



SCHNEIDER
COLD FORGING

www.schneider-umformen.de



General Management:
 Jens Siegle (MD)
 Dr. Jens Neumeyer (MD)
 Anja Schneider (procuration)

Meeting challenges is our speciality

We at Walter Schneider GmbH know exactly what our feel-good weight is. Anywhere between 2 and 250 grams: This is the weight range in which we develop and produce high-grade cold forged parts. As a flexible and creative problem solver, we break away from well-trodden routes to explore new avenues for helping our discerning customers achieve efficient cold mass forming results.

Asymmetric geometries? Unusual functionality? Non-standard materials? Decades of research and a diverse range of facilities and materials have made us ideally prepared to face all kinds of challenges at Walter Schneider. Why not put us to the test?

The General Management of Walter Schneider GmbH

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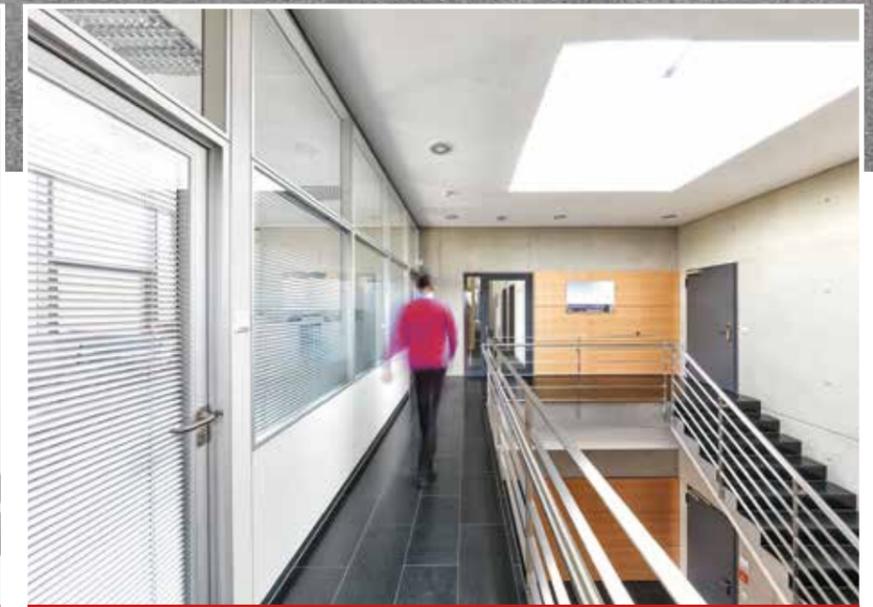


A highly innovative and **reliable partner**



Not only are they highly economical, precise and easily reproducible, they also provide impressively high strength values and smooth surface finishes ... To name only a few of the benefits of cold forged parts. And the list gets even longer if the cold forging process is performed by us at Walter Schneider. Because every cold forged part which leaves our production line is not only exhaustively quality tested, it also complies 100% to the customer's specifications. Despite the fact our orders come from fields as diverse as automotive industry, the furniture industry or the textile sector.

Components bearing the Walter Schneider brand are used not only across industry, but around the world too. We supply renowned companies from around the globe: as an innovative and reliable partner, Walter Schneider has gained a name as constant presence in the field of cold mass forming over many years. The success story of this traditional family firm stretches back to 1954. Our company location between Karlsruhe and Stuttgart now employs a workforce of around 100 highly qualified employees, and the tendency is rising. Day in, day out, they produce the precision and quality for which Walter Schneider is known and which provide the assurance of a sharp competitive edge for our customers.



Down to the **perfect end geometry**

The forming process used for cold mass forming starts at room temperature. The tool is not actively heated and the temperature of the material remains below the recrystallization temperature. The solid blanks – normally produced by shearing off, sawing off or punching – are placed under such high pressure that the material begins to flow and assume the required shape.

Whether billets, plug plates, blanks or wire rings: We at Walter Schneider produce cold forged parts from a whole range of different starting materials. Not only precisely to customer specification but also with the greatest possible efficiency. Because we have a sound command of all commonly used methods and possible combinations, with multi-step forming to create the perfect end geometry as one of our focal specialities.

Alongside compression, upsetting, stamping and tapering, forging is among the core processes used in the field of cold mass forming. All these methods are classified according to DIN 8583 under the umbrella of forming under compressive conditions.



Cold mass forming is superior in many ways to methods such as machining, pressure die casting, deep drawing, stamping or bending.

