

The Original Seat Valve

SRC-RC Reverse Closing Valve

Application

SRC-RC change-over valve is specially suited for sanitary applications in which the possibility to divert flow is required, e.g. for periodical re-circulation of product. The SRC-RC change-over valve is used for instance in pasteurising plants to secure re-circulation in case an alteration of the product temperature is required. Both SRC-RC stop valve and SRC-RC change-over valve are used in applications where pressure shocks must be avoided.

Working principle

The valves are remote-controlled by means of compressed air. The valve plug closes against the flow to eliminate pressure shocks.

The valves have few and simple moveable parts, which results in a very reliable valve.

Standard design

SRC-RC consists of actuator, lip seal, plug and valve bodies. All components are assembled by means of clamp rings and a stem clip-system. In the SRC-RC change-over version the stem is not coated with hard chrome as galling is avoided by fitting a plastic guide ring in the bonnet. In the SRC-RC stop valve version the stem is hard chromed and the bonnet is *not* fitted with a plastic guide.

The valve bodies have welding ends as standard.

Actuator function

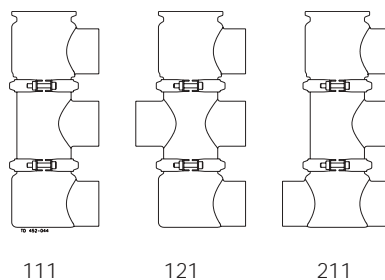
- . Pneumatic downward movement, spring return (NC).
- . Pneumatic upward movement, spring return (NO).
- . Pneumatic upward and downward movement (A/A).
- . Actuator for intermediate position of the valve plug as option (Two-Step or Three-Position).



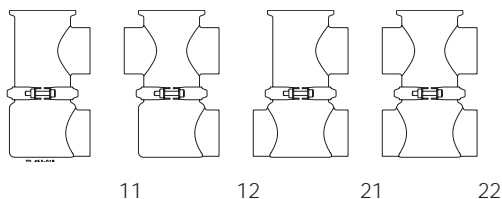
Fig. 1. SRC-RC stop and SRC-RC change-over.

