

SARASIN-RSD

Changeover Valves

Starvalve



Excellent
Engineering
Solutions

WEIR
VALVES & CONTROLS

Weir Valves & Controls

The key to the success of Weir Valves & Controls is our capability to deliver engineering solutions that add value to the customer's process. We offer a total package of products to meet end-to-end project requirements. Using our own analysis and configuration system, we will design and deliver the optimum valves and controls solution to protect the value of the production process.

A rigorous programme of information management means that the division is able to take a more anticipatory role in defining the future needs and expectations of the market by fully utilising the organisation's critical resources to provide whole process isolation and control valve solutions for the global *Energy* sector.

With a comprehensive range of engineered valve products Weir Valves & Controls have developed an extensive global installed base and expertise across a wide range of industry sectors:

- Power Generation
- General Industrial
- Oil & Gas Production
- Refining
- Petrochemical
- Chemical
- Pulp & Paper
- Desalination



3-way valves
Check valves
Wye valves



Control butterfly valves
Isolation butterfly valves
High performance butterfly valves



Globe control valves
Choke valves
Desuperheaters
Severe service valves



Gate valves
Globe valves
Reheat isolation devices
Shell boiler mountings



Side entry ball valves
Top entry ball valves
Subsea ball valves
Rotary gate valves
Integrated systems



Spring-loaded safety relief valves
Pilot operated safety relief valves
Two-way change-over valves
Thermal relief valves
Tank blanketing system



Pilot operated nuclear safety valves



Triple offset butterfly valves

Quality assurance

Weir Valves & Controls operates quality programmes to cover the full scope of their activities. Comprehensive quality systems have been developed to serve the power, oil and gas and industrial markets which they serve.

The company holds approvals to:

- ASME Section III ‘N’, ‘NPT’
- ASME Section I ‘V’
- ASME Section VIII code UV
- BS EN ISO 9001:2000
- NF EN ISO 9001:2000
- ISO 14001:2004
- API Q1 TO API LICENCES API 6D (6D-0182) and API 6A (6A-0445)
- API RP 520
- API Std 526
- API RP 527
- API Std 2000



The Quality systems have been approved for the supply of products to meet the requirements of the Pressure Equipment Directive (PED) and compliance modules A, D1, H, B&D have been applied in categories I through IV respectively.

The company is committed to compliance with legislation and has an established environment and health and safety policy.

An ongoing commitment to customer care is met through the process of continuous improvement and the further development of our systems and processes towards meeting ISO 9001:2000.

Valve Testing Facilities

All pressure containing items are hydrostatically tested, seat leakage tested and functionally tested. In addition, gas, packing emission, cryogenic and advanced functional testing can be arranged.

Material testing facilities

- Non-destructive examination by radiography, ultrasonics, magnetic particle and liquid penetrant.
- Chemical analysis by computer controlled direct reading emission spectrometer.
- Mechanical testing for tensile properties at ambient and elevated temperatures, bend and hardness testing. Charpy testing at ambient, elevated and sub-zero temperatures.

Further technical information can be obtained from our Web site: <http://www.weirvalve.com>

Sarasin-RSBD

Weir Valves & Controls France manufactures the Sarasin-RSBD range of pressure safety valves and safety devices for oil and gas, petrochemical and chemical industries, pipelines, thermal and nuclear power plants, sugar refineries and pulp mills.

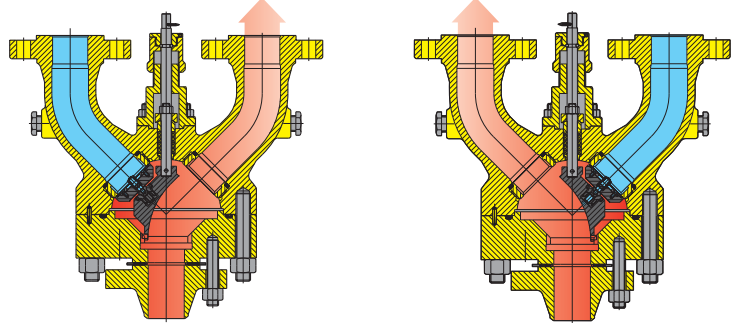
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Features

“Starvalve” is a changeover valve designed to couple two Pressure Safety Valves (PSV). Two different concepts are available.

