

Product Catalogue



Modulpac



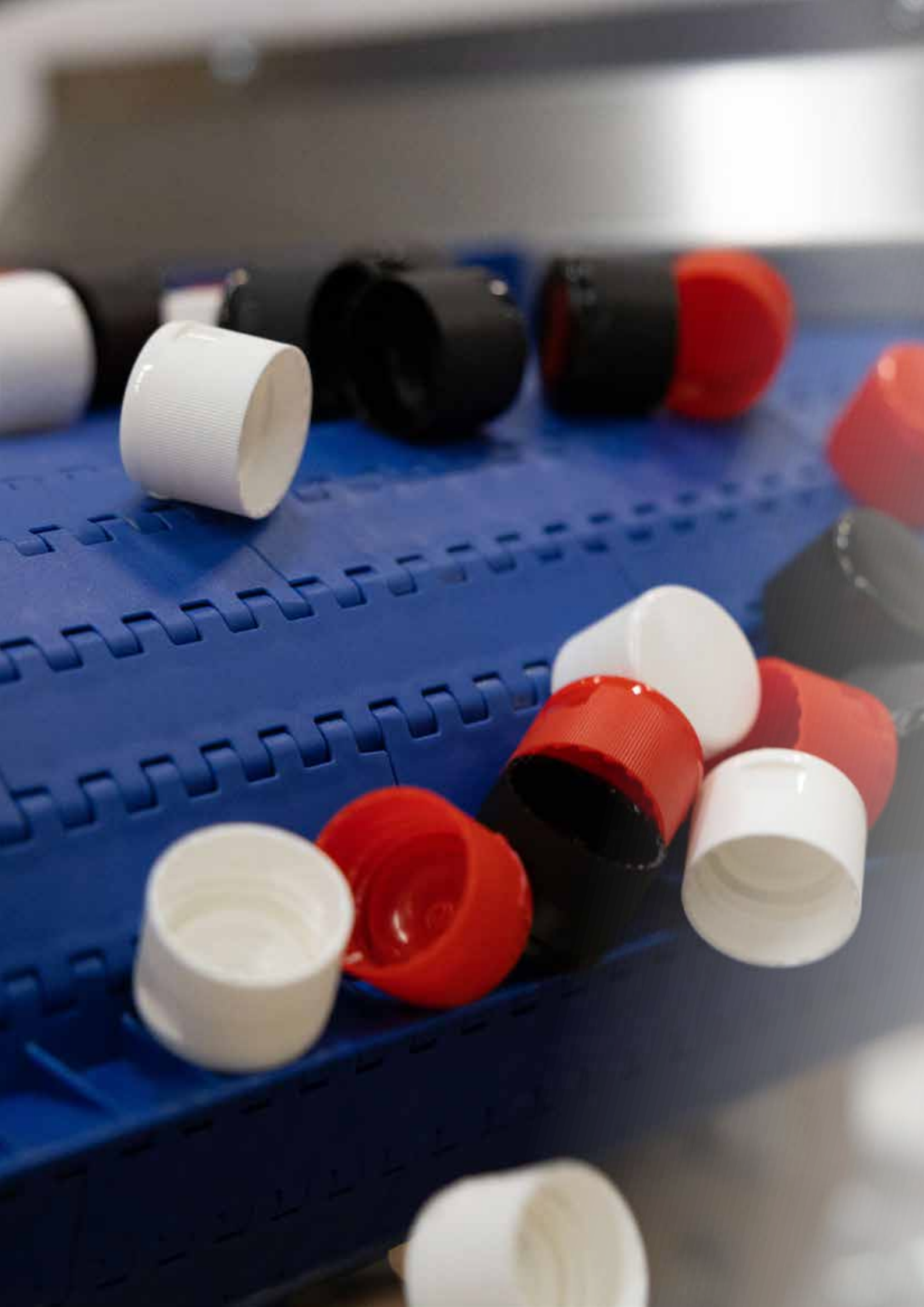


Table of Contents

Company presentation.....	4
Product development.....	6
Profiling.....	9

22 mm closures.....	10
24 mm closures.....	13
25 mm closures.....	15

28 mm closures.....	16
---------------------	----

32 mm closures.....	30
33 mm closures.....	36
38 mm closures.....	37

40 mm closures.....	40
43 mm closures.....	49

Weldspouts.....	51
Grips.....	52
Dosage cups.....	53
Shampoo closures.....	54
Cosmetic jars and lids.....	56

Liner information.....	60
------------------------	----

Quality.....	63
Tests for quality assurance.....	66
Sustainability.....	74



Modulpac AB

Modulpac AB has been active on the international plastic market since 1982, where we have been manufacturing first class plastic closures and packaging solutions aimed at our four main market segments – pharma/MedTech-, cosmetic-, chemical- and the food industry.

We have been based in Lagan in the south of Sweden since the beginning, where both of our factories and our headquarter is located. This means that we preserved our knowledge, our experience and our expertise throughout the development over the years.



At Modulpac we put long experience into the development of our products with a focus on sustainability throughout the process. We offer everything you need to develop your ideas into actual products. Whether it is standard packaging or customized solutions.

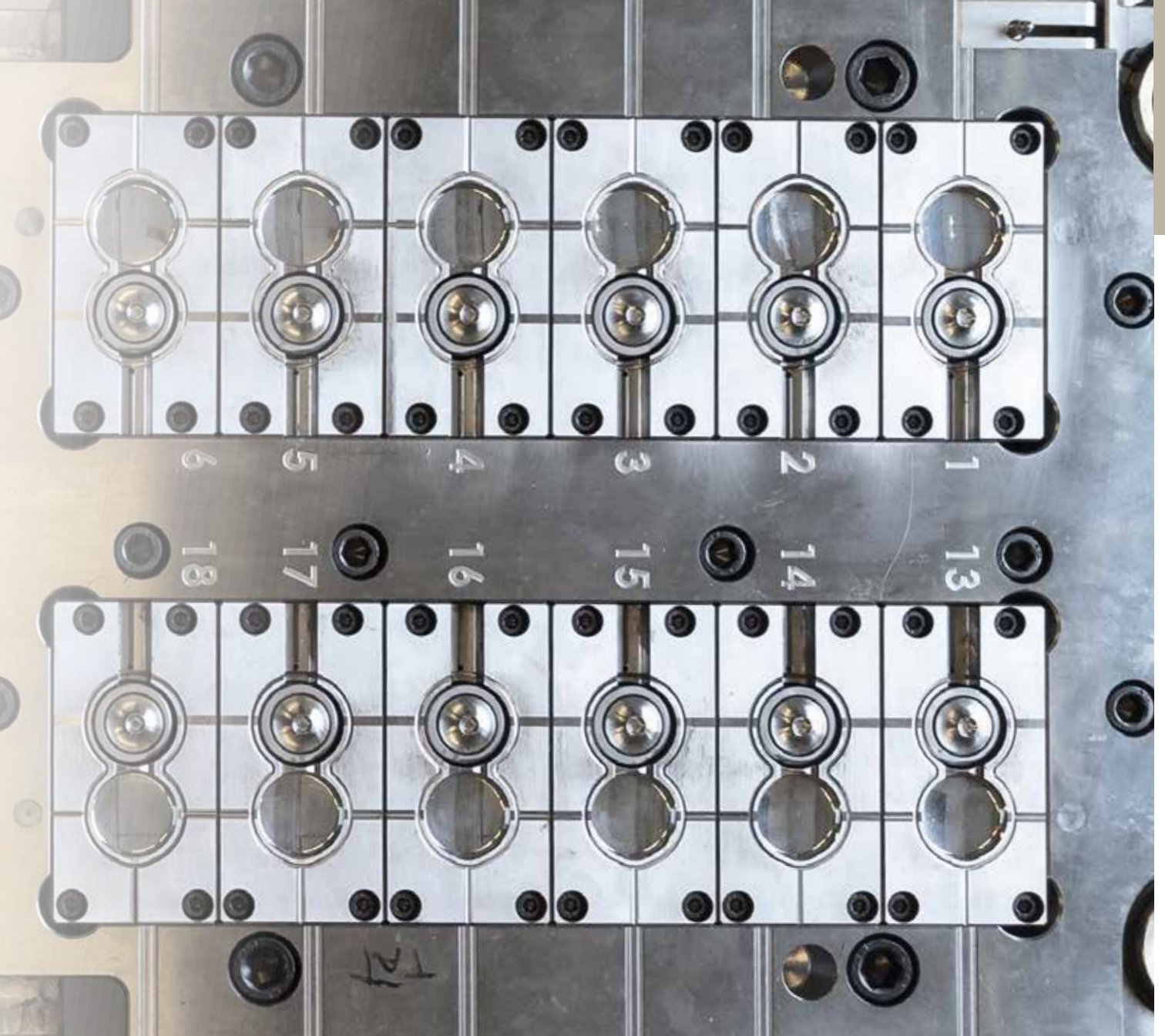
We combine high quality and fast deliveries with total flexibility when it comes to functionality and design. As a result of this we have formed long term relationships with many satisfied customers on the domestic and international market.



Product Development

It is our ambition to be a frontrunner in product development within our line of business. We have our own research and development department where we develop new products, both our own and those tailored-made solutions for customer needs. During the years, we've developed and patented several solutions and products.

We can take a project from the initial idea all the way through to the final product. We design products adapted to your production flow and that fulfil your demands of functionality as well as design and specific safety demands.



When our customers wish to develop customized products, we always prefer to be involved from square one. In that way we can make sure the final product meets all your specifications regarding design, functionality and materials.



NOIR
STOCKHOLM

AND THEN WE DANCED
TEXTURE PASTE SOUFFLÉ

Profiling

High quality profiling can be critical to the success of a product, particularly in the cosmetic market. We offer profiling in addition to give your product a unique look in terms of shape and color, we can help you by giving it a more distinct profile in a number of different ways.

Using printed details, you can add that little extra touch to your product. An elegant and professional graphic design helps your product convey precisely what you want and to catch the eye of a presumptive customer.

Different Methods

IML or In-Mould- Labelling - A method for labelling your products while they are being manufactured.

Tampo pad printing - A method in which a rubber pad picks the dye from a block and prints the image on the closure. We can print a logo on caps in many different colors.

Labelling - Yet another option to present your message. We have several labelling machines and are happy to help you applying labels.

Embossing and debossing - Two techniques used to either impress or depress a design into the closures. These effects are ideal for giving your closure a fresh, contemporary look.

Laser printing - With our laser printer, we can create a unique graphic design on the closures that easily can be varied in short series, for example when the customer has a temporary campaign. The laser printing machine is a carbon dioxide (CO₂) - laser which is suitable for non metallic materials such as plastic and wood.

Aseptically Sealed Packaging

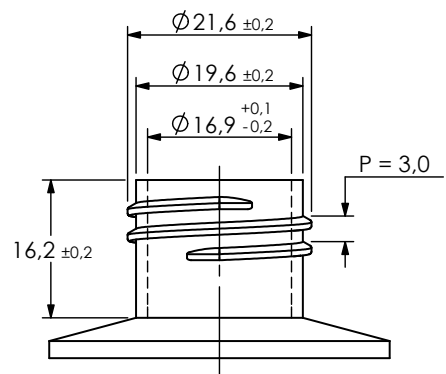
Modulpac has developed a cost-efficient patented sealing system that enables our customers packaging to stay aseptically sealed. The low oxygen permeability keeps an aseptically filled product fresh for at least one year when stored in room temperature.

22 - 25mm Closures

22B

 5 000 pcs  80 000 pcs

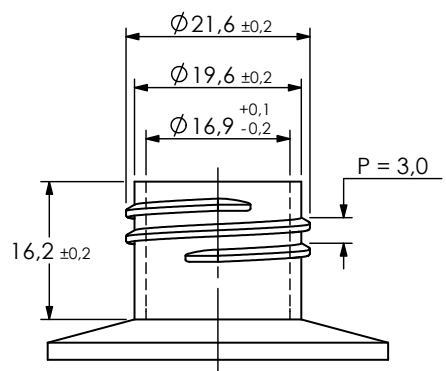
Type: 22 mm child resistant closure
Design: Rills
Sealing: Cone sealing



22BO

 5 000 pcs  80 000 pcs

Type: 22 mm child resistant closure
Design: Rills
Sealing: Standard liner: PP, aluminium (IHS), venting

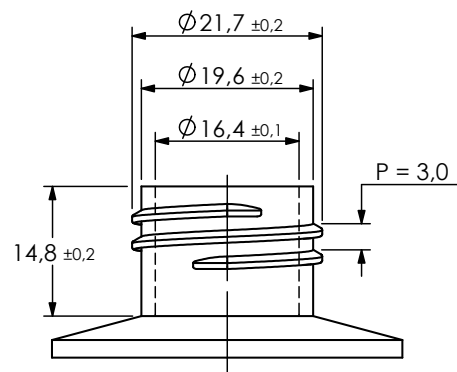


22 - 25mm Closures

22FT

 6 000 pcs  96 000 pcs

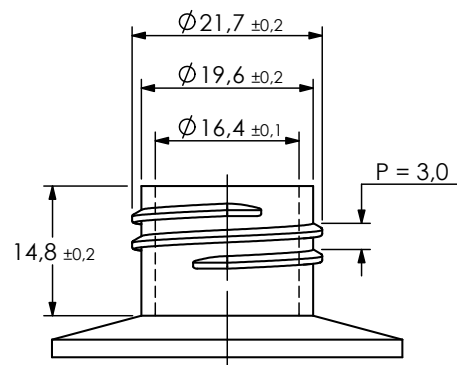
Type: 22 mm flip top closure
Design: Glossy, 3 mm orifice
Sealing: Cone sealing



