

MATERIALS FOR MEDICAL TECHNOLOGY

100 YEARS OF EXPERTISE AND EXPERIENCE



Our Swiss headquarters
in Wallisellen.

We, **voestalpine High Performance Metals Switzerland AG**, are among the leading manufacturers of high-quality stainless steel and high-performance materials, supported by our own production facilities. These include BÖHLER Edelstahl in Kapfenberg and BÖHLER Bleche in Mürzzuschlag (Austria), as well as Villares Metals in Sumaré (Brazil). What differentiates us is our combined expertise, built over many years, along with our commitment to innovation and close customer relationships. We offer a wide product portfolio and guarantee premium quality.

 **VILLARES METALS**
a voestalpine company



For generations, our brands and products have been a synonym for stainless steel and high-performance alloys of the **highest quality** worldwide. What drives us to give our best every day are our customers. Leading companies in forward-looking industries. Highly innovative specialists who need high-performance materials and intelligent solutions that push the boundaries of what is possible.

We are proud of the expertise that we have built up over decades and of our dedicated employees. Together, we continue to develop proven production and delivery standards and establish new, innovative procedures and processes in order to produce our products even more economically, safely and resource-efficiently. This is how we set standards on the market. For the benefit of our customers and our environment.

We are your competent partner for instrument steels and implant materials in the product forms bar, sheet, profile and strip.



STEPS TO QUALITY

1. GROUP-OWNED SUPPLY PLANTS

We work closely with the group's own suppliers and long-standing partners. This strategic cooperation creates a broad procurement basis and supports the reliability of the supply chain.

2. PRODUCT DEVELOPMENT

We continuously invest in the development of new products. Through permanent process development work and the use of state-of-the-art technologies, we strive to create ideal products for demanding customer segments.

3. INVESTMENTS

Ongoing investments enable the production of high-end products that meet the strictest quality standards.

4. RESHAPING ON ALL LINES

voestalpine BÖHLER Edelstahl and Villares Metals produce bar steel with round and flat profiles as well as wire of the highest precision and quality on the most modern rolling mills.

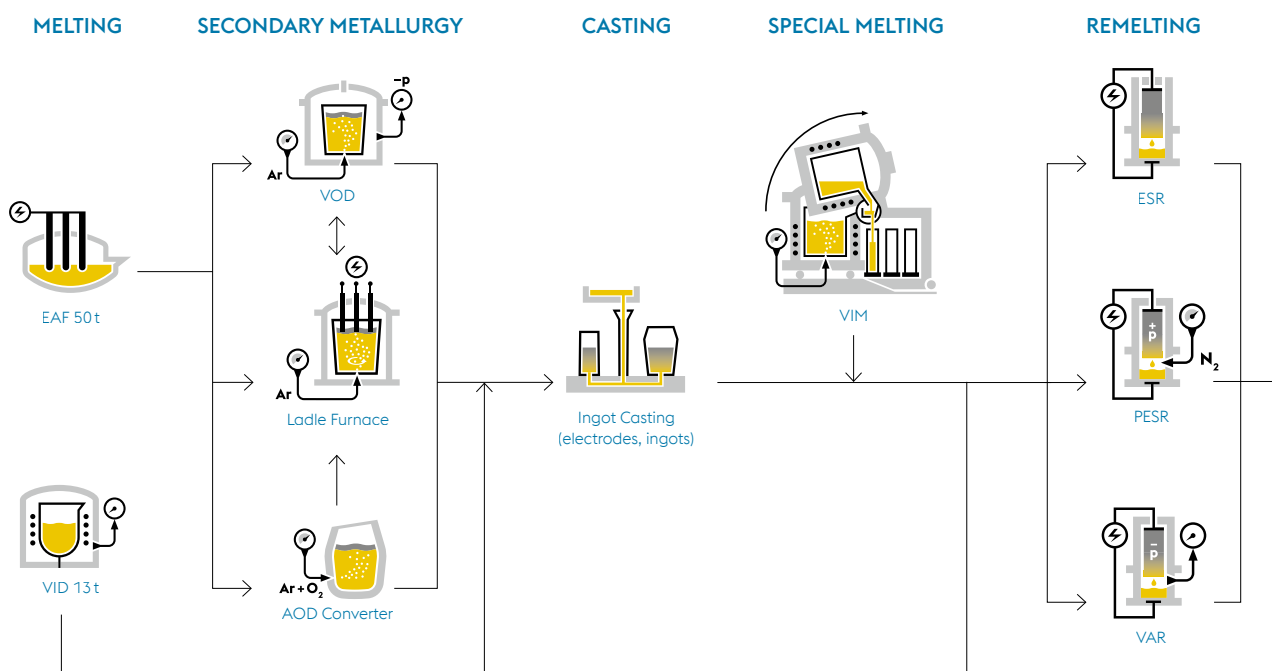
At Metaltec, the products are drawn and ground to their final dimensions with maximum precision and tightest tolerances.

