

# Casting systems



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## for round billets and rolling ingots

- Excellent surface and grain structure qualities
- A high degree of user friendliness
- Meeting aerospace, automotive and MIL standard quality criteria
- Casting weights of up to 80 t/drop



## Casting systems

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swiss<sup>cast</sup>  
engineering gmbh  
A Jasper company



1. Casting system
2. Finished billet after casting
3. Casting cylinder before installation

In partnership with Swiss-cast engineering GmbH, we develop customer-specific casting systems for round billets and rolling ingots. Our innovative foundry technology ensures maximum levels of surface and grain structure quality. Our specialties include hard alloys, large diameters as well as adjustable moulds for rolling ingots.

#### Fully automatic process

The casting process is fully automatic – with internal casting cylinders and control systems for media supply. Freely programmable casting recipe management and continuous monitoring of process data ensure an excellent-quality product.

#### Advantages:

- The best surface and grain structure qualities
- User friendliness of the system
- Safety during operation
- Meeting aerospace, automotive and MIL standard quality criteria

#### Ingot mould technology

When considering the ingot mould technology, the most significant influence in determining the quality of the ingot, we ensure that all of the factors are precisely matched, such as the concept, design and production, including the control and monitoring of the media flow.

#### Surface quality

For the continuous casting process, we use air-oil flow ingot moulds, considered to be among the best systems available. In this process liquid aluminum is fed to one or more ingot moulds. The aim is to produce high surface and grain structure quality using an air cushion between the still-liquid aluminum and the mould form. This cushion reduces heat loss through the mould wall and improves the solidification process of the ingot surface.

#### Mould design

The structure of moulds depends on the alloys to cast. Our casting lines are designed to be flexible – depending on whether aerospace, automotive or military standards are required.

#### Material dimensions

Depending on the alloy involved, we can supply cast products in the following sizes:

- Billet diameter: from 50–1,000 mm
- Ingots: 2,400 x 640 mm
- Casting weights: up to 80 t/drop

#### A high degree of user friendliness

The user interface of the system consists of easy-to-operate software modules via which the recipes are entered and the process data is monitored. The easily readable visualisation of the data on a large display makes a key contribution to the user friendliness.

#### Services:

- Laser-controlled level monitoring of the bath surface
- Fully automatic emergency discharge system for power failures
- Continuous temperature measurement in the melt/cooling water circuit
- Remote control and problem analysis

#### Accessories:

Degassing units, filter systems, grain refinement, water treatment, lifting equipment, heating systems, cleaning stages

#### An overview of our products and services:

- Industrial furnace engineering
- **Casting systems**
- Regenerators
- Burner systems
- Waste treatment
- Servicing of furnace systems

