



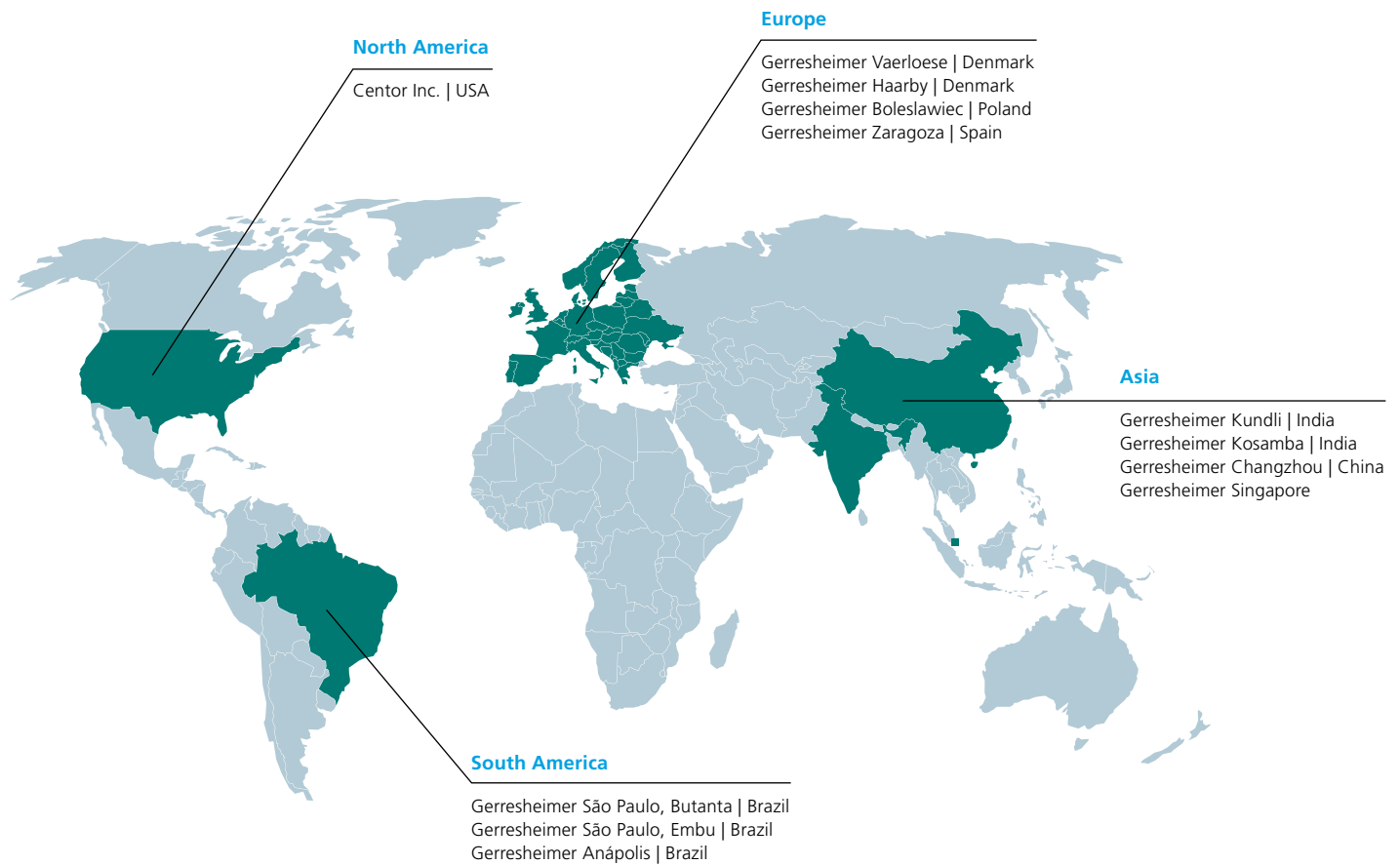
GERRESHEIMER

High-Quality Pharmaceutical Plastic Packaging and Systems

PET / Liquid & Solid



Gerresheimer Plastic Packaging



About Gerresheimer

Gerresheimer is a leading global partner to the pharma and health-care industry. With our specialty glass and plastic products, we contribute to health and well-being. We have worldwide operations and about 10,000 employees manufacture our products in local markets, close to our customers. With our plants in Europe, North America, South America and Asia, we generate revenues of approximately EUR 1.4 billion.

