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## Cold Forged Parts

SHENGFA Hardware is a supplier and manufacturer of metal parts and components who can provide full solution of forgings in Ningbo China. Cold Forged Parts are especially recommended for long production series and low weight parts. SHENGFA uses the latest technique available in this industry and is one of the Chinese specialists in this process. Forging process is carried out at room temperature, without the use of energy in any other form. The metal is strengthened so that subsequent heat treatments can often be done away with.

### How is the Cold Forged Parts Produced?

Cold forging is a manufacturing process that deforms a metal material in desire shapes at room temperature by applying very high pressure at room temperature or below the metal's austenite temperature. Depending on the requirements of the parts design, the workpiece may pass through multiple dies or be struck several times in succession to achieve the final shape. The benefits of this process: components or parts are resistant to high temperatures and acids, are recyclable, their weight continues to decrease, and energy and material efficiency are high.

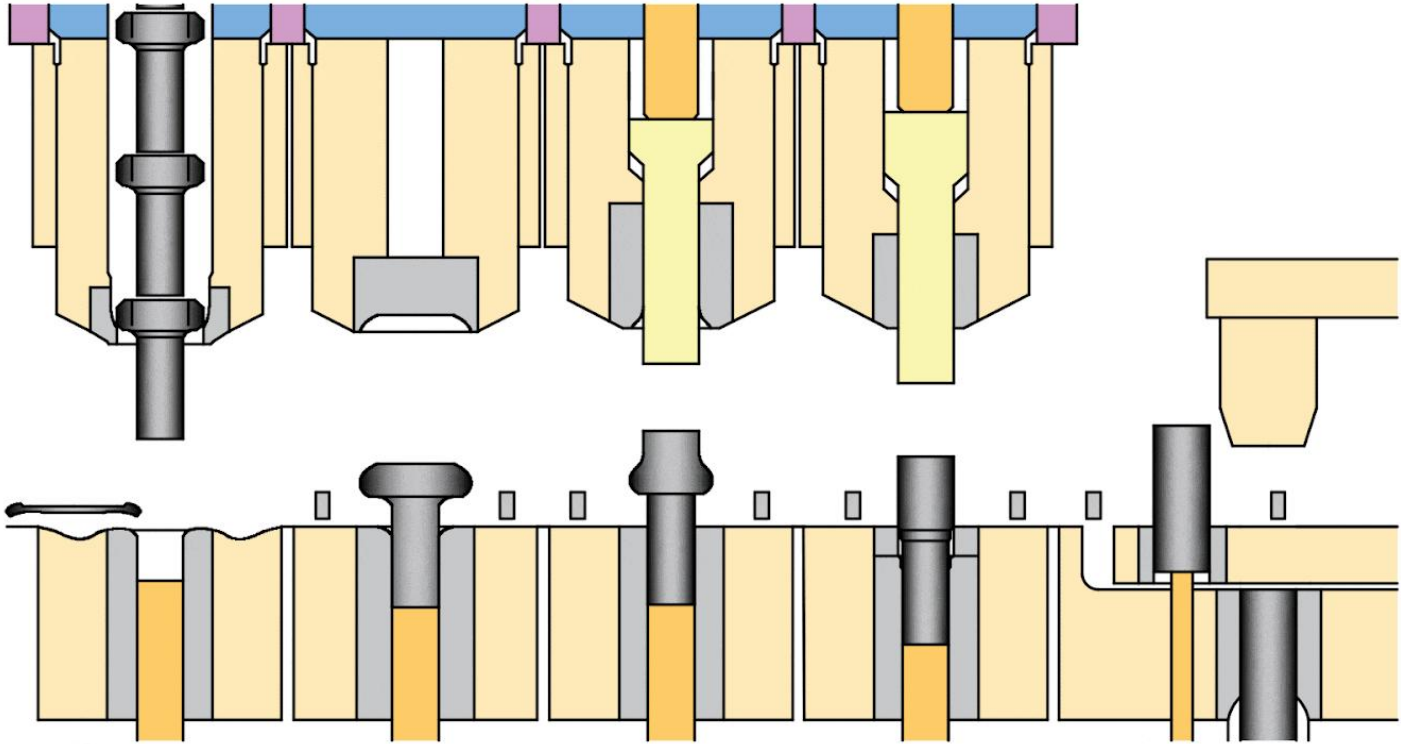
Below you can see how the Cold Forged Parts are produced.



