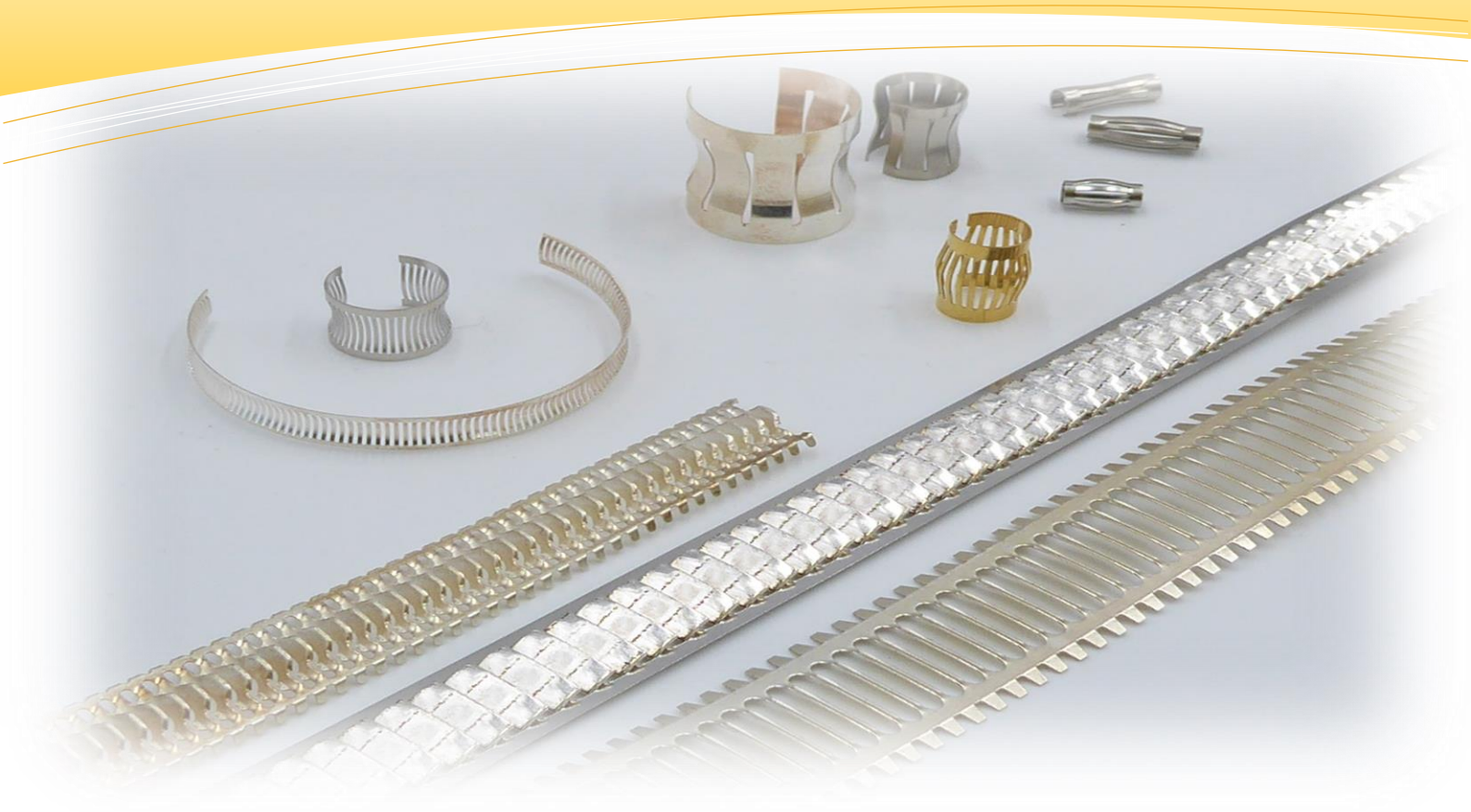
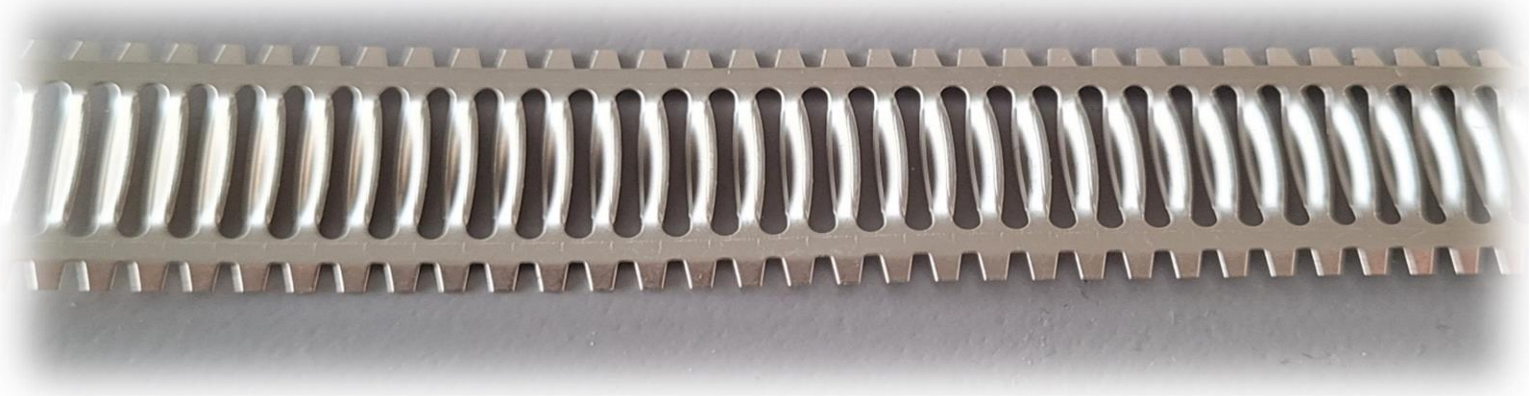
ACA Atlas Contacte GmbH



