

Services



Our enclosures are machine-finished on the premises. At BOPLA, we have an experienced workforce as well as state-of-the-art machine and systems. A combination that ensures you affordable production runs at a consistently high standard of quality.

We offer you a complete “All-round carefree package” with a wide range of intelligent services, tailor-made for your application.

For more than 50 years we have been your partner for sophisticated solutions, and we have constantly expanded and perfected our range of services. Form your own opinion of our know-how: machining service, membrane keypads / HMIs and system integration. We look forward to seeing you!



Machining service



Quick-Finder:
www.bopla.de/14

Mechanical machining

Our highly-qualified employees carry out processing for you on modern CNC machines and equipment. This ensures constant and even quality of work.

In addition, the overall solution consisting of the enclosure and customer-specific processing results in optimal delivery times while reducing both the risk of rejects and transport costs.

Our range of services includes:

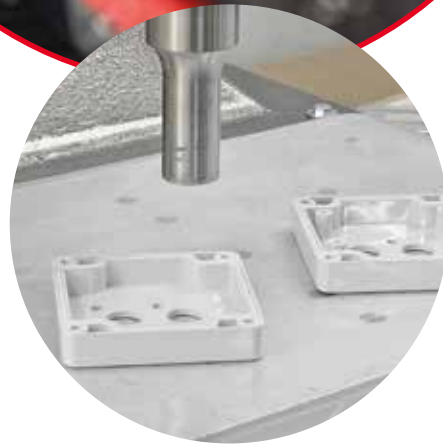
- Drilling
- Milling
- Counter-sinking
- Thread-cutting



Our highly-qualified and motivated employees saw extruded aluminium profiles in accordance with your specifications. This ensures optimal delivery times and a high level of quality for the products.

Profile processing:

- Scutting
- Sawing



Ultrasonic welding

We use a special ultrasonic welding method to join the screw domes to our enclosures.

All our plastic enclosures are equipped with screw bosses made of plastic to fasten the mounting plates or PCBs. If you would like an additional fastening method at another position, then we can carry out this requirement by welding in a screw dome.

Services

Surface improvement

By "surface improvement" we mean all the technical processes used during production of a part in order to improve the surface characteristics. These characteristics may be functional or decorative, or a combination of both.



Digital printing

In principle all types of enclosures can be designed using digital printing. The digital printers which we use allow the printing of enclosures up to a weight of 8 kg and maximum dimensions of 690 x 490 x 150 mm (L x W x H). Depending on their size and weight, multiple enclosures can be printed at the same time.



Silk screen and pad printing

We use silk screen and pad printing in accordance with your specifications in RAL, Pantone or HKS colours. Our modern machinery and high-quality ink guarantee optimal print quality.

Your advantages:

- High level of coverage
- Special colours are available, e.g. gold, silver, etc.
- Extremely tough and durable



Laser marking

Flexible, abrasion-resistant and environmentally-friendly. Thanks to the innovative laser process, even changing layouts during every marking procedure is not a problem. In addition, the method is extremely precise, including with narrow line thicknesses and small symbols, and it also offers absolute abrasion resistance to chemicals.



Engraving

Engraving involves the cutting of letters or images in aluminium and plastic components, for example in enclosures, part front panels, plug-in front panels and profiles.

Classical engraving takes place using a graver or a cutter on the surfaces. During this process, the rotating tools remove material, creating a visual contrast to the background.



Lacquering

Lacquering is an additional method of refining our enclosures and components. Lacquers are liquid or powdery coating materials which can be applied thinly to our enclosures or components and, by means of chemical or physical processes such as the vaporisation of the solvent, result in the building up of a continuous, solid film.



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Powder-coating

Powder-coating is a process in which powder is applied to our metal enclosures. As part of the process, the enclosures are transported by a conveyor system. Powder-coated enclosures are extremely tough mechanically, and have better mechanical characteristics (impact and scratch resistance) than the untreated metal enclosures.



EMC coating Plastic enclosures:

BOPLA is your competent partner when it is necessary to protect electronics against external interference. We provide three processes which offer you the necessary protection.

