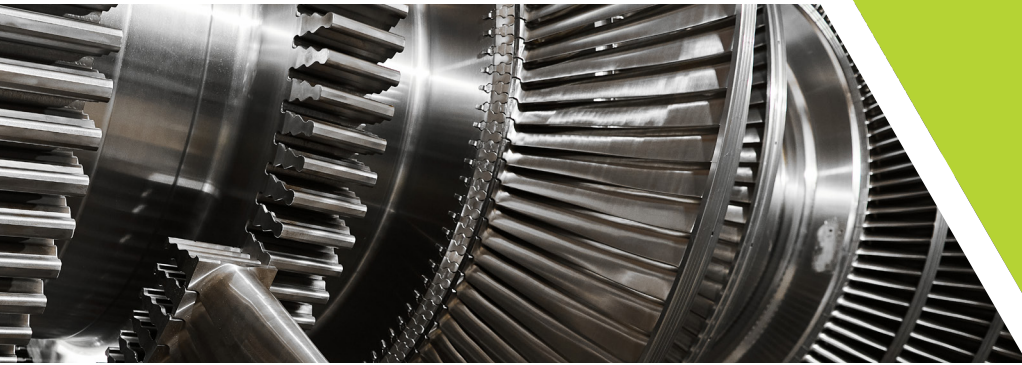


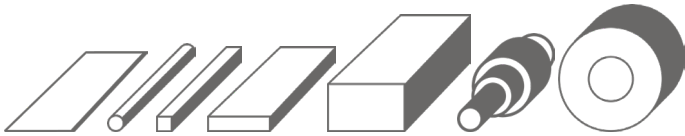
SINOXX^{...}

STAINLESS STEEL



sij | group





SINOXX combines a wide range of stainless steels. Under the SINOXX brand, we have developed various steels customised for specific applications. Each grade has emphasised properties that ensure a longer lifespan and improved usability for your product.

Austenitic stainless steels are non-magnetic. In addition to containing 18% chromium, they also contain a minimum of 8% nickel, which enhances their corrosion resistance. This resistance is further improved through alloying with molybdenum, which helps form a stable protective passivation oxide layer for additional protection. These steels are also characterised by excellent toughness and the ability to maintain their mechanical properties even at very low temperatures.

Ferritic stainless steels are magnetic and have a low carbon content. Their main alloying element is chromium (typically between 13% and 17%), while nickel is not added. Their primary advantage lies in their resistance to stress-corrosion cracking and atmospheric corrosion. Special precautions must be taken before, during, and after fusion welding.

Martensitic stainless steels generally form a martensitic microstructure after quenching and tempering, while their microstructure in the annealed condition depends on composition and may be ferritic, martensitic, or a mixture of phases. Compared with conventional martensitic steels, some grades offer improved corrosion resistance. These steels typically contain around 11–18% chromium, while the carbon content varies widely – from very low levels (below 0.1% in precipitation-hardening grades such as 17-4PH) to around 1% in high-carbon grades. The addition of alloying elements such as molybdenum or copper can further improve corrosion resistance and mechanical properties. Lower-carbon grades are commonly used in applications requiring a balance of corrosion resistance and toughness, whereas higher-carbon grades are used for cutting tools due to their high hardness and wear resistance.

Precipitation-hardened stainless steels are iron-chromium-nickel alloys characterised by high strength, achieved through the precipitation hardening of their austenitic or martensitic structure. This process allows alloying with one or more elements, such as copper, aluminium, titanium, niobium, and molybdenum.

Duplex stainless steels have a characteristic austenitic-ferritic microstructure, typically in a 50:50 ratio in commercial grades. They contain approximately 22% chromium and 5% nickel and are additionally alloyed with molybdenum and nitrogen. These steels exhibit excellent mechanical properties, particularly high yield and tensile strength. They are partially magnetic and offer strong resistance to pitting and stress-corrosion cracking.

SINOXX stainless steel is manufactured by SIJ Acroni and SIJ Metal Ravne. The manufacturer depends on the steel's final form, which affects its physical properties and chemical composition.



