

BIZON[®]

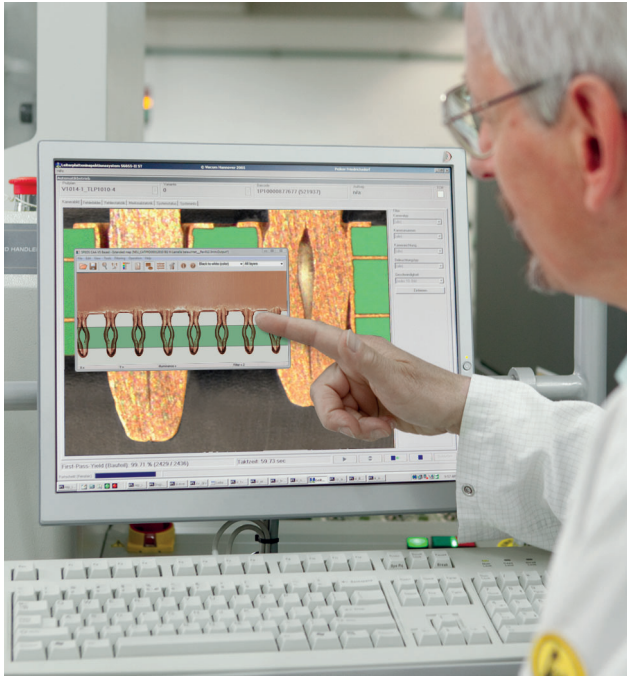
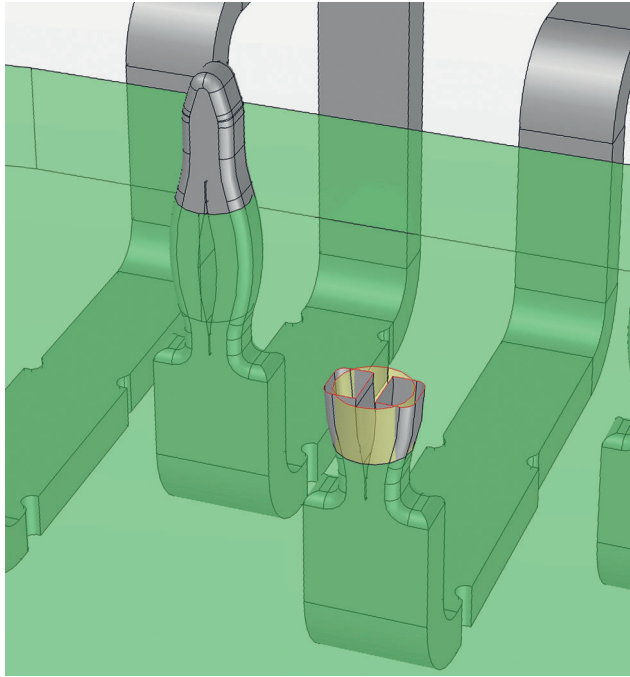
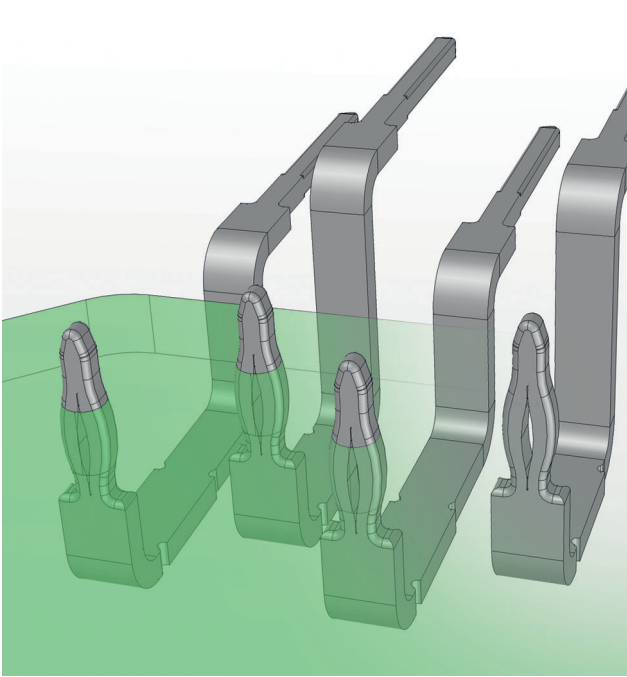
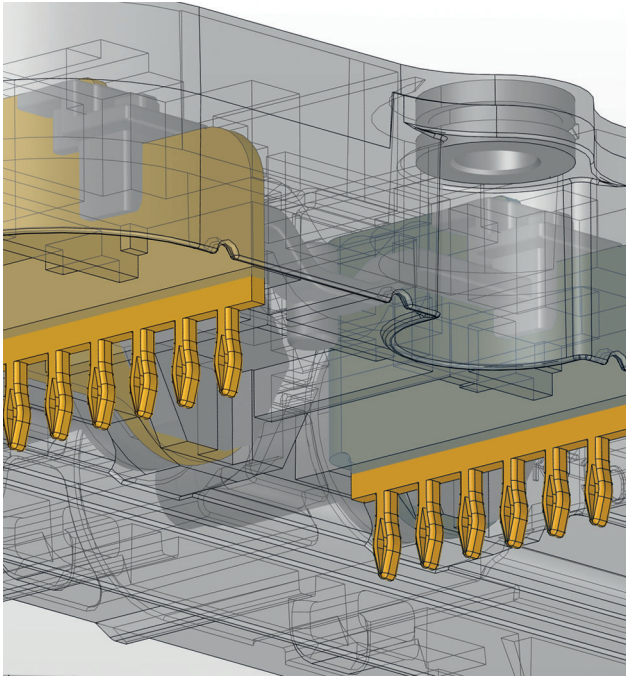
PRESS-FIT

