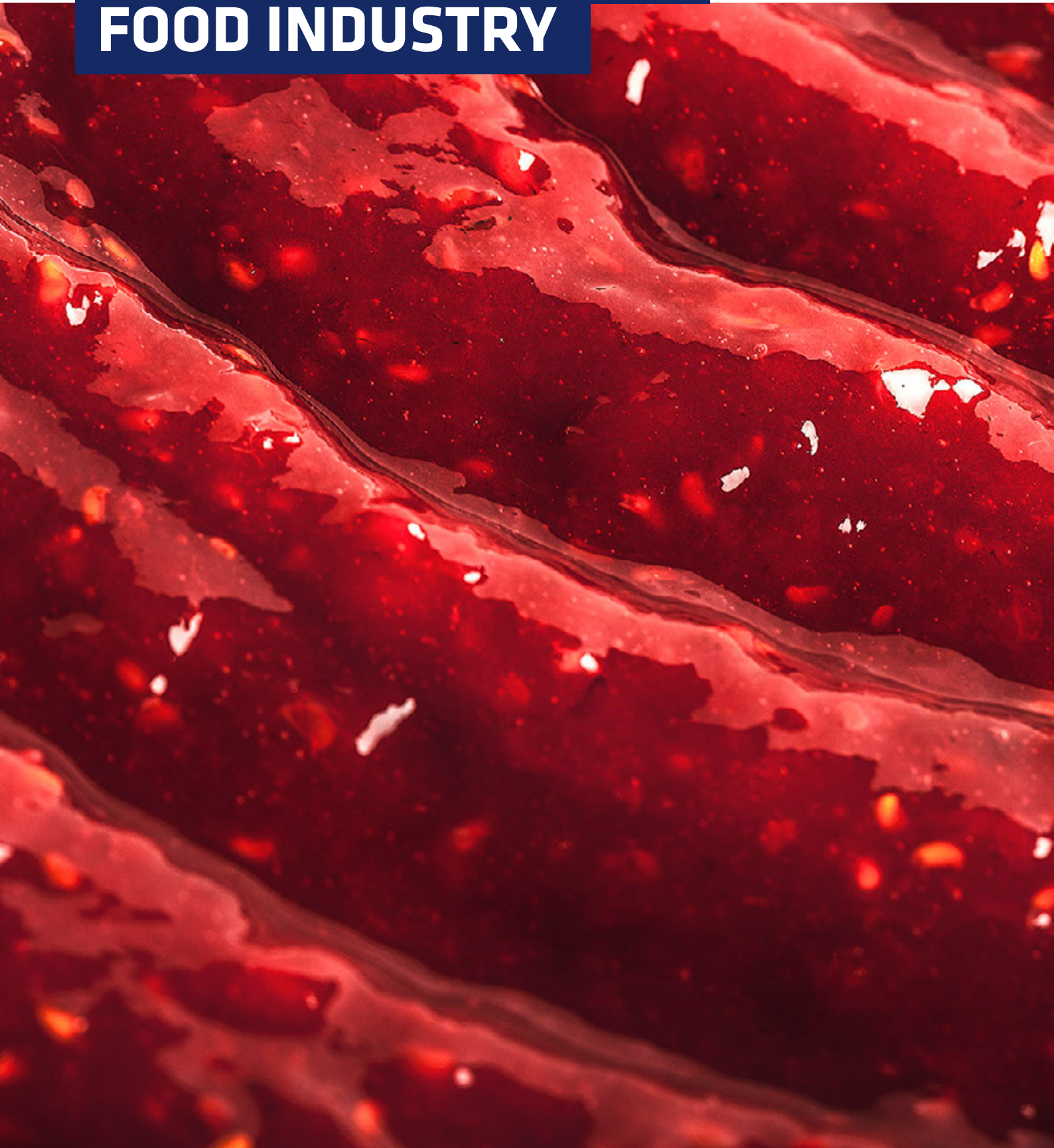




SOLUTIONS FOR THE FOOD INDUSTRY



WELCOME

ABOUT US

As one of the world's leading manufacturer of stainless steel containers, THIELMANN delivers unsurpassed container expertise. The profound knowledge we've gathered in more than 275 years of container production and use, in a diverse range of industries, render us uniquely qualified to confidently and successfully tackle your business challenge.

