



bringing plastic to shape  
since 1970



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### Injection Moulding

If your product should not be ideally suited to vacuum deep-drawing technology for technical reasons, we will also gladly supervise its manufacture with one of our reliable partners using injection moulding technology. We will meet your production needs quickly and reliably by making a prototype using the stereo-lithography method right through to the manufacture of an injection moulding batch production part.



We thank our customers for their many years of loyalty.



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### KVH-Hartung Vacuum Forming and Thermoforming with Plastic

We will manufacture your products in the highest quality and at the best terms according to your requirements using a wide variety of technical thermoplastic materials and the deep-drawing and injection moulding methods.

Our own negative deep-drawing method enables us to produce a surface quality that comes so close to injection moulding that a closed casing cannot be distinguished as being a deep-draw component.

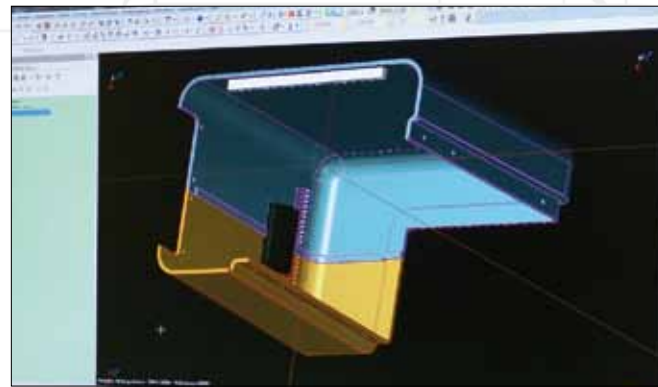
Our vacuum deep-drawing process offers you a simple and cost-effective way to shape plastics for a batch production thereby providing your product with an optimal functionality and a top surface quality.

Through the deep-draw method with tool costs that are almost 90 per cent below average we can enable you to manufacture your product with decisive cost benefits compared with injection moulding.

Since KVH specialises in the negative method, we can form the finest contours such as design lines, indentations, logos, surface structures, ribbed patterns and lettering.



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## Services

### Development and Supervision of Projects

You can also benefit from the services of our development and project department. All you have to do is provide us with your project as CAD data (iges or step), a model or a sketch and we will advise you quickly and objectively. Our CAD department will gladly assist you with your design.

### Tool Making

Our computer assisted production methods enable us to produce your tool from heat-resistant hard plastic (prototype / batch production tool), aluminium cast resin or aluminium (batch production tools) in 4 to 6 weeks.

### Deep Drawing

Universal Illig machines enable tools measuring from 180 mm x 220 mm to 2940 mm x 1440 mm and tool heights from 770 mm to be deep drawn.

We machine all customary thermoplastics as well as special materials with flame and/or UV protection in a thickness of 0.1 mm to 10 mm.

### CNC Machining

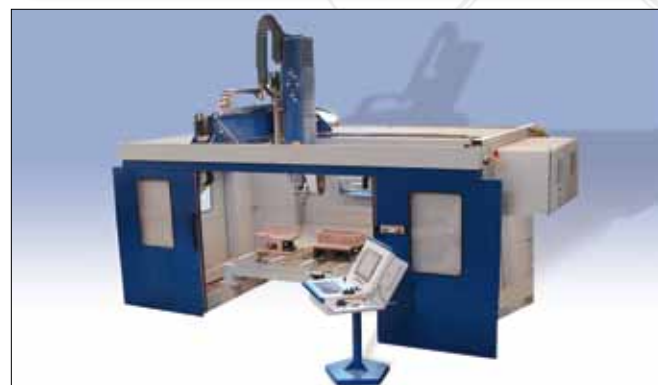
The use of hard plastic jigs during 5-axial CNC machining work together with vacuum enable us to perform absolutely accurate repetitive trimming.

This ensures you a precision fit and an easy assembly of your plastic moulded components.

### Assembly/Finishing Process

Our assembly work comprises a wide range of finishing processes designed to refine your product.

This includes the installation and production of holding devices for circuit boards, additional parts, sheet metal, turned parts made of aluminium, plastic or brass, subsequent electrostatic treatment, EMC shields, dressing, gluing, varnishing, laser marking, riveting, hinge assembly, welding, silk-screen printing, blanking, pad printing, chromium plating, wrapping, and much more.



## Products

The products that we manufactured for our customers during the last 40 years can be found in almost all areas of life. Whether for interior or exterior use, the machining of special materials for aircraft manufacturing or for all types of technical components, we will ensure that your product reaches its full effect. Why not allow yourself to be inspired by our product presentations!

### Advertising

In the field of advertising your marketing will be able to join forces with our development department. Your concept can include both an integration of electrical components (for mobile displays) or light fixtures with cabling as well as a combination of plastic, wood and metal. Our designs proposals are always based on your specific needs.

### Automotive Engineering

Our many years of experience in the field of automotive engineering enable us to offer you a quick production and a long-term just-in-time delivery service.

### Blister Packaging

Cost and time play a major role in the construction of blister packaging design. Prototype tools allow the influence of these factors to be reduced. Based on the information you provide us with and the parts being packaged, we can begin with the production of an initial series in only two weeks.

### Transport Containers

The field of transport containers includes production positioning devices, conveyor belt pallets, internal and external transport protection, sales containers and pallets as well as point-of-sale pallets.

Using your samples we can help you to develop appropriate mould cavities. This will enable you to avoid costly design work and save time while obtaining a functional model in the shortest period of time.

### Technical Parts

The topic of technical plastic parts includes a wide range of applications such as machine and robot cladding. Here the colour, design and matching with other machine components is a prerequisite that we will look after to your complete satisfaction through our professional advice and highly skilled development service.

### Medical Engineering

When manufacturing medical casings we focus on a corporate design and the functionality of the components. Our negative procedure allows you to include a special note with your casings. Our highly precise CNC machining will help to ensure that your components will always find their exact assembly position.

