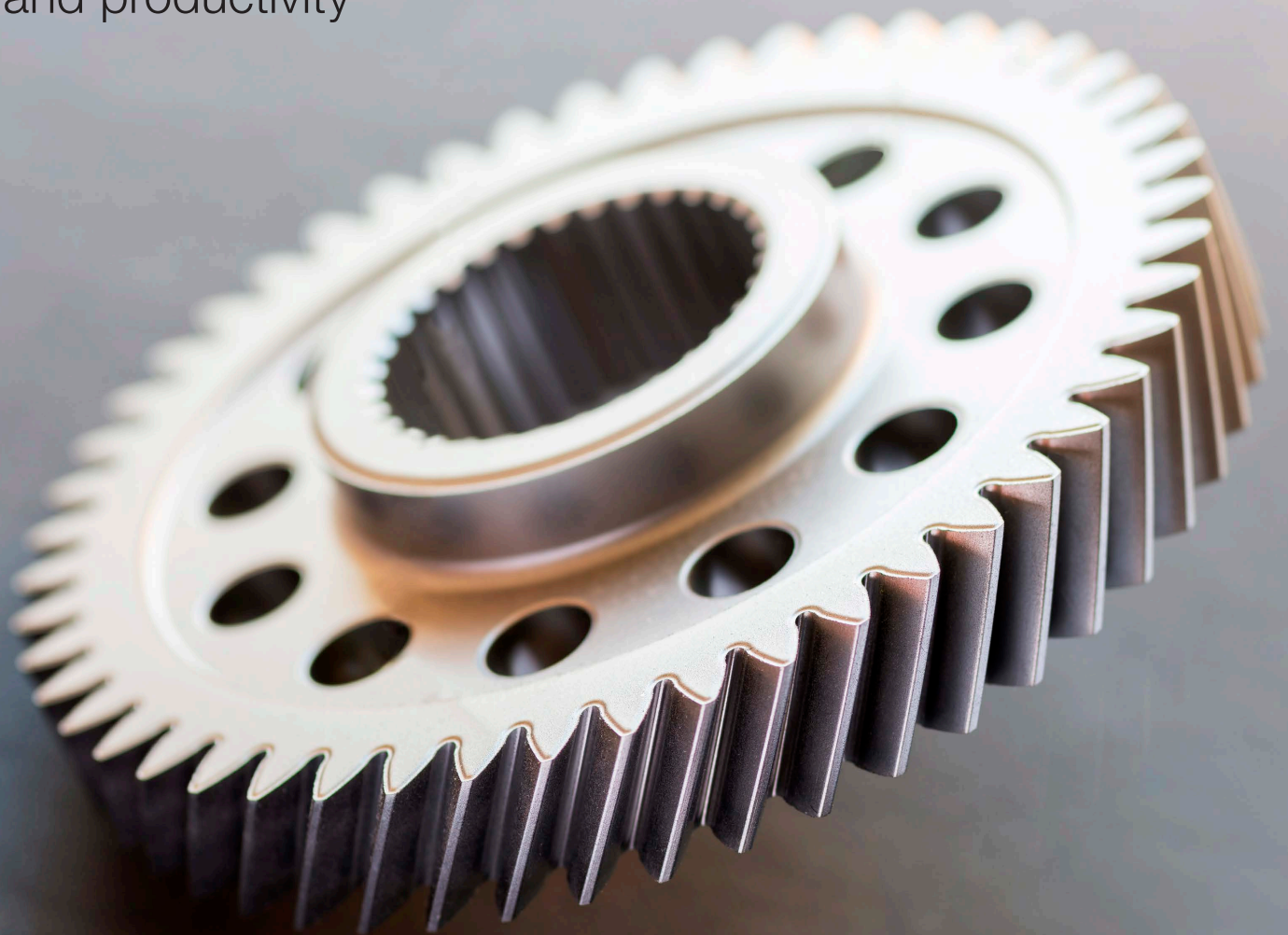


# Warm Compaction and **Densmix**<sup>®</sup>

Your route to excellent part performance  
and productivity



# Warm Compaction

## What is warm compaction?

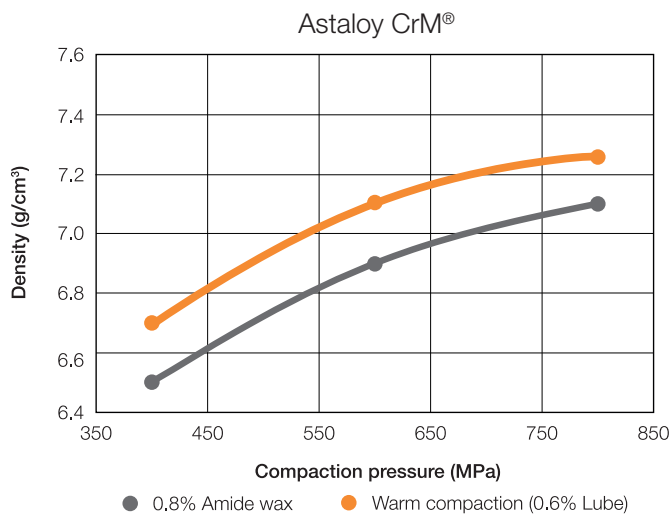
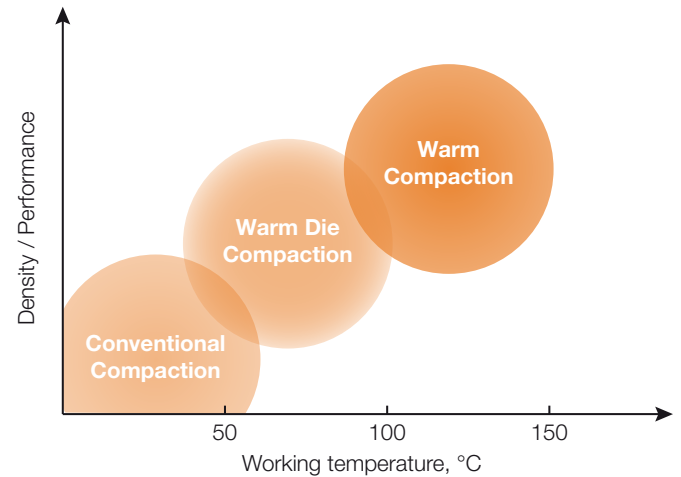
Warm compaction means pressing at elevated temperatures (>100°C) and is the logical choice to reach top performance levels on processes and parts.

## The warm compaction process

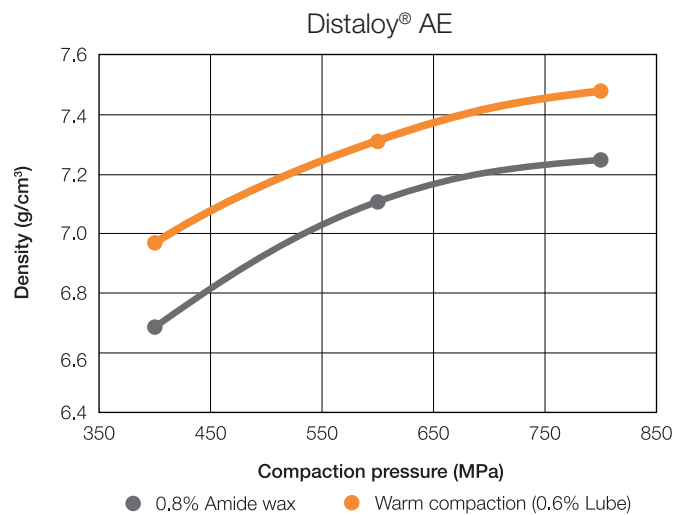
Pressing powder is all about converting mechanical energy into deformation. As deformation is a thermally activated process, warm compaction becomes a way to increase the compressibility of the powder.

Another benefit with warm compaction is that the lubricant system is made to work optimally at elevated temperatures. By combining the thermally activated deformation of the metal powder with the stable - higher temperature of the lubricant system, higher density parts with increased mechanical performance and more uniform properties can be obtained.

The compressibility improvement is typically in the range of 0.1-0.3 g/cm<sup>3</sup>. All material types will benefit from warm compaction.



*Astaloy CrM (3% Cr, 0.5% Mo) is a fully pre-alloyed powder.*



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# Densmix<sup>®</sup>

A Densmix offers you a press-ready mix for your warm compaction process giving excellent conditions for high product performance.