APPLICATIONS

- Chemical and petrochemical industry
- Food and pharmaceutical industry
- Energy: oil & gas, LNG, fusion, nuclear, hydrogen, renewable energy
- Water treatment
- Offshore applications

5 REASONS TO CHOOSE SINOXX

- Extreme corrosion resistance
- Good formability and weldability
- High mechanical strength
- High service temperatures
- Sustainable material choice

DIMENSIONS

	Quarto plates
Thickness [mm]	7–130 (0.276"–5.118")
Width [mm]	1000–2500 (39.370"–98.425")
Length [mm]	2000–12000 (78.740"–472.441")
Weight [kg]	max. 9600

	Strips	Sheets
Thickness [mm]	0.35–6.00 (0.0138"–0.236")	0.35–6.00 (0.0138"–0.236")
Width [mm]	30–1000 (1.181"–39.370")	1000 (39.370")
Length [mm]	–	2000–6000 (78.740"– 236.220")
Weight [kg/mm width]	6–8.6	–
Coil ID [mm]	508 (20")	–

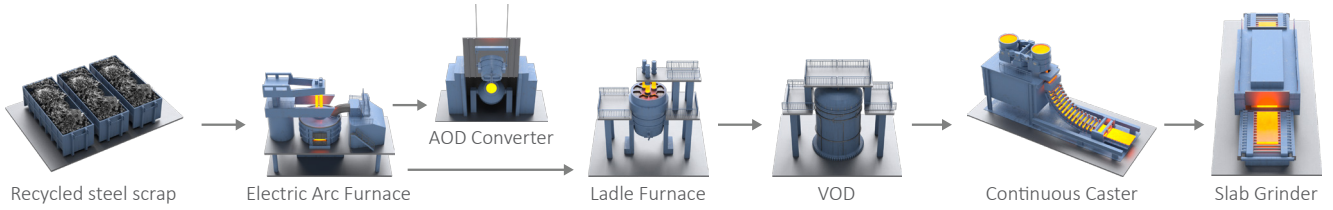
SURFACE FINISH

Format	Symbol	Type of condition	Surface finish	Notes
Quarto plate	1D	Hot rolled, heat treated, pickled	Free of scale	Usually standard for most steel types to ensure good corrosion resistance; also common finish for further processing.
	1C	Hot rolled, heat treated, not descaled	Covered with rolling scale	Suitable for parts which will be descaled or machined in subsequent production or for certain heat-resisting applications.
	1E	Hot rolled, heat treated, mechanically descaled	Free of scale	The type of mechanical descaling, e.g coarse grinding or shot blasting, depends on the steel grade and the product, and is left to the manufacturer's discretion, unless otherwise agreed.
Hot-rolled sheet/coil	1C	Hot rolled, heat treated, not descaled	Covered with rolling scale	Suitable for parts which will be descaled or machined in subsequent production or for certain heat-resisting applications.
Cold-rolled sheet/coil	2C	Cold rolled, heat treated, not descaled	Smooth with scale from heat treatment	Suitable for parts which will be descaled or machined in subsequent production or for certain heat-resisting applications.