22FTR

 6 000 pcs  96 000 pcs

Type: 22 mm flip top closure
Design: Rills, 3 mm orifice
Sealing: Cone sealing

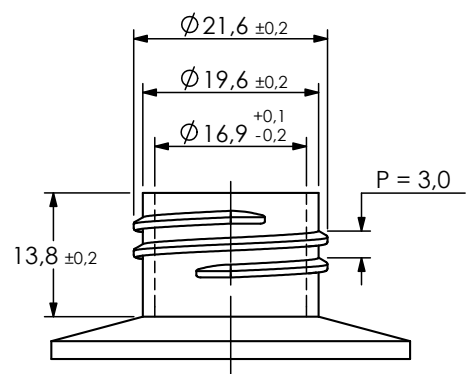


22 - 25mm Closures

22K

 7 500 pcs  120 000 pcs

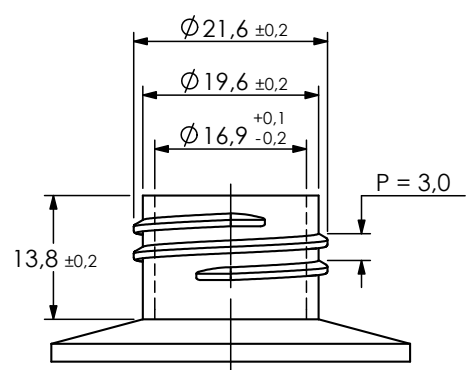
Type: 22 mm closure
Design: Rills
Sealing: Cone sealing



22KO

 7 500 pcs  120 000 pcs

Type: 22 mm closure
Design: Rills
Sealing: Standard liner: PP, aluminium (IHS), venting



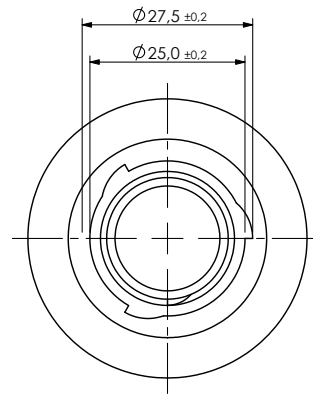
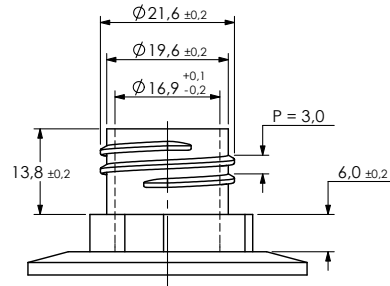
22 - 25mm Closures

22P

 4 500 pcs  90 000 pcs

Type: 22 mm pilfer proof closure
Design: Rills
Sealing: Cone sealing

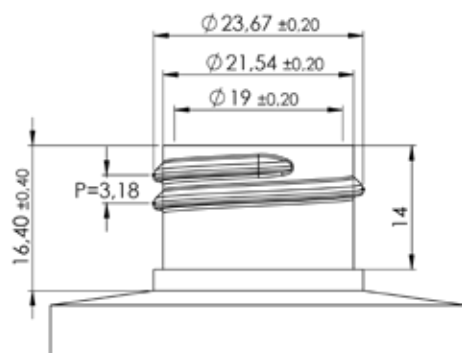
* Pilfer proof ring remains on the container after opening.



24FT

 2 800 pcs  78 400 pcs

Type: 24 mm flip top closure
Design: Glossy, 3 mm orifice
Sealing: Cone sealing

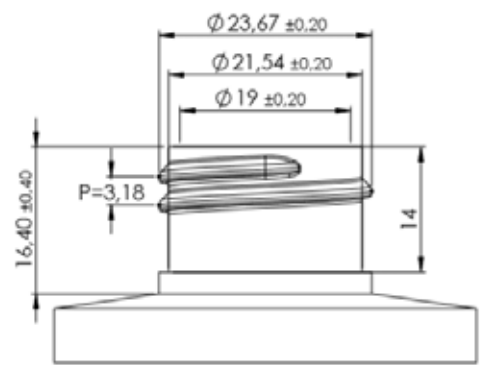


22 - 25mm Closures

24DT

 2 200 pcs  61 600 pcs

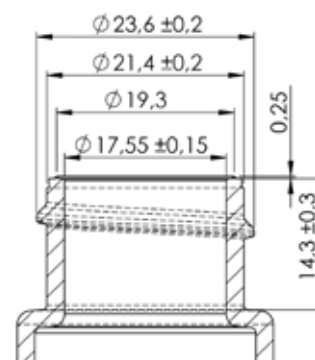
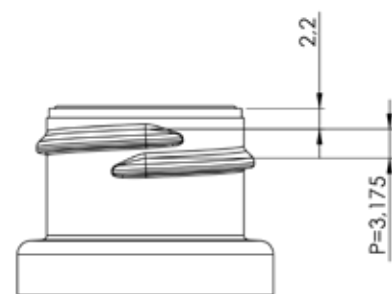
Type: 24 mm disc top closure
Design: Matt
Sealing: Cone sealing



24DK

 5 300 pcs  106 000 pcs

Type: 24 mm deo closure
Design: Matt
Sealing: Cone sealing

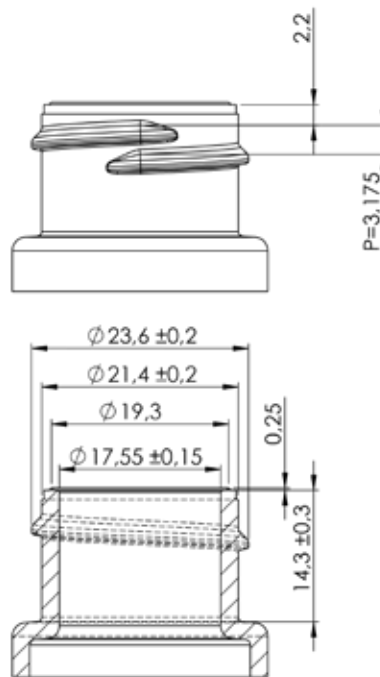


22 - 25mm Closures

24TKO

 6 000 pcs  120 000 pcs

Type: 24 mm closure
Design: Rills
Sealing: Standard liner: PP, aluminium (IHS), venting

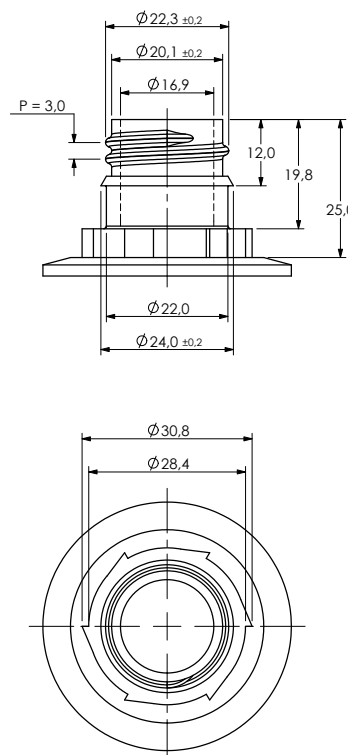


25PMO

 3 000 pcs  60 000 pcs

Type: 25 mm pilfer proof closure
Design: Rills
Sealing: Standard liner: PP, aluminium (IHS), venting

* Pilfer proof ring remains on the container after opening.

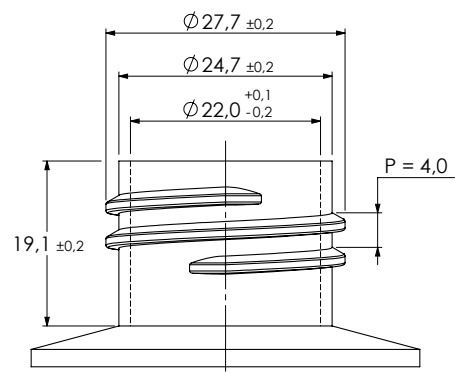


28mm Closures

28B

 3 000 pcs  48 000 pcs

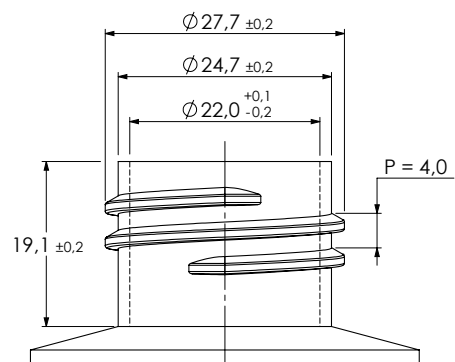
Type: 28 mm child resistant closure
Design: Rills
Sealing: Cone sealing



28BO

 3 000 pcs  48 000 pcs

Type: 28 mm child resistant closure
Design: Rills
Sealing: Standard liner: PP, aluminium (IHS), venting



28mm Closures

28BI

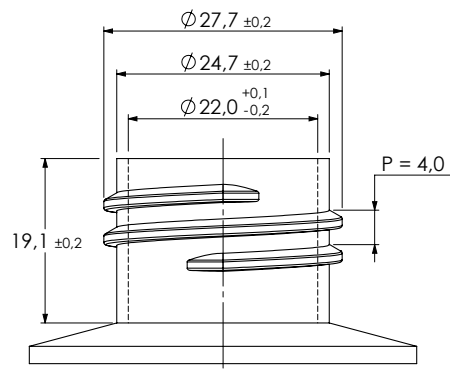
 3 000 pcs  48 000 pcs

Type: 28 mm child resistant closure

Design: Spray insert, rills

Sealing: Spray insert

* Available with different types of spray inserts.



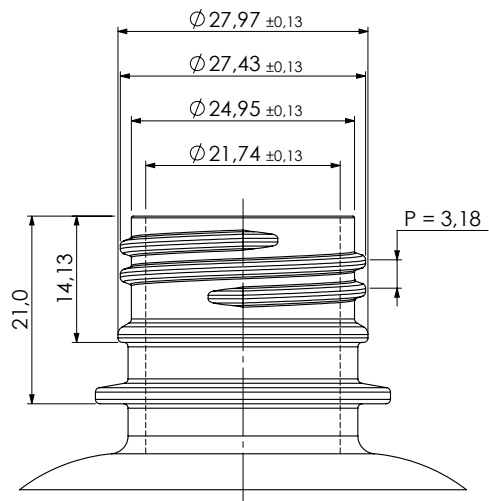
28B PCO

 3 000 pcs  48 000 pcs

Type: 28 mm child resistant closure

Design: Rills, PCO-thread

Sealing: Cone sealing

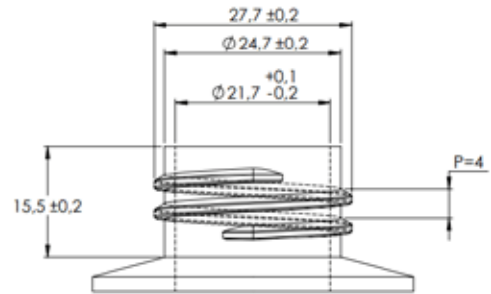


28mm Closures

28GKLPET

 4 000 pcs  80 000 pcs

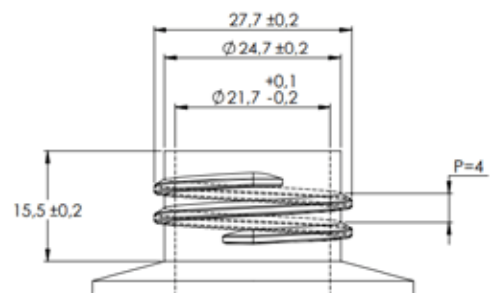
Type: 28 mm closure
Design: Short, rills, for PET bottle
Sealing: Cone sealing



28GKLO

 4 000 pcs  80 000 pcs

Type: 28 mm closure
Design: Short, rills, for PET bottle
Sealing: Standard liner: PP, aluminium (IHS), venting

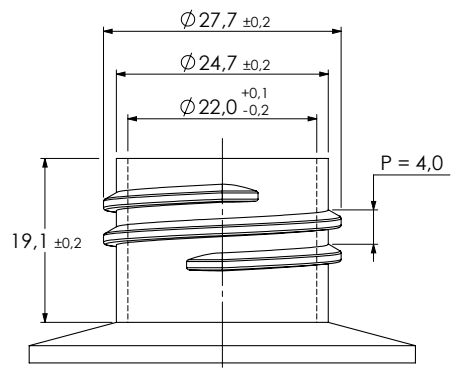


28mm Closures

283FT

 2 000 pcs  56 000 pcs

Type: 28 mm flip top closure
Design: Glossy, 3 mm orifice
Sealing: Cone sealing

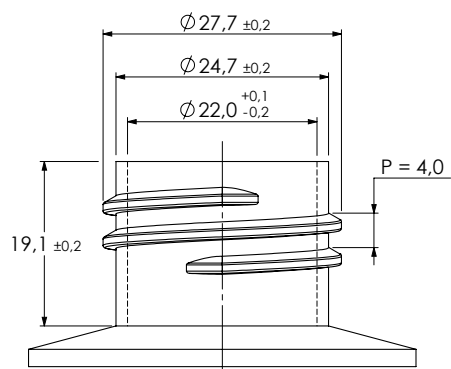


28 mm

286FT

 2 000 pcs  56 000 pcs

Type: 28 mm flip top closure
Design: Glossy, 6 mm orifice
Sealing: Cone sealing

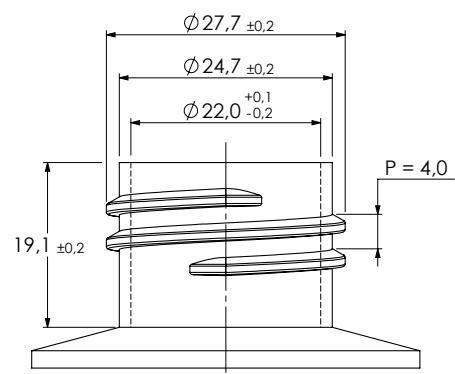


28mm Closures

283FTR

 2 000 pcs  56 000 pcs

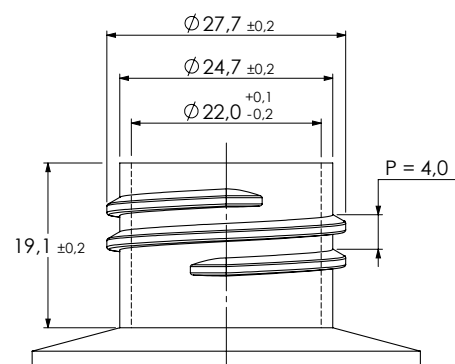
Type: 28 mm flip top closure
Design: Rills, 3 mm orifice
Sealing: Cone sealing



