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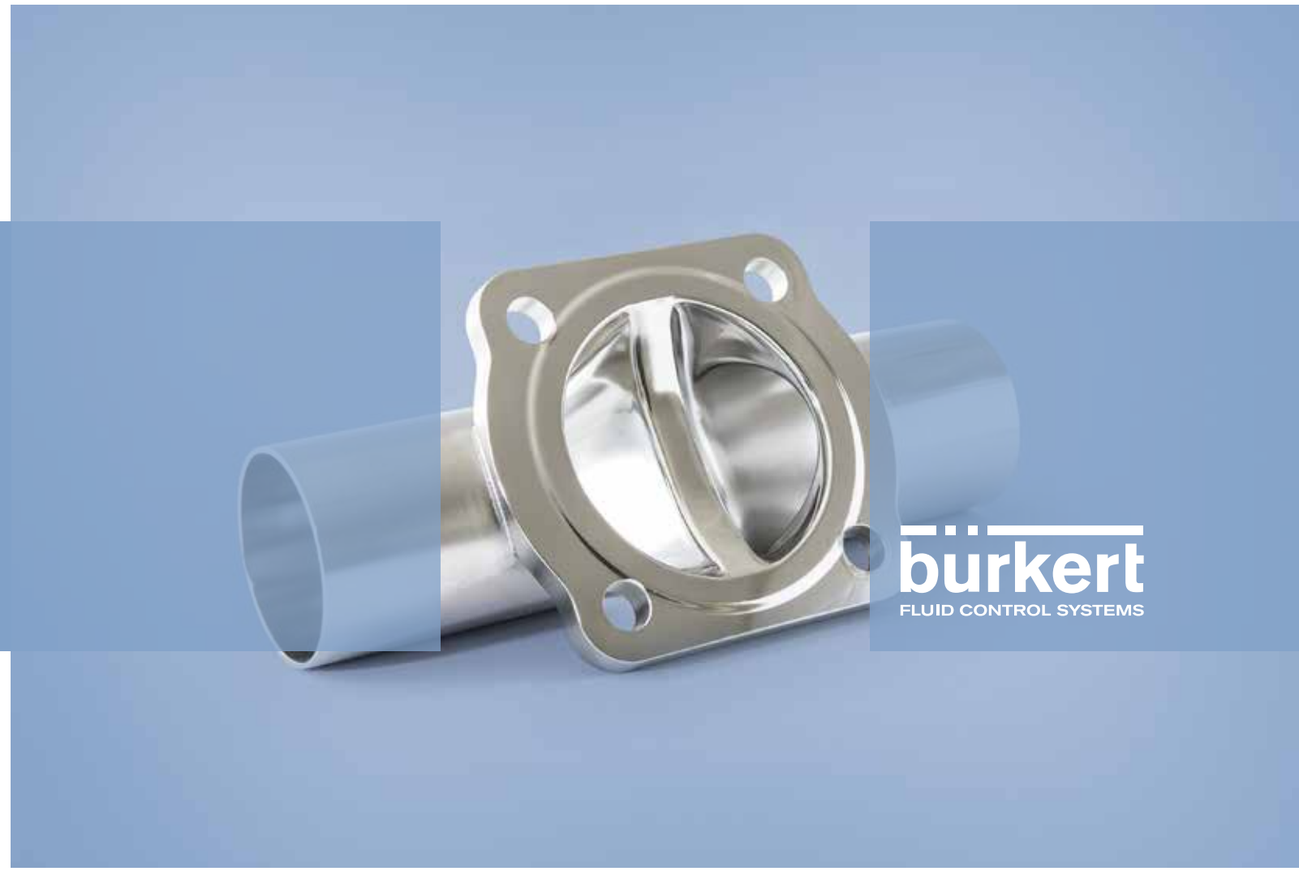
Groundbreaking into a former two-way race

The Hydroformed Tube Valve Body for Diaphragm Valves



- Create more sustainable processes
- Regain valuable manufacturing time
- Increase overall plant productivity

The Hydroformed Tube Valve Body for Diaphragm Valves

One of the most common necessities for manufacturing pharmaceuticals, cosmetics, food and beverages are diaphragm valves. What used to be a dull two-way race between forged and cast body variants is now being challenged by an exciting, ground-breaking technology. The hydroformed, light-weight diaphragm tube valve body will change the way you think about plant design and operation – as it helps you create more sustainable processes while meeting the industry's demanding regulations. And during operation, it can increase overall productivity of your plant.

