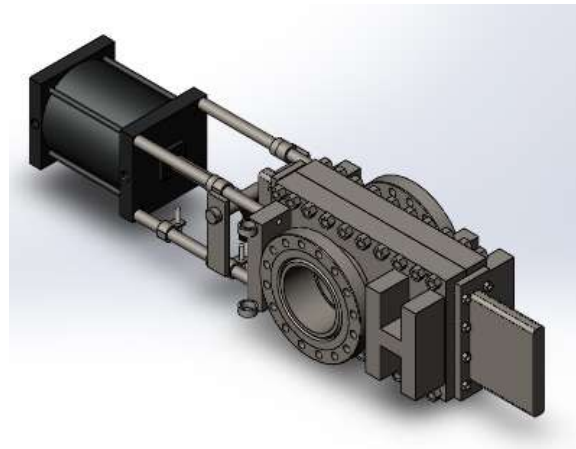


STAINLESS VALVE CO.

Tuesday, November 08, 2022

Big Blow™

THE Batch Digester Blow Down Valve



Forty Eight Years of Un-Matched Application Specific Service

The Big Blow™ valve has a long history of providing un-matched reliability and low maintenance requirements in one of the most severe, critical, and demanding services in the pulp and paper industry. The batch digester blow down valve is central to the efficient, safe, and reliable operation of batch digesters, whether the mill has common headers or individual blow lines.

The digester blow valve application is quite violent. Shockwaves of over 10,000psi have been measured as a result of vapor flashing and accelerated material mass impacting valves in common header systems. Digester and blow line movement adds to the stresses that the blow down valve must accommodate. Despite this severe service, the Big Blow™ valve performs very well over a long service life between refurbishments. It is reasonable to expect 3-7 years between scheduled refurbishments. This is unmatched by any ball valve or Big Blow™ copycat offering.

Design

The Big Blow™ is designed specifically for the critical and demanding digester blow down valve application. The valve has several characteristics that make it the ideal valve for this application starting with the robust design and material allotment. The valve body and blade are substantial for the pressure rating.

Details lead to Un-rivaled Performance

- Integrated and reinforced packing glands: Developments by SVC and New England Braiding have brought about a material that maintains the seal even under elastic deformation of the valve body. This material is used in addition to Self-Mold to ensure that there is no leakage from the valve despite heavy shock waves and slurry material in the line.
- Soft seats: Reinforced and modified PTFE seats fully retained to maintain position despite shock waves. Preloaded seats maintain a tight shutoff regardless of pressure differential. The Big Blow™ valve can successfully utilize soft seats where ball valves must resort to metal seated designs that are susceptible to damage from direct impacts on the ball and seat surfaces.
- Proprietary weld design: Flanges-Nipple-Body welds are designed specifically to handle external forces from digester system on the valve. Indicator gussets provide visual indication of the loads placed on the valve and when the valve should be pulled for evaluation
- Auto-adjusting blade guides: Specifically suited for handling abrasive, erosive media along with vapor flashing and mechanical shock waves. Proper guiding of blade ensures optimized seal performance and wear life.
- Loaded Seats: fully loaded seats prevent process material from getting under the seats and causing binds or premature seat wear.



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Valve Features

Locking Device

Big Blow™ pneumatic and hydraulic actuated valves are supplied with a locking device to mechanically lock the valves in the closed position. This allows work behind the locked valve without the necessity of setting a line blind. The pin of the locking device is heavy enough to allow the valve actuators to be charged with 250 psi air pressure without damage to the locking device. The LO locking device for locking in the open position is available as an option.

Actuators

Most valves are actuated by type "A" pneumatic actuators, i.e., the top quality cylinders for longest life even at high cycle rates. The actuators are epoxy-painted; cylinder rods are stainless steel for corrosion resistance. The opening and closing speed can be varied with the airflow to an ideal actuation time of 45 seconds for a 10" valve (30s for 8"). The Big Blow™ may also utilize hydraulic or electric actuation per user preference.

Limit Switches

Different types of limit switches may be used based on customer preference. Typically lever style limit switches are used due to the shocks and vibrations associated with the blow down application. Inductive proximity limit switches may also be utilized.