The comprehensive product portfolio includes pharmaceutical packaging and products for the safe, simple administration of medicines: Insulin pens, inhalers, micro pumps, prefillable syringes, injection vials, ampoules, bottles and containers for liquid and solid medicines with closure and safety systems as well as packaging for the cosmetics industry.

Gerresheimer Plastic Packaging Solutions

Intelligent products for diverse pharmaceutical applications



Solid Dosages



Ophthalmic, Nasal and Parenteral Applications



PET / Liquid & Solid

Gerresheimer Plastic Packaging specializes in the widely varied spectrum of pharmaceutical plastic packaging within solid, liquid and ophthalmic applications, plastic vials and plastic bottles for personal care. Our leading brands Duma®, Dudek™ and Triveni for solid dosage, edp-branded PET bottles for liquid dosage and our ophthalmic products form part of a comprehensive and innovative product range. Our monolayer plastic vials are based on COP and offer inert contact surface and deliver a unique packaging safety feature to manufacturers of toxic or high potency drug solutions.

Our standard range includes a wide choice of different types of containers and closures, PET bottles, eye droppers, nasal sprays as well as numerous customized developments.

Using our ideas and experience to produce intelligent, increasingly safe and user-friendly packaging solutions has enabled us to become an innovative partner to the global pharmaceutical industry.

We know, understand and reinforce our customers business.

Sustainable plastic packaging

Plastic materials

PET | R-PET | BIO-PET

As Gerresheimer Plastic Packaging is committed to environmental concerns we offer our PET ranges with different mixtures of post-consumer recycled materials.

We can produce bottles made of up to 100% R-PET.

Ecological aspects

Besides using recycled materials, Gerresheimer is also motivated to help our customers contribute to the reduction of greenhouse gas emissions by using biomaterials. Biomaterials are the renewable alternative to conventional PE/PET.

Sugarcane is one of the substances used to make biomaterials. You take the ethanol from the sugarcane plant and then put it through a dehydration process to transform it into green ethylene. Afterwards the green ethylene goes to the polymerization plants, where it is converted into green PE/PET.



Technical Features

- ISBM technology
- PET, R-PET, BIO-PET
- bottles available in different colors
- Different mixtures of post-consumer recycled materials
- 3D CAD design software
- ISO 9001

Gerresheimer Zaragoza now pharma focused company with clean room



- Single source provider of bottles and caps manufactured in an ISO class 8 clean room
- Further quality and stability enhancements
- Improved production processes with new machines and molds
- ISO certifications (ISO 9001 and ISO 15378)





Specialist and quality leader in primary plastic packaging

Our manufacturing operations use state-of-the-art technology and apply the most rigorous quality and hygiene standards. They cover all production technologies from injection moulding and injection blow moulding to blow moulding processes. The majority of our production operations are carried out in modern classified clean-rooms or in clean conditions. All plants apply the rules of Good Manufacturing Practice (GMP) and are certified in accordance with ISO standards.

- Solution providing
- Good Manufacturing Practice (GMP)
- ISO certifications (ISO 9001, ISO 15378, ISO 14001)
- Automated in-line controls
- Vision-based inspection system
- Class 7 (10,000) + class 8 (100,000) clean-rooms

Strong regulatory approach

We ensure full conformity of our products with the European pharmacopoeia, the United States pharmacopoeia and the requirements for FDA registration with a Drug Master File as the standard. Knowing the extensive requirements of our customers we focus on providing a high level of documentation with our products.

- High level of documentation and registration
- Standard product database
- FDA and world-wide registration of all products
- US and Canada Drug Master File
- Product registrations in Russia, China and the Ukraine
- Food approval

Strong quality culture

A strong quality culture supports our efforts to deliver excellent quality. The culture is defined by our shared beliefs, values and behaviour patterns.

- Quality attitude and team work
- Continuous improvements
- Systematic problem solving
- Quality by design
- Stable, robust, reliable and validated processes
- Risk-based approach

PET / Liquid & Solid



We offer a comprehensive range of edp-branded PET bottles for liquids and closures in HDPE and PP for different applications.

