

ENGLISH



HEINLEIN PLASTIK-TECHNIK





WE PROTECT YOUR VALUES

PHARMA PACKAGING MADE IN GERMANY

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WE ARE HEINLEIN PLASTIK-TECHNIK

THE RIGHT PARTNER IN EVERY RESPECT

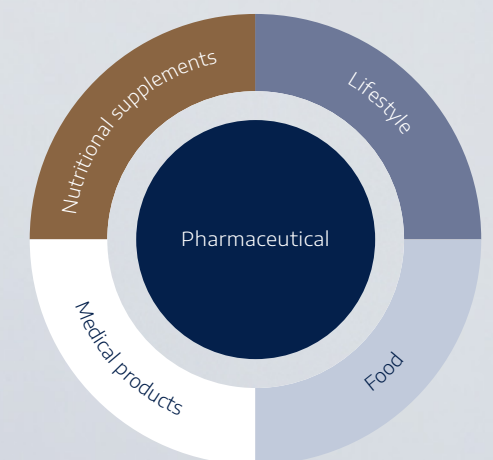
Heinlein Plastik-Technik is your reliable manufacturer for closures, dosing systems and application aids. Our wide-ranging technical expertise and extensive experience in the use of our products around the world, as well as unwavering support, provide the best possible environment for the development of optimal customer solutions. Forming the basis for this is the measured organic growth of our company combined with constant monitoring of the needs of the market and our customers.

Our products are used worldwide for a diverse range of solutions in the pharmaceutical and medical industries, for lifestyle products, as well as in the food industry and nutritional supplement segment.

HEINLEIN PLASTIK-TECHNIK FACTS

- + family run
- + founded in 1932
- + 24,000 sqm total area
- + 8,000 sqm production area
- + 6,000 sqm storage space
- + 41 injection molding machines
- + 19 assembly machines
- + 3-shift operation, 24/7

Last amended: 2020





OUR VALUES

We at Heinlein Plastik-Technik have set ourselves the goal of making our products and services better and therefore more successful. And, for several generations, we have succeeded magnificently. This success is built on our clearly defined company values, which guide us daily and by which we measure our daily performance.

We set standards

Our core expertise lies in the manufacture and assembly of plastic precision parts. Using this know-how as a foundation, we have built a wide portfolio of services over time. This includes targeted technical consultations for our customers – from product specification right up to application – and ranges from the constant optimisation of our highly automated manufacturing processes to providing support in the form of training courses, maintenance, and servicing measures on site. To fulfil all these tasks, we have a clear goal in mind down to the very last detail: one hundred percent satisfaction from our clients.

We are a reliable partner by your side

From the initial enquiry to the final delivery: our focus is always squarely on providing our customers with professional support. The constant availability of our employees provides the basis for this. Furthermore, thanks to our long-standing business relationships, in many cases we have been able to build a personal relationship with our customers and partners. Our professional and personal relationships are characterised by core values such as reliability, commitment, and mutual trust. Such a values-based relationship provides the best foundation for the joint development of successful solutions.

We guarantee cleanliness and secure process workflows

Compliance with and constant monitoring of the quality of our products and processes is a matter of course for us. Regardless of whether it is about complying with hygiene regulations or standardised process workflows: our customers can always be assured of the high-quality manufacturing, assembly, and packaging of our products under controlled conditions at all times. All process steps satisfy the highest international quality standards as certified according to ISO 9001, ISO 13485 and ISO 15378.

We secure a modern corporate culture

They possess a variety of talents, years of industry experience, and contribute invaluable fresh ideas. With regular further training, we ensure that our employees keep abreast with the latest know-how, which you as a customer particularly benefit from. Heinlein not only stands for an outstanding level of quality, but also for a flexible and person-oriented, modern corporate culture.



MISSION E



With the Heinlein „Mission e“, we as an internationally active company pledge to support increased sustainability, climate protection, and the conscious use of resources. To do this, we work intensively on new ideas for contributing to a cleaner future.

Since 2012, Heinlein has had a certified energy management system and promotes the ideas suggested via this system for improving energy efficiency. Resource-saving manufacturing processes are as much a part of our sustainability concept as the acquisition of modern injection moulding machines with hybrid drives.

The emissions of our production operations are minimal. All rejects and waste created in the production process are professionally recycled. We process exclusively high-quality raw materials and masterbatch, which is crucial for the long-term safe use of the products. Our portfolio also includes closures made of ecological raw materials such as organic plastics made from sugar cane.