286FTR

 2 000 pcs  56 000 pcs

Type: 28 mm flip top closure
Design: Rills, 6 mm orifice
Sealing: Cone sealing

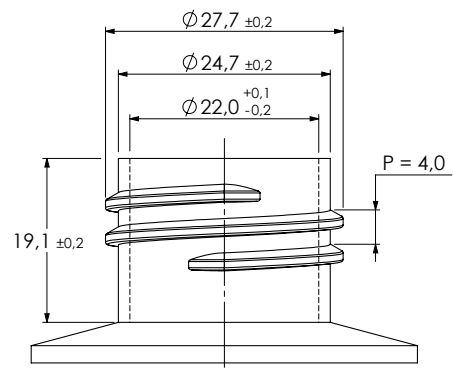


28mm Closures

283FTO

 2 000 pcs  56 000 pcs

Type: 28 mm flip top closure
Design: Glossy, 3 mm orifice
Sealing: Aluminium (IHS) liner

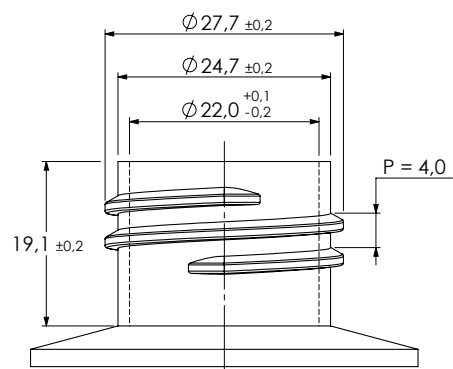


28 mm

286FTO

 2 000 pcs  56 000 pcs

Type: 28 mm flip top closure
Design: Glossy, 6 mm orifice
Sealing: Aluminium (IHS) liner

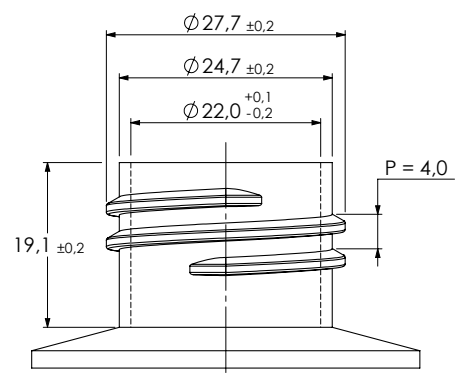


28mm Closures

283FTRO

 2 000 pcs  56 000 pcs

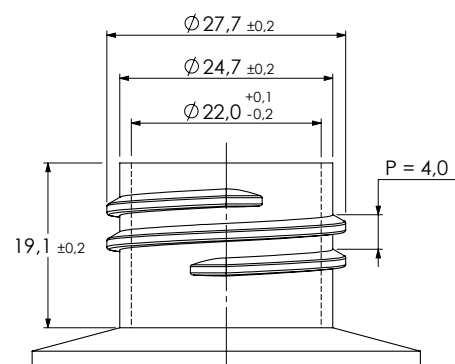
Type: 28 mm flip top closure
Design: Rills, 3 mm orifice
Sealing: Aluminium (IHS) liner



286FTRO

 2 000 pcs  56 000 pcs

Type: 28 mm flip top closure
Design: Rills, 6 mm orifice
Sealing: Aluminium (IHS) liner

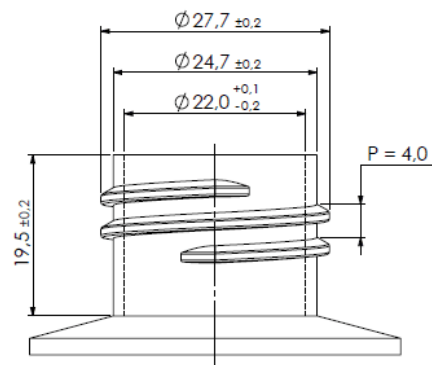


28mm Closures

28K

 4 000 pcs  80 000 pcs

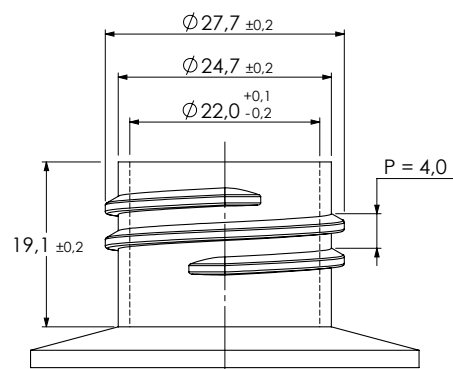
Type: 28 mm closure
Design: Rills
Sealing: Cone sealing



28KO

 4 000 pcs  80 000 pcs

Type: 28 mm closure
Design: Rills
Sealing: Standard liner: PP, aluminium (IHS), venting



28 mm

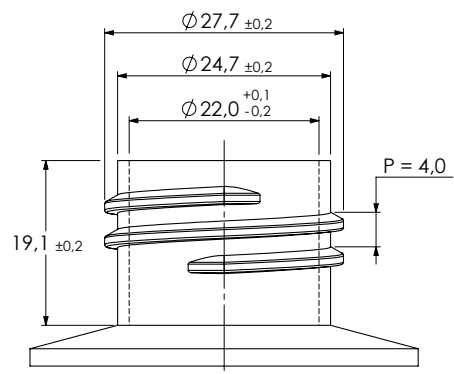
28mm Closures

28KS

 4 000 pcs  64 000 pcs

Type: 28 mm closure
Design: Spray insert, rills
Sealing: Spray insert

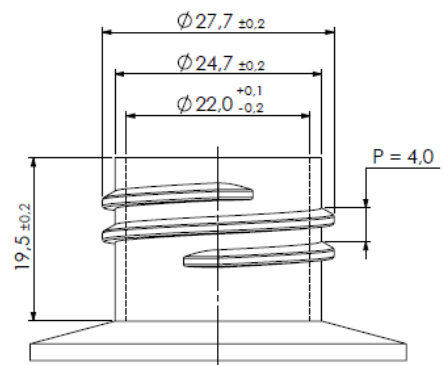
*Available with different types of spray inserts.



28KB

 4 000 pcs  80 000 pcs

Type: 28 mm closure
Design: Glossy
Sealing: Cone sealing



28mm Closures

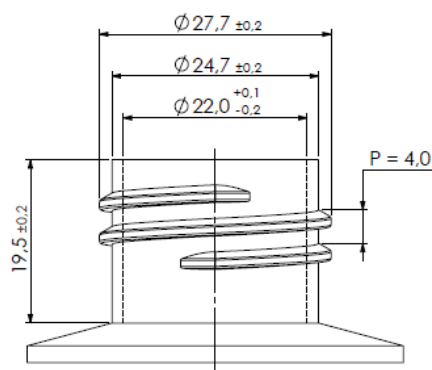
28KBO

 4 000 pcs  80 000 pcs

Type: 28 mm closure

Design: Glossy

Sealing: Standard liner: PP, aluminium (IHS), venting



28 mm

28P

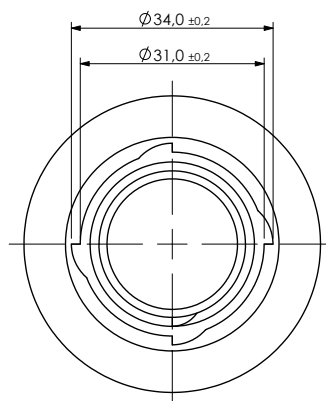
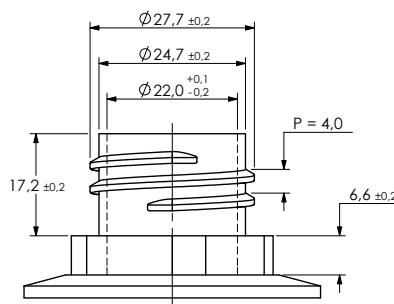
 2 500 pcs  50 000 pcs

Type: 28 mm pilfer proof closure

Design: Rills

Sealing: Cone sealing

*Pilfer proof ring remains on the container after opening.

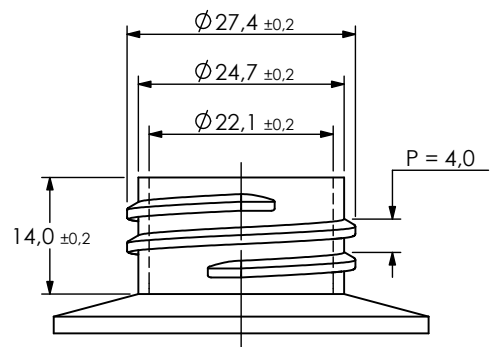


28mm Closures

28SP

 3 900 pcs  78 000 pcs

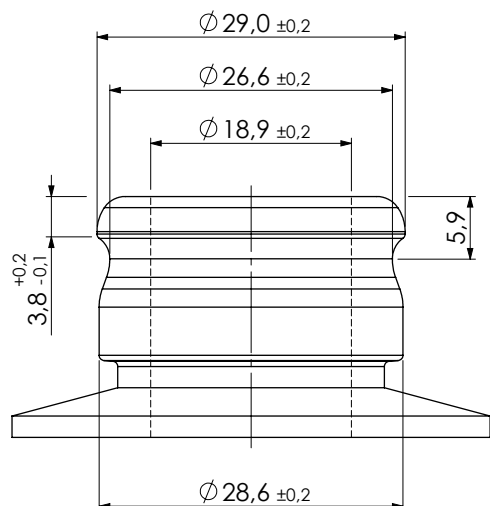
Type: 28 mm spout closure
Design: Rills, spout
Sealing: Cone sealing



28AZ

 3 000 pcs  48 000 pcs

Type: 28 mm drop less closure
Design: Drop less, tamper evident
Sealing: Cone sealing



28mm Closures

28ROPP

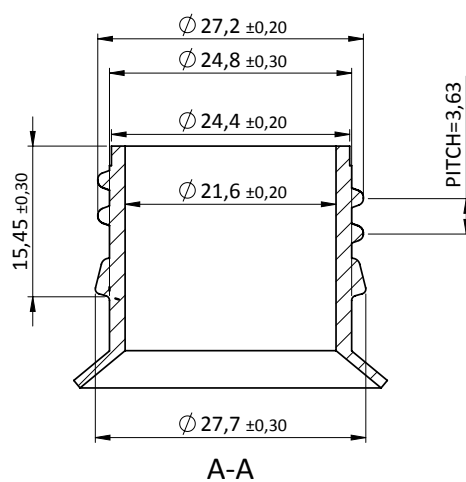
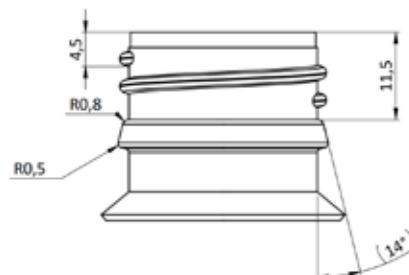
 2 500 pcs  50 000 pcs

Type: 28 mm ROPP closure

Design: Rills

Sealing: Cone sealing

*Pilfer proof ring remains on the container after opening.



28 mm

28ROPPO

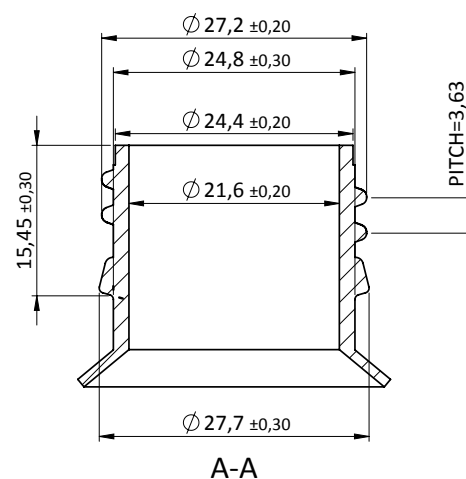
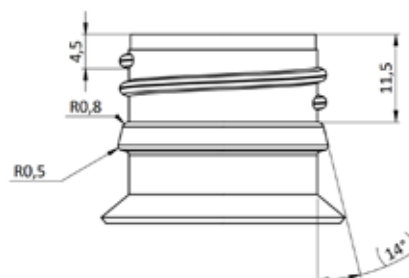
 2 500 pcs  50 000 pcs

Type: 28 mm ROPP closure

Design: Rills

Sealing: Standard liner: PP, aluminium (IHS), venting

*Pilfer proof ring remains on the container after opening.



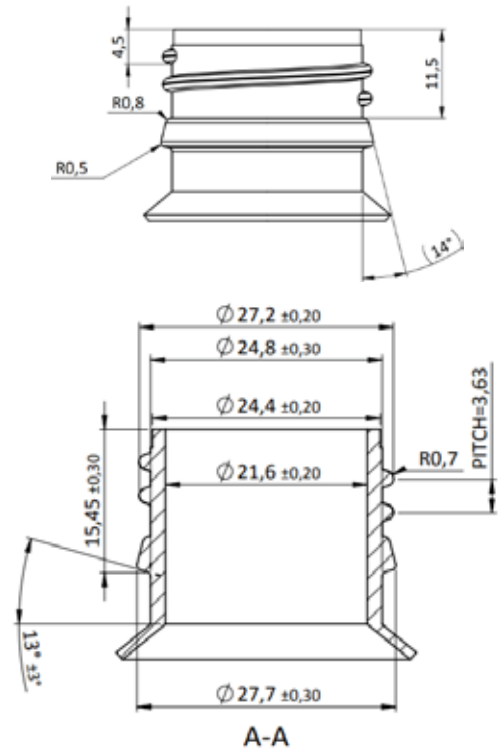
28mm Closures

28ROPPHP

 2 500 pcs  50 000 pcs

Type: 28 mm ROPP closure
Design: With pour spout, rills
Sealing: Pour spout

*Pilfer proof ring remains on the container after opening.

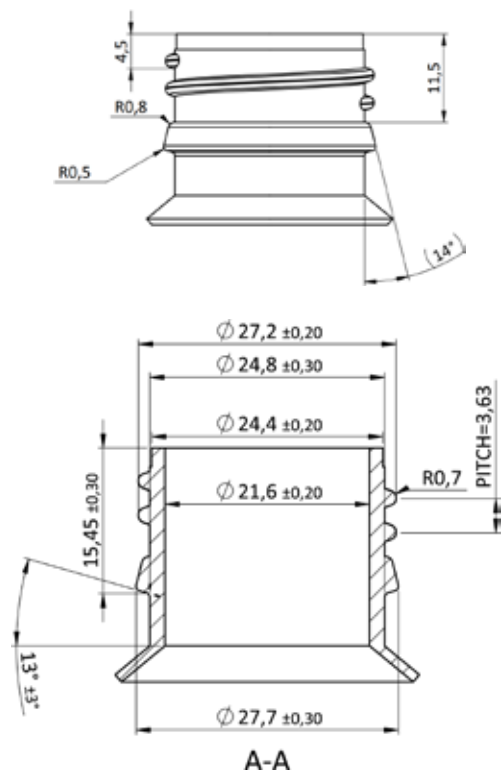


28ROPPSIPETS

 2 500 pcs  50 000 pcs

Type: 28 mm ROPP closure
Design: With spray insert, rills
Sealing: Spray insert

*Pilfer proof ring remains on the container after opening.