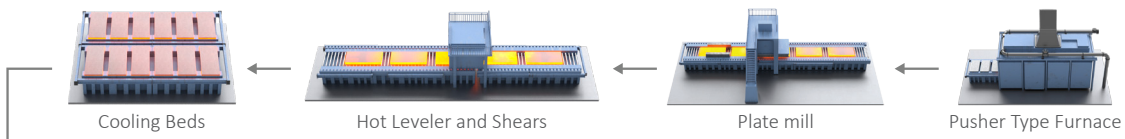
Grades	SIJ designation	EN	UNS/AISI/ASTM	GOST	QP	Coil
Austenitic	SINOXX 4301	1.4301	304	12X18H9	•	
	SINOXX 4305	1.4305	303		•	
	SINOXX 4306	1.4306	304L	06X18H11	•	
	SINOXX 4307	1.4307	304L	04X18H10	•	
	SINOXX 4307 machinability+	1.4307	304L		•	
	SINOXX 4311	1.4311	304LN		•	
	SINOXX 4315	1.4315	304N		•	
	SINOXX 4541	1.4541	321	08X18H10T	•	
	SINOXX 4550	1.4550	347/347H	08X18H12B	•	
	SINOXX 4878	1.4878	321H	08X18H10T / 12X18H10T	•	
	SINOXX 4948	1.4948	304H		•	
Austenitic with Mo	SINOXX 4401	1.4401	316		•	
	SINOXX 4404	1.4404	316L		•	
	SINOXX 4404 machinability+	1.4404	316L		•	
	SINOXX 4406	1.4406	316LN		•	
	SINOXX 4429	1.4429	316LN		•	
	SINOXX 4432	1.4432	316L		•	
	SINOXX 4435	1.4435	316L	03X17H14M3	•	
	SINOXX 4436	1.4436	316L		•	
	SINOXX 4438	1.4438	317L		•	
	SINOXX S471		317L		•	
	SINOXX 4571	1.4571	316Ti	10X17H13M2T	•	
	SINOXX 316H		316H		•	
	SINOXX XM-19		S20910 / XM-19		•	
	SINOXX 4539	1.4539	904L		•	
	SINOXX S451			12X18H9T	•	
	SINOXX S461			05X18H10T	•	
	SINOXX S462			03X18H10T	•	
SINOXX S463			12X18H12T	•		
SINOXX S464			08X18H12T	•		
SINOXX S465			03X18H11	•		
SINOXX S466			08X18H10	•		
Heat-resistant austenitic	SINOXX 4828	1.4828			•	
	SINOXX 4833	1.4833	309/309S/309H		•	
	SINOXX 4835	1.4835	S30815		•	
	SINOXX 4841	1.4841	314		•	
	SINOXX 4845	1.4845	310/310S/310H	20X23H18	•	
Ferritic	SINOXX 4000	1.4000	410S		•	
	SINOXX 4002	1.4002	405		•	
	SINOXX 4003	1.4003	S41003		•	
	SINOXX 4016	1.4016	430		•	
	SINOXX 4510	1.4510	439		•	
	SINOXX 4512	1.4512	S40910/S40920		•	
Heat-resistant ferritic	SINOXX 4713	1.4713			•	•
	SINOXX 4724	1.4724			•	•
	SINOXX 4725	1.4725			•	•
	SINOXX 4742	1.4742			•	•
	SINOXX 4746	1.4746			•	•
	SINOXX 4762	1.4762			•	•
Martensitic	SINOXX 4767	1.4767			•	•
	SINOXX 4006	1.4006	410/403	12X13	•	
	SINOXX 4021	1.4021	420		•	
	SINOXX 4028	1.4028	420		•	
	SINOXX 4034	1.4034	420		•	
	SINOXX 4313	1.4313	S41500		•	
	SINOXX 4418	1.4418			•	
Precipitation hardening	SINOXX 4542	1.4542	630		•	
	SINOXX 4162	1.4162	S32101		•	
Duplex / Superduplex	SINOXX 4362	1.4362	S32304		•	
	SINOXX 4462	1.4462	S32205	03X22H5AM3	•	
	SINOXX 4410	1.4410	S32750		•	
	SINOXX 4501	1.4501	S32760		•	
	SINOXX 433G			08X22H6T	•	
	SINOXX 446G			08X21H6M2T	•	
Ni Superalloy	SIPREME 800H	1.4876	800H		•	

PRODUCTION PROCESS

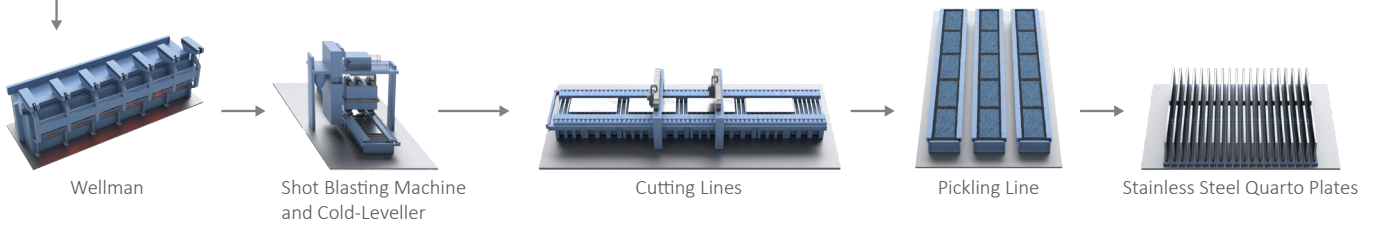
Steel Mill



Hot Rolling Mill



Quarto Plate Department

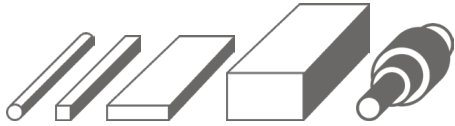


Approvals, standards and certificates

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APPLICATIONS

- Mechanical engineering (rolls)
- Hot-forming rolls (for steel, aluminium, aluminium foil)
- Automotive (dies, frames)
- Shipbuilding industry (shafts, stabilizers)
- Metallurgical industry (tools, mandrels, extrusion sleeves)
- Metalworking industry (sleeves, rings for cutting dies)
- Energy industry (turbine shaft housing, sealing rings, shafts)
- Oil & gas industry (tubes, connectors)
- Graphic industry (rolls for newspaper printing)

