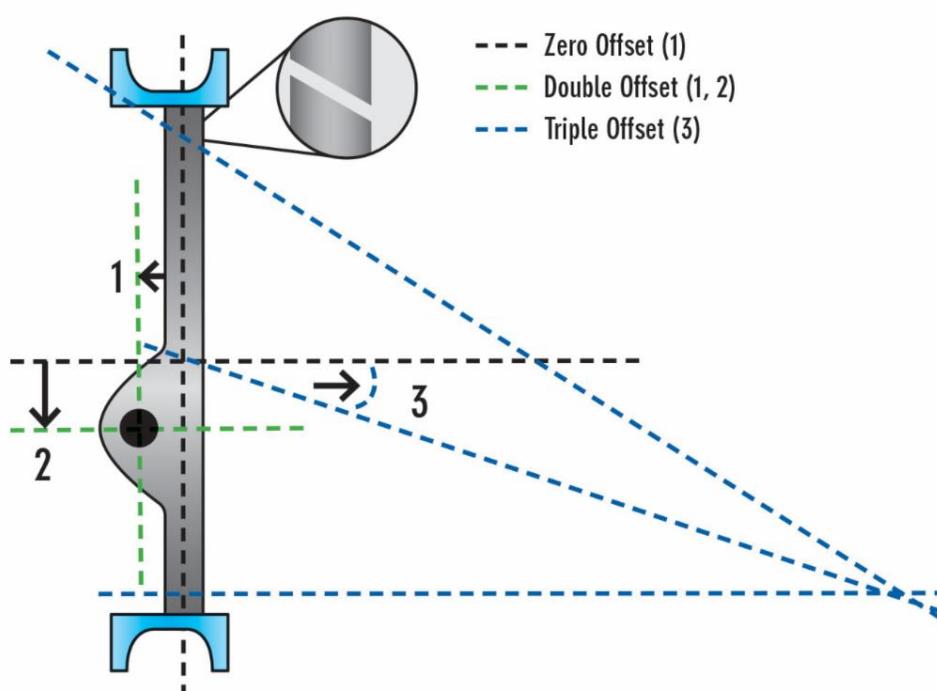


June 11, 2025

What's Different About Triple Offset Butterfly Valves?

Previously this spring, we addressed differences in zero-offset (resilient-seated) and double-offset (high-performance) butterfly valves. As Milwaukee Valve prepares to launch the new TØV Triple Offset valve, let's dig into what separates the TØV from the others.

Triple Offset is a design feature in butterfly valves where the valve stem, disc and sealing surface are all positioned at **different** off-center angles. Combining these three offsets produces a highly precise, bubble-tight seal with minimal operating friction — even at high pressures. This design also allows for uniform sealing, creating a tight shutoff in a metal seat design. This is a lower-cost, lower-torque option (easier to automate) than alternative metal-seated valves. And Milwaukee Valve's TØV passes API Standard 598 for no-leak, bidirectional shutoff you can trust.



Offset 1 – The stem is offset behind the seat axis, to provide complete sealing contact around the entire seat.

Offset 2 – The stem centerline is offset from the pipe and valve, allowing interference-free opening/closing.

Offset 3— The seat cone axis is offset from the stem centerline to eliminate friction during opening/closing, and achieve uniform compression and sealing around the entire seat.



Triple offsets are generally used in applications where gate valves are found, where a metal seat is required, and tight shutoff and/or quarter-turn actuation is desired. Applications such as high-pressure steam (over 150 PSI), superheated-steam, high-temperature gases and oils, and other high-temperature applications are good for this type of valve. The triple offset valve is used in many similar industries as the double offset butterfly valve, but the applications are more demanding.

Let us help you find the best butterfly valves for your application. For more information, visit our [TØV](#) products page on the Milwaukee Valve website. For assistance with a specific problem, contact your [Milwaukee Valve sales representative](#). Their experience and industry knowledge will simplify finding a solution to your product and application requirements. You can see our entire line at www.MilwaukeeValve.com.



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