- 04** INDUSTRY APPLICATIONS
- 05** CERTIFICATIONS
- 06** SMALL INDUSTRIAL CONTAINERS
- 08** INTERMEDIATE BULK CONTAINERS - IBCS
- 12** TANK CONTAINER SOLUTIONS
- 13** POWDER HANDLING SYSTEMS
- 15** SERVICES OVERVIEW

THE NUMBER ONE CHOICE FOR THE HYGIENIC STORAGE, TRANSPORT AND MAINTENANCE OF THE ORGANOLEPTIC PROPERTIES OF YOUR FOOD PRODUCTS UNDER EVEN THE MOST DEMANDING CONDITIONS

THE FOOD INDUSTRY IS EXTREMELY DEMANDING AND IT IS ABSOLUTELY ESSENTIAL TO OBTAIN ASEPTIC RECIPIENTS AND CONTAINERS WHICH ENSURE MAXIMUM QUALITY AND SAFETY, AND WHICH KEEP THE CHARACTERISTICS OF FOOD INGREDIENTS WHICH THEY CONTAIN INTACT

THIELMANN stainless steel containers for the storage, mixing and transport of manufactured food products are made to highest performance levels, certifications and standards to guarantee the best preservation of your products.

Food product production, in all of its varieties, is subject to strict hygiene, quality and food safety requirements, as well as numerous certifications from official state and industry bodies and administrations.

Our containers are manufactured from AISI 304 / AISI 316 high-grade austenitic stainless steel to guarantee high durability and the best possible corrosion protection, which extends their longevity in even the most punishing conditions. They also offer your workers increased safety because they are completely fireproof.

In addition to ensuring optimum conservation of the organoleptic properties of your products, THIELMANN containers for the food manufacturing industry save our customers money. Their antibacterial properties also allow for easy and effective cleaning – a feature particularly appreciated by users of our tank containers.

In any case, your partnership with THIELMANN gives you access to a global engineering team, a solution with a geometrically perfect design and, most important of all, special attention and adaptation to your specific needs.

ADVANTAGES OF STAINLESS STEEL FOR THE STORAGE AND TRANSPORT OF FOOD PRODUCTS

- Preserves the organoleptic properties of food products
- Preserves food quality and flavor
- Allows for easy, effective and antibacterial cleaning
- Protects against the entry of external contamination and ultraviolet (UV) light
- Prevents the entry of impurities, as well as any kind of oxidation
- Protects food against sudden temperature changes
- Useful life of 30 years, providing economic savings
- Allows for easy transport and storage
- Easy to transport and store

Choose high-grade stainless steel for storage, mixing and transport containers for the food products produced by your industry to obtain assurance and peace of mind with the lowest possible investment. Choose 100% flavour and 100% quality. Choose THIELMANN.

INDUSTRY APPLICATIONS

DAIRY PRODUCTS

THIELMANN's high-grade stainless-steel containers can store, transport and dispense many different types of dairy products, such as, milk, butter, cheese, ice cream, yogurt, powdered milk and condensed milk. The antibacterial properties of stainless steel render our containers the ideal vessel for the storage and transportation of a diverse variety of dairy products.

LIQUID EGG

Liquid egg is a pasteurized egg product which is commonly used as an ingredient in the bakery industry in place of shell eggs. Liquid egg has several advantages over its shell egg counterpart, such as, higher convenience and a longer shelf life. It is therefore vital to store and transport this product in a completely aseptic stainless steel container to correctly preserve it in order to reap all of its benefits.

FOOD ADDITIVES

Our stainless steel containers are the prime choice to store food additives which are used in food production for reasons such as, preservation, coloring and sweetening. Additives are added to food at many different stages of food production: during its manufacture, processing, preparation, treatment, packaging, transport and storage, and as such, having the right containment solution is vital.

BEVERAGE INGREDIENTS

THIELMANN high-grade stainless steel containers are the best option for the storage and transportation of beverage ingredients and can be custom-tailored for: energy drinks, sports drinks, mixed-beer drinks, carbonated soft drinks, syrups, still drinks, plus many more. Based on the technological intricacies and challenges presented by these types of beverages, stainless steel containers are the perfect choice for a wide range of applications.

