



# AUTO CONTROL DIVERT VALVE



The unique seat valve meets the comprehensive demands of production process in terms of purity and safety.



## WORKING

CSE pneumatic and manual seat valve is with a flexible and modular design and widely used in the food, pharmaceutical and semiconductor fields, including L, T, L/L, T/T and multiple valve bodies combination. Operation of this pneumatic valve is remotely controlled by compressed air. All parts are highly functional, CIP/SIP compatible, easy to maintain and reliable for the safety of the production process.

## ACTUATOR FUNCTION

Operation: air/air or air/spring

## CONCEPT

CSE unique seat valve meets the highest requirements in terms of hygiene and safety. It provides a variety of types to solve your needs and prevents the pressure shock generated when the product flow is closed.

CSE seat valves have been installed in countless systems worldwide.

## DESIGN

CSE unique valve body design ensures the flexible combination of one-body, two-body, and even more bodies structures specifically for flow control and mix-proof control. The compact compress design guarantees all seals with long service life. The actuator is installed using a bracket, and all components are assembled by clamp.



# TECHNICAL

## Temperature rating

Standard seal: -10 °C to +140 °C (Material: EPDM)

## Pressure

Mix pressure: 1000 KPa (10 bar)

Air pressure: 500~700 kPa equal to 5~7 bar

# DATA

## Material

Body for flow Steel parts: 316L

Other steel parts: 304

Outside finished: polish, Ra < 1.6 μm





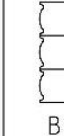

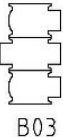
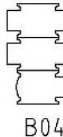


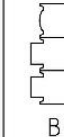
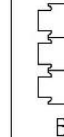
Inside finished: polish , Ra < 0.8 μm

Seals material (fluid contacting) : EPDM

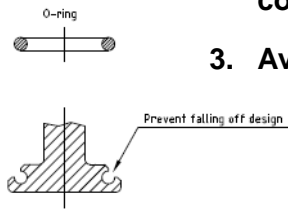
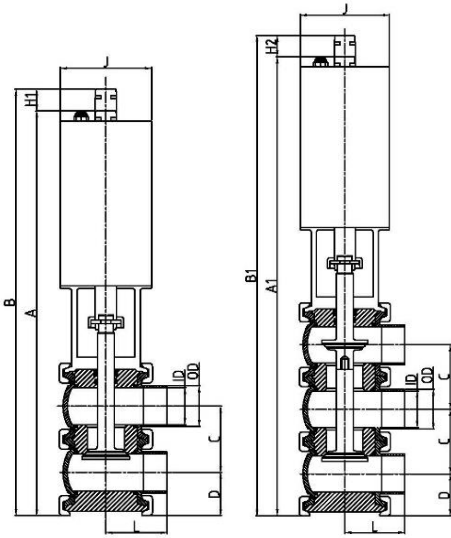
Other seals: NBR

End connection types: 3A, DIN, SMS, IDF, RJT

# VALVE BODY COMBINATIONS

 A01	 A02	 A03	 A04	 B01	 B02
 B03	 B04	 B05	 B06	 B07	 B08





## OPTION

1. Various end connection.
  - ◆ Weld End /Clamp End /KF End \*
  - ◆ 3A /DIN /SMS /IDF /RJT standard \*
2. Select seals with EPDM/FKM/PTFE in compliance with FDA 21 CFR 177.2600.
3. Available for easily installed control box.



\*Additional options available upon request.

## DIMENSION

size		A	B	A1	B1	C	OD	Id	L	H1	H2	J
Imperial size (DN/OD)	25	338	350	386	397	47.8	25	21.8	50	12	11	60
	38	355	376	420	436	60.8	38	34.8	49.5	21	16	85
	51	411	437	489	511	73.8	51	47.8	61	26	22	85
	63.5	436	462	526	548	86.3	63.5	60.3	81	26	22	133
	76.1	483	514	586	613	98.9	76.1	72.9	86	31	27	133
	101.6	532	563	660	687	123.6	101.6	97.6	119	31	27	133
DIN tubing size (DN tubes)	25	346	358	398	409	52	29	26	50	12	11	60
	40	361	382	429	445	64	41	38	49.5	21	16	85
	50	416	442	496	518	76	53	50	62	26	22	85
	65	448	474	544	566	92	70	66	78	26	22	133
	80	500	531	611	638	107	85	81	87	31	27	133
	100	538	569	668	695	126	104	100	120	31	27	133

## NOTICE!

- For detail information, please refer to CSE.
- Other seat valves are with the same basic design, including manual valve and tank bottom valve.
- The actuator has a 5-year warranty.

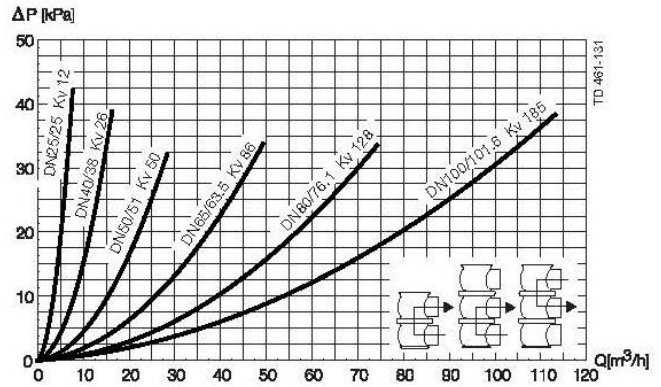
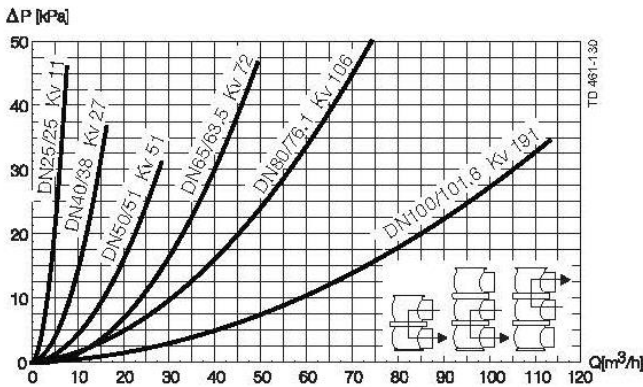
## NOTICE!