Cold forging variants

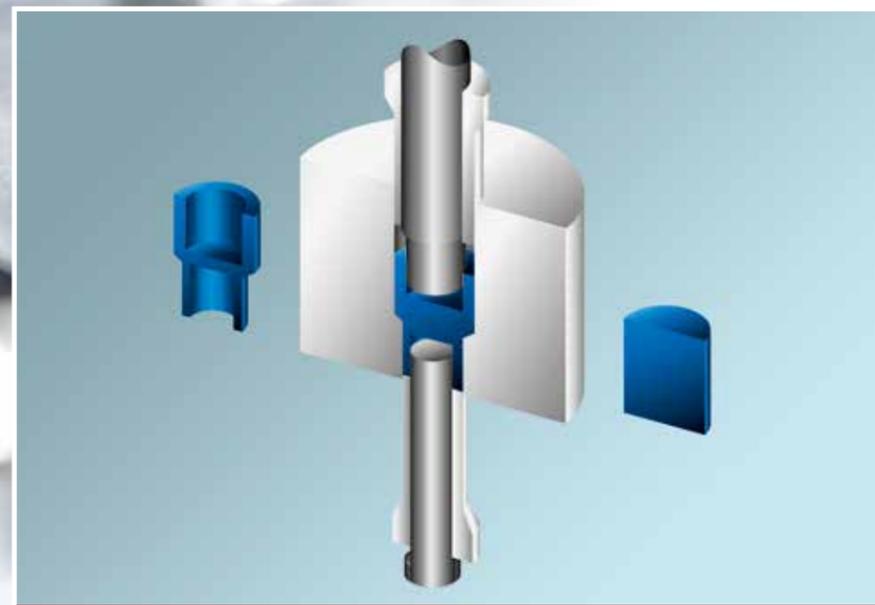
- ▶ Reverse / two-sided can extrusion
- ▶ Full forward / full forward reverse can extrusion
- ▶ Hollow forward reverse can extrusion
- ▶ Transverse cold forging

Economic benefits

- ▶ Short production times
- ▶ Material savings
- ▶ Energy savings
- ▶ Environmentally friendly

Technical benefits

- ▶ Optimum fibre flow for withstanding loads
- ▶ Strain hardening of the material
- ▶ Smooth, scale-free surface with very good roughness values
- ▶ High dimensional and form accuracy



Development and production **expertise**

We make the complicated achievable, with expertise spanning the entire process chain. From the first design through to the ready-to-mount component: Bringing Walter Schneider on board means benefiting from comprehensive expertise, an extreme vertical depth of production and smooth, trouble-free processes.



Design

Stage plans from Walter Schneider enable economical production. Our decades of experience mean that we take all the framework conditions into account to achieve an efficient, practically rework-free production result using optimized forming steps. We produce all the designs for our press step sequences in-house. The design drawings form the basis for tool production in our own toolmaking department.



Toolmaking

Our toolmaking department is the operational nerve centre of the company. Whatever our designers specify is implemented by our skilled specialist team: Milling, profile grinding, cylindrical grinding... These and other machining steps allow the creation of complex precision tools – with a vertical production depth of almost 100%, to the very highest standards of durability and dimensional accuracy. Because only with the optimum combination of materials and the right hardness achieved by applying coatings that all the economic benefits of cold forging are fully brought to bear.



Pressing plant

The pressing plant is the central core of the company. Whether production tests, sample or mass production – Walter Schneider offers an extensive array of production possibilities. From tool trials to series production, our designers prove their efficiency day to day in close and proven cooperation with the toolmaking department and the pressing plant.

Our presses with pressing forces of between 80 and 630 tons are manned by our experienced machine operators. Their extreme care and precision result in top-quality products for individual mounting situations.



Part cleaning

We are ideally placed at Walter Schneider when it comes to part cleaning too. For a wide range of materials such as stainless steel, aluminium or copper, our service ensures precisely the cleaning results our discerning customers expect.



Reworking / Finish

Our modern machine fleet – including robotics and assembly lines – allows us to offer our customers not only cold forging technology but also a broad spectrum of reworking options. If other machining steps than pressing technology are required to produce the desired finish, we can execute the following range of machining processes: Deburring, drilling, turning, milling, thread tapping, sawing and grinding. The result are top-quality ready-to-install components – in a wide range of different shapes and tolerances.

At work across wide-ranging industries



They are an indispensable element in practically every kind of industrial production: Cold forged parts such as bolts, sleeves or gear shaft blanks. These are also used inside electronic and mechanical products, for instance. The automation of cold forging has meant that they can be cheaply and efficiently produced. Cold forged parts from Walter Schneider brand also score due to their extreme dimensional accuracy and surface quality, and are in high demand across a wide range of industries: Including the automotive sector, the fittings and connectors industry, handling and electrical engineering, mechanical engineering, the food and animal feedstuffs industry ... As awareness for the versatile benefits of cold forging continues to grow, cold forged parts are helping bring about improvements for ever more companies and sectors.



