Simply Unique Single Seat

Unique SSV Tangential

General Information
The Unique Single Seat Valve is an innovative new generation 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
Unique Single Seat Valve is a pneumatic seat valve in a hygienic and modular design for a wide field of applications.

The Tangential version offers complete drainability of the valve body on horizontally mounted valves. It can be configured as a shut-off valve with two (2) or three (3) ports or as a change-over valve with three (3) to five (5) ports.

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 Single Seat Tangential Valve come in a one or two body configuration. To ensure a high degree of flexibility the valve seat between the two bodies in the Change-over version is loose. The valve features an optimized life span of the seals through a controlled compression design. The actuator is connected to the valve body using a yoke and all components are assembled with clamp rings.

To facilitate installation the valve is only partly assembled when delivered. The valve has welding ends as standard and is available with fittings as option.

The Unique Single Seat Tangential Valve range covers the sizes from DN/OD 51 mm to 101.6 mm.

The actuator comes with a 5 years warranty.



Unique Single Seat Tangential Change-over and Shut-off Valve

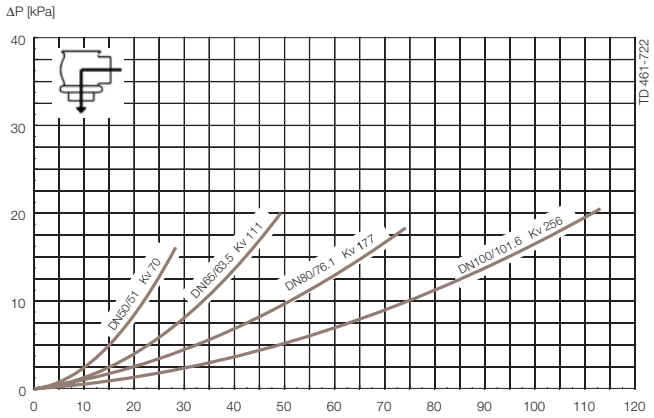
The Unique SSV tangential valve is designed, tested and approved according to EHEDG guidelines.

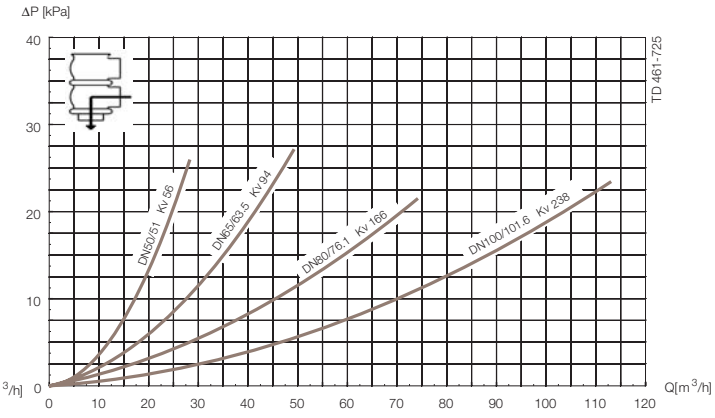
Other valves in the same basic design
The Unique SSV valve range includes several purpose built valves. Below listed are some of the valve models available, though please use the Alfa Laval computer aided selection tool (CAS) for full access to all models and options.

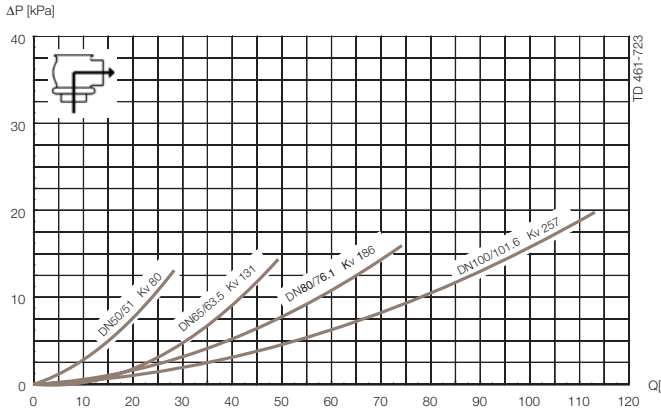
- Reverse acting valve.
- Long stroke valve.
- Manually operated valve.
- Aseptic valve.

