**For special applications in mechanical engineering**

**Aluminium is not the only way –
profiles from item with a high wood content**

**Profiles made from wood-plastic composites are lightweight, have high flexural strength and conduct no electricity and virtually no heat. This ensures they have a wide range of uses in mechanical and factory equipment engineering. It’s also why item offers fully compatible** [**Profiles KH**](https://welcome.item24.de/kh-profil) **and matching accessories as a metal-free alternative, in addition to classic aluminium profiles. These products can be seamlessly combined with the components from the** [**item MB Building Kit System**](https://www.item24.de/en/productworld/building-kit-system.html) **and** [**item Lean Production Building Kit System**](https://www.item24.de/en/productworld/lean-production.html)**, enabling users to optimise the benefits of both materials.**

Although non-metallic, Profiles KH still offer all the key features of an item profile. They boast a Line 8 profile groove and can be easily screwed together using item fastening technology. However, it’s just as easy to undo connections to adapt constructions to new requirements. Profiles KH are made up of thermoplastic and are over 70 percent wood. As the CO2 equivalent is much lower than for aluminium profiles, CO2 emissions are reduced by up to 90 percent. Profiles KH are lighter than aluminium and are easy to machine. They have impressively low cutting resistance and a flexural strength of 77 N/mm2. Their special properties make them ideal for equipment in testing technology and for laboratory equipment and privacy screens. Unlike aluminium profiles, [wood-plastic composites](https://blog.item24.com/en/general/special-profiles-for-mechanical-engineering-made-from-wood-and-plastic/) do not conduct any electricity. As a result, the item components are particularly suited to areas requiring electrical insulation or transparency to electromagnetic waves. The material is pleasant to the touch and conducts heat more slowly than aluminium. Profiles KH are therefore perfect for applications that are frequently or unintentionally touched by employees.

**Making optimum use of material properties**

Profiles KH are compatible with Line 8 from the item product range. As a result, all accessories for the item Line 8 system groove can be used. Combinations of Profiles KH and aluminium profiles are also possible, which means planners and designers can make optimum use of both materials’ properties within one application. In short, aluminium profiles produce robust and stable constructions that are highly resilient and are resistant to dynamic loads. Profiles KH are advisable if electrical insulation is required, there is direct skin contact, or the weight and CO2 emissions need to be reduced.

**Length:** 2,671

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**Photos:** 3 (source: item)

**Caption 1:** item offers fully compatible Profiles KH and matching accessories as a metal-free alternative, in addition to classic aluminium profiles.

**Caption 2:** Profiles KH boast a Line 8 profile groove and can be easily screwed together using item fastening technology.

**Caption 3:** Profiles KH are made up of 70 percent wood. They are lighter than aluminium, conduct no electricity and virtually no heat, are easy to machine and are suitable for many areas of application.

**About item**

item Industrietechnik GmbH is the pioneer in building kit systems for industrial applications and a partner of the manufacturing industry across the entire globe. Today, the item product portfolio comprises more than 4,000 high-quality components designed for use in machine bases, work benches, automation solutions and lean production applications. The company has received a string of awards for products with ground-breaking industrial design and end-to-end ergonomics.

item is spearheading digital engineering by driving forward the digitalisation of processes with software tools developed in-house. The item Academy offers training at various levels with on-demand training and online courses available in multiple languages.

Headquartered in Solingen, Germany, item has subsidiaries in various countries. Some 900 employees worldwide harness their know-how and passion to develop innovative solutions and services. Twelve sites make sure the company is always close to customers in Germany, with a global logistics chain ensuring swift delivery times for all components.

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