We have continuously reduced our energy consumption through investments for improving energy efficiency and green electricity from our in-house photovoltaics installation.





TECHNOLOGY

WE PUSH BOUNDARIES

A key factor in the further development of our enterprise is the expansion, diversification, and refinement of our process chain. At the heart of this is our technological expertise.

In addition, we are also constantly optimising our performance in the associated process segments of sales, administration, and customer services.

1

DEVELOPMENT
Collective expertise



2

DESIGN
Speed – our guiding principle



3

MOULD CONSTRUCTION
Precision moulds for top quality



4

MACHINE CONSTRUCTION
In-house developments for optimum manufacturing quality



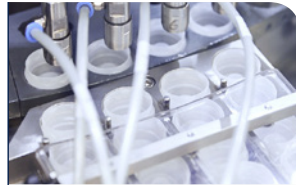
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PRODUCTION
Sophisticated hygiene and technology in the material flow



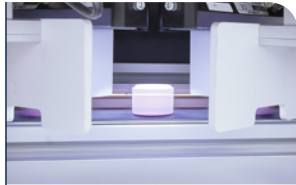
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ASSEMBLY
Highly dynamic process and assembly technology



7

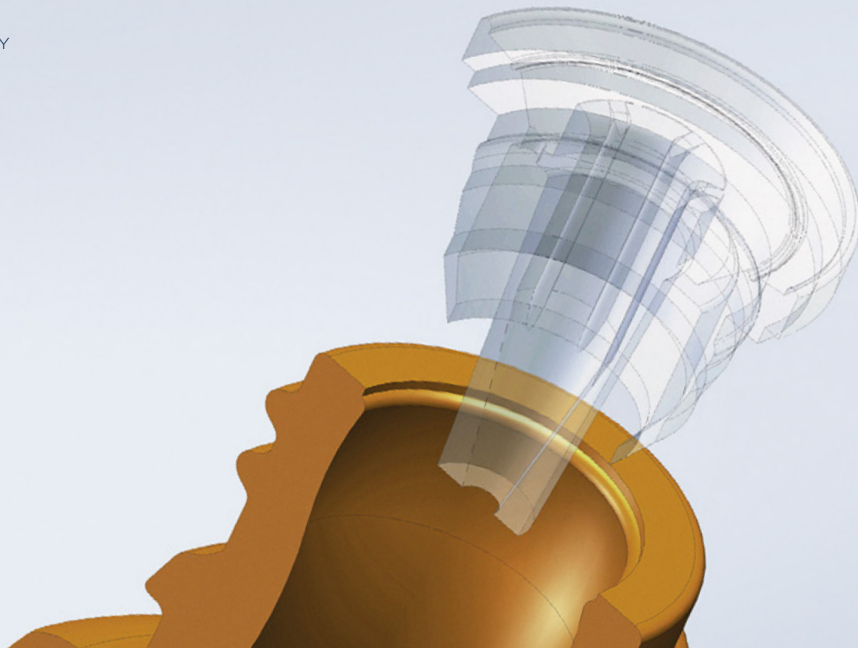
QUALITY CONTROL
Clean manufacturing – inspected and documented



8

STORAGE & SHIPPING
High capacities – short delivery times





14 **COLLECTIVE EXPERTISE**
DEVELOPMENT

Our technology centre in Ansbach models the entire development process of the products: from the initial idea to the development and design, and ultimately to series production. Here, engineers, technicians, and experts from different departments come together and work hand in hand. In this manner, products are created which reflect the entirety of our collective know-how: high-quality workmanship combined with functional reliability and, above all, production that is aligned towards economies of scale through maximum-efficiency high-volume production. Our experienced team of developers is as

focused on expanding our existing range as it is on creating customised packaging for our customers. The equipment we use for our research and development work comprises the latest technology (3D printers, latest CAD programs), testing equipment, workshops for test runs, a design department, and our mould construction department for building prototypes and moulds. Cooperation partners such as the engineering faculty of the Ansbach University of Applied Sciences (specialists in plastics technology) also assist us with specific requirements, e.g. through the use of magnetic resonance tomography.