Data sheet Drehfederkontaktband 17,5 mm



DQS-zertifiziert nach
DIN EN ISO 9001
NR. 68040-01

Atlas Contacte GmbH
Wallbacher Straße 5
D-79664 Wehr
info@atlas-contacte.de



Product description:

The ACA torsion spring contact strip 17.5 mm is a proven solution for demanding high-current contacts. It is characterized by its robust and functional design, which enables effective transmission of high currents. Thanks to self-cleaning during mating, this contact strip makes safe and reliable contact even in adverse environments. The high current carrying capacity and low contact resistance result from the principle of multiple contact points.

Application:

The 17.5 mm torsion spring contact strip is ideal for applications that require high currents and at the same time demand a long service life and reliability. It is ideal for

- Electric vehicles
- Industrial applications (e.g. drive technology, robots)
- Energy transmission systems
- Charging infrastructure for electric vehicles
- High-performance battery systems
- Contacting in galvanic systems
- Industrial connectors

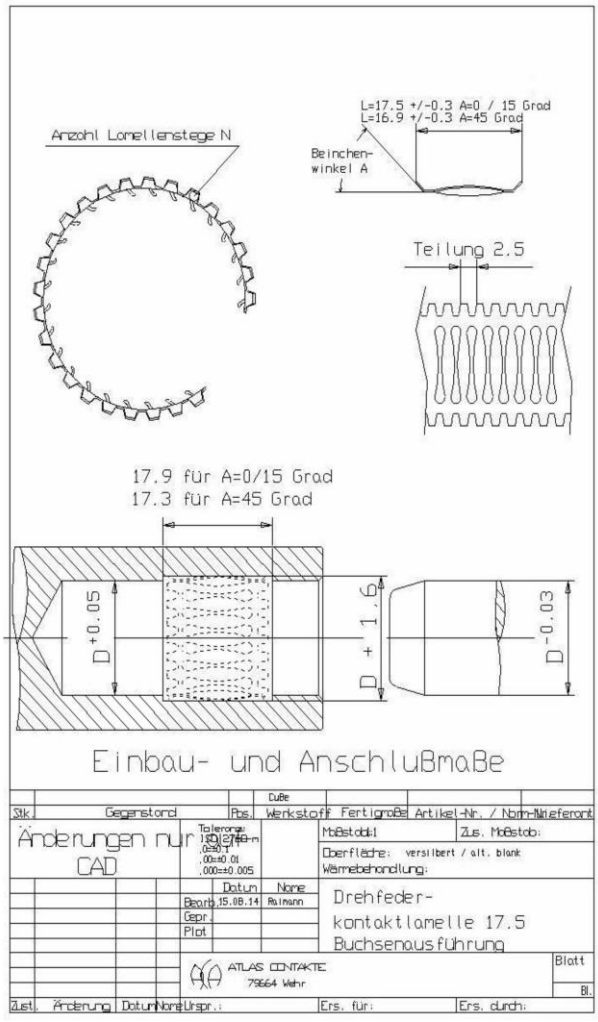
Advantages:

- Economical design and low assembly costs.
- High current transmission: Reliable performance at high currents.
- Flexibility: Ideal for harsh environments and vibrations.
- Robustness: High resistance to mechanical stress and environmental influences.
- Temperature range -40 °C to +180 °C
- High short-circuit current resistance
- Customized adaptations possible

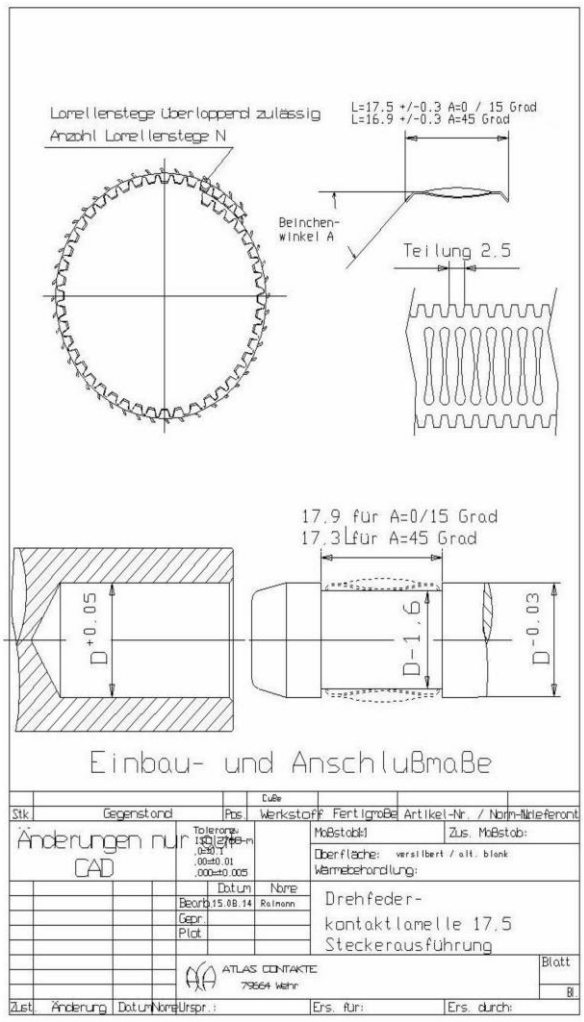
Atlas Contacte GmbH
Wallbacher Straße 5
D-79664 Wehr
info@atlas-contacte.de

Structure:

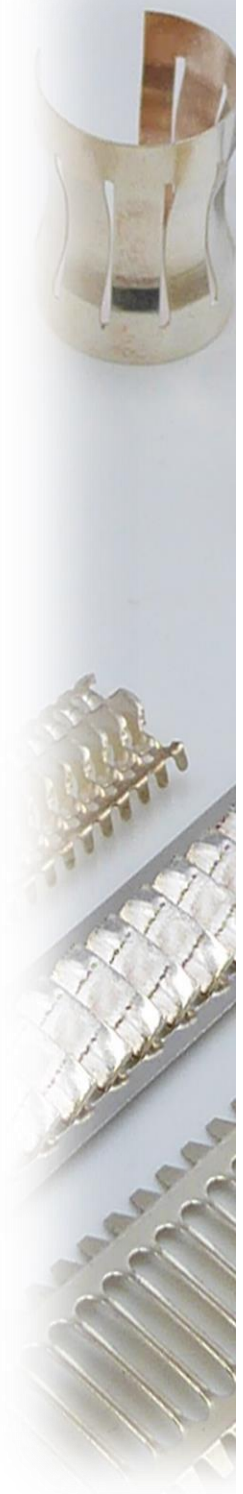
The ACA torsion spring contact strip 17.5 mm is manufactured from high-quality copper beryllium using a stamping and bending process. The contact strip is hardened and silver-plated to achieve the required mechanical and electrical properties. Dimensions according to the drawing.



Drehfederkontaktband 17,5:
Contact element for mounting in the socket.



Drehfederkontaktband 17,5:
Contact element for mounting on the pin.