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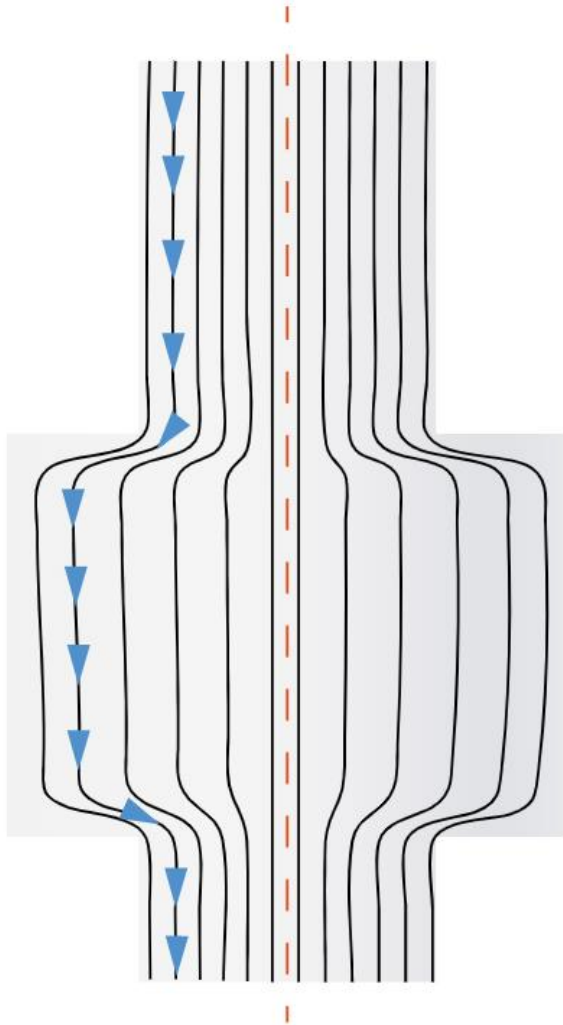
## Cold Forged Products





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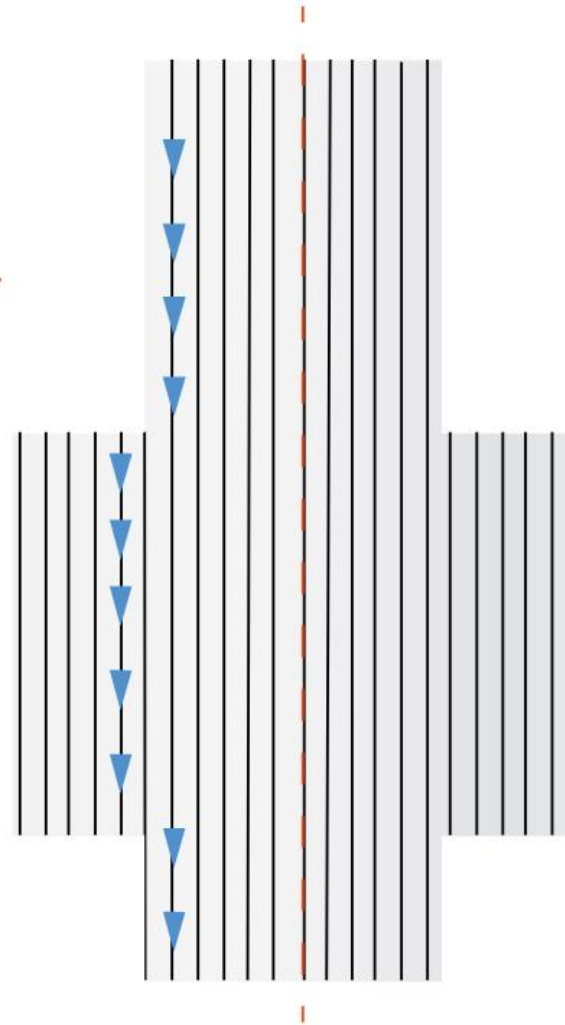
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### Cold Forging

Fiber flow is following the shape of the components

**HIGH PERFORMANCE**



### Cutting

Fiber flow is cut during machining operations

**WEAK PERFORMANCE**

The internal structure of the metal is organized in fibers. This "fibration" is the result of the tightening and reorientation of the crystals during the working (plastic deformation) of a metal part. The control of the orientation of these fibers makes it possible to obtain very high mechanical characteristics. Cold forging allows perfect control of the fiber pattern adapted to the geometry of the part and oriented according to the mechanical constraints of use. Unlike bar machining, the fibers are not cut. As a result, Cold Forged Parts, benefiting from optimal fatigue life, are suitable used in the most critical applications.

Advantages of Cold Forged Parts:



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Near net shape & Improved mechanical properties Possible less use of less costly material Good Mechanical/ Physical Properties Good surface finish, scale free surfaces and durability Consistent and more precise tolerances and better grain structure