



Our IBC program –  
a perfect fit for great  
logistics.

Quality, security, innovation and  
sustainability included!



*The MAUSER® Composite IBC program provides superior solutions for the most diverse transport and logistical requirements found in many industries. Designed for hazardous and sensitive filling goods, MAUSER® SM IBCs are one of the world's leading brands when it comes to combining security and efficiency.*

*Not only do MAUSER® specialists achieve excellent results in design and manufacturing, they dedicate their expertise to the use and end-of-use of industrial packaging.*

*As a market leader, our ambition is to combine economic success with responsibility for humans, nature and our planet.*

## Efficient logistics is great. Logistical excellence is even better.

MAUSER's IBCs optimize the advantages for your business. We concern ourselves with your efficiency as well as your effectiveness. As an industry frontrunner, we at MAUSER know that economic success, ecology and social responsibility go hand in hand. This spirit is an integral part of our business model.

- ▶ We are not only about products, but about people. MAUSER has numerous experienced experts who are committed to developing superior solutions. Innovative packaging design and materials are as important as competent technical service advice.
  - ▶ In-house processes and technological know-how support permanent innovation.
  - ▶ We make sure that our Composite IBCs are where our customers need them – and always on time. With highly standardized products and more than 60 locations, MAUSER stands for international availability and high supply security.
  - ▶ Due to modular design concepts, we are able to continuously adapt our Composite IBC solutions to specific customer requirements.
- ▶ “Fit for purpose” philosophy. At MAUSER, we like to focus on what really counts – providing IBCs for safe and reliable transport of dangerous and sensitive goods. The MAUSER IBC portfolio reflects our philosophy: creating packaging solutions for diverse individual applications that are not technically over-engineered.
  - ▶ National Container Group (NCG) extends the packaging life cycle.
  - ▶ Because it is vertically integrated into MAUSER, NCG offers reconditioning services with high supply security.
  - ▶ MAUSER/NCG provides expertise in reverse logistics as well as in forming joint sustainability teams to implement large-scale customer-specific return programs.
  - ▶ Combining the options of new and reconditioned packaging, the MAUSER IBC program adds a new dimension to efficiency.

*The MAUSER IBC portfolio is perfect for helping your business become safe, clean and successful. Our global recollection service opens up diverse opportunities for consequent reuse of packaging that minimizes resource depletion.*



## Our competitive edge: product excellence and technical competence.

### Design & innovation

MAUSER, our ambition is to design superior industrial packaging concepts. MAUSER® SM IBCs are continuously improved by our R&D team in light of the most recent technology developments.

### Technical support

Choosing the right IBC or industrial packaging is not always easy. Our technical service specialists support you to make the right choice for your individual application. They advise you on all matters related to filling, closing, warehouse transport, storage, shipping and appropriate load-securing.

### Sticking to the rules

Designed for hazardous and sensitive filling goods, MAUSER® SM IBCs fulfill international packaging regulations. As a manufacturer of UN-approved packaging, we take our responsibility seriously. Our experts are actively involved in various regulatory working groups; we support clients in regard to all related issues.

### Manufacturing excellence

All our MAUSER IBC manufacturing locations are ISO 9001- and ISO 14001-certified as well as operated according to the MAUSER Production System (MPS). As an integrated lean production system, MPS focuses on continuous improvement and empowerment of individuals – to ensure that safe operations and high-quality products go hand in hand.

## Know-how for first-class products. A closer look at materials, design and processing.



### Selected materials only

All materials used for MAUSER® SM IBCs are carefully chosen. Material performance as well as supply security are extremely important to us.

Unified design and material specifications guarantee reliable and standardized product performance around the globe. At the same time, our modular design and variety of material choices allow individual adaptation.

