

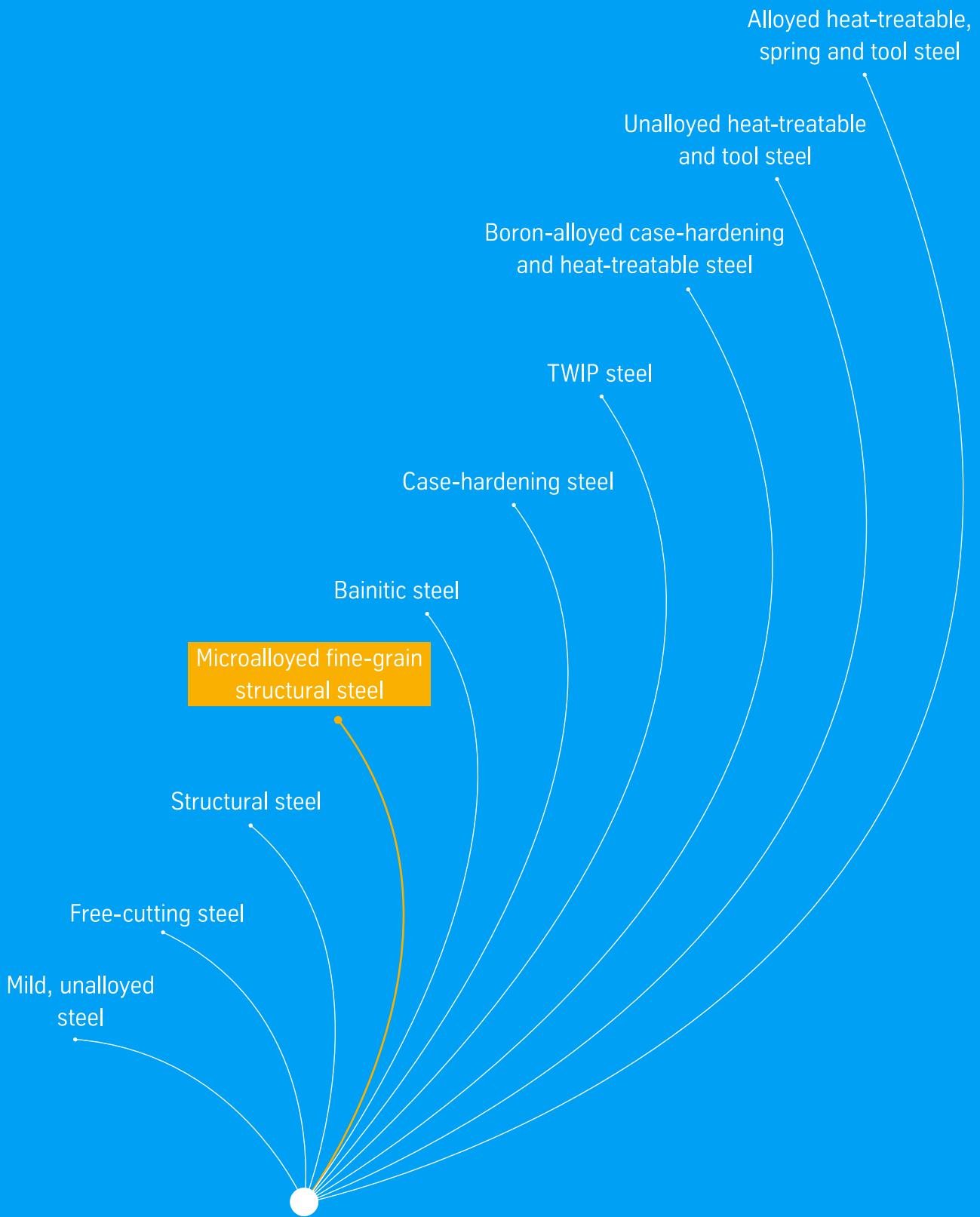
Steel
Precision Steel

precidur[®] Microalloyed fine-grain structural steels

Hot-rolled fine-grain structural steels with extremely close thickness tolerances. Ideally suited for complex forming processes.



thyssenkrupp



precidur®

is our thyssenkrupp Hohenlimburg trademark for premium-quality precision strip. And it epitomizes the way our service and support are systematically focused on the individual and highly exacting requirements of our customers.

precidur[®] – our brand for precision strip

precidur[®] stands for extremely close thickness and profile tolerances in widths up to 720 mm and thicknesses of 1.5 to 16 mm; optimum surface properties, whether black or pickled; homogenous material properties, full hard and annealed; a wide variety of grades, from unalloyed to high ductility and high strength to high-alloy; rounded mill edges without burrs or microcracks that ensure no embrittlement due to work hardening. All in all, precidur[®] stands for our qualitative edge, built up over more than 150 years, extended through ongoing

Modernization measures and proof of our customer focus and our all-round reliability. Full process automation, unparalleled speed of production, short-term availability, maximum flexibility in putting together even small, tailored batch sizes, constant transparency and data availability, rapid response to short-notice change request-in fact we're ideally prepared for every eventuality.