The “Single way” designed to be used when the process system does not allow any interruption for emergency maintenance of the PSV. A quick change flow way can easily be made by switching over the rotating disc enabling pressurization of the second PSV while closing the pressure way of the first PSV, which therefore provides a continuous protection of the process system.



The “Dual way” designed when two PSV have to protect a pressurized vessel and both have to relieve 100% of the capacity simultaneously. (Case of liquefied gas storage vessels). In this case the rotating disc is set in the median position of both ways (**fig 1**). In case of one of the PSV, same as above the corresponding way can be temporarily closed, the other staying open and the second PSV then insuring the full protection of the vessel (**fig 2L or fig 2R**).

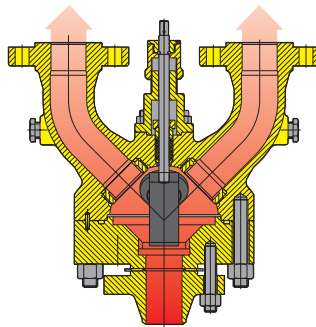


Figure 1.

“Starvalve” is designed to provide a highly reduced “Pressure Drop” in order to prevent risk of chattering of the PSV when discharging. Sealing of discs made with soft material offering a premium tightness of the closed way. Soft goods are offered to meet with the operating conditions.

“Starvalve” materials of construction correspond with those used in the Sarasin-RSBD spring loaded and pilot operated PSV ranges, from standard carbon steel up to the most elaborated stainless and alloy steel.

“Starvalve” can be supplied with the following accessories:

- Bleed valves to depressurize the closed way
- Padlock system to prevent changing of way inadvertently
- Linkage to couple two Starvalve as described on page 8.

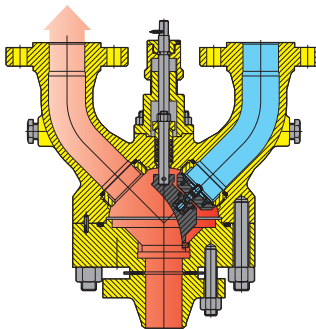


Figure 2L.

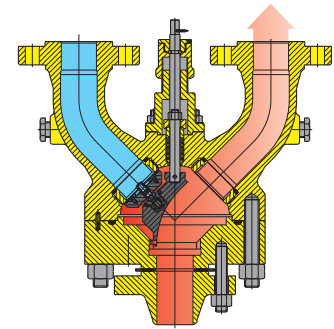
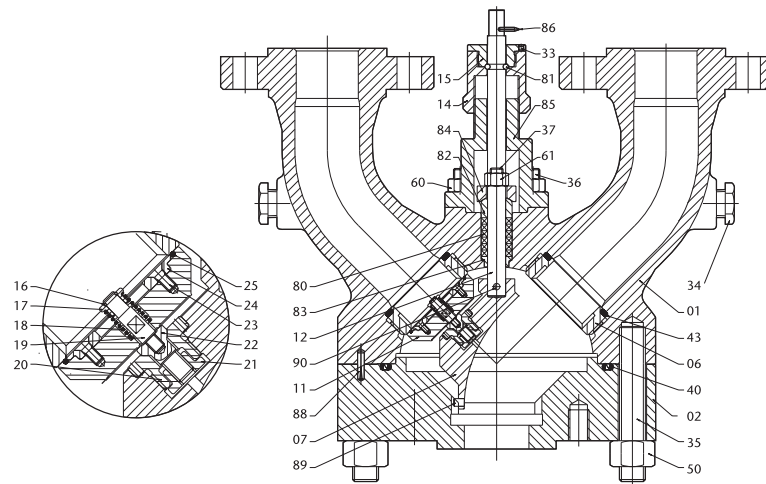


Figure 2R.

