

Steel

A new, wider range of dual-phase steels

A tailored portfolio of cold-rolled
sheet products for the next
generation of lighter automobiles.



thyssenkrupp

We at thyssenkrupp have widened our portfolio of cold-rolled dual-phase steels well beyond the conventional high-strength steels. We have added new grades which as well as offering high energy absorption and deformation resistance also display enhanced cold-forming properties – and allow substantial weight savings in the car body. For the vehicles of the future: eco-friendly, resource-efficient, safe, comfortable, and with low production and running costs.

A wider range with a lot to offer.

Alongside our proven steel concept, our extended portfolio of cold-rolled dual-phase steels now offers you:



The full spectrum of high-strength classes – from 500 to 1,200 MPa



Attractive characteristics for crash-relevant parts



New degrees of freedom in the cold forming of ultrahigh-strength structural parts



Worldwide availability to recognized VDA standard

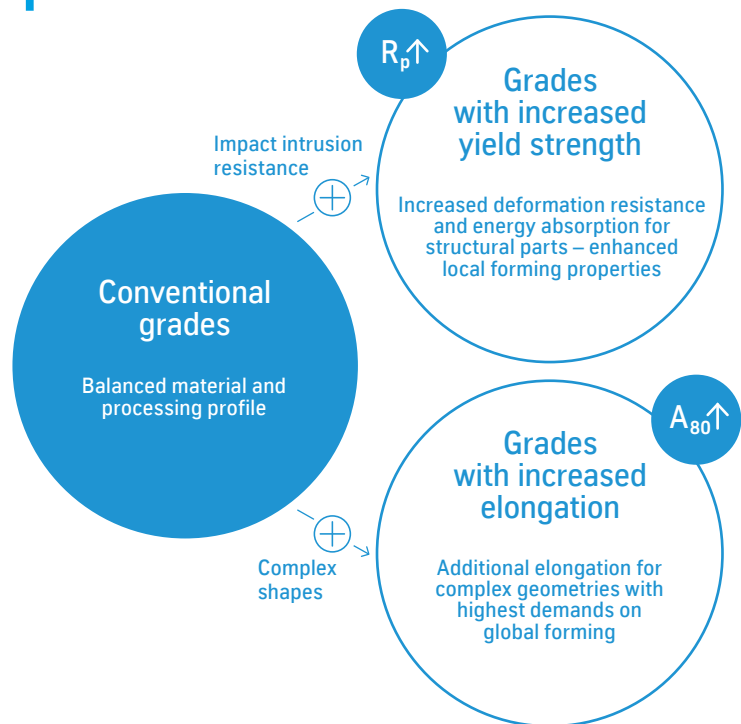
We have used the opportunity created by the new VDA 239-100 standard for cold-rolled sheet to structure our dual-phase steel portfolio clearly according to key applications and add several interesting new products.

For you this means you can make more accurate decisions and be sure you're getting the best materials for your needs – and from a single source.

Good things come in threes. At thyssenkrupp.

High strength, good formability or enhanced crash performance: with our dual-phase steels we have the right solution for every application.

We offer a portfolio of cold-rolled dual-phase steels that opens up new opportunities and degrees of freedom. A coordinated range, logically laid out, across all strength classes. As well as the conventional grades for universal use we now offer additional options for increased yield strength and ductility. They provide added potential for crash performance and part complexity in lightweight structures – while retaining our proven steel concept and without any restrictions on processing and joining.



The grades marked with * fulfill the specifications of material sheet VDA 239-100.

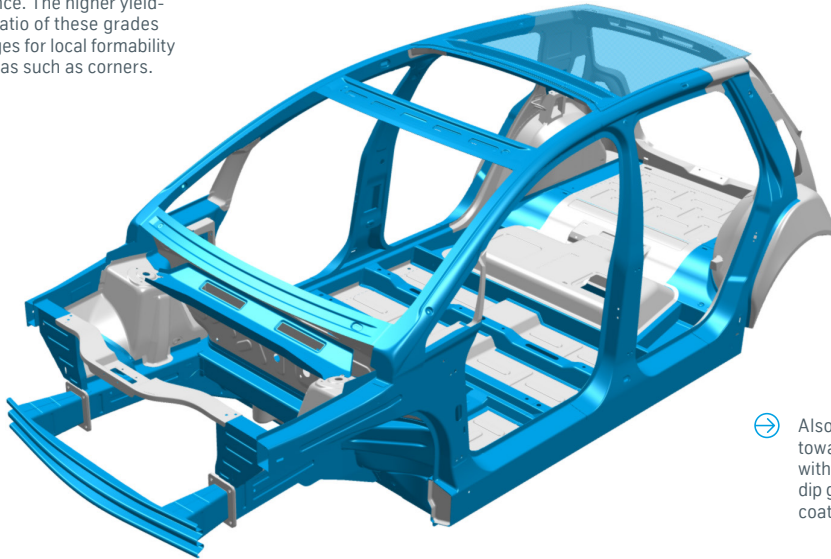
Portfolio of cold-rolled dual-phase steels

	Strenght classes				
	500 MPa	600 MPa	800 MPa	1,000 MPa	1,200 MPa
Conventional grades	DP-K® 290Y490T*	DP-K® 330Y590T*	DP-K® 440Y780T* DP-K® 440Y780THHE	DP-K® 590Y980T*	DP-K® 780Y1180T
Increased yield strength $R_{p0.2}$		DP-K® 420Y590T	DP-K® 500Y780T	DP-K® 700Y980T*	DP-K® 900Y1180T
Increased elongation A_{80}		DP-K® 330Y590T DH*	DP-K® 440Y780T DH*	jetQ® 700Y980T	jetQ® 850Y1180T

The grade names are based on material sheet VDA 239-100.

jetQ® 700Y980T and jetQ® 850Y1180T are innovative multi-phase steels of the third generation, which complement the portfolio of dual-phase steels. In contrast to classic dual-phase steels in the same tensile strength class, they possess an increased yield strength with enhanced strain. As such, they open up new light construction potentials, in particular for complex structural components for safety-critical applications. Further information can be found on our .

