

STAINLESS VALVE CO.

June 2017

Stargate-O-Port-Valve®

Valves for Scavenger Valve and Hydropulper applications



Scavenger valves are commonly used in the recycle pulp industry to isolate cyclone cleaners. The arrangement is typically a lock hopper setup at the bottom of the cyclone. The top inlet valve is typically not considered a severe service. The bottom valve, on the other hand must contend with the erosive wear from the swirling metal staples, plastics and other rejects in the pulp slurry. A proper valve must be able to seal along with assuring reliable actuation with the ability to shear through foreign materials. Scavenger valves vary in size with common applications between 4" and 24" 150# service.

SVC has developed a version of the full port Stargate-O-Port-Valve[®] to address the need for improved reliability and performance in the more severe service scavenger valve applications where the commonly utilized knife gate valves do not perform. Typical issues associated with KGVs are dewatering and inability to perform proper closure by shearing through foreign material in the line. It is also common for material to pack in the voids of the KGV and prevent actuation of the KGV.

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Stargate-O-Port-Valve® Solution

The Stargate-O-Port-Valve[®] applies several technologies that have been developed by SVC over the years for efficient, reliable, and low maintenance operation of the scavenger valve application:

Anti-Swirl Technology: A common issue with the scavenger isolation valves is the erosive effect that the swirl of the cyclone has on the blade surface. The Stargate-O-Port-Valve has a design feature that minimizes the "swirl" at the blade surface thus reducing the erosive wear on the blade. The Anti-Swirl ring is designed specifically to the media that is flowing through the valve to not only protect the blade but also prevent the wear to the valve body that is seen in the valves typically used in this application.



Dual tandem seats: One of the reliability issues associated with commodity hydrocyclone cleaner isolation valves is the lack of sealing capability that leads to de-watering and the potential for a pulp plug to prevent flow or causing damage to downstream equipment. Stargate-O-Port-Valve® The solves this problem by using SVC's Dual Tandem seat technology. The valve sealing is accomplished via double concentric seats around the OD of the valve orifice acting on the blade. The primary purpose of the metal seat is to protect the soft seat from damage or excessive wear due to the abrasive process materials. The soft seat will only serve one purpose: to maintain a drip tight seal through the valve.

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- Shearing capability: In conjunction with the metal seat design, the Stargate-O-Port-Valve® has the ability to shear through solid materials. Staples, nails, banding material, and solid plastics are all sheared to prevent the valve from locking up. The shearing action is utilized both on the open and closed stroke to ensure reliable valve actuation.
- Coated blade: Depending of the severity of the process, the blade of the Stargate-O-Port-Valve[®] is hard coated or thru hardened. In conjunction with the Anti-Swirl ring, this feature minimizes the erosive wear on the critical components of the valve.
- Actuator force: the Stargate-O-Port-Valve[®] is not shy about brute force. Oversized heavy duty actuators are utilized to ensure significant force is available to actuate the valve through the process materials.
- Live loading: All of the soft goods and the cut rings in the valve are live loaded. Soft seals provide absolute shutoff with little maintenance required. The live loaded cut rings allow for optimized shearing capabilities.
- Tight tolerances: The Stargate-O-Port-Valve is a custom specialty severe service valve built to very tight tolerances. This focus on tight tolerances allows the valve to outperform any other valve brand or type even in the most severe and critical service applications in process industry.
- Small footprint: Compared to a KGV, the Stargate-O-Port-Valve is larger and heavier duty. With that being said, the Stargate-O-Port-Valve does have the design capability to be arranged in a variety of configurations to allow the valve to be installed in some relatively tight installation envelopes.



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Contact SVC

We invite your inquiries into how the Stargate O-Port-Valve[®] can resolve your most difficult, critical, and unique valve application issues around hydro-pulpers and HD cleaners.

The Stargate-O-Port-Valve® ... Solutions Realized!



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