Valve body combinations

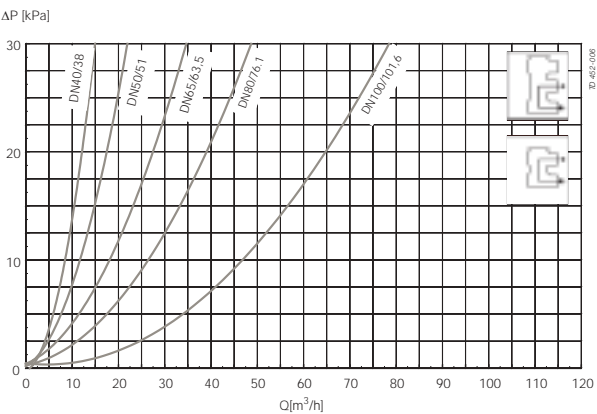
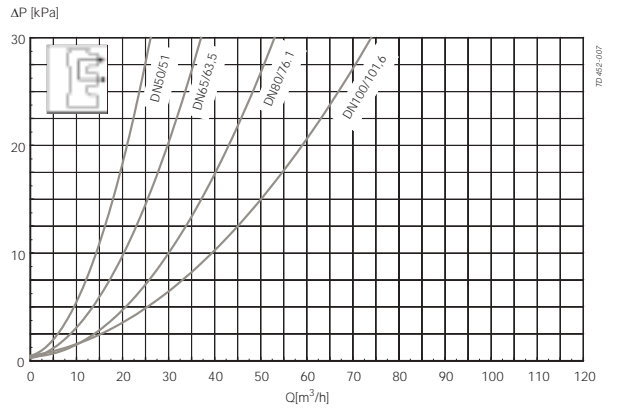
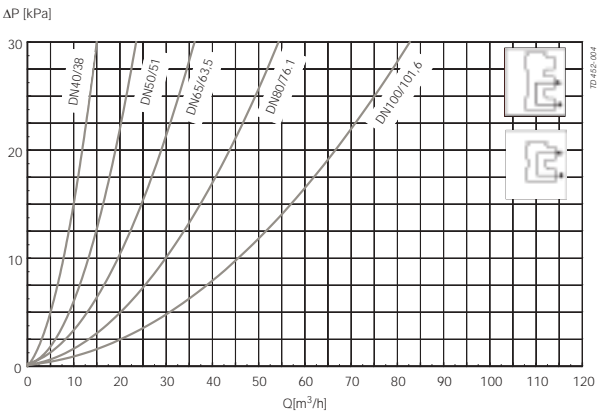
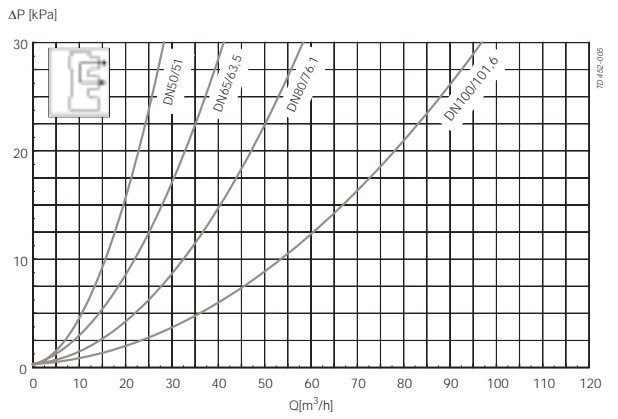
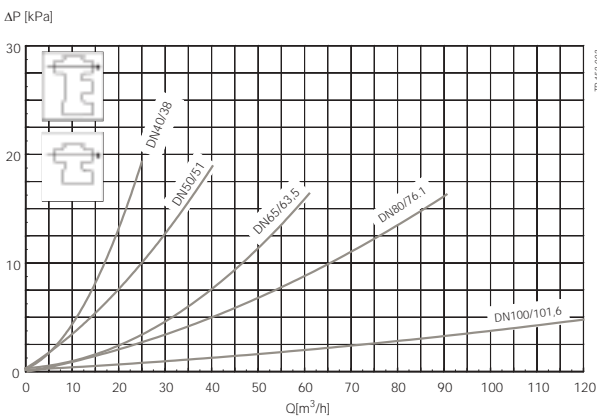
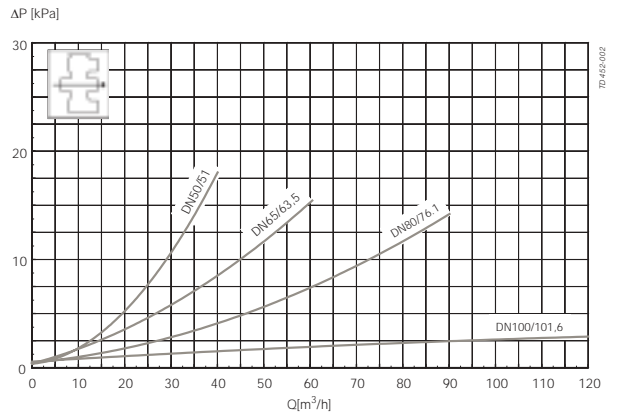
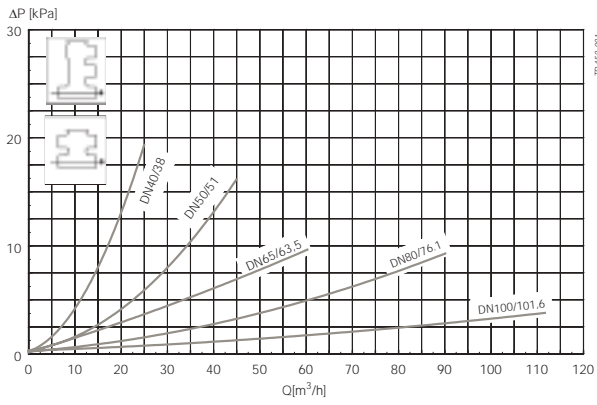
SRC-RC change-over valve



SRC-RC stop valve



SRC-RC Pressure Drop Diagrams



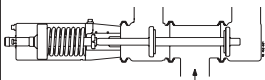
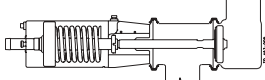
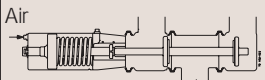
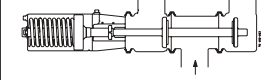
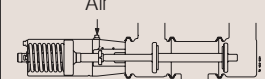
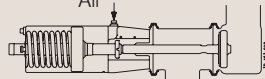
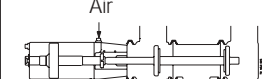
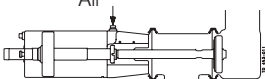
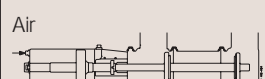
NOTE! For the diagrams the following applies:
 Medium: Water (20°C).
 Measurement: In accordance with VDI 2173.