All our bottles can be supplied with caps, reducers and other accessories. Some are optionally available with a measuring cup that has a 2.5 to 10 ml scale or a measuring cup with a 5 to 20 ml scale.

Some of our products are even compatible with glass accessories/bottles.

You can opt for one of the products in the standard range or design a product customized to your needs and requirements with our R&D team.

- PET bottles for liquid – EDP brand
- PET containers for solid – Duma® PET
- PET bottles for oral care
- Caps and measuring cups for PP18 neck, PP28 neck & Duma® PET
- Customized shapes
- Different colours available
- PP18 and PP28 caps compatible with glass, PE & PP solutions
- UV filter
- FDA registered, DMF type III, DMF no. 22946, US Drug Master File (DMF)
- Recycled materials

Liquid

1



ST bottles
PP18 neck

2



ST bottles
PP28 neck

3



PF bottles
PP28 neck

4



LP bottles
PP28 neck

5



OM bottles
PP18 neck
PP28 neck

6



PL bottles
PP28 neck

Solid

7



Duma® PET

Oral Care

8



Mouthwash

Accessories

9










Complements

Standard and custom molding

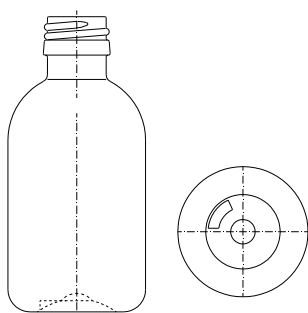
ST bottles PP18 neck



SPECIFICATIONS

| |  ref |  ml |  ml |  mm |  mm |  mm |  |
|-------------------|-----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| ST10 PP18 PET 4,5 | 1104 | 10 | 14,8 | 23 | 54 | PP18 | 10088 |
| ST15 PP18 PET 4,5 | 1105 | 15 | 21 | 24,6 | 63 | PP18 | 10088 |
| ST30 PP18 PET 5,8 | 900 | 30 | 35,2 | 29 | 75 | PP18 | 10088 |
| ST50 PP18 PET 8 | 910 | 50 | 60 | 37,3 | 80 | PP18 | 10088 |









- Material: Bottle PET, tamper-evident cap PP
- 4 ST bottles PP18 neck sizes ranging from 10–50 ml
- Can be supplied with other caps and reducers
- Bottles available in different colors

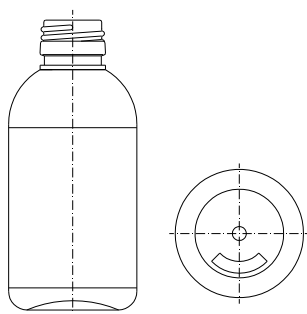


ST bottles PP28 neck



SPECIFICATIONS

| |  ref |  ml |  ml |  mm |  mm |  mm |  |  |
|-----------------------|-----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| ST100 PP28ST PET 17 | 1103 | 100 | 119,5 | 46 | 100,5 | PP28ST | 10089 | 10100/10108 |
| ST200 PP28ST PET 21 | 1094 | 200 | 222 | 55,3 | 125 | PP28ST | 10089 | 10100/10108 |
| ST250 PP28ST PET 28 | 140 | 250 | 270 | 55 | 148 | PP28ST | 10089 | 10100/10108 |
| ST300 PP28ST PET 27,5 | 1006 | 300 | 315 | 60 | 147 | PP28ST | 10089 | 10100/10108 |
| ST500 PP28ST PET 35 | 1090 | 500 | 521 | 68,5 | 179 | PP28ST | 10089 | 10100/10108 |
| ST600 PP28ST PET 53 | 472 | 600 | 630 | 76 | 182 | PP28ST | 10089 | 10100/10108 |
| ST1000 PP28ST PET 57 | 1002 | 1000 | 1030 | 85,1 | 227,8 | PP28ST | 10089 | 10100/10108 |











- Material: bottle PET, tamper-evident cap PP, measuring cup PP
- Can be supplied with other caps and reducers
- Measuring cup can be supplied with the scale from 5 ml to 20 ml in clear (10108) and white (10100) colour
- Bottles available in different colours