With plastic housings:

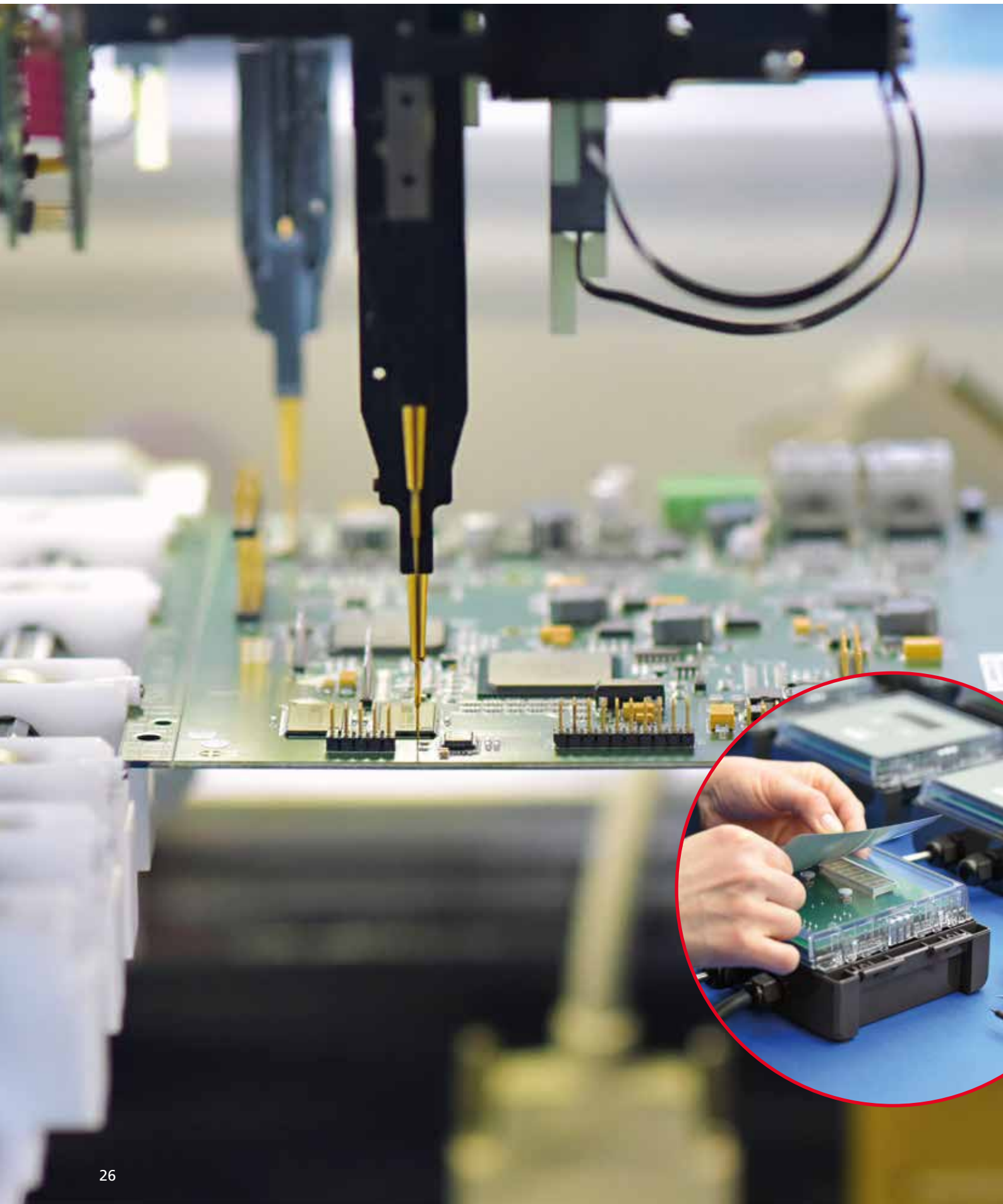
- Copper-chrome-nickel evaporation
- Aluminium evaporation
- Lacquering with conductive copper lacquer



Aluminium enclosures:

Even without any additional screening measures, the electrically conductive base material used for the aluminium enclosure provides good basic screening, and optional accessories can be used to optimise this.