- ⤴ If the focus is on intrusion protection in a side impact, the higher yield strengths of **DP-K® 420Y590T**, **DP-K® 700Y980T** and **DP-K® 900Y1180T** provide the necessary deformation resistance. The higher yield-to-tensile strength ratio of these grades also brings advantages for local formability in individual part areas such as corners.



- ⤴ Also interesting is the trend towards outer skin applications with **DP-K® 290Y490T** with hot-dip galvanized and ZM Ecoprotect® coatings.

- ⤴ Grades **DP-K® 330Y590T** and **DP-K® 440Y780T** are proven solutions for longitudinal and cross members. Variants **DP-K® 330Y590T DH** or **DP-K® 440Y780T DH** are ideal for higher demands on forming or crash performance.

- ⤴ **DP-K® 780Y1180T** and **DP-K® 900Y1180T** set new standards as ultrahigh-strength cold forming grades in the 1,200MPa class. Main uses are rockers and side impact beams.



More than just steel: Customized services and consulting at first hand.

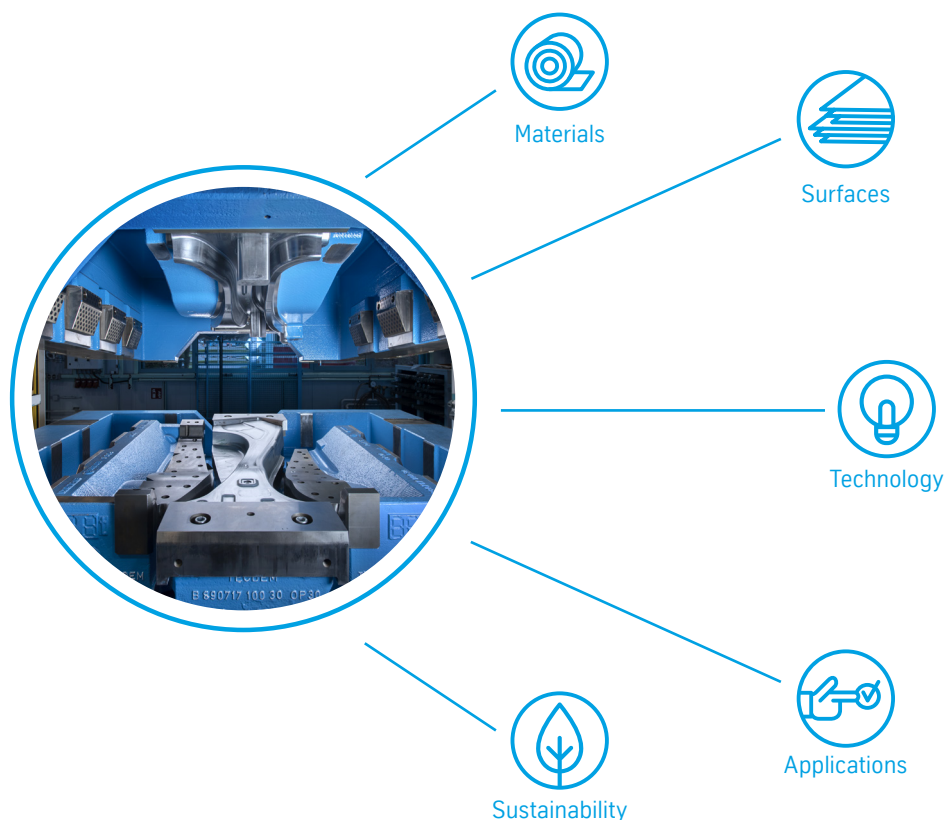
More than 25 years-experience in lightweight construction in the automotive industry and being one of the leading manufacturers of high-performance electrical sheet for drive motors, makes thyssenkrupp your ideal partner for all matters concerning electro-mobility.

We develop new technology for the production of green steel and pursue our path towards climate neutrality consequently. Our experts support you in the implementation of your individual mobility strategy with customized steel solutions and validated consulting competence.

Do you require advice concerning sustainable materials, their processing or surfaces? Do you wish to further decrease the CO₂ footprint of your vehicles? Please contact us.

#nextgenerationsteel

A new generation of steel
for coming generations



A large industrial steel mill with a massive sheet of metal being processed by machinery. The scene is dominated by vertical and diagonal lines of metal, with a bright yellow and pink mechanical component in the foreground. The lighting is dramatic, highlighting the metallic surfaces.

No expense too great.

Our advanced high-tech steels place high demands on production equipment and process control. That's why we invest continuously in cold rolling, hot-dip coating and other production equipment for our ultra-high-strength products.

Steel

thyssenkrupp Steel Europe AG
Kaiser-Wilhelm-Straße 100
47166 Duisburg, Germany
P: +49 203 52-0
F: +49 203 52-25102
www.thyssenkrupp-steel.com
info.steel@thyssenkrupp.com

Automotive

P: +49 203 52-45541
info.auto@thyssenkrupp.com

engineering.tomorrow.together.