DIMENSIONS

Round

Rolled	Ø 15–105 (0.59"–4.13"), L: 3,000–6,000 (9.84 ft–19.67 ft), according to EN 10060
Peeled/peeled&polished	Ø 15–100 (0.59"–3.94"), L: 2,500–6,000 (8.20 ft–19.67 ft), according to EN 10278
Ground/ground&polished	Ø 6–80 (0.24"–3.15"), L: 2,000–4,000 (6.56 ft–13.11 ft), according to EN 10278
Forged&peeled	Ø 85–205 (3.35"–8.07"), L: 2,000–7,000 (6.56 ft–22.97 ft), tol. +1/-0 mm (+0.04"–0")
Forged&turned	Ø 206–300 (8.11"–11.81"), L: 2,000–6,000 (6.56 ft–19.67 ft), tol. +2/-0 mm (+0.08"–0") Ø 301–1,000 (11.85"–39.37"), L: 2,000–7,000 (6.56 ft–22.97 ft), tol. +3/-0 mm (+0.12"–0")

Flat

Rolled EN 10058	W: 40–150 mm (1.57"–5.91"), T: 7–65 mm (0.28"–2.56"), L: 3,000–6,000 mm (9.84 ft–19.67 ft)
Rolled DIN 59200	W: 151–255 mm (5.94"–10.04"), T: 7–50 mm (0.28"–1.97"), L: 3,000–6,000 mm (9.84 ft–19.67 ft)
Forged DIN 7527/6	square 100–max. 400 mm (3.94"–15.75"), L: 2,000–6,000 mm (6.56 ft–19.67 ft) flat W: 100–1200 mm (3.94"–47.24"), T: 100–max. 90,000 mm ² (3.94"–max. 139.50 ¹²)
Forged&milled	square 100–max. 400 mm (3.94"–15.75"), L: 2,000–6,000 mm (6.56 ft–19.67 ft) flat W: 100–1200 mm (3.94"–47.24"), T: 100–max. 90,000 mm ² (3.94"–max. 139.50 ¹²), tol. +2/-0 mm

