



**CUNOVA**

FORMERLY KME  
SPECIAL PRODUCTS  
& SOLUTIONS



# CV Cooling Design



MELTING & CASTING  
TECHNOLOGIES

# The Company

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. cunova has the ability to invent and develop new materials and innovative production processes via ongoing advancement and training of our employees and the continual improvement of its organisational structures. This process is also supported by FEM calculations.

### Challenge

- Increase heat transfer for reaching higher casting speed with existing equipment

### Solution

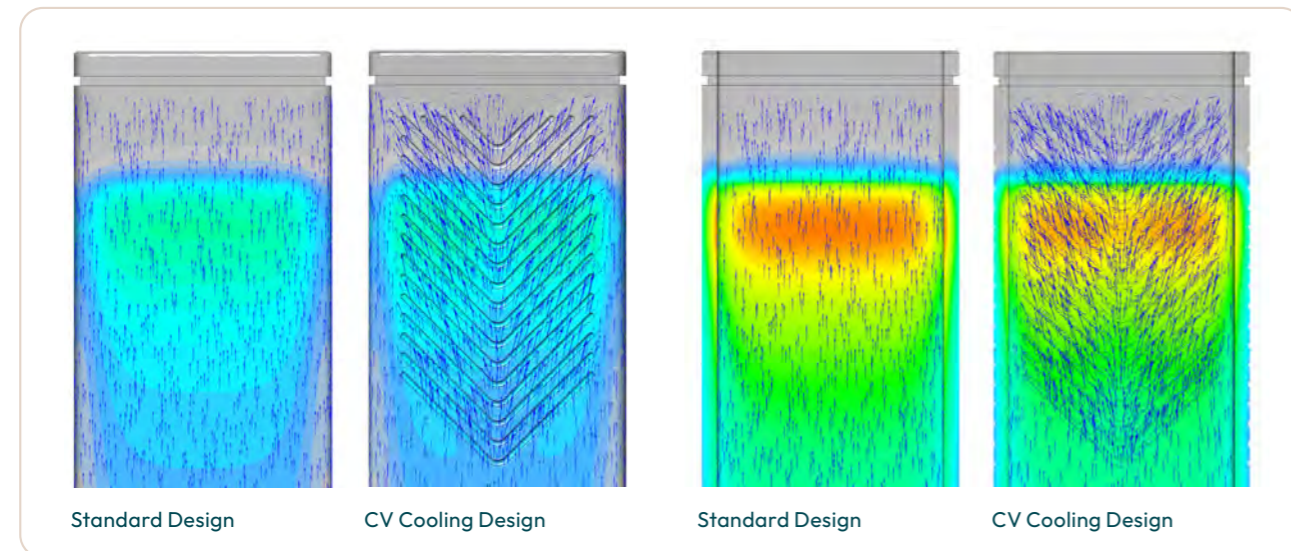
- Special outside macrostructures create turbulences in order to force the cooling medium to absorb more energy (patent pending)

### Application

- Moulds in all copper alloys
- All mould tube types
- All types of hot face coatings
- For oil and powder casting
- Compatible with existing equipment

### Advantages

- Improved heat transfer
- Faster shell growth
- Higher casting speed



Redirection of the cooling water flow

# CV Cooling Design

The special feature of this mould tube is a macrostructure in the upper area on the outer surface. The purpose of this new design is to improve the heat transfer locally, especially in the upper part of the copper tube for an overall better performance of the mould.

The macrostructure swirls the cooling medium intensively and the resulting turbulences leads to an increased heat transfer of the copper wall into the cooling medium.

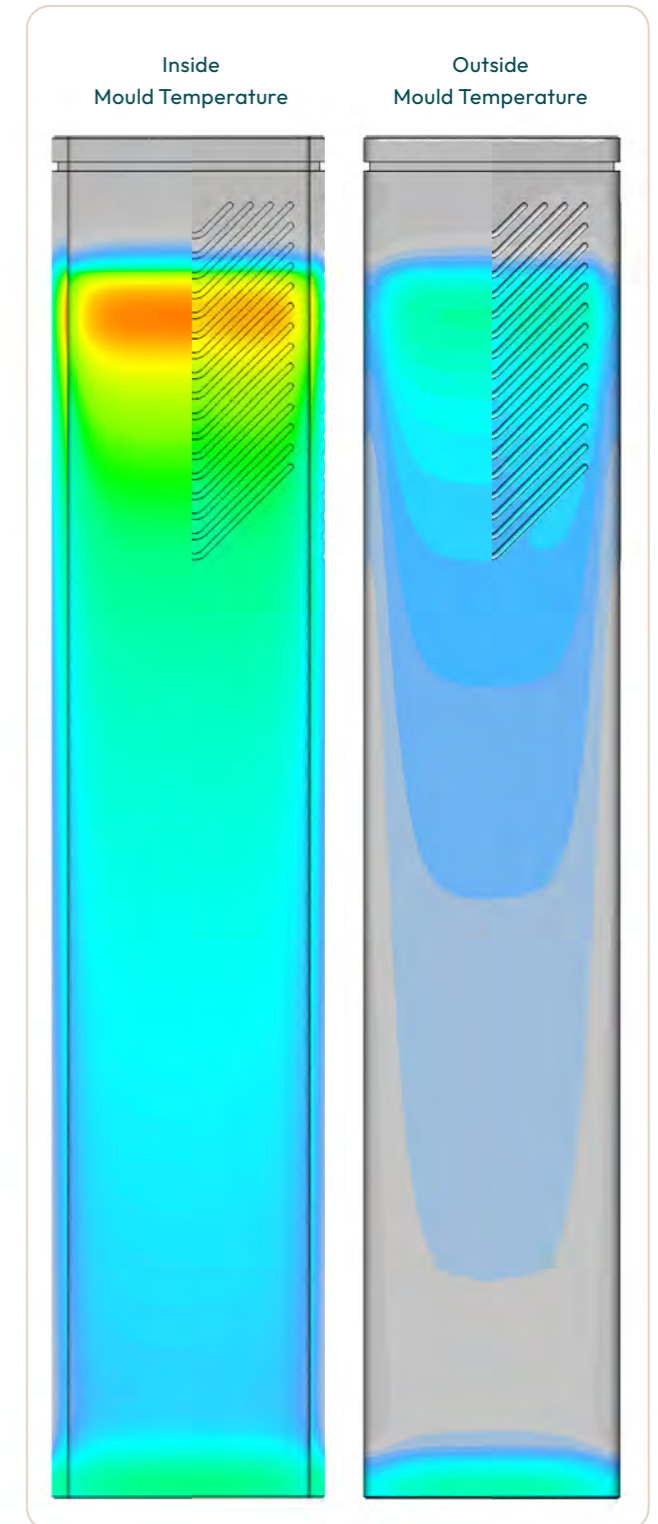
Lower hot face temperatures reduce the risk of an attack by harmful elements and early coating damage. Furthermore, the better cooling conditions increase the shell growth, providing a stiffer steel shell as basis for an increase in casting speed.



Standard mould tube (flat inside) with CV Cooling Design



WAVE® mould tube with CV Cooling Design



Comparison of standard mould tube and CV cooling mould tube design.



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