

How to design with Somaloy?

Design for high volume production

To gain the benefits of Somaloy and the Soft Magnetic Composite technology, it is important to design for high volume production. That means focus on the complete manufacturing process in its entirety - from powder to application. Cost reduction can be obtained by reducing the total raw material cost as well as more efficient manufacturing and assembly. Somaloy meets future demands on efficiency, cost, performance and recyclability.

Examples of how Somaloy can provide lower production costs:

- Size and weight reduction of components
- Reduction of the total number of parts
- Low scrap rate in manufacturing
- Modular design
- Easy assembly and automated production
- Reduction of the amount of copper
- Easy integration into application
- Reducing the need for subsequent operations

Driven by a vision




We focus on customer success

Our target is to speed up time-to-market for our customers. With exclusive know-how of Somaloy material, design and production process, we provide services to support you all the way - from idea to high volume production. This will give you the benefits of cost-effective manufacturing, compact component design and high performance applications. Let us know how we can support you in your development project!



Höganäs provide inspiration and guidance through the new generation of material technology in your development project.

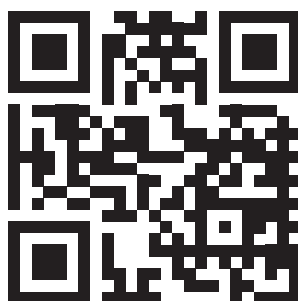


Driving positive change through material innovation

Höganäs' vision is to drive positive change through material innovation, which in turn will help us in our ambition to become the globally preferred partner for sustainable powder materials. Powder technology provides endless opportunities; not only does it empower 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, powders are a resource-efficient alternative that are optimal for a range of industries.

World leader in powders

Höganäs is a global company with local presents all over the world. We are a global leader in advanced ceramic and metal powders. Contact your nearest Höganäs office today, click or scan the QR-code:



For more information on
soft magnetic composites,
please scan the QR code.

Powder solutions

for soft magnetic composite
applications



Somaloy®

Höganäs 
POWDER THAT EMPOWERS®

What is Somaloy?

Material technology for the future

Somaloy is a Soft Magnetic Composite (SMC) material with unique 3D flux properties. Somaloy is developed for component manufacturing for electromagnetic applications, providing high performance and low losses. It is designed for efficient volume production at low costs, by utilising the combination of Soft Magnetic Composite technology and Powder Metallurgy (PM) process. It is the 3D magnetic properties and the net shaping capabilities of Somaloy materials that open up new opportunities to design compact, light and cost-efficient solutions.

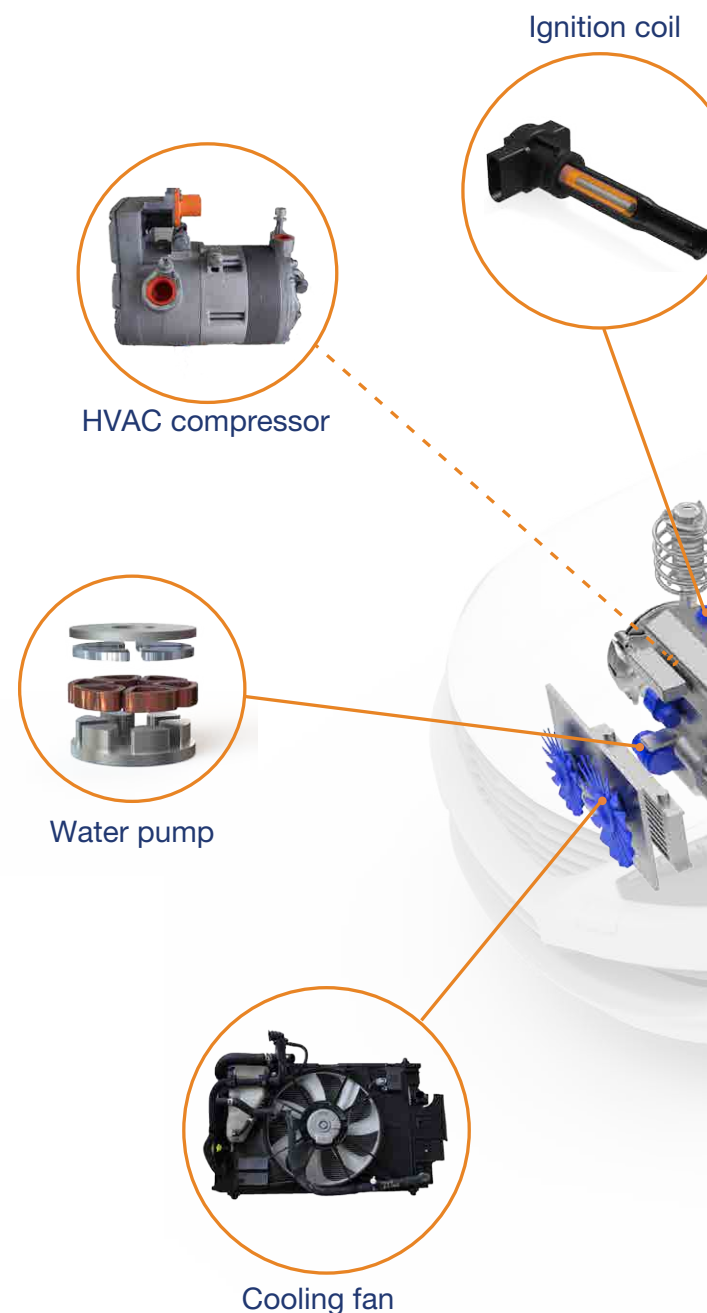
- Compact design
- High performance
- Cost-efficient

We care about your success

- Cost reduction by size and weight reduction
- High torque and power density solutions
- Unique 3D extended design approach
- Efficient volume production of components
- Simplified winding arrangements
- Permanent magnet and winding reduction
- Suitable for automated assembly

"We chose Somaloy primarily for its unique isotropic flux properties and ability to form it into 3D shapes. Höganäs was the only supplier of powdered materials that met our specifications."