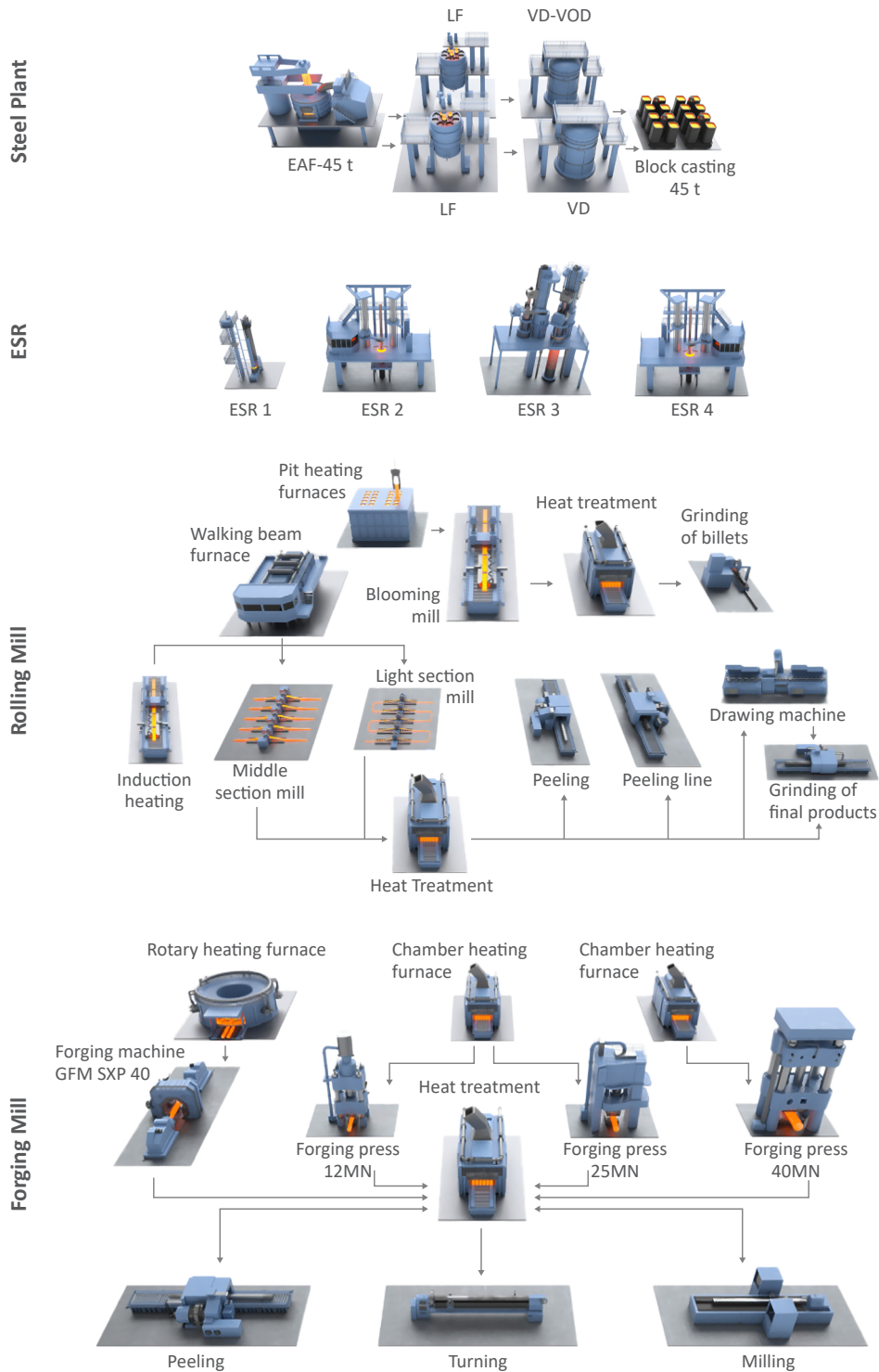
Forgings

max. Ø	1,000 mm (39.37")
max. length	10,000 mm (32.8 ft)
max. weight	20,000 kg (44.093 lbs)

Disclaimer: Dimensions vary depending on the requested steel grade.

