

ELECTRONIC PACKAGING – STANDARD PRODUCT VS. CUSTOM SOLUTIONS

An analysis of possibilities and
limitations that surprises

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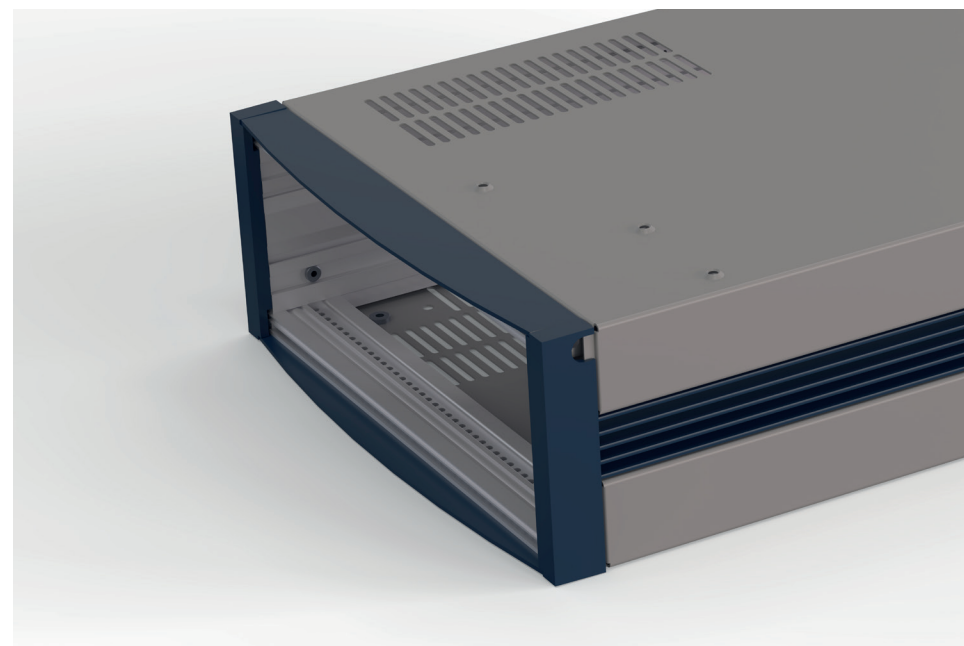
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INTRODUCTION

You are often faced with the fundamental question of choosing between a standard product and a custom solution when searching for the most desirable case for your electronic components. This choice may initially appear to be a decision between possibly rising costs and interchangeable design. Except that reality shows a differentiated picture. So-called standard products are actually sold well below their capabilities considering their designation, since they already offer a long list of adaptations within their standard scope. Experience shows that the transition from standard applications to adapted versions is becoming increasingly smooth.

On the following pages, we take a look at the numerous options offered by POLYRACK's standard products, in which way product-specific developments can be implemented as cost-effectively as possible, and where only 100% customization deployment is really an option moving beyond restrictions—a transparent analysis for anyone with specific ideas about the design, function, and cost-effectiveness of their electronic packaging.





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THE SURFACE

If you carry creative ideas for the surface design of your case, call for POLYRACK's standard product range, offering a wide range of options. All product families can be modified with a large selection of surfaces and features options to meet the design and functional requirements of the final product draw.