Pressure data for SRC-RC

Actuator type / function

- 10. Pneumatic downward movement, spring return (NC-lower seat)
- 20. Pneumatic upward movement, spring return (NO-lower seat)
- 30. Pneumatic upward and downward movement (A/A).
- 60. Three-positions (NC-lower seat).
- 70. Three-positions (NO-lower seat).

Table 1: Max. pressure without leakage at the valve seat

Actuator/valve body combination and direction of pressure		Air pressure (bar)	Valve sizes				
Change-over valve	Stop valve		DN40 DN/OD38	DN50 DN/OD51	DN65 DN/OD63.5	DN80 DN/OD76.1	DN100 DN/OD101.6
 Spring closes P	 Spring closes P		4.5	4	3.8	6	3.5
 Air closes P		5	-	3.5	2.5	5.2	3
		6	-	5.5	4	7.8	4.2
 Spring closes P			-	4	2.5	6.2	3.5
 Air closes P	 Air closes P	5	4.2	4	3.5	4.5	3
		6	6.5	6	5.2	8	4.8
 Air closes P	 Air closes P	5	10	10	10	10**)	9
		6	10*)	10*)	10*)	10**)	10
 Air closes P		5	-	10	7.5	10**)	8
		6	-	10*)	9	10**)	10

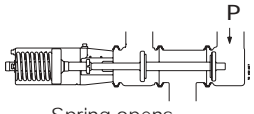
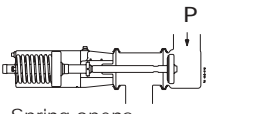
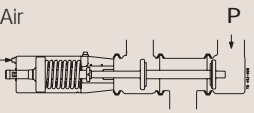
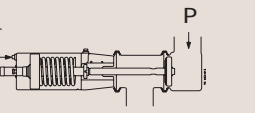
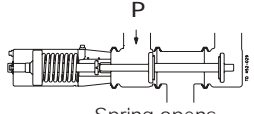
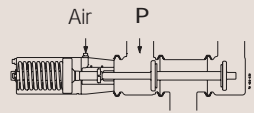
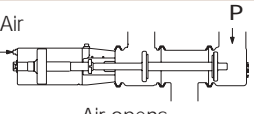
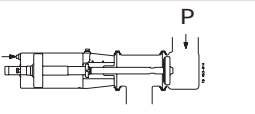
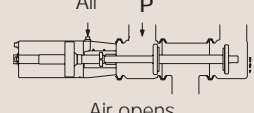
*) It is recommended not to exceed 5 bar air pressure.

***) It is recommended not to exceed 4 bar air pressure.

Pressure data for SRC-RC

Table 2: Max. pressure for opening

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)	Valve sizes				
Change-over valve	Stop valve		DN40 DN/OD38	DN50 DN/OD51	DN65 DN/OD63.5	DN80 DN/OD76.1	DN100 DN/OD101.6
 Spring opens	 Spring opens		6	6.5	5	9.5	5.5
 Air opens	 Air opens	5 6	6 8	6 8	4.4 6	7.5 10	5 7
 Spring opens			-	7.5	5.5	10	6
 Air opens		5 6	- -	6.5 9	4.5 6.5	7.5 10	4.5 6.5
 Air opens	 Air opens	5 6	10 10 ^{*)}	10 10 ^{*)}	8 10	10 ^{**)} 10 ^{**)}	9.5 10 ^{*)}
 Air opens		5 6	- -	10 ^{**)} 10 ^{**)}	9 10	10 ^{**)} 10 ^{**)}	9 10

^{*)} It is recommended not to exceed 5 bar air pressure.

^{**)} It is recommended not to exceed 4.5 bar air pressure.

Table 3: Max. pressure without leakage at the valve seat
Stop and change-over valves with extra strong springs.