Services



Integration of electronics



Quick-Finder:
www.bopla.de/90

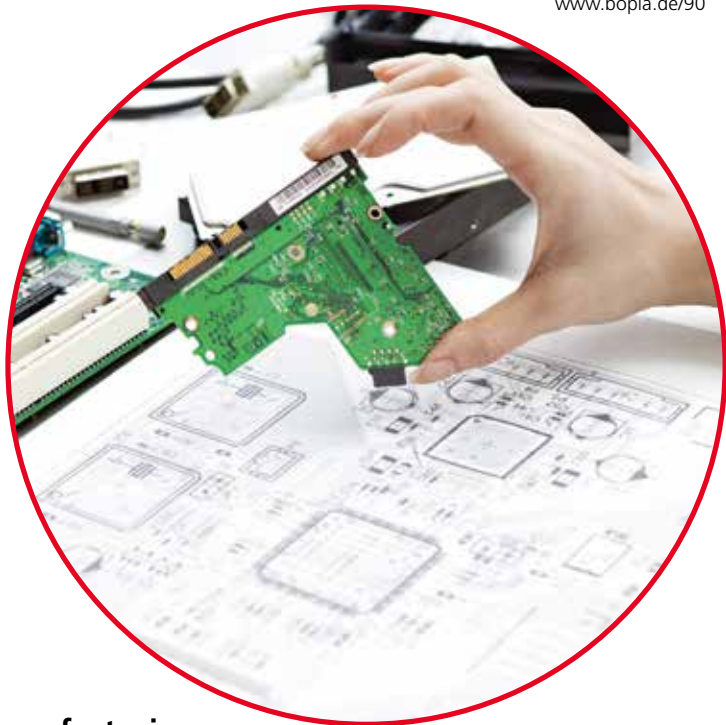
The heart of your product

We offer the full range of services, from development support for the electronic module to materials management and production up to complete assembly of your individual enclosure. A comprehensive end-of-line test is also one of our services.

Development support

Every project starts with a detailed concept phase in which we provide comprehensive advice and then define the tasks, requirements and workload. On the basis of these factors, we prepare a cost overview for your end product.

Our contact persons accompany you reliably during the entire process.



Manufacturing

You benefit from our electronics services as a result of economic efficiency and short delivery times. In addition, consistent quality management in order production ensures the constant high standard of the modules.

Extract from our services:

- SMD and THT insertion of all design shapes
- High-precision and performance automatic machines for all batch sizes
- Various soldering processes
- Conventional assembly of all designs
- Separate area for small and special series production

Completion / Testing

Following your instructions, we will gladly carry out the integration of:

- Electronic modules
- Electromechanical components
- Touch screens / display units
- Membrane keypads and decor foils
- Cables and connection leads
- EMC screening

Qualified technicians carry out the final assessment of the modules, with function and end tests.



Services



Mounting / Testing / Packaging

The perfect result

For mechanical processing, mounting of the enclosure parts or additional mechanical articles, terminal insertion, pre-wiring or the mounting of membrane keypads – this is how you minimise the amount of your in-house work, and we take over the risk of manufacturing faulty products.

For example, we take care of the following for you:

- Mounting of subracks
- Installation of cable glands
- Installation of DIN rails
- Soldering and bonding work
- completion

If there are special demands in respect of particle-free mounting of your optical, electronic and precision components, a work table is available which operates with a vertical flow of air and is assigned to purity class 6 according to DIN EN ISO 14644-1.



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Protection type testing

Many of our enclosures already provide high levels of protection as standard. If these levels are not adequate for your application, we test the feasibility of a higher level of protection in our in-house laboratory.

Individual marking & packaging

In recent years there has been a considerable increase in the requirement for tailor-made packaging, especially in the integrated complete solution sector. We have worked hard to deal with these enquiries, and we offer our customers the necessary technical competence in order to meet their specific wishes. We will be happy to work closely with you as early as the offer phase of a project in order to define your requirements in detail with our logistics experts.

Individual enclosures



You are looking for ways to implement one of your own designs? Or do you want to develop your own individual enclosure in order to integrate specific functions?

We will gladly manufacture your individual enclosure. Make use of our many years of experience – we have already created many successful special solutions for a range of sectors. You benefit from our high levels of specialist knowledge, excellent product quality, and our experienced employees!

Our offer comprises:

Consultation



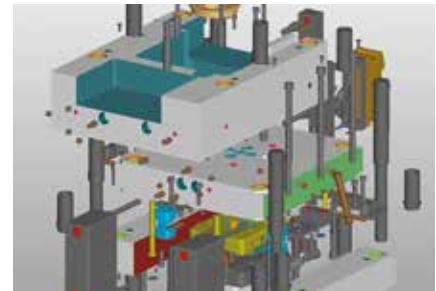
- Consultation
- Spezifikation
- Preliminary costing

Construction



- Preparation of drawing
- Filling study
- Prototype construction

Tool



- Tool drawing
- Tool manufacture

Production process



- Plastic injection moulding
- Aluminium profile extrusion
- Aluminium / zinc die casting
- Stamping and bending technology
- Further processing