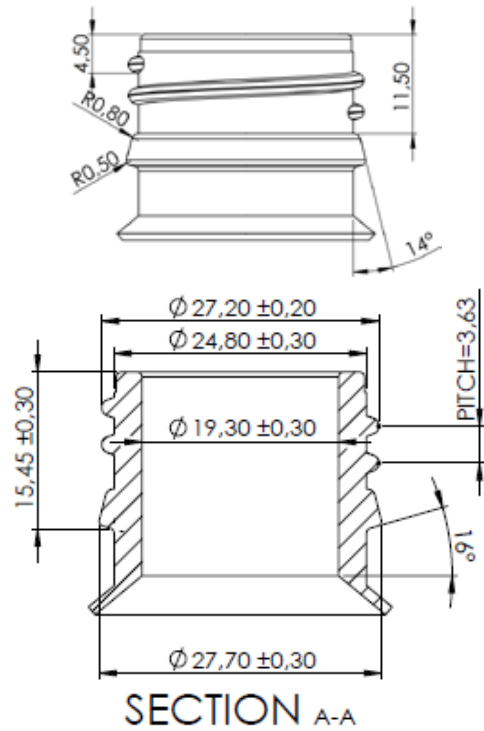
28mm Closures

28ROPPHPGL

 2 500 pcs  50 000 pcs

Type: 28 mm ROPP closure
Design: With pour spout for glass, rills
Sealing: Pour spout

*Pilfer proof ring remains on the container after opening.



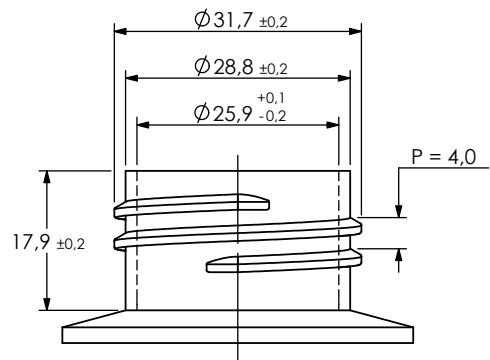
28 mm

32 - 38mm Closures

32B

 2 800 pcs  44 800 pcs

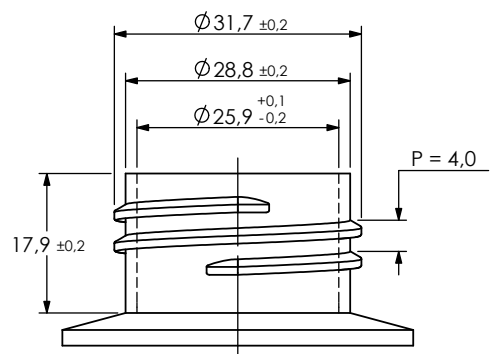
Type: 32 mm child resistant closure
Design: Rills
Sealing: Cone sealing



32BO

 2 800 pcs  44 800 pcs

Type: 32 mm child resistant closure
Design: Rills
Sealing: Standard liner: PP, aluminium (IHS), venting

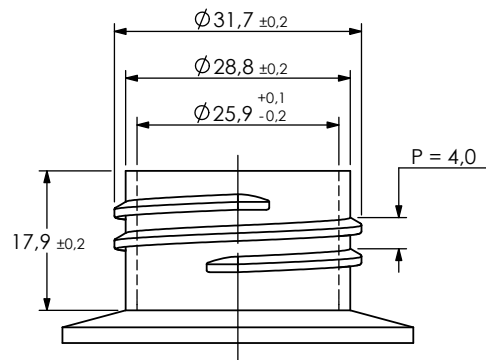


32 - 38mm Closures

32K

 3 500 pcs  70 000 pcs

Type: 32 mm closure
Design: Rills
Sealing: Cone sealing

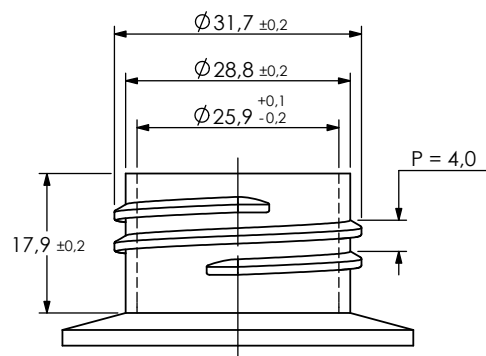


32 - 38 mm

32KO

 3 500 pcs  70 000 pcs

Type: 32 mm closure
Design: Rills
Sealing: Standard liner: PP, aluminium (IHS), venting

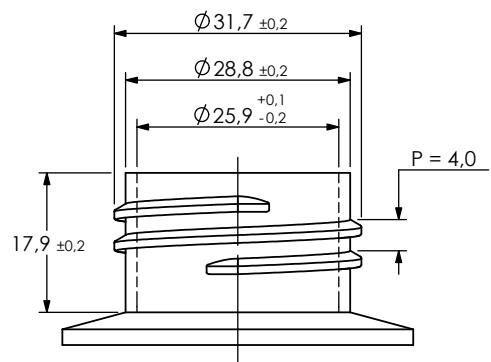


32 - 38mm Closures

32KOS

 3 100 pcs  49 600 pcs

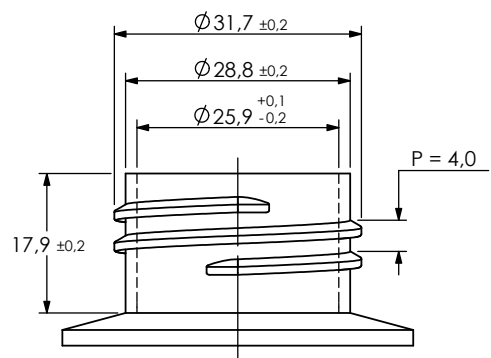
Type: 32 mm closure
Design: Rills, cutting device
Sealing: Aluminium (IHS) liner



32L

 2 000 pcs  40 000 pcs

Type: 32 mm adhesive closure
Design: Rills, spout
Sealing: Cone sealing



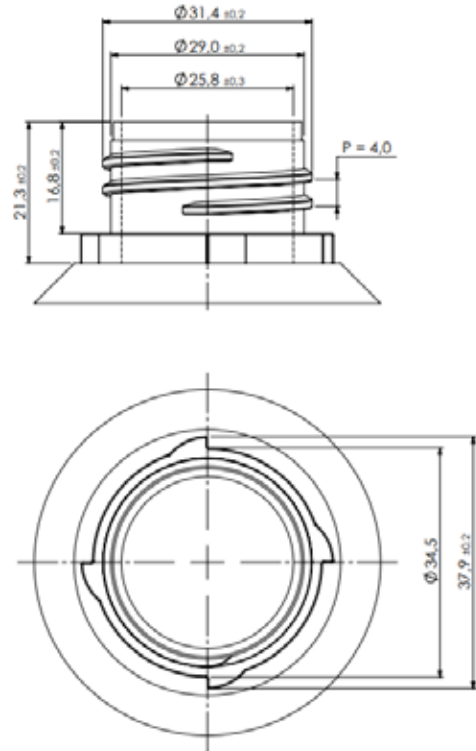
32 - 38mm Closures

32ND

 2 200 pcs  44 000 pcs

Type: 32 mm pilfer proof closure
Design: Rills
Sealing: Cone sealing

*Pilfer proof ring remains on the closure after opening.

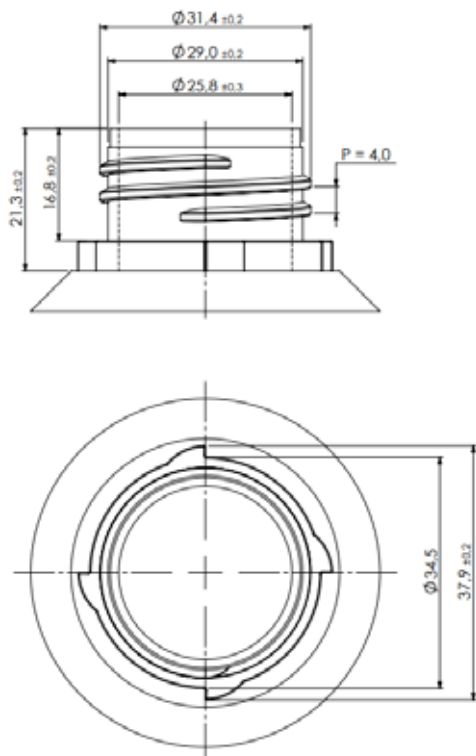


32NDO

 2 200 pcs  44 000 pcs

Type: 32 mm pilfer proof closure
Design: Rills
Sealing: Standard liner: PP, aluminium (IHS), venting

*Pilfer proof ring remains on the closure after opening.



32 - 38mm Closures

32P

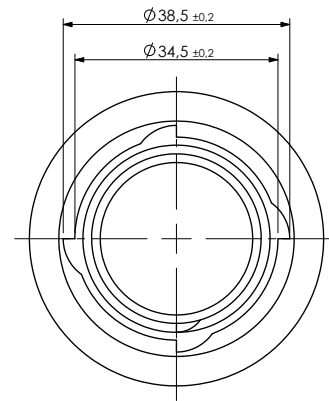
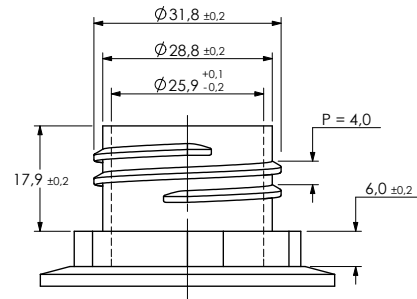
 2 000 pcs  40 000 pcs

Type: 32 mm pilfer proof closure

Design: Rills

Sealing: Cone sealing

*Pilfer proof ring remains on the container after opening.



32PM

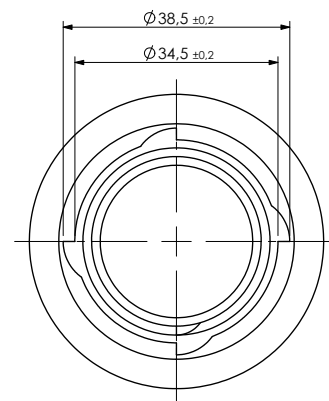
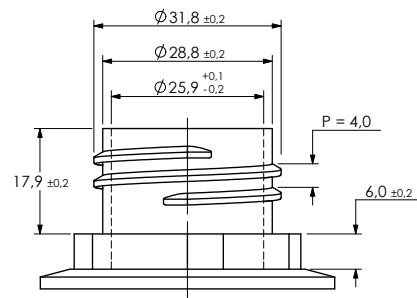
 2 100 pcs  42 000 pcs

Type: 32 mm pilfer proof closure

Design: Rills

Sealing: Cone sealing

*Pilfer proof ring remains on the closure after opening.



32 - 38mm Closures

32PR

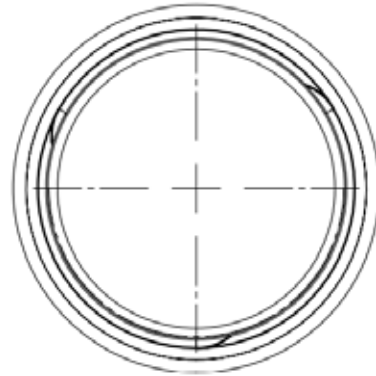
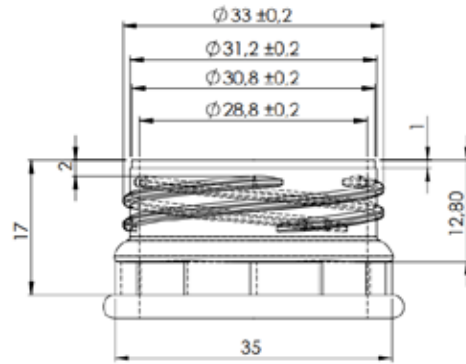
 3 100 pcs  62 000 pcs

Type: 32 mm pilfer proof closure

Design: Rills

Sealing: Cone sealing

*Pilfer proof ring remains on the container after opening.




32 - 38 mm

32 - 38mm Closures

335FTRO

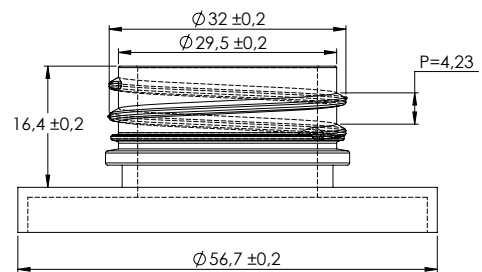
 750 pcs

 15 000 pcs

Type: 33 mm flip top closure


Design: Rills, 5 mm orifice

Sealing: Aluminium (IHS) liner



336FTRO

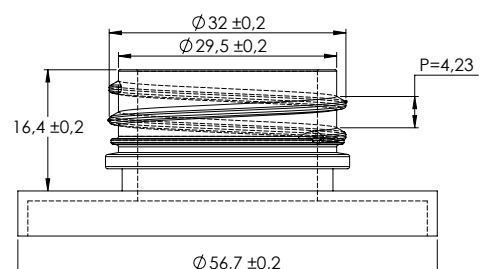
 750 pcs

 15 000 pcs

Type: 33 mm flip top closure

Design: Rills, 6 mm orifice

Sealing: Aluminium (IHS) liner

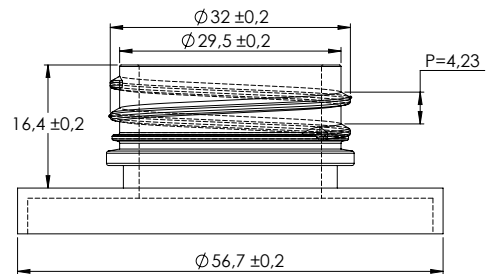


32 - 38mm Closures

339FTRO

 750 pcs  15 000 pcs

Type: 33 mm flip top closure
Design: Rills, 9 mm orifice
Sealing: Aluminium (IHS) liner

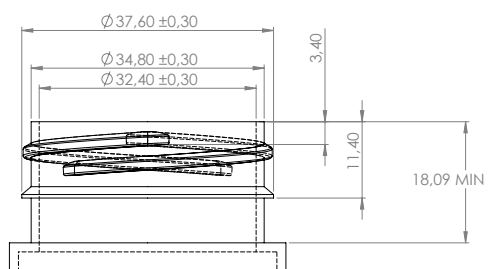
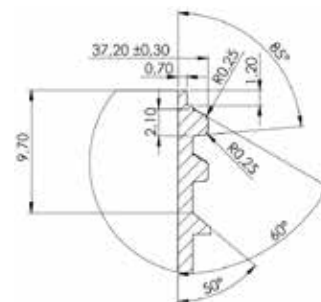


38PVR

 2 500 pcs  50 000 pcs

Type: 38 mm pilfer proof closure
Design: Rills
Sealing: Cone sealing

*Pilfer proof ring remains on the container after opening.

