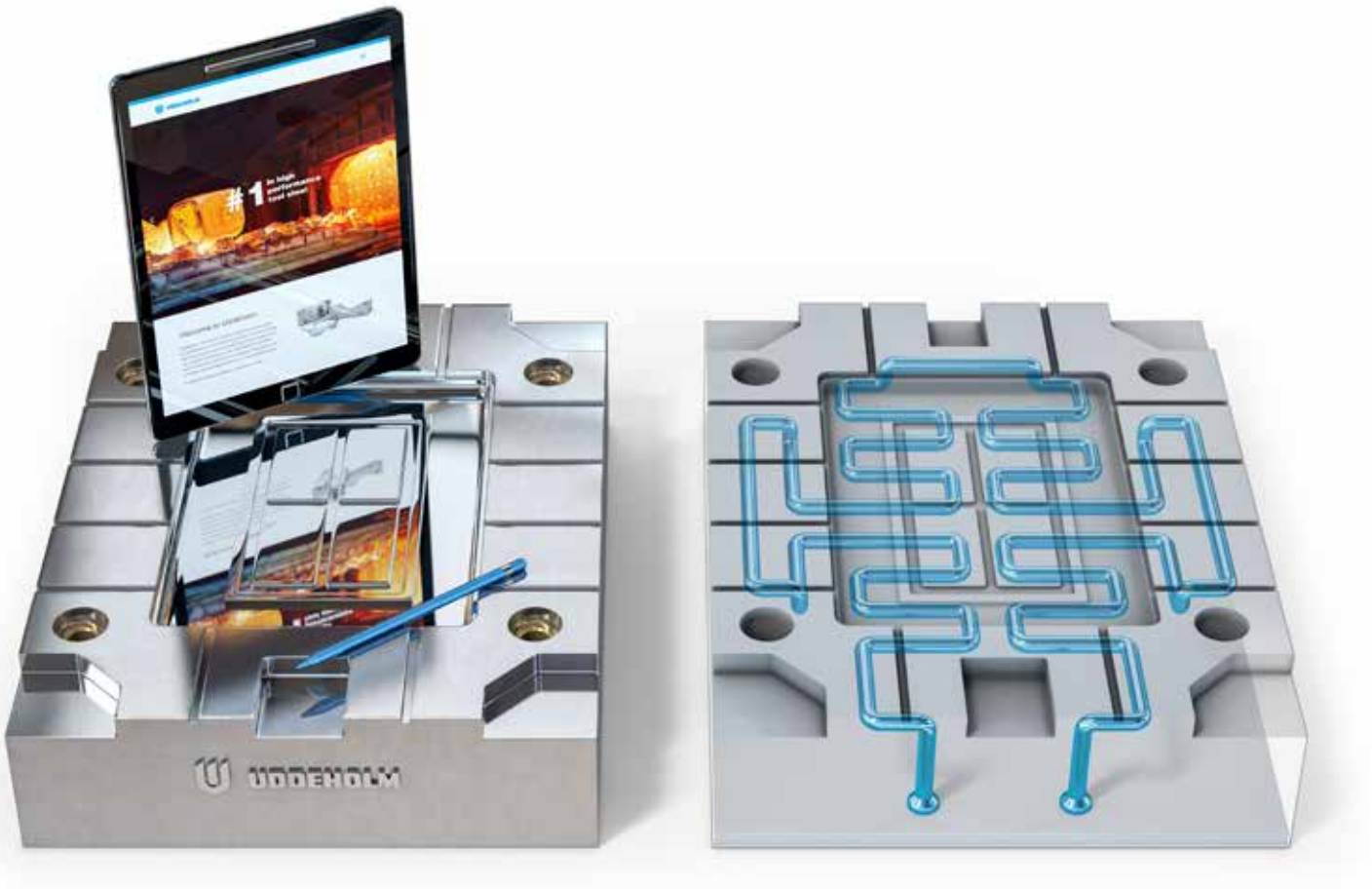
since 1945
75 years

ADDITIVE MANUFACTURING

Beyond the impossible



ASSAB

Edition 20200828

A REVOLUTIONARY WAY OF MANUFACTURING

A NEW WAY OF THINKING

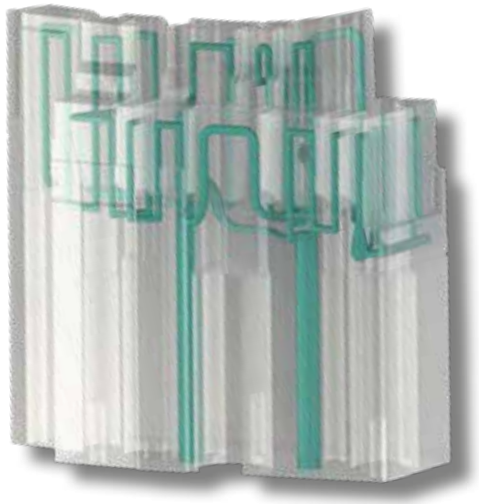
Additive Manufacturing, also known as 3D printing, is the process of forming objects by printing metal powder layer by layer according to designs using Computer Aided Design (CAD) software.

With Additive Manufacturing, moulds with connectivity of multiple parts, additional shapes and complex structures can now be achieved.

A GAME CHANGER

Additive manufacturing enables:

- Building of complex geomatries that includes internal features
- Combining multiple parts into one
- Utilising lightweight lattice designs
- Generating less waste
- Reducing inventory
- Rapid protoyping and faster time to market
