



## Our fiber drum program – a perfect fit for great logistics

Quality, security, sustainability,  
and value!



*The MAUSER® fiber drum program provides superior solutions for many transport and logistic requirements throughout numerous industries. We offer you a worldwide leading brand when it comes to combining security and efficiency.*

*MAUSER specialists are dedicated to excellence in design and manufacturing. Their goal is to achieve the most cost-effective and eco-friendly industrial packaging possible.*

*As a market leader it is our ambition to provide high-quality, light-weight packaging solutions that exceed your expectations for performance and value.*

## Efficient logistics are great. Even better is logistical excellence.

Fiber drums by MAUSER optimize the advantages for your business. It is not only about being efficient but also about being effective. As a frontrunner in our industry, we at MAUSER see economic success must not conflict with environmental and social responsibility. This spirit is an integral part of our business model.

- ▶ We are not only about products but about people. The MAUSER team of industry experts are committed to providing you superior industrial packaging solutions. And we do it not only through innovative packaging design and advanced material development, but through reliable, competent, technical service support.
- ▶ Our operational excellence and machinery expertise drives continual packaging and systems innovation providing you incomparable value.
- ▶ Our global footprint means that we manufacture our fiber drums close to where you need them providing you with a reliable and timely supply stream.
- ▶ Due to modular design concepts, we are capable of modifying our product line to provide you with a customized solution that works just right for you.
- ▶ “Fit for purpose” philosophy. At MAUSER we like to focus on what really counts – providing fiber drums for safe and reliable transport of solid, liquid and semi-liquid filling goods. The MAUSER fiber drum program reflects our philosophy: packaging solutions for a variety of individual applications without being technically over-engineered.

**Our fiber drum program will provide your company and your products with the protection, the cleanliness and the consistency you require in order to succeed. We supply more than just packaging; we supply success.**



*MAUSER offers an extensive line of fiber lock ring drums featuring multiple diameters ranging for the US market from 14" to 23" and filling capacities between 4.5 to 75 gallons (US) and for the EU region from 375 to 560 mm and filling capacities between 20 to 230 l.*



*If efficient product protection is required, our drums can be produced with poly, silicone or anti-static liners. Optional foil lamination barriers provide maximum moisture resistance.*



## MAUSER fiber drums provide you with extremely convenient, cost-effective and eco-friendly solutions.

For over 60 years, MAUSER has offered fiber drums in the packaging market. We have developed a level of competency and excellence that provides you with the confidence that our reliable, proven fiber solutions will work time and time again for your needs. Fiber drums "Made by MAUSER" are well-engineered products that have proven themselves millions of times under practical filling and transporting conditions.

Today, MAUSER is a renowned producer of Lock Ring Drums, offering you several outstanding product features:

- ▶ Our drums are ideal for the pharmaceutical and food market as well as for other hygienic markets such as chemical products and powdered or dry granular products.
- ▶ With the addition of plastic liners, our fiber drums can also be used for liquid- and semi-liquid products.
- ▶ Our product range also includes Lock Ring Drums with UN approvals for Packing Groups I, II and III.
- ▶ A variety of lid types, clamping rings and exterior finishes provide fully customized packaging solutions for your individual purposes.

If you are looking for both sustainable and economic benefits, MAUSER fiber drums are your first choice.

### **MAUSER fiber drums help you achieve your sustainability objectives due to the following:**

- ▶ Use of renewable raw material with an excellent CO<sub>2</sub> emissions balance and minimal creation of chemical pollutants or their release into the environment.
- ▶ Raw material used for MAUSER fiber drums comes from selected board mills with proven records of commitment to sustainability.
- ▶ Use of natural or sustainable glues.
- ▶ Fiber drums require less energy to manufacture than other industrial packaging options.
- ▶ Fiber material is 100% recyclable, returning the highest fiber quality into the secondary fiber market.
- ▶ Furthermore, fiber can be easily disposed of or incinerated.

Fiber drums are thus the perfect solution for meeting environmental concerns. They completely fulfill MAUSER's commitment to ecology and sustainability.

### **MAUSER fiber drums provide economic benefits as well:**

- ▶ Our fiber drums provide tremendous value compared to other industrial packaging options.
- ▶ Light-weight fiber drums reduce shipping costs.
- ▶ The stackability of our fiber drums ensures more efficient storage and lower warehousing costs.

## We deliver a comprehensive product spectrum for your industrial needs: highest-quality complete solutions.

When developing our newest generation of high-quality fiber drums, MAUSER engineers and designers take advantage of the most recent scientific findings and research. We offer you a broad portfolio of drums that meets the highest standards for the filling, transport, shipping and supply of various goods.