### Solid steel tube cage

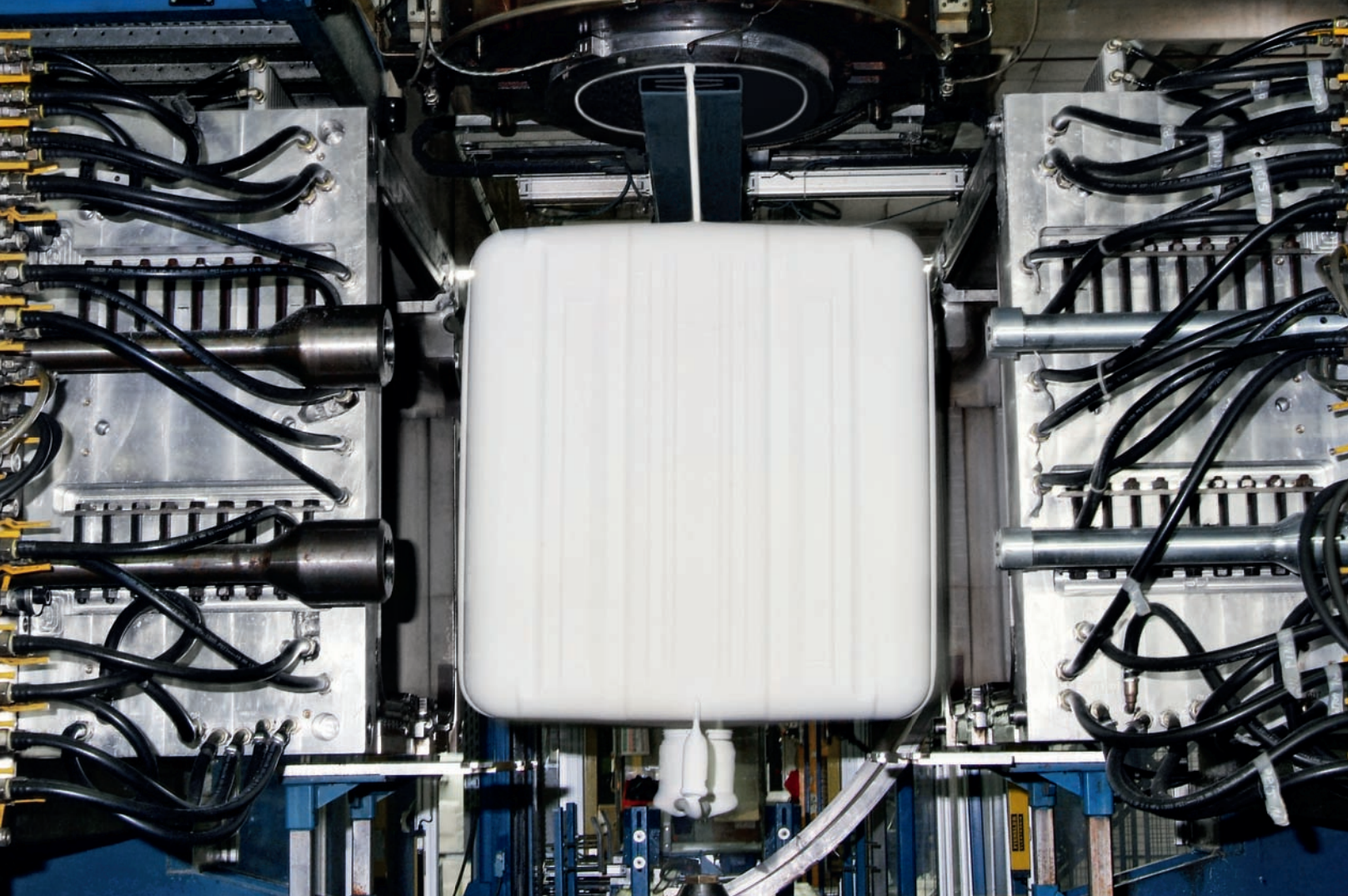
Each MAUSER® SM IBC is covered by a robust steel tube cage. We make our own tubes from zinc-coated steel coils because we can ensure the best quality of tubes for maximum rigidity. In-house engineering of

cage welding and forming lines guarantees process reliability and continuous quality. The patented cage design is optimized to withstand dynamic and static load during all modes of transport and storage. MAUSER® SM IBCs can be stacked two high during transport\*; higher stacks are permissible in warehouse storage.

*\* Assuming a top load not exceeding 1650 kg*

### Bottle variants

The IBC bottle is blow-molded from UV-stabilized polyethylene of high molecular weight and high density, which provides excellent chemical compatibility. Because the IBC bottles are translucent, the amount in the bottle is clearly visible. The bottle has excellent mechanical strength and can be used for a broad spectrum of filling goods. Our multilayer SM EX bottle, for example, has an inner layer of polyethylene and an external layer of permanent antistatic



compound, which prevents the bottle from becoming electrostatically charged. Optional FDA-compliant materials and use of advanced air filter technology applied under GMP guidelines make MAUSER® SM IBCs the preferred choice for food and other applications that require especially high-purity bottles. Additional top openings for dispensing systems are yet another specific bottle feature.