Your benefits:

- Customer-specific developments
- Short communication paths, standardised development processes
- Development of medical products and pharmaceutical primary packaging in compliance with MD 93 / 42 EEC V.3, ISO 13485 and FDA
- Full simulations, 3D models, initial functional models
- Usability evaluation

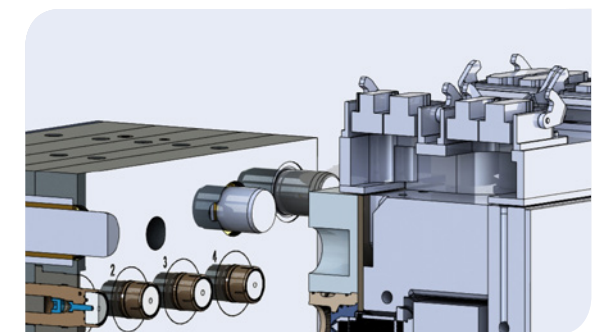
STEP
1

SPEED – OUR GUIDING PRINCIPLE
DESIGN

The core competencies of mould construction are brought together in the company's own engineering design department. Here, the necessary series production moulds are designed, engineered and manufactured, and a pool of over a hundred ready-to-use injection moulds is managed.

In addition to wide interfaces and short communication paths between the departments, the in-house design workflow greatly accelerates the process.

New moulds can be built faster, and problems with moulds identified and rectified more quickly.



Your benefits:

- Construction of pilot moulds
- Fast reaction times from customer support
- More than 100 ready-to-use proprietary injection moulds

STEP
2



MOULD CONSTRUCTION

Mould construction is a traditional affair at Heinlein by 1932, we were already manufacturing sophisticated, high-quality moulds. Our current injection moulds are designed to satisfy the complex requirements of the pharmaceutical industry. Crucial factors in this respect are precision and dimensional accuracy, high output quantities, and short cycle times. Our mould construction represents the combination of

maximum process accuracy and uncompromising service. High productivity and system efficiency ensure that we reliably achieve our target output. The manufacturing and adaptation of our moulds, as well as the provision of interchangeable mould inserts for short maintenance and retooling times, ensure rapid, smooth production.

Your benefits:

- In-house manufacturing of injection moulds
- Manufacturing of precision moulds based on customerspecific adaptations or new designs
- Outfitting with CNC, milling, vertical eroding, turning, and grinding machines as well as the relevant peripherals
- Adaptation of format parts and conveying technologies, e.g. vibratory bowls, feed rails, and sorters
- Manufacturing of screwing units and screw heads
- Quick implementation of maintenance and repair services (in-house)
- High degree of reliability for deliveries > 95% of all deliveries



MACHINE CONSTRUCTION

Our in-house developments are executed to the same high standards as customer orders. This pooling of expertise within our own company enables a great degree of individuality and innovation. From design and programming to the use of camera

technology, we create our assembly machines entirely with our own resources. Comprehensive support is assured throughout the production process – an additional advantage that will benefit you as our customer!

Your benefits:

- In-house design, construction and programming of all assembly machines
- Quick and flexible system adaptation to new closure types and combinations
- In-house maintenance and servicing
- Construction of customer-specific accessories for filling lines
- High degree of reliability for deliveries > 95% of all deliveries



PRODUCTION

Innovative injection moulding technologies and in-line manufacture form the basis for the production of sophisticated primary packaging. With intelligently coordinated process workflows, our production is fully geared towards high speeds and compliance with the highest hygiene standards. We process the relevant pharmaceutical grade material with the necessary permits. We also handle plastic as a raw material with the relevant degree of care: one example is our participation in the „Zero granule loss“ initiative. Cutting-edge manufacturing and assembly systems are in operation for our international customers around the clock. We have equipped our injection moulding machines with state-of-the-art camera systems, which inspect every individual closure. Our machine pool comprises over 41 injection moulding machines from renowned manufacturers such as Arburg, Krauss-Maffei and Netstal, some of which have already been fitted with hybrid drives, or are fully electric machines. Manufacturing takes place under conditions with low microbiological contamination, or also in a clean room where required. The high purity of the material, in combination with a hygienically and technically flawless material flow, is guaranteed by a system which distributes

the plastic granules via closed stainless steel pipes from the silos to the individual machines. Furthermore, Class 7 dust filter installations ensure the constant cleanliness of the pipe systems.

Heinlein Plastik-Technik In-line production:

Fully automatic material feed and cap transport.



