

# RITE® SERIES 210 SINGLE DOOR WAFER TYPE SWING CHECK VALVE INTEGRAL HARD SEAT



## OVERVIEW

The Rite® Series 210 wafer combination swing check valves are flow activated and Rite® sized. The Rite® Series Check Valve inlet ports and disc have been shape optimized to achieve a fully open position at low flow rates (3 ft/s on average).

## SPECIFICATIONS

<b>Size Range</b>	NPS 1" to 60" 25mm to 1500mm
<b>Temperature Range</b>	Cryogenic to High Temperature (Pending Materials Selected)
<b>Operating Pressure</b>	ASME (125, 150, 300) DIN (PN10, 16, 25, 40)
<b>Body Style</b>	One-Piece Wafer Body Integral Type
<b>Leakage Rate</b>	API 598

## APPLICATIONS

- > Chemical Processing
- > Electrolysis
- > Facilities/Skid
- > HVAC
- > Marine
- > Nuclear
- > Oil Transport
- > Petrochemical
- > Power Generation
- > Refrigeration
- > Storage & Transport
- > Tank Trucks
- > Water

## MEDIA

- > Acids
- > Alkalis
- > Corrosive Chemicals
- > Dry Chlorine (Gas or Liquid)
- > Gases
- > Hydrogen
- > Oxygen
- > Water

## DESIGN FEATURES

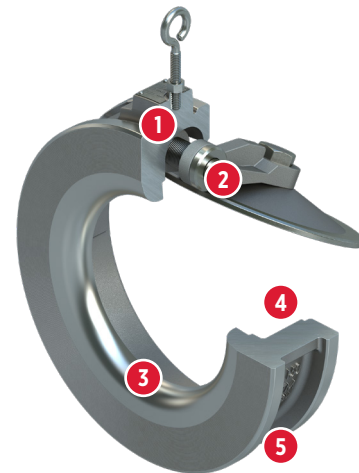
The Series 210 hard seated check valves offer:

### SINGLE DOOR DESIGN:

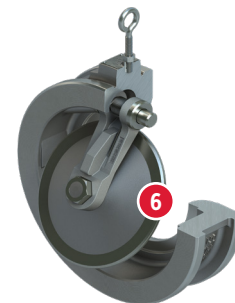
**Below numbered list can be referenced on various figures throughout document**

- 1 Combination design utilizing both gravity + spring makes the valve easy to open/close, reducing water hammer.
- 2 Limited movement of internal parts during operation extends service life.
- 3 Elliptical inlet shape designed to accelerate line media through the valve.
- 4 Optimal diameter for high flow capacity.
- 5 Short face to face, reducing weight and space between flanges.
- 6 Low cracking pressure design.
- 7 Quick response time (ideal for process lines with varying flows & control valves).
- 8 Customizable modular design, allows for adding optional special accessories to meet customer application requirements.
- 9 Cost & energy efficiency, requiring only one set of flange studs which span the valve, reducing in-service vibration.
- 10 Integral design reduces leak path enhancing life expectancy.

