



alform 960 CR x-treme

Cold-rolled steel strip made of ultra-high-strength steel

Successful light-weight design requires the utilization of high-strength and ultra-high-strength steels. The innovative steel grades of voestalpine provide exceptional advantages in reduced weight and processability.

The latest generation of alform x-treme grades is also available as cold-rolled steel strip. With a minimum yield strength of 960 MPa and thicknesses ranging between 1.5 and 2.0 mm, alform 960 CR x-treme makes it possible to manufacture components and vehicles with high service loads, high payloads and lower net weight. The material is particularly suitable for machinery applications such as articulated-arm cranes, commercial vehicles, aerial work platforms etc.

Convincing advantages

- » Low material thickness
- » Low residual stress
- » Excellent weldability
- » Best surface quality
- » High lightweight potential based on combination of strength and thickness



Premium quality
with reduced carbon footprint

alform®
greentec steel

Chemical composition

Ladle analysis in weight percent and carbon equivalent

Steel grade	C max.	Si max.	Mn max.	P max.	S max.	Al min.	Cr + Mo max.	Ti + Nb max.	Cu max.	B max.	Typical values	
											CEV	CET ¹⁾
alform 960 CR x-treme	0.23	1.00	2.90	0.05	0.01	0.015	1.00	0.15	0.20	0.005	0.51	0.36

¹⁾ Carbon equivalents pursuant to EN 1011-2 apply only to a Mn content up to 1.9% max.

Mechanical properties

Steel grade	Yield strength R _{p0.2} ¹⁾	Tensile strength R _m ¹⁾		Total elongation A ₈₀ ¹⁾	Recommended edge radii ²⁾ Ri min. at 90° edging Sheet thickness = s
	[MPa] min.	min.	max.	[%] min.	
alform 960 CR x-treme	960	1180	1350	5	3.50 s

¹⁾ Longitudinal to rolling direction

²⁾ Narrower radii are also possible in guided bending operations such as roll forming.

Finish and delivery condition

The thickness tolerance for thicknesses ranging from 1.5 to 2.0 mm is +/- 0.1 mm. Narrower tolerances are possible upon request. Supplied in pickled, cold-rolled and annealed condition. The surface quality is pursuant to EN 10130, and the material is delivered as surface type A, non-skin-passed. Roughness is not specifically defined. An Ra value of < 1.2 µm may result from the cold-rolling process.

Example dimensions

Maximum width per thickness (trimmed)

Steel grade	Maximum thickness [mm]					
	< 1.50	1.50	1.60	1.70	1.80	2.00
alform 960 CR x-treme	upon request	1580	1580	1400	1330	1180

Additional dimensions upon request.
The maximum sheet length is 6,000 mm. Additional lengths upon request.

Forms of supply

The following grades are available:

- » Cut sheets
- » Slit steel strip
- » Wide strip



Premium quality with reduced carbon footprint



Cold-rolled-steel strip – greentec steel Edition

Max. carbon footprint 1.97 kg CO₂e per kg of steel ¹⁾

¹⁾ per EN 15804+A2 (EPD methodology) cradle to gate

All products, dimensions and steel grades listed in each voestalpine supply range are available as greentec steel Edition.

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voestalpine Steel Division
voestalpine-Straße 3
4020 Linz, Austria
productmanagement@voestalpine.com
www.voestalpine.com/steel