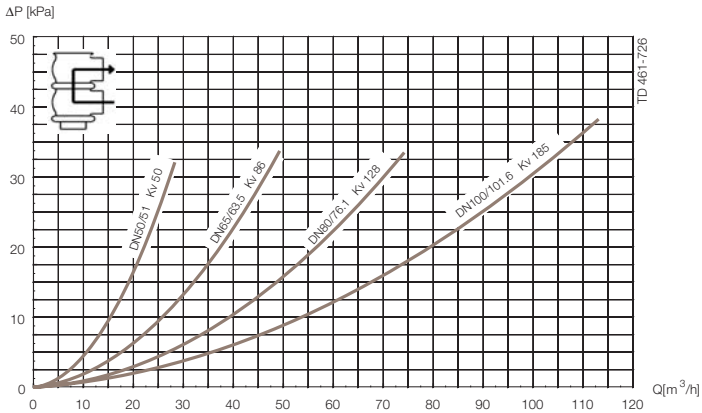
Gillain & Co NV | Boomsesteenweg 85, B-2630 Aartselaar | Tel. +32 3 870 60 80, Fax +32 3 870 60 89 | advice@gillain.com | www.gillain.com

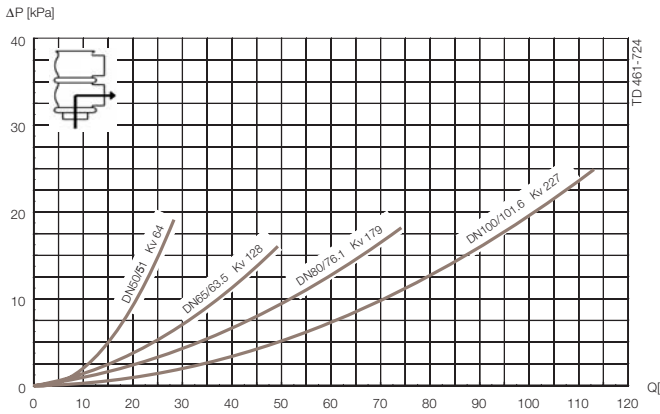
Pressure drop/capacity diagrams

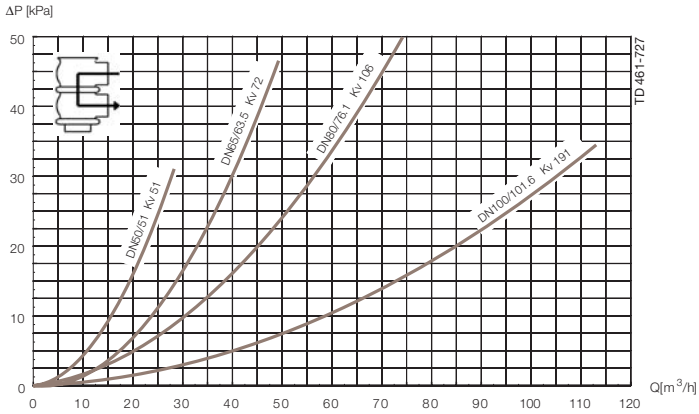












Note!

For the diagrams the following applies:

Medium: Water (68° F/20° C)

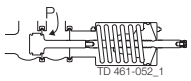
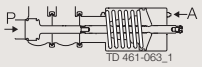
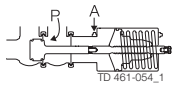
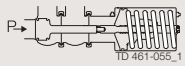
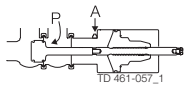
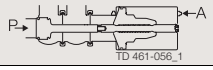
Measurement: In accordance with VDI2173

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Pressure data for Unique Single Seat Valve Tangential body/Tank valve