ASSEMBLY

Over 19 high-performance assembly machines ensure the highest manufacturing quality. With our in-line manufacturing process, the relevant parts are automatically forwarded from the injection moulding

machine to the assembly machine. The assembly machines are designed and built in-house from standard components, which means that we are able to rapidly react to customer-specific requirements. Whether it is a question of single components or entire product groups: our precisely coordinated technologies ensure a completely pre-assembled product upon delivery. Up to four parts can be assembled in a single work step. Before it is transferred to the transport packaging, each individual part is inspected with a high-precision online camera system. In this manner, we guarantee a high degree of quality and reliability, thereby creating the basis for process reliability during your further processing.



QUALITY CONTROL

With cutting-edge CAQ systems and measuring equipment, we promote continuously documented process quality. Visual and measurement inspections are conducted regularly. Heinlein works according to a standardised quality management system which is certified in accordance with ISO 9001,

ISO 13485 and ISO 15378. This QM system also includes sub-systems for corrective and preventative error handling (CAPA). Thanks to a binding change control procedure, we also ensure that the validated state of a process is not negatively influenced by changes.

Your benefits:

- Latest CAQ systems and cutting-edge measuring equipment for documented process quality
- Regular visual and measurement inspections
- Optical 3D CNC measuring machines from Werth, Zeiss, Mitutoyo
- 100 percent checks via the use of camera systems
- High product reliability

STORAGE & SHIPPING

A modern high-bay warehouse with 3,600 spaces for pallets and climate-controlled storage rooms ensures high turnaround and short delivery times. Thanks to our wide range of products, we are able to react promptly to customer inquiries and deliver the desired items on a just-in-time basis. With our three loading ramps, we are currently able to process multiple deliveries simultaneously and load lorries without long waiting times.

Your benefits:

- High level of hygiene and controlled warehousing conditions
- Climate-controlled storage areas
- Safety stock / delivery capacity
- Quick loading for forwarders

QUALITY



WE CREATE NEW STANDARDS

High functionality, reliability and product safety are our yardsticks: QUALITY is always our highest priority to ensure your satisfaction and the safety of patients, consumers and third parties when using our products.

We guarantee the highest quality standards thanks to equipment by Mitutoyo, Zwick und Werth-Messtechnik in our specialised measuring offices and optical test systems in our QM laboratory. Uncompromising quality – this has been our guiding principle and overarching objective from day one.

The result: outstanding functionality and product reliability.

We use CNC-controlled optical measuring machines to perform our tests and enable continuous production control. The results are automatically documented in a computerised database.

This means that electronic inspections are performed on virtually every product based on numerous characteristics. Your benefits: **maximum safety and quality, less downtime and lower costs.**

Clean room technology for the highest quality standards
Purity and hygiene are essential for pharmaceuticals and must be guaranteed without exception. We therefore manufacture under clean room conditions on request (clean room system according to ISO 14644-1 / purity class 7) and can accommodate supply chain management with strict purity requirements.



OUR CERTIFICATES
SEAL OF QUALITY

There is only one benchmark for all of our products, processes and services: quality. Heinlein Plastik-Technik is committed to cleanness in 3 ways:

Best Cleanness with regard to Material
Cleanness and hygienics are inevitable conditions producing for the pharmaceutical industry. We process superior pharma grades. In addition, our company is experienced concerning supply chain management with special requirements to cleanness.

Best Cleanness with regard to Manufacturing
The manufacturing process is carried out under controlled microbiological conditions. If necessary, we produce in cleanrooms. Our cleanroom system is certified according to ISO 14644-1 / cleanness class 7.

Best Cleanness with regard to System
We guarantee that we adhere completely to our own strict requirements by preventive maintenance and cleaning procedures regarding every single processing area. We train our staff in hygienics and HACCP issues on a regular basis.

All our products, process chains and services focus on one priority: Quality

CORPORATE CERTIFICATIONS:

- DIN EN ISO 9001
- DIN EN ISO 15378
- DIN EN ISO 13485
- DIN EN ISO 50001
- HACCP

PRODUCT CERTIFICATIONS:

- DIN EN ISO 8317
- US 16 CFR § 1700.20
- MD 93 / 42 EEC V.3

ALWAYS ON THE SAFE SIDE WITH HEINLEIN PRODUCTS

We offer products and solutions for a wide range of application scenarios, whether it is for closures, dosing systems, or application aids.



SCREW CLOSURES



SC-18 | SC-28

Screw closures are cost-effective closure solutions with a reliable sealing function. They are used mainly when no additional function to ensure the safety of the contents is necessary, e.g. evidence of tampering. The internal matching mandrel of the closure is tailored to the respective dosing insert, so that preassembly can take place without a hitch. The outer appearance of the closure type is identical even when different dosing inserts are installed. Processing can be performed on all commonly encountered filling and sealing systems. In addition to the colour white, we also manufacture to custom specifications.

