

[www.apra-plast.de](http://www.apra-plast.de)



We form your ideas



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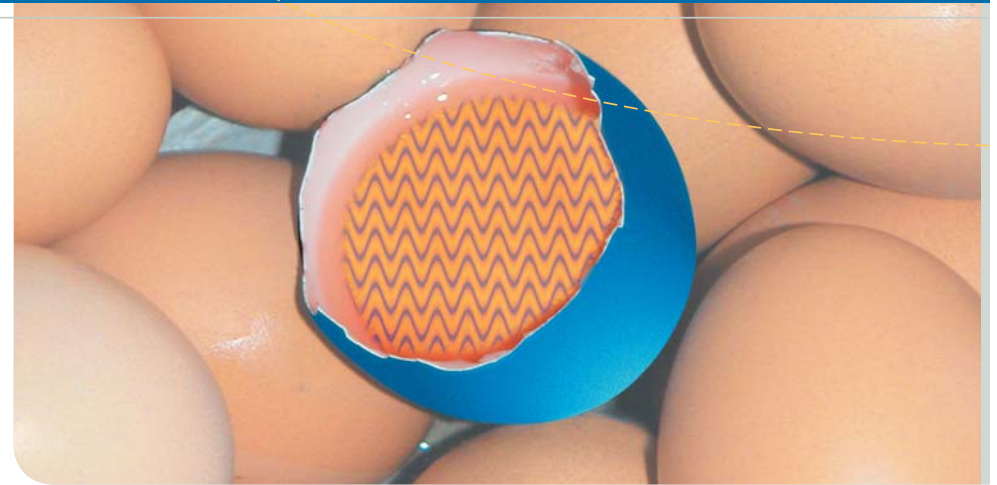
# situation

## One egg looks very much like another, but your ideas are unique.

Imagine you have an idea, but you're missing the wrapping to present it in its best light. We are the ideal people to turn to.

We offer individual solutions to problems ranging from individual items to series produced items because we hardly have any tooling costs, our manufacturing processes are flexible and inexpensive.

We can also realise highly complex form and material requirements for you.



### The perfect shell for valuable electronics.

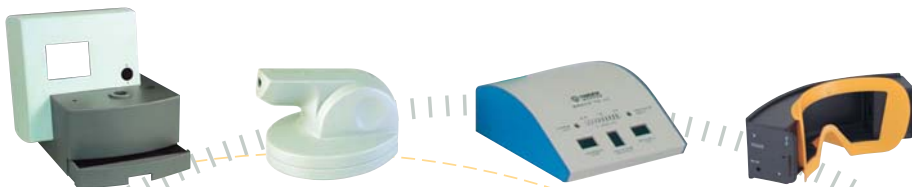
If you're looking for a fully-equipped case with special features and an eye-catching appearance, this is standard practice for us and nothing out of the ordinary!

We can supply products which are fully-equipped e.g. with fastening parts, moving or locking devices, feet, membrane fronts or membrane keyboards. Features such as EMI shielding or UL-listed materials are also no problem. We can also finish surfaces with painting, screen printing or laser etching.

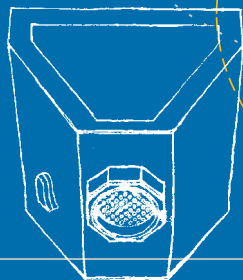
### Individuality is our strength.

Every product is designed according to our customers' wishes and produced in line with your specific measurements and specifications. You will get something unique, not something mass produced.

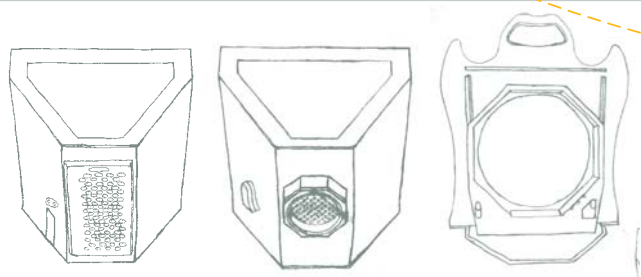
Even the most unusual customer demands can be fulfilled 100% with our possibilities of case production. We will provide you with your own personal case – individual and distinctive in form, colour and fittings.



