



# Flo-Tite Ball Valve Pulp and Paper Solutions

Flo-Tite Pulp & Paper Solution for

#Abrasion

#Corrosion

#Fibrous Materials

#Scaling

#Scaling

Flo-Tite's Metal seated "Scraper Seat" design strips the ball of harmful scale to keep it from the seating area. This limits the amount of future damage to the seats. White liquor is known to develop a scale during the Kraft process and the scraper seat removes this material during operation.

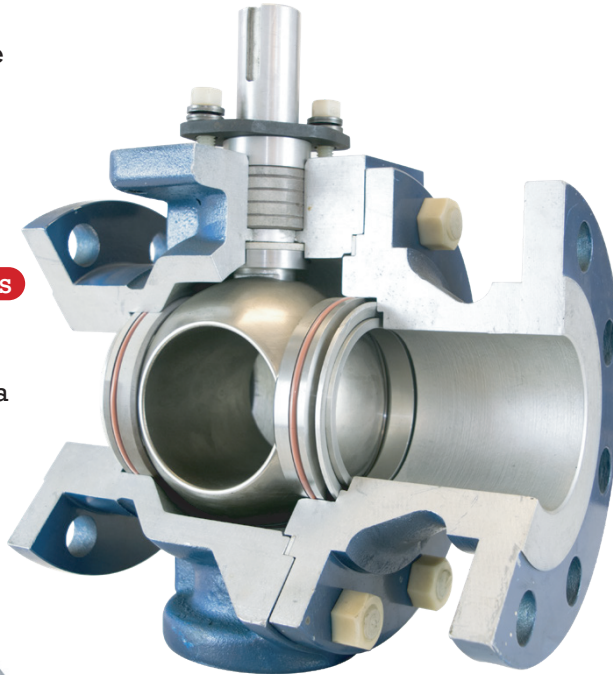
#Quality

#Corrosion

Flo-Tite's VanGuard triple stem seal system employs 3 layers of protection from corrosive leakage through the always-problematic stem area.

#Abrasion

Flo-Tite's S-Tek seats are a special blend of PTFE type material with special fillers that are capable of higher temperature and mild abrasion in service, much more than standard TFM or PTFE. They can be used in applications such as clarified liquors where the solids content has been reduced.



#Abrasion

#Fibrous Materials

Flo-Tite's Metal Seated valves are capable of withstanding abrasion typically encountered in a paper application for most liquors and stock materials.

#Corrosion

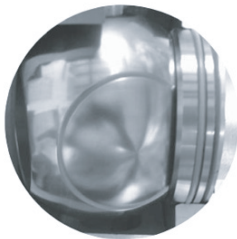
#Scaling

Flo-Tite's Chem-Tek surface treatment imparts a non-stick/corrosion resistant layer to the internal parts of the valve. This layer keeps any buildup of material from rooting itself into the walls of the valve. Both White and Green Liquor commonly build up scale on the interior of the valve.

#Abrasion

#Scaling

Flo-Tite's "Escaping Ball" design has relief areas cut into the ball to limit abrasion on the ball when the valve is mid cycle and not required to properly seal. This is common in White Liquor applications where scaling is common.



#Fibrous Materials

Flo-Tite's Sentinel Series Segmented V-Ball has a strong leading edge that can slice through any material that finds itself in the seating area during closing.



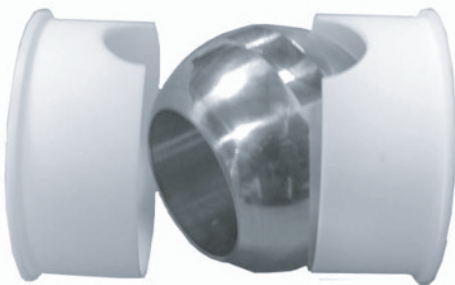
#Fibrous Materials

#Corrosion

Flo-Tite's specially designed "Open Port Ball" keeps media from collecting inside the ball. It allows washout during operation and limits corrosive attack. This Open Port Ball also keeps any fibrous materials such as paper stock or wood chips from collecting inside the ball cavity.

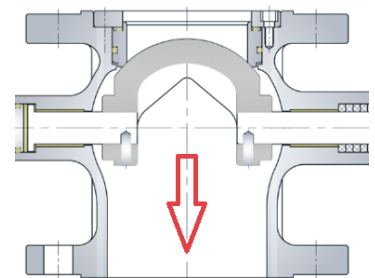
#Scaling

Flo-Tite's Cavity fillers are applied to internal valve cavities – this limits the actual amount of potentially scale-causing media from building up inside the valve. Less media=less scale.



