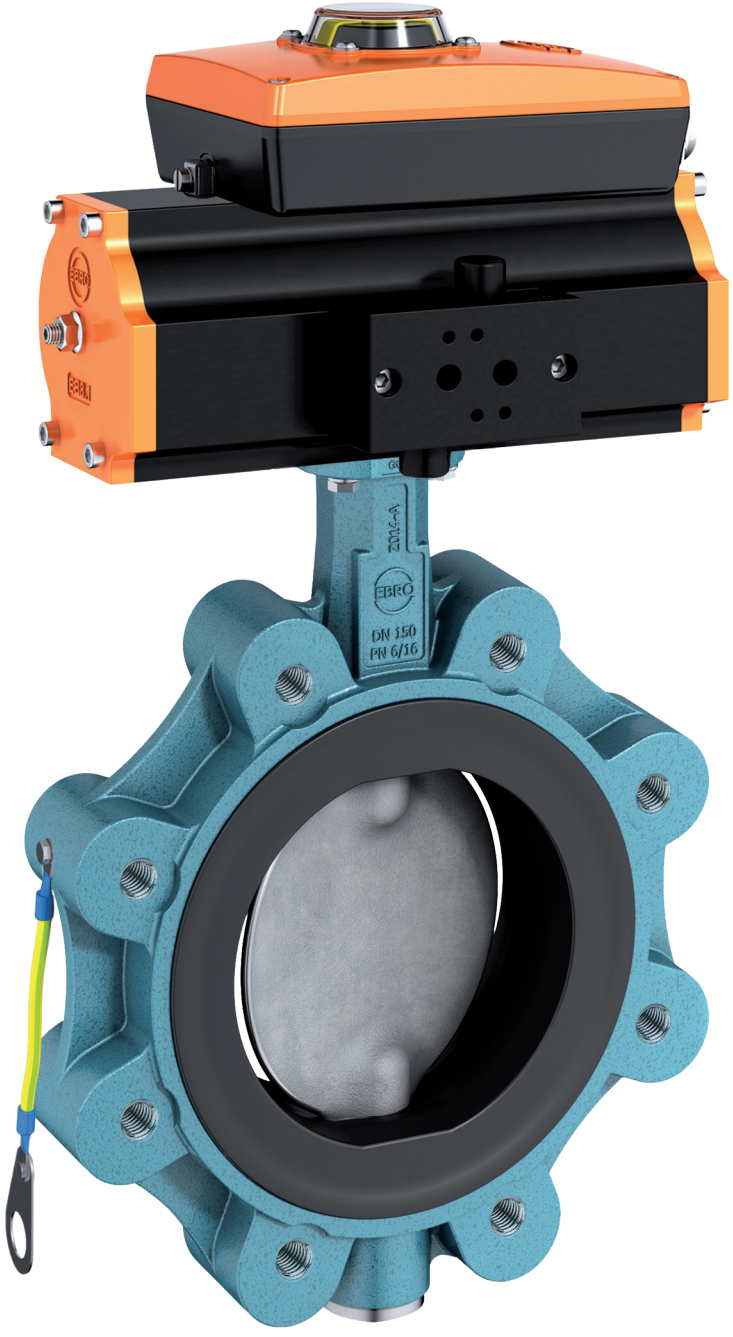
Valves for potentially explosive areas

Considered separately, a valve is a non-electrical device that does not have a potential ignition source of its own. However, when installed and working within an operating environment, valves are capable of becoming electrostatically charged and causing hot surfaces. Thus, ultimately, they can indeed be considered a potential source of ignition. For this reason, valves come under the scope of the ATEX Directive 2014/34/EU. However, there are differences in the way this is interpreted by manufacturers. The majority adhere to the provisions of the VDMA's ATEX guidelines for the valve industry, in particular the statement that as a mechanical closing device the valve does not fall within the scope of ATEX. But what this actually means for customers in practical terms is that they need to have valves that are components of an equipment or safety system in potentially explosive areas tested and approved. This is an elaborate process that is time-consuming and incurs high costs.

For EBRO ARMATUREN this aspect is a matter of principle. "The requirements in potentially explosive areas are particularly stringent. We want to offer reliable safety from the outset, so our product lines are tailored to the requirements of ATEX," says Thorsten Hardt, Head of Product Management. "Surfaces that come into contact with a potentially explosive atmosphere can become electrostatically charged due to friction and therefore create a potential source of danger. The same applies to the surfaces of valves. Many years ago we therefore decided to work systematically on implementing ATEX for all EBRO valves."

Today all EBRO's soft sealing valves are available with EU type testing and can be supplied with ATEX marking and indication of the EPL (equipment protection level). They meet the current requirements relating to the standards EN ISO 80079-36 and EN ISO 80079-37. In the meanwhile, approved insulating or conductive elastomer liners are available for all product lines. These include, for example, various NBR, EPDM, FKM and SBR blends approved for gas or dust zones depending on application. Additional requirements like FDA and BfR can also be met using these liners. Conductive coatings can be supplied at customer request or if technically necessary. In designs with throughgoing shaft, butterfly valves are now also available up to a maximum operating pressure of 10 bar and the highest dust explosion class ST3.

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