Beyond this, voestalpine BÖHLER Bleche is one of the world's leading manufacturers of cross-rolled stainless steel sheets and sheet blanks.

5. PRECISION

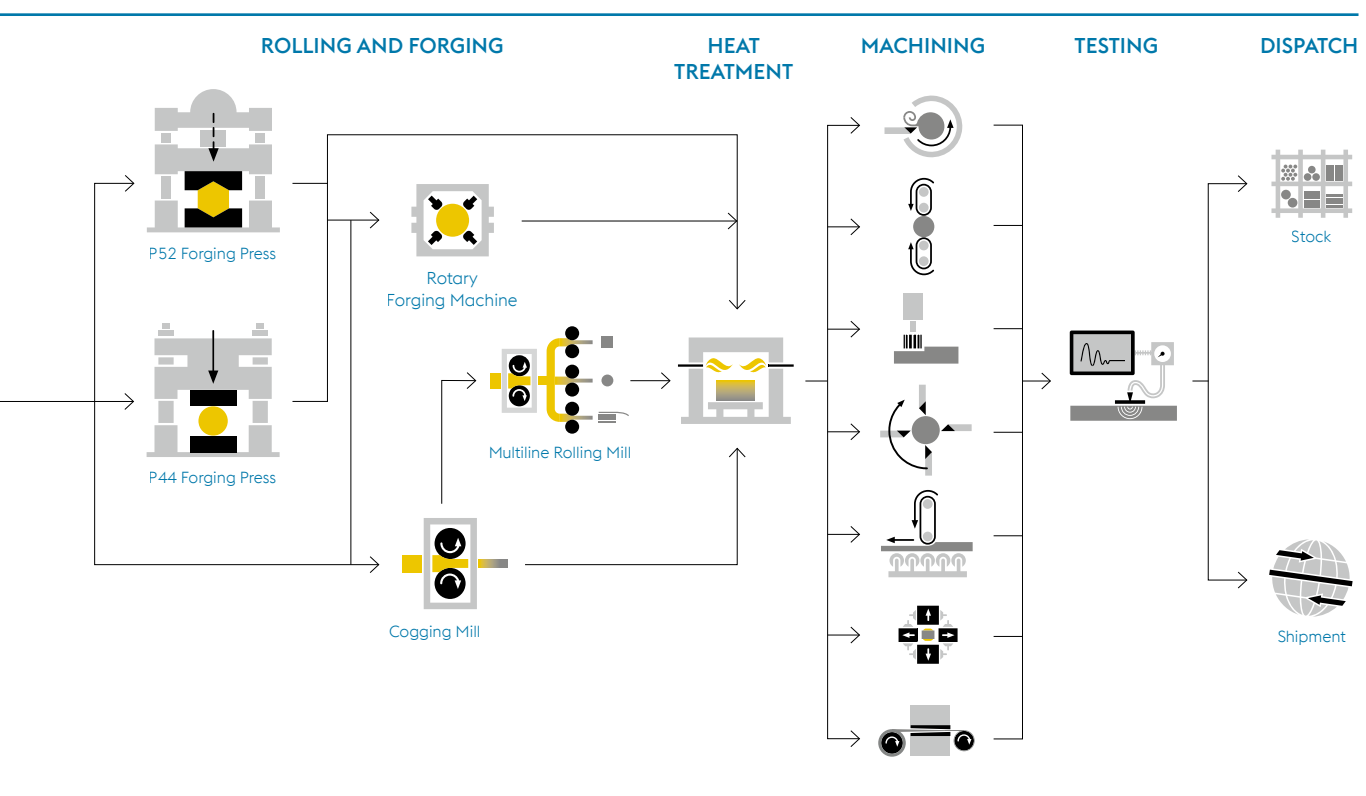
Our production stands for outstanding quality and precision. The reproducibility of processes, flexibility and close cooperation with our customers are crucial to our leading position on the global market.

