

# Award winning problem solvers

UDDEHOLM STEEL FOR POWDER COMPACTING

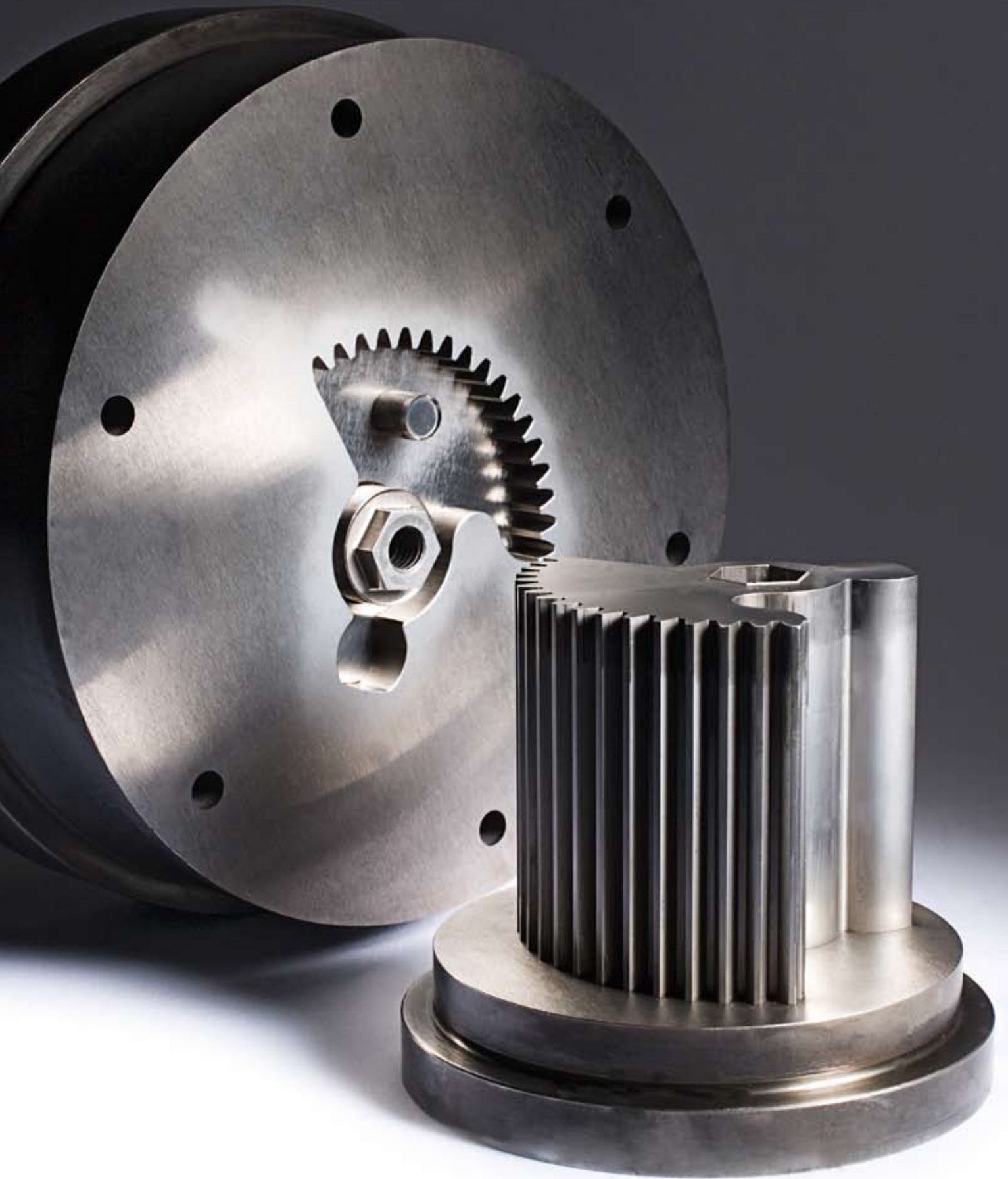


## Keep on going!

The life of your tool is crucial in powder compacting processes. With Uddeholm Steel for Powder Compacting, you can increase the life span of your tools. They often last twice as long or even longer than tools made of conventional tool steel or high speed steel.