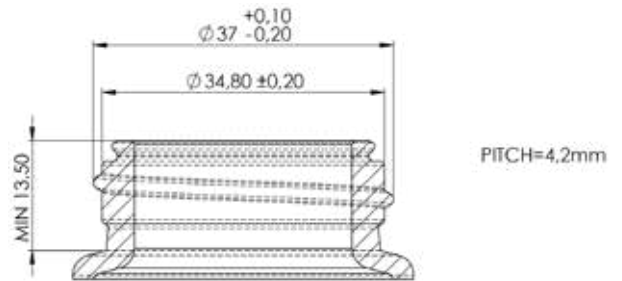


32 - 38mm Closures

38KLO

 2 450 pcs  39 200 pcs

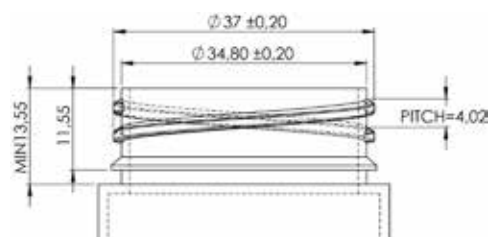
Type: 38 mm spice lid
Design: Duo-flapper
Sealing: Aluminium (IHS) liner



38KLSO

 2 450 pcs  39 200 pcs

Type: 38 mm spice lid
Design: Duo-flapper, 2-start thread
Sealing: Aluminium (IHS) liner

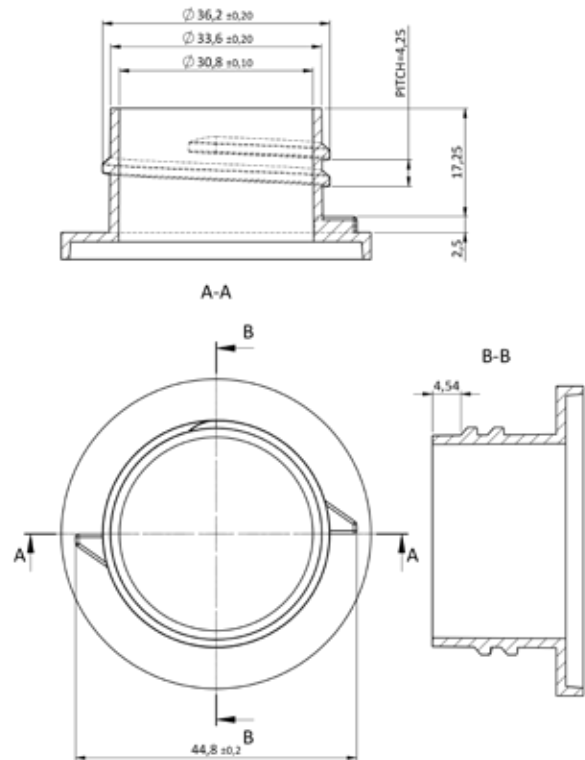


32 - 38mm Closures

38BST

 1 300 pcs  20 800 pcs

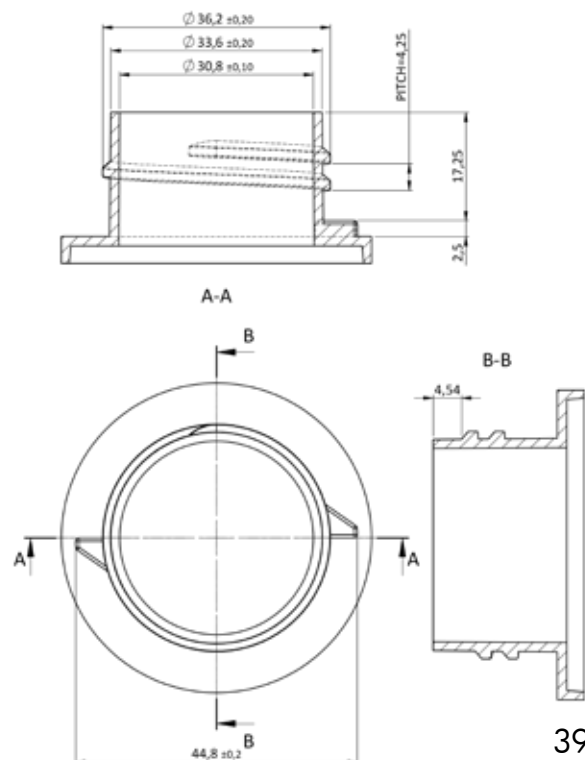
Type: 38 mm child resistant closure
Design: Squeeze and turn closure, rills
Sealing: Cone sealing



38BSTO

 1 300 pcs  20 800 pcs

Type: 38 mm child resistant closure
Design: Squeeze and turn closure, rills
Sealing: Standard liner: PP, aluminium (IHS), venting

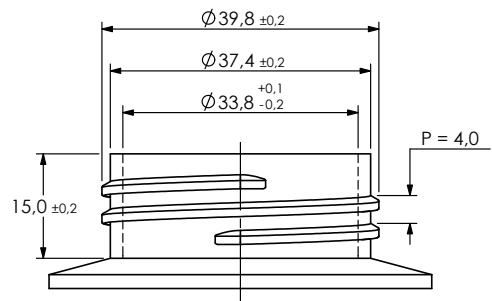


40 - 43mm Closures

40B

 2 100 pcs  33 600 pcs

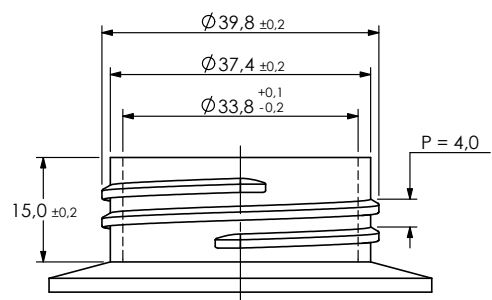
Type: 40 mm child resistant closure
Design: Rills
Sealing: Cone sealing



40BO

 2 100 pcs  33 600 pcs

Type: 40 mm child resistant closure
Design: Rills
Sealing: Standard liner: PP, aluminium (IHS), venting

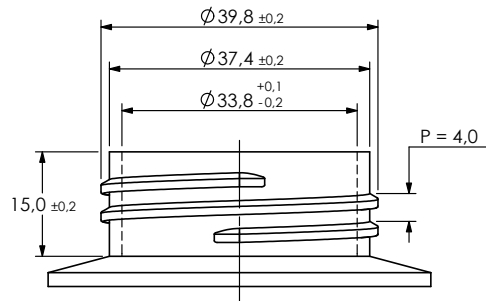


40 - 43mm Closures

40L

 1 500 pcs  30 000 pcs

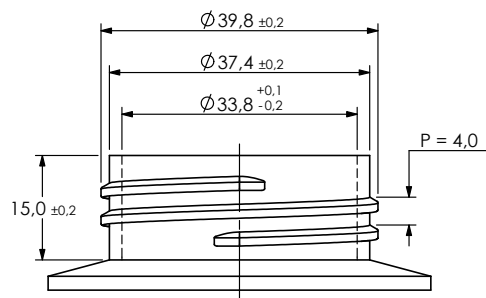
Type: 40 mm spout closure
Design: Rills, spout
Sealing: Cone sealing



40K

 2 600 pcs  41 600 pcs

Type: 40 mm closure
Design: Rills
Sealing: Cone sealing

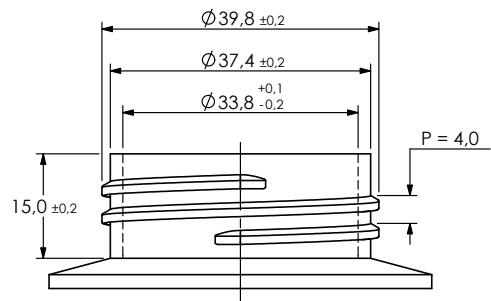


40 - 43mm Closures

40KO

 2 600 pcs  41 600 pcs

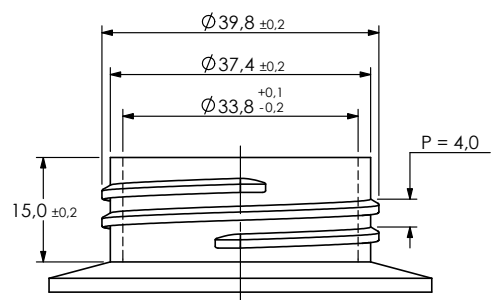
Type: 40 mm closure
Design: Rills
Sealing: Standard liner: PP, aluminium (IHS), venting



40KOS

 2 500 pcs  40 000 pcs

Type: 40 mm closure
Design: Rills, cutting device
Sealing: Aluminium (IHS) liner



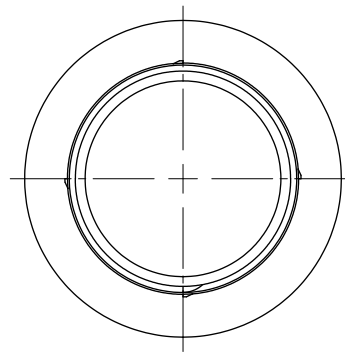
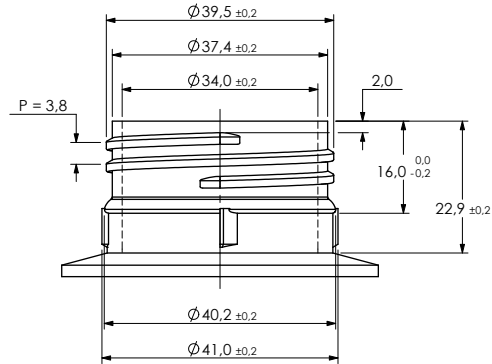
40 - 43mm Closures

40PR

 2 000 pcs  40 000 pcs

Type: 40 mm pilfer proof closure
Design: Rills
Sealing: Cone sealing

*Pilfer proof ring remains on the container after opening.

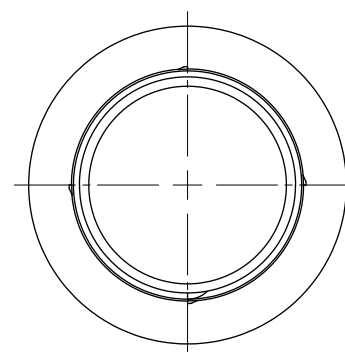
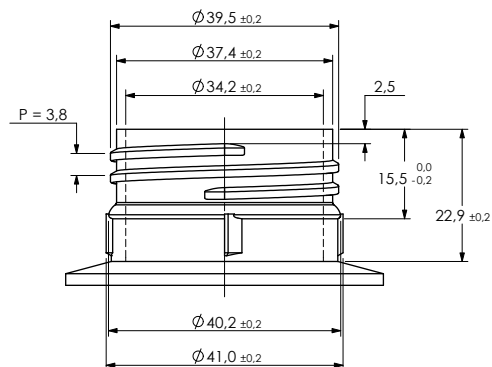


40PRO

 2 000 pcs  40 000 pcs

Type: 40 mm pilfer proof closure
Design: Rills
Sealing: Standard liner: PP, aluminium (IHS), venting

*Pilfer proof ring remains on the container after opening.



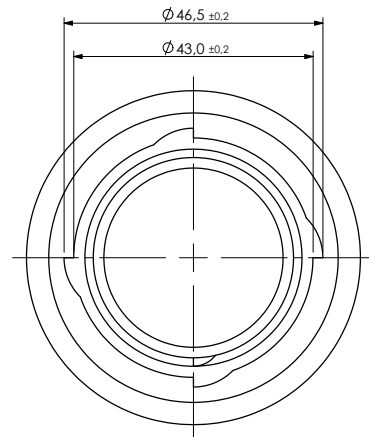
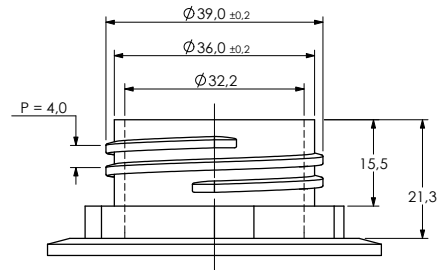
40 - 43mm Closures

40BGO

 1 400 pcs  22 400 pcs

Type: 40 mm child resistant closure
Design: Pilfer proof, rills
Sealing: Standard liner: PP, aluminium (IHS), venting

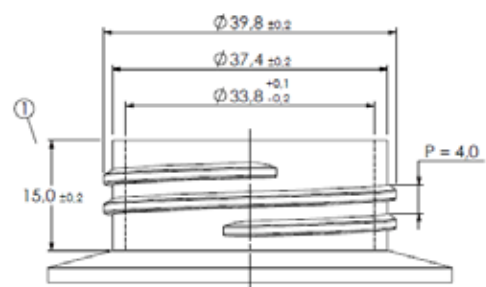
*Pilfer proof ring remains on the closure after opening.