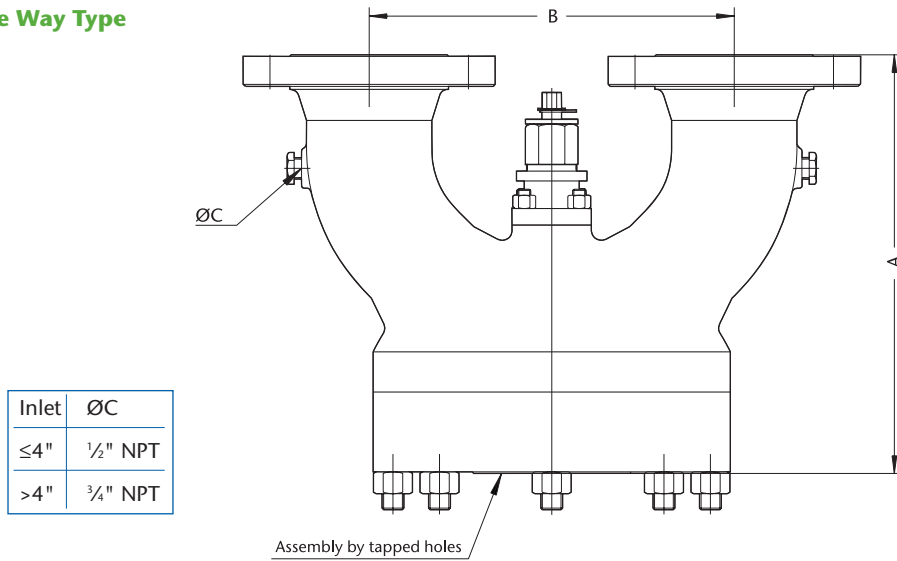


Materials of Construction

Rep	Designation	Carbon steel		Stainless steel
		Standard Material code 30	Low temperature Material code 19	Material code 16
01	Body	A216 Gr WCC	A352 Gr LCC	A351 Gr CF8M
02	Base	A216 Gr WCC/A105	A352 Gr LCC/A350 FL2	A351 Gr CF8M/AISI 316L
06	Nozzle	AISI 316L	AISI 316L	AISI 316L
07	Deflector	AISI 316L	AISI 316L	AISI 316L
11	Disc	17/4 PH ST ST	17/4 PH ST ST	AISI 316L
12	Shaft	AISI 316L	AISI 316L	AISI 316L
14	Reaction nut	AISI 316L	AISI 316L	AISI 316L
15	Check nut	AISI 316L	AISI 316L	AISI 316L
16	Rush	AISI 316	AISI 316	AISI 316
17	Washer	AISI 316L	AISI 316L	AISI 316L
18	Spring	AISI 316	AISI 316	AISI 316
19	Stem	AISI 316L	AISI 316L	AISI 316L
20	Nut	AISI 316L	AISI 316L	AISI 316L
21	Check nut	AISI 316L	AISI 316L	AISI 316L
22	Disc	17/4 PH ST ST	17/4 PH ST ST	AISI 316L
23	Screw	Stainless Steel	Stainless Steel	Stainless Steel
24	Retaining plate	AISI 316L	AISI 316L	AISI 316L
25	Gasket	*	*	*
33	Stop Screw	Stainless Steel	Stainless Steel	Stainless Steel
34	Plug	Carbon Steel	Carbon Steel	Stainless Steel
35	Threaded Rod	A193 Gr B7	A320 Gr L7	A193 Gr B8T
36	Threaded Rod	A193 Gr B7	A320 Gr L7	A193 Gr B8T
37	Threaded Rod	A193 Gr B7	A320 Gr L7	A193 Gr B8T
40	Body gasket	*	*	*
43	Nozzle gasket	*	*	*
50	Nut	A194 Gr 2H	A194 Gr 4	A194 Gr 8
60	Nut	A194 Gr 2H	A194 Gr 4	A194 Gr 8
61	Nut	A194 Gr 2H	A194 Gr 4	A194 Gr 8
80	Packing	*	*	*
81	Ball	Stainless Steel	Stainless Steel	Stainless Steel
82	Gland	17/4 PH ST ST	17/4 PH ST ST	17/4 PH ST ST
83	Stuffing box bushing	17/4 PH ST ST	17/4 PH ST ST	17/4 PH ST ST
84	Gland flange	AISI 316L	AISI 316L	AISI 316L
85	Support	A351 Gr CF3M/316L	A351 Gr CF3M/316L	A351 Gr CF3M/316L
86	Index	Stainless Steel	Stainless Steel	Stainless Steel
88	Pin	Stainless Steel	Stainless Steel	Stainless Steel
89	Position pin	Stainless Steel	Stainless Steel	Stainless Steel
90	Pin	Stainless Steel	Stainless Steel	Stainless Steel