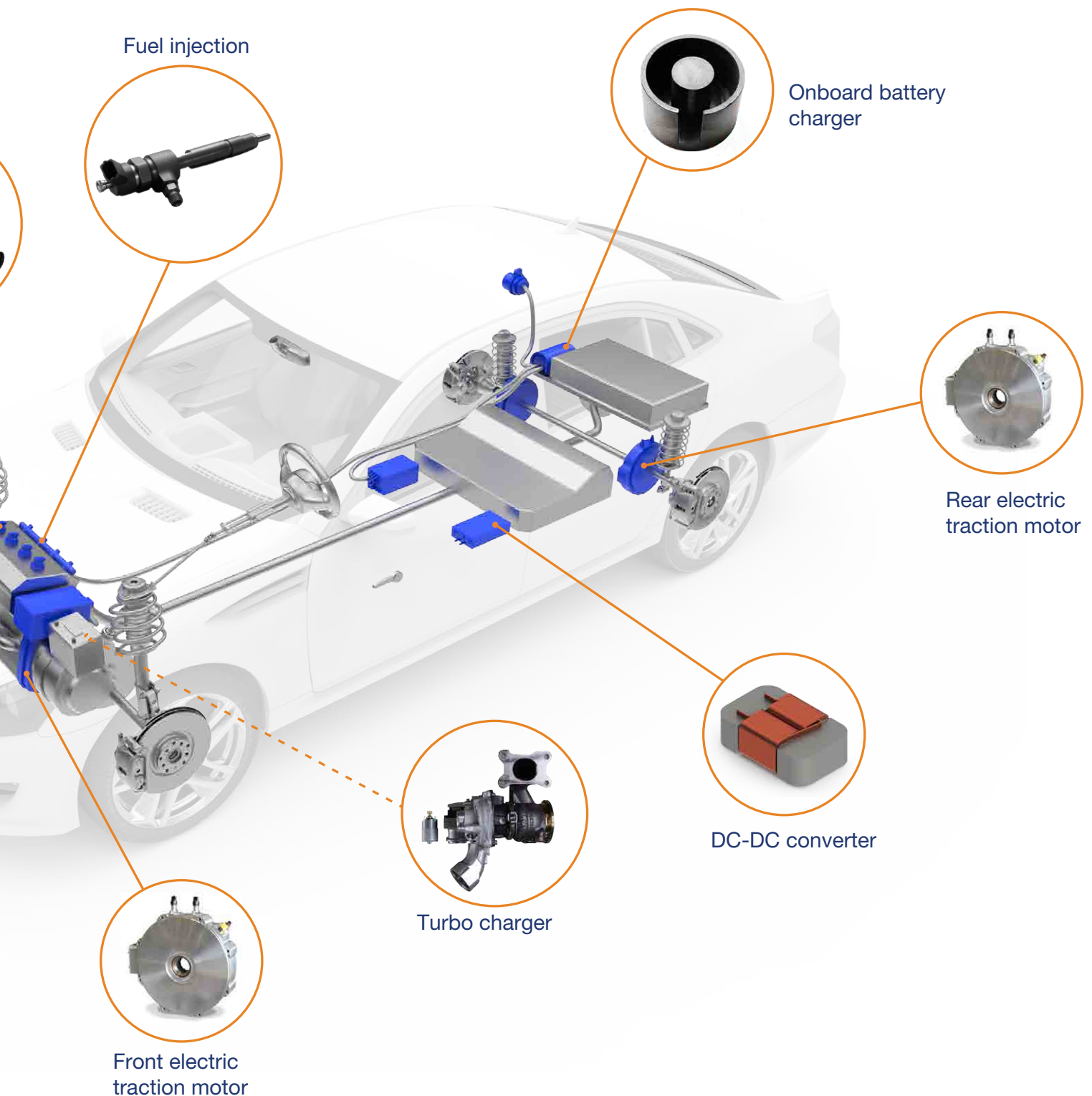
Electric Torque Machines Inc.



Opportunities everywhere

Core concept solutions

Somaloy provides optimal core concept solutions for a range of market areas such as household appliances and heating, ventilation and air conditioning (HVAC). However, automotive is the widest market area with target applications as shown in the illustration below.



Making components of powder

Powder Metallurgy

Somaloy is tailored for high volume, low-cost component production by utilising the Powder Metallurgy (PM) method. The main benefits of the PM production method is the efficient, almost waste-less transformation of metal powder into complex net-shaped components, reducing the need for subsequent operations.

Components made of Somaloy are formed into net-shape at large compaction pressures to reach highest density possible. The forming is made in dedicated tool-sets mounted in automated presses working at efficient production rates. After compaction, the SMC component will pass through heat-treatment to improve the magnetic performance by reducing the residual stress from the compaction deformation.

After forming and heat-treatment the components are normally directly ready for further assembly into the magnetic circuit of the application. Careful design for manufacturing results in simplified, easy assembly and significant savings on other adjacent components in the application.



Find out more

For inquiries please contact your local sales representative or visit www.hoganas.com/somaloy