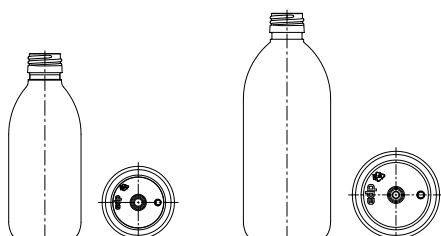


PF bottles PP28 neck



SPECIFICATIONS

| |  |  |  |  |  |  |  |  |
|-----------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| PF60 PP28ST PET 11,8 | 161 | 60 | 80 | 38 | 95,5 | PP28ST | 10089 | 10100/10108 |
| PF 90 PP28ST PET 15 | 1110 | 90 | 97,5 | 40,7 | 101,6 | PP28ST | 10089 | 10100/10108 |
| PF100 PP28ST PET 17 | 1093 | 100 | 115 | 44,1 | 107 | PP28ST | 10089 | 10100/10108 |
| PF120 PP28ST PET 17,5 | 163 | 120 | 150 | 48 | 115,5 | PP28ST | 10089 | 10100/10108 |
| PF150 PP28ST PET 17,5 | 164 | 150 | 175 | 49 | 126,1 | PP28ST | 10089 | 10100/10108 |
| PF200 PP28ST PET 24 | 1095 | 200 | 222,5 | 52,1 | 144,5 | PP28ST | 10089 | 10100/10108 |
| PF250 PP28ST PET 24 | 1096 | 250 | 283 | 58 | 147,7 | PP28ST | 10089 | 10100/10108 |
| PF300 PP28ST PET 24 | 1123 | 300 | 313 | 60,6 | 145,5 | PP28ST | 10089 | 10100/10108 |
| PF500 PP28ST PET 35 | 1089 | 500 | 526 | 70 | 180 | PP28ST | 10089 | 10100/10108 |











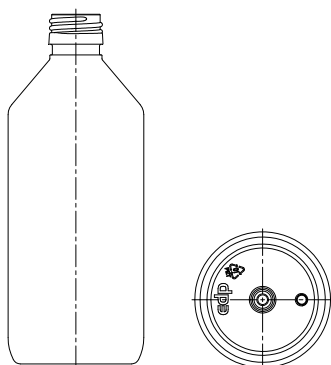
- Material: bottle PET, tamper-evident cap PP, measuring cup PP
- Can be supplied with other caps and reducers
- Measuring cup can be supplied with the scale from 5 ml to 20 ml in clear (10108) and white (10100) colour
- Bottles available in different colours

LP bottles PP28 neck



SPECIFICATIONS

| |  |  |  |  |  |  |  |  |
|----------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| LP150 PP28ST PET 21 | 520 | 150 | 170,5 | 52,5 | 112,75 | PP28ST | 10089 | 10100/10108 |
| LP500 PP28ST PET 35 | 1091 | 500 | 520,5 | 69,5 | 179 | PP28ST | 10089 | 10100/10108 |
| LP1000 PP28ST PET 50 | 1124 | 1000 | 1050 | 88 | 218 | PP28ST | 10089 | 10100/10108 |



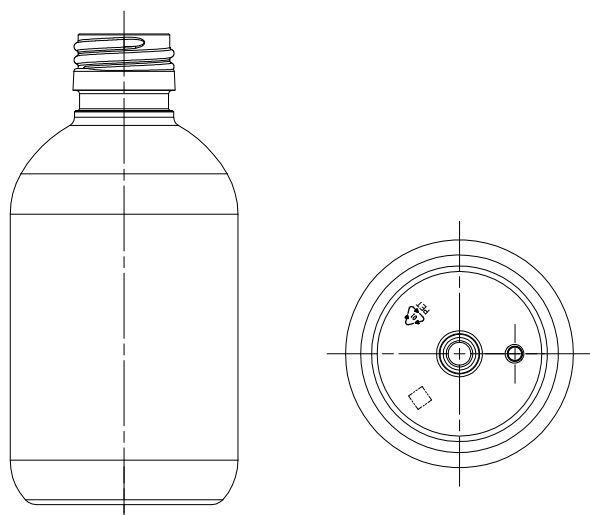
- Material: bottle PET, tamper-evident cap PP, measuring cup PP
- Can be supplied with other caps and reducers
- Measuring cup can be supplied with the scale from 5 ml to 20 ml in clear (10108) and white (10100) colour
- Bottles available in different colours