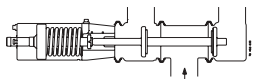
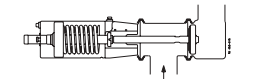
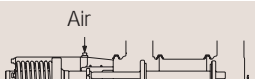


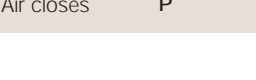
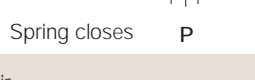
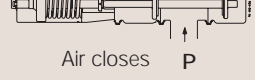
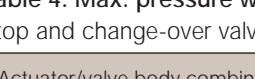
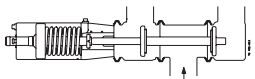
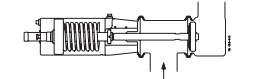



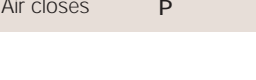

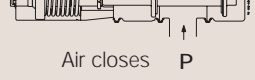
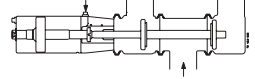
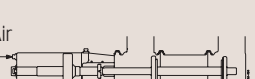

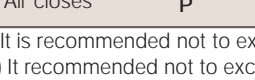
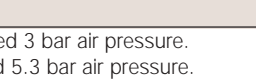

Actuator/valve body combination and direction of pressure		Air pressure (bar)	Valve sizes				
Change-over valve	Stop valve		DN40 DN/OD38	DN50 DN/OD51	DN65 DN/OD63.5	DN80 DN/OD76.1	DN100 DN/OD101.6
 Spring closes P	 Spring closes P		7	6.5	6	8.5	5.6
 Air closes P	 Air closes P	5	1.5	1	1.2	0	0
 Air closes P	 Air closes P	6	3.5	3.5	2.6	3.5	2.5
 Spring closes P		-	-	6	4.2	9	5
 Air closes P		5	-	0.2	0	1	0.5
 Air closes P		6	-	2.5	1.3	4.5	2.2

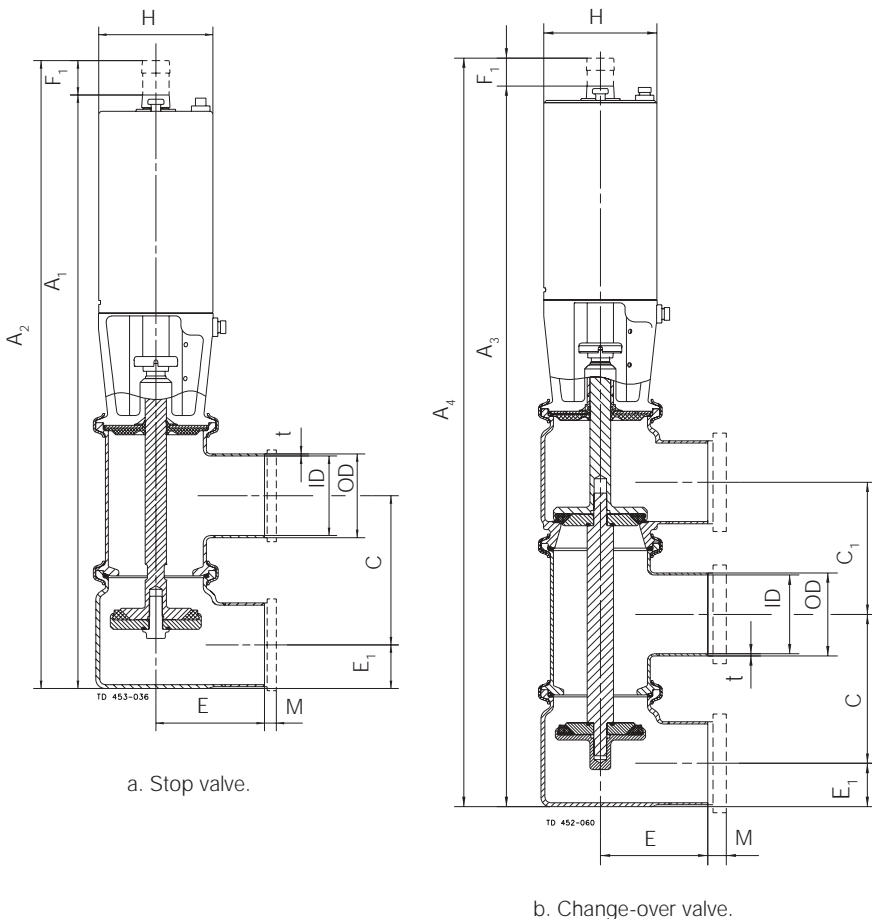
Table 4: Max. pressure without leakage at the valve seat
Stop and change-over valves with special actuators (dia 133).

