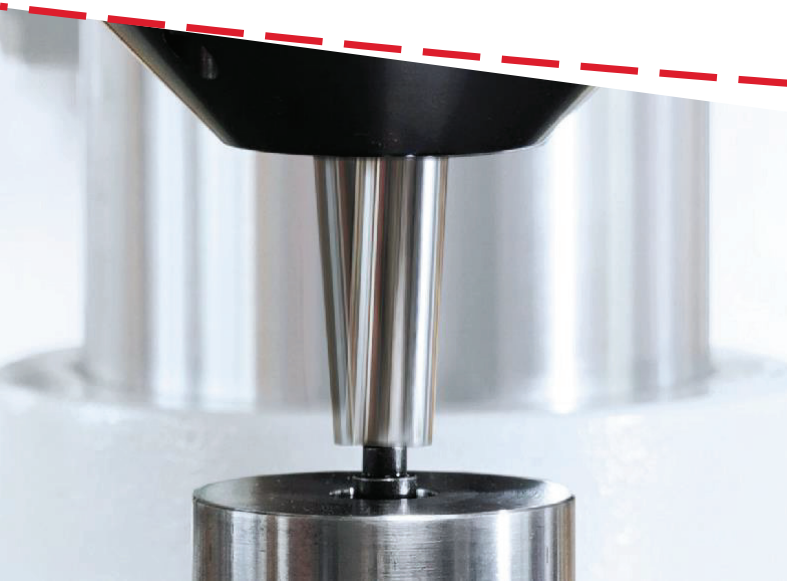


# Riveting Machines Assembly Systems



Riveting Technology Pioneers

# Joints with method and expertise ...



## Radial point riveting

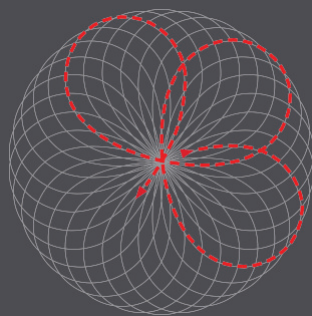
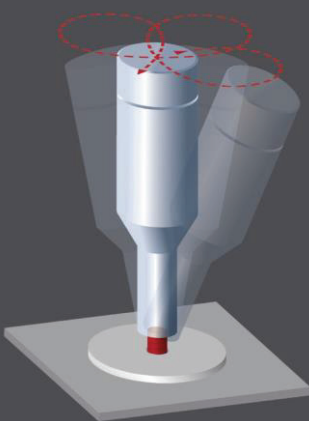
The riveting die depicts a hypocycloid movement. It permanently alternates between vertical position and maximum deflection angle. The resulting point contact compresses the riveting material in its depth and forms it into a stable snap head from the inside out.

**Applications:** Solid rivets, non-round rivets, small peeled rivets.

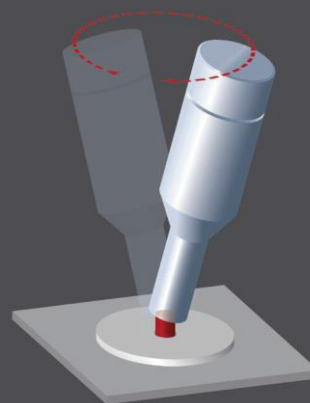
## Orbital riveting (GBA)

The riveting die is driven by a circular movement and thus rotates with a constant setting angle. The churned material deformation caused by this process requires excellent parts fixing.

**Applications:** Hollow rivets, flares and large peeled rivets.

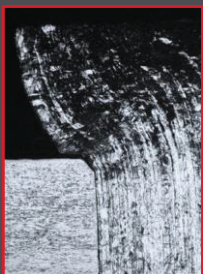


View from the top



View from the top

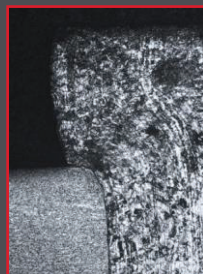
## Change in material structure in different riveting processes



Radial point riveting



Orbital riveting (GBA)



Compressed rivets

When comparing micrographs it can be seen that the joint structure of the material remains largely intact in the radial point riveting process.

Due to the lower force requirement compared to orbital riveting or compression riveting, the material is gently

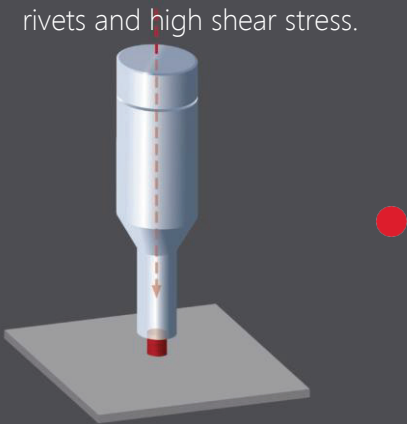




## Compressed rivets

The deformation does not entail a rotational movement. Due to a high axial force, the part hole is well filled and a large bearing pressure is generated also at depth.

**Applications:** Riveting with solid rivets and high shear stress.



View from the top

## Joining

Axial force is also used to precisely insert two components into each other. This ensures that both the bearing

## Roll-forming

Roll-forming heads are used to roll bearings into housings and meet special requirements in terms of strength, tightness and freedom from chips.

The material is deformed by several roll-overs. Depending on the application, axial and/or radial deformation processes are combined carefully without chips.

**Applications:** Fixing of bearings/ fixtures in housings, constriction of pipes.

## Bushings

In this process, plain bearing bushes are inserted and flanged by axial force. The bushings can be flanged in one or several passes, depending on the characteristics and requirements.

In order to achieve high, consistent quality and uniform torque progression of the finished bearings, the bushing is finally calibrated in diameter and height.

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