

Thin-walled bushing

# **Food industry**

With centrifugally compressed casting, Kuhn Special Steel can offer you a flexible alternative to traditional hollow steel or forged parts with the same materials properties, with small batch sizes tailored to your requirements, in premachined or in finished versions, and in all casting alloys that can be produced.

## Our specialist knowledge applied for you

We have developed numerous special grades precisely for applications in the food and animal feed industries, some of them together with renowned university or college institutions. After all, the important thing is to meet the highest demands in terms of wear or corrosion resistance, toughness or workability with individual solutions.

A solution using Kuhn Special Steel composite casting is provided for applications with heavy demands regarding wear resistance for which a ductile base material for less expensive materials processing or welding is nevertheless required. Inside or outside, an extremely wear-



Finishing on one of our CNC machines



resistant coating with coating thicknesses of > 5 mm can be applied centrifugally in order to extend the service life by several times. Here too, we offer special grades in hardnesses of 50 to 65 HRC with good corrosion resistance.

## Benefit from our strengths!

- Over 45 years' experience in centrifugal casting
- 16 centrifugal casting machines and 7 furnaces in use
- Wide range of machining and milling machinery



Perforated drum in use

#### **Materials:**

# Rust-proof and acid-resistant steels: Ferrites and martensites

- · Standard alloys
- · Soft martensites
- · Soft martensites can be precipitation hardened

#### **Duplex steels**

- · Lean duplex steel
- · Standard duplex steel
- · High-carbon duplex steel
- · Super duplex steel

### **Austenites**

- Standard alloys with and without Mo
- Austenitic alloys with increased Si content

## Wear-resistant steels:

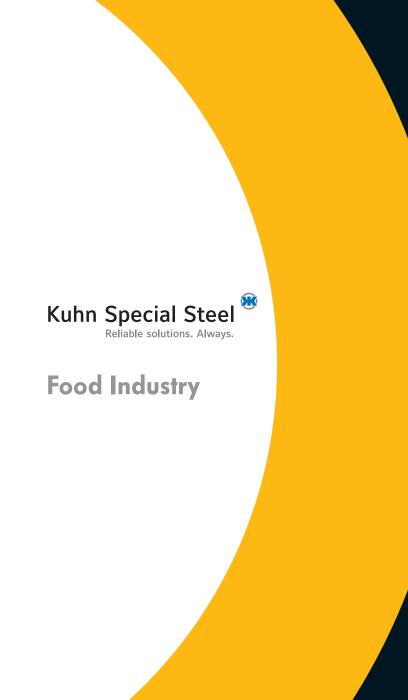
Chromium gravity cast iron
Austenitic carbide gravity cast iron
Ferritic carbide gravity cast iron
Nickel-based alloys
composite casting

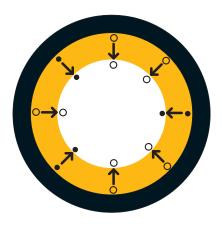
#### Possible size range:

Maximum external diameter 1,100 mm (in exceptional cases up to about 1,300 mm) and 3.3 tonnes cast weight depending on the wall thickness.



Perforated drum





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## The centrifugal casting technique

Our core competence is in the centrifugal casting technique with subsequent finishing. We have mastered the application of this production technique for the most varied stainless steels and alloys. The range varies from low-alloy steels to iron-free alloys. We contribute our materials know-how as early as the development phase so as to produce a perfect product at the end.

We manufacture over 70 % of our products as finished products individually and precisely to customers' drawings. And individual parts and small runs represent no problem for us. Moreover we manufacture each one in materials that can be cast reliably with the centrifugal casting technique and we are also happy to manufacture special materials to your particular specifications.

In centrifugal casting, the steel is cast via the axis of rotation into a rotating canister and it solidifies at up to 120 times the acceleration due to gravity. These great rotation forces and the solidification in an inward direction create a particularly dense and pure structure. Impurities and gas inclusions are driven to the surface and can be removed in subsequent processing.

The products manufactured with this technique therefore have outstanding technological properties that are greatly superior in many areas to conventional static casting.

Our varied options for the preparation and finishing of rotationally condensed stainless steel meet our customers' most varied requirements. Whether it's lathes, finishing and polishing machines or our CNC processing centres – our great strength as a specialist in centrifugal casting is also matched in finishing.