Performance Guarantee

Perhaps the most unique "feature" to the Big Blow™ is the unsurpassed Performance Guarantee: 10 years on the valve and 3 years on the wear parts. SVC stands behind our product and have full confidence in the long term performance of the Big Blow™ valve. The Big Blow™ valve will offer the lowest long term cost of ownership of any valve product in the digester blow down application.

Refurbishment Options

OEM Refurbishment:

After many years of service, SVC valves may require repacking or replacement seats. Stainless Valve Co. has the necessary technical expertise, the personnel, spare parts, and equipment to perform this service fast and economically. Products are updated to the latest state of art technology in both materials and design.

On-Site Refurbishment:

The Big Blow™ valve is relatively simple in design and construction. Several of our users opt to complete refurbishments on site using OEM soft goods. OEM trained and certified technicians are able to complete the "Soft Goods" refurbishment during digester outages at the mill site. Typically 2-3 soft goods refurbishments may be completed before an OEM refurbishment is required to ensure long term, high performance and reliability.

Major factors making use of Big Blow™ Valve the first choice:

- Excellent performance with an absolute minimum of maintenance. This valve is built rugged enough to withstand almost any problem related to the batch pulp digesters.
- The Big Blow™ is almost indestructible. It has tremendous resistance to abrasion, corrosion, shock waves, system vibration, and sudden changes in temperature. The Big Blow will perform where ball valves are flattened and copycat valves crack.

Page 2

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Our company is certified ISO9001:2008 ISO9001:2015 / Certificate No.: CERT-0124294



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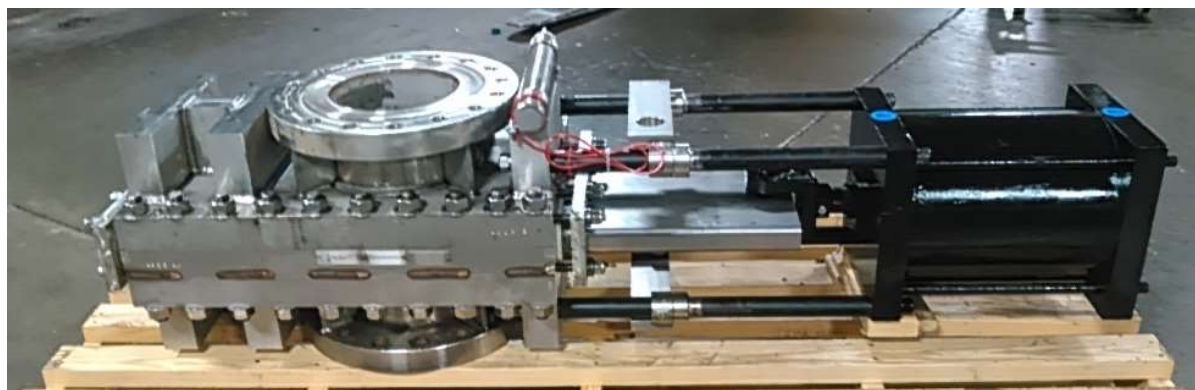
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- The wear parts are the PTFE seats and packing. The seats are inset from the bore and are not directly impacted by the flow of steam or the flow of media, not even in the partially open position at the beginning of the blow down.
- Even if the seats are worn or destroyed, little leakage can flow through the valve due to the small clearance (0.030") between the blade and side plates. There is minimal danger of dewatering.
- Built in safety factors allow maintenance work behind the valve when the LC locking device is engaged. The blade position is always visible even from a distance. Two inches of stainless steel in a 10" Big Blow™ block the port, and cannot be blown to the open position. Only one Big Blow™ valve per digester is required.
- Big Blow™ valves of 10" and 12" size use 12" air cylinders, which generate over 9,000 lbs., thrust at 80 psi air pressure. This assures that the valves will not stick or hang during actuation. Big Blow™ Valves have the capability to shear foreign matter between the blade and side plate.
- Big Blow™ valves open slowly and consistently. The opening time can be controlled from 30-45 seconds for ideal blow down conditions.

The Big Blow™ is a heavy built specialty valve for the very demanding digester blow valve application. Numerous success stories stand behind the performance of the Big Blow™ valve in wood pulp batch digester systems.

Please contact us at:

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