* on application.

“RSS” Single Way Type

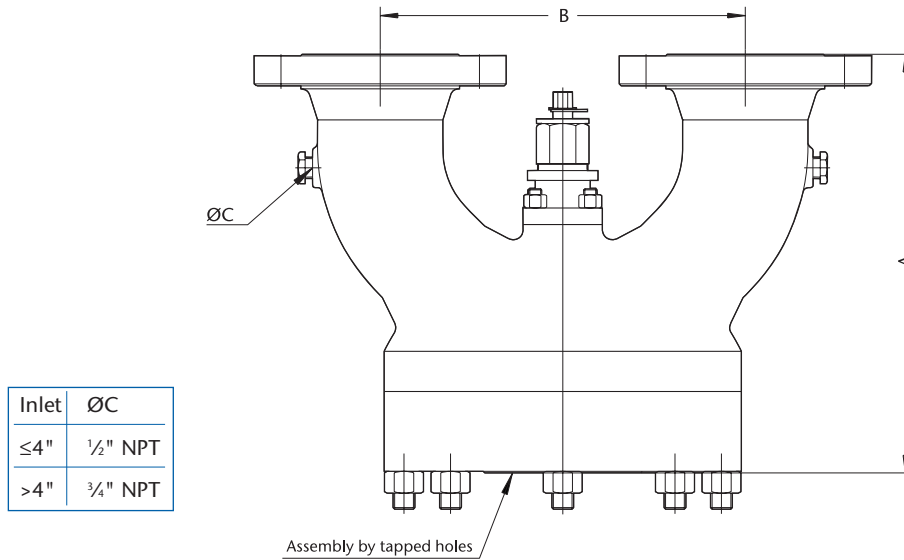


Dimensions

COV Inlet / Outlet	Dimension	Series		
		150	300	600
2" - 2x1"	A RF	305	305	305
	B	262	262	262
	Weight	54	56	56
2" - 2x1½"	A RF	305	305	305
	B	262	262	262
	Weight	58	60	60
2" - 2x2"	A RF	305	305	305
	B	262	262	262
	Weight	60	62	62
3" - 2x2"	A RF	358	358	358
	B	305	305	305
	Weight	105	108	108
3" - 2x3"	A RF	358	358	358
	B	305	305	305
	Weight	105	108	108
4" - 2x3"	A RF	426	426	444
	B	368	368	368
	Weight	140	146	161
4" - 2x4"	A RF	426	426	444
	B	368	368	368
	Weight	140	146	161
6" - 2x4"	A RF	570	570	570
	B	432	432	432
	Weight	225	250	285
6" - 2x6"	A RF	570	570	570
	B	432	432	432
	Weight	225	250	285
8" - 2x6"	A RF	671	671	671
	B	495	495	495
	Weight	363	395	440
8" - 2x8"	A RF	671	671	671
	B	495	495	495
	Weight	363	395	440

Pressure rating 900# and higher on application. Other sizes on application.

