



**Industry 4.0 – Steel digital**



## Steel Service Krefeld – The changing industry

Steel Service Krefeld GmbH is an exciting example of medium-sized companies which have digitalized its entire logistics. The model of success bases on online sales of steel products to industrial clients.

Additionally purchase order management and inventory management have been fully digitalized by the use of industrial tablets and ring scanners. All relevant information from ingoing material up to commissioning are handled digitally – Augmented Reality is in place and shortens work processes. After data acquisition of every product after arrival from the mill the product is real time available for sale at the online shop.

Jürgen Beesen is Managing Director of the company. At that time he could not imagine how successful selling steel products online could be for his company. Digitalization has realized double-digit growth for the company in recent years. Decisive competitive advantages were achieved, especially by speed at the order processing, sales and logistics. These benefits are shared with the customers.

Additionally the entire company works paperless. This creates additional speed and supports the necessity to protect our environment wherever possible. Digitalization shapes the future.



## Best Practice digitization

Digitalization, Industry. 4.0 and Smart Production. These keywords are on everyone`s mind for some time now. But how do fit these buzzwords into business practice and what solutions make sense?

Innovation Partners Niederrhein (Lower Rhine Area) gives an idea about it by showing best practice examples in the Lower Rhine Area. These companies have digitalized successfully and are ready to face the challenges of tomorrow.





## Precision Ground Flats + P-Plates + EDM-Blocks

The agile partner for steel distributors: SSK delivers precision ground flats for the machine building and tooling industry as well as for mold making and fixture construction out of three large warehouses. Guarantor for instant delivery of all orders are our „intelligent“ warehouse management systems and lean order processing.

Rely on it: we keep a wide number of different steel grades and standard sizes on stock which you may keep in hands within just one working day only (depending on the area you are based at).

Based on standard sizes we are also able to produce every individual length size for your sales. So you are able to extend your delivery program – cost saving and with any additional effort. P-Plates and EDM-blocks complete your portfolio of near the finish shape and ready-to-install products.

Thanks to SSK-contract logistics we are able to offer even more service, higher speed and flexibility. We deliver goods with your delivery notes and papers directly to your end users. This shortens delivery times and minimizes your logistical and administrative work.

You will find our entire delivery program at [www.stahl-shop.com](http://www.stahl-shop.com)





## Round Steel Ground

Strong at standard sizes as well as at individual cuts: we keep an extended range of different tool steel grades (and stainless 1.4112/ 440B) on stock. Standard lengths are 1.000 mm and 2.000 mm. However, if needed we are able to cut to your individual size length as well. Apart from our standard stock sizes we are also able to deliver nonstandard sizes ex production.

We make customer wishes come true! As contract logistic company we are able to deliver the round bars with your papers directly to your customer. This shortens delivery times and minimizes your logistical and administrative work.

Place your order now at [stahl-shop.com](http://stahl-shop.com) or under +49 2151 93144-0. Depending on the area of destination goods can be delivered the next working day.

## Tool Steel Round & Flat Sizes

SSK also offers an extensive range of high-quality tool steels directly from stock. In close cooperation with our stockists and producers in Asia and Europe, we offer you various round and flat dimensions with 4-sided milled surfaces as a basis for optimal further processing

No need for our customers to take care of logistics, shipment or customs clearance on international delivery routes!

### Tool moulds

SSK-molds are ideal for competitive plastic injection molding or aluminium die-casting applications. Based on CAD-data files we deliver precision fit and demanding special moulds up to a weight of 15 tons. High efficiency CNC-production ensures an even balance between quality and economic efficiency.

Due to our long-standing cooperation with selected partners in Asia, we also offer a complete delivery programme of drawing-based tool moulds for the plastic injection industry or for the aluminium die-casting sector. The weight of the moulds can range from 50 kg to 20.000 kg.

## Coorpration GooDa Machinery

Thanks to our many years of experience as a supplier of machined tool steels, we know exactly how important it is to use excellent machines to produce high-quality machined steel products.

