Amphenol

Amphenol-Tuchel Electronics GmbH

Radsok®
Automotive
High Power Connectors

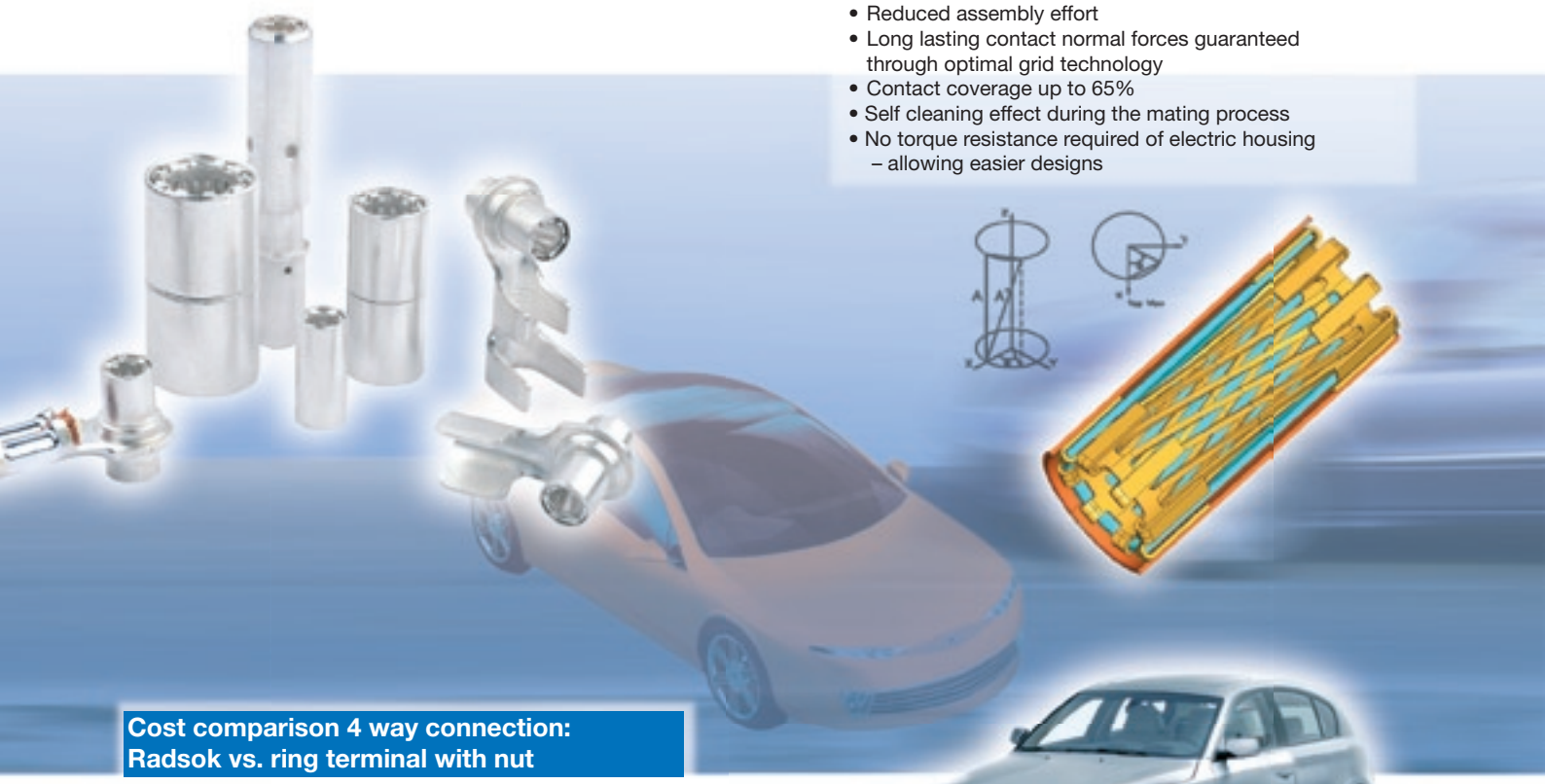
Amphenol Radsok®

The cost effective hyperbolic high power contact in stamp & form technology – perfect for automotive applications