“RSD” Dual Way Type



Dimensions

COV Inlet/Outlet	Dimension	Series		
		150	300	600
2" - 2 x 1"	A RF	305	305	305
	B	262	262	262
	Weight	54	56	56
3" - 2 x 1 1/2"	A RF	358	358	358
	B	305	305	305
	Weight	100	102	102
3" - 2 x 2"	A RF	358	358	358
	B	305	305	305
	Weight	102	104	104
4" - 2 x 3"	A RF	426	426	444
	B	368	368	368
	Weight	135	140	150
6" - 2 x 3"	A RF	570	570	570
	B	432	432	432
	Weight	220	245	280
6" - 2 x 4"	A RF	570	570	570
	B	432	432	432
	Weight	220	245	280
8" - 2 x 6"	A RF	671	671	671
	B	495	495	495
	Weight	350	380	420

Pressure rating 900# and higher on application.
Other sizes on application.

Combined Valves with linkage system

When the process conditions require the two PSV to discharge in a common header, two Starvalves can be combined as a tandem system where:

- The upstream Starvalve is flanged to PSV inlets
- The downstream Starvalve is flanged to the PSV outlets.

A linkage device connects the two Starvalve allowing to easily switch the corresponding ways simultaneously and therefore the corresponding PSV eliminating the risk of error.

The combined Starvalve system allows the economic reduction of the amount of piping at one inlet (upstream PSV) and one outlet (downstream PSV).

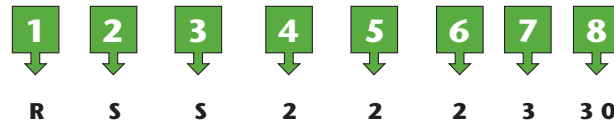


Dimensions

COV Inlet/Outlet	Dimension	Inlet			COV Inlet/Outlet	Dimension	Outlet	
		150	Series 300	600			150	Series 300
2" - 2 x 1"	A RF	305	305	305	2" - 2 x 2"	A RF	305	305
	B	262	262	262		B	262	262
	Weight	54	56	56		Weight	60	62
2" - 2 x 1½"	A RF	305	305	305	2" - 2 x 2"	A RF	305	305
	B	262	262	262		B	262	262
	Weight	58	60	60		Weight	60	62
3" - 2 x 1½"	A RF	358	358	358	3" - 2 x 3"	A RF	358	358
	B	305	305	305		B	305	305
	Weight	100	102	102		Weight	105	108
3" - 2 x 2"	A RF	358	358	358	3" - 2 x 3"	A RF	358	358
	B	305	305	305		B	305	305
	Weight	102	104	104		Weight	105	108
4" - 2 x 3"	A RF	426	426	444	4" - 2 x 4"	A RF	426	426
	B	368	368	368		B	368	368
	Weight	135	140	150		Weight	140	146
6" - 2 x 4"	A RF	570	570	570	6" - 2 x 6"	A RF	570	570
	B	432	432	432		B	432	432
	Weight	220	245	280		Weight	225	250
8" - 2 x 6"	A RF	671	671	671	8" - 2 x 8"	A RF	671	671
	B	495	495	495		B	495	495
	Weight	350	380	420		Weight	363	395

Pressure rating 900# and higher on application.
Other sizes on application.

Codification



1&2 → **RS** = Changeover Valve

3 → **Type:**
S = Single Way
D = Dual Ways
A = Combined Valves Single Way
B = Combined Valves Dual Ways

4 → **2** = Inlet Size
 1 : 1" 6 : 6"
 2 : 2" 8 : 8"
 3 : 3" 9 : 10"
 4 : 4" A : 12"

5 → **2** = Body Size
 2 : 2" 8 : 8"
 3 : 3" 9 : 10"
 4 : 4" A : 12"
 6 : 6"

6 → **2** = Outlet Size
 1 : 1" 6 : 6"
 2 : 2" 7 : 1½"
 3 : 3" 8 : 8"
 4 : 4"

7 → **3** = Pressure Class
 1 : 150# Class
 2 : 300# Class
 3 : 600# Class

8 → **30** = Material Code
 – 30 : Carbon Steel (SA216WCC)
 – 16 : Stainless Steel (SA351CF8M)
 – 19 : Low temperature carbon steel (SA352LCC)

*The information is given for guidance only and can be revised without previous notice.
 They cannot replace an appropriate technical characteristic design*



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