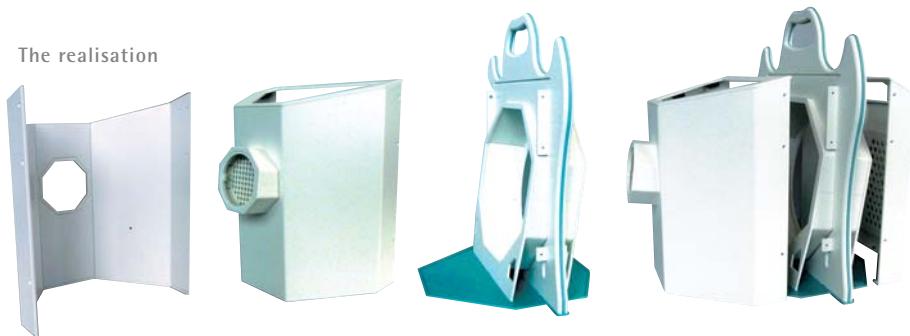
## The idea



# realisation



## The realisation



## Designed from start to finish.

We can offer you full service:

Advice, design, production, finishing, accessories and after-sales service.

A custom-made case with complete service from A-Z at a fair price.

In consultation with you, we clarify your needs and then take care of the rest – allowing you to concentrate fully on your business.

You won't need any technical draughtsmen or designers – we've got them!

How it works:

You tell us your requirements – we draft you a proposal.

You check and correct the proposal – we make the prototypes.

You test the product – we produce the series.

You give us a presentation of your plans (sketches, drawings and models) and we advise you extensively and in detail on the manufacturing processes, material and possible fittings for the product. Our designers will develop products based on individuality, attractiveness, ergonomics and practical suitability.

Our designers work with the latest CAD systems and use their entire know-how to come up with well thought-out and practical designs.

We use state-of-the-art CNC machines to ensure that the finished product is made with the same accuracy as the CAD drawing.

Where machines can no longer be used, we will manually finish the job with care.

Constant quality control during the creation stages goes without saying.

## The result



## The application



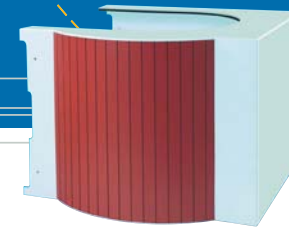
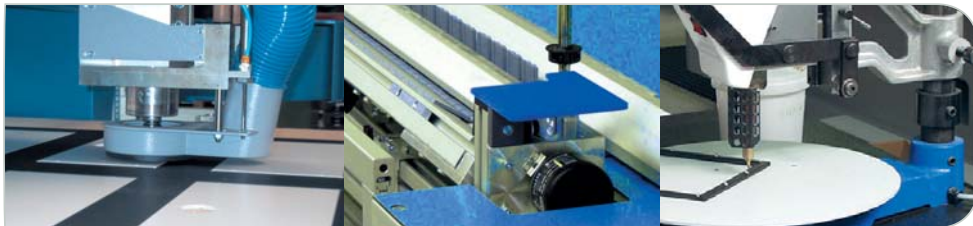
# technology

## Our technical capabilities give you creative freedom.

The speed at which electronics are developing is breathtaking – product lifecycles are getting shorter and shorter. Whoever presents their new product on the market first, has the advantage.

And in most cases customers are not looking for everyday products, they want individuality!

Apra-plast responds to this market demand with a highly extensive range of processes, allowing it to offer individual plastic part solutions for problems ranging from individual items to series-produced solutions, mostly without any major pre-investments.



### MILLING AND BENDING TECHNOLOGY

The trend for individual design and professional outfitting for small and medium-sized batches is forcing designers in the plastic case and parts areas to look for alternative production technologies.

Without tying up large amounts of capital because of the unnecessary tool costs, milling and bending technology provides designers with the ideal solution and with no time wasting:

Economical production even for small quantities, flexible and quick, using milling and bending technology.

We'll produce your "wrapping" to your plans (sketches, technical drawings, component parts, CAD data).

There are hardly any limits for your imagination: we have a whole range of special tools for CNC machining. Any bending angle can be realised.

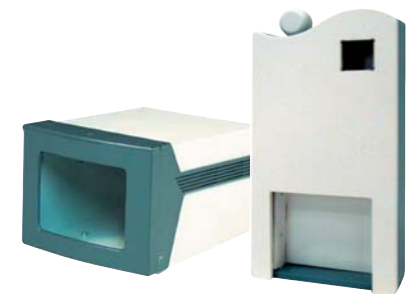
You can create your own personal case from a wide range of standard materials and colours. Fastening technologies with solid thread inserts for service-friendly assembly come as standard (there's almost no restriction on movable parts). Viewing windows made from acrylic glass can be inserted seamlessly and flush in the material.