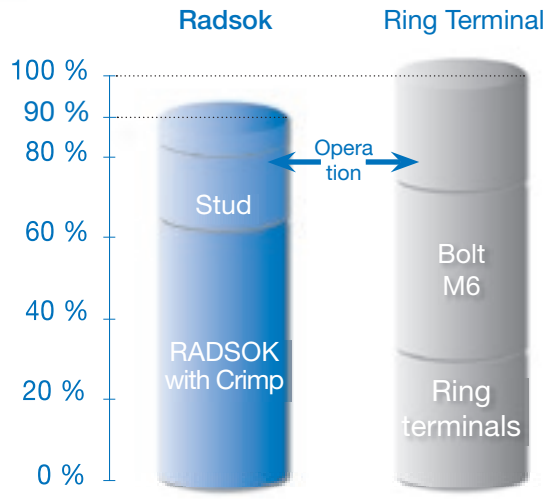
The increasing number of electrical and electronic components leads to an ever higher demand for electric power in the car, which exceeds the limits of conventional connector technologies. With Radsok® Amphenol offers a new generation of power contacts. The hyperbolic contact geometry offers many advantages, such as contact coverage of up to 65%, absorption of vibrations as well as a superior durability of the contact element. Amperage capacities above 300 A with a high number of mating cycles can be realized.

Radsok benefits at a glance

- Cost-effective production using stamp & form technology
- Fully automated production for full process capability
- Low insertion and extraction forces
- High number of mating cycles
- Reduced assembly effort
- Long lasting contact normal forces guaranteed through optimal grid technology
- Contact coverage up to 65%
- Self cleaning effect during the mating process
- No torque resistance required of electric housing – allowing easier designs



Cost comparison 4 way connection: Radsok vs. ring terminal with nut



A plus for Radsok®

- Blind mating by optimized self centering
- Easy to assemble without tools
- Less space required for mating
- Defined position after the mating process
- Connector systems available
- Waterproofed version optional
- Low risk of corrosion

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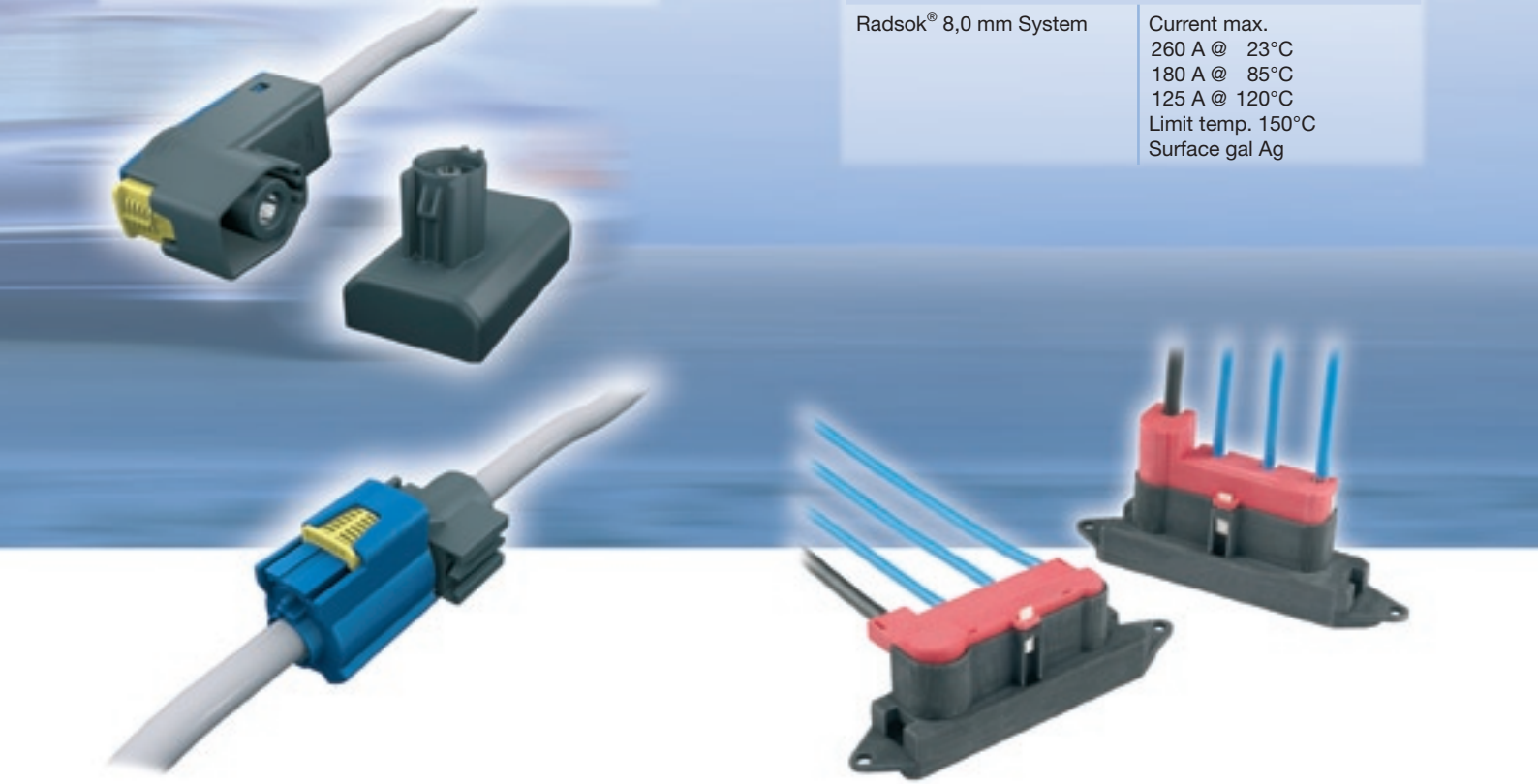
Product description