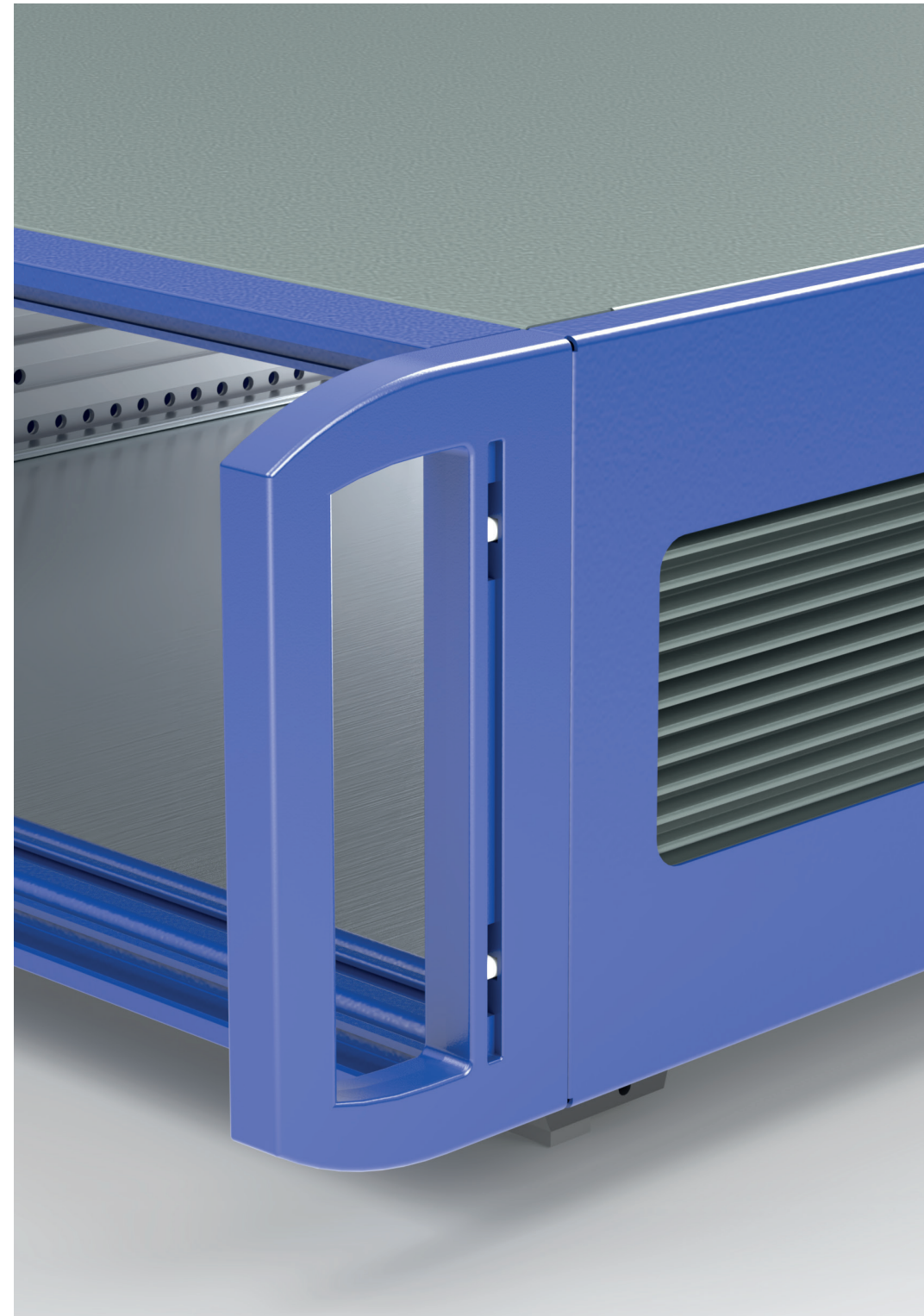
Possible options include:

- Choice of selection of base materials
- Galvanic surface treatment
- Powder-coated surfaces
- Wet-paint surfaces
- Laser-engraved surfaces
- Satin finishing
- Individual design (including multicolor)
- Individual screen or pad printing
- HD printing process
- Applying adhesive printed foils

INTERIOR INTEGRATION AND FEATURES

The interior integration of POLYRACK's standard product families is predestined for modifications to accommodate electronic components or other desired placement of built-in parts. The functionality of the standard products can also be adapted to a wide range of product requirements. These include in particular:

- Function-oriented design of front and rear panels
- Customized operating solutions via switches or displays in front or rear panels
- Demand-oriented heat dissipation solutions, e.g., through guided airflow via cooling ribs, perforations, or active fans



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THE GEOMETRY

The geometrical shape of the standard series cases offered by POLYRACK can be extensively adapted to cover individual demands. The dimensions of the cases can be easily changed within allowed incremental steps and the limits of physical constraints. A design-to-meet and CI-conform look can be possibly realized without developing the enclosure from scratch. The ease of changes in the appearance of a case by example can simply be achieved by replacements with optional parts, individually designed handles, cosmetic-styled frame bumpers, or substitutional different material combinations and suitable alternative items.



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THE COSTS

The costs for custom developments are significantly higher compared for solutions based on standard products. The main reasons for this are the development costs, the construction of any necessary tools, and the adaptation of the manufacturing processes to the custom solution. This concludes that these additional costs are reflected in the price per unit, especially for small quantities.

THE LIMITATIONS

Considering the range of POLYRACK standard products, all parameters are individually revisable to a high extent. You can improve a standard product by adding little ID modifications without having to develop a customized solution. Against this backdrop, the question remains whether the area of customer-specific developments has completely lost its right to exist. The answer is no. The customization options in the standard range do have their limits, beyond which there is no alternative to a completely customized development. Possible examples of this are:

- If cases are to be used in particularly harsh external conditions and the standard IP sealing values are insufficient, custom development may be beneficial.
- If the requirements for the case dimensions are extremely different to comply with regular standards, individual physical solutions may be necessary, leading to custom development.
- If the requirements for the case design are so apart from the appearance of the standard solution and the individual offered ways of modifications, a completely customized solution might be the only option.



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CONCLUSION

Typical electronics cases for desktop or rack-mount applications must meet precise requirements in terms of both function and design. The POLYRACK TECH-GROUP has already established most of the necessary options for modifications in its standard products in a forward-looking manner, enabling the standard solution to respond very precisely to the functionality and design requirements of the end product without having to carry out expensive and time-consuming custom development.

Advisory excellence is the key

The basis for maximum project success is intensive communication between the developer and production partner as well as oriented support both in terms of the projected result and cost-effectiveness. The POLYRACK TECH-GROUP can guarantee competent and neutral project support, carrying over 45 years of experience in this area of skills, and thanks to its extensive portfolio offerings throughout all common production technologies and its wide range of standard products, which also includes modification to standard products and customized products.

Are you aiming for a new product development, and would you like to discuss a possible production concept in person? The POLYRACK TECH-GROUP team of experts will be happy to provide you with a non-binding initial consultation.

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