Inlaid cutting technology enables control panels, other coloured parts, front membranes or membrane keyboards to be inserted flush with the surface.

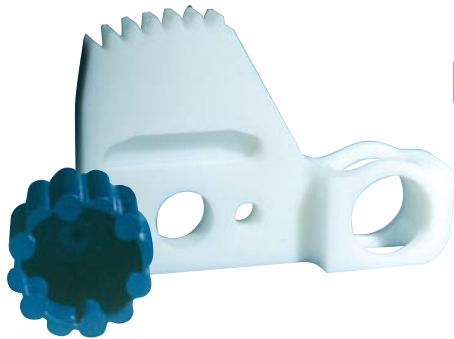
To finish off, we offer various processes such as painting, printing, laser etching or engraving. Any colour is possible.

We can also offer protection in EMC areas with the appropriate coating.

If you like, we can deliver your case preassembled ready to fit including accessories, and, if necessary, metal assemblies can also be produced and integrated.



# technology



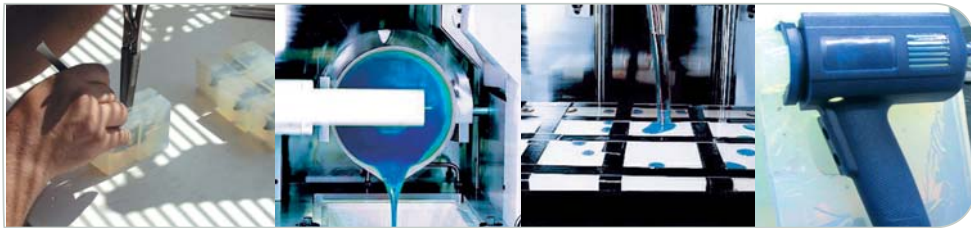
## VACUUM CASTING TECHNOLOGY

Vacuum casting technology is used for manufacturing prototypes, pre-series or small series without tools. The most important aspect here is the economical aspect. Constructing a tool for such volumes is often not cost-effective. Casting technology doesn't require tools. Based on your plans and our competent advice, we can produce your individual model.

The master model will be a 1:1 reproduction of the required part and can be produced from a whole range of materials. By encapsulating the master model in silicone, a 1:1 negative impression is produced which is used as the mould.

For casting in the mould, an almost unlimited choice of materials in any colour, transparency and strength is available.

Free form for cases and functional parts.



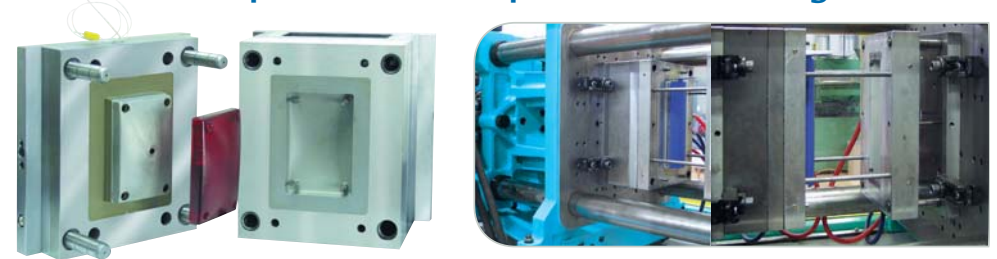
## CASTING MOULD TECHNOLOGY

Casting mould technology is a new process of injection moulding which makes small and medium batch sizes more economical with cost-effective tooling. Quick, cost-effective and perfect in design!

By using this technology, apra-plast closes the gap between prototype construction and conventional injection moulding technology.

Free forms based on patterns and master models are now possible for small series with injection moulding technology. This new method of tool construction fulfils all injection moulding requirements – to achieve the highest standards.

Quick, inexpensive and perfect in design.



# technology



## MEMBRANE TECHNOLOGY

Membrane technology is used increasingly worldwide for information input using electronically-controlled equipment. We can offer you the complete range of membrane technologies, from decorative membranes and front membranes to membrane keyboards.

EMC protection (including in display areas), colour filters, pockets and key embossing belong to our production range, as well as LEDs integrated in the membrane (monochrome or duotone).

We can develop an optimum solution to meet your requirements and guarantee a quick and flexible realisation of modern design and of top quality.

## CASE FITTINGS

If you're looking for a product ready to install and use, we can integrate additional parts made from different materials such as metal or glass during the assembly process. When working with plastic parts, we can also use welding and gluing processes. If required, parts provided by the customer can also be integrated.