The Radsok-product family includes three contact sizes, further versions are under preparation Standard housings for ”wire to wire” as well as ”wire to board / lead-frame” connections are available. Many features such as TPA, CPA, water protection and coding are implemented in the housings and can also be adapted in customized solutions. Radsok connectors can also be mated to threaded studs. These connections show similar characteristics as those to even surfaced pins. This superior grid capacity allows using Radsok as a drop-in replacement without modification of the basic system.
Radsok – approved by vehicle manufactures and already used in mass production - is in accordance with all relevant automotive specifications.

Contact Sizes	Field of Application Ampere
Radsok® 3,6 mm System	Current max. 125 A @ 23°C 88 A @ 85°C 60 A @ 120°C Limit temp. 150°C Surface gal Ag
Radsok® 6,0 mm System	Current max. 160 A @ 23°C 110 A @ 85°C 75 A @ 120°C Limit temp. 150°C Surface gal Ag
Radsok® 8,0 mm System	Current max. 260 A @ 23°C 180 A @ 85°C 125 A @ 120°C Limit temp. 150°C Surface gal Ag



Applications

- Power distribution system
- Battery management systems
- Fuse boxes
- Battery charging systems
- PTC heating systems
- Air conditioning systems
- Cooling generator for trucks
- Pre-heaters for catalytic converters
- Electrical power steering
- Starter generator
- Super capacitors
- ...

Standard program / application-specific solutions

A standard range of contacts and housings is available from stock. In addition our engineers constantly develop more versions for specific automotive applications.

For the design of optimal connection solutions our development team benefits from an extensive knowledge base and the latest CAD and CAE capabilities. From initial concept through prototyping and industrialization all functional and process related criteria are considered in the development supported by simulations such as FEM or Mold Flow analysis. Rapid Prototyping and our in house tool shop can provide functioning samples and small series in the shortest possible time. Our own, well equipped laboratory provides all required test & analysis evaluations using elaborate test programs to assure 100% product reliability and total customer satisfaction.

Radsok® High Power Connectors – Test It!

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General information

We reserve the right to change the design due to improvement in quality, development or production requirements.

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