

Uddeholm Sustainable Solutions FOR LIGHTER VEHICLES



TOOLING SOLUTIONS FOR
ADVANCED HIGH STRENGTH STEEL

Environmental advantages and safety first – a winning combination

The goal is lighter and safer vehicles. Use of advanced high strength steel is a key solution, thereby achieving goals such as reduction in the quantity of raw materials used and lower energy consumption. Combine this with materials that meet the demands for higher strength and safety, and you have a winning combination for the automotive industry – environmental friendliness and higher safety levels.

NEW MATERIALS REQUIRE NEW TOOLING SOLUTIONS

The increasing use of advanced high strength steel in new product designs place higher demands on the tool steel used in production. Previous generations of tool steel are insufficient to handle the pressures and loads. To succeed, you need tool steel that really withstand the toughest conditions. Uddeholm Sustainable Solutions is a new tool steel concept that really works.

Many industrial products can be reduced in weight and achieve increased durability by using advanced high strength steel in their design. With steel from Uddeholm Sustainable Solutions, it is possible to avoid premature tool failures and achieve optimum tooling economy at the minimum cost per part produced.

Advanced high strength steel is hard to handle - finally, tools that really work



Meeting the higher demands of the automotive industry

Uddeholm has, together with key industrial partners, been working with advanced high strength steel for more than a decade. Thanks to our long experience we can give you the right advice when it comes to tool steel suitable for processing advanced high strength steel.

BENEFIT FROM UDDEHOLM'S EXPERIENCE

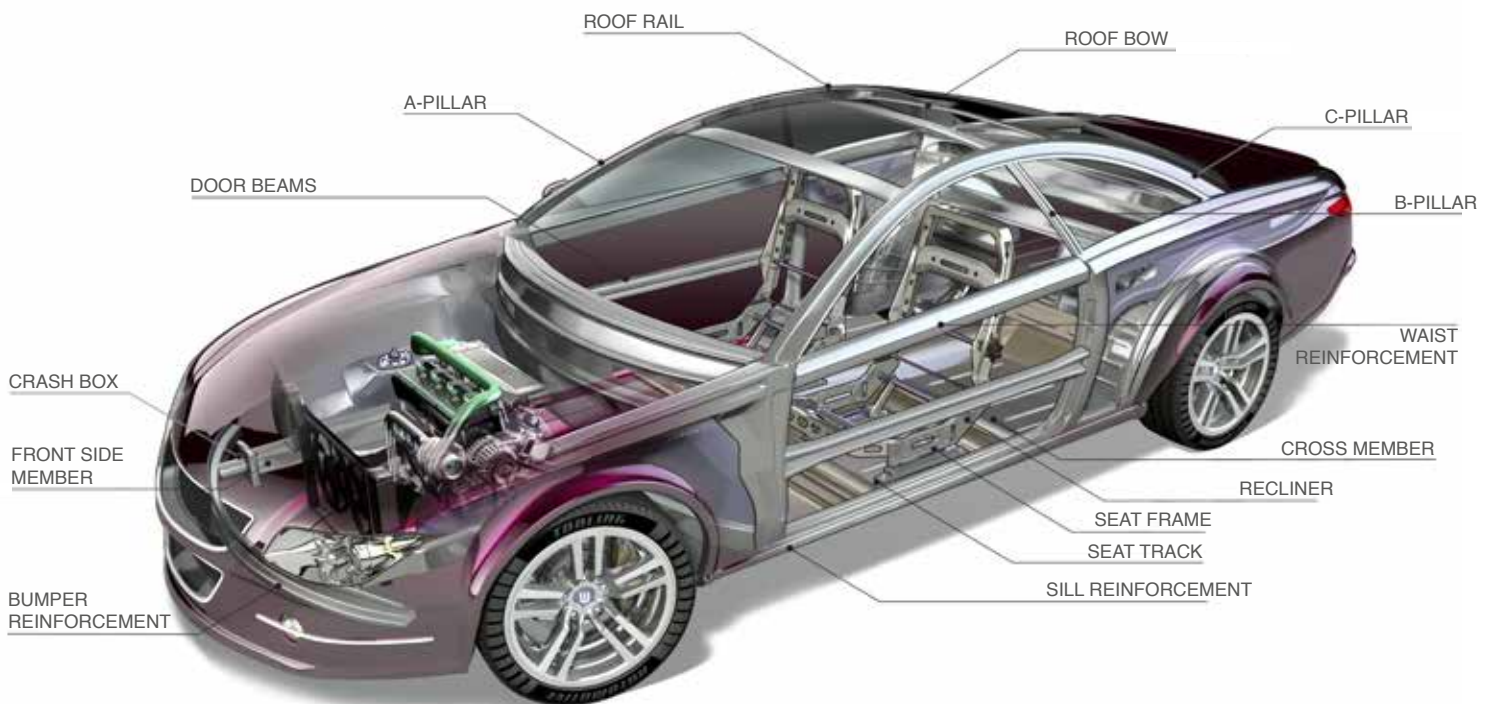
By using Uddeholm's knowledge you will be able to shorten your learning curve when it comes to selecting the right tool steel for your trouble free press line tooling. The Uddeholm guidelines are available to all our customers and are based on many years of experience with advanced high strength steel tooling solutions.