The product should not only look good, of course it should also fulfil its purpose, which is why we fit it out completely with functional parts such as battery compartments, seals, press nuts, membranes, membrane keyboards, card guides, plastic domes, hinges, viewing windows, feet, studs, mounting rail brackets and many other accessories.

Fastening parts and mechanical movement and locking devices are also among the challenges we'll happily meet for you. There's almost no restriction on movable case parts.

## CASE FINISHES

We can meet your requirements.

We can offer protection (EMC/EMI) with painting.

Any colour is possible. Whether it's a special colouration you want or structured surface with painting or multi-coloured screen printing for control panels, we have the right finishing technology to meet all requirements.

Company logos and text can also be etched on by engraving or laser.

Optimum solutions with unlimited choice.



# a multitude of forms



Individual forms – perfect for your complex requirements

# combination

## TOOL CONSTRUCTION+MOULDING

For medium-sized and large production series, RADAPLAST is a reliable partner for injection moulded parts.

The RADAPLAST department, part of apra, makes your ideas become reality by using its own modern tool construction plant.

Plastic parts with mould weights ranging from 1 to 600 g can be produced on the seven partly-automated injection moulding machines. Up to 40 different plastic types can be used.

The production of individual and distinctive cases – in form, colour and fittings – is no problem for us. We can also supply products which are fully-equipped (e.g. with fastening parts, moving or locking devices, feet, membranes or membrane keyboards). If required, features such as electromagnetic protection or UL-listed materials can also be applied.

We can also finish surfaces with painting, screen printing or laser etching.

With its own product program, switchboard cases DIN 43700/IEC 61554, RADAPLAST has the largest selection in Europe.

We carry almost all sizes with the appropriate accessories.

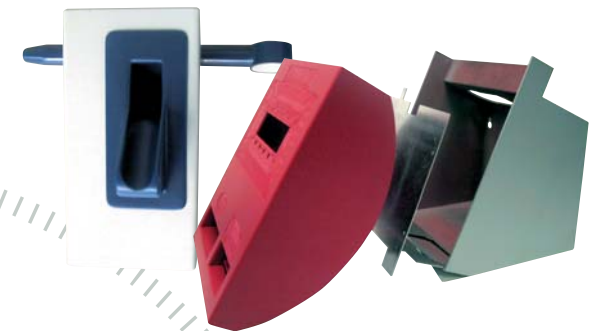
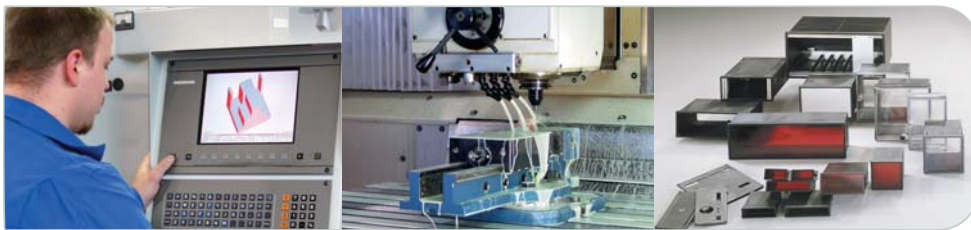
## Make use of our synergies.

Because of the synergies through our associated companies we can work with and combine all sorts of materials in the design and manufacturing stages of the products (sheet steel, aluminium, high-grade steel and plastic).

The co-operation between apra-plast and apra-norm rounds off the portfolio of services in case technology.

The union of plastic and metal parts is therefore guaranteed.

## Complex requirements – perfect solutions.



# motivation



In addition to optimum machinery and high-tech production processes, the experience and know-how of our workforce is the guarantee of your success.  
Highly-qualified experts ensure efficient processes and finely-tuned procedures.

## Our expertise is your success.

### We are a team of highly-motivated co-workers

Goal-oriented and trustworthy co-operation characterises our style of working and is a major asset of our company.

### We are very customer-oriented

We earn our customers' confidence with extensive advice and support. With a high degree of flexibility in the product creation, our competent staff will provide you with your individual customer solution.

We react immediately to your wishes and process your orders quickly and with the greatest of care.

### We guarantee prompt availability

We have to be quicker and better than our competitors – this is the requirement we must address daily.

Depending on the production process, we can produce prototypes and series parts within just a few days or weeks.

We supply cases ready for immediate use – fit and go!