- ▶ Our outstanding industrial containers made from high-quality fiber can be used around the world for safe packaging and transport.
- ▶ They are the perfect transportation solution for numerous industries.
- ▶ They are suitable for many different applications.
- ▶ They feature perfect stacking and palletization for seamless integration in your filling processes.

No matter how demanding or specialized your individual needs are, MAUSER always provides you with the most suitable industrial packaging.

- ▶ Contact us. MAUSER's sales experts will ensure that you get the optimal solution. Our full spectrum of global packaging options is based on technology, experience and sustainability that few companies can match.
- ▶ Even tailor-made solutions for your individual application are available due to our wide range of diameters, heights, functional product features and additional accessories.

The following pages provide more information on our fiber drum product portfolio for the EU and North American regions.





## MAUSER fiber drums: first choice for your company – especially for EU standards.

We offer two basic fiber drum versions for the European region. Both are manufactured in our Brühl production facility and provide a wide variety of options. This makes our industrial packaging the ideal, tailor-made solution for your solid filling goods. With filling capacities of 20 to 230 l, they are available in various versions, depending on the desired material features, diameters and heights.

Nearly all of our EU fiber drums with diameters ranging from 375 to 560 mm are UN-approved. Most of them are approved in the highest category X.

### **The MAUSER NTR fiber drum:**

This standard fiber drum type with unrivaled packaging-cost advantages is made of the following components:

- ▶ Sustainably-produced Kraft liner.
- ▶ Corn starch-based glue.



### The MAUSER Thermo Plus fiber drum:

This product variant from our portfolio is made from:

- ▶ Sustainably produced Kraft liner.
- ▶ Addition of heat-weld PE-coating.

Due to its special PE coating, this drum type is particularly useful for rougher transportation conditions with higher environmental impact. The PE coating protects the filling of the drum from moisture, vapor and other contamination.

For very moisture-sensitive, hygroscopic transport materials, an additional aluminum inner layer can be used for the best filling protection and transportation conditions.

Both fiber drum models are also available with the following product features and efficient accessories:

- ▶ Steel and plastic covers.
- ▶ Steel bottoms and specially treated steel bottoms, e.g. with PE-lined fiber board.
- ▶ Food approved PE-bags, either fixed or loose.

## The MAUSER North America fiber drum program offers a variety of packaging solutions just right for your needs.

**In North America today, fiber drums play an important role due to their perfect combination of economical and ecological benefits. Their light-weight design translates to lower shipping costs while their construction from renewable raw materials drives sustainability initiatives.**

These products are available with filling capacities of 4.5 to 75 gal. and come in various versions depending on material types, diameters and heights. They are lock ring style fiber drums ensuring safe and secure economical packaging for both hazardous and non-regulated filling goods. UN-ratings are available for Packing Groups I, II and III in excess of 200 kg gross mass.

Diameters of MAUSER Lock Ring Drums range from 14 inches (356 mm) to 23 inches (584 mm) in 1.5 inch (38 mm) increments. Because of this range of formats each user can select a tailored packaging solution in a wide variety of heights as well as capacities of from 11 to 284 liters.

US fiber drum bodies are produced out of several Kraft paper layers that are glued with a natural, pure mineral adhesive.

**MAUSER USA LLC fiber drums are primarily used for:**

- ▶ Packaging solid, semi-liquid and liquid materials (hot or cold).
- ▶ Packaging and dispensing wire and tubing.
- ▶ Pumpable applications (straightsided drum) in the food and adhesive industries.

**Here's a closer look at product features, model variations and special accessories:**

Drum body features:

- ▶ Special liner and barrier system, e.g. for adhesive products, moisture and oxygen permeation.
- ▶ FDA-approved liners for both the food and beverage industry as well as the pharmaceutical industry, which requires aseptic conditions.
- ▶ Painted both for optic improvement and for better moisture protection.
- ▶ Silkscreened, can be labeled for promotional purposes.

Drum accessories:

- ▶ Covers and bottoms available in fiber, plastic and steel.
- ▶ Hemmed metal chimes and closing rings for safer drum handling.
- ▶ Steel and plastic closing rings.
- ▶ Outer wrap and outer sleeves for maximum loading protection and durability.
- ▶ Inner bags and inner sleeves.

*Complete flexibility in regard to height and diameter makes our fiber drums a truly customized packaging solution for a wide variety of shipping requirements.*





*Fiber lock ring drums can be closed with plastic, fiber or steel covers. Plastic covers can also be furnished with or without 2" and 3/4" NPS closures.*



*Drum exteriors can be painted and silkscreened as required.*



*Based on our customers' requirements, we can produce drum interiors with PE, silicone or anti-static liners.*

## Two MAUSER fiber drum variants especially developed for the needs of customers in North America.

Here, we present you with two efficient MAUSER fiber drum variants designed especially to meet the requirements of industrial customers in the US. Both models provide perfect stability and offer ideal product packaging perspectives.