AVOID PREMATURE TOOL FAILURES

Through new product development, Uddeholm has products especially designed to handle the high demands for blanking and forming advanced high strength steel. With Uddeholm products you can avoid premature tool failures, enjoy reliable tooling solutions and save money.

LIGHTER VEHICLES – PART BY PART

These are examples of parts that can be manufactured in advanced high strength steel, using tool steel from Uddeholm.



TOOL STEEL RECOMMENDATION					
	Abrasive wear	Adhesive wear/ Galling	Plastic Deformation	Chipping	Breakage
PROBLEM AREAS	<ul style="list-style-type: none"> • Hot rolled sheet • High carbon sheets • Electrical sheet 	<ul style="list-style-type: none"> • Stainless sheet • Coated sheet • Thick sheet 	<ul style="list-style-type: none"> • High strength sheet • Thick sheet 	<ul style="list-style-type: none"> • Complicated design 	<ul style="list-style-type: none"> • Thin walls • Complicated design • Long punches
BEST SOLUTIONS	Uddeholm Vanadis® 8	Uddeholm Vancron® 40	Uddeholm Vanadis® 8	Uddeholm Unimax®	Uddeholm Unimax®
ALTERNATIVE SOLUTIONS	Uddeholm Vanadis® 4 Extra Uddeholm Sleipner® Uddeholm Caldie®	Uddeholm Vanadis® 8 Uddeholm Vanadis® 4 Extra Uddeholm Caldie®	Uddeholm Vanadis® 4 Extra Uddeholm Sleipner® Uddeholm Caldie®	Uddeholm Calmax® Uddeholm Caldie® Uddeholm Vanadis® 4 Extra	Uddeholm Caldie® Uddeholm Calmax® Uddeholm Vanadis® 4 Extra

Steel within Uddeholm Sustainable Solutions

Uddeholm Sleipner®

A universal tool steel, with a very broad property profile, that can replace the traditional AISI D2/W.-Nr. 1.2379. It is characterized by improved chipping resistance and compressive strength.

Uddeholm Calmax®

Very good chipping resistance makes Uddeholm Calmax suitable for short to medium length production runs where chipping or breakage are the predominant failure mechanisms.

Uddeholm Caldie®

Has a very good combination of cracking resistance and compressive strength. This means that it is very useful for blanking and forming advanced high strength steel sheet. Uddeholm Caldie is also a perfect substrate for all kinds of surface coatings.

Uddeholm Unimax®

An extremely high cracking resistance makes Uddeholm Unimax the best problem solver in the event of tool failures caused by severe chipping and cracking.

Uddeholm Vanadis® 4 extra SuperClean

Has the best combination of wear and chipping resistance of all the steels in the programme. It plays an important role as a problem solver in blanking applications.

Uddeholm Vanadis® 8

Combines one of the highest wear resistances on the market with good chipping resistance and compressive strength.

Uddeholm Vancron® 40 SuperClean

A real innovation in the world of tooling. The galling and adhesive wear resistance is very good and this steel can even be used without coating in many advanced high strength steel forming applications.

#1 IN HIGH PERFORMANCE TOOL STEEL

Since 1668 we have been providing a wide range of innovative cutting-edge solutions for our customers in demanding segments. Our dedicated employees work in almost ninety countries and together we deliver improved competitiveness to clients worldwide. Welcome to Uddeholm, #1 in high performance tool steel.