OM bottles PP18 and PP28 neck



SPECIFICATIONS

| | ref | ml | ml | mm | mm | mm | | |
|---------------------|------|-----|-----|------|-------|--------|-------|---------------|
| OM15 PP18 PET 4,5 | 1117 | 15 | 20 | 25,5 | 56,35 | PP18 | 10088 | |
| OM250 PP28ST PET 24 | 1111 | 250 | 272 | 61,7 | 127,5 | PP28ST | 10089 | 10100 / 10108 |



- Material: bottle PET, tamper-evident cap PP, measuring cup PP
- Can be supplied with other caps and reducers
- Measuring cup can be supplied with the scale from 5 ml to 20 ml in clear (10108) and white (10100) colour
- Bottles available in different colours

PL bottles PP28 neck



SPECIFICATIONS

| ref | ml | ml | mm | mm | mm | | |
|-------|-----|-----|----|-----|------|-------|-------|
| 37101 | 100 | 119 | 47 | 103 | PP28 | 15127 | 41010 |
| 37126 | 125 | 150 | 48 | 116 | PP28 | 15127 | 41010 |
| 37151 | 150 | 200 | 54 | 122 | PP28 | 15127 | 41010 |
| 37251 | 250 | 300 | 58 | 153 | PP28 | 15127 | 41010 |

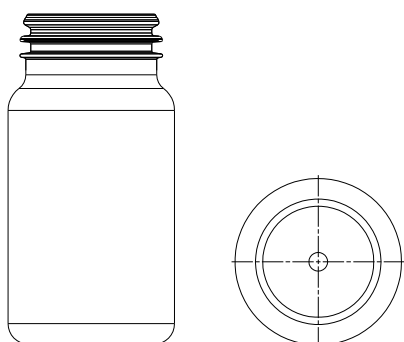
- Material: bottle PET, tamper-evident screw cap PE, measuring cup PP
- Bottles available in amber, white, clear
- Measuring cup with scale available from 2,5 ml to 10 ml
- Suited to standard filling and packaging equipment
- Manufactured under clean-room conditions

Duma® PET



SPECIFICATIONS

| | ref | ml | mm | mm | mm | Label mm | | Int. Des.* |
|------------------|------|-----|------|------|----|----------|------|------------|
| DUMAPET 75 17 | 1058 | 75 | 45,5 | 73 | 33 | 37,7 | 4015 | 4015 |
| DUMAPET 100 17 | 1036 | 100 | 45,5 | 89,5 | 33 | 54 | 4015 | 4015 |
| DUMAPET 125 20 | 1037 | 125 | 48,7 | 96,5 | 33 | 58,5 | 4015 | 4015 |
| DUMAPET 150 20 | 1038 | 150 | 51,4 | 100 | 33 | 61,5 | 4015 | 4015 |
| DUMAPET 200 20,5 | 1054 | 200 | 51,1 | 125 | 33 | 88 | 4015 | 4015 |



- Material: bottle PET, cap LDPE
- Bottles available in different colours
- Snap lock system
- Handy cap easy-open system
- Tamper-evident
- Available with integrated desiccant 4 g
- Caps available in different colours



Mouthwash



SPECIFICATIONS

| | ref | ml | ml | mm | mm | mm |
|---------------------|-----|-----|-----|-----------|-----|-------|
| COL500 M1759 PET 41 | 724 | 500 | 545 | 83 x 46 | 224 | M1759 |
| COL500 M1759 PET 41 | 538 | 500 | 524 | 81,6 x 50 | 227 | M1759 |

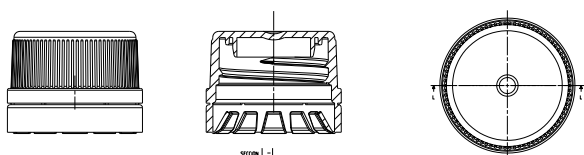
- PET bottles
- Can be supplied with cap