These are indicative applications you might use our containers for. The raw materials you work with will always be submitted for technical evaluation by our experts first. They will subsequently review and recommend the best containment solution to meet your needs based on residence time, temperature and concentration of your materials. Please contact us to check the suitability of your application.

EDIBLE OIL

An edible oil is a plant, animal, or synthetic fat used in food preparation and cooking. Stainless steel containers are most suited for the storage and transportation of edible oils in comparison to other types of containers because they have smooth and seamless interiors which allow for easy emptying of these greasy oils. The aseptic nature of stainless steel also preserves the integrity of the antioxidants found in edible oils.

FRUIT PREPARATIONS / FRUIT CONCENTRATES

Fruit concentrate is made by removing the water from fruit, and is an ingredient found in many food products, from orange juice to granola bars. Fruit preparations are also a key component in many dairy products. THIELMANN high-grade stainless-steel containers assure total quality of these ingredients, which have specific demands in relation to their storage and processing.

AROMAS AND ESSENCES

In the food industry aromas and essences are used in a variety of different processes. Stainless steel containers provide complete safety and total quality for the storage and transportation of these ingredients. THIELMANN high-grade containers are made to exacting standards in order to handle, sometimes volatile, gaseous substances, liquids, and even solid foods and aroma essences.

OTHER RELEVANT APPLICATIONS

- Chocolates
- Liquid seasonings and sauces
- Pet food and animal feed
- Sugar processing and refining
- Starch
- Dried fruit
- Infant formula

CERTIFIED QUALITY

RIGOROUSLY TESTED AND FULLY ACCREDITED STAINLESS STEEL CONTAINER SOLUTIONS

Now, more than ever before it is key that your container solutions carry the relevant certifications or approvals proving that they have met specific safety and quality standards. Quality control is a key part of our business, and thanks to our global reach we are well-versed in the international expectations demanded from us by our customers to achieve these certification requirements. We have many years of experience in managing these quality assurance processes with clearly defined practices,

documentation and control procedures which confidently deliver exhaustively tested and fully accredited certified solutions, delivering quality that is second to none. THIELMANN containers can be adapted to comply with all international markings and regulations, offering total assurance and peace of mind that our solutions have met the rigorous standards to assure quality, safety, and protection of the environment and human life.

ISO 9001

Internationally recognized quality management system standard.

EC 1935-2004

Materials and articles intended to come into contact with food.

UN Approval

Regulation for the transport of dangerous goods.

ASME "U" AND "T"

Certified for the manufacture of pressure vessels for transport in the US.

AD 2000

Certified for the AD 2000 pressure vessel code in Germany.

UL approvals

(Underwriters Laboratories) Approval for electrical equipment used in the US.

ADR

Transport by road.

IMDG

Transport by sea.

Our technical team will assist you to guarantee that your products are safely stored and transported from the point of origin to the destination fulfilling all the requirements that apply to them. Please contact us to request further information about any certification or approval needed.

WHG

Certified to act as a specialist company in compliance with Germany's Water Resource Act.

2014/68/EU

Directive on the harmonization of the laws relating to the making available on the market of pressure equipment.

CE Approval

According to Pressure Vessel Directive 97/23/ECC for fluid categories 1 (dangerous) and 2 (non dangerous).

NATIONAL BOARD "R" AND "NB"

Certified for the repair and/or alteration of boilers, pressure vessels, and other pressure-retaining items.

ISO 3834-2

Quality certified for fusion welding of metallic materials.

DOT

US Vibration tests.

RID

Transport by rail.

SMALL INDUSTRIAL CONTAINERS

MULTIPURPOSE VESSELS

FLEXIBLE CONTAINER SOLUTION AVAILABLE IN MANY DIFFERENT SIZING FORMATS

THIELMANN Multipurpose Vessels are suitable for products which do not require any specific certification. As such, this renders them the ideal versatile solution for customers who require a flexible high quality container suitable for a multitude of different applications.

The main advantage of the THIELMANN Multipurpose Vessel is the vast range of flexible customization options available. For example, they can be constructed using either AISI 304 or AISI 316L/316Ti high quality stainless steel depending on your requirements, and are also available in many different capacity formats from 0.6 - 66 gallons (2.5- 250 Liters). The different diameter sizing options range from 216mm - 550mm.