Or to put it another way: We are your premium partner for premium precision steel. Today, tomorrow and beyond. Together with precidur[®] we look forward to your challenge.

The advantages of precidur[®] at a glance:



Extremely close thickness and
profile tolerances



Wide variety
of grades



Homogenous material properties,
optimum surface quality



Tailored batch sizes



Ideal for processing and
forming

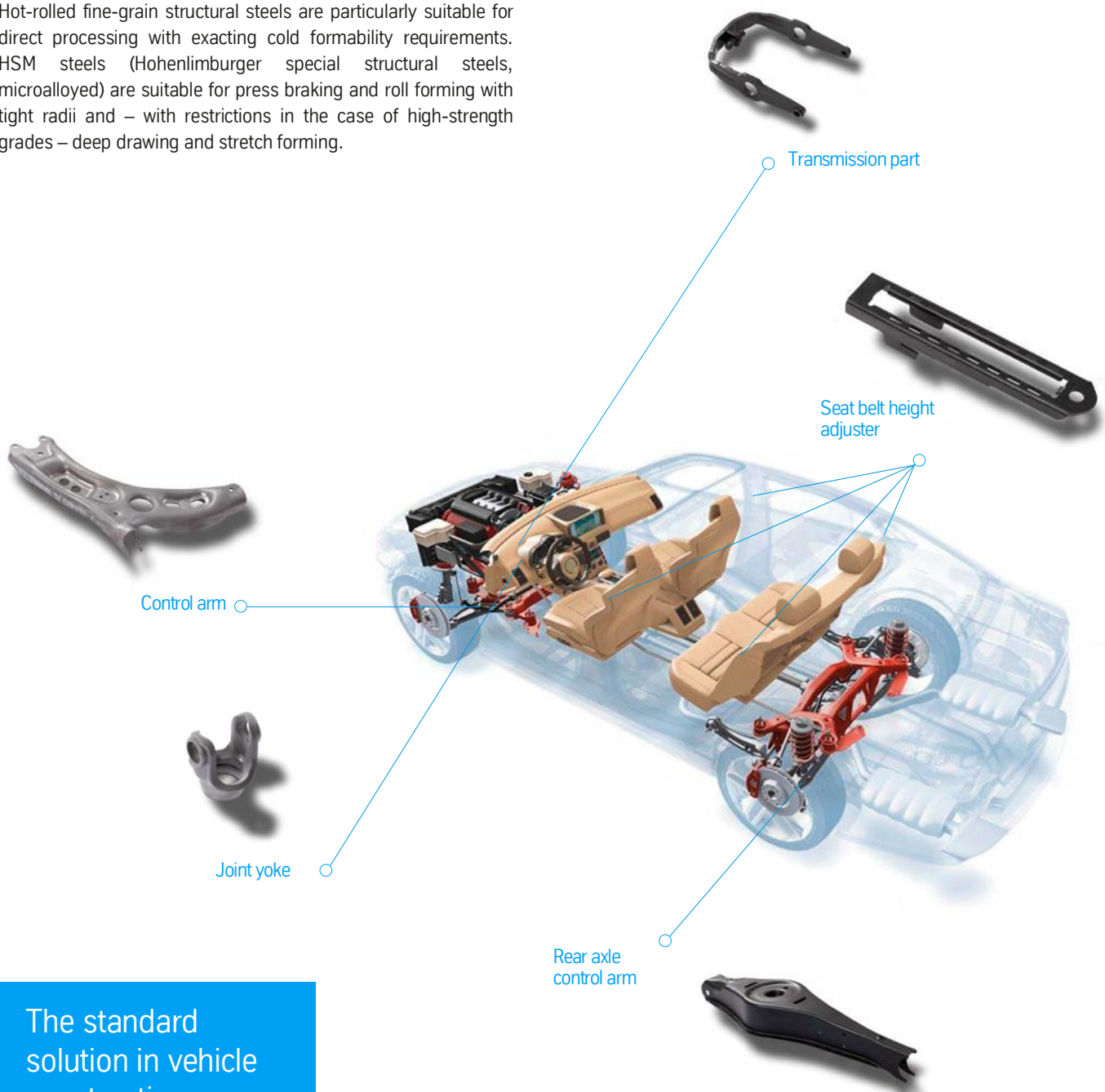


Quick, flexible and competent
support and service

Microalloyed steels MC

precidur® microalloyed fine-grain structural steels are produced with low carbon equivalents in accordance with DIN EN 10149-2.