- Potential for smart printed parts and integration of functions/sensors



A PROBLEM SOLVER

Conventional cooling systems are limited to straight lines by drilling channels in moulds. Now with Additive Manufacturing, conformal cooling can be achieved. Conformal cooling helps:

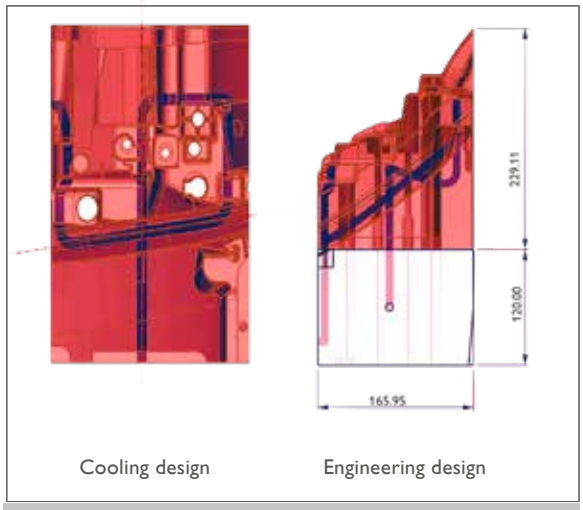
- Reach hot spots more effectively
- Achieve more homogeneous material parts
- Better quality parts
- Lower scrap rate with reduced internal stress caused by different thickness
- Less energy consumption
- Shorten cycle time

OUR SOLUTION TO YOUR CHALLENGES

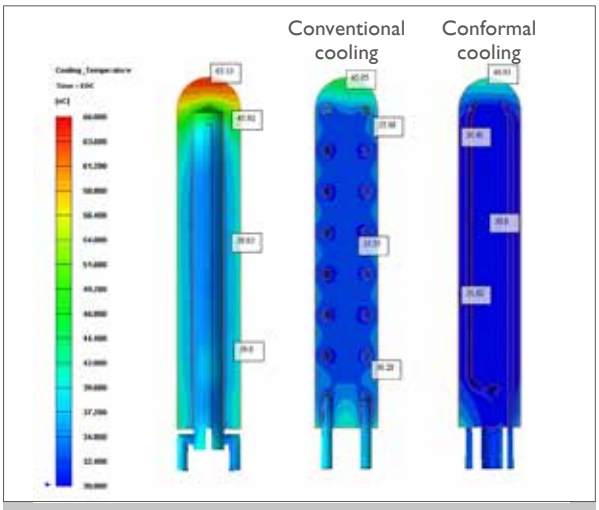
MAKE IT POSSIBLE

ASSAB is renowned for providing quality tool steel and value added services to the moulding industry. We are constantly enhancing our product and service portfolio to uphold this reputation. Additive manufacturing is our latest development.

