



# SUSTAINABILITY IN MACHINERY

CO<sub>2</sub> reduction under  
extreme stress

Sustainability in Machinery

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## INNOVATION MEETS RESPONSIBILITY

voestalpine sets new standards in machinery with premium steel that combines efficiency and sustainability. Our clear goal is steel production processes with net zero carbon emissions by 2050. But even today, we offer steel in the greentec steel Edition with a reduced carbon footprint in proven voestalpine premium quality.

Our alform® and durostat® steels and their product properties make a significant contribution to resource conservation and sustainability:

- » High hardness and excellent resistance to wear
- » Longer service life and maintenance intervals
- » Significant weight savings
- » Reduced fuel consumption



PREMIUM QUALITY  
WITH REDUCED  
CARBON FOOTPRINT

### Our clear plan:

- 2024**  
Construction began on two electric arc furnaces
- 2027**  
Commissioning of two electric-arc furnaces, one in Linz and one in Donawitz, and decommissioning of two coal-based blast furnaces.
- From 2027**  
2.5 million tons of CO<sub>2</sub>-reduced steel per year
- By 2029**  
Objective: -30% CO<sub>2</sub> emissions
- From 2030 to 2035**  
Replacing another blast furnace at each of the sites in Linz and Donawitz  
The target: 50% reduction in CO<sub>2</sub> emissions
- 2050**  
Achieving steel production with net zero CO<sub>2</sub> emissions

## PREMIUM STEEL WITH A REDUCED CARBON FOOTPRINT

The steel grades developed by voestalpine for the machinery segment are characterized by high strength and excellent wear properties. This opens up completely new design possibilities with a reduced carbon footprint.

Product	worldsteel average* LCI data 2019		voestalpine carbon footprint EPD** (2019 reference year)	voestalpine greentec steel Edition	voestalpine greentec steel Edition 600
	Europe	Global	EPD 15804 + A2	Calculation***	Calculation***
Hot-rolled steel strip	2,29	2,46	2,17	1,95	0,60
Cold-rolled steel strip	2,63	2,80	2,19	1,97	0,60
Heavy plates (excl. plated)	2,68	2,55	2,43	2,21	0,60

Note: Unit in kg CO<sub>2</sub>e/kg product (unless specified otherwise)

\* Blast furnace and EAF routes

\*\* EPD = Environmental Product Declaration, a neutral tool for communicating the environmental impact of a product based on its lifecycle assessment

\*\*\* Pursuant to EN 15804+A2 (EPD methodology) cradle to gate, worldsteel CML 2001-2016 also possible upon customer request (system expansion)

All products, dimensions and steel grades listed in each voestalpine supply range are available as greentec steel Edition and greentec steel Edition 600.

## REDUCED CARBON FOOTPRINT RESULTING FROM SMART MATERIAL SELECTION

A great deal can be improved with a clever selection of materials, which is illustrated by the skipster scrap charging box. The use of alform® 700 M in the skipster lowers its weight by 27% when compared with conventional steel boxes with the same capacity, e.g. S235. The decision in favor of alform® 700 M leads to a CO<sub>2</sub> reduction of 30%. The use of greentec steel Edition products further reduces the footprint.



\* The CO<sub>2</sub> reductions result from the combination of weight savings and lower carbon footprints when compared with the European average.

**alform®**  
greentec steel

[www.voestalpine.com/alform/en/Sustainability](http://www.voestalpine.com/alform/en/Sustainability)

**durostat®**  
greentec steel

[www.voestalpine.com/durostat/en/Sustainability](http://www.voestalpine.com/durostat/en/Sustainability)

**STELLA**   
SUSTAINABLE

[www.voestalpine.com/stella/en](http://www.voestalpine.com/stella/en)

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**voestalpine**  
ONE STEP AHEAD.