40BR

 2 100 pcs  33 600 pcs

Type: 40 mm child resistant closure
Design: Robust, rills
Sealing: Cone sealing

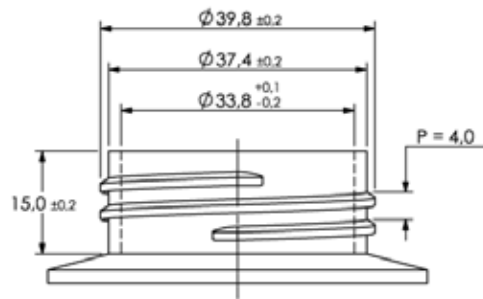


40 - 43mm Closures

40BRO

 2 100 pcs  33 600 pcs

Type: 40 mm child resistant closure
Design: Robust, rills
Sealing: Standard liner: PP, aluminium (IHS), venting

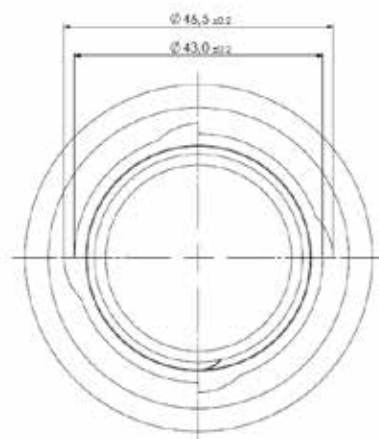
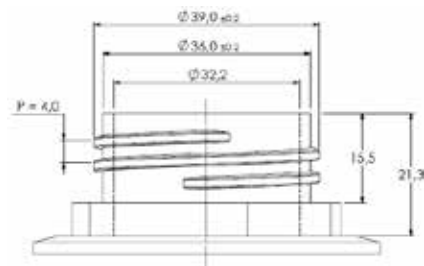


40BGRO

 1 400 pcs  22 400 pcs

Type: 40 mm child resistant closure
Design: Robust, pilfer proof, rills
Sealing: Standard liner: PP, aluminium (IHS), venting

*Pilfer proof ring remains on the closure after opening.



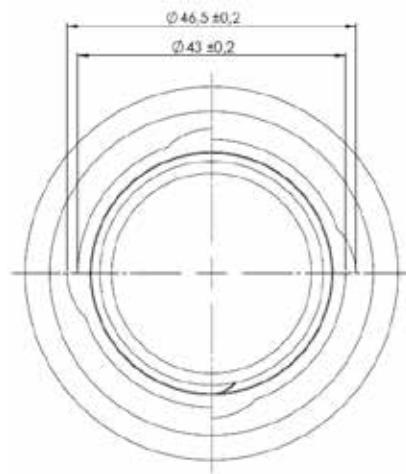
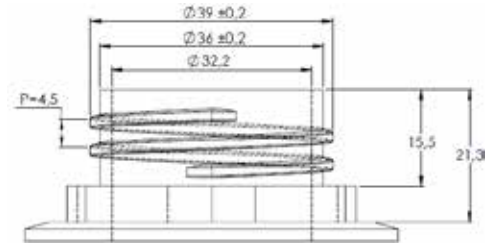
40 - 43mm Closures

40BGRSO

 1 400 pcs  22 400 pcs

Type: 40 mm child resistant closure
Design: Robust, pilfer proof, rills, 4,5 mm thread pitch
Sealing: Standard liner: PP, aluminium (IHS), venting

*Pilfer proof ring remains on the closure after opening.

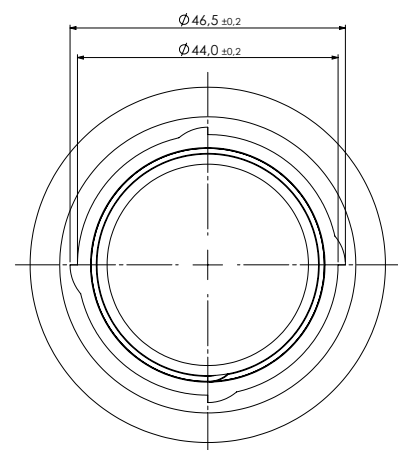
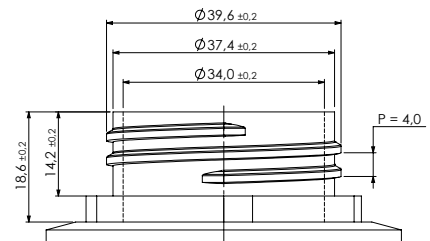


40P

 1 900 pcs  38 000 pcs

Type: 40 mm pilfer proof closure
Design: Rills
Sealing: Cone sealing

*Pilfer proof ring remains on the container after opening.



40 - 43mm Closures

40PM

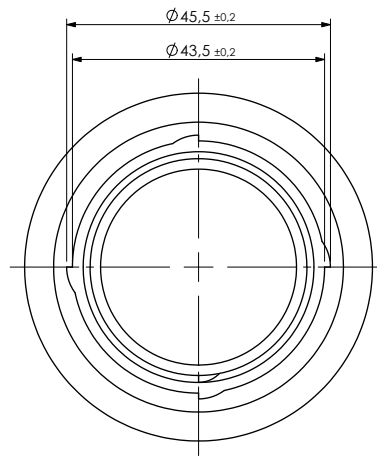
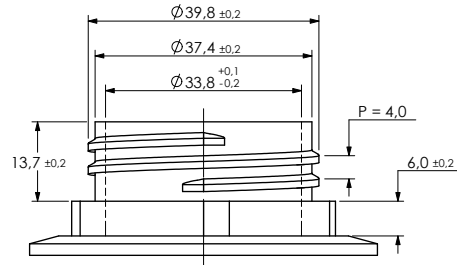
 1 800 pcs  36 000 pcs

Type: 40 mm pilfer proof closure

Design: Rills

Sealing: Cone sealing

*Pilfer proof ring remains on the closure after opening.



40PMO

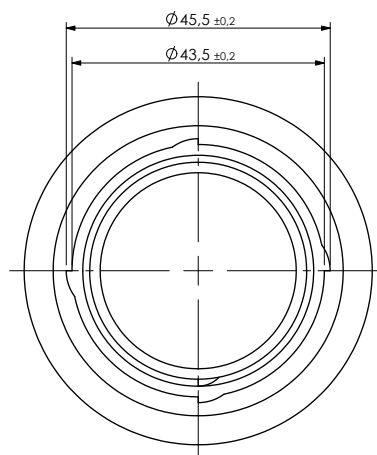
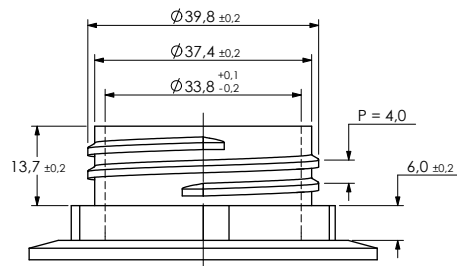
 1 800 pcs  36 000 pcs

Type: 40 mm pilfer proof closure

Design: Rills

Sealing: Standard liner: PP, aluminium (IHS), venting

*Pilfer proof ring remains on the closure after opening.



40 - 43mm Closures

40PMF

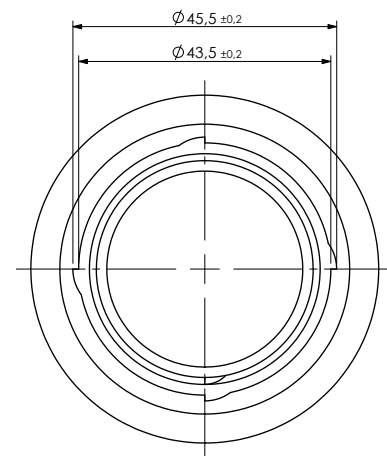
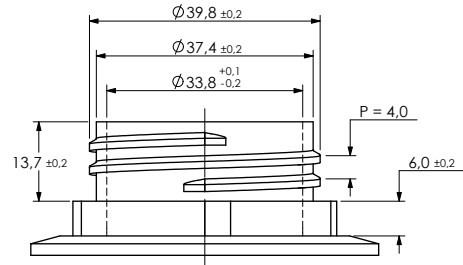
 1 800 pcs  36 000 pcs

Type: 40 mm pilfer proof closure

Design: Rills

Sealing: Cone sealing

*Pilfer proof ring remains on the closure after opening.



40PMFO

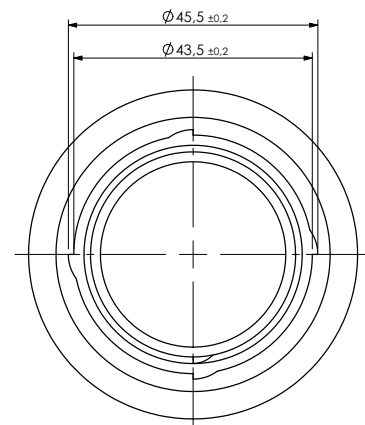
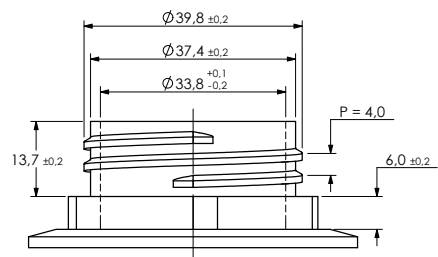
 1 800 pcs  36 000 pcs

Type: 40 mm pilfer proof closure

Design: Rills

Sealing: Standard liner: PP, aluminium (IHS), venting

*Pilfer proof ring remains on the closure after opening.

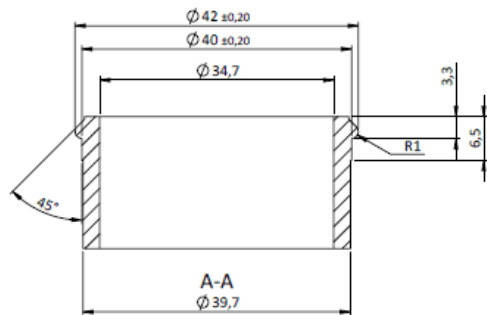


40 - 43mm Closures

40C

 1 500 pcs  30 000 pcs

Type: 40 mm push-on closure
Design: Rills, two pieces
Sealing: Cone sealing

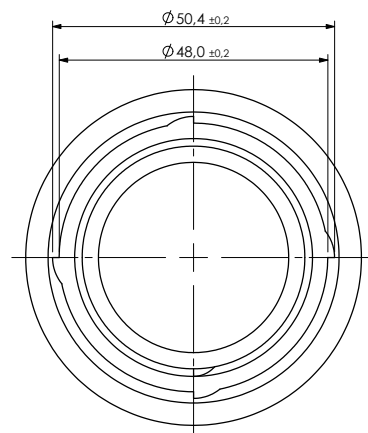
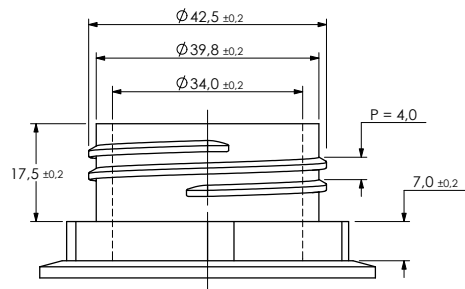


43PMO

 1 300 pcs  26 000 pcs


Type: 43 mm pilfer proof closure
Design: Rills
Sealing: Standard liner: PP, aluminium (IHS), venting


*Pilfer proof ring remains on the closure after opening.



40 - 43mm Closures

43SK

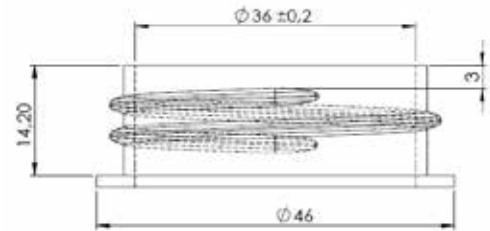
 800 pcs

 16 000 pcs

Type: 43 mm rinse dosage closure


Design: With 10 ml measurement


Sealing: Cone sealing



Other Products

30G

 950 pcs

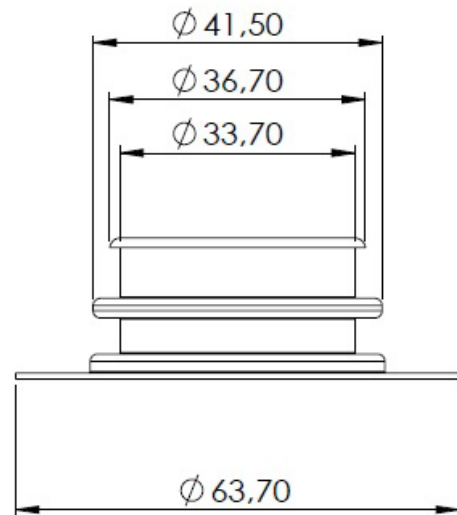
 19 000 pcs

Type: 30 mm gland

Design: N/A


Sealing: N/A

*Available in different materials.



30GP

 950 pcs

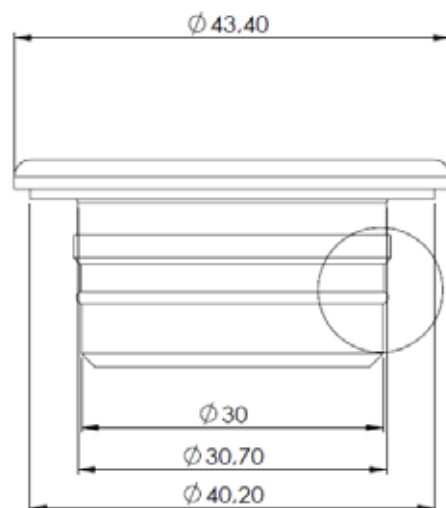
 19 000 pcs

Type: 30 mm gland plug

Design: N/A

Sealing: N/A

*Available in different materials.



Other Products

32AK

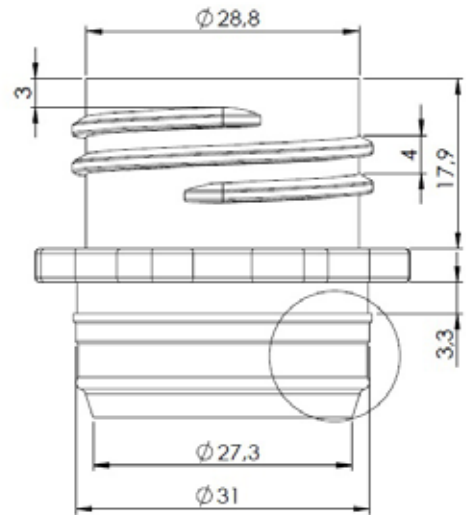
 1 300 pcs  26 000 pcs

Type: 32 mm gland adapter

Design: Adapter + closure

Sealing: N/A

*Available in different materials.