Due to their customizable nature you can create a truly unique high quality container solution for use within a myriad of industries.

  **VOLUME**
2.5 - 250 Liters / 0.6 - 66 Gallons



CE PRESSURE VESSEL FOR HIGH PURITY APPLICATIONS

CE STAINLESS STEEL PRESSURE VESSEL, DESIGNED FOR STATIONARY USE UNDER PRESSURE

With decades of experience in the production of stainless steel containers and drums, THIELMANN confidently designs and delivers customized products.

Our portable stainless steel pressure vessels are manufactured using only the highest quality stainless steel (AISI 304, up to AISI 316L) can be built in accordance with the requirements of CE.

If required, the surfaces of our pressure vessels and containers can be treated with electro polishing, in this process, metal is removed ion by ion from the surface of the object via electrolysis. As a result, the surface of the metal is microscopically featureless, with not even the smallest speck of a torn surface remaining, this therefore avoids the deposit of any material whatsoever.

  **VOLUME**
From 5.7 to 120 Liters / 1.5 - 32 Gallons



ION EXCHANGE VESSELS

CE APPROVED VESSEL FOR WATER SOFTENING AND ION EXCHANGE

Pressure vessels are the holding vessels for ion exchange resins and can play an integral part of most water treatments systems. These pressure vessels are an essential component within the Water Treatment Industry to ensure impeccable water softening and demineralization.

Our Water Treatment Pressure Vessels are manufactured using only the highest quality stainless steels (AISI 316Ti) and can be used at varying temperatures and pressures. These vessels are designed to be filled with the correct resin mixture in order to remove ions from the water.

THIELMANN supplies ion exchanger solutions in stainless steel that perform desalinization, decalcification and decarbonizing tailor-made to your specific business needs.

THIELMANN. Your preferred industrial partner for custom-made pressure vessels.

  **VOLUME**
10 - 100 Liters / 2.6 - 26 Gallons



HAZARDOUS STORAGE & TRANSPORT VESSEL

UN APPROVED VESSEL SUITABLE FOR MANY APPLICATIONS, INCLUDING ASME APPROVED STORAGE, FILLING AND EMPTYING

THIELMANN UN Vessels for hazardous products are constructed using high quality stainless steel (AISI 304, up to AISI 316L) and are designed for the storage and transportation of dangerous goods, and other products commonly used within the Oil & Biofuel, Biotechnology, Chemical, Health & Beauty, Pharmaceutical, Hygiene, Semi-Conductor, Food, Pulp & Paper and Power Generation industries.

They are suitable for applications under pressure, including stationary filling and emptying, and as part of our extensive customization options, THIELMANN UN Approved Stainless Steel Vessels can be built in accordance with the requirements of CE or the ASME Boiler and Pressure Vessels code.

   **VOLUME**
10 - 250 Liters / 2.6 - 66 Gallons



INTERMEDIATE BULK CONTAINERS - IBCS

IBCS FOR LIQUIDS

ASC ASEPTIC IBC CONTAINER

ASEPTIC CONTAINER FOR LIQUIDS AND HIGHLY VISCOUS PRODUCTS

ASC Aseptic Container features ideal cleaning geometry, residue-free emptying, and is non-permeable. With great variety in sizes and non-wearing construction which allows continual re-use, the aseptic container ASC made of stainless steel meets all your requirements.

Our striving for quality and perfection ensures the highest possible degree of safety and lifespan. Your requirements and our pioneer culture give rise to customized, innovative products made of stainless steel. This product is also available to rent.



ASC BEI ASEPTIC HEATABLE IBC CONTAINER

HEATABLE ASEPTIC CONTAINER FOR HIGHLY VISCOUS LIQUIDS WITH HEATING SYSTEM

ASC BEI product warmer features optimal product temperature, ideal cleaning geometry, residue-free emptying, and is non-permeable. The food container ASC BEI made of stainless steel meets all your requirements.

Our striving for quality and perfection ensures the highest possible degree of safety and longevity. Your requirements and our pioneer culture give rise to customized, innovative products made of stainless steel.