Fittings and furniture industry



Electrical industry



Plant and machine engineering



Automotive

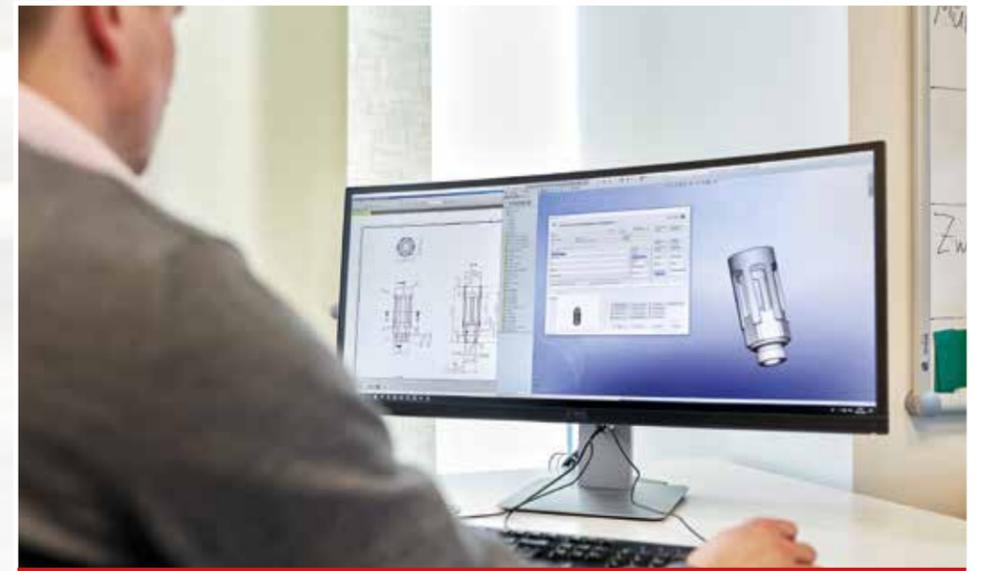


Food and animal feedstuffs industry



Pneumatics

Committed and **well trained**



Our dedicated workforce is one decisive reason why high-quality, innovative cold forged parts from Walter Schneider are at work around the world and are appreciated by renowned companies across different industries. Our employees are highly skilled and trained, and work with the utmost commitment, precision and reliability.

To maintain this high level of quality and innovation, at Walter Schneider we have traditionally paid special attention to fostering the next generation. Motivated youngsters can take a first step into a successful career by joining us – becoming part of a modern family firm which offers a friendly and open work climate, interesting customers and challenges.

Flawless quality, exceptional diversity

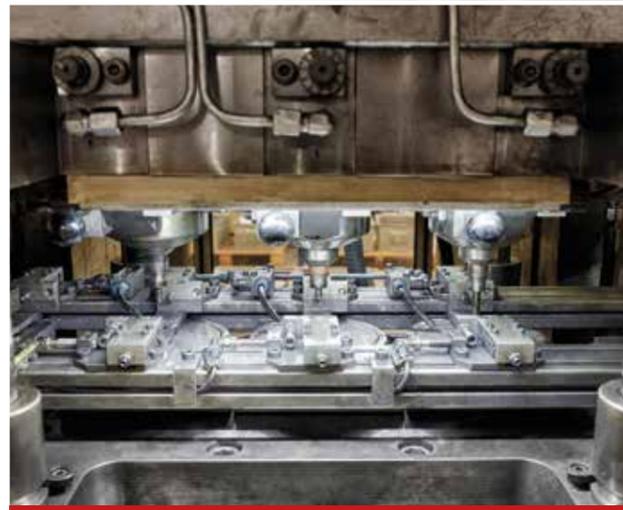
Our enormous depth of production means that we are extremely flexible. And it provides the guarantee of flawless quality. This exceptional depth of production coupled with our deep-seated expertise allows us to offer a broad spectrum of plant and material technologies. Alongside a wide range of machine types including vertical presses, Walter Schneider has its own toolmaking department and extensive expertise in working with non-standard material such as stainless steel or nickel. All of which allows us to support and advise our customers right from the very start of the process, ideally as soon as the development phase.

Geometry, material, machining steps – our designers know how to lay the groundwork for optimized component manufacture – sometimes with solutions that may seem surprising. In terms of material consumption, production cost, quality and also functionality.

It goes without saying that our company is certified to IATF 16949 as well as ISO 9001, and since 2011 also in line with the ISO 14001 environmental standard.



Analytical and advisory competence – the basis for optimum processes and efficient results



Flexibility – we possess the expertise and creativity to take new and totally individual directions



Depth of production – our large machine fleet and our own toolmaking department enable us to respond rapidly and provide the assurance of top quality



Material diversity – iron, stainless steel, Fe-Ni alloys, pure iron, copper, copper alloys, aluminium, aluminium alloys – we offer a wide range of options and filter out the ideal materials



www.werboffice.de

Walter Schneider GmbH

Raiffeisenstr. 28
75196 Remchingen
GERMANY

-  +49 (0) 7232 - 31998-0
-  +49 (0) 7232 - 31998-98
-  info@schneider-umformen.de
-  www.schneider-umformen.de

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