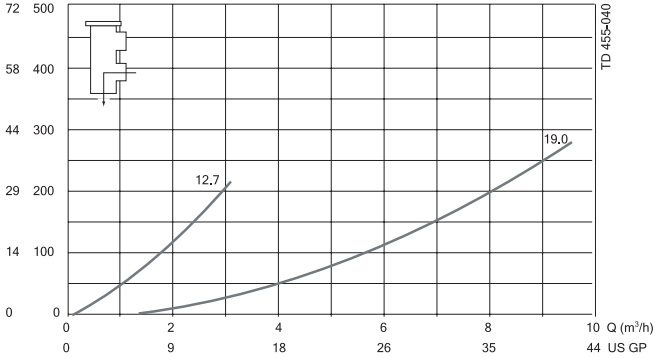
PSI ΔP (kPa)



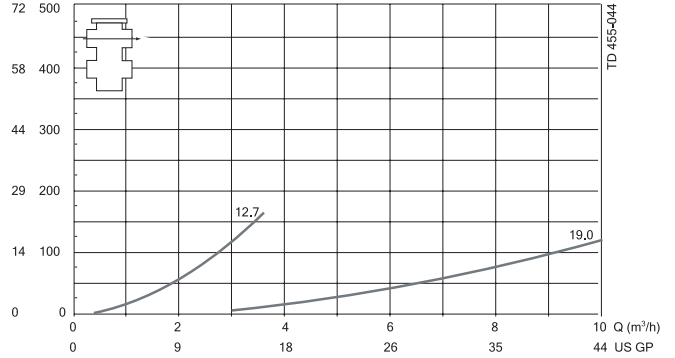
PSI ΔP (kPa)



PSI ΔP (kPa)



PSI ΔP (kPa)



NOTE!

For the diagrams the following applies:

Medium: Water (68 °F).

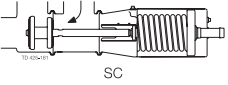
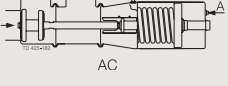
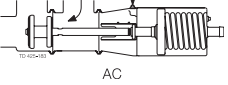
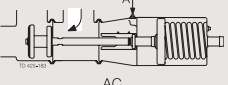
Measurement: In accordance with VDI 2173

Pressure data for Small Single Seat Valve

Actuator type / function

10. Pneumatic downward movement, spring return (NO-lower seat)
 20. Pneumatic upward movement, spring return (NC-lower seat)

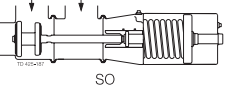
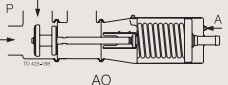
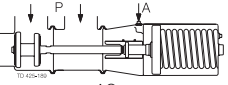
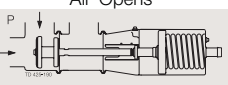
Table 1: Stop and divert valve. The table shows the approx. static pressure (p) in psi without leakage at the valve seat.

Actuator / Valve body combination and direction of pressure	Air pressure (psi)	Actuator type/function	Valve size	
			OD 1/2"	OD 3/4"
 <p>SC Spring Closes</p>		10(NO)	Min.145	Min.145
 <p>AC Air Closes</p>	29 43.5 58	10(NO) 10(NO) 10(NO)	29 Min.145	- 43.5 Min.145
 <p>AC Air Closes</p>	29 43.5	20(NC) 20(NC)	130.5 Min.145	- Min.145
 <p>AC Spring Closes</p>		20(NC)	Min.145	Min.145

-> = Actual product pressure.

Table 2: Stop and divert valves.

The table shows the approx. static pressure (p) in psi against which the valve can open.

Actuator / Valve body combination and direction of pressure	Air pressure (psi)	Actuator type/function	Valve size	
			DN/OD 1/2"	DN/OD 3/4"
 <p>SO Spring Opens</p>		10(NO)	Min.145	Min.145
 <p>AO Air Opens</p>	29 43.5 58	10(NO) 10(NO) 10(NO)	130.5 Min.145	- 87 Min.145
 <p>AO Air Opens</p>	29	20(NC)	Min.145	Min.145
 <p>SO Spring Opens</p>		20(NC)	Min.145	Min.145

A = Air

Dimensions (inch)

Nominal Size	Remote-controlled	
	OD	OD
	½"	¾"
A ¹	6.78	6.74
A ²	7.06	7.17
A ³	7.88	8.24
A ⁴	8.16	8.67
C	1.27	1.50
OD	0.50	0.75
ID	0.37	0.62
t	0.06	0.06
E ¹	1.17	1.18
E ²	1.77	1.77
F ¹	0.28	0.43
F ²	0.28	0.43
H	2.24	2.24
Weight (lbs) Stop valve	2.36	2.43
Weight (lbs) Change-over valve	3.00	3.11

(900-233)

*Dimensions valid for both welding ends and clamp ends.