Galling, adhesive wear and high friction are serious problems in many cold forming operations. After many years of analysing tooling problems, Uddeholm can now offer the best solutions to them. New production processes make this possible. Uddeholm Vancron 40 has an internal surface coating that vastly reduces friction. This means that you do not need to surface coat any Uddeholm Vancron 40 tool, and that you can keep on producing long after your competitors have given up.

Uddeholm Steel for Powder Compacting solve most tooling-related problems that might occur during the compacting process. The four tool steel solve the following common tooling problems: galling, adhesive wear, abrasive wear, chipping and cracking. Furthermore, they are all easy to heat treat and maintain good dimensional stability. Keep on going with the award winning steel Uddeholm Vancron 40 and its complements.



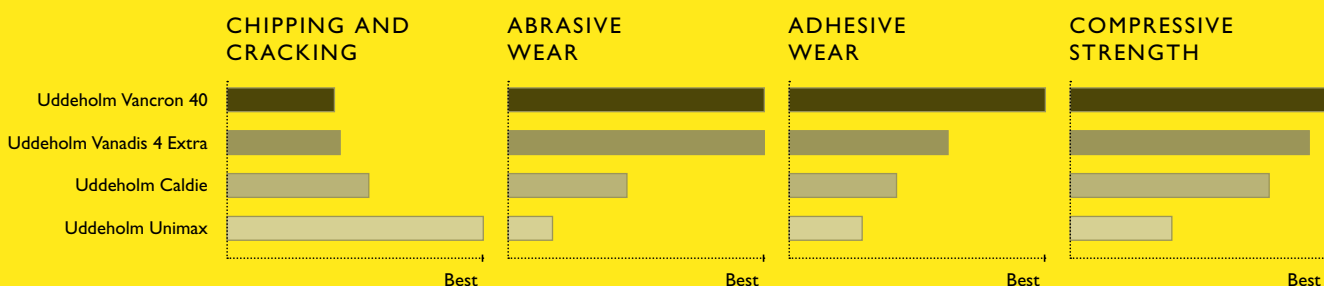
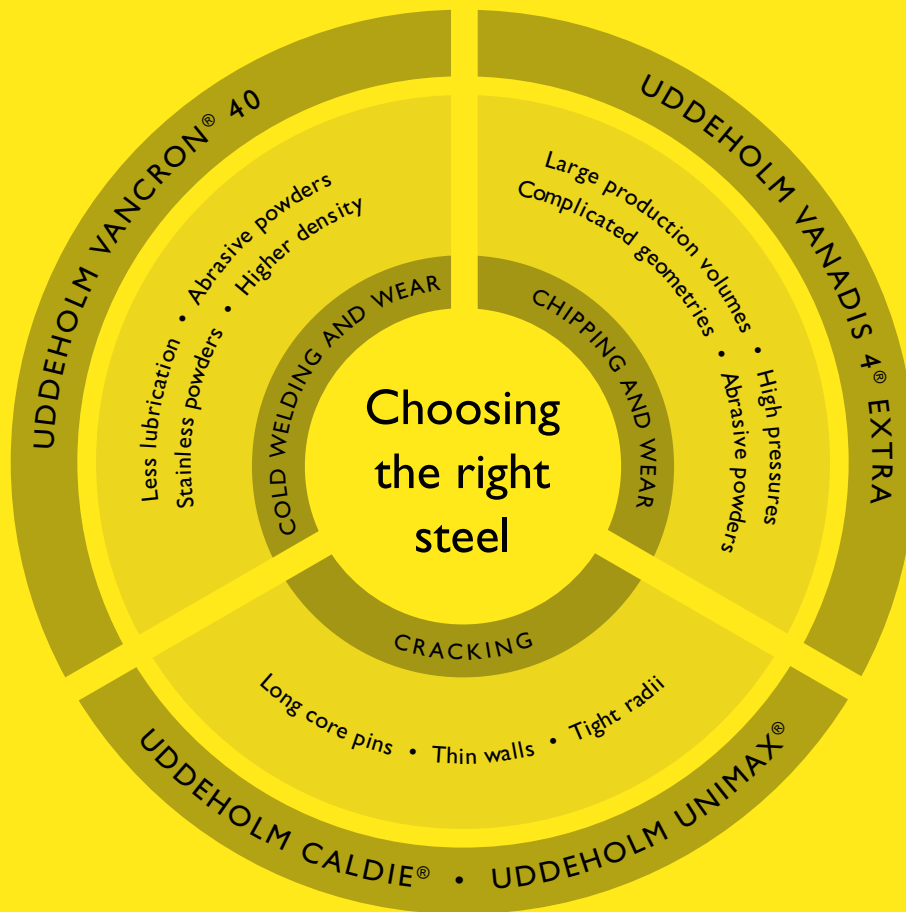
Classified according to EU Directive 1999/45/EC. For further information see our "Material Safety Data Sheets".