- | Stamped contacts
- | Single pin insertion
- | Pin header
- | Overmolded plastic housings
- | High-current busbars



25 Jahre
seit 1993

bizon.alacsystems.de



BIZON® PRESS-FIT TECHNOLOGY

Smart, high-performance and reliable connection solution

ALACsystems offers an innovative solder-free connection technology with BIZON® press-fit technology for the requirements of the automotive supply industry and industrial electronics. The press-fit techniques are a solder-free electromechanical connecting method, with which elastic workable or solid pins are pressed into metal coated circuit board holes with the aid of a pressing tool. At the points of contact between the pressing area of the pins and to the metal coated hole in the wall, a permanent gas-tight connection is therefore formed. The important characteristic here is that the diagonal of the pin cross-section is greater than the diameter of the copper sleeve in the circuit board.

Construction-related freedom, free material selection, adaptable

The BIZON® Contact, as an elastic contact, offers the greatest possible cross-section in a circuit board hole with overriding contact characteristics. As a result, it is possible to handle several hundred ampere ranges with standard circuit boards. This has an important price advantage, particularly in the case of motor vehicle applications. The contact can be produced in every size and sheet-metal thickness, with free material selection. A unique feature is that, with the same production engineering, both a non-detachable press contact and a detachable plug contact can be manufactured.

Our automotive products for demanding applications

- **Stamped contacts** - overmolded or pressed in separately
- **Male Multipoint blade connectors** with circuit board plug connectors equipped with different pins - straight, bent, sealed
- **Circuit board plug connector** with different separations and different pole numbers
- **Overmolded housing/hybrid component parts** which offer special protection against e.g. liquids or gases
- **Pin header:** Pin contacts connected with a simple pin insulator
- **High-current busbars** for the power feed into the circuit board

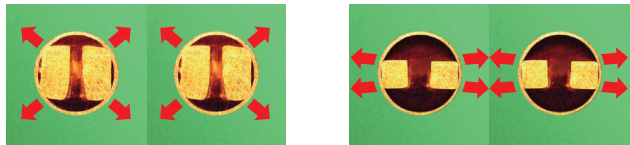
Advantages

- **Reliability** (up to 30 times more reliable than an SMT solder joint)
- **Space saving** and optimum use of construction space
- **Economic advantages** in working process
- **Simplification** in processing
- **Material compatibility:** Compatibility with automotive specifications (e.g. IMDS, RoHS)

Electrical and mechanical characteristics

- **High current-carrying capacity** with minimum space Requirement
- **Four contact points** through square Cross-section
- **Sheet thickness** from 0.2 mm to 2 mm possible
- **Low pressing force**
- **High retention forces** through cold welding
- **Dismantling** possible by mechanical squeezing

Force distribution and directing into the circuit board



<i>BIZON</i>	<i>Competition</i>
Four symmetrically-distributed contact surfaces, far apart from each other and defined, mean proper contact pressure	
Four similar radial contact forces result in good self-centring and symmetrical support - the contact adapts to the hole	
No torque, no tangential movement and no bending in case of minimum hole	
Surface force distribution means no summing and no expansion of the circuit board	
Therefore no hazard exists for SMD elements nearby	

Sheet(strip) thickness and hole table

Sheet thickness	Pin dimensions	Finished hole PCB	Smallest stamping pitch
0.2	0.2 x 0.24	0.3 - 0.38	0.81
0.4	0.4 x 0.5	0.55 - 0.65	1.3
0.6	0.6 x 0.6	0.8 - 0.9	1.2
0.64	0.64 x 0.64	0.9 - 1.0	1.3
0.64 ⁽¹⁾	0.64 x 0.8	1.0 - 1.1	1.45
0.8	0.8 x 0.8	1.05 - 1.15	1.6
0.8 ⁽¹⁾	0.8 x 1.2	1.40 - 1.55	2.0
1.2	1.2 x 1.2	1.52 - 1.67	2.4
1.2 ⁽¹⁾	1.2 x 1.5	1.9 - 2.05	2.7
1.5	1.5 x 1.5	1.9 - 2.05	3.0
2.0	2.0 x 2.0	2.7	4.0

Qualification

In the phase of product development, we specify the significant influence parameters such as basic material, press-in zone geometry and surface coating, and then monitor these in the series. We advise and support our customers right from the beginning throughout the entire project phase. In the test laboratory, significant characteristic values according to DIN EN 60352-5 can be tested and validated. The inspection and measuring equipment required for that is available. Test circuit boards, or on request also your series circuit boards, are used for the test.

Visual and dimension inspection
Press-in and press-out force
Microsection setting and assessment
Forward resistance
Rapid temperature cycling (temperature shock)
Air-conditioning sequence (dry heat, refrigeration & moist, cyclical heat)
Whisker test
Etching techniques



RoHS compliant **IMDS** **DIN EN IEC 60352-5**
Hella Standard, Siemens Standard, ZF Standard

All dimensions in millimetres
1) The contact is adapted to historically standard, larger hole diameters.

YOUR RELIABLE
PARTNER FOR
DEVELOPMENT AND
MANUFACTURING

- | Electronic Components
- | Interior Lighting Systems
- | Customized Connectors
- | Wire Harnesses
- | BIZON® - Press-Fit



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