Hot-rolled fine-grain structural steels are particularly suitable for direct processing with exacting cold formability requirements. HSM steels (Hohenlimburger special structural steels, microalloyed) are suitable for press braking and roll forming with tight radii and – with restrictions in the case of high-strength grades – deep drawing and stretch forming.



The standard
solution in vehicle
construction

Technical features

Mechanical properties MC grades						
	Tensile strength	Yield strength	Elongation		In acc. with DIN EN 10149-2	Material number
	R _m [MPa]	R _e [MPa]	A _g min. %	A ₉₀ min. %		
precidur® HSM 315	min. 315	410 - 490	min. 25	min. 21	S315MC	1.0972
precidur® HSM 355	min. 355	430 - 510	min. 25	min. 21	S355MC	1.0976
precidur® HSM 380	min. 380	450 - 530	min. 24	min. 20	S380MC*	1.0978
precidur® HSM 420	min. 420	480 - 580	min. 22	min. 18	S420MC	1.0980
precidur® HSM 460	min. 460	520 - 620	min. 20	min. 17	S460MC	1.0982
precidur® HSM 500	min. 500	550 - 650	min. 19	min. 16	S500MC	1.0984
precidur® HSM 550	min. 550	600 - 700	min. 18	min. 15	S550MC	1.0986
precidur® HSM 600	min. 600	650 - 750	min. 17	min. 14	S600MC	1.8969
precidur® HSM 650	min. 650	700 - 820	min. 16	min. 13	S650MC	1.8976
precidur® HSM 700	min. 700	750 - 900	min. 16	min. 12	S700MC	1.8974
precidur® HSM 760	min. 760	810 - 960	min. 16	min. 12	S760MC*	1.0968

*The precidur® HSM 380 and precidur® HSM 760 grades are additions to the familiar strength classes and meet the chemical analysis requirements pursuant to DIN EN 10149. Test direction: in rolling direction

Possible delivery options for MC grades						
Options	Mill edge Cut Edge	pickled	black	slit	trimmed	cut to length
precidur® HSM	Mill edge or cut edge	✓	✓	✓	✓	✓

General thickness tolerances for precidur®								
Strip thickness [mm]	1,5 - 2,54	2,55 - 4,03	4,04 - 6,03	6,04 - 8,03	8,04 - 9,03	9,04 - 11,03	11,04 - 14,03	14,04 - 16,00
Standard tolerances [mm]	± 0,04	± 0,04	± 0,05	± 0,055	± 0,06	± 0,07	± 0,08	± 0,10
Special tolerances [mm]	± 0,03	± 0,035	± 0,04	± 0,045	± 0,05	± 0,055	± 0,06	± 0,07

General delivery options for precidur®	
Coil inside - Ø:	Standard 508 mm / optional 610 mm
Coil outer - Ø:	max. 1890 mm
Coil weight:	max. 20,5 kg / mm strip width
Strip width:	max. 720 mm
Strip thickness:	1,5 – 16 mm

