THICKNESS TOLERANCES HOT-ROLLED STEEL STRIP

At voestalpine, we are setting a new standard in the thickness tolerance of hot-rolled steel strip. State-of-the-art manufacturing lines and innovative measuring and control equipment guarantee hot-rolled steel strip of the highest quality and within the narrowest thickness tolerances. At voestalpine, we guarantee highest precision in three classes across the entire width and length of the strip.

Count on precise advantages:

- Guaranteed thickness tolerance values across the entire width and length of the strip
- Stable processes and efficiency during production
- Reproducible components with economical production

Hot-rolled steel strip is now also available as a greentec steel edition in proven quality with a reduced CO_2 footprint.

greentec steel

PREMIUM QUALITY
WITH REDUCED
CARBON FOOTPRINT

voestalpine Steel Division
www.voestalpine.com/stahl

voestalpine
ONE STEP AHEAD.

ULTIMATE class
» up to 1/6 of the standard tolerance
» for nominal pickled strip thicknesses ranging between 2.5 and 6.0 mm


ULTIMATE Class

ADVANCED class
» up to 1/4 of the standard tolerance
» for nominal strip thickness ranging between 2.0 and 20.0 mm


ADVANCED Class

BASIC class
» 50% of the standard tolerance
» for nominal strip thickness ranging between 2.0 and 20.0 mm


BASIC Class

CLASSES ABOVE THE REST

The tolerance values indicated in thickness tolerance classes apply to all hot-rolled steels of voestalpine, regardless of strip width and steel strength class (mild steels rated separately). The reference values for all voestalpine tolerances are those specified in EN 10051:2010. The thickness tolerance guarantees apply to 100% of the strip surface.

BASIC class

Compliance with the narrowest tolerances is the voestalpine standard. The state-of-the-art production facilities of voestalpine make it possible for us to deliver 50% of the values specified in DIN EN 10051:2010 as a standard for all steel grade classes A through D.

ADVANCED class

The most modern production technologies and self-learning production systems based on statistics make it possible to further narrow our thickness tolerances. Hot-rolled steel strip made by voestalpine achieves thickness tolerances of up to a quarter of the value pursuant to DIN EN 10051:2010, independent of class A to D. This makes it the best starting material for stable processes and greater efficiency in your production.

ULTIMATE class

Should the thickness tolerances not meet your application requirements, voestalpine can even go a step further using intelligent production systems combined with a unique production process. Thickness tolerances of up to one sixth of those set forth for pickled material in DIN EN 10051:2010 can be achieved by thickness-controlled skin passing. The values achieved, for example, significantly exceed the values set forth in DIN EN 10131:2006 (Cold rolled uncoated and zinc or zinc-nickel electrolytically coated low carbon and high yield strength steel flat products for cold forming – Tolerances on dimensions and shape). This makes it possible for the hot-rolled steel strip made by voestalpine to precisely meet your requirements and offers the best conditions for economical and efficient production.

Thickness tolerances for hot-rolled steel strip

	Thickness tolerances +/-			
Nominal thickness t	**ULTIMATE class***	**ADVANCED class***	**BASIC class****	**EN 10 051*****
t ≤ 2.00		0.08	0.15	0.29
2.00 < t ≤ 2.50		0.08	0.16	0.32
2.50 < t ≤ 3.00	0.05	0.09	0.17	0.34
3.00 < t ≤ 4.00	0.05	0.10	0.18	0.36
4.00 < t ≤ 5,00	0.05	0.11	0.20	0.39
5.00 < t ≤ 6.00	0.05	0.12	0.20	0.41
6.00 < t ≤ 8.00		0.13	0.21	0.43
8.00 < t ≤ 10.00		0.15	0.24	0.48
10.00 < t ≤ 12.50		0.15	0.26	0.52
12.50 < t ≤ 15.00		0.20	0.27	0.56
15.00 < t ≤ 20.00		0.28	0.31	0.63

* Applies to all steels featured in EN10051 of strength class A to D (independent of width). Ultimate class following technical testing.
** EN10051, Class D as an example of nominal width 1,500 to 1,800 mm
*** EN 10 051, standard values pursuant to strip and sheet class D with nominal width ranging between 1,500 to 1,800 mm

Dimensions in mm

Example of alform 500M with a thickness of 6 mm and a width of 1,500 mm

ULTIMATE class	0.05
ADVANCED class	0.12
BASIC class	0.20
EN 10 051	0.41

Dimensions in mm

Limited thickness tolerances for mild steels

	Thickness tolerances and widths +/-							
Nominal thickness t	t ≤ 2.00	2.00 < t ≤ 2.50	2.50 < t ≤ 3.00	3.00 < t ≤ 4.00	4.00 < t ≤ 5.00	5.00 < t ≤ 6.00	6.00 < t ≤ 8.00	8.00 < t ≤ 11.00
Mild steel	0.09	0.09	0.10	0.10	0.10	0.11	0.13	0.16

Narrower thickness tolerances for mild steels upon request

Dimensions in mm

greentec steel

Premium quality with reduced carbon footprint

Hot-rolled steel strip – greentec steel Edition

Max. carbon footprint 2.10 kg CO_2e per kg of steel [1)]

Cold-rolled steel strip – greentec steel Edition

Max. carbon footprint 2.30 kg CO_2e 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.

Is the ultimate class not enough for you? Please do not hesitate to contact us.

Please find further information and downloadable files at
www.voestalpine.com/ultralights

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