METERCUBE IBC CONTAINER

CUBIC IBC FOR LIQUIDS WITH OPTIMAL SPACE UTILIZATION

MeterCUBE Cubic Container features ideal cleaning geometry, residue-free emptying, is non-permeable and unbeatable service life. The MeterCUBE made of stainless steel meets all your requirements.

Our striving for quality and perfection ensures the highest possible degree of safety and lifespan. Your requirements and our pioneer culture give rise to customized, innovative products made of stainless steel.

Cost-efficient, cubic IBC for liquids with optimal space optimization.



CUBICAL CONTAINER LTP

CUBIC IBC FOR LIQUIDS

LTP cubic container features ideal cleaning geometry, residue-free emptying, is non-permeable and unbeatable service life. With great variety in sizes and non-wearing construction which allows continual re-use, the LTP Cubic Container made of stainless steel meets all your requirements.

Our striving for quality and perfection ensures the highest possible degree of safety and lifespan. Your requirements and our pioneer culture give rise to customized, innovative products made of stainless steel.



CUBICAL CONTAINER TPN

CUBIC IBC FOR STORAGE AND TRANSPORT OF LIQUIDS WITH PROTECTING FRAME

The robust construction allows long-standing performance as a reusable container. With great variety in sizes and non-wearing construction which allows continual re-use, the TPN container made of stainless steel meets all your requirements.

Our striving for quality and perfection ensures the highest possible degree of safety and longevity. Your requirements and our pioneer culture give rise to customized, innovative products made of stainless steel. This product is also available to rent.



CYLINDRICAL CONTAINER IBCZN

CYLINDRICAL IBC FOR LIQUIDS

The robust construction allows long-standing performance as a reusable container. With great variety in sizes and non-wearing construction which allows continual re-use, the IBCzN container made of stainless steel meets all your requirements.

Our striving for quality and perfection ensures the highest possible degree of safety and lifespan. Your requirements and our pioneer culture give rise to customized, innovative products made of stainless steel.



CYLINDRICAL CONTAINER LATERAL OUTLET IBCZ-LO

CYLINDRICAL IBC FOR LIQUIDS WITH A HANDY CORNER OUTLET VALVE

The new THIELMANN cylindrical container is here offering an improved design along with an impressive 90kg weight reduction.

The optimized re-design of the IBCz-LO means that it is suitable for a multitude of applications, because it combines clean design, with the durability required to fulfill the demanding requirements that UN approved vessels for dangerous goods need to meet. Minimizes the overall weight without compromising on safety.



ELECTRIC HEATABLE CONTAINER ZBEI

ELECTRICALLY HEATED IBC FOR TEMPERATURE SENSITIVE AND POOR FLOWING LIQUIDS

ZBEI electrically heatable container features optimal product temperature, ideal cleaning geometry, residue-free emptying, and is non-permeable. With great variety in sizes and non-wearing construction which allows continual re-use, the ZBEI container made of stainless steel meets all your requirements.

Our striving for quality and perfection ensures the highest possible degree of safety and longevity. Your requirements and our pioneer culture give rise to customized, innovative products made of stainless steel.



IBCS FOR BULK SOLIDS

BULK CONTAINER BP

IBC FOR DANGEROUS POWDER AND BULK SOLID MATERIALS

BP Bulk Container features ideal cleaning geometry, residue-free emptying and is non-permeable. With great variety in sizes and non-wearing construction which allows continual re-use, the BP bulk material container made of stainless steel meets all your requirements.

Our striving for quality and perfection ensures the highest possible degree of safety and longevity. Your requirements and our pioneer culture give rise to customized, innovative products made of stainless steel.



BULK CONTAINER BPO

IBC FOR BULK MATERIALS WITH SELF-SUPPORTING DESIGN

BPO features ideal cleaning geometry, residue-free emptying and is non-permeable. With great variety in sizes and non-wearing construction which allows continual re-use, the BPO bulk material container made of stainless steel meets all your requirements.

Our striving for quality and perfection ensures the highest possible degree of safety and longevity. Your requirements and our pioneer culture give rise to customized, innovative products made of stainless steel.