Table 1 - Shut-off and change-over valves

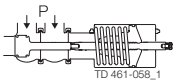
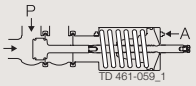
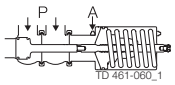
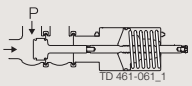
Max. pressure in bar without leakage at the valve seat

Actuator / Valve body combination and direction of pressure	Air pressure [bar]	Plug position	Valve size DN/OD 51 mm	DN/OD 63.5 mm	DN/OD 76.1 mm	DN/OD 101.6 mm
		NO	8.4	4.5	6.8	4.4
	6	NO	9.6	5.6	7.2	4.8
	6	NC	10.0	6.1	7.7	5.0
		NC	7.2	4.2	6.4	4.2
	6	A/A	10.0	10.0	10.0	10.0
	6	A/A	10.0	10.0	10.0	10.0

A = Air
P = Product pressure

Table 2 - Shut-off and change-over valves

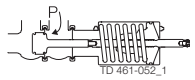
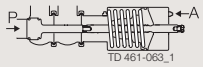
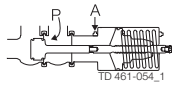
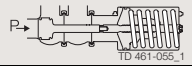
Max. pressure in bar against which the valve can open.

Actuator / Valve body combination and direction of pressure	Air pressure [bar]	Plug position	Valve size DN/OD 51 mm	DN/OD 63.5 mm	DN/OD 76.1 mm	DN/OD 101.6 mm
		NO	10.0	7.7	9.7	6.3
	6	NO	10.0	8.3	9.9	6.6
	6	NC	10.0	9.0	10.0	6.9
		NC	10.0	6.8	9.1	6.1

A = Air
P = Product pressure

Table 3 - Shut-off and change-over valves with high pressure actuator option

Max. pressure in bar without leakage at the valve seat

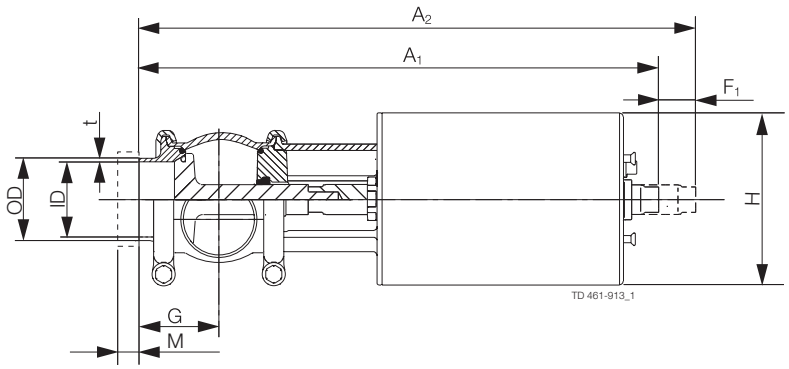
Actuator / Valve body combination and direction of pressure	Air pressure [bar]	Plug position	Valve size			
			DN/OD 51 mm	DN/OD 63.5 mm	DN/OD 76.1 mm	DN/OD 101.6 mm
		NO	10.0	10.0	-	-
	6	NO	10.0	10.0	-	-
	6	NC	10.0	10.0	5.0	3.0
		NC	10.0	9.6	10.0	7.0

A = Air
P = Product pressure

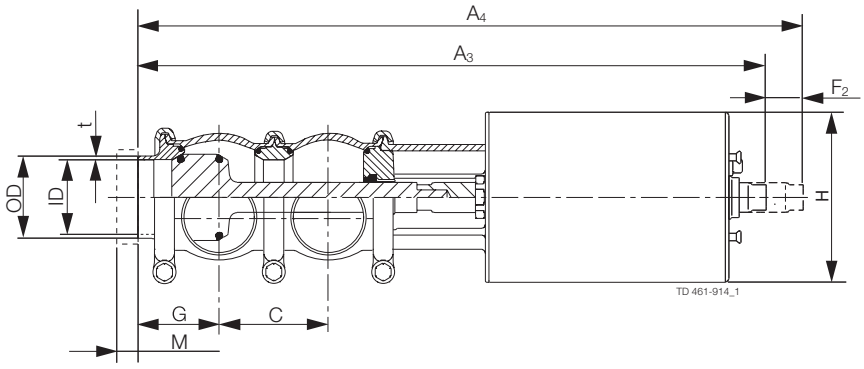
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Dimensions