Actuator/valve body combination and direction of pressure		Air pressure (bar)	Valve sizes		
Change-over valve	Stop valve		DN40 DN/OD38	DN50 DN/OD51	DN65 DN/OD63.5
 Spring closes P	 Spring closes P		10	10	10
 Air closes P	 Air closes P	5	9.5	9.5	9
 Air closes P	 Air closes P	6	10**)	10**)	10**)
 Spring closes P		-	-	10	8
 Air closes P		5	-	10	7
 Air closes P		6	-	10**)	10
 Air closes P	 Air closes P	5	10*)	10*)	10*)
 Air closes P	 Air closes P	6	10*)	10*)	10*)
 Air closes P		5	-	10*)	10*)
 Air closes P		6	-	10*)	10*)

*) It is recommended not to exceed 3 bar air pressure.
**) It is recommended not to exceed 5.3 bar air pressure.

Dimensions (mm)

	Inch DN/OD					DIN DN				
Nominal size	38	51	63.5	76.1	101.6	40	50	65	80	100
A ₁	387	414.3	450.9	535.8	595.3	386.5	415.5	453.7	541.2	595.5
A ₂	412	439.3	475.9	567.8	627.3	412	439.5	478.7	573.2	627.5
A ₃		498.3	554	650.8	742.3		499.5	556.8	661.7	742.5
A ₄		523.5	579	682.5	774.3		524.5	581.8	693.7	774.5
C	79	94	113	129	163	79	94	113	129	160
C ₁		84.9	102.1	116	135		84.9	102.1	121.5	138.3
OD	38.1	50.8	63.5	76.1	101.6	41	53	70	85	104
ID	34.9	47.6	60.3	72.1	97.6	38	50	66	81	100
t	1.6	1.6	1.6	2.0	2.0	1.5	1.5	2.0	2.0	2.0
E	49.5	62	82	87	134	49.5	62	82	87	134
E ₁	20.5	26.8	33.2	39.1	51.8	22	28	36	43.5	53
F ₁	25	25	25	32	32	25	25	25	32	32
H	89	89	89	133	133	89	89	89	133	133
M/ISO clamp	21	21	21	21	21					
M/DIN clamp					21	21	21	28	28	28
M/ISO male	21	21	21	21	21					
M/DIN male					22	23	25	25	30	46
M/SMS male	20	20	24	24	35					
M/BS male	22	22	22	22	27					
Weight (kg): Stop	6	6	6.6	13.5	15.3	6	6	6.6	13.5	15.3
Change-over		7.2	8.3	16.3	19.2		7.2	8.3	16.3	19.2



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.

Fig. 2. Dimensions.

Technical data

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

Air consumption (litres free air) for one stroke		
Size	DN/OD38-63.5 DN 40-65	DN/OD76-101.6 DN 80-100
Stop /Change-over valve	0.2 x Air pressure (bar)	0.7 x Air pressure (bar)
Actuator function	NO and NC	NO and NC
Stop/Change-over valve	0.4 x Air pressure (bar)	1.3 x Air pressure (bar)
Actuator function	A/A	A/A

Materials

Product wetted steel parts: Acid-resistant steel 1.4401 (316L).
 Finish: Semi bright.
 Other steel parts: Stainless steel 1.4301 (304).
 Plug stem stop valve: AISI 316L with hard chrome plated stem surface.
 Plug stem change-over valve AISI 316L
 Product wetted seals: EPDM rubber.
 Other seals: Nitrile (NBR).

Options

- A) Male parts or clamp liners in accordance with required standard.
- B) Control and Indication (see section 3.6 in Product Catalogue).
- C) Actuator with stronger spring.
- D) Larger actuator for valve sizes DN/OD38-63.5/DN 40-65.
- E) Stainless steel seal disc replacing standard lip seal.
- F) Two-step or three-position actuator.
- G) Tangential side port valve.
- H) Surface finish, product wetted parts: Ra ≤ 0.8 µm.
- I) Product wetted seals of Nitrile (NBR), Fluorinated rubber (FPM) or PTFE.
- J) Service tools for actuator.

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 IM 70846.