Gillain & Co
HYGIENIC EQUIPMENT FOR FOOD & LIFE SCIENCES

Simply Unique Single Seat

Unique SSV DN125 and DN150

Application

Unique Single Seat DN125 and DN150 Valves are pneumatic seat valves in a sanitary and modular design giving a wide field of application, e.g. as a stop valve with two (2) or three (3) ports or as 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 and low maintenance cost.

Standard Design

The Unique Single Seat DN125 and DN150 Valves come in a one or two body configuration. The actuator is connected to the valve body by means of 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.

It is recommended, due to the valve size and weight, to use supporting equipment, handling and installing the valve. Guidelines are given in the instruction manual (IM70007). Alfa Laval is not able to supply the recommended supporting equipment.

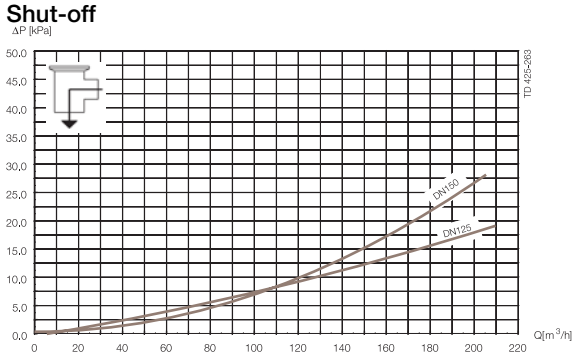


Unique Single Seat DN125 Change-over Valve

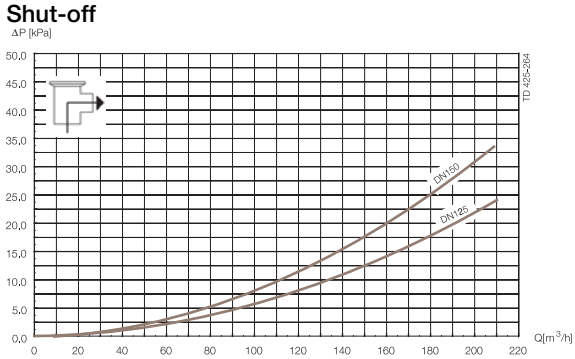
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Pressure drop/capacity diagrams