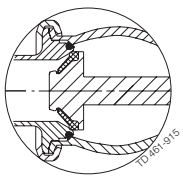
	Nominal Size			
	DN/OD 51 mm	DN/OD 63.5 mm	DN/OD 76.1 mm	DN/OD 101.6 mm
A_1	361	374	409	433
A_2	386	399	439	463
A_3	435	460	507	557
A_4	457	482	534	584
C	73.,8	86.3	98.9	123.6
OD	51	63.5	76.1	101.6
ID	47.8	60.3	72.9	97.6
t	1.6	1.6	1.6	2
E	62	82	87	120
G	59.9	66.2	72.5	84.8
F_1	25	25	30	30
F_2	22	22	27	27
H	114.9	114.9	154.3	154.3
N	14.3	17.9	21.5	25
M/ISO Clamp	21	21	21	21
M/SMS male	20	24	24	35
Weight (kg)				
Shut-off valve	5.8	6.8	11.7	14.1
Change-over valve	7.4	9	14.5	18.8

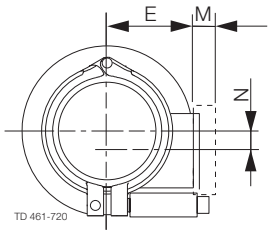


Shut-off valve



Change-over valve





PTFE plug seal (TR2)

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.

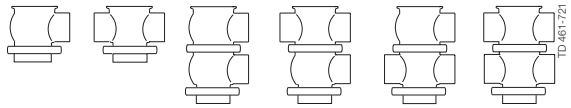
Air Connections Compressed air:

R 1/8" (BSP). Internal thread.

Technical data

Max. product pressure (depending on valve specifications): . . . . . .1000 kPa (10 bar).
Min. product pressure: . . . . . .Full vacuum.
Temperature range: . . . . . .-10°C to +140°C (EPDM).
Air pressure: . . . . . .500 to 700 kPa (5 - 7 bar).

Valve Body Combinations



207(TL) 208(TR) | 309(TC) | 217(TL) 218(TR) | 227(TL) 228(TR) | 317(TL) 318(TR) | 329(TC)

Actuator function

- Pneumatic downward movement, spring return.
- Pneumatic upward movement, spring return.
- Pneumatic upward and downward movement (A/A).
- Actuator for intermediate position of the valve plug (optional)

Air Consumption (Litres free air) for one stroke		
Size	**DN/OD 51 - 63.5 mm**	**DN/OD 76.1 - 101.6 mm**
NO and NC	0.15 x air pressure [bar]	1.3 x air pressure [bar]
A/A	1.1 x air pressure [bar]	2.7 x air pressure [bar]

Materials

Product wetted steel parts: . . . . . .1.4404 (316L) (internal Ra < 0.8 µ)
Other steel parts: 1.4301 (304)
Plug seal: . . . . . .EPDM
Other product wetted seals: . . . . . .EPDM (standard)
Other seals: . . . . . .NBR

Options

a. Weld ends or connection types other than Tri-Clamp.
b. Control and Indication: IndiTop, ThinkTop or ThinkTop Basic.
c. Product wetted seals in HNBR or FPM.
d. Plug seal HNBR, FPM or TR2 (floating PTFE design).
e. High pressure actuator.
f. NO or A/A actuator.
g. Maintainable actuator.
h. External surface finish bright.

Ordering

Please state the following when ordering:

- Size.
- Connections if not welding ends
- Valve body combination.
- Actuator function: NC, NO or A/A.
- Options.

Note!

For further details, see instruction ESE00609.

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

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