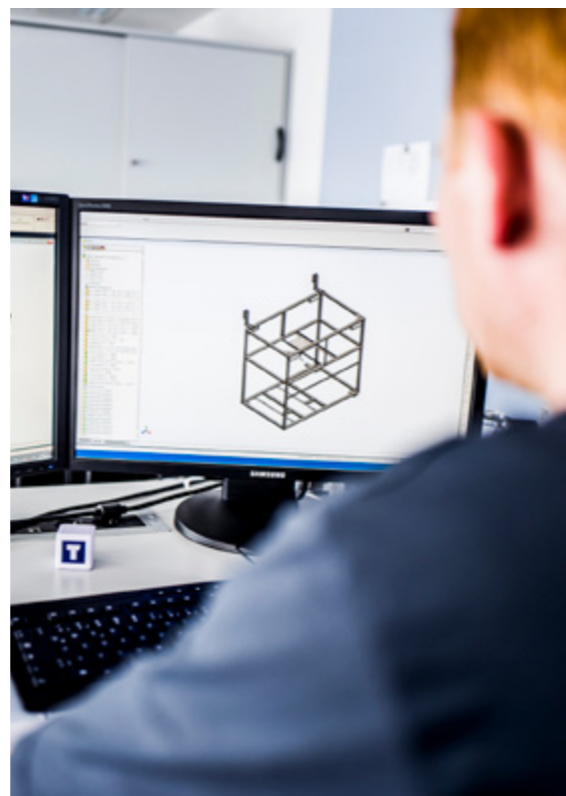
TANK CONTAINER SOLUTIONS

SPECIALIST SOLUTIONS

FOR SPECIALIST APPLICATIONS WITH UNIQUE REQUIREMENTS, THIELMANN OFFERS A DESIGN AND MANUFACTURING SERVICE

Whether you need deep customization of an existing product or a new 'clean sheet' design, THIELMANN engineers can design, manufacture, test and certify solutions that 100 percent meet your needs.

Flexible enough to work with any design parameters, we can provide specialist solutions in single or double-walled designs within standard ISO or non-ISO frames. Materials can include carbon, stainless steel (V2A / V4A) in all grades, hastelloy, nickel and titanium.



POWDER HANDLING SYSTEMS

ADVANCED CONE VALVE SYSTEM

ADVANCED CONE VALVE SOLUTIONS FOR DIFFICULT TO FLOW BULK MATERIALS WITH ADVANCED CLEANLINESS REQUIREMENTS

The THIELMANN advanced cone valves offer an operational advantage when working with poor flowing and sticky bulk materials that have high cleanliness requirements.

Our technical experts will match your bulk material with the right advanced cone valve solution to eliminate bridging, rat-holing and segregation during operations.

Ensure precise dosing and discharge every time with zero cross-contamination.

THIELMANN advanced cone valves are designed to be safe, hygienic and easy to use. They can be controlled manually or via fully automated process to ensure precise dosing every time.



BUTTERFLY VALVE SYSTEM

BUTTERFLY VALVE SYSTEMS ARE THE BEST OPTION FOR NON-HAZARDOUS, EASY FLOW MATERIALS WITHOUT HIGH CLEANLINESS REQUIREMENTS

For the easy transfer of non-hazardous bulk materials with good flowability between container and receiving unit, THIELMANN butterfly valves are suited to a range of applications and industries.

Our butterfly valve systems can be manually, semi-automatically or full-automatically operated, giving operators maximum flexibility for their powder bulk handling operations.

Principal areas of application for the butterfly valve systems are non-hazardous, easy to flow bulk materials for operations where high levels of cleanliness are not a primary concern.