The benefits

- ✦ Cost-effective solution with reliable seal
- ✦ High dimensional stability, easy-grip outer edge
- ✦ Can be processed on all commonly encountered closing machines
- ✦ Ease of use for end consumers

Combination options

- ✦ Droppers & Pourers
- ✦ Measuring Cups & Spoons
- ✦ Dosing Syringes & Adapters
- ✦ Pipettes
- ✦ Brushes & Spatula
- ✦ Sealing Systems



Bottleneck Sizes

DIN 168/GL 18, GL 22
DIN 6094-7/PP 28 S
Others upon request.

Materials

Polypropylene PP
Polyethylene PE

Applications

Perfect for all contents which do not require a child-resistant or tamper-evident solution.

TAMPER-EVIDENT CLOSURES



ONE-PART

TE1-18 | TE1-28

Easy to open, and the perfect visible protection when your product is first opened. This closure with a contemporary design is the ideal choice for ensuring product safety. Its function of verifying first opening is perfectly discharged when the ring is flawlessly broken off. We manufacture one-part tamper-evident closures as individual components in a single work step using injection moulding. The tamper-evident ring of the closure is elegantly broken off during the initial opening, after which it remains clearly visible on the bottle shoulder during subsequent use. Clearly recognisable tamper-evident seal, leaving no doubt regarding whether the container has been opened before. Manual closing as well as semi- or fully automatic processing on filling and closing systems is possible.

Design & Exclusivity

- + Fine or coarse ridges
- + Cap embossing
- + Custom design or logo available

The benefits

- + Absolutely tamper-proof
- + Clean dosage
- + Does not break off prematurely when closure is installed by machines
- + Breaks off cleanly during initial opening
- + The broken tamper-evident seal is easy to recognise once it has been opened
- + Closure design that meets the strictest requirements
- + Can be used with all commonly encountered closing machines
- + **Patented**

Combination options

- + Droppers & Pourers
- + Measuring Cups & Spoons
- + Dosing Syringes & Adapters
- + Pipettes
- + Brushes & Spatula
- + Sealing Systems



Bottleneck Sizes

DIN 168/GL 18, GL 22
DIN 6094-7/PP 28 S, 31,5 S
Others upon request.

Materials

Polypropylene PP
Polyethylene PE-HD

Applications

Perfect for all contents which require a visible tamper-evident solution.



TE2-18 | TE3-18 | TE3-28

With separately injection-moulded and mounted tamper-evident rings, it offers a user-friendly and particularly dimensionally stable multiple-piece closure solution. The appealing design and a discreet but visible tamper-evident seal provides your product with the required safety against tampering. Seniors will particularly appreciate the comfortable feel and the easy-to-open packaging. Installed in the closure made of robust PP is a separately manufactured tamper-evident safety ring made of HD-PE. This makes the packaging highly resistant to tampering, and fulfils the necessary safety specifications required by the industry. The tamper-evident ring of the closure is broken off cleanly during the initial opening, after which it remains visible on the bottle shoulder during subsequent use. It can be processed on all commonly encountered closing machines.

The benefits

- ✦ Tamper-proof
- ✦ Particularly user-friendly for seniors
- ✦ Does not break off prematurely when closure is installed by machines
- ✦ The broken tamper-evident seal is easy to recognise once it has been opened
- ✦ Reliable sealing and dimensional stability
- ✦ Can be processed on all commonly encountered closing machines

Design & Exclusivity

- ✦ Cap embossing
- ✦ Custom design or logo available

Combination options

- | | |
|------------------------------|---------------------|
| ✦ Droppers & Pourers | ✦ Pipettes |
| ✦ Measuring Cups & Spoons | ✦ Brushes & Spatula |
| ✦ Dosing Syringes & Adapters | ✦ Sealing Systems |



Bottleneck Sizes
DIN 168 / GL 18
DIN 6094-7 / PP 28 S
Others upon request.

Materials
Polypropylene PP
Polyethylene PE

Applications
Perfect for all contents which require a visible tamper-evident solution.

TE2-18

Tamper-evident ring, EXTERNALLY MOUNTED



TE3-18

Tamper-evident ring, INTERNAL



Tamper-evident ring is available in various colours, making it easier to recognise that packaging has been opened.

