



STRENX 960 PLUS

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General Product Description

The high-strength structural steel at 960 MPa

Strenx™ 960 Plus is a hot-rolled structural strip steel made for cold forming, with a minimum yield strength of 960 MPa.

Strenx 960 Plus combines good weldability with good toughness and strength in the welds. These cut-to-length sheets feature excellent thickness accuracy in the strength level, providing an outstanding finish to the final products.

Typical applications include advanced lifting devices and lighter transport solutions and components.

Dimension Range

Strenx 960 Plus is available as cut to length sheets in thicknesses of 3.00- 6.00 mm, widths up to 1600 mm and lengths up to 16 meters.

Mechanical Properties

Yield strength $R_{eH}^{1)}$ (min MPa)	Tensile strength R_m (MPa)	Elongation A_5 (min %)	Min. inner bending radius for a 90° bend ²⁾
960	980- 1250	10	3.5xt

The mechanical properties are tested in the longitudinal direction.

Mechanical testing in the transverse direction is available after special agreement at order.

¹⁾ If ReH is not applicable then Rp0,2 is used.

²⁾ For both longitudinal and transverse direction.

Impact Properties

Min. Impact energy for longitudinal test Charpy V 10x10 mm test specimens	Test temperature
27 J	-40 °C

Impact testing according to EN ISO 148-1 is performed on thicknesses ≥ 6 mm. The specified minimum value corresponds to a full-size specimen.

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Chemical Composition (ladle analysis)

C (max %)	Si (max %)	Mn (max %)	P (max %)	S (max %)	Al _{tot} (min %)
0.18	0.50	2.10	0.020	0.010	0.018

The steel is grain refined.

In addition Nb, V, Cr, Mo, B, Ti may be used.

Carbon equivalent CET(CEV)

Thickness (mm)	3 - 6 mm
Typical CET (CEV)	0.34 (0.50)

$$CET = C + \frac{Mn + Mo}{10} + \frac{Cr + Cu}{20} + \frac{Ni}{40}$$

$$CEV = C + \frac{Mn}{6} + \frac{Cr + Mo + V}{5} + \frac{Cu + Ni}{15}$$

Tolerances

More details are given on www.ssab.com.

Thickness

Tolerances according to Strenx Thickness Guarantees. Strenx Guarantees offer considerably narrower thickness tolerances compared to EN 10 051.

Length and Width

Width and length tolerances according to SSAB standard. The SSAB standard offer narrower width and length tolerances compared to EN 10 051. Length tolerances only apply for cut to length sheets.

Shape

Tolerances according to EN 10 051. Narrower tolerances according to the SSAB standard are available on request.

Flatness

Tolerances according to Strenx Flatness Guarantees Class A. Strenx Flatness Guarantees offer narrower tolerances compared to EN 10 051. Flatness guarantees only apply for cut to length sheets.

Surface Properties

According to EN 10 163-2 Class A, Subclass 3.

Delivery Conditions

Strenx 960 Plus is supplied in as rolled surface condition, pickled surface is available in a limited thickness range. The product is thermomechanically rolled and further processed for final properties.

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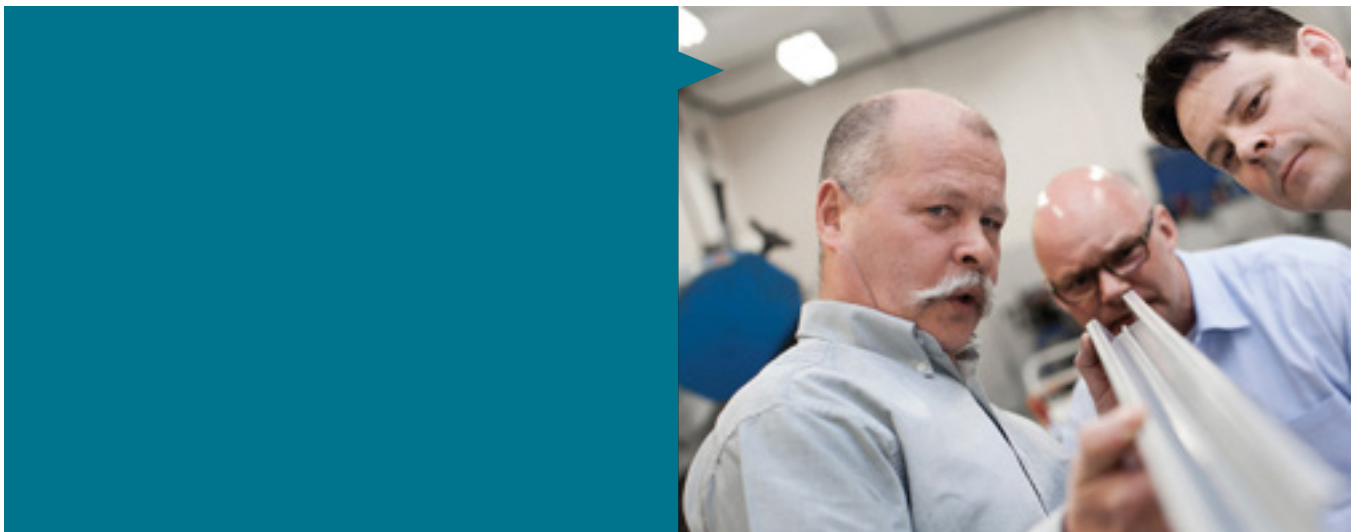
Fabrication and Other Recommendations

Strenx 960 Plus has very good weldability with good toughness and strength in the welds.

Strenx 960 Plus has good forming and cutting performance.

Strenx 960 Plus is not suited for applications requiring hot working or heat treatments at temperatures above 400°C, since the material then may lose its guaranteed properties.

For information concerning fabrication, see SSAB's brochures on www.ssab.com or consult Tech Support, techsupport@ssab.com. Appropriate health and safety precautions must be taken when bending, welding, cutting, grinding or otherwise working on the product.



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