

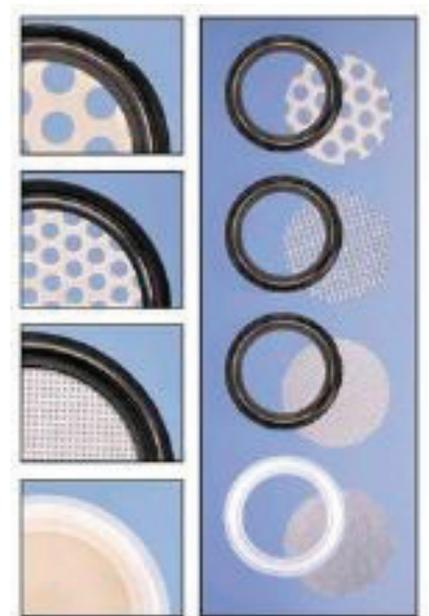
Sanitary Screen Gaskets and Orifice Plates- When Do You Use Them?

Sanitary Tri-Clamp gaskets are fairly simple devices used to seal a union between two Tri-Clamp ferrules. But there are derivatives of the Tri-Clamp gasket that can be used as a simple, cost effective way to solve some other process issues. Today, we are writing about two of these devices, the sanitary Tri-Clamp screen gasket and the sanitary Tri-Clamp orifice plate.

If you want to separate a large volume of solids from your process stream you would use a filter. There are many commercially available sanitary filters and filter screen devices on the market. We sell a lot of them. But if you have a very light volume of solids to separate out of your process stream, you may be able to use a sanitary screen gasket. These can also be used as a cost-effective safety device, to ensure any foreign materials introduced into the process line gets trapped.

Sanitary screen gaskets consist of an elastomer outer section that resembles a standard Tri-Clamp gasket. The gasket portion is bonded to an inner section consisting of either stainless steel screen material or a perforated stainless steel plate. The sealing materials portion of the gaskets are offered in FDA approved materials including EPDM, FKM (Viton), Buna-N, and Silicone. The screen portion of the gasket is constructed of 316 stainless steel.

In addition to sanitary screen gaskets being made from FDA approved materials, you can choose a screen gasket in a USP Class VI elastomer for pharmaceutical applications. They are available in a variety of mesh sizes, 10 micron through 4 mesh. Higher chemical and thermal resistant materials including Teflon and Tuf-steel are also available. Sanitary screen gaskets are also available in metal detectable elastomers.



Mesh Options for Screen Gaskets

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What's the downside of using a sanitary screen gasket? First, they cannot handle a large solids load. In heavy solids loading conditions they will foul very quickly. Second, compared to a filter, the sanitary screen gasket may be more difficult to pull out of your process line to clean when compared to using a tee style filter/strainer.

Sanitary orifice plates can be used as an economical means to either constrict either flow/pressure downstream in a sanitary process line or to maintain a constant pressure upstream on a line. In simple, constant flow applications it can often replace a more expensive pressure control valve. A sanitary orifice plate is like the screen gasket in that it has an outer section resembling a Tri-Clamp gasket. The sanitary orifice plate has an inner 316 stainless steel solid plate. The plate can be drilled out specific dimensions to achieve the desired pressure and or flow reduction across the plate. Like the screen gaskets, sanitary orifice plates are available in a broad range of FDA and USP Class VI elastomers.

With many different availabilities in materials used in gaskets and orifice plates it can be difficult to pick the appropriate one for your application. Different elastomers may stand up to a temperature but may not stand up to a chemical that is being used. If you are having a chemical compatibility issue please email us at sales@tricanada.com.