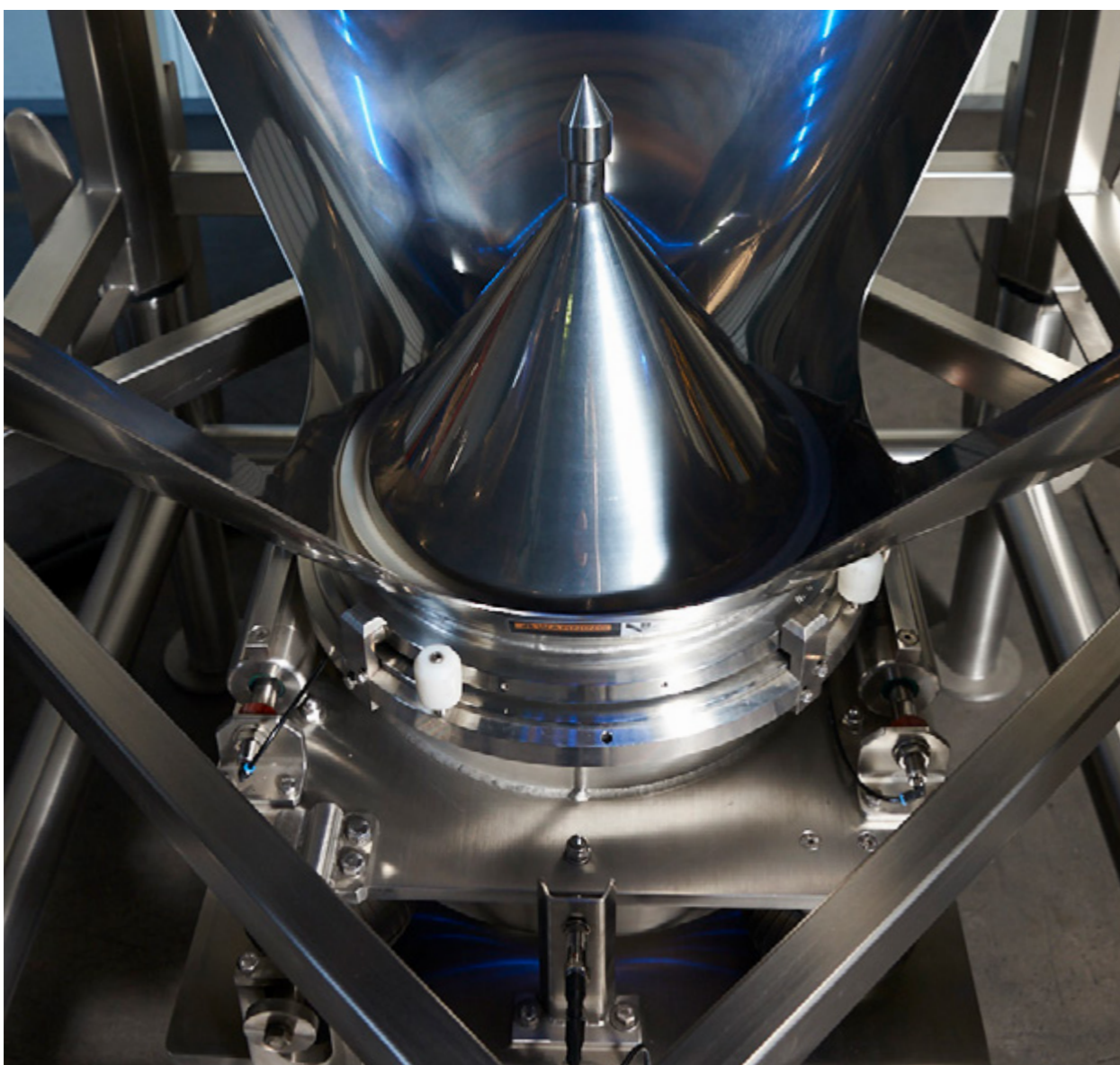
SPLIT BUTTERFLY VALVE SYSTEM

FOR OPERATIONS WHERE CROSS-CONTAMINATION AND THE CONTAINMENT OF DUST AND PARTICLES IS A CENTRAL CONCERN

THIELMANN split butterfly valve systems are designed to meet and exceed the rigorous requirements of industries that require the very highest quality solutions for the transition of materials between container and receiving unit, particularly where highly hazardous bulk materials are in use, or where the product needs to be protected from external agents, as in the Pharma industry.

For the safe and contamination-free transfer of products between container and receiving unit, THIELMANN split butterfly valves control dust and other materials for a safe operating environment, and ensure the integrity of the end product.

Principal areas of application are highly hazardous or delicate, easy to flow bulk materials where contamination levels must be kept to a minimum, and high cleanliness is paramount.



SERVICES OVERVIEW

FROM MAINTENANCE TO REPAIRS AND CERTIFICATIONS, AND EVEN FINANCING SOLUTIONS, HERE AT THIELMANN WE WANT TO TAKE THE HARD WORK OUT OF MANAGING YOUR CONTAINER FLEET.