CHILD-RESISTANT CLOSURES



WITH TAMPER-EVIDENCE

CRC-TE 18 | CRC-TE 28

Our child-resistant closures provide an ideal balance between an innovative design, ease of operation, and the legally required level of reliability. We attach great value to product qualification according to DIN EN ISO 8317 and US 16 CFR § 1700-20.

The benefits

- ✦ High dimensional stability
- ✦ Low closing torques
- ✦ Can be processed on all commonly encountered closing systems
- ✦ Easy for end consumers to use
- ✦ Attractive closure design
- ✦ Easy to recognise when opened, making it particularly tamper-proof
- ✦ Breaks off cleanly during initial opening
- ✦ Uniform look throughout the entire product family

Design & Exclusivity

- ✦ Company logo, push+turn, custom symbols etc. available

Combination options

- ✦ Droppers & Pourers
- ✦ Measuring Cups & Spoons
- ✦ Dosing Syringes & Adapters
- ✦ Pipettes
- ✦ Brushes & Spatula
- ✦ Sealing Systems

**Bottleneck Sizes**

DIN 168 / GL 18
DIN 6094-7 / PP 28 S
Others upon request.

Materials

Polypropylene PP
Polyethylene PE

Applications

Perfect for all contents which require a child-resistant and visible tamper-evidence solution.



36 **WITHOUT TAMPER-EVIDENCE**
CRC-18 | CRC-28

Our child-resistant closures provide an ideal balance between an innovative design, ease of operation, and the legally required level of reliability. We attach great value to product qualification according to DIN EN ISO 8317 and US 16 CFR § 1700-20.

- The benefits**
 - ✦ Easy for seniors to use
 - ✦ Maximum functionality and reliability
 - ✦ Attractive closure design
 - ✦ Familiar push-and-turn system
- Design & Exclusivity**
 - ✦ Company logo, push+turn, custom symbols etc. available
- Combination options**
 - ✦ Droppers & Pourers
 - ✦ Measuring Cups & Spoons
 - ✦ Dosing Syringes & Adapters
 - ✦ Brushes & Spatula
 - ✦ Sealing Systems



Bottleneck Sizes

DIN 168 / GL 18, 22
DIN 6094-7 / PP 24 S,
25 S, 28 S, 31.5 S
Others upon request.

Materials

Polypropylene PP
Polyethylene PE

Applications

Perfect for all contents which require a child-resistant closure, but not a tamper-evident one.

MAXIMUM PRODUCT SAFETY BY SPECIAL LINER
SEALING SYSTEMS



All closure variants are available with a cone seal or a special inlay.

Cone seal
A cone seal is the simplest and most inexpensive method for tightly sealing a bottle. During manufacturing, the closure receives a conical sealing lip on the inner side of the cap. Sealing therefore takes place using the closure itself, without the use of a sealing disc. The advantage of this is an inexpensive sealing solution.

Sealing discs
When particularly high requirements need to be fulfilled, special disc inserts ensure the indispensable barrier properties for your product. Variants range from simple foam inserts to sophisticated aluminium, Surlyn and Teflon linings, or even RFID inlays. Heinlein has access to all sealing disc variants. Feel free to contact us.



38 **HEINLEIN PLASTIK-TECHNIK**
DROPPERS & POURERS



39

We offer you a wide range of different droppers. We will find the ideal dosing system for your product, tailored to the liquid in question.

Dropper Matching Service

To help us find the ideal dropper, please send:

1. A sufficient quantity of the original product
2. The desired dosing requirements
3. The intended bottle sizes
4. The desired closure design



Bottleneck Sizes
DIN 168 / GL 18
Materials
PE-LD or PE-HD



The benefits

Universal and Horizontal Dropper

- ✦ Variable application scenarios
- ✦ Consistent drip behaviour
- ✦ Can be used with plant-based products, as any solids present in the liquid do not hinder the drip behaviour



Vertical Dropper

- ✦ Allows for exact dosing (e.g. for strong painkillers)
- ✦ Countable drops
- ✦ Upside-down orientation minimises incorrect dosing
- ✦ Compatible with all closure variants of the GL 18 screw thread

Applications

Perfect for applications which need to fulfil stringent dosing requirements in accordance with the Ph. Eur. (European Pharmacopoeia).

Pourers are used where a simple dosing aid is required. Above all, pourers improve the pouring characteristics and help to avoid the bottle's screw thread being moistened by the contents. We can offer you pourers for various screw thread sizes and requirements. Feel free to contact us. We would be glad to help you find a suitable product combination.