As a global technology leader, we offer the full suite of production techniques and consultancy services.



Design and Engineering



Simulation

Prototyping

3D Production

Post processing and Inspection

THE ENTIRE CHAIN

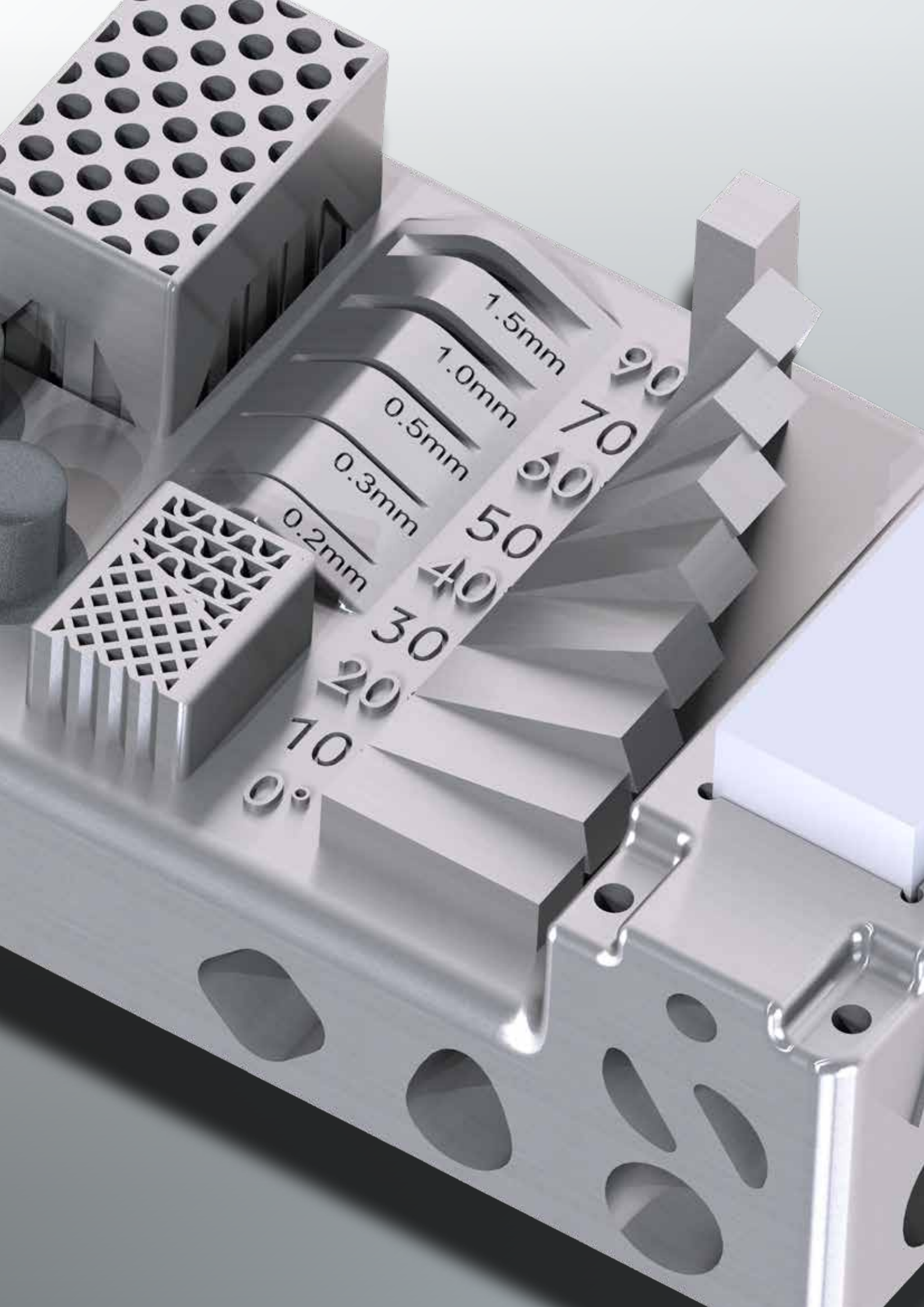
A REWARDING RELATIONSHIP

Starting from the metal powder production to engineering design, simulation, prototyping, manufacturing and full spectrum of post-processing, we are here for you throughout the entire chain of Additive Manufacturing. This end-to-end solution reduces waste and mitigates risk in the supply chain. We will be your trusted and reliable business partner.