SERVICES FOR IBCS

Your trusted global partner for cleaning, maintenance and testing.

Proper maintenance and repair of your container fleet is essential to its performance, safety, uptime, and longevity.

As a company specializing in comprehensive large IBC packaging services, you can receive all services, from a single source, leaving you to focus on your core business whilst ensuring a reliable and cost-effective supply chain of clean and functioning IBCs for your customers.

Take advantage of our professional services:

- Cleaning of reusable hazardous and non-hazardous goods containers (IBCs)
- Maintenance, revision and repair of all types of metal IBCs
- Approved inspection body for statutory tests
- On-time pick-up and delivery logistics



SERVICES FOR TANK CONTAINERS

Our systems are operated in some of the harshest environments, frequently used by operators who may not be fully conversant with the system design. **Field service support, periodic upgrades, design and safety** case reviews form a critical element of THIELMANN's integrated service package.

We provide an exceptional standard in bespoke support solutions (for our own products as well as third party products) which include:

- Post design services
- Contractor logistics support
- Contracting for availability
- Operator and maintenance training (web-based training and virtual reality simulations)
- Spares
- Codification
- Obsolescence management
- Regeneration and upgrades



IBC RENTALS

In reaction to a surge in market demand, THIELMANN has got your business covered with its range of standard IBCs, in stock, and now available to rent. Our offer includes renting and leasing from short to long-term, and sale/ lease back agreements.

- Flexibility: containers when and where needed, with the latest technology, allowing you to benefit from seasonal surges in demand and production.
- Quick delivery: the right container for the right product, delivered at short notice thanks to our large stock.
- Financial benefits by reserving valuable lines of credit for other growth opportunities.

Standard IBCs available for rent can be customized with different discharge valves depending on your connections, and labelled or customized with a sticker with your brand's name.



BUYING AND SELLING SERVICES

Whether you need to dispose of your old containers or are considering buying second-hand ones, we are confident that our 360 services will have the solution for you:

- Purchasing of already-used containers from our customers, including kegs, IBC, and tank containers which we then, depending on the condition, either scrap or recondition and re-sell.
- We also offer to sell second-hand containers to our customers, which we ensure have met our own very high standards, in a wide range of sizes, specifications, and conditions.

FINANCIAL SERVICES

THIELMANN offers customized financial solutions to meet your business objectives. Whether you're a small company or a large corporation, we have the resources and know-how to help your business to develop and expand.

WHY THIELMANN?

Here at THIELMANN we endeavor to be the best at whatever we do, and with the reach of our global network we are fortunate that we can respond to change rapidly without causing disruption to our customers. Our commitment to the success of our customers combined with our unrivaled expertise render us the ideal partner for your container requirements. The THIELMANN team is a passionate and dynamic force which doesn't shy away from challenges - in fact we relish them!

Challenge us – and we'll confidently meet and exceed your expectations.



CONTACT US EXPERTISE YOU CAN TRUST

sales@thielmann.com

THIELMANN UCON GmbH

Gustav-Rivinius Platz 2
77756 - Hausach
Germany

Tel. +49 7831 77269

THIELMANN Mexico S.A. de C.V.

Eje 124 No. 115-7 Zona Industrial
78395 - San Luis Potosi
Mexico

Tel. +52 444 4565300

THIELMANN CONTEK Services GmbH

Harzstrasse 12
99755 - Ellrich
Germany

Tel. +49 3633 22890

THIELMANN PORTINOX SPAIN S.A.

Ctra Pulianas, km 6
18197 - Pulianas - Granada
Spain

Tel. +34 958 406000

THIELMANN UK Ltd.

Unit 1 Churchwell Vale - Shaw Cross
Business Park - WF12 7RD - Dewsbury
United Kingdom

Tel. +44 1924 885010

THIELMANN AG

Park Tower 12th Floor, Gubelstrasse 24
6300 - Zug
Switzerland

THIELMANN WEW GmbH

Ringstrasse 65a
57586 - Weitefeld
Germany

Tel. +49 2743 9222-0

THIELMANN US LLC.

12121 Wickchester Lane, Suite 325.
Houston, Texas 77079
United States

Tel. +1 281 741 8547