The benefits

- ✦ Clean dosage
- ✦ Drip edge allows for clean backflow of product
- ✦ Mouth of bottle remains clean and hygienic
- ✦ Available for all closure types
- ✦ Complete system with closure, pourer and matching measuring cup available
- ✦ Pourers available in mounted and unmounted versions

Combination options

Droppers & pourers can be combined with all of our closures.



Bottleneck Sizes
DIN 168 / GL 18
DIN 168 / GL 22
DIN 6094-7 / PP 28 S

Materials
PE-LD, PE-HD

Applications

Perfect for all liquids which require a pouring aid.



MEASURING CUPS & SPOONS

Our dosing aids enable clean use and precise dosing. Our range of dosing cups is designed for combined use with our closures, and they fit on top of them. This enables automatic assembly in your production process and reduces space requirements for the secondary packing. The registration of our dosing cups and spoons as medical devices also gives you the necessary peace of mind.

Heinlein offers various measuring cup types, which are certified according to DIN EN ISO 13485 and qualified according to Directive MD 93/42 EEC V.3. All measuring cups are labelled according to the Medical Products Law with CE marking and manufacturer logo. We deliver dosing aids made to your specifications. We also offer a wide range of various designs, scales and functions for our products.

Certificates

- + In acc. w/ ISO 13485 for medical devices and Directive 93/42/EEC Annex V.3
- + CE marking

Materials

Polypropylene PP, transparent

Applications

Perfect for liquids which require dosing.

MEASURING CUPS

The benefits

- + Easy dosing possible with various viscosities
- + High dimensional stability due to folded drinking rim, despite thin wall thickness
- + Cups do not get stuck inside one another
- + Fits onto all closures thanks to flexible fin shape
- + Machine processing possible

Scaling

- + Standard scaling from 1 to 30 ml
- + Special scaling available upon request
- + For even better legibility: printed scaling

Combination options

Measuring cups can be combined with all of our closures.

MEASURING SPOONS

The benefits

- + Enables one-step administration
- + Does not tip over after being filled
- + Can be supplied with every product in the packaging
- + Suitable for machine processing due to stackability

Scaling

- + Capacity: 5 ml (when full to the brim)
- + Standard scaling: 1/4 and 1/2, corresponds to 1.25 ml and 2.5 ml

Combination options

Measuring spoons can be combined with every product in the packaging.





Pipette sets are used primarily for dosing and applying liquids. For a long time, pipettes and pipette assemblies have provided a time-tested, reliable variant of our dosing and application aids. Fluids can not only be dosed and/or applied at precise volumes, but also at a specific location. Pipettes and suction bulbs are available in custom lengths and types and can be combined with various closure designs from Heinlein.

Various design and adjustment options enable pipette assemblies to be flexibly adapted to the relevant purpose and the container used. Our customers can choose between glass pipettes or plastic ones. Our large selection of pipette tips makes it possible to adjust dosing even more specifically to the customer's wishes.

The benefits

- ✦ Dispense countable drops by squeezing the suction bulb
- ✦ Precise and clean dosage
- ✦ Allows visual checks to be conducted

Combination options

- ✦ Screw closure
- ✦ Tamper-evident closure, one-part
- ✦ Tamper-evident closure, multiple-piece

NEW

developed in-house

Child-resistant pipette with tamper-evident closure



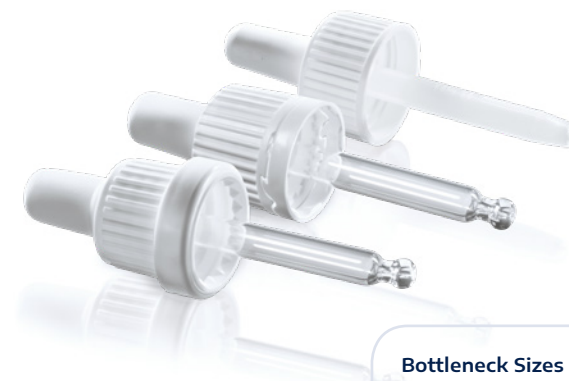
Pipettes types & materials

- ✦ Bent balloon tip
- ✦ Elongated tip
- ✦ Straight tip
- ✦ Available in glass or plastic
- ✦ Custom graduations and printing available for glass pipettes



Bulbs types & materials

- ✦ Natural latex
- ✦ Suction bulbs available in various colours
- ✦ Other variants available; please enquire with us.