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## GET IT ALL FROM UDDEHOLM

Uddeholm Steel for Powder Compacting are great problem solvers. By using various combinations you can achieve superior results in your process. Uddeholm offers a complete programme of steel with properties that will improve your powder compacting business. This in turn will improve your economy, shorten your lead times and make it easier for you to keep your promises. You can get all the tool steel you need from Uddeholm.



## UDDEHOLM VANCRON® 40 – A REAL INNOVATION IN THE WORLD OF TOOLING!



Uddeholm Vancron 40 is the most modern powder metallurgical tool steel available on the market. In 2007 it received the EPMA award of merit because of its unique properties. With remarkable low friction and surface properties it is, in many cases, not even necessary to coat Uddeholm Vancron 40 to prevent galling. This means you can reduce the amount of lubrication in your powder to be pressed and attain higher densities and better properties. All in all this steel vastly improves the quality of the finished part and reduces the ejection force.

## UDDEHOLM VANADIS 4® EXTRA – REDUCE DOWNTIME

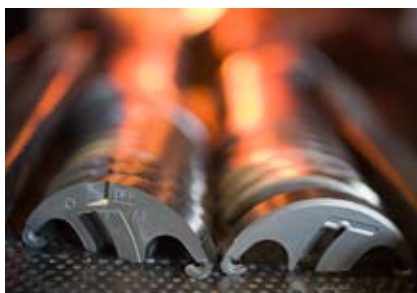
Uddeholm Vanadis 4 Extra is a third generation high alloy powder metallurgical tool steel. This makes it possible to combine a good chipping and cracking resistance with very good wear resistance, for complicated tooling and long runs. It is a highly robust material and you will experience fewer stoppages as well as improved total economy. Uddeholm Vanadis 4 Extra plays an important role as a universal problem solver in tooling for powder compacting.

## UDDEHOLM CALDIE® – TO AVOID CRACKING

Uddeholm Caldie is an Electro Slag Remelted (ESR) matrix type cold work tool steel. It can be hardened to 62 HRC, giving it a very good combination of chipping and cracking resistance, as well as a high compressive strength. This means it is very useful for powder compacting where higher densities are wanted, or when problems with plastic deformation of the tooling occur. The high compressive strength also makes Uddeholm Caldie a perfect substrate material for surface coated tools.

## UDDEHOLM UNIMAX® – SOLVES EXCESSIVE CHIPPING

Uddeholm Unimax is an Electro Slag Remelted (ESR) matrix type cold work tool steel. An extremely high ductility makes Uddeholm Unimax the best problem solver in the event of premature tool failures caused by excessive chipping and cracking. It is a particularly good choice for tools of sensitive geometries (tight radii, bends, teeth etc.).



UDDEHOLM is the world's leading supplier of tooling materials. This is a position we have reached by improving our customers' everyday business. Long tradition combined with research and product development equips Uddeholm to solve any tooling problem that may arise. It is a challenging process, but the goal is clear – to be your number one partner and tool steel provider.

Our presence on every continent guarantees you the same high quality wherever you are. ASSAB is our wholly-owned subsidiary and exclusive sales channel, representing Uddeholm in various parts of the world. Together we secure our position as the world's leading supplier of tooling materials. We act worldwide, so there is always an Uddeholm or ASSAB representative close at hand to give local advice and support. For us it is all a matter of trust – in long-term partnerships as well as in developing new products. Trust is something you earn, every day.

For more information, please visit [www.uddeholm.com](http://www.uddeholm.com), [www.assab.com](http://www.assab.com) or your local website.