**Figure 01:** Integral Hard Seat Cutaway Front View.



**Figure 02:** Integral Hard Seat Cutaway Rear View.



**RITE® SERIES 210  
SINGLE DOOR WAFER TYPE SWING CHECK VALVE  
INTEGRAL HARD SEAT**



**DESIGN STANDARDS**

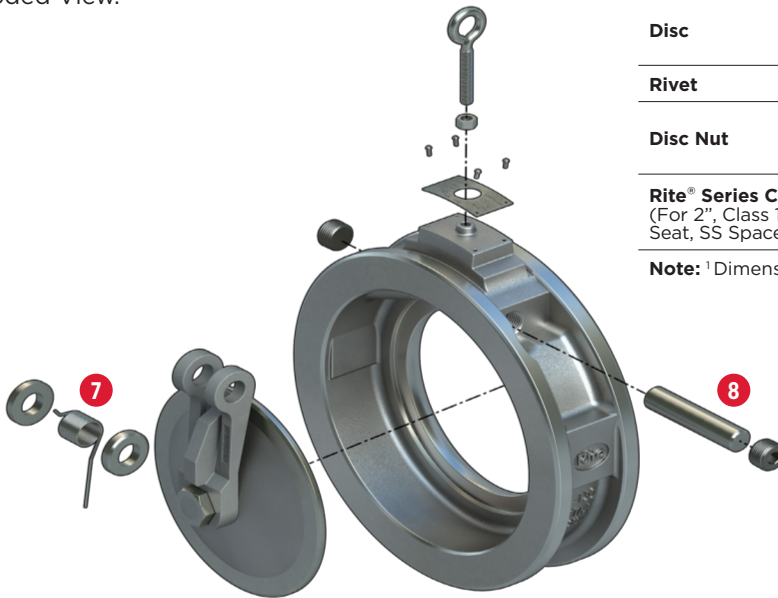
<b>Valve Design</b>	ASME B16.34
<b>Accessories Available</b>	H100, SA01, SA1, SA2, SA3, SA4, SA4A, SA6, SA7, SA10, SA16, SA40, SA40A, SA50, etc.
<b>Testing Standard</b>	ASME B16.34, API 598
<b>Face-to-Face</b>	Manufacturer's Standard

**CERTIFICATIONS AND APPROVALS**

<b>Certifications</b>	CE/PED CRN
<b>Approvals</b>	NSF-61

Additional information is available in the Bray Rite® Ltd. Technical Sales Manual.

**Figure 03:** Integral Hard Seat Exploded View.



**MATERIAL OPTIONS<sup>1</sup>**

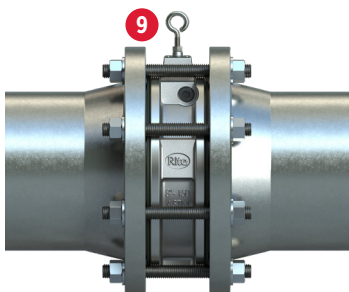
Body Material determines whether design is integral type, or seat ring type. See below chart:

<b>Body</b>	Stainless Steel (ASTM A351 CF8M) Exotic Alloys
<b>Hinge</b>	Stainless Steel (ASTM A351 CF8M) Matches body material on exotic materials
<b>Seat (Integral)</b>	Matches body material, Stellite overlay optional
<b>Spring</b>	<b>Valve size:</b> <12": Stainless Steel (ASTM A313 316) standard duty <b>Valve size:</b> ≥14"+: Stainless Steel (ASTM A313 17-7 PH) Inconel (X750) on exotic body materials
<b>Spacer</b>	Stainless Steel (ASTM A479 316), PTFE optional
<b>Pin</b>	Stainless Steel (ASTM A479 316) Matches body material on exotic materials
<b>Plug</b>	Stainless Steel (SS 316) Matches body material on exotic materials
<b>Lock Nut</b>	Steel Zinc Plated
<b>Eye Bolt</b>	Steel Zinc Plated
<b>Name Plate</b>	Stainless Steel (SS 316)
<b>Disc</b>	Stainless Steel (ASTM A351 CF8M) Matches body material on exotic materials
<b>Rivet</b>	Steel Zinc Plated
<b>Disc Nut</b>	Stainless Steel (ASTM F594 316) Matches body material on exotic materials

**Rite® Series Check Valve integral-type part number:** V0215XMZ (For 2", Class 150, Stainless Steel ASTM A351 CF8M Body, Metal Seat, SS Spacer, Series 210)

**Note:** <sup>1</sup>Dimensions available in ASME and DIN sizes.

**Figure 04:** Integral Hard Seat In-Pipe View.



**Figure 05:** Integral Hard Seat Close-Up Cutaway Views.