Bottleneck Sizes
DIN 168 / GL 18
DIN 6094-7 / PP 28 S

Applications

Perfect for all products which require a dosing situation with countable drops.



44 HEINLEIN PLASTIK-TECHNIK

BRUSHES & SPATULAS

Brushes and spatulas are ideal for the application of liquids. We help you find the right applicator that is tailored to your container and contents.

The benefits

- ✦ Familiar, easy operation
- ✦ Suitable for applying preparations with different viscosities
- ✦ High variability in the properties of the brush
- ✦ Available in mounted and unmounted versions

Combination options

Brushes & Spatulas are combinable with all kind of closures upon request.

**Materials**

Spatulas: Polyethylene PE-LD

Brush shaft: Polyethylene, low-density, PE-LD
Polyethylene, high-density, PE-HD

Brush bristles: Polyamide PA
Polybutylene terephthalate PBT

Bottleneck Sizes

DIN 168 / GL 18
Others upon request.

Applications

For the application of viscous liquids.



HEINLEIN PLASTIK-TECHNIK

DOSING SYRINGES & ADAPTERS

45

Dosing syringes and adapters are available for glass and PET syrup bottles for various bottleneck sizes. Dosing syringes are currently a welcome packaging solution, as dosing is extremely easy and clean with this type of syringe (no residue on the barrel of the syringe). The syringe adapter from Heinlein is suitable for all dosing syringes commonly available on the market and provides an optimal grip with a wide range of syringe diameters for convenient dosing. The syringe adapter is available in a mounted or unmounted version for all closure designs from Heinlein. We obtain these dosing syringes from our long-standing partners.

The benefits

- ✦ Easy and convenient dosing
- ✦ Exact volume measurements for dosing
- ✦ Practical and straight forward to use
- ✦ With matching transparent syringe adapter
- ✦ For glass and PET bottles

Combination options

The syringe adapter is available in a mounted or unmounted version for all closure designs from Heinlein. We source these dosing syringes from our long-standing partners.

**Materials**

Syringes: Polypropylene PP (barrel)

Polyethylene, high-density, PE-HD (plunger)

Adapters:

Polyethylene, low-density, PE-LD

Bottleneck Sizes

DIN 168 / GL 18
DIN 6094-7 / PP 28 S

Applications

Perfect for all liquids which require exact, hygienic dosing.



HEINLEIN PLASTIK-TECHNIK

CUSTOMER-SPECIFIC SOLUTIONS

Every customer is different – and every sector has its own special requirements. For this reason, we are the ideal partner when it comes to special customer and product requests.

Our very own in-house divisions enables us to realise virtually any custom product request both quickly and cost-efficiently.

QUESTIONS?

Do you have any questions or would you like to request a quote? Please let us know your specific requirements – we would be happy to provide you with more detailed advice and will find the ideal, customised solution for your product.



THE HEINLEIN ALL-ROUND CAREFREE PACKAGE

Heinlein Plastik-Technik offers you an all-round carefree package when choosing your packaging supplier. Every one of our employees is a supporting pillar, carrying our company on their shoulders and taking it forward. Our flexibility, the expertise we have built up over long years of practical experience, and our readiness

to support our customers with total commitment: all these corporate strengths come from the strengths of our staff, and for you they mean success. To preserve this positive dynamic for the long term, we constantly strive to guarantee optimum support. **That is why we support you 24/7 in the following areas:**

Support at your plant	Feed and Screwing units	Processing, Sealing and Conveying Technology
Screw heads and optical / sensor-aided monitoring systems	Leak tests	appropriate Documentation (test certificates, material specifications etc.)
Drip tests	Compatibility check with the customer bottle	Closure recommendations





WE STRENGTHEN YOUR BUSINESS

Comprehensive service and expert advice have always been a priority at Heinlein. That is why we offer professional support to help you find suitable packaging, as well as in the areas of processing, sealing and conveyor technology. As a customer, you will benefit from our longstanding experience, our expertise in creating moulds in-house, and our machine construction.

As an additional service, we can assist you by professionally determining which items and administration methods best suit your requirements.

We carry out suitable dosing tests directly on your product, based on prescribed dosing regulations. We then use the findings to determine the **best product combination for your needs.**

This saves time and creates transparent values, thanks to documented procedures. For us, good service does not end with the delivery of our products. That is why we are also glad to assist you with system configuration and help with any related questions or problems: by phone or on site.

Visit our website at www.heinlein-plastik.com

Sales & Service Team