### **Seamlessly integrated pallet**

The third major component that comes with every MAUSER® SM IBC is the integrated pallet. Different pallet designs and materials can be selected. All-wood\* (heat-treated), steel/plastic and all-plastic (steel strengthened) pallets are available to meet particular requirements, including greater-than-average hygiene needs or high shock or corrosion resistance. Our pallets are available as runner and frame design to suit individual automatic filling lines and storage racks.

*\* Due to restrictions on wood pallets, not available in all regions*

*In-house technology and MAUSER engineering expertise guarantee an efficient and high-quality production process. Well selected, highly specific raw materials are transformed into the first-class products of the MAUSER® SM IBC range.*





#### MAUSER® SM 6

*Based on a robust wooden pallet design, MAUSER® SM 6 IBCs provide optimum cost efficiency with the highest MAUSER quality standards. Specially designed for use with MAUSER® SM IBCs, the runner pallet design allows easy handling and provides high rigidity, making these units ideal for high rack storage. Due to regional preferences, pallet design is different in Europe and North America. MAUSER® SM 6 is not available in Asia and South America.*



#### MAUSER® SM 13

*Our true global standard, the MAUSER® SM 13 IBC, is built on a robust composite pallet. Available as a frame and as a runner version, the pallet is characterized by a combination of steel and plastic parts. With comparable stiffness to full steel pallets, plastic feet provide superior handling performance. Limited permanent damage as well as modular pallet design with replaceable parts make MAUSER® SM 13 a reconditioning favorite.*



#### MAUSER® SM 15

*The all-plastics pallet of our MAUSER® SM 15 IBC “goes the extra mile” when it comes to particular hygiene requirements. This one-piece injection-molded plastic pallet with encapsulated steel reinforcement is the number-one choice for food and pharmaceutical applications. Its low weight and high recycled plastics content make the easy-to-clean unit our environmental favorite.*

**A strong foundation to build on – the MAUSER® SM core range.**

## The diversity of life – packaging to fit every purpose.

Global business requires global standards. However, not every business requires the same standards. At MAUSER, we are well aware of the variety of applications our Composite IBCs are used for. We believe that our MAUSER® SM portfolio reflects this variety without compromising standardization.

Despite the fact they differ by pallet type in the core range, all MAUSER® SM IBCs are available at same high-quality standards as non-UN, UN-approved and high-level UN-approved containers.

Each of these containers can be filled to a nominal volume of 1000 l/275 US gal. and handled at a standard footprint of 1000 mm x 1200 mm. The use of globally standardized filling opening (DN 150 [6"] and DN 225 [9"]) as well as discharge valve (DN 50 [2"] and DN 80 [3"]) dimensions guarantees easy filling and emptying throughout regional and global supply chains.

**Sophisticated and renowned clients from various industries around the globe rely on MAUSER Composite IBCs.**

## Additional functionality on top – MAUSER® SM specialties.



MAUSER® SM EX\*

*With its multi-layer bottle, which incorporates an external layer of permanent antistatic plastics compound, MAUSER® SM EX has been developed for use in EX-Zones 1 and 2. This Cenelec-certified design includes discharge valves and pallets that are especially designed for grounding the unit. This model is available on composite and wooden pallet only.*

\* Not available in all regions



MAUSER® SM LP\*

*Sometimes, white is the better black. MAUSER® SM LP is designed to protect your filling goods from UV and visible light. In contrast to black bottles, the special white pigment used in MAUSER® SM LP reflects sunlight. It therefore helps limit temperature levels inside the container, which avoids the chemical reactions that could occur at higher temperatures. The model is available on all pallets.*

\* Not available in all regions



330 GAL./1250 L MAUSER® SM\*

*For those looking for even larger volumes, our North American operations offer the 330 gal./1250 l version of the MAUSER® SM IBC. With its higher cage and bottle, it provides 25% more volume with the same footprint. Choice of pallets and accessories are similar to those available with our standard 275 gal./1000 l units.*