Processing



- Milling
- Drilling
- Counter-sinking
- Punching
- Sawing

Refinement



- Printing
- (Powder) lacquering
- Engraving
- Laser marking
- EMC screening

Packaging



- HMI integration
- Assembly
- Wiring
- Cable assembly

Testing



- IP test
- IK test
- Climatic test
- EMV test

Packaging



- ESD-compliant packaging
- Individual packaging
- Returnable packaging
- Logistics concept

Individual enclosures



Technology

Plastic injection molded enclosures

Aluminium-/Zinc die-cast



Modified enclosures on 19" basis

Stamping and bending technology

Extrusion of aluminum profiles

Advantages

Advantages of plastic

Plastic injection-moulded enclosure:

- Individual design
- Low weight
- Low unit costs for large quantities
- In parts which are resistant to aggressive environmental influences (salt water)

Advantages of metal

Aluminium / zinc die casting:

- Reliable even under extreme conditions
- High impact resistance, stability and ingress protection
- Resistant to chemicals and temperature
- Very good heat dissipation
- Good EMC screening
- Low unit costs

Aluminium profile enclosures:

- Variable lengths
(a "family" of enclosures can easily be created)
- Ideal for use in difficult environments
(high chemical and temperature resistance)
- Good opportunities for EMC screening and conductive connections
- Very good heat dissipation
- Low tool costs
- High level of impact resistance
- Very good stability

Stamping and bending technology:

- Small quantities at lower cost than with plastic enclosures
- Good opportunities for EMC screening and conductive connections
- Ideal for use in difficult environments
(high chemical and temperature resistance)
- Low-cost alterations to the enclosure design are possible
- Very good stability



System integration

System integration allows us to deliver the perfect end product – developed together with you and expanded to series readiness.

For you, system integration means a complete “All-round carefree package” with a wide range of intelligent services tailor-made for your application.

For more than 50 years we have been your partner for sophisticated solutions, and we have constantly expanded and perfected our range of services. Form your own opinion of our know-how: machining service, membrane keypads / HMI's and system integration. We look forward to seeing you!



Here are the solutions!

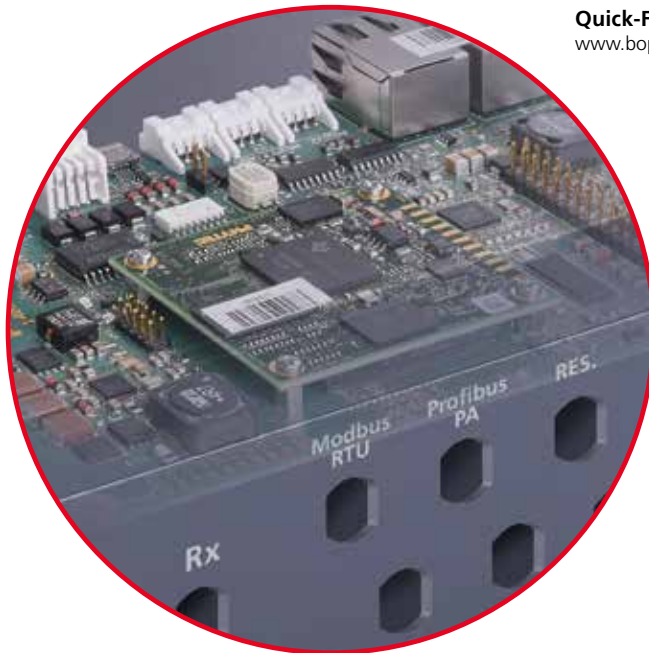


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All the components are brought together at this stage of the process, and your individual device is created!

Our range of services includes:

- Procurement and warehousing of all necessary components
- Insertion (THT / SMT)
- Module test (AOI / ICT)
- Function test
- Labelling and packing



The enclosure

BOPLA's enclosure sector product range is incredibly diverse and ranges from hand-held, desktop, console and wall-mounted enclosures to 19" applications. Select the suitable enclosure from our comprehensive product range.

The electronics

From procurement of all necessary components to insertion to the module test – it's what we do.



The HMI solution

We create HMI devices for every application. From simple membrane mounting to the complex integration of touch screens – all in impressive quality and with an appealing design!



The processing

We excel in all standard processes: milling, drilling, countersinking, thread-cutting, sawing, ultrasonic welding, and many more. These include engraving and laser engraving, printing and lacquering, and powder and EMC coatings.

Mounting / function test

The integration of highly-sensitive components / modules and the final check of the device by means of a function and end test is carried out by our qualified and expert personnel in our in-house laboratory.