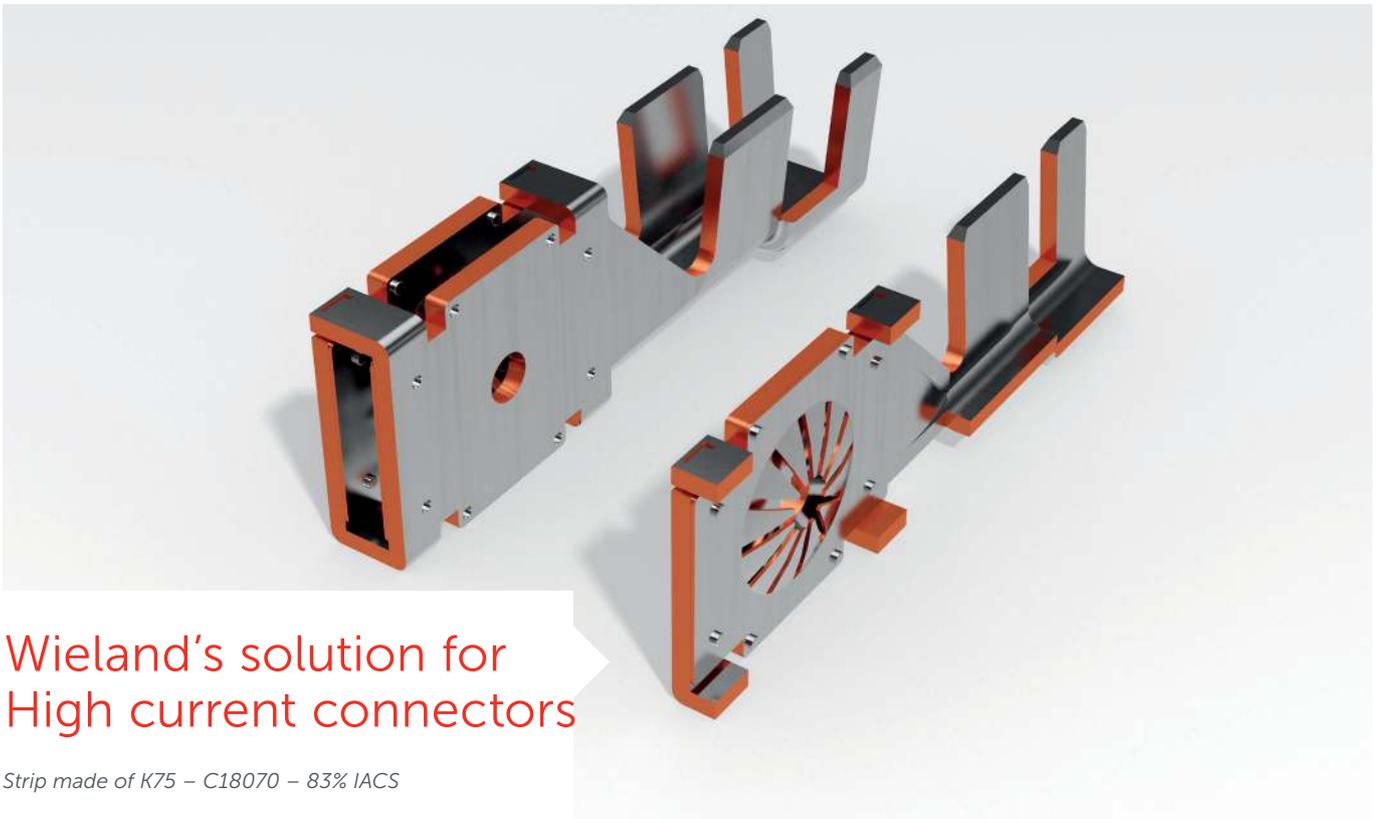


High-conductivity copper alloy strip for high-current connectors

Wieland K75 high-conductivity high-performance copper alloys



Wieland's solution for High current connectors

Strip made of K75 – C18070 – 83% IACS

Electrification of cars and the switch to electric vehicles require high currents to be processed inside a car. Thus, the connectors must be able to transmit high currents to and from power distributors and control units. They may only heat up slightly which requires a high conductivity of the base material. Their spring forces must be maintained, even if the working temperature exceeds 100° for a long period of time. In materials technology, this requirement is referred to as resistance to thermal relaxation. This combination of these properties can only be provided with particularly high-performance materials. Wieland's new development in this direction is the conductivity optimized high-performance copper alloy K75 (CuCrTiSi, C18070), which provides a minimum electric conductivity of 83% IACS at temper R460.

Optimized for transferring high currents

Electrification in automotive industry continuously steps forward and currents to be transferred increase. As a consequence the requirement to the connectors and their base material are also increased in terms of providing an even higher conductivity while maintaining the ability to apply high spring forces and withstand thermal relaxation.

This property combination is due to the ability of the material to form hardening precipitations inside the crystal lattice.

With this background Wieland chose the well-established high performance alloy K75, developed it further and finally launched a new version with enhanced conductivity of minimum 83% IACS on the market for this kind of application.

Reliable in tough conditions

The properties of the high-conductivity grades of K75 strip render it ideal for high current transferring connectors in automotive electronics as well as in Datacom and 5G. Advantages of K75 are good formability, high strength for high spring forces and its resistance against stress relaxation which allows service under elevated temperature up to 130 °C and even higher.



Wieland-K75 83% IACS Your benefits

- K75 conductivity-optimized version is characterized by excellent electric conductivity and reduced current induced heating.
- Additionally the material provides very high spring forces and resistance against thermal relaxation.
- The material offers very good forming capacity for producing even intricately shaped connectors.



High current transferring automotive connectors are candidates for the application of K75 conductivity-optimized version.

Do you want to learn more about Wieland K75 83% IACS?

Please join our website and use our Wieland-knowledge based program Alloywizard
[wieland-alloywizard.com](https://www.wieland-alloywizard.com)

Do you want to test Wieland K75 83% IACS in your production?

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