

VTE® - SERIES PVC
SINGLE DOOR FLANGED TYPE SWING CHECK VALVE
INTEGRAL SOFT SEAT



OVERVIEW

The Rite® Series PVC flanged 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

Size Range	NPS 2" to 24"
Temperature Range	35:140 °F (1:60 °C)
Operating Pressure	ASME (125, 150) Equivalent
Body Style	One-Piece Flanged
Leakage Rate	Zero Leakage

APPLICATIONS

- > Desalination > Saltwater
- > Marine life support

MEDIA

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

DESIGN FEATURES

The Series PVC soft 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 the flanges.
- 6 Low cracking pressure design.
- 7 Quick response time (ideal for process lines with varying flows & control valves).
- 8 Cost & energy efficiency, requiring only one set of flange studs which span the valve, reducing in-service vibration.
- 9 A mechanically dynamic seal, contained in a specially designed groove.
- 10 Maintenance is simple as the o-ring is easily removed and replaced when worn.
- 11 As pressure is applied to the valve disc, the seal is compressed into the groove ensuring a consistent and uniform seal.
- 12 The load on the seal is controlled, reducing wear for longer life.

Figure 01: Integral Soft Seat Cutaway Front View.

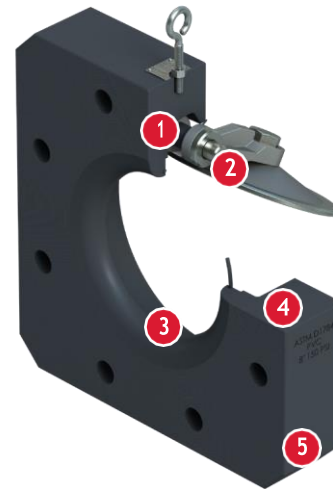


Figure 02: Integral Soft Seat Cutaway Rear View.



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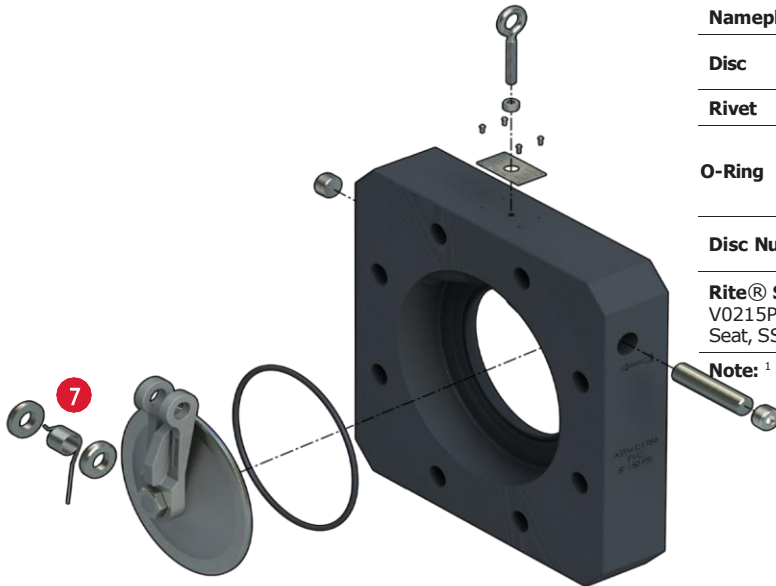


DESIGN STANDARDS

Valve Design	Manufacturer's standard
Accessories Available	SA4A
Testing Standard	ASME (125, 150) Equivalent
Face-to-Face	Manufacturer's standard

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

Figure 03: Integral Soft Seat Exploded View.



MATERIAL OPTIONS¹

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

Body	PVC (ASTM D 1784)
Hinge	Stainless Steel (ASTM A351 CF8M), Titanium optional
Seat (Integral)	Matches body material
Spring	Valve size: <math>\leq 12''</math>: SS302/304, Stainless Steel (ASTM A313 316) standard duty Valve size: <math>\geq 14''</math>+: Stainless Steel (ASTM A313 17-7 PH) For All Valve Sizes: Inconel (X750) on body materials higher grade than SS.
Spacer	Stainless Steel (ASTM A479 316), Titanium optional
Pin	Stainless Steel (ASTM A479 316), Titanium optional
Plug	Stainless Steel (SS 316) Titanium optional
Lock Nut	Steel Zinc Plated
Eye Bolt	Steel Zinc Plated
Nameplate	Stainless Steel (SS 316)
Disc	Stainless Steel (ASTM A351 CF8M), Titanium optional
Rivet	Steel Zinc Plated
O-Ring	BUNA-N, EPDM, FKM-A, HNBR, Neoprene
Disc Nut	PTFE-virgin, Teflon encapsulated silicone, Viton Stainless Steel (ASTM F594 316) Titanium optional

Rite® Series Check Valve seat ring type part number:
V0215PBZ (For 2", Class 150, PVC (ASTM D 1784) Body, BUNA-N Seat, SS Spacer, Series PVC)

Note: ¹ Dimensions available in ASME sizes.

Figure 04: Integral Soft Seat In-Pipe View.

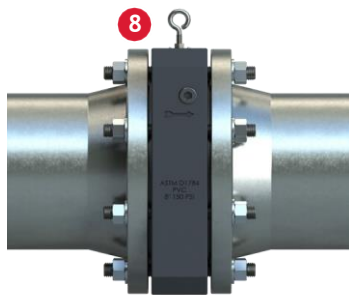


Figure 05: Integral Soft Seat Close-Up Cutaway Views.



VAL TECHNOLOGY & ENGINEERING SDN. BHD.

No. 1, Lorong Teras Jaya 3, Taman Perindustrian Teras Jaya,
13400 Butterworth, Penang, Malaysia.

Tel: +604-333 4119 (Hunting) Fax: +604-333 4120

Email: sales@valtech.com.my URL: www.valtech.com.my