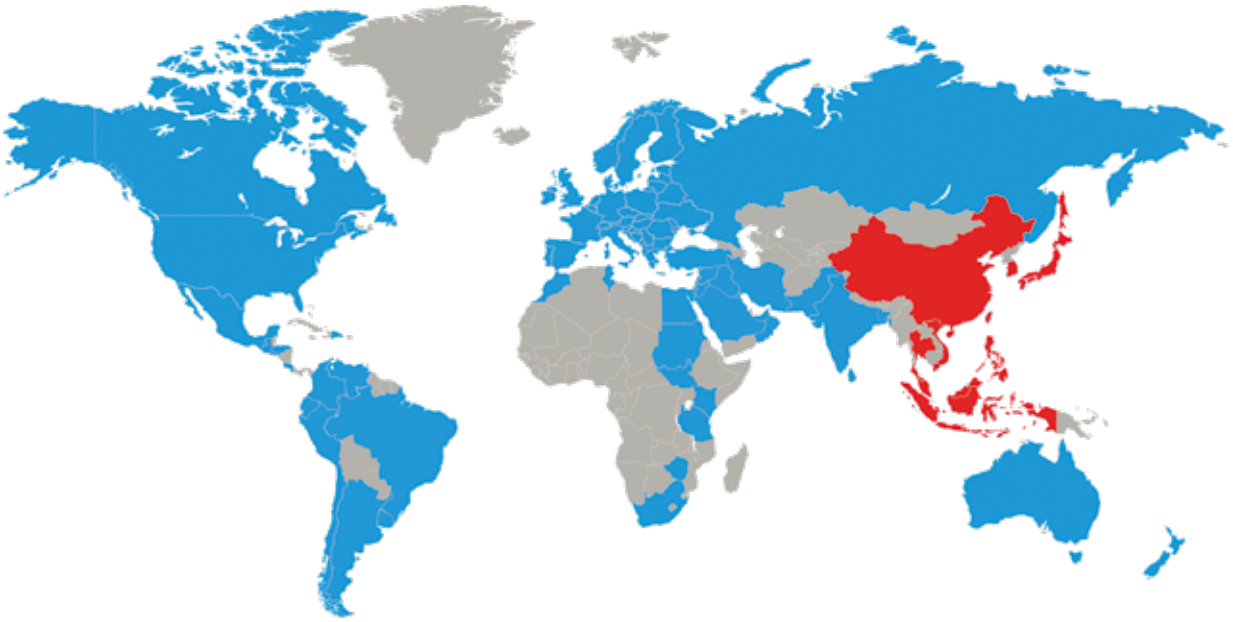
Additive Manufacturing from ASSAB

- Full capability from design and simulation, supply of metal powder, 3D production to post processing of finished parts
- Global network
- Long & proven experience in the mould industry
- Printed / Hybrid parts

Metal Powder
Metal powder developed to customers' needs
Additive Manufacturing
Design & Engineering
Simulation
Prototyping
3D production
Post Processing
Powder Extraction
Wire EDM to remove build plate
Rough machining
Heat Treatment
Fine machining
Polishing
Nitriding/ nitrocarburising
PVD coating
Inspection


1.5mm
1.0mm
0.5mm
0.3mm
0.2mm
90
70
60
50
40
30
20
10
0°

Scan me for more information



Choosing the right steel is of vital importance. ASSAB engineers and metallurgists are always ready to assist you in your choice of the optimum steel grade and the best treatment for each application. ASSAB not only supplies steel products with superior quality, we offer state-of-the-art machining, heat treatment and surface treatment services to enhance steel properties to meet your requirement in the shortest lead time. Using a holistic approach as a one-stop solution provider, we are more than just another tool steel supplier.

ASSAB and Uddeholm are present on every continent. This ensures you that high quality tool steel and local support are available wherever you are. Together we secure our position as the world's leading supplier of tooling materials.

For more information, please visit
www.assab.com

UDDEHOLM
a voestalpine company

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