The new tube valve body in combination with Bürkert's diaphragm valve actuators

Current challenges

Currently, traditional forged body diaphragm valves needlessly consume energy in SIP processes with loads of costly-to-raise clean steam. At the same time, they diminish manufacturing time while heating and cooling slowly in CIP/SIP cycles due to their excessive thermal mass. This is also valid for cast bodies, even though they have a lower thermal mass than forged, but are still heavier than the new tube valve body. Besides, cast bodies increase product contamination risk due to possible casting impurities.

The way to more sustainable processes …

Now you are able to regain your valuable manufacturing time due to shortened heat-ups and quicker cool downs, as Bürkert's unique tube valve body has a remarkably lighter thermal mass than forged and cast alternatives – up to 75% for a 2-inch-valve. During laboratory testing, we found steam rate savings of up to 53.8% per valve (with a temperature delta of 100 K). Multiply this energy saving with the number of valves in your plant – and then multiply again with the number of CIP/SIP cycles per year!

Expect the high quality you are used to. The tube valve body is robust and rigid: Its wall thickness conforms to ASME-BPE 2014, the hydroformed tube section and the flange are joined by laser welding. Hygienic safety is assured by EHEDG certified CIP processes and the fact that any media only touches the diaphragm and the pharma tube section – which is identical to the piping elements you are already using in your process! With this revolutionary body, you get access to the most hygienic connection available: tube-to-tube welding.

… and higher plant productivity

The tube valve body is a ground-breaking technology for diaphragm valves users in the pharmaceutical, cosmetic, food and beverage industry. You will be able to design lighter, more sustainable processes including less steam for CIP/SIP. With these energy savings plus Bürkert's green tube valve body production you will reduce your overall Carbon Footprint. Moreover, when the process comes into operation, tube valve bodies can increase overall productivity of your plant by increasing the manufacturing time available to you.

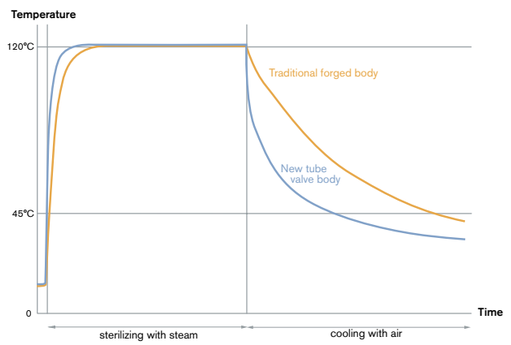
The tube valve body helps to design lighter, more sustainable processes.

Applications

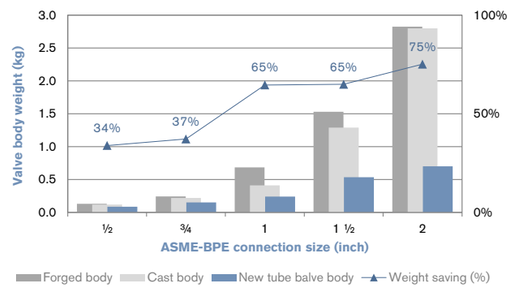
- Clean Utilities – distribution and storage loops for pharmaceutical water like WFI and PW
- Cleaning in Place (CIP)
- Sterilization in Place (SIP)

Industries

- Pharmaceuticals, Biotechnology
- Cosmetics
- Food & Beverage



Regain valuable manufacturing time with shortened heat-ups and quicker cool downs in SIP/CIP cycles: SIP temperature curves in comparison.



The tube valve body has a lighter thermal mass (up to 75 %) than traditional forged or cast body alternatives and therefore saves energy.