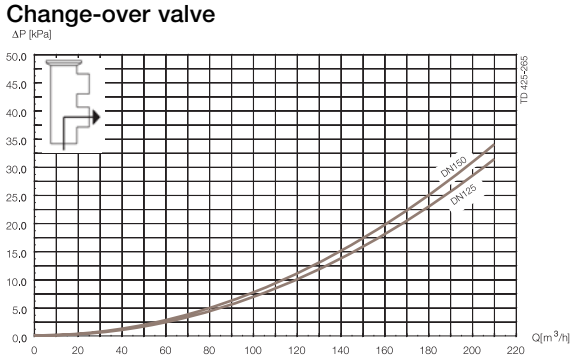
Shut-off



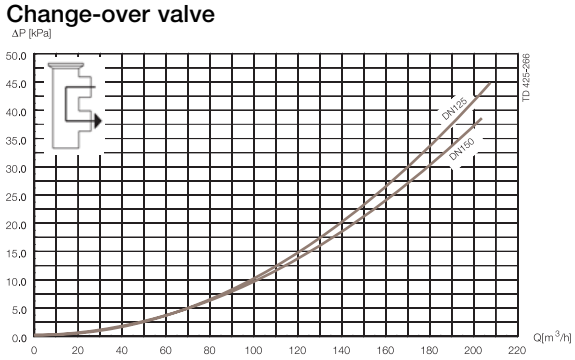
Shut-off

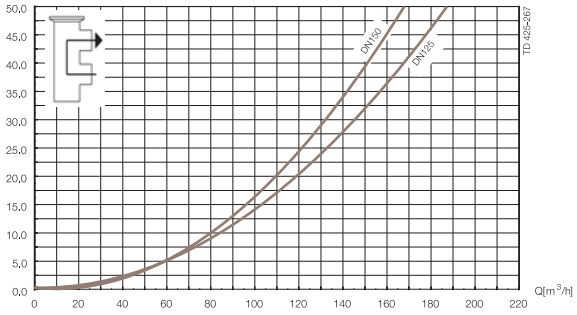


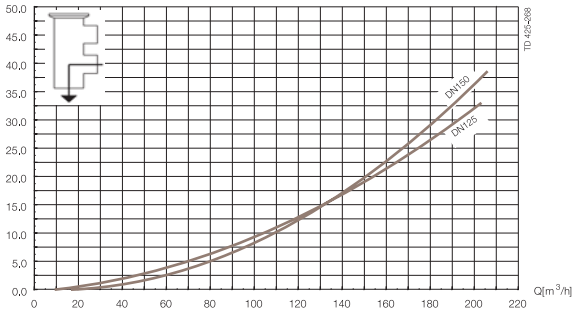
Change-over valve



Change-over valve







NOTE!

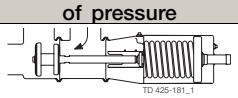
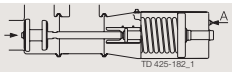
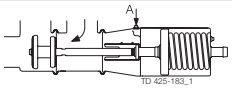
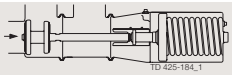
For the diagrams the following applies:
Medium: Water (20°C).
Measurement: In accordance with VDI 2173

Pressure data for Unique Single Seat Valve DN125 and DN150

Actuator type / function

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

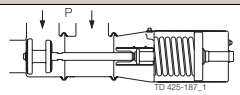
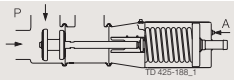
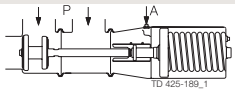
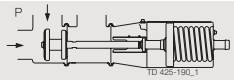
Table 1: Stop and change-over valves - Max. pressure without leakage at the valve seat

Actuator / Valve body combination and direction of pressure	Air pressure (bar)	Plug position	Valve Size	
			Type	DN 125-150
		NO		5.2
	5	NO	DIN	8.7
	6	NO	DIN	4.4
	5	NC		8.1*
	6	NC		3.7
		NC	DIN	5.2

* = Values are valid for 8 bar air pressure

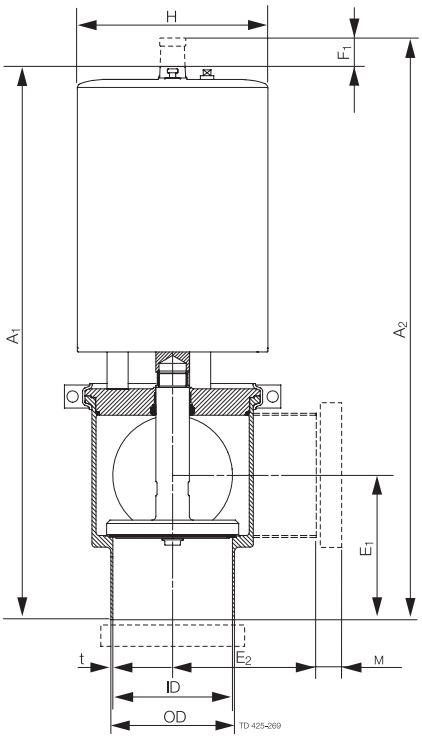
† = Actual product pressure

Table 2: Stop and change-over valves. The table shows the approx. static pressure (P) in bar against which the valve can open.