- Operating time is affected by :
- Inlet air pressure.
  - Length and size of air hose
  - The number of valves connected to the same air hose
  - Single solenoid valve used for actuator.
  - Pipeline working pressure



# PRESSURE/ CAPACITY

Pressure Drop/Capacity Diagrams



## NOTICE

For the diagrams the following applies:  
 Medium: Water (20°C)  
 Measurement: In accordance with VDI2173  
 Pressure drop can also be calculated in Anytime configurator.

Pressure drop can also be calculated with the following:  $Q = K_v \times \sqrt{\Delta p}$   
 Where  
 Q = Flow in m³/h.  
 Kv = m³/h at a pressure drop of 1 bar (see table above).  
 $\Delta p$  = Pressure drop in bar over the valve.

How to calculate the pressure drop for an 2.5" shut-off valve if the flow is 40 m³/h 2.5" shut-off valve, where Kv = 111 (see table above).

$$Q = K_v \times \sqrt{\Delta p}$$

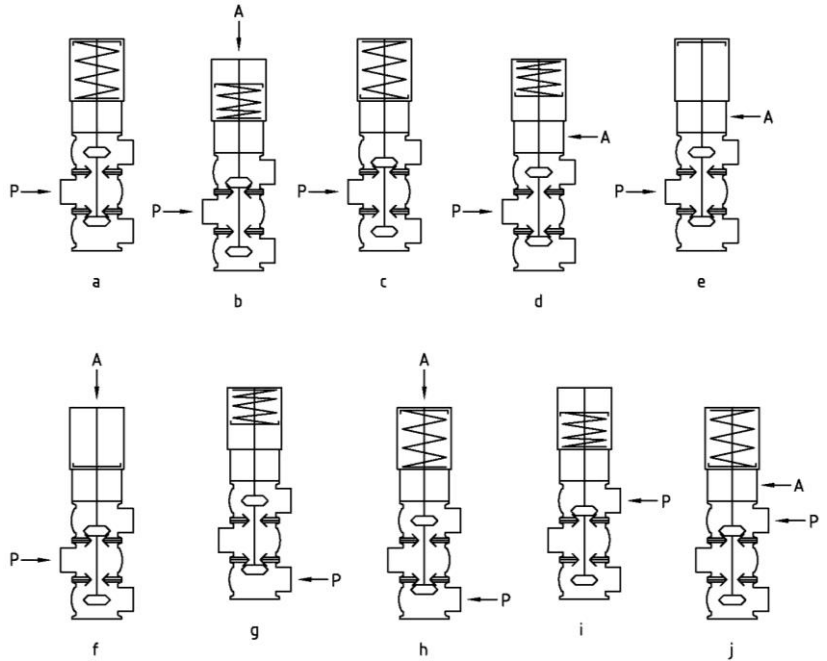
$$40 = 111 \times \sqrt{\Delta p}$$

$$\Delta p = \left(\frac{40}{111}\right)^2 = 0.13 \text{ bar}$$

(This is approx. the same pressure drop by reading the y-axis above)



# PRESSURE/ CAPACITY



A = AIR P = Product pressure

**Table1- Shut-off and Change-over valves**

Actuator /Valve body combination and direction of pressure Change-over valve	Air pressure (bar)	Plug position	Max. pressure in bar without leakage at the valve seat					
			Valve size					
			DN25 DN/OD 25mm	DN40 DN/OD 38mm	DN50 DN/OD 51mm	DN65 DN/OD 63.5mm	DN80 DN/OD 76.1mm	DN100 DN/OD 101.6mm
a		NC	10.0	8.2	8.4	4.5	6.8	4.4
b	6	NC	10.0	7.6	9.6	5.6	7.2	4.8
c		NO	10.0	6.3	7.2	4.2	6.4	4.2
d	6	NO	10.0	10.0	10.0	6.1	7.7	5.0
e	6	A/C	10.0	10.0	10.0	10.0	9.0	5.8
f	6	A/C	10.0	10.0	10.0	10.0	8.5	5.6

**Table2- Shut-off and Change-over valves.**

Actuator /Valve body combination and direction of pressure Change-over valve	Air pressure (bar)	Plug position	Max. pressure in bar against which the valve can open					
			Valve size					
			DN25 DN/OD 25 mm	DN40 DN/OD 38 mm	DN50 DN/OD 51 mm	DN65 DN/OD 63.5 mm	DN80 DN/OD 76.1 mm	DN100 DN/OD 101.6 mm
g		NO	10.0	9.7	10.0	6.8	4.6	3.1
h	6	NC	10.0	10.0	10.0	8.3	9.9	6.6
i		NC	10.0	10.0	10.0	7.4	4.9	3.2
j	6	NO	10.0	10.0	10.0	9.0	10.0	6.9

**CSE. CHIANG SUNG ENTERPRISE CO., LTD.**



No.65, Sheng Kung 1 St. Rd. Pei Tou, Industrial Park, Changhua, Taiwan  
 TEL: +886-4-8876919(Rep) FAX: +886-4-8876918  
 E-mail:csee@ms57.hinet.net