### **The MAUSER Poly Overlay fiber drum**

This special fiber drum model comes with an 8 mil (0.2 mm) white poly sleeve with memory. The poly sleeve offers several advantages: it can be trimmed and it prevents corrosion and rusting of the top chime. As no metal is exposed on the drum top, there are no sharp edges and users benefit from secure handling. This fiber drum model also has a clean, sanitary appearance.



*Overlay fiber drum*

### **The MAUSER Flo fiber drum**

The MAUSER Flo fiber drum is equipped with a removable top for the transportation of cold products. We also offer a version with a removable top and bottom for use with hot substances. Both models have been especially designed for platen dispensing applications commonly used in the adhesive and food segments. An additional feature of the MAUSER Hot Flo fiber drum is that virtually 100% of the residual product can be recovered.



*Hot Flo fiber drum*

*Cold Flo fiber drum*



*The MAUSER tradition has always been to invent packaging concepts that combine superior security, ecology, economy and prosperity – for both today's and tomorrow's world.*

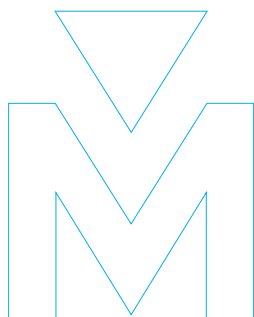
## The MAUSER success story at a glance.

- ▶ **1896:** Dr. Alfons Mauser started manufacturing iron fences out of scrap steel strips from the local watch-making industry. Material recycling at its best – even if the word had not been invented yet.
- ▶ **1898-1914:** Responding to new logistical needs created by industrialization MAUSER introduced the first groundbreaking packaging concepts for transporting glass carboys with acids, i.e. dangerous goods.
- ▶ **1903:** MAUSER pioneered the metal drum as an innovation which is generally regarded as the beginning of industrial packaging. MAUSER's anilin drum was a further worldwide success that was used around the globe until the end of the 1960s.
- ▶ **1950s & 1960s:** New materials offered new opportunities. MAUSER started looking into plastics for industrial packaging and soon came up with innovative plastic open head and tight head drums, once again setting industry standards.
- ▶ **1954:** Start of MAUSER's serial production of fiber drums at the German manufacturing site in Köln-Ehrenfeld.
- ▶ **1984:** MAUSER introduced its first 1000 l multi-trip container.
- ▶ **1990s:** By introducing several technical and functional innovations, MAUSER became one of the leading companies for the standardization of various fiber drum models.
- ▶ **1990:** As one highlight of MAUSER's dedication to the optimization of innovative fiber drum solutions a special manufacturing technology was developed. This technology focused on the direct introduction of the heat energy of open fire on a one-side PE-coated Kraft liner to melt the PE-coating during winding of the fiber drum body in order to make it much more moisture resistant in wet atmospheres.
- ▶ **1991:** Use of recycled materials became the focus within MAUSER. We introduced the first 1000 l Composite IBC with a total plastic pallet made from 100% recycled plastics.
- ▶ **1994:** By implementing the MAUSER Euro-Return-Service for recollection and reuse of composite IBCs, we positioned ourselves as the industry's ecological frontrunner.
- ▶ **2008:** MAUSER acquired and reconstructed a fiber drum manufacturing site of AFD American fiber drum in Chicago/USA and thus enhanced its presence on the US market.
- ▶ **2009:** Construction and launch of a second, huge fiber drum manufacturing site in Charlotte/USA.

## From the first idea to end of use – MAUSER today.

- ▶ **Global:** World-wide market presence with more than 50 locations in over 30 countries.
- ▶ **High quality:** We know what we do and what our products are used for: quality and security is key.
- ▶ **Customer-focused:** MAUSER serves international blue chips in the chemical, lube oil, pharma and food industry as well as numerous regional accounts. We are experts for international standardization and specialties.
- ▶ **Innovative:** Numerous patents and awards demonstrate the MAUSER spirit for innovation.
- ▶ **Full-liner:** The MAUSER product portfolio includes the complete range of rigid industrial packaging – plastics packaging, steel drums, fiber drums, composite IBCs; from small bottles to 1000 l IBCs.
- ▶ **More than packaging:** Process technology and blow molding equipment are designed and built in-house.

**MAUSER today is much more than a producer:  
We strive to manage the cycle.**



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