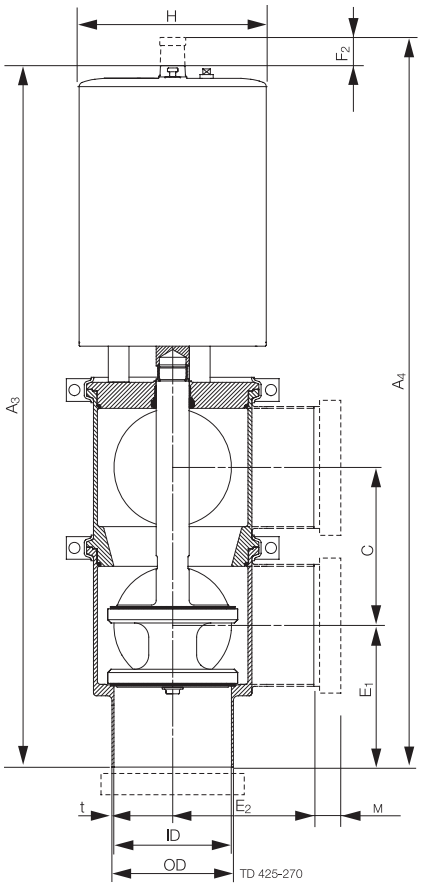
Actuator / Valve body combination and direction of pressure	Air pressure (bar)	Actuator type/ function	Type	DN 125-150
		60(NO)	DIN	8.8
	6	10(NO)		8.1
	6	60(NO)		min. 10**
	6	70(NC)	DIN	7.8
		20(NC)		8.9

Dimensions (mm)

Nominal size	DIN DN 125		150	
	NC	NO	NC	NO
A_1	571	573	584	586
A_2	614	618	627	631
A_3	740	737	777	775
A_4	781	778	818	816
C	167	167	192	192
OD	129	129	154	154
ID	125	125	150	150
t	2.0	2.0	2.0	2.0
E_1	150	150	150	150
E_2	150	150	150	150
F_1	43	45	43	45
F_2	41	41	41	41
H	199	199	199	199
M/DIN male	46	46	50	50
Weight (kg) - Shut-off valve	40.3	40.3	40.9	40.9
Weight (kg) - Change-over valve	50	50	51.3	51.3



a. Shut-off .



b. Change-over valve.

Fig 2. Dimensions.

Caution, opening/closing time:
Opening/closing time will be affected 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.

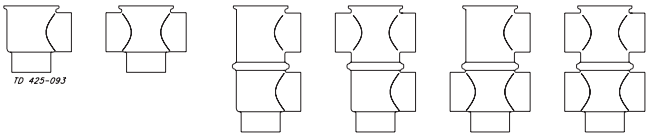
Air Connections Compressed air:

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

Technical data

Max. product pressure: . . . . . .1000 kPa (10 bar).
Min. product pressure: . . . . . .Full vacuum.
Temperature range, standard lip seal: . . . . . .-10°C to +100°C (EPDM)
Temperature range, special lip seal: . . . . . .-10°C to +140°C (EPDM)
Air pressure, actuator - Sizes DN125-150 . . . . . .600 to 800 kPa (6 to 8 bar)

Valve body combinations



200 300 210 220 310 320

Actuator function

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

Air consumption (litres free air) for one stroke		
Size	DN 125-150	DN 125-150
Shut-off / Change-over valve Actuator function	1.5 x Air pressure (bar) NC	2.2 x Air pressure (bar) NO
Shut-off / Change-over valve Actuator function	3.6 x Air pressure (bar) NC (Support air for closing)	2.9 x Air pressure (bar) NO (Support air for opening)

Materials

Product wetted steel parts: . . . . . .Acid-resistant steel 1.4401 (316L).
Other steel parts: . . . . . .Stainless steel 1.4301 (304).
Plug stem sizes DN125-150 . . . . . .1.4401 (316L).
Product wetted seals . . . . . .EPDM (standard).
Other seals . . . . . .NBR.

Options

A. Male parts in accordance with required standard.
B. Control and Indication (IndiTop, ThinkTop or ThinkTop Basic).
C. Surface roughness, product wetted parts: Ra ≤0.8 µm.
D. Product wetted seals of NBR or FPM.
E. Service tools for actuator.
F. Plug seals NBR/FPM.

Ordering

Please state the following when ordering:

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

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

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