

Precision Steel

# precidur<sup>®</sup> 16MnCr5

Product information for hot-rolled precision strip made in Hohenlimburg



thyssenkrupp

Version 01/22

## Case hardening steel

Case hardening steels from BU Precision Steel are produced in accordance with DIN EN ISO 683-3, DIN EN 10084 and analogous to DIN EN 10132 and permit the combination of hard, wear-resistant surfaces and high core toughness.

Close analysis ranges tailored to specific purposes and precisely controlled rolling parameters guarantee consistent and outstanding processability.

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## precidur<sup>®</sup>

- is used in virtually all industry sectors.
- offers close thickness tolerances similar to cold-rolled strip, optimum surface finishes and consistent material properties over the entire strip length and width.
- is characterized by its symmetrical strip profiles and mill edges.
- is the sum of all the experience we have gained in more than 100 years of manufacturing and processing steel.

## Technical features

Case hardening steel

Material number:	1.7131
Proprietary brand:	precidur® 16MnCr5
Delivery specification:	DIN EN ISO 683-3, DIN EN 10084, analogous to DIN EN 10132
Application:	Case hardening steel for auto, machinery and plant construction

### Chemical composition

Ladle analysis mass percentages	C [%]	Si [%]	Mn [%]	P [%]	S [%]	Cr [%]	Mo [%]	Ni [%]	Al [%]	Cu [%]
min.	0.14	-	1.00	-	-	0.80	-	-	-	-
max.	0.19	0.40	1.30	0.025	0.035	1.10	0.10	0.20	0.015*	0.20

Further special analyses available

\* Al killed variant available

HH variant available

### Mechanical properties

Longitudinal to rolling direction	Tensile strength R <sub>m</sub> [MPa]	Elongation A <sub>5</sub> [%]	A <sub>80</sub> [%]
Rolled condition	max. 630	min. 19	min. 18
GKZ annealed	max. 540	min. 24	min. 20

### Possible delivery options

Options	Mill edge (NK) Cut edge (GK)	pickled	unpickled	slit	trimmed	cut to length	annealed	not annealed
precidur® 16MnCr5	NK or GK	✓ or	✓	✓	✓	✓	✓	✓

### General thickness tolerances

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

Coil inner diameter: standard 508 mm / optional 610 mm

Coil outer diameter: max. 1,890 mm

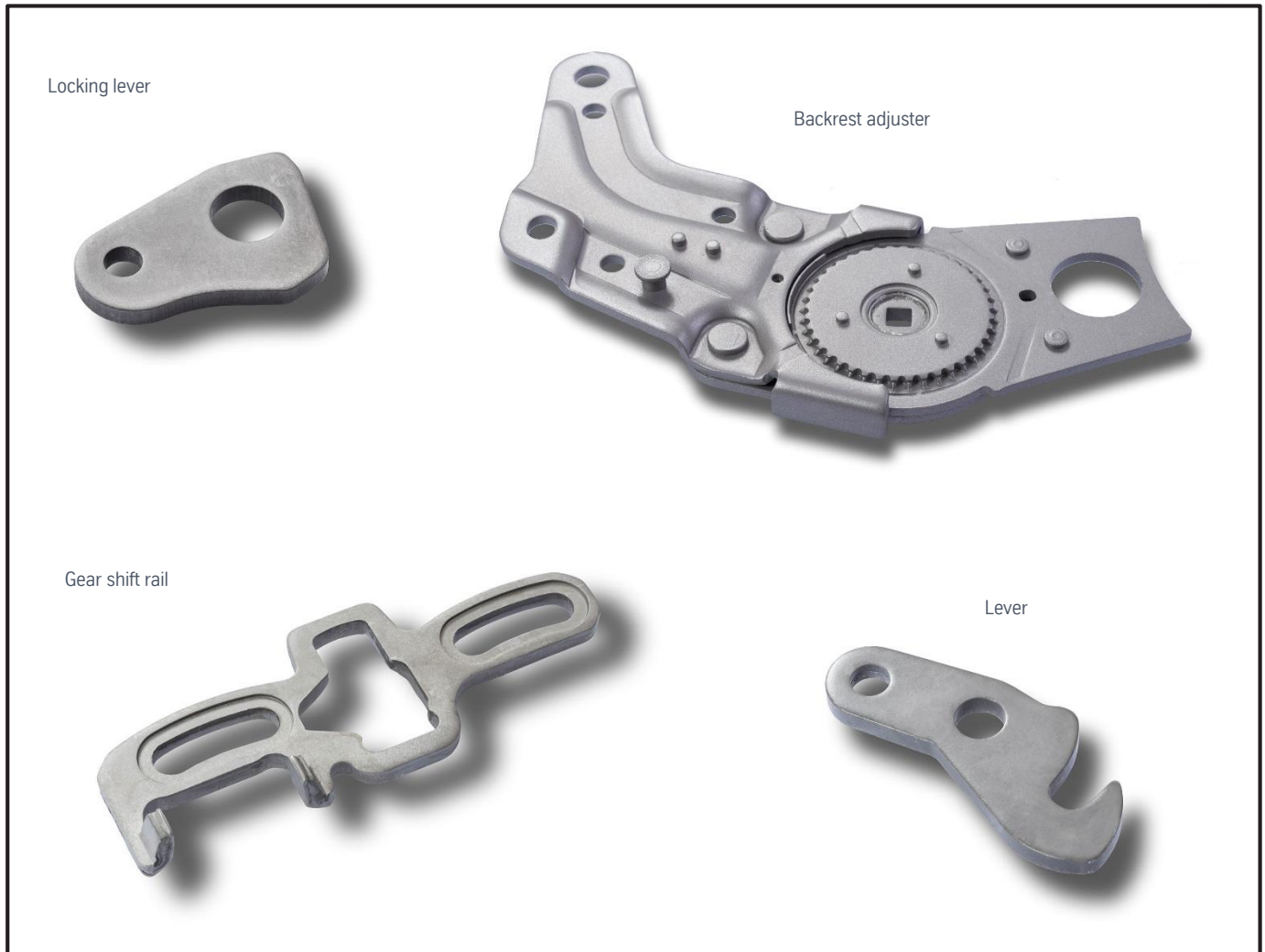
Coil weight: max. 20.5 kg/mm strip width

Strip width\*: max. 720 mm

Strip thickness\*: 1.5 – 16 mm

\* May be subjected to restrictions.

## Application examples for case hardening steel



Special mill grades feature unique thyssenkrupp properties. Other terms and conditions of supply not specified here will be based on the applicable specifications. The specifications used will be those valid on the date of publication of this product information.

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