\*Not available in all regions



## MAUSER discharge valves and accessories. Technical excellence in detail.

It's the little things that count. This is also true for the accessories specially designed for use with the MAUSER® SM IBC series. No matter if it's a discharge valve, screw cap or label plate: the MAUSER portfolio offers many variations. Here are just a few highlights:

### MAUSER discharge valves

All MAUSER® SM discharge valves have a rigid one-piece polyethylene body with an encapsulated backend gasket. Due to this special design and material, they provide superior chemical compatibility. In contrast to their integrated or welded counterparts, our screwable, replaceable discharge valves can be exchanged during reconditioning. Our valves are assembled fully automatically, including testing for 100% leak tightness. The special one-piece body design allows automated valve installation.

Due to the outstanding chemical compatibility of the ETFE seal used for the valve flap, the robust butterfly valves are highly universal. Butterfly valves are available in DN 50 (2") and DN 80 (3") sizes.

DN 50 (2") cylindrical/ball valves are the alternative choice. Their design permits unrestricted flow in the open position while providing twice the sealing power in the closed position.

Both types of discharge valves are available in metric and NPS threads as well as with an integrated 2" or 1.5" quick-connect front end. In addition, many adaptors are available.

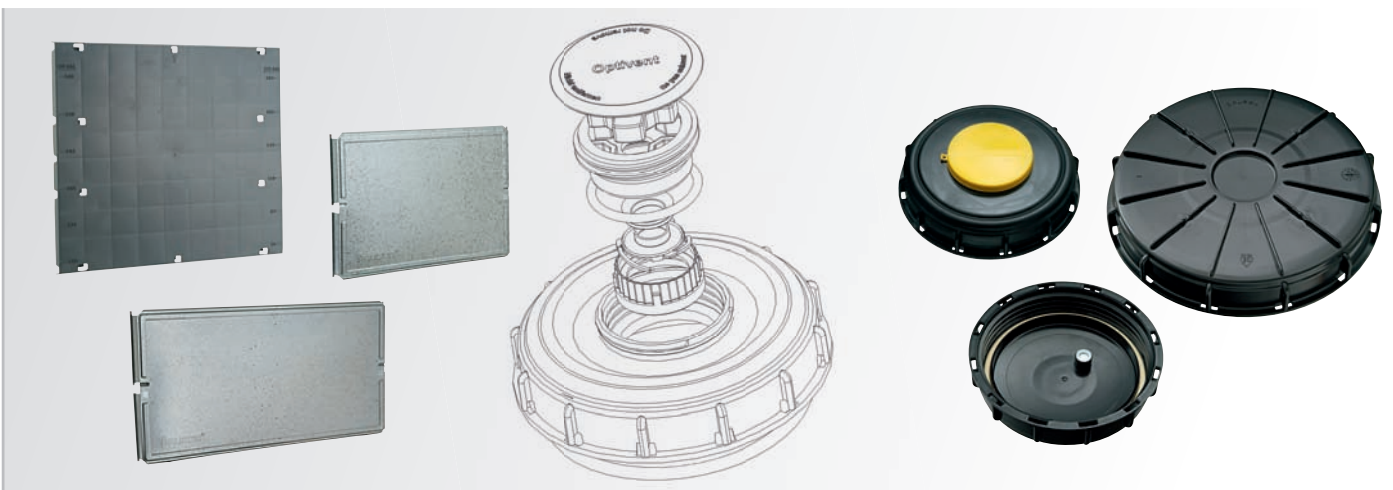
### MAUSER screw caps

Rigid, high-quality screw caps are available in the standard diameters DN 150 (6") and DN 225 (9"). In contrast to the plain standard, both of these versions can be equipped with integrated venting as well as with a center bung in BCS 56x4 or 2" NPS as well as 2" buttress.

Our unique Optivent® venting system enables discharging without having to unscrew the cap. High airflow and an integrated filter allow continuous emptying without risk of outside contamination.

### MAUSER label plates

Information is the key to logistics – especially when it comes to transporting hazardous goods. Multiple as well as accurate labeling is required. MAUSER offers small, medium and large steel label plates as well as an extra large plastic label plate to meet every need. All of our label plates are securely affixed to the IBC cage, although they can easily be exchanged or supplemented by additional plates.





