

Precision Steel

precidur® C55/C55E/C55S

Product information for hot-rolled precision strip made in Hohenlimburg



thyssenkrupp

Version 11/24

Unalloyed heat treatable steel

Whether it's for wear parts, springs, chain links or safety components, heat treatable steels made of precidur® offer the right solution for all requirements. Good fine blanking properties and formability in the annealed condition are combined with high strength and good toughness in the quenched and tempered condition. Close analysis ranges tailored to specific purposes and precisely controlled rolling parameters guarantee consistent and outstanding processability and consistent heat treatment results.

We offer a variant of unalloyed heat treatable steels in accordance with DIN EN ISO 683-1, resp. DIN EN 10083-2 with carbon contents between 0.20 % and 0.60 %.

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precidur®

- 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

Heat treatable steel

Material number: 1.0535 / 1.1203 / 1.1204

Material name: C55 / C55E / C55S

Proprietary brand: precidur® C55 / C55E / C55S

Delivery specification: DIN EN ISO 683-1. DIN EN 10083-2 and analogous to DIN EN 10132

Application: Heat-treatable steel for parts in auto, machinery and plant construction

Chemical composition

| Ladle analysis mass percentages | C [%] | Si [%] | Mn [%] | P [%] | S [%] | Cr [%] | Mo [%] | Ni [%] | Al [%] | Cu [%] |
|---------------------------------|-------|--------|--------|-------|-------|--------|--------|--------|--------|--------|
| min. | 0.52 | 0.15 | 0.60 | - | - | 0.10 | - | - | - | - |
| max. | 0.60 | 0.35 | 0.90 | 0.025 | 0.015 | 0.40 | 0.10 | 0.20 | 0.015* | 0.20 |

Further special analyses available/ *Al killed variant available/ **Cr-free variant available

Mechanical properties

| Longitudinal to rolling direction | Tensile strength R _m [MPa] | Elongation A ₅ [%] | A ₈₀ [%] |
|-----------------------------------|--|----------------------------------|---------------------|
| Rolled condition* | Ø 850 | min. 15 | min. 11 |
| GKZ annealed | max. 610 | min. 23 | - |

*Restricted mechanical property ranges can be agreed on request.

Possible delivery options

| Options | Mill edge (NK) Cut edge (GK) | pickled | unpickled | slit | trimmed | Cut to length | annealed | not annealed |
|-------------------------|---------------------------------|---------|-----------|------|---------|---------------|----------|--------------|
| precidur® C55/C55E/C55S | 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

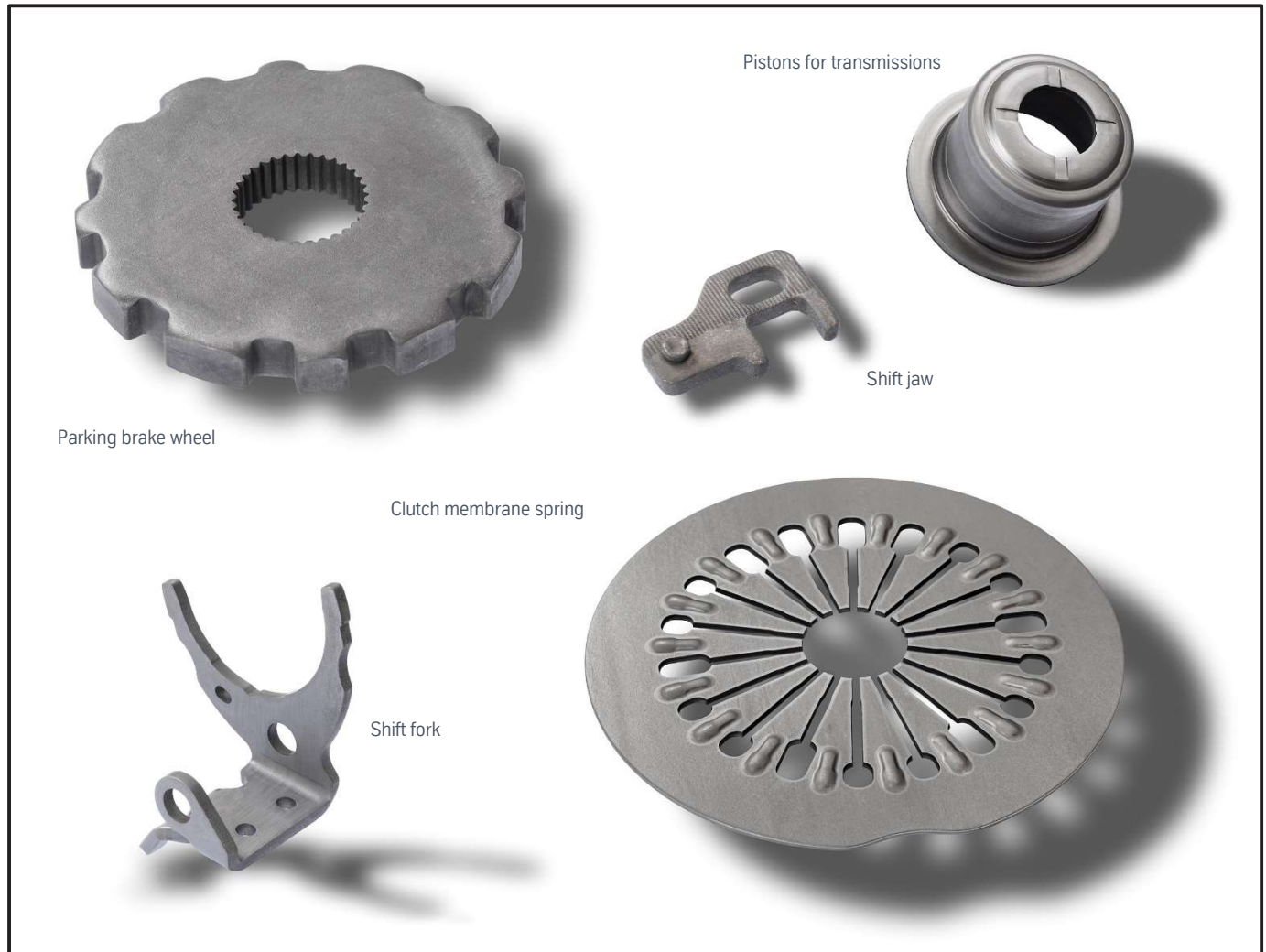
Coil weight: max. 20.5 kg/mm strip width

Strip width*: max. 720 mm

Strip thickness*: 1.5 – 16 mm

* May be subjected to restrictions.

Application examples for unalloyed heat treatable 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.

Please contact our sales/technical customer support team for detailed information.

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