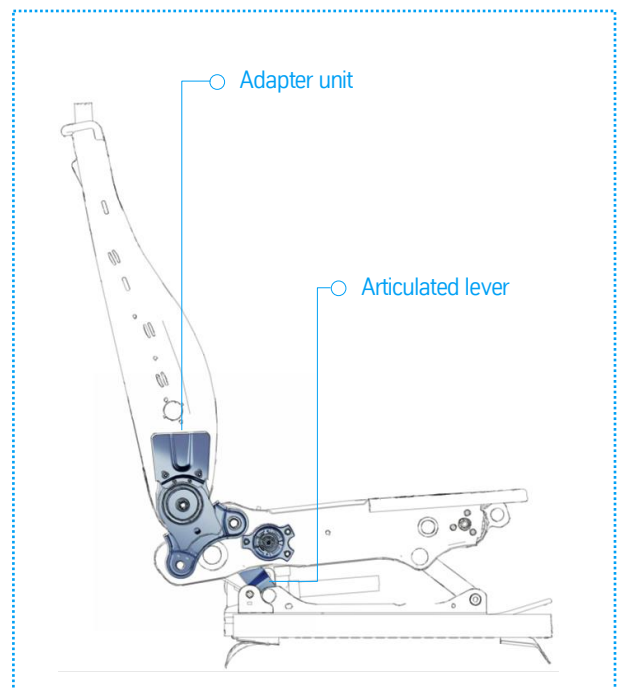
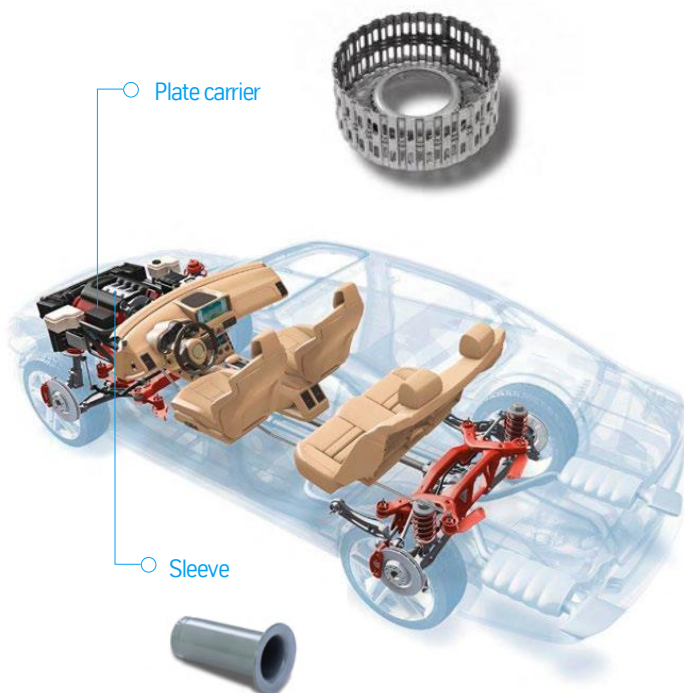
For further product information:



Microalloyed steels HD

- norm compliant -

High ductility (HD) microalloyed fine-grain structural steels open up new design possibilities in lightweight auto construction. The high-quality precidur® steel grades are produced with a very fine microstructure and embedded nano-precipitates, while their extremely low carbon content counters the formation of coarse and brittle areas in the microstructure. That makes these materials particularly suitable for the forming of complex geometries. Compared with conventional microalloyed steels, our precidur® HD grades also offer higher shear strain values and multiaxial elongation, ensuring greater process reliability in component production and good weldability.



The solution for complex forming processes

Technical features

Mechanical properties of HD grades

	Tensile strength	Yield strength	Elongation		In acc. with DIN EN 10149-2	Material number
	R _{m0.2} [MPa]	R _m [MPa]	A ₅ min. %	A ₈₀ min. %		
precidur® HSM 315 HD	min. 315	400 - 500	min. 28	min. 23	S315MC	1.0972
precidur® HSM 355 HD	min. 355	430 - 510	min. 28	min. 23	S355MC	1.0976
precidur® HSM 380 HD	min. 380	450 - 550	min. 25	min. 20	S380MC	1.0978
precidur® HSM 420 HD	min. 420	480 - 580	min. 24	min. 19	S420MC	1.0980
precidur® HSM 460 HD	min. 460	520 - 620	min. 22	min. 18	S460MC	1.0982
precidur® HSM 500 HD	min. 500	550 - 670	min. 20	min. 16	S500MC	1.0984
precidur® HSM 550 HD	min. 550	600 - 700	min. 20	min. 15	S550MC	1.0986
precidur® HSM 600 HD	min. 600	650 - 820	min. 17	min. 13	S600MC	1.8969
precidur® HSM 650 HD	min. 650	700 - 860	min. 17	min. 13	S650MC	1.8976
precidur® HSM 700 HD	min. 700	750 - 900	min. 16	min. 12	S700MC	1.8974
precidur® HSM 800 HD	in development

Test direction: in rolling direction

Possible delivery options for HD grades

Options	Mill edge Cut edge	pickled	black	slit	trimmed	cut to length
precidur® HSM HD	Mill edge or cut edge	✓	✓	✓	✓	✓

General thickness tolerances for precidur®

Strip thickness [mm]	1,5 - 2,54	2,55 - 4,03	4,04 - 6,03	6,04 - 8,03	8,04 - 9,03	9,04 - 11,03	11,04 - 14,03	14,04 - 16,00
Standard tolerances [mm]	± 0,04	± 0,04	± 0,05	± 0,055	± 0,06	± 0,07	± 0,08	± 0,10
Special tolerances [mm]	± 0,03	± 0,035	± 0,04	± 0,045	± 0,05	± 0,055	± 0,06	± 0,07

General delivery options for precidur®

Coil inner - Ø: Standard 508 mm / optional 610 mm

Coil outer - Ø: max. 1890 mm

Coil weight: max. 20,5 kg / mm strip width

Strip width: max. 720 mm

Strip thickness: 1,5 – 16 mm

For further product information:



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