We are highly innovative and keep ourselves up to date with the latest material developments and machine technology, which helps us to fulfil our customers' requests.



# quality

## High-quality innovative products are our standard.

Thanks to its personal commitment, its insight into the requirements of the future market and a constant high level of quality, apra can always count on the loyalty of its most discerning customers.

A prerequisite of this is a well-functioning quality and environmental management system.

This system is proven with a certificate. The certificate is granted when a company can prove by means of an audit that it has fulfilled all the requirements set out by the DIN standard.

One of these requirements for example is that all processes are unambiguous, transparent and fully documented. The apra Group has quality and environmental certification for all its sites.

DIN EN ISO 9001 is the standard which describes the selection and introduction of a quality management system in a company.

DIN EN ISO 14001 is the environmental standard. It is granted to a company which complies with all environmental aspects.



## Individuality at standard prices.

From the prototype to series production of several thousand units - our prices and services always keep to a favourable ratio.

We make products to meet our customers' wishes precisely by offering a broad range of features and fittings for plastic cases.

We seldom require the services of a third party as we can take care of all the necessary work ourselves and so structure our prices much more favourably.

Our used technologies make part modification possible with minimum expense.

If our customers want to make a change to a product, we can introduce it immediately into current production at low cost with little time delay.



# success

## Experienced, customer-oriented, reliable, successful

Only those who react quickly to change can enjoy long success. We have proved this success daily for more than 10 years.

Our customers represent all types of industry:

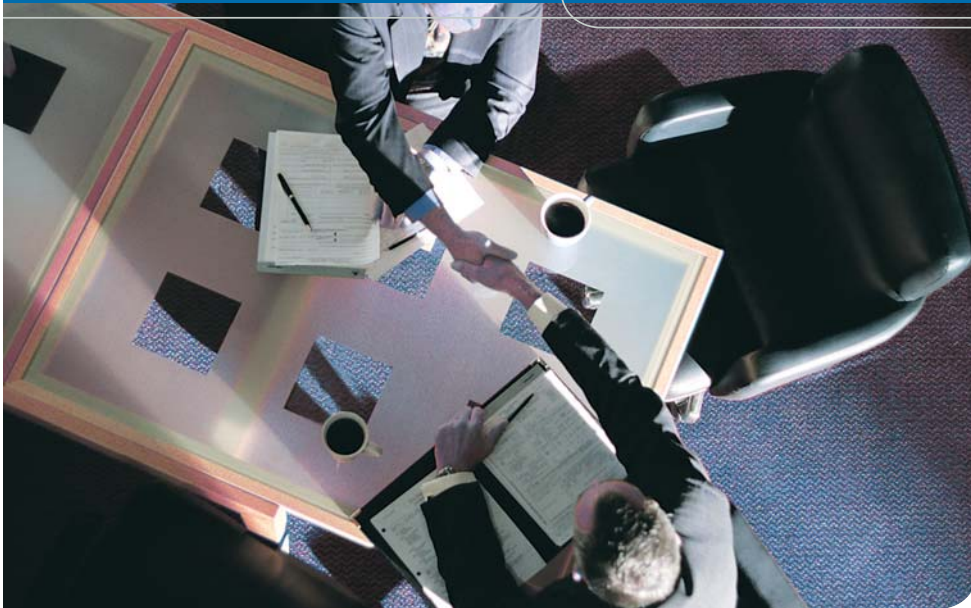
Medical technology	Computer Technology
Rail traffic technology	Refrigeration Technology
Machine and plant construction	Military Technology
Space travel	Merchandising fairs
Automation	Electricity and Energy
Airlines	Research Institutions
Electronics/switchgear construction	TV and Radio
Commercial vehicles	
Metrology and control technology	
Telecommunications	
Chemical	



Our work centres around the customer.

We guarantee you will benefit from our many years of experience and be satisfied with our services.

# strong partners



**apra-plast**, your contact for customer-specific cases or plastic parts.



**apra-norm** a market leader in the 19" sector. The name has stood for cabinet, plug-in module and case systems made from metal, aluminium or plastic for more than 30 years.



**apra-gerätebau Chemnitz** offers special case solutions alongside its full product range. It specialises in the development of displays and terminals as well as special solutions for all areas of use.



**apra-net**, is a specialist in innovations in the network area: from distributor cabinet systems to fibre optics.

## The apra group companies make up a strong partnership.

The close co-operation of the individual companies in the apra Group expands our expertise, enabling us to act as a full-service partner for your complex requirements.