## Densmix

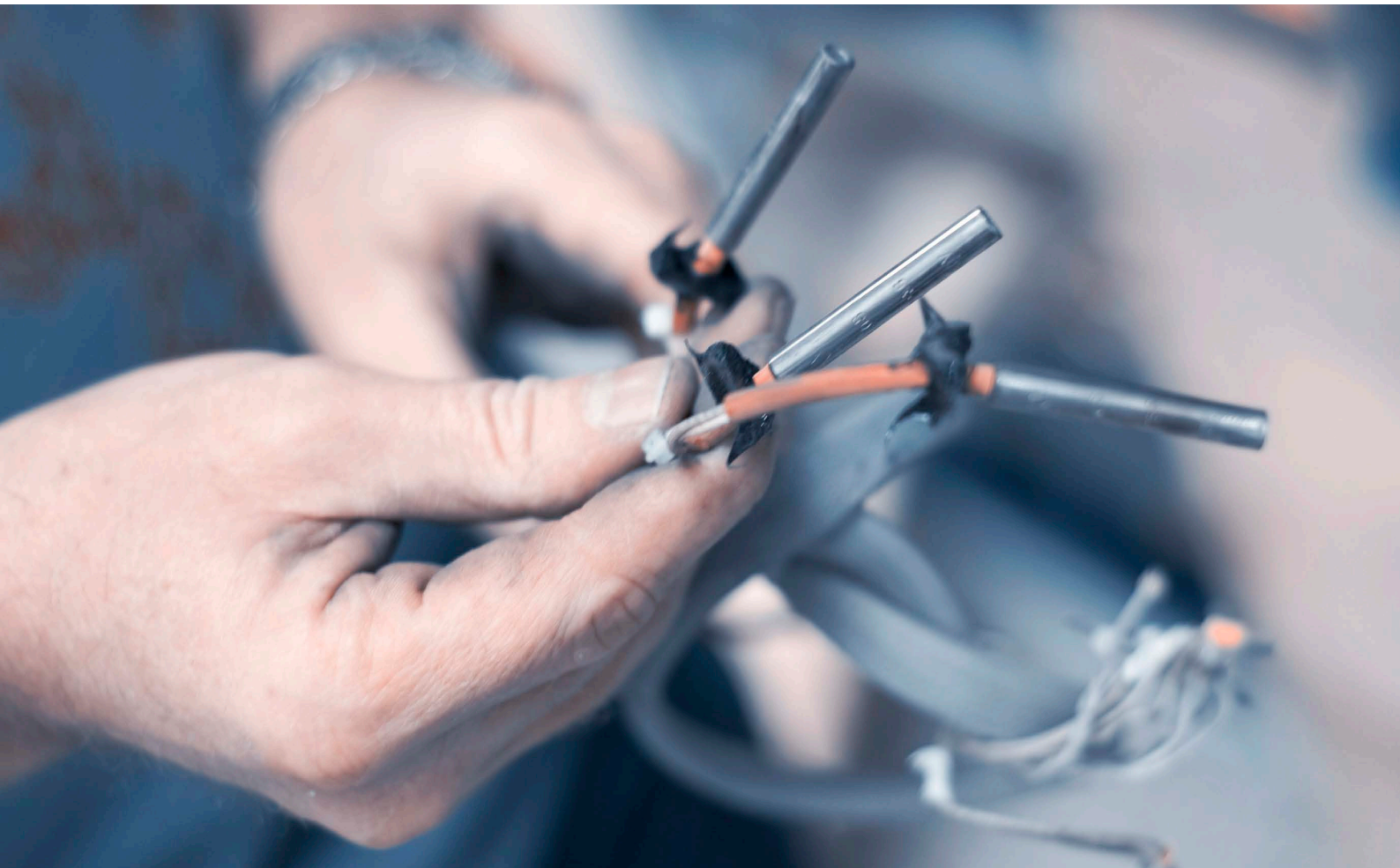
- Has a tailor-made lubricant system designed to work at optimum temperatures in warm compaction
- Gives high and uniform densities and properties
- Is a bonded mix which improves part precision, tolerances, and reduces dusting
- Increases AD, flow and minimises segregation

A Densmix works optimally at 120°C powder and tool temperature.

## Warm compaction process needs

In order to adapt your pressing line to warm compaction, heated tooling and a powder pre-heater is required. Different solutions are possible depending on your process and product design. We will support you in all stages of your adaptation process.

For more information, please contact us.



# Inspire industry to make more with less

Höganäs' vision is to inspire industry to make more with less. Metal powder technology provides endless opportunities; not only does it enable our customers to reduce their material and energy consumption, but it also helps them use new and better techniques that make final products more efficient and less expensive. In short, metal powders are a resource-efficient alternative, suitable for many industries – that's one of our contributions to a more sustainable world.

To find out how you can apply the Power of Powder®, please contact your nearest Höganäs office.



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