With GooDa Machinery, Steel Service Krefeld GmbH has found a partner who produces these machines and which we sell to customers in Germany and selected European countries to create added value.

GooDa Machinery is the first Chinese manufacturer of high-end CNC machines, whose high efficiency and precision enable the production of high-quality products.

### Sawing machines/ high-speed circular saws

- + Sawing range from 10 to 100 mm thickness

### Milling machines

- + Double head milling machines:  
Dimension range from 20 x 60 x 60 mm to 440/490 x 1,200 x 1,200 mm
- + Portal milling machines:  
Dimension range up to 1.500 mm height x 1.600 mm width x 3.000 mm length

### Chamfering machines

- + Dimension range from 25-300 x 100-800 x 100 to 1.400 mm

### Grinding machines/ portal grinding machines

- + Dimension range up to max. 500 mm thickness x 2.000 mm width x 4.000 mm length



## 3D-Printing

Typical applications are titanium alloys for biologic transplants, CoCr-alloys for dental applications, stainless metal or titanium alloys for aviation application, tool steels for mold making and the automotive industry.

## Magnetically soft material

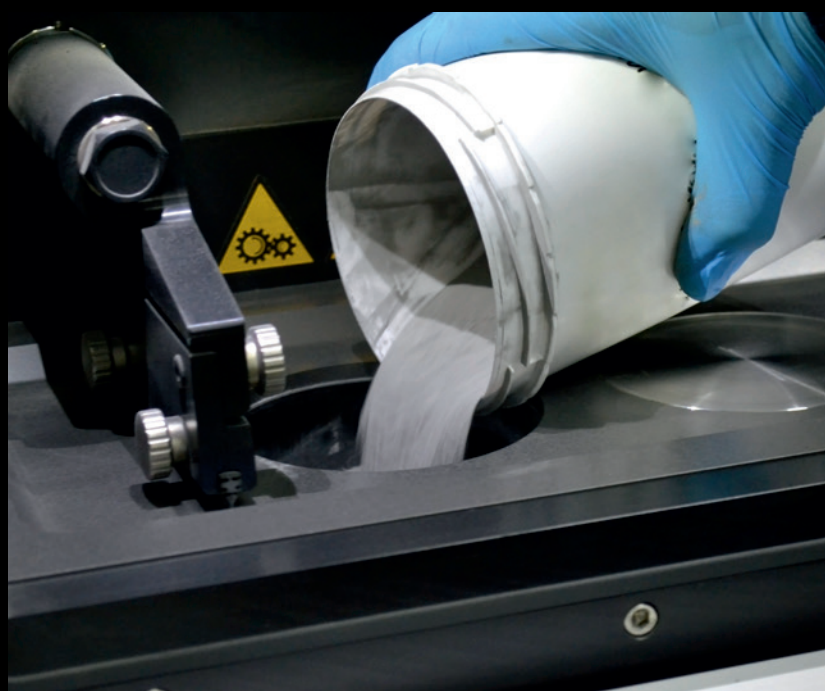
Magnetically soft powder materials are especially used for the production of powder cores. These powder cores are significant components for the magnetic core production. Powder cores are produced out of ferromagnetic materials by a process similar to the metal injection molding.

## Metal Injection Moulding MIM

MIM combines the advantages of plastic injection moulding with the properties and selection of powder metallurgy materials. Embedded in thermoplastics, the powder-metallurgical material can be used in an injection moulding process. The parts produced in this way are subjected to a subsequent sintering process in which the plastic content is removed and the component is densely sintered. The process can be used for a wide range of metallic materials, intermetallic phases and even heavy metals.

## Powder metal metallurgy

Powder metal metallurgy was not developed in the 21st century. In the past powder metal steels were produced to optimize the attributes and the microstructure of steels. Since the beginning of the additive manufacturing like 3Dprinting, laser cladding and metal injection molding the application options and requirements for powder metals have increased.



## Please contact us!

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