cunova

ASM

Advanced Slab Mould

MELTING & CASTING
TECHNOLOGIES

The Company

cunova offers a unique combination of know-how and experience in all key technologies for the production of high-performance moulds for casting ferrous alloys. cunova‘s corporate goal is to develop and manufacture products that meet customer demands, finding solutions for their specific applications, and providing services as a long-term partner. cunova’s strategy for accomplishing this goal is based on a highly skilled and experienced workforce.

AMT® ADVANCED MOULD TECHNOLOGY

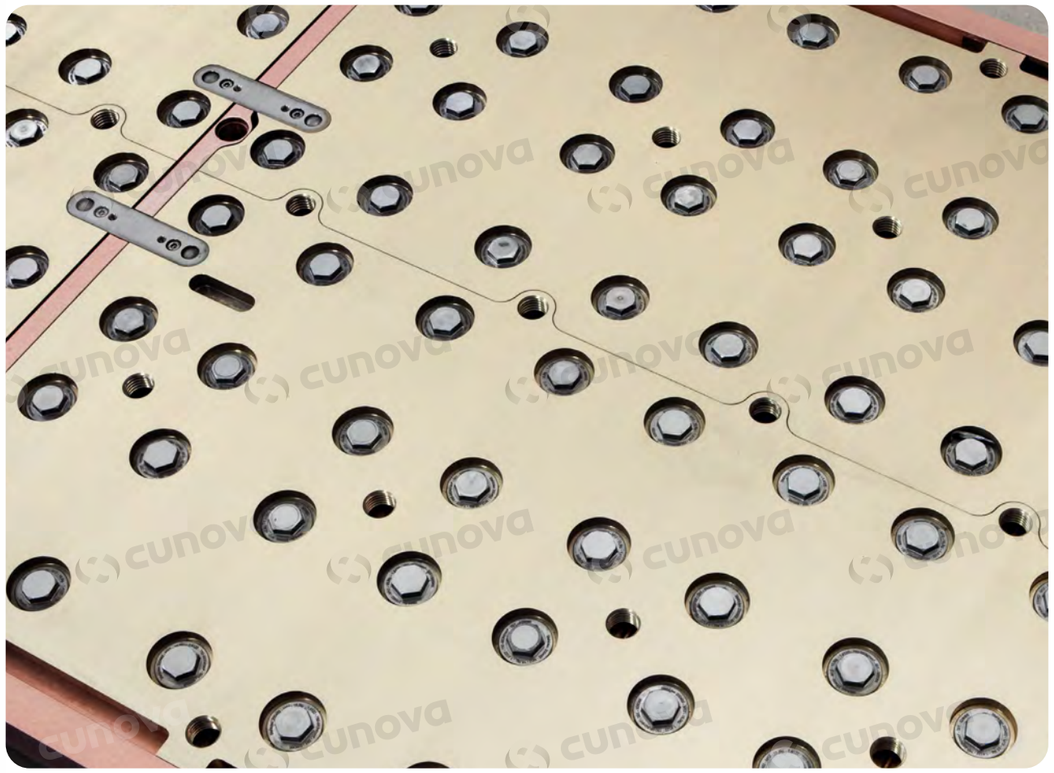
ASM Advanced Slab Mould

Challenge
- Optimize cooling of standard mould plates and improve slab quality

Solution
- Uniform water gap cooling design
- Low stress AFM® mounting technology (cunova patent)

Application
- All slab mould plates

Advantages
- Homogeneous temperature profile – no hot spots
- Higher heat transfer rate
- Higher lifetime due to reduced thermal stress
- Low retrofitting costs
- Compatible with existing water box design



AMT® ADVANCED MOULD TECHNOLOGY

Mould Plates for Blooms and Slabs

The design and manufacture of mould plates for bloom and slab casting machines, whether furnished with cooling slots or deep-hole drills, is a major part of cunova's product range. For these applications cunova delivers a comprehensive selection of mould materials and coatings.

cunova has developed various technology packages for the continued development of the moulds used in the casting of bloom and slab shapes. Based on a precise analysis of the cooling water flow and the load on the moulds arising from the process, an improvement in the service life can often be achieved through local optimisation of the cooling geometry.

Also completely new designs for cooling improvements were established in recent years, such as optimised-deep-drilled plates, chamfered narrow faces with special edge cooling and ASM mould plates.

ASM Mould Plates

cunova engineers have developed ASM (Advanced Slab Mould) technology to optimise the cooling of standard mould plates by converting the slot cooling design into a uniform water gap cooling type.

By using filler- or adapter plates in conjunction with the patented AFM® mounting, it is possible to reduce the working load on the moulds and to improve casting efficiency and strand quality with adjusted cooling water flow especially for curved mould plates. A significant advantage of the ASM technology is that existing moulds can be converted without requiring high investment.

