



**GET IN
TOUCH**

DESIGN & LEGENDING

Design variations and individual legending
for components and assemblies



IMPRESSIVE POSSIBILITIES

TO YOUR SPECIFICATIONS

When time is short, every move must be coordinated. Press the wrong key switch just once and valuable time is lost – perhaps material and money too, in the worst case. Functional design and precise markings are indispensable – either through different designs or specific legending.

That's why we at RAFI offer numerous design variations and customized legending for your components and assemblies, always with the focus on look, ergonomics and operation in everyday work.







DESIGN

COMBINES SHAPE, FUNCTION AND QUALITY

At RAFI, we take design seriously – it's been a central part of product development since the company was founded. Numerous patents, innovations and design awards prove this and attest to our journey towards highly functional and perfectly shaped products.

We attach great importance to every detail. For example, the homogenous illumination of our signal lamps and illuminated pushbuttons. A further success factor is the recognition value across our many product series.

Our ability to integrate customized designs, colors and legending means we can implement a wide variety of projects – however unusual or challenging.

Shape

Our products are designed to beautifully complement your specific system. And we offer a wide range of shapes, allowing us to find the right component for every project.

Function and ergonomics

RAFI products are characterized by intuitive operation, ergonomic design and a focus on functionality. Design always follows function, guaranteeing the highest possible user friendliness.

Colors

Colors are ideal for indicating different functions and states of machines and systems. With our standardized palette, you can choose from classic or strikingly bold colors. We also offer customized shades with the guarantee of color consistency across all your product groups. Our portfolio includes colored rings and bezels as well as multi-colored illumination with RGB-LEDs.

Haptics and acoustics

Appearance often plays a key role in design. But our product designers go one step further, taking other senses into account too. What does the key switch feel like? How does it click? Taking all this into account, we create operating or indicating units from plastic, glass, stainless steel or porcelain which also sound and feel good.





LEGENDING

FOR THE PERFECT IMPLEMENTATION OF YOUR PROJECT

There are lots of ways you can mark your products. Our offering includes the most effective methods – depending on material, product and quantities.



FLEXLAB and C-LAB legend inserts

RAFIX control components, LUMOTAST single pushbuttons and other RAFI products can be legended quickly and individually with legend inserts. The transparent bezels protect the inserts against abrasion.



Direct legending on metal and plastic

Here, the surfaces of the bezels or keycaps are legended directly by printing or engraving, depending on the material. An additional, particularly robust variant is the 2-component injection molding process.



Label holders

It's not possible to directly legend USB feed-throughs, keylock switches and certain other products. The solution is to use holders for the legend labels.



Emergency stop labels

For the emergency stop variants of all series, we offer suitable adhesive labels with standard legending in various languages or according to your specifications.



Front panel legending

For larger quantities, it's often more cost-effective to label the front panel directly. Our overlays give you the option of using identification strips.

EXACTLY TO YOUR SPECIFICATIONS

RAFI offers you a wide range of different procedures for legending your components and assemblies. Together, we can find the right solution for you.



Engraving – plastic or metal

A graver is used to remove material and engrave the desired symbol into the surface. Next, the engraving can be highlighted with color.



Laser engraving – plastic or metal

This method enables us to label components and assemblies with a laser jet. We use laser-engravable plastics and metals that change color under the laser beam. The resulting legends are watertight and smudge-proof.



Rapidograph – technical pen

We use a technical pen for computer-controlled legending of paper or transparent PVC membrane overlays with black ink. This low-cost procedure is ideal for creating legend inserts for prototypes or single pieces.



Pad printing

Pad printing is the only printing method to guarantee distortion-free printed images on complex three-dimensional bodies. First, the desired image is engraved or etched into a printing plate. The printing ink is then spread over the printing plate and removed so that ink only remains in the indentations. Finally, the ink is absorbed by the pad and transferred to the component to be printed.

Screen printing

In screen printing, a rubber blade presses the ink through a fine-meshed fabric onto a wide range of materials. Special printing inks in RAL or Pantone color shades are used. We use this method mainly to print overlays for operating and indicating panels.



2-component injection molding

This method involves injecting two plastic components into a mold, either simultaneously or one after the other. The resulting symbol is made entirely of plastic. It is firmly connected to the key body and is absolutely abrasion-resistant. For example, we produce keycaps for high-quality keyboards using 2-component injection molding.



Digital printing

Here, digital data is usually printed directly onto the desired material using laser or inkjet printers. This saves costs and ensures flexibility, as no elaborate print templates are required.