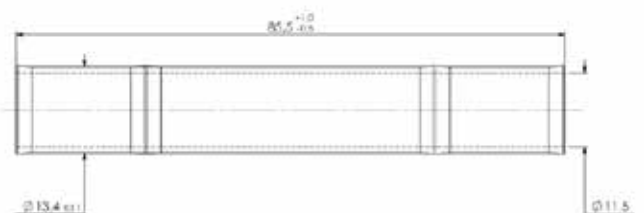
87PLH

 3 500 pcs  70 000 pcs

Type: 87 mm grip

Design: Grip for bucket

Sealing: N/A

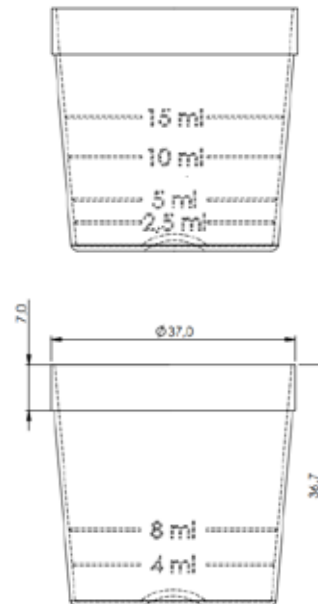


Other Products

15DOS

 1 600 pcs  25 600 pcs

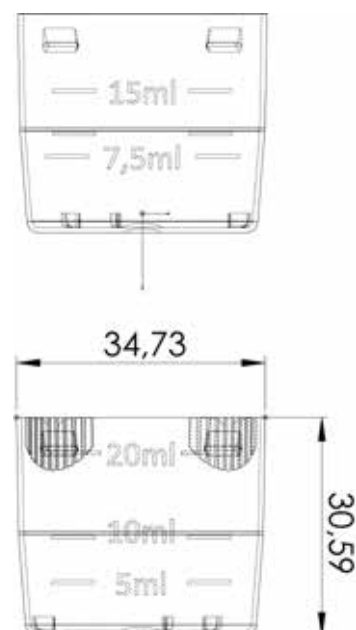
Type: 15 ml dosage cup
Design: 2,5 ml, 4 ml, 5 ml, 8 ml, 10 ml, 15 ml dosage measurements
Sealing: N/A



20DOSR CE

 1 400 pcs  22 400 pcs

Type: 20 ml dosage cup with CE mark
Design: 5 ml, 7,5 ml, 10 ml, 15 ml, 20 ml dosage measurements
Sealing: N/A

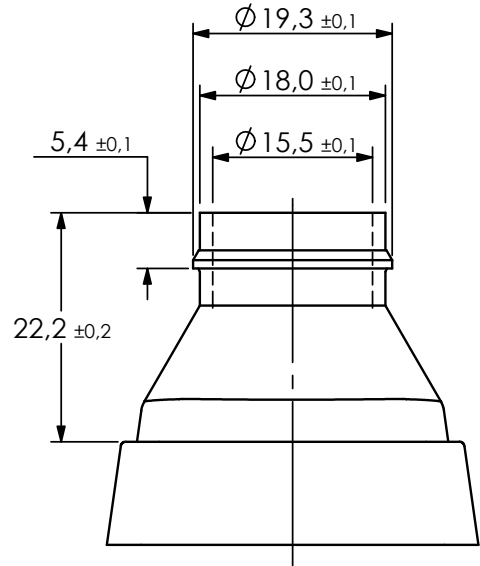


Other Products

25SH

 2 000 pcs  40 000 pcs

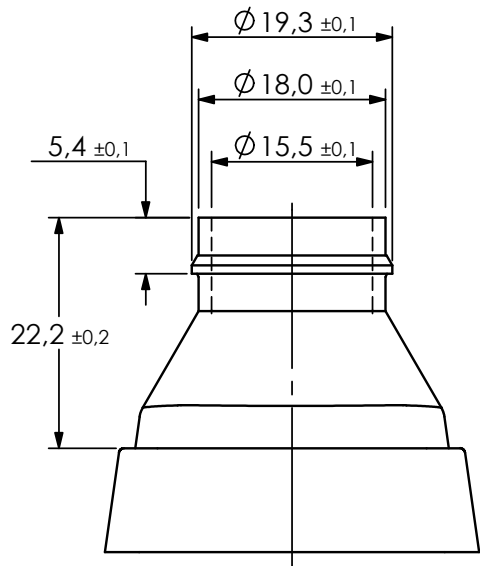
Type: Shampoo closure
Design: Push-on, 2,5 mm orifice, glossy
Sealing: Cone sealing



25SHM

 2 000 pcs  40 000 pcs

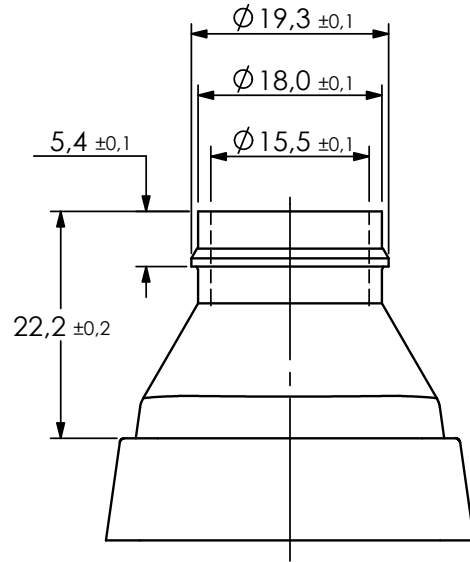
Type: Shampoo closure
Design: Push-on, 2,5 mm orifice, matt
Sealing: Cone sealing



40SH

 2 000 pcs  40 000 pcs

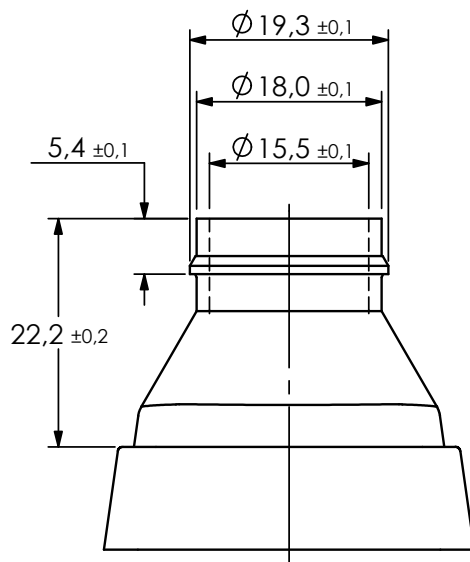
Type: Shampoo closure
Design: Push-on, 4 mm orifice, glossy
Sealing: Cone sealing



40SHM

 2 000 pcs  40 000 pcs


Type: Shampoo closure
Design: Push-on, 4 mm orifice, matt
Sealing: Cone sealing



Other Products

100KB

 420 pcs

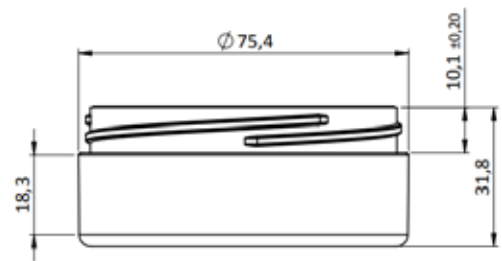
 8 400 pcs

Type: 100 ml cosmetic jar

Design: Glossy


Sealing: N/A

*Fits with lid 140KL & 140KLM.



100KBM

 420 pcs

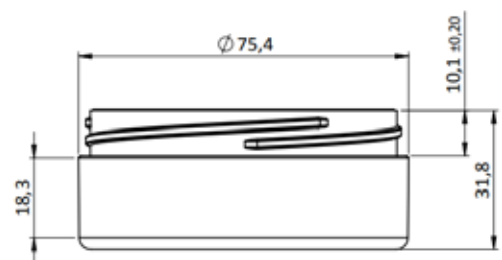
 8 400 pcs

Type: 100 ml cosmetic jar

Design: Matt

Sealing: N/A

*Fits with lid 140KL & 140KLM.



Other Products

200KB

 210 pcs

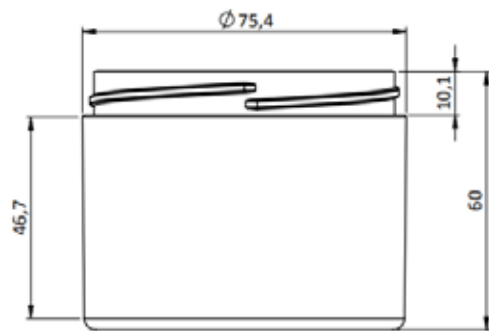
 4 200 pcs

Type: 200 ml cosmetic jar


Design: Glossy


Sealing: N/A

*Fits with lid 140KL & 140KLM.



140KL

 1 024 pcs

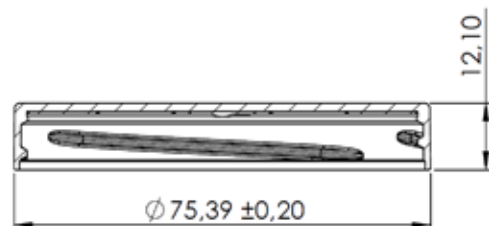
 20 480 pcs

Type: Cosmetic lid

Design: Glossy

Sealing: TPE liner

*Fits with jar 100KB, 100KBM & 200KB.



Other Products

140KLM

 1 024 pcs  20 480 pcs

Type: Cosmetic lid

Design: Matt

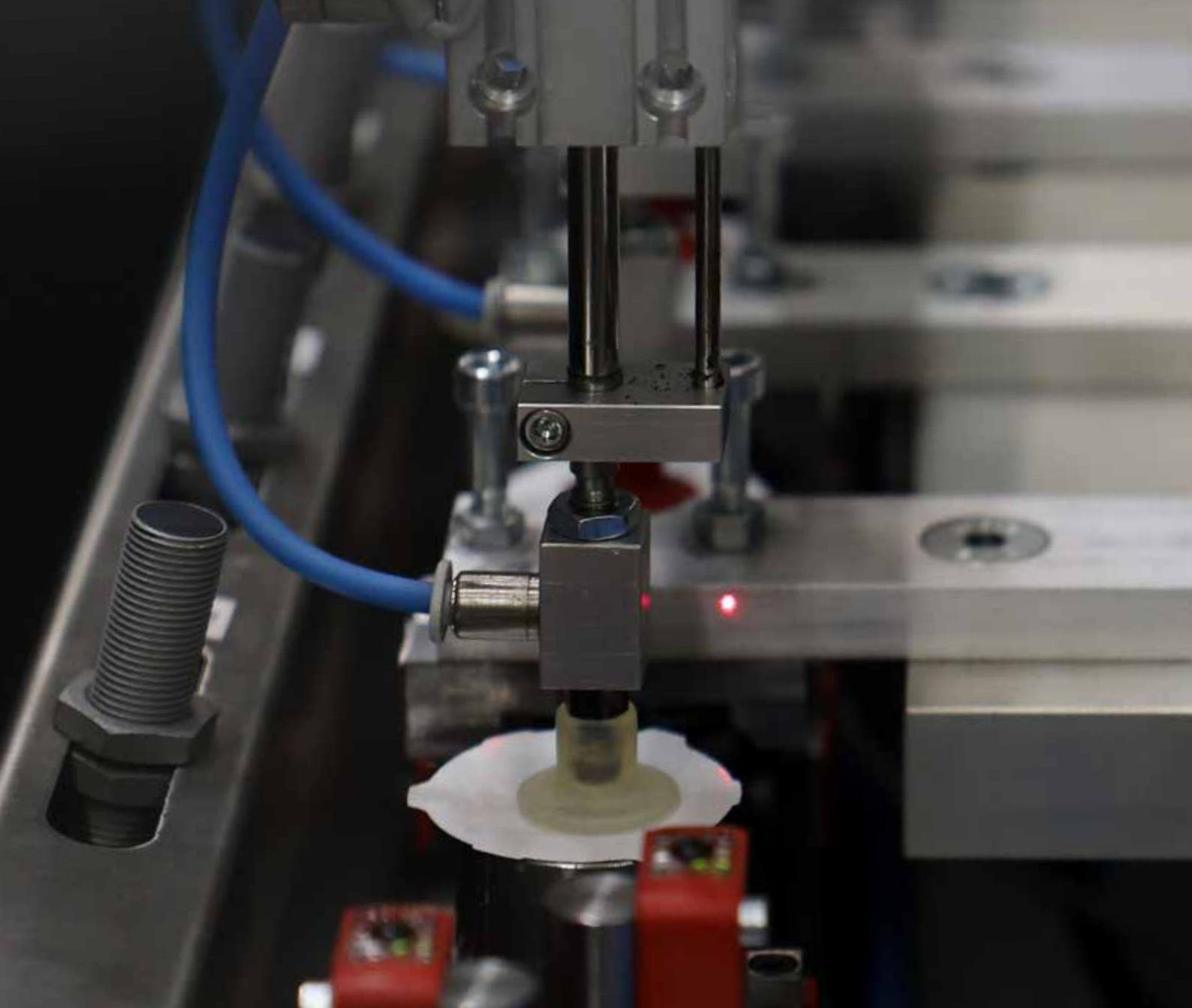
Sealing: TPE liner

*Fits with jar 100KB, 100KBM & 200KB.





