SEVERE SERVICE ENGINEERING

By focusing on delivering highly specialized valves that cater to unique, sometimes unforeseen requirements, Cornerstone Valve offers a valuable service for distributors, end users, engineers, and designers alike.

This approach not only mitigates the limitations posed by stock availability and predictive planning but also supports the seamless incorporation of emerging technologies into plant designs.

SINCE 1990, CORNERSTONE VALVE'S CORE EXPERTISE HAS BEEN DESIGN AND MANUFACTURING RELIABLE, ENGINEERED-TO-ORDER METAL SEATED, BUBBLE TIGHT LEAKAGE, HIGH PERFORMANCE ISOLATION VALVE SOLUTIONS UP TO API 6A –15000#.

We take pride in our ability to provide Engineered Flow Control Solutions to a wide spectrum of industries including Oil & Gas-production / topside / subsea / cryogenic, Chemical & Petrochemical, Refining, Power Generation, Mining and Minerals, Pulp & Paper, U.S. Defense / Aerospace and Wastewater Treatment plants. Our strength comes from our unique designs, flexibility, and our continued emphasis on state-of-the art engineering for severe service.

Unique Differentiators from over-the-counter production quality valves:

- Bespoke Sophisticated Valves
- Engineered Critical Valves
- Advanced Engineering Designs
- Last Resort – when off the shelf doesn't cut it

Benefits of Trunnion Ball Valve:

- Better support and stability: The trunnion design provides additional support to the ball, making it more stable and less likely to move or shift within the valve body. This makes it ideal for high-pressure and high-temperature applications.
- Lower operating torque: The trunnion design reduces the amount of torque required to operate the valve, making it easier to turn and less likely to fail due to excessive force.
- Larger size range: Trunnion ball valves are available in larger sizes than floating ball valves, making them ideal for applications that require a larger flow rate.

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Benefits of Floating Ball Valve:

- Lower cost: The floating ball valve design is simpler and less expensive to manufacture than the trunnion ball valve design. This makes it a more cost-effective option for low-pressure and low-temperature applications.
- Ease of maintenance: The floating ball valve design allows for easy maintenance and repair, as the ball and seats can be easily removed from the valve body without disassembling the entire valve.
- Better sealing performance: The floating ball valve design provides better sealing performance, as the pressure of the fluid on the ball helps to create a tighter seal between the ball and the seats.

Ultimately, the choice between a trunnion or floating ball valve will depend on the specific application requirements, such as pressure, temperature, flow rate, and budget.

Cornerstone Valve specializes in providing solutions for industries facing extreme conditions, prioritizing both efficiency and safety. Our extensive experience and focus on designing valves for harsh environments make them a reliable choice for companies seeking to prevent disasters and ensure continuous operations.

Cornerstone Valve's reputation in the industry for tackling severe service valve challenges is a testament to our expertise and innovative approach. Cornerstone Valve demonstrates a deep understanding of the critical importance of reliable valves in maintaining continuous operation and ensuring employee safety in harsh industrial environments. Our specialization in severe-service valves positions them as a crucial partner for industries facing extreme conditions, where every component's resilience and reliability can significantly impact overall safety and productivity.

With over 200 years of combined experience, Cornerstone Valve brings a wealth of knowledge and a proven track record to the table. This extensive experience, accumulated from years of designing, manufacturing, and testing valves under the toughest conditions, highlights Cornerstone's ability to not just meet but exceed industry demands for durability and performance. The company's commitment to working closely with its customers to develop tailored solutions underscores a customer-centric approach, ensuring each valve is not only robust but also perfectly aligned with specific operational requirements.

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The emphasis on collaboration between Cornerstone and its clients further enhances the value they bring to harsh industrial environments. By engaging in a deep dive into their customers' unique challenges, Cornerstone is able to engineer solutions that are not only innovative but also practical and reliable in the long term. This bespoke engineering process, combined with their specialized knowledge, makes Cornerstone Valve an indispensable ally in mitigating the risks associated with severe-service conditions.

In the broader context, Cornerstone Valve's role extends beyond merely supplying products; We are pivotal in enhancing operational efficiency, minimizing downtime, and significantly reducing the risks to employee safety. Our expertise in severe-service valves is critical in ensuring that industries subjected to brutal conditions have the support necessary to maintain high safety standards and uninterrupted operations. This not only contributes to the sustainability and profitability of such operations but also reinforces the importance of specialized knowledge and experience in overcoming some of the most challenging industrial conditions.

Cornerstone Valve's focused approach and deep-seated expertise in severe service valves mark us as a leader in our field, capable of addressing some of the most demanding challenges faced by industries today. Our dedication to safety, reliability, and customer collaboration makes us an essential partner for any operation seeking to thrive in harsh conditions.

Below is a sample of some of the applications handled by Cornerstone Valve.

- Subsea design experience at 10,000 feet of water
- High pressure design (API6A) and experience at 15,000 psig
  - Liquid & Gas Zero Leakage
  - Subsea, Onshore, Offshore, & Aerospace
- High-temperature design and experience to 1,600F
- Low-temperature design and experience to -320F
- Abrasive service – “Solids Proof”.
- Power and Refinery Valves
- Rotary ball control technology.
  - Trim for D-Ball
  - Multistage Slot Trim (developed for the U.S. Navy)
  - Noise reduction