

bedra

SERIES-READY WIRE SOLUTIONS

FOR AUTOMOTIVE
MANUFACTURING

bedra
intelligent alloys

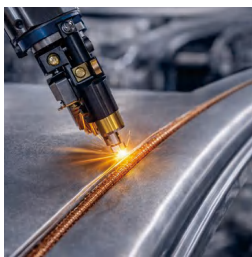
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Series-ready wire solutions for automotive manufacturing

From visible body-in-white seams and battery frames to automotive electrical and electronic production, bedra provides production-ready wire solutions for joining, winding, heating and contact-element applications. Customers benefit from reliable performance, application-specific expertise and strong technical support throughout the qualification process. Detailed datasheets, approvals and qualification support are available on request

Application overview



Body joining & brazing

Visible BIW seams and laser brazed joints on galvanised body structures.



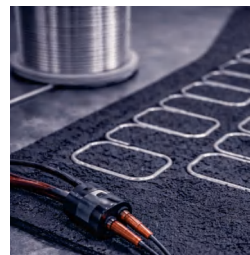
Structural aluminium welding

Battery trays, module frames and load-bearing aluminium joints in body structures.



Windings & E/E manufacturing

Winding-related applications in actuators, relays, pumps, valves and selected e-machine components.



Heating & contact element materials

Seat-heating elements plus precision wire/profile inputs for pin and contact-element manufacturing

Why bedra for automotive manufacturing

Series-production focus

- Tight tolerances and clean surfaces
- Stable feeding and pay-off behaviour
- Reduced process variation in automated lines

Materials & process breadth

- Body-joining fillers, magnet wire, resistance wire and precision wire/profile inputs
- Application-focused development from first review to qualification

Documentation & support

- Datasheets, approvals and agreed documentation on request
- Qualification support aligned with process and sourcing requirements

bedra at a glance

Since 1889

wire expertise and market-close development

Own foundry

customer-specific alloys and rapid response

Automotive scope

body joining and E/E manufacturing in one view

On request

datasheets, approvals and qualification support

Body joining & structural welding

Wire solutions for visible laser-brazed seams, aluminium battery frames and load-bearing structural joints in automotive body manufacturing.



BIW visible seams

Applications:

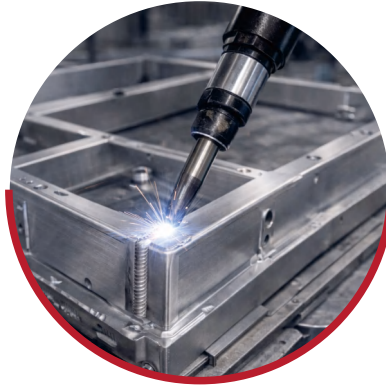
Laser brazing on galvanised panels, e.g. roof seams and other visible joints.

Typical solution:

bercoweld S3 (CuSi3Mn1)

Why it matters:

- Supports paintable seam appearance in visible areas
- Tight tolerances and low contamination help stabilise the process



Battery trays & module frames

Applications:

Aluminium MIG/TIG welding for battery trays, underbody frames and module frames.

Typical solution:

berAlweld 4047 (AlSi12)

Why it matters:

- High flowability supports robust bead formation at corners and profile joints
- Reduced hot-crack sensitivity and strong fillet-weld performance



Structural nodes & subframes

Applications:

Load-bearing structural joints, nodes and frame assemblies in aluminium body structures.

Typical solution:

berAlweld 5356 (AlMg5)

Why it matters:

- Established filler for structural aluminium joints in series production
- Stable feeding and repeatable weld quality support TCO

Applications & bedra solutions

- Applications: BIW laser brazing (visible seams) | battery trays and battery module frames | structural aluminium joints, nodes and subframes
- Core solutions: bercoweld S3 (CuSi3Mn1) | berAlweld 4047 (AlSi12) | berAlweld 5356 (AlMg5, selected TÜV documentation)
- Additional aluminium fillers on request: 4043 | 5087 | 5183
- What matters in production: tight tolerances, clean wire surfaces, stable feeding behaviour and reduced contamination
- Documentation & approvals: EN ISO / AWS references and selected TÜV documentation available on request

Automotive E/E manufacturing

Wire as functional material for winding, heating and contact-element manufacturing in automotive E/E applications.



Windings / magnet wire

Applications: Actuators, relays, pumps, valves and selected e-machine components.

Typical solution: Magnet wire / enamelled winding wire with custom enamel thickness.

Why it matters:

- Defined enamel build supports critical winding applications
- Stable spool behaviour helps repeatable series processing



Seat heating / resistance wire

Applications: Heating mats and related seat-heating elements in automotive interiors.

Typical solution: Resistance wires (bercotherm)

Why it matters:

- Designed for defined heat output
- Supports series-capable processing in heating-element production



Pins & contact elements

Applications: Input material for manufacturing pins and contact elements in automotive E/E modules.

Typical solution: Precision wire and profile input materials, e.g. square and flat formats.

Why it matters:

- Tight dimensional control supports downstream forming
- Clean surfaces help stable contact-element manufacturing

Applications & bedra solutions

- Applications: windings for actuators, relays, pumps, valves and selected e-machine components | seat-heating elements | pin and contact-element manufacturing
- Core solutions: magnet wire / enamelled winding wire | resistance wires (bercotherm) | precision wire/profile input materials
- What matters in production: defined insulation or enamel build, dimensional control where required, stable pay-off/feeding and clean surfaces
- Documentation & qualification: traceability, agreed documentation and qualification scope aligned with customer requirements

Why bedra for automotive manufacturing?

bedra combines material expertise, process stability and application-focused support for automotive body manufacturing and automotive E/E production.

Body joining & welding

- Tight tolerances and clean surfaces support repeatable brazing and welding results
- Stable feeding behaviour helps automated lines and reduces re-tuning
- Selected approvals and documentation are available on request

Automotive E/E manufacturing

- Defined insulation or enamel builds and stable payoff behaviour support winding and heating processes
- Precision wire and profile inputs support pin and contact-element manufacturing
- Traceability and agreed documentation can be aligned with customer requirements

Materials, surfaces & packaging

- Broad competence across body-joining fillers, magnet wire, resistance wire and precision profile inputs
- Production-oriented packaging supports reliable feeding and handling

Approvals & qualification

- Datasheets and product-specific documentation are available on request
- EN ISO / AWS references and selected TÜV documentation for relevant fillers
- Qualification support aligned with process and sourcing needs

Cross-portfolio competence

- One automotive manufacturing view across body joining, windings, heating and contact-element production
- Own foundry and market-close development for application-specific requirements

REQUEST DATASHEETS, APPROVALS AND APPLICATION SUPPORT

Let's review your body-joining or automotive E/E manufacturing application together.

Contact your bedra representative



Berkenhoff GmbH
(Kinzenbach plant)
Berkenhoffstraße 14
35452 Heuchelheim
Phone : +49 641 601 0
info@bedra.com

Berkenhoff GmbH
(Merkenbach plant)
Rehmühle 1
35745 Herborn
Phone : +49 2772 5002 0
info@bedra.com



www.bedra.com