Other products

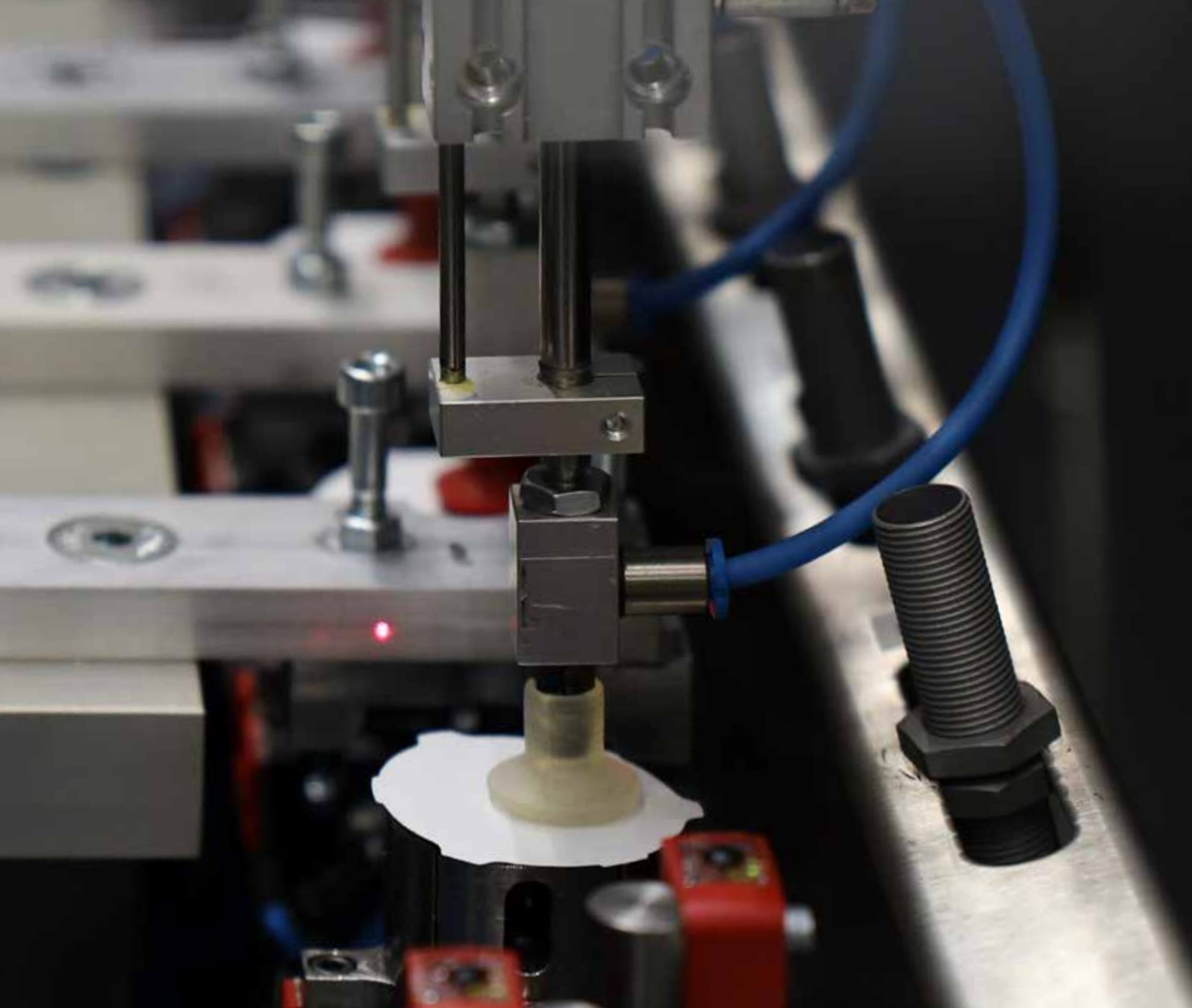


Liners

When you need a closure with specific characteristic, a cap with a liner instead of a cone could be an alternative. We have liners in various materials and sizes suitable for our closures.

The most common reasons for using a liner are to ensure the quality of the contents and the tightness between the cap and the bottle. In some cases it's also used to ensure the customer that the bottle is unbroken.

There is a standard selection, but the liners can be customized to meet your needs. For instance, ventilating liners, pressure sensitive liners or liners made specifically to fit the content of your packaging.



A liner could be everything from a simple foam disc to a combination of several different materials. There are liners which are welded to give extra protection from moisture and oxygen, and at the same time ensures the final user the product has not been opened.

We use high quality liners to guarantee the best solution based on your wishes when it comes to volume, price and functionality.



Quality

All operations at Modulpac, from idea, development and manufacturing, are planned and managed with regards to quality and environment. Our Environmental- and quality management are integrated in the same system to ensure the traceability through the processes.

Modulpac has a well-implemented quality and environmental management system. We were certified for ISO-9001 already back in 1997 and in 2005 we became environmentally certified according to ISO 14001. In 2016 we were certified according to ISO 13485 - internationally recognized quality standard that specifies the requirements in quality management systems for design and manufacture of medical devices.

During 2021 Modulpac were certified according to FSSC 22000. FSSC 22000 contains a complete certification Scheme for Food Safety Management Systems. This certification was a natural step for Modulpac, since most of the requirements were already implemented in the production and organization. Just recently we also got certified according to ISCC+, a global sustainability certification, see more page 77.

By being certified, we also create the conditions to best live up to the requirements and expectations set by you as a customer but also by authorities and suppliers. Regardless of whether it concerns product quality, availability and delivery times, as well as customer relations and commitment.

Our quality and environmental management system is well implemented and aims to clarify roles and responsibilities. We let overall policies and goals permeate and concretize in planning, implementation, follow-up and evaluation. An important part of the quality work is to continuously educating our staff to ensure that we keep our high standards.

Our work is based on the seven quality management principles:

- Customer focus
- Leadership
- Employee commitment
- Process orientation
- Continuous improvement
- Fact-based decisions
- Mutually beneficial relationships with suppliers

Our goal is to meet market requirements such as customer requirements, government requirements, laws and regulations.


CERTIFIED
ISO 9001
Quality management systems



CERTIFIED
ISO 14001
Environmental management systems



CERTIFIED
ISO 13485
Medical devices
Quality management systems



CERTIFIED
FSSC 22000
Food safety management systems






Tests for Quality Assurance

UN packaging testing

The UN packaging testing, is a global regulatory framework to ensure the safety of road-, rail-, sea- and air transport. This test is an international standard for the transport of dangerous goods, this standard is established by the UN (United Nations). For an UN-certified package (bottle/container and closure), it is necessary that the package meets certain requirements and is tested through six different tests. Here is an explanation of which tests are required to get the package UN-certified.

Storage test

For complete packaging, both bottle/container and closure made of plastic and intended for liquid, storage involves a very extensive process. ADR (Dangerous Goods Transport Regulations) distinguishes between "standard liquid" and "original liquid". Most fluids contain one or more "standard liquids". This makes it possible to use a so-called "accelerated test", as long as the plastic is of the polyethylene type. For this test, the package is filled with the standard liquid (s) that meet its requirements and stored at $40^{\circ} \text{C} \pm 2$ for three weeks. If the liquid has not been assigned as a "standard liquid" in the ADR or if the packaging is made of a material other than polyethylene, the packaging must be stored with the intended "original liquid" for 180 days in room temperature conditions. This method is very time consuming and we therefore recommend that all our customers contact us as soon as they know that their packaging must have UN packaging testing approval, this gives us the opportunity to start the storage test as soon as possible.

Drop test

To get a packaging (bottle/container and closure) UN approved, a drop test is performed. The drop test is designed to test the most "fragile" parts on the packaging. The drop occurs in a 45-degree angle towards the closure. The height of the drop test is determined by which UN classification the product is to be tested against. The criteria for obtaining approved packaging are that the package should not leak.

Stacking test

The packaging is stacked in 28 days in 42°C . The test sample is subjected to a force applied to the top surface of the test packaging equivalent to the total weight of identical packages which might be stacked on it during transport. The minimum height of the stack, including the test sample, must be 3.0 m (10 feet). The test is successful as long as the packaging hasn't been deformed or leaked its content.





Leakproof test

The leakproof test is performed using compressed air, the packaging is under a pressure of 20 or 30 kPa for 5 minutes. The test fails if the package leaks.

Pressure test

The purpose of this test is to ensure that no leakage of liquid occurs due to vapor pressure build-up at various temperatures. The pressure test is carried out after the packaging has been stored. Pressure tests last for 30 minutes for plastic packaging.

Permeability test

If the packaging is to be UN-certified for liquids with a flash point $\leq 60^{\circ}$ C, it must undergo a permeability test. For polyethylene packaging, this only applies to liquids that contain benzene, toluene and xylene. This is done by measuring weight loss over a period of time and under given climate aspects and temperatures.

Child resistant closures - CRC

Child-resistant packaging - The international standard for resealable child-resistant packaging is ISO 8317. This standard applies to pharma and chemical products. A CRC packaging consists of both a container and a suitable closing mechanism that is difficult for children to open and come into contact with the content. At the same time, it should be easy for adults/the elderly to open and use it properly when the product has been tested and approved in accordance with this standard.

This standard applies to packages that can be opened and resealed several times and continue to provide an equal degree of security after the first opening can be certified.

Modulpac calls this a "child resistant closure mechanism". The closing mechanism should make it difficult for children to open the package, but it will never be impossible. The most common solution is a "push down and twist" cap. It is always the complete packaging that must be tested - both the bottle/container and the closing mechanism.

Manufacturing of child resistant closures

When you make a child resistant cap, the most common way is to make an outer part and an inner part. We also manufacture another type of child resistant closure which has a push and turn function made in only one part. However, this is not as common as a two-part cap. In some cases, you also need to have a liner to seal the product properly.

How a CRC-test is conducted

For the certification of child-resistant packaging, the entire packaging must pass a two-test procedure and each test lasts for 10 minutes.

The packaging is classified by type, for example if the closing mechanism is difficult for children to open due to two grips at the same time (e.g., pressure and twist function). There are also packages with the closing mechanism that are not accessible to children. For example packages that is too large for children's hands to grip, must be opened with certain tools or requires too much strength.

The first test is arranged with 200 children in the age between 42 and 51 months. The children must try to open the package, which is filled with a harmless product (such as water).

The package is considered child-resistant when less than 10% of the children manage to open the package during the first 5 minutes of the test and when less than 20% of the children manage to open the package within 10 minutes.





The second test requires 100 adults aged 50 to 70 years. They must be able to open and reseal the packaging without any problems. At least 90% of the adults are expected to open and close the package properly.

It is also possible to get a sequential test instead, that follows your own procedure.

When choosing combinations to be tested, different materials, neck, shape, sizes and closing mechanism are always taken into account. These factors can affect the child resistant properties. With a series of packages in different sizes, where all important properties are identical in terms of material, shape, closure, etc., the smallest and largest packaging will undergo the test. The midsize products will also be approved as long as the smallest and largest packaging is successfully tested by the accredited testing company.

A child resistant packaging can be placed on the market when the combination of the closure and the container has passed a complete test, and the positive results have been approved in a certificate report.

Food packaging

Modulpac manufactures products used for the food industry. In order for the closure to come into contact with food, it is always required that the cap is migration tested.

Modulpac has all standard colours in combination with standard plastic materials migration tested. If you choose a customized colour, it probably needs to be migration tested.

During a migration test, the material and colour is tested, to discover if any substance can migrate out of the plastic and into the food.

Materials and products intended to come into contact with food must not transfer substances to the food in such quantities that they:

- Cause a danger to human health
- Cause an unacceptable change in the composition of the food
- Changes its taste and/or smell

Sustainability

Modulpac is committed to operating its business according to good standards of ethical, moral and lawful conduct. Our goal is to take part in creating a sustainable economy through optimizing performance around labour rights, health & safety, business ethics and the environment, and to encourage our suppliers to do the same.

Our focus is on creating a positive environmental impact through streamlined operations, continuously engaged partners, and optimized, eco-friendly products. We believe in science based, circular packaging innovation and responsible use and disposal of all packaging materials. We support our customers in making sustainable packaging choices and compatibility with the existing recycling systems.

We're continuously working towards different kinds of sustainability goals:

Environmental

A big part of our environmental sustainability plan is to reduce our carbon footprint, for instance by recycling material, streamline our transports and to have an effective production. Another important part is to offer our products in recycled materials (PCR), biomaterials and other sustainable solutions to increase the possibilities to recycle our products. More information about our different materials and solutions, see page 76.

Social

The social aspect of the sustainability plan is to offer all of our employees a safe working environment as well as the opportunity to develop within the company. Local community involvement is a vital part for us in many ways, for instance by supporting operations in our immediate area. Another part of the social aspect is that we make demands on our suppliers, among other things based on our ISO certificates. For more information about our ISO certificates, see page 63.

Economical

Long-term vision and sustainable profitability are central to our strategic focus, and together with committed employees, innovative power and continuous improvement, profitable growth is created. One way of working with our economical sustainability is by using LCA (life cycle analysis) in our operation. We always try to find solutions in existing equipment, etc. in order to make our production economically sustainable.





Material and Colour Possibilities

Most of the time a reliable standard solution is sufficient to meet a customer's every need. We have a wide product range covering most types of packaging within our four market segments. But sometimes it takes something extra to reach all the way, and that is when Modulpac really stands out.

Whether it be colour, shape or function, we have the know-how to develop a product customised to your specific wishes. Plastic material is quite transparent, depending on material. In order to colour your products we need to mix plastic material with a colour masterbatch. This masterbatch must be carefully fitted to the plastics used and to the characteristics of the final product.



We keep a number of different standard colours in stock, but can also produce colours customised to the visual identity of your company or your logotype. In customised projects we always make test runs before commencing live production, so you can approve colour, functionality and quality.

During 2021 we got certified according to ISCC+ which is a global sustainability certification. This certification is mainly to secure traceability throughout the complete supply chains for bio-circular materials. It allows us to offer a wider range of bio materials for our customers.

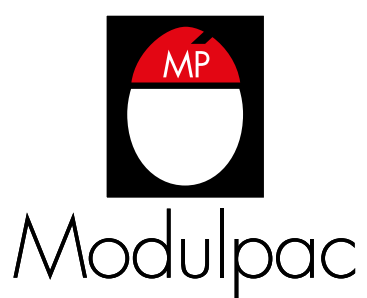
The traceability also enables us to secure every step of the supply chain out of a compassionate and environmental point of view, to protect the human rights, the land we walk on, the water we drink and the air we breathe - for a more sustainable future.



Final Words

At Modulpac we enjoy challenges. It is through great challenges we evolve. Our customers expect unique solutions that give results in tough competition. Many want a product that distinguishes them from others in the market. It could be in terms of design, functionality, eco-friendliness, cost-effectiveness or any combination thereof. It is not always easy, but thanks to our experience and unique ability to develop innovative solutions, we succeed time after time.

That's why Modulpac is the natural choice for so many in the industry. You are always welcome to challenge our motto - Modulpac, the best of packaging. We have our customers to thank for achieving a leading position in plastic packaging.



Västergatan 16
SE-341 50 Lagan
Sweden

+46 (0)372 255 00
sales@modulpac.se

www.modulpac.com