Anodic printing

With anodic printing, aluminum is first anodized with open pores. Using screen or digital printing, finely pigmented inks are then embedded in the anodic layer. The anodic layer is then sealed in a sealing process. This color printing in superb image quality is heat resistant up to 650°C and withstands chemicals, steam, scratches and sterilization.



YOUR SOLUTION









At a glance

In our handy table, you can see the advantages of the individual methods and find the right one for your project. If you have any further questions, we'd be happy to help you.

Legending methods	Quantity	Abrasion resistance	Negative legending	Colors	Application options
Engraving	From 1 piece	Yes , under a bezel or keycap	No	Yes , multi-colored engraving design possible	On all metal or plastic surfaces
Rapidograph	From 1 piece	Yes , under a bezel or keycap	No	Black Rapidograph ink	On all paper or PVC membrane overlay surfaces: Legend inserts
Pad printing	From 30 pieces	Yes , with 2-component paints and protective lacquer	Yes	Yes , one printing process for each color	On all convex or textured surfaces made of plastic or metal: <ul style="list-style-type: none"> • Bezels • Keycaps • Legend labels
Laser engraving	From 30 pieces	Yes	Possible	Conditionally possible*/ <ul style="list-style-type: none"> · Color change dependent on plastic material and additives · Lasering of painted surfaces through material removal 	On all convex or textured surfaces through color change: <ul style="list-style-type: none"> • Bezels • Keycaps • Housing On metal through laser engraving
Screen printing	Larger quantities, on request	Yes	Yes	Yes	Polyester membrane overlays: Overlays or front panel overlays for keyboards and control components Glass and plexiglass also possible
2-component injection molding	Larger quantities, on request	Yes	Yes	Yes , max. 2 colors	2-color injection-molded bezels or keycaps for keyboards and operating panels
Digital printing	From 2 sheets of DIN A4 format	Yes , under a bezel or keycap	Yes	Yes , color shades similar to RAL and Pantone	Production of DIN A4 labelling sheets for legend inserts
Anodic printing	On request	Yes , scratch-proof against mechanical abrasion	Yes	Yes , color printing in high image quality possible (only on aluminum)	Aluminum keycaps: e.g. RK 90

Flexibility and replaceability of the legending is possible using legend inserts or legend labels.



Plastic keycap	Metal keycap	Overlay legend insert	Labels	Product examples	Advantages
X	X	-	X		<ul style="list-style-type: none"> • Permanent legending on various materials • Color finishes with special paints
-	-	X	-		Permanent legending of a legend insert on paper or PVC membrane overlay under a transparent bezel or keycap
X	X	X	X		<ul style="list-style-type: none"> • Permanent legending • Also on uneven, convex or heavily textured surfaces
X *	X	X	X		<ul style="list-style-type: none"> • Precise and abrasion-resistant through color change by laser • Permanent, acid-resistant legending • Depending on substrate and composition of the plastic, legending may appear dark or light
-	X	X	-		<ul style="list-style-type: none"> • Long-lasting and brilliant color printing • Durable, weather-proof and color-intensive • Highest quality • Best choice when you need top functionality and color-fastness for front panel and keyboard overlays
(glass/plexiglass also possible)					
X	-	-	-		<ul style="list-style-type: none"> • Abrasion-resistant legending also for very robust industrial applications • Material properties of two different plastics or colors combined
-	-	X	-		<ul style="list-style-type: none"> • Prints are created digitally • Variable data: consecutive numbering, texts or logos • Photo printing or halftone printing with maximum resolution • Panel in DIN A4 format with pre-cut legend inserts for individual removal
-	X	•	-		<ul style="list-style-type: none"> • Option of printing directly in the anodized layer • Temperature-resistant up to 650°C • Resistant to chemicals • Resistant to steam and sterilization

*Keycaps or bezels protect against abrasion and contamination.



The information in this brochure contains general descriptions and performance characteristics which may not apply exactly in the concrete application and/or which can change due to further development of the products. The technical data, images and other details of our products are merely the results of individual technical tests. These and other performance characteristics are only binding when they are expressly agreed upon conclusion of the contract.

Otherwise, the following applies:

We reserve the right to change delivery options and technical details. Products are similar to the images and other forms of representation.

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RAFI GmbH & Co. KG

Ravensburger Str. 128–134, 88276 Berg, Germany

P +49 751 89-0, F +49 751 89-1300

rafi-group.com, info.headquarters@rafi-group.com

RAFI