#Fibrous Materials

Due to its free-flowing design, Flo-Tite's Sentinel Series Segmented V-ball can be used with fibrous or particulate media that may have a tendency to build up on interior surfaces when oriented in a vertical pipe.





# Flo-Tite Ball Valve Pulp and Paper Solutions

## Max-Seal Butterfly Valves

Cartridge Elastomer Seats

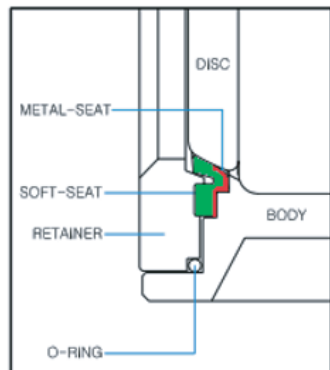
Double Offset

Triple Offset

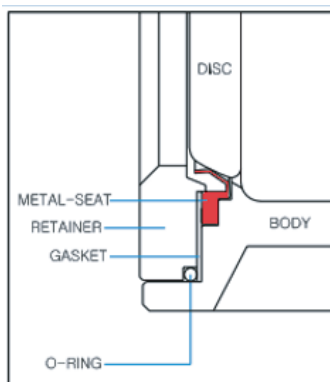
2" to 48"

ANSI 150 to 900

### Soft Seat



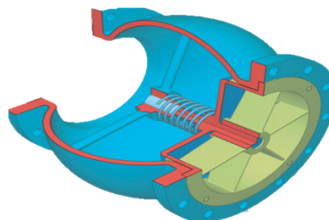
### Metal Seat



**TITAN**

TITAN FLOW CONTROL, INC.

- 1/4" to 72"
- ANSI 125 to 2500
- Y-Strainer, Basket, Duplex, Temporary, Fabricated
- Full Fabrication capabilities in Lumberton, NC
- Alloy selection based on corrosive properties
- Silent Checks



## Strainers and Check Valves



## Knife Gate Offering

Elastomer Seated, Metal Seated, Ceramic Seated/heavy duty slurry



DC Series



DQ Series  
Uni-Dir



DT Series  
O Port



DF Series  
Square Port



DS Series  
Double Knife Type



DK Series  
Slurry Type



CSK Ceramic  
Heavy duty Slurry



# Flo-Tite Ball Valve Pulp and Paper Solutions

## Project Engineering and Management

We track your project in our database to maintain a record of valve tags, materials of construction, media, pressure and temperature so that we know positively what type of valve you've used in certain applications. *Often – engineering firms rely on us and our database as this feeds our quotation process.*

- Experienced Engineers
- PE's within the organizations
- Product Development experience
- Quality
- Fluid Flow and Heat Transfer

Experience includes: Pressure Vessels, Heat Exchangers, Nuclear, Welding, 3D printing, Control valves, Controls.

### Single Seat Design

Minimizes collection areas for fibrous materials

Latest	ID	Tag	Media	Size	Model	Line	Cod
X	1	52-HV-0211	Weak Black Liquor	2"	F300SS	304L	SS
X	2	52-HV-0212	Weak Black Liquor	2"	F300SS	304L	SS
NOT ORDE	3	52-HV-0312	Brown Unwashed Stock	12"	BL730SS	304L	SS
X	4	52-HV-0315	Brown Unwashed Stock	2"	F300SS	304L	SS
NOT ORDE	5	52-HV-0316	Mill Water	2"	F150SS	304L	SS
X	6	52-HV-0317	Brown Unwashed Stock	2"	F300SS	304L	SS
X	7	52-HV-0318	Mill Water	2"	F300SS	304L	SS
NOT ORDE	8	52-HV-0332	Brown Unwashed Stock	12"	BL730SS	304L	SS
X	9	52-HV-0360	Weak Black Liquor	2"	F150SS	304L	SS
XXX	10	52-HV-0405	High Pressure Seal Water	1"	F300SS	304L	SS
X	11	52-HV-1203	Weak Black Liquor	10"	BL630CS	CS	CS
X	12	52-HV-1205	Weak Black Liquor	10"	BL630CS	CS	CS
X	13	52-HV-1406	Weak Black Liquor	2"	F150CS	CS	CS
X	14	52-HV-1414	HP Seal Water	1"	F150SS	304L	SS
X	15	52-HV-1417	Hot Water	1"	F150SS	304L	SS
X	16	52-HV-1606	Weak Black Liquor	2"	F150CS	CS	CS
X	17	52-HV-1614	HP Seal Water	1"	F150SS	304L	SS
X	18	52-HV-1617	Hot Water	1"	F150SS	304L	SS
X	19	52-HV-1803	Weak Black Liquor	8"	BL630CS	CS	CS
X	20	52-HV-1808	AIR/WBL	2"	F150CS	CS	CS
NOT ORDE	21	52-HV-0306	Brown Unwashed Stock				
X	22	52-HV-0802	Mill Water	1"	F150SS	304L	SS
X	23	52-HV-0805	Weak Black Liquor	1"	F150CS	CS	CS
X	24	52-HV-1310	HP Seal Water	1"	F300SS	304L	SS