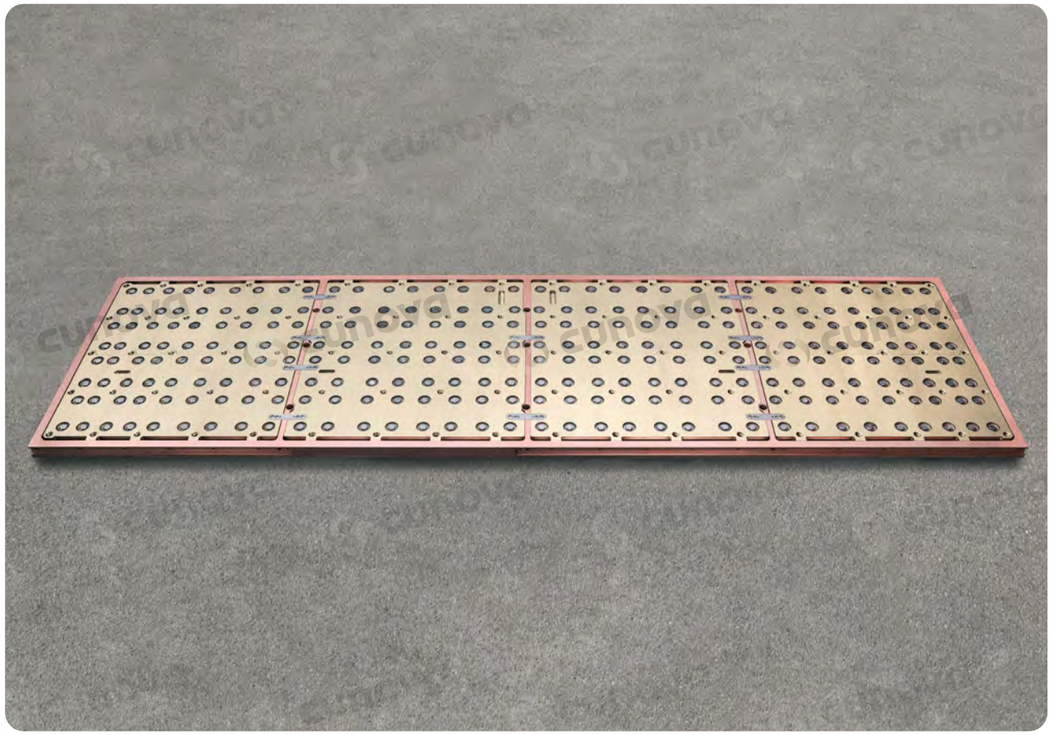
Reduced Heat Dissipation

For the casting of steel grades that are prone to cracking, cunova offers materials with reduced thermal conductivity as well as solutions with textured hot faces for mould plates to achieve a reduced heat transfer in the mould.

cunova's strength in technical design together with our available materials and coatings, enables us to develop tailor-made solutions for each customer as required.

cunova Manufacturing Range for Mould Plates

Material	• CuAg-GS/NS, ELBRODUR® H, ELBRODUR® G/GP/GP-NS • ELBRODUR® NIB
Plate Design	• Water gap cooling type • Casting surfaces straight or machined to casting radius
Coatings	• Nickel • Nickel + chrome • Nickel alloy • Nickel alloy + chrome • Metal-Ceramic • Cobalt alloy
Sizes	• Practically no limits



AMT® ADVANCED MOULD TECHNOLOGY

Efficiency Enhancement through advanced Mould Plates

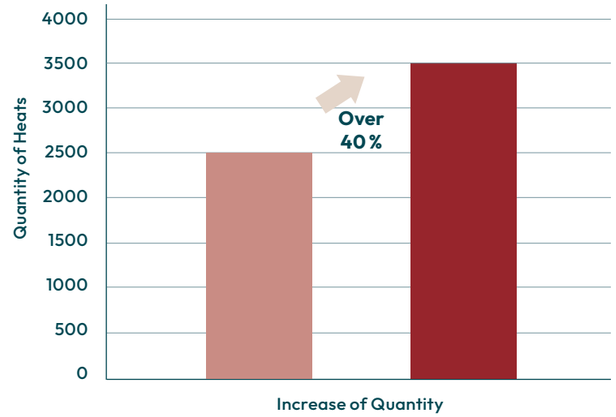
Our ASM plates have significantly improved production efficiency for our customer. Utilizing advanced materials and technologies, we have enhanced the lifespan and performance of our mould plates. Optimized heat transfer ensures uniform cooling of the cast material, resulting in higher product quality and reduced scrap rates. Special coatings and alloys extend the plates' lifespan, reducing maintenance efforts and downtimes.

Proven Customer Success

Before

Now

Our customer in Mexico increased the lifetime of their mould plates from 2,500 heats to 3,500 heats. This improvement reduced production costs and enhanced efficiency.



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