

**ALWAYS
KEEPS WHAT
IT PROMISES!**

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The principle of the quadruple offset butterfly valve offers a number of important advantages over other designs.

Butterfly valves need to meet the highest requirements in terms of tightness and longevity. This is especially true for demanding applications. In the oil and gas industry, the petrochemical industry, refineries and, for example, in LNG and LPG applications extreme pressures and wide temperature ranges mean that excellence in design and material is essential. With its quadruple offset butterfly valve, müller quadax gmbh, based in Baden-Württemberg, supplies a patented, friction-free solution which eliminates leakage.

The valve manufacturer from the Kocher Valley is, in contrast to the triple offset butterfly valves, based on a completely round sealing geometry. This innovation was made possible by an intelligent design principle and access to modern 5-axis machining centres. Thanks to its innovative design, the Quadax® meets the highest demands on tightness requirements 100%. In addition, neither extreme pressures nor extreme temperatures of -270° C to +800° C represent a major challenge. Thanks to the four-way eccentricity and the use of the highest quality materials, the Quadax® is tight in both directions

right up to full pressure. Because the valve is friction-free and involves no wear on the seat, the risk of failure is greatly reduced while simultaneously extending the service life. In addition, the high KV value allows a smaller dimensioning of the nominal pipe diameter. As well as ensuring more economical maintenance intervals, this frees up additional potential for saving ongoing costs. Thanks to „Fire Safe“ in both directions in accordance with ISO10497, API 607 and BS 6755, the flap is ideal for processes with flammable media and explosive atmospheres.

Cryogenic applications without leakage

In recent years, the demand for equipment for storing and processing liquefied natural gas („LNG“) rose significantly because the cooling to -162° C and the resultant liquefaction of the gas leads to an approximately 600-fold increase in storage capacity. A disadvantage of the triple offset design commonly used in this industry is that it is unable to ensure 100% tightness. Due to thermal variations, the different wall thicknesses lead to uneven spreading of the material on the seat – a problem that is rendered obsolete with the quadruple offset design. The perfectly rounded sealing geometry of this construction with all-round identical material thickness guarantees bubble-free tightness

in cryogenic applications (down to -196° C) or those involving extreme temperature fluctuations. With its product, müller quadax gmbh exceeded the specifications of current valve specification guideline „BS 6364“ and had zero visible leakage in the test (target: 100 mm³/s*300 = 30.000 mm³/s = 1.800 ml/min). One practical application can be seen at Linde AG who use the shut-off valve for their air separation plants. With the quadruple offset butterfly valve, the company has found the most suitable component for controlling its cryogenic processes.

In use worldwide

The müller co-ax group has established itself in its over 50-year company history as a renowned, globally operating manufacturer of valve technology. From this group emerged the subsidiary müller quadax gmbh. One essential ingredient in the successful development of the quadruple offset butterfly valve was the quest to design an innovative product that eliminates all the disadvantages of standard solutions and in particular impresses with its cost-effectiveness. The result was able to more than meet the expectations.