## What a sustainable IBC program should be: not a one-way street but a complete eco-cycle.

For MAUSER it is obvious that resources are not endless and that they must be used as efficiently as possible. This does not only mean reduction, but reuse and recycling as well. As a global market leader, we take our environmental and social responsibility seriously. At the same time, we know that our economic performance – and that of all of our clients – is the key to success.

We thus consider it logical that not only a company but also a company's products and services must be sustainable. Our sustainability philosophy is built on our comprehensive ECO-CYCLE concept – which follows 5 principles:

**RENEW** – frontrunner in investigating materials for the future

**REDUCE** – minimize raw material use, energy consumption and environmental impact

**RECOLLECT** – worldwide recollection system for industrial packaging

**REUSE** – reconditioned packaging as a high-quality, low environmental impact solution

**RECYCLE** – closing the cycle, giving materials new life

For us, sustainability in the industrial packaging branch is not about selling containers, but about providing a customized product and service program. This means that we are also highly experienced in reconditioning IBCs. Not only do we pick up used IBCs at your place of business, we clean them thoroughly, carefully eliminate all dents and then test and inspect them before they are reintroduced into the cycle. Not only do we exchange parts that can no longer be used with new parts. IBCs that can no longer be reconditioned are recycled, e.g. by breaking down inner containers into plastic granulate that we can reuse in production.

At MAUSER, National Container Group (NCG) is responsible for all recollection and reconditioning activities.



Extending the Lifecycle of Industrial Packaging

*For further information please see*

*[www.ncg-europe.com](http://www.ncg-europe.com)*

*[www.nationalcontainer.com](http://www.nationalcontainer.com)*





*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.*

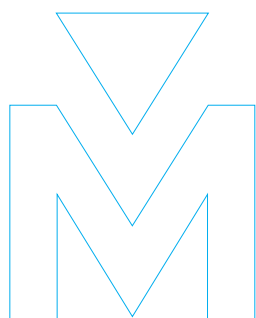
## The MAUSER success story at a glance.

- ▶ **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 aniline 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.
- ▶ **1984:** MAUSER introduces its first 1000 l multi-trip container: a revolutionary design with an exchangeable inner bottle made from plastics, an outer steel-mesh cage and a steel pallet. In 1987, a version on wooden pallet followed.
- ▶ **1991:** Use of recycled materials became a priority within MAUSER – we introduced the first 1000 l Composite IBC with a pallet made from recycled plastics. The MAUSER Repaltainer® (1993) remains a highly valued multi-trip IBC concept until the present day.
- ▶ **1994:** By implementing the MAUSER Euro-Return-Service for recollection and reuse of Composite IBCs, we positioned ourselves as the industry's ecological frontrunner.
- ▶ **2004:** Development of innovative Diesel Exhaust Fluid technology for reducing Diesel truck emissions. This material is supplied in the MAUSER Repaltainer® with an additional top dispensing system.
- ▶ **2004:** By acquiring Mamor®, MAUSER became a global leader in Composite IBCs, supplying similar IBC design throughout the world.
- ▶ **2004:** MAUSER acquired National Container Group (NCG), thus making it a full-service provider instead of "solely" a manufacturer.
- ▶ **2004 – 2010:** Continuous design improvements make MAUSER® SM IBC a global premium brand in Composite IBCs.
- ▶ **2005:** Market introduction of one-piece injection-molded plastic pallet made from recycled plastics.
- ▶ **2006:** Bringing new functionality to the field of Composite IBCs, MAUSER introduced the permanent antistatic (MAUSER® SM EX) and light-protecting (MAUSER® SM LP) multilayer bottles in its Composite IBC product range.
- ▶ **2009:** As one of the first companies – and well ahead of regulatory implementation deadlines – MAUSER qualified its SM IBC range to be vibration-resistant according to new international regulations.
- ▶ **2010:** Redesign of our MAUSER® SM outer cage to increase its performance and make it even safer.

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

- ▶ **Global:** World-wide market presence with more than 60 locations in over 30 countries.
- ▶ **High quality:** We know all aspects of our business and our products. Quality and security are key.
- ▶ **Customer-focused:** MAUSER serves international blue chips in the chemical, petrochemical, pharmaceutical and food industries 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 1250 l / 330 gal. 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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