Grades	SIJ designation	W. Nr.	AISI/ASTM	EN	Forged and rolled bars	Cold-drawn/ground bars
Austenitic	SINOXX 4301	1.4301	304	X5CrNi18-10	•	•
	SINOXX 4305	1.4305	303	X8CrNiS18-9	•	•
	SINOXX 4306	1.4306	304L	X2CrNi19-11	•	•
	SINOXX 4307	1.4307	304L	X2CrNi18-9	•	•
	SINOXX 4311	1.4311	304LN	X2CrNiN18-10	•	•
	SINOXX 4315	1.4315	304LN	X5CrNiN19-9	•	•
	SINOXX 4541	1.4541	321	X6CrNiTi18-10	•	•
	SINOXX 4550	1.4550	347 / 348 / 347H	X6CrNiNb18-10	•	•
	SINOXX 4878	1.4878	321H	X6CrNiTi18-10	•	•
	SINOXX S490	-	Nitronic 60	-	•	•
	SINOXX S690	1.3964	XM-19 / Nitronic 50	X2CrNiMnMoNNb21-16-5-3	•	•
	SINOXX 4948	1.4948	304H	X6CrNi18-10	•	•
	SINOXX 4401	1.4401	316	X5CrNiMo17-12-2	•	•
	SINOXX 4404	1.4404	316L	X2CrNiMo17-12-2	•	•
	SINOXX 4406	1.4406	316LN	X2CrNiMoN17-12-2	•	•
	SINOXX 4432	1.4432	316L	X2CrNiMo17-12-3	•	•
	SINOXX 4435	1.4435	316L	X2CrNiMo18-14-3	•	•
	SINOXX 4436	1.4436	316	X3CrNiMo17-13-3	•	•
	SINOXX 4441	1.4441	-	X2CrNiMo18-15-3	•	•
	SINOXX 4571	1.4571	316Ti	X6CrNiMoTi17-12-2	•	•
	SINOXX 4919	1.4919	316H	-	•	•
SINOXX 4841	1.4841	314	X15CrNiSi25-21	•	•	
SINOXX 4864	1.4864	330	X12NiCrSi35-16	•	•	
Ferritic	SINOXX 4724	1.4724	405	X10CrAlSi13	•	•
	SINOXX 4762	1.4762	446	X10CrAl24	•	•
	SINOXX 4000	1.4000	403/405/410S/429	X6Cr13	•	•
	SINOXX 4016	1.4016	430	X6Cr17	•	•
	SINOXX 4105	1.4105	430F	X6CrMoS17	•	•
	SINOXX 4510	1.4510	439	X3CrTi17	•	•
	SINOXX 4005	1.4005	416	X12CrS13	•	•
Martensitic	SINOXX 4006	1.4006	403/410	X12Cr13	•	•
	SINOXX 4021	1.4021	420	X20Cr13	•	•
	SINOXX 4028	1.4028	420F	X30Cr13	•	•
	SINOXX 4034	1.4034	420	X46Cr13	•	•
	SINOXX 4057	1.4057	431	X17CrNi16-2	•	•
	SINOXX 4104	1.4104	430F	X14CrMoS17	•	•
	SINOXX 4112	1.4112	440B	X90CrMoV18	•	•
	SINOXX 4116	1.4116	440A	X50CrMoV15	•	•
	SINOXX 4119	1.4119	403/410	X15CrMo13	•	•
	SINOXX 4122	1.4122	-	X39CrMo17-1	•	•
	SINOXX 4125	1.4125	440C	X105CrMo17	•	•
	SINOXX 4313	1.4313	415	X3CrNiMo13-4	•	•
	SINOXX 4418	1.4418	-	X4CrNiMo16-5-1	•	•
	SINOXX 4923	1.4923	-	X22CrMoV12-1	•	•
	SINOXX E770	1.4021	420	X20Cr13	•	•
	SINOXX 4938	1.4938	-	X12CrNiMoV12-3	•	•
	SINOXX 4913	1.4913	-	X19CrMoVNbN11-1	•	•
	SINOXX 4903	1.4903	F91	X10CrMoVNb9-1	•	•
	SINOXX 4906	1.4906	-	X12CrMoWVNbN10-1-1	•	•
	Precipitation hardened	SINOXX 4542	1.4542	630	X5CrNiCuNb16-4	•
SINOXX 4545		1.4545	XM-12	X5CrNiCu15-5	•	•
SINOXX 4980		1.4980	660	X5NiCrTi26-15	•	•
Duplex / Superduplex	SINOXX 4462	1.4462	F51	X2CrNiMoN22-5-3	•	•
	SINOXX 4362	1.4362	F68	X2CrNiN23-4	•	•
	SINOXX 4410	1.4410	F53	X2CrNiMoN25-7-4	•	•

PRODUCTION PROCESS



Approvals, standards and certificates

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green²

SINOXX stainless steel is also available as part of our sustainable line green²

Recycled content

Green² steel is made from recycled steel scrap, without the use of iron ore.

100 % renewable electricity

Green² steel is made with 100 % renewable electricity.

Single site production

Green² steel is produced entirely in one location avoiding unnecessary emissions from transporting semi-finished products.

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DISTRIBUTION & PROCESSING

SIJ Group's Distribution and Processing division brings our materials closer to customers through a global network of 21 locations. Positioned in key markets, our steel centres and sales offices provide fast delivery, dependable service, and the flexibility to meet specific project needs.

By handling distribution ourselves, we keep things simple and efficient – reducing lead times and staying directly connected to our customers. Alongside supply, we offer practical processing services such as cutting, grinding, edge preparation, straightening, and shearing, supported by experienced technical teams.



SIJ – Slovenian Steel Group is Slovenia's largest vertically integrated metallurgy group. We are one of the leading European producers of stainless steel, special steels and tool steels, as well as electrical, wear-resistant and high-strength structural steels. We are committed to global and European climate goals and operate in line with circular economy principles. With our steel and steel products, we are the right partner for facilitating the green transition. Our manufacturing companies are modern recycling steelworks with sustainable production certified by ResponsibleSteel.

Living Circular Economy

We value flexibility and sustainability, which is why we make small batches of high-quality steel products with high added value and a low CO₂ footprint for niche markets.

- 100% of our steel is made from recycled steel scrap in an electric arc furnace. We use magnetic separation to purify and increase the quality of scrap. This helps us reduce our environmental impact and increase the quality of the final product.
- 98% of waste generated during our production process, such as steel scrap and slag, is recycled or otherwise reused.



Discover more about SINOXX stainless steel!

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