

Edelstahl Maurer AG

Edelstahl Maurer AG specializes in the development, design, manufacturing, assembly and commissioning of process engineering facilities and pressure vessels of the highest standard. Our customers are mainly buyers in the pharmaceuticals and biotechnology industries.

As the market leader in various fields, we develop and manufacture top-quality products and provide outstanding services.

We would be happy to provide you with more information about our products.

You can contact us at any time.

MAURER®

MAURER®



The MAURER® API/ADC freeze-thaw vessel is a mobile stainless steel vessel used for freezing and thawing biopharmaceutical products (API/ADC) under controlled conditions. The frozen product can be stored or transported in the vessel for a long period of time with no loss of quality.

Innovative design

The MAURER® API/ADC freeze-thaw vessel consists of a jacketed, cylindrical stainless steel tank with a radial, corrugated heat exchanger inside, which divides the vessel lengthwise into six sections. This design reduces the distance of heat transfer and improves energy exchange across the entire volume, promoting dendritic ice formation and preventing damaging cryoconcentration.

Outstanding product characteristics

The product can be sterile filtered and frozen in the vessel.

An external cooling system with temperature-controlled silicone oil circulation cools or heats the vessel wall and internal heat exchanger, to ensure precise control over the freezing and thawing process.

During thawing, the MAURER® API/ADC freeze-thaw vessel can be shaken, which speeds up the mixing of the product and prevents areas of uneven concentration. This results in an even temperature distribution in the solution to provide a quick and safe thawing process.

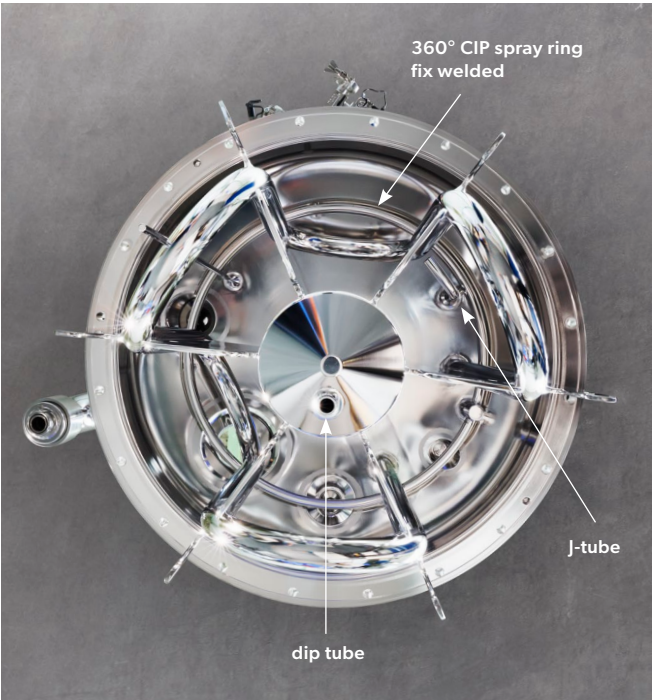
The stainless steel vessel is designed for clean-in-place (CIP). A fix welded 360° CIP spray ring ensures thorough cleaning.

For emptying, the vessel is equipped with a heatable dip tube, which is guided through the triple central tube. The curved J-tube, which is positioned in the direction of a serpentine, is used for filling. The design ensures that the end product can be filled or extracted efficiently and safely.

The vessel is ASME- and PED-pressure rated and designed for steam-in-place (SIP).

The MAURER® API/ADC freeze-thaw vessel is available in sizes of 20 to 300 liters.

The minimum operating temperature for these stainless steel vessels is -80°C.



View of the cover unit from below with radial, corrugated heat exchanger, dip tube, J-tube and fix welded 360° CIP spray ring

The benefits of stainless steel

Stainless steel systems have proven effective for controlled freezing and thawing, with the aim of protecting the product, minimizing loss of efficacy and ensuring long-term stability without compromising quality characteristics.

Stainless steel vessels

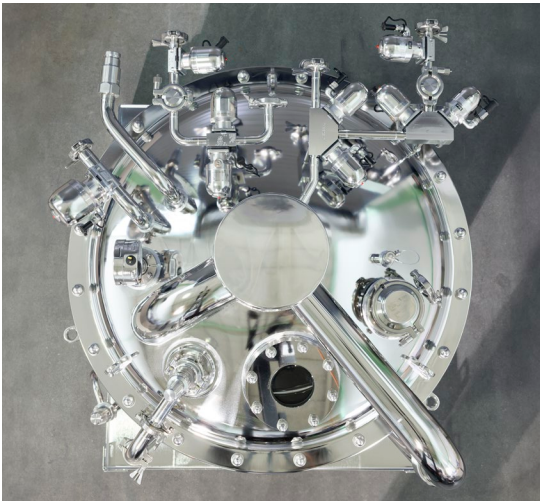
- are safe, reliable and stable
- free from leachable and extractable substances
- substances due to a long service life

Benefit from our experience and know-how

For over 25 years, we have been concentrating on developing, designing and manufacturing the MAURER® API/ADC freeze-thaw vessel and have delivered over 1,300 units worldwide to date. In close collaboration with the world’s biggest biotech companies, we have accrued extensive knowledge and manufacturing know-how and grown to be the market leader in this field. Benefit from our experience!



Stainless steel vessel with cover unit open



View of the cover unit with its arrangement of connections



Stainless steel vessel ready to be transported by air in an LD3 container cooled with dry ice