## Flo-Tite/Max-Seal/Titan/Hi-Tek Pulp and Paper Service Guidelines

	White Liquor	Clarified White Liquor	Unwashed Brown Stock	Washed Brown Stock	Weak Black Liquor	Black Liquor	Green Liquor	Clarified Green Liquor
Process	White becomes black	After Clarifier	Black Liquor + Fibers	Fibers only	Spent liquor	Dehydrated weak Black Liquor	From recovery boiler	After Clarifier
Characteristics	Suspended solids		Med Thickness	Low Thickness	Low thickness	Thick Syrup	particulate	
Corrosion	Most corrosive	Most Corrosive	Medium-High	Low-Medium	Low	Medium	Medium	Medium
Body	304/316	304/316	High pH 304-316 or duplex	High pH 304-316 or duplex	CS (preferred is SS)	SS (sometimes CS is requested)	304/316	304/316
Seats	Metal	S-Tek	Metal	Metal	Metal	Metal	Metal	S-Tek
Scraper	Yes	No	Yes	Yes	Yes	Yes	Yes	No
Scaling?	No	Yes	No	No	No	No	Maybe	Yes
Chem Tek II Internal surface treatment (scaling reduction)	No	Yes	No	No	No	No	No	Maybe
Open Port/Segment Ball	maybe	No	Yes	Yes	No	No	Yes	No
Cavity Filler	No	Yes	No	No	No	No	Yes	Yes





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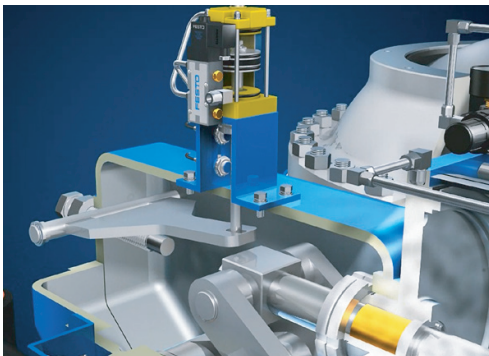
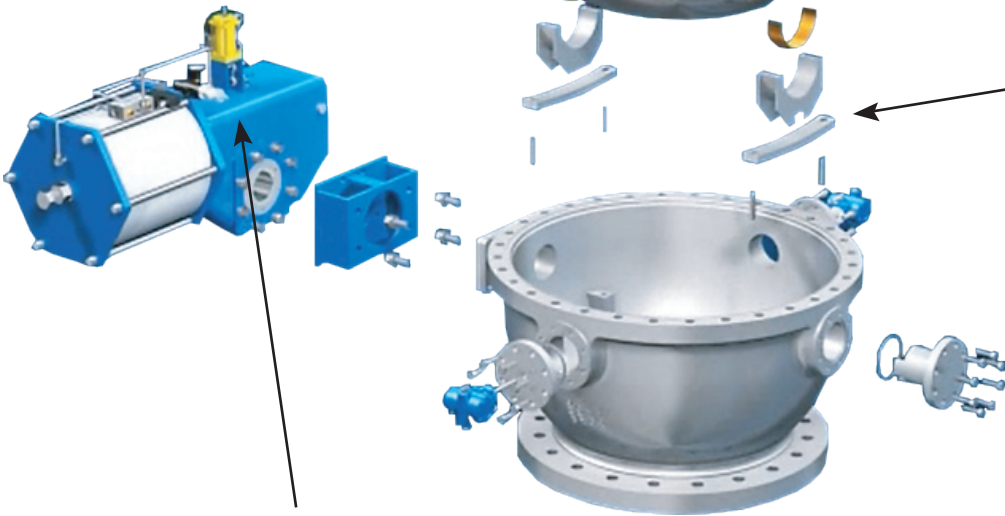
180 Degree rotation doubles the valve life.



**Single Seat Design**  
Minimizes collection areas for  
fibrous materials.



**Floating Ball for enhanced sealing—**  
Spring loaded mounts allow pressure  
to push the ball into the seat.



**Mechanical Operation Interlock—**  
restricts inadvertent valve  
operation.



**Pressure Safety Interlocks—**  
electronically monitor  
internal pressure to insure  
proper operation.

Revision No: 01  
Last Reviewed/Updated: 12/31/2020