Complements



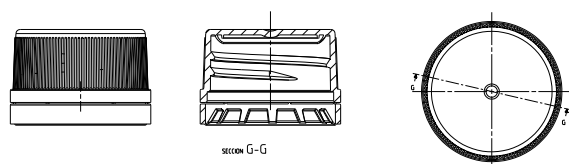
PP18



- Material: tamper-evident cap PP
- Suitable for ST bottles PP18 neck (see page 10) and OM bottle 15 ml (see page 15)
- Ref 10088 on page 10 and 15 corresponds to PP18 cap

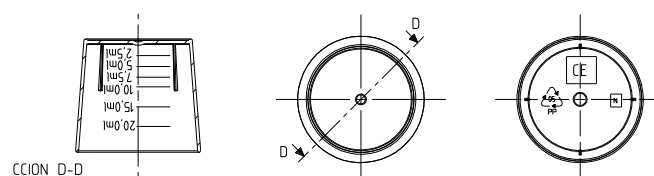


PP28



- Material: tamper-evident cap PP
- Suitable for ST, PF, LP, OM bottles PP28 neck (see pages 11, 13, 14 and 15)
- Ref 10089 on pages 11, 13, 14 and 15 corresponds to PP28 cap

Measuring Cup

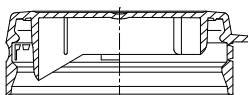
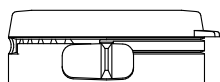
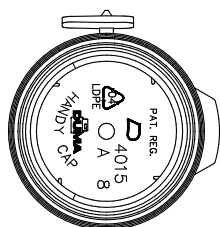


- Material: measuring cup PP
- Measuring cup from 5 ml to 20 ml available in white and clear
- Ref 10100 and 10108 on pages 11, 13, 14 and 15 correspond to PP28 measuring cup

Complements



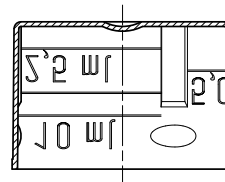
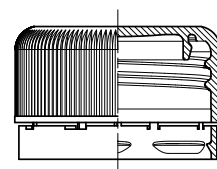
Duma® Handy cap



- Material: cap LDPE
- Suitable for Duma® PET containers (see page 17)
- Snap lock system
- Handy Cap easy-open system
- Tamper-evident
- Available with integrated desiccant 4 g
- Caps available in different colours
- Ref 4015 on page 17 corresponds to Duma® Handy Cap



PL bottles PP28 neck

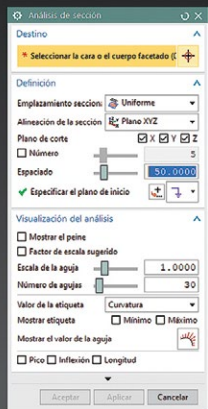


- Material: tamper-evident screw cap PE, measuring cup PP
- Suitable for PL bottles PP28 neck (see page 16)
- Ref 15127 on page 16 corresponds to the cap
- Ref 41010 on page 16 corresponds to the measuring cup



Standard and custom molding

Gerresheimer has a dedicated and committed R & D department



Product Design

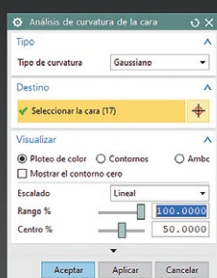
Gerresheimer offers a wide range of services to generate product designs from initial product concept to the final shape. It is a process through final tool design 3D CAD software providing photo realistic rendered images. We can also propose mock ups for this initial stage.

Technical Evaluations

We offer a full service, covering all technical and commercial aspects, from the unit tool to the first samples produced in the industrial mold. Our engineers have a vast experience and knowledge of product development.

Service

We are customer-oriented, working hand by hand from the first draft to the production in our customers' filling line.





CUSTOMIZED



Gerresheimer Plastic Packaging offers unique diversity even in the standard range and we are happy to develop products for individual needs and requirements. Our machines give us maximum flexibility and allow us to adapt easily to any size of product series.

We cooperate with experienced coloring partners and we have the capability to develop specific master batches within short notice for pharma and para-pharmacy products.

We can also support our customers offering them outsourced service of sterilisation and decoration.



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