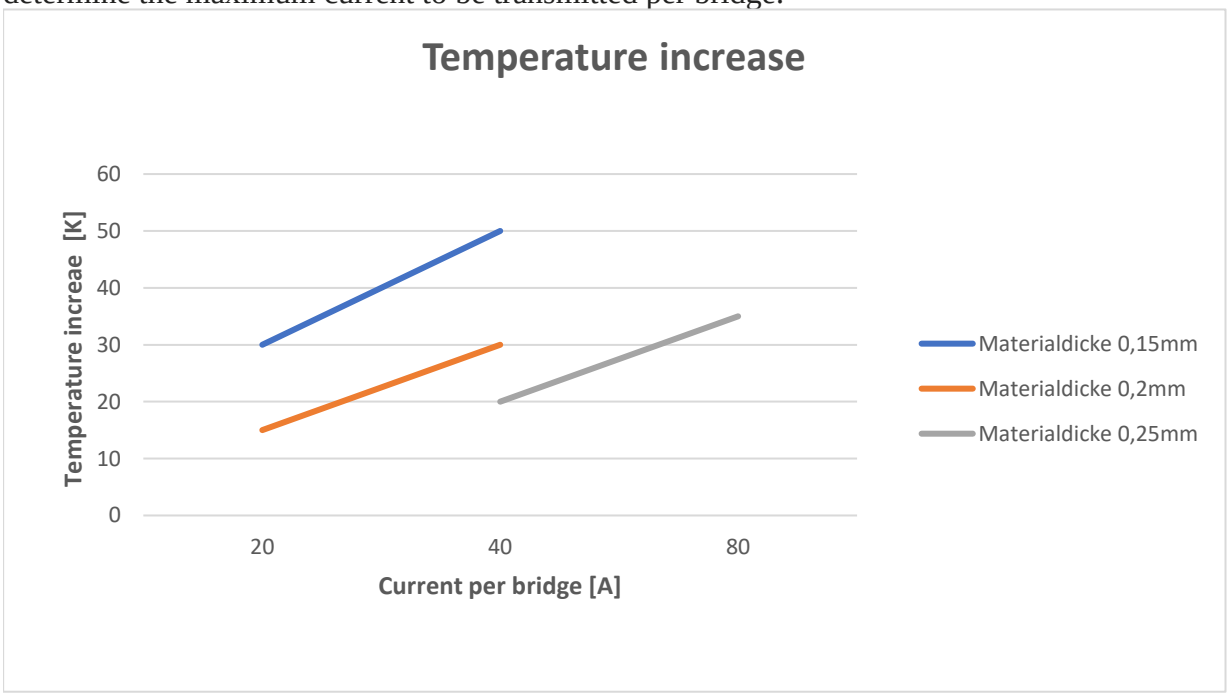


Atlas Contacte GmbH
Wallbacher Straße 5
D-79664 Wehr
info@atlas-contacte.de

Electrical characteristics:

Current carrying capacity

The expected temperature increase of your application can be seen in the diagram. Depending on the operating temperature and the maximum permissible temperature of your application, you can determine the maximum current to be transmitted per bridge.



The permissible continuous current of your application is calculated as follows

$I_{max} = n \times I_{Bridge}$ n= Number of contact bridges in your application.

Note: The current carrying capacity was determined under ideal conditions. Silver-plated copper mating contacts. Sufficiently large sized cables must be connected in accordance with the technical regulations. If silver-plated brass mating contacts are used, the values must be multiplied by a factor of 0.6.

Verifying measurements in your application are required

Atlas Contacte GmbH
Wallbacher Straße 5
D-79664 Wehr
info@atlas-contacte.de



Electrical resistance:

The electrical resistance Rbridge in mΩ per bridge is:

Material thickness 0,15mm: 0,55 mΩ per Bridge
Material thickness 0,2mm: 0,40 mΩ per Bridge
Material thickness 0,25mm: 0,30 mΩ per Bridge

Due to the parallel connection of the individual contact bridges, the total resistance of the contact arrangement is calculated as follows

$R_{Ges} = R_{Brücke} / n$ n= Number of contact bridges in your application.

Note: The stated values apply to counter contacts made of silver-plated copper. If silver-plated brass contacts are used, the resistance is 40% higher.

