

VTE® - SPECIAL APPLICATION SERIES SA01 EXTERNAL SPRING CHECK VALVE ACCESSORY



OVERVIEW

The Rite® Series SA01 check valve accessory with external spring is designed to apply additional force for valve closure. This is used when the valve needs force to close in rapid media instances with high potential for flow reversal. Design can be used on downward flow applications.

SPECIFICATIONS

Size Range	NPS 2" to 12" 50mm to 300mm
Temperature Range	Pending Materials Selected
Operating Pressure	Pending Pressure Class Selected
Body Style	One-Piece Flanged or Wafer Body
Compatibility	Bray 205, 210, or 211 Series
Leakage Rate	API 598

APPLICATIONS

- > Mining
- > Multiple Header Manifolds
- > Pump protection
- > Sewage lift stations
- > Steel mills
- > Water pump stations

MEDIA

- > Dry Chlorine (Gas or Liquid)
- > Gases
- > Hydrogen
- > Oxygen
- > Water

DESIGN FEATURES

The Rite® Series SA01 check valve accessory offers single door check valve design modification to alter flow conditions:

APPLICATION:

The purpose of equipping a standard Rite® Series Single Door Wafer or Flanged Type Swing Check Valve with an external spring, is to provide field adjustable external control. Used in applications such as multiple pumping installations that terminate in common headers, where transient forces are difficult to ascertain and control. Additional applications include those that require fast closure such as solid/liquid handling, & wastewater. The basic principle is to start closing the valve as soon as the flow starts to decrease. With the external spring it is possible to close the valve before the flow reverses. This reduces or eliminates water-hammer and the associated problems.

GENERAL DESCRIPTION:

The model SA01 is a standard Rite® Series Single Door Swing Check Valve that has been converted, featuring a positive hexagon drive at the disc/hinge/shaft connection. The shaft extends through and is supported by the body at one end, by a bushing in the body, and by a ball bearing designed to reduce friction mounted in a bracket on the opposing side. O-rings seal the shaft, seal bushing and the body to prevent leakage. An external spring is mounted on the shaft via a hexagonal connection and anchored via the eye bolt to the bracket to allow pre-load adjustment and facilitate rapid disc closure.

Figure 01: SA01 Rear View Closed (Right Hand Mount Displayed and Provided As Standard).

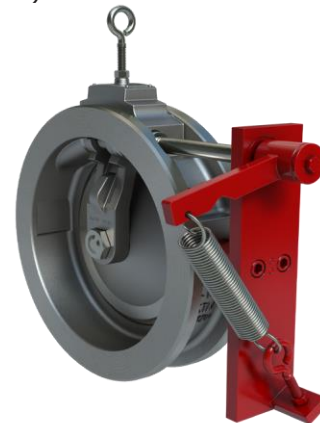


Figure 02: SA01 Rear View Open.



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For body/trim materials user must first refer to and select the appropriate model from the foundation unit Sales Data Sheets.

Series 205	Integral Hard Seat (IHS)
	Seat Ring Hard Seat (SRHS)
	Integral Soft Seat (ISS)
Series 210	Seat Ring Soft Seat (SRSS)
	Integral Hard Seat (IHS)
	Seat Ring Hard Seat (SRHS)
Series 211	Integral Soft Seat (ISS)
	Seat Ring Soft Seat (SRSS)
	Integral Hard Seat (IHS)

MATERIAL OPTIONS¹

Seal Bushing	Stainless Steel (ASTM A479 316)
Seal O-Rings (x4)	BUNA-N, EPDM, FKM-A, HNBR, Neoprene PTFE-virgin, Teflon encapsulated silicone, Viton
Spring Adaptor	Steel
Retaining Plate	Steel
Bracket	Steel
Socket Head Screws (x3)	Steel Zinc Plated
Dowel Pins (x2)	Steel Zinc Plated
Ball Bearing	Steel
Round Head Screw	Steel Zinc Plated
Eyebolt	Steel Zinc Plated
Nut (x2)	Steel Zinc Plated
Spring	Valve size: $\leq 12''$: Stainless Steel (ASTM A313 standard duty) Valve size: $\geq 14''$+: Stainless Steel (ASTM A313 17-7 PH)

Note: ¹ Dimensions available in ASME and DIN sizes. All external components can be offered in SS where required. * Previous Models before July 2024 may have included slightly different material configurations/parts callout lists.

Rite® Series Check Valve Integral Hard Seat type part number: V0215XBZ205**SA01** (For 2", Class 150, Stainless Steel (ASTM A351 CF8M) Body, BUNA-N O-Ring, SS Spacer, Series 205, **Special Application Series SA01**).

Figure 03: SA01 Exploded View.

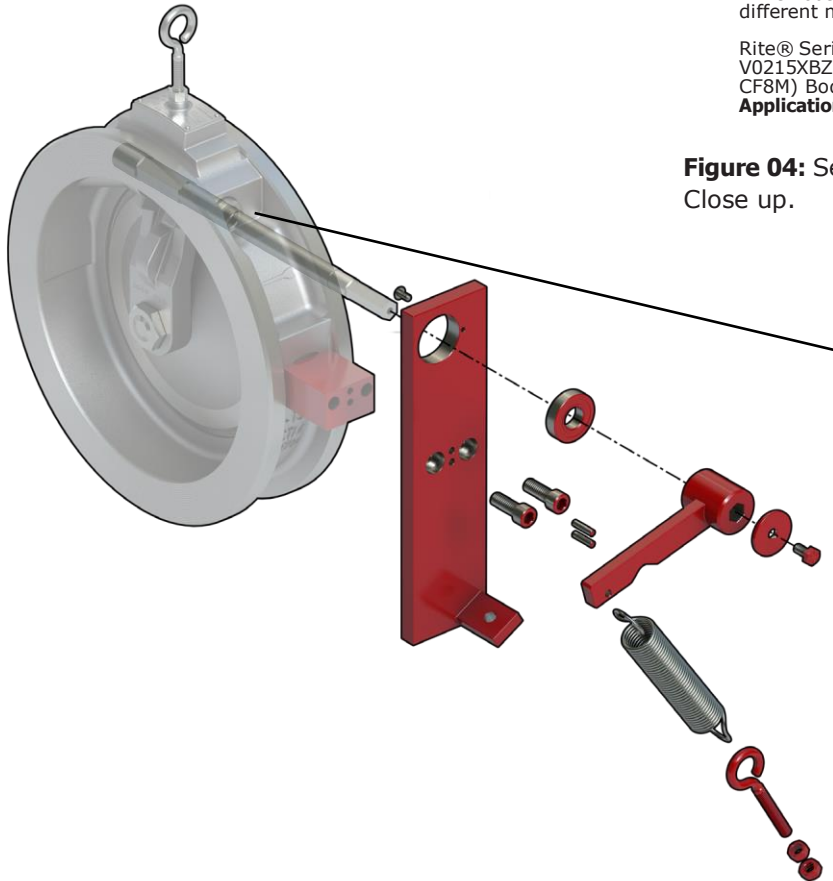


Figure 04: Seal Bushing & O-Ring Close up.