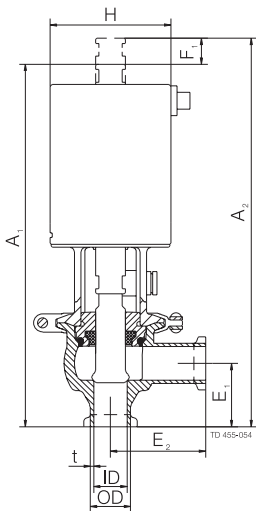
Caution, opening/closing time:

Opening/closing time will be effected by the following:

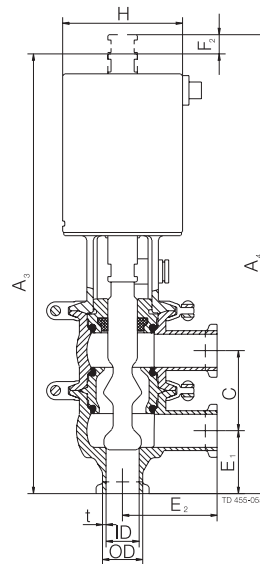
- The air supply (air pressure).
- The length and dimensions of the air hoses.
- Number of valves connected to the same air hose.
- Use of single solenoid valve for serial connected air actuator functions.
- Product pressure.

Air Connections Compressed air:

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



a. Stop valve



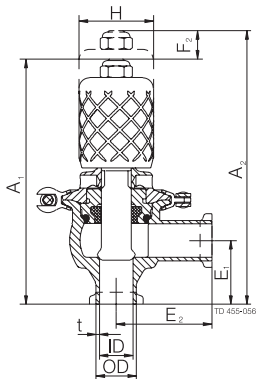
b. Divert valve

Dimensions (inch)

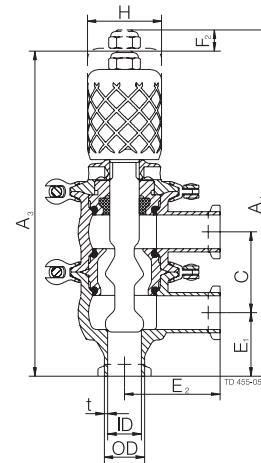
Nominal size	Manually operated	
	OD	OD
	½"	¾"
A ¹	4.32	4.44
A ²	4.59	4.87
A ³	5.58	5.93
A ⁴	5.85	6.37
C	1.27	1.50
OD	0.50	0.75
ID	0.37	0.62
t	0.06	0.06
E ¹	1.17	1.18
E ²	1.77	1.77
F ¹	0.28	0.43
F ²	0.28	0.43
H	1.38	1.38
Weight (lbs) Stop valve	1.10	1.17
Weight (lbs) Change-over valve	1.76	1.87

(900-233)

* Dimensions valid for both welding ends and clamp ends.



a. Manual stop valve



b. Manual divert valve

Technical data

Max. product pressure:145 psi (1000 kPa).
Min. product pressure:Full vacuum.
Temperature range:14°F to + 284°F (EPDM).
Air pressure:14.5 to 101.5 psi (100 to 700 kPa).

Air consumption (litres free air) for one stroke	
Size	1/2" and 3/4"
Stop valve/Divert valve	0.004 x Air pressure (psi)
Actuator function	NO and NC

Product wetted steel parts:Acid-resistant steel AISI 316L (1.4404) .
Finish outside:Semi bright.
Finish inside:≤ 20 µinch Ra.
Other steel parts:Stainless steel AISI 304L (1.4307).
Plug:PVDF
Product wetted seals:EPDM rubber.
Actuator seals:Nitrile (NBR)
Alternative product wetted seals:HNBR, FPM.

Options

- A. Material certification (3.1.B).
- B. Adapter for ThinkTop®.
- C. Automation: See chapter in Product Catalogue.
- D. Product wetted seals of HNBR or fluorinated rubber (FPM).
- E. Surface finish external ≤ 32 µinch Ra.

Ordering

Please state the following when ordering:


- Size.
- Body with welding ends or clamp ends.
- Actuator function, NC or manual.
- Options.

ESE00368ENUS 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 to
access the information direct.

 Authorized to carry
the 3A symbol