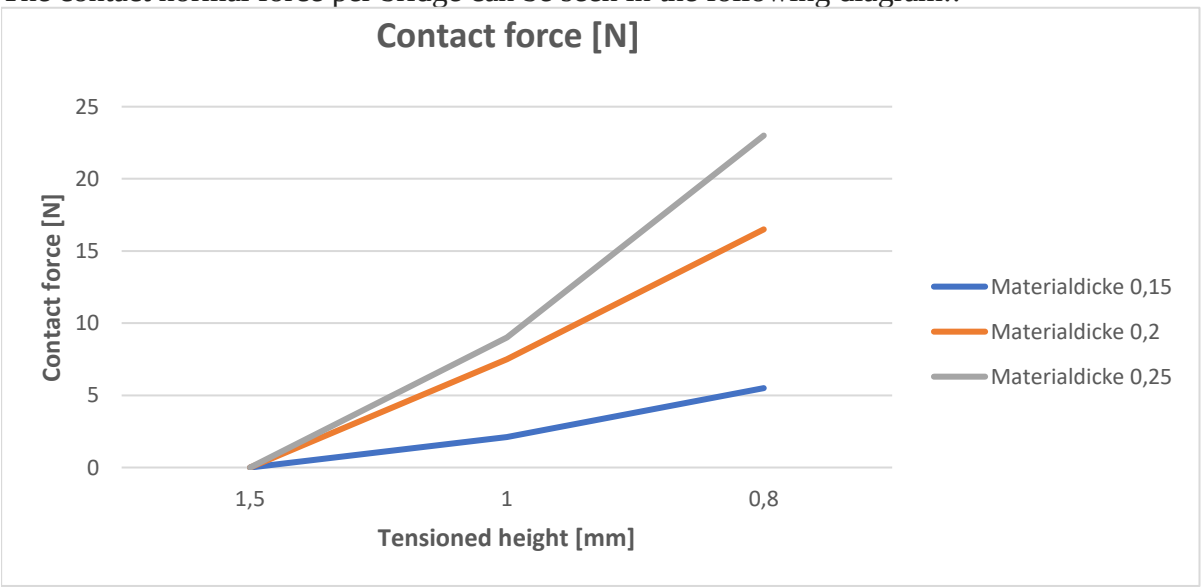
Measurements in your application are required



Mechanical characteristics:

Contact force:

The contact normal force per bridge can be seen in the following diagram:.

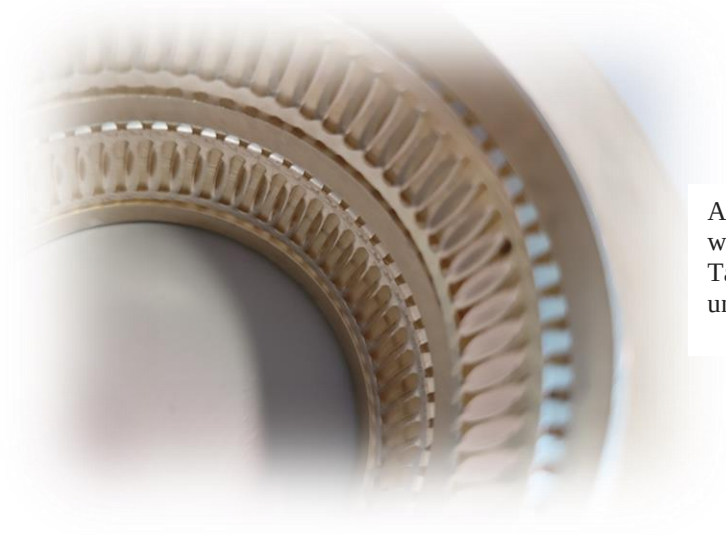


Atlas Contacte GmbH
Wallbacher Straße 5
D-79664 Wehr
info@atlas-contacte.de

Delivery form, assembly and installation:

Ideally, the 17.5 mm torsion spring contact strip is supplied as a pre-rounded contact part ready for installation or as a strip section customised to your application.

When used in round contacts, the high-current contact strip is preferably mounted in the socket. It is inserted into a machined groove and held there under its own preload. It is possible to deviate from the recommended installation dimensions in order to achieve the desired product-specific characteristics.



ACA torsion spring contact strip 17.5 mm with parallel design as round contact. Tape inserted in turned grooves. Holds under its own pretension



Large dimensions or flat contact arrangements require special mounting methods. Please enquire about this.

ACA Atlas Contacte GmbH

30 Jahre Fertigung hochwertiger Elektrokontakte

Atlas Contacte GmbH
Wallbacher Straße 5
D-79664 Wehr
info@atlas-contacte.de