MATERIAL FLOW OF HIGH-PERFORMANCE SPECIAL MATERIALS





The world's most modern stainless steel plant in Kapfenberg, Austria.



MACHINING – THE CUSTOMIZED FINISH

Thanks to flexible machining options, individual requirements can be met quickly and to the highest quality.

Our products undergo heat treatment according to customer specifications and are then adjusted, processed and tested. We will also meet your every wish in terms of surface finish.

PRODUCT VERSIONS

- » peeled
- » polished
- » ground
- » turned
- » 6-side-machined
- » sawn
- » cold drawn
- » chamfering

In tolerance classes of your choice.



We offer customized products and services.



TECHNICAL ADVICE AND CUSTOMER PROXIMITY

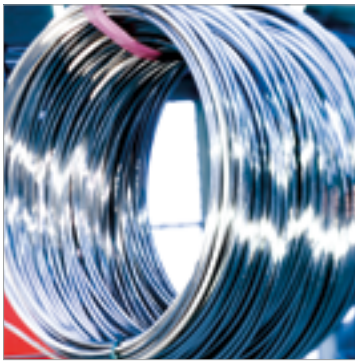
As specialists, we offer you a broad range of services, from the selection of materials to application, processing and coating. We are here to advise you from the start of the project right through to the finished product. Our focus is on people - qualified, motivated employees who work hard every day to ensure that your orders are carried out to your full satisfaction. In such a way that you will be happy to come back to us.

QUALITY, STORAGE AND SERVICE

We are characterized not only by quality, but also by fast product availability. Thanks to our production site in Pieterlen and the service center in Wallisellen, we guarantee customer proximity, short and reliable delivery times as well as storage, packaging and just-in-time delivery. We continuously invest in our facilities and processes to ensure that we meet strict standards in terms of quality and service (see certifications p.9).

**WE GUARANTEE
HIGHEST AVAILABILITY,
SHORT DELIVERY
AND MAXIMUM
RELIABILITY.**

PRODUCT VERSIONS AND DELIVERY FORMS



WIRE

- » Ø 0.7 - 15mm
- » in rings, on coils
- » on crown sticks
- » in various executions



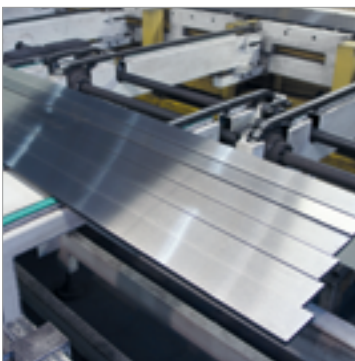
HIGH-PRECISION WIRE

- » on coils
- » straightened in bars
- » round Ø 0.7 - 12mm
- » flat profiles 0.5 - 40mm² cross-sectional area



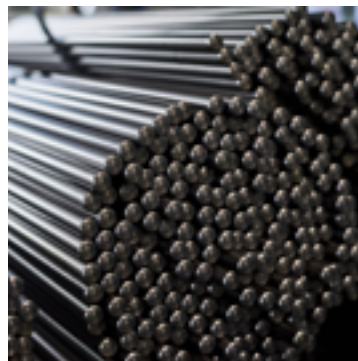
BRIGHT STEEL

- » rolled, peeled/ground
- » Ø 0.7 - 100mm



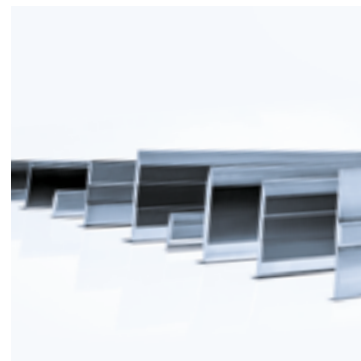
FLAT BAR

- » widths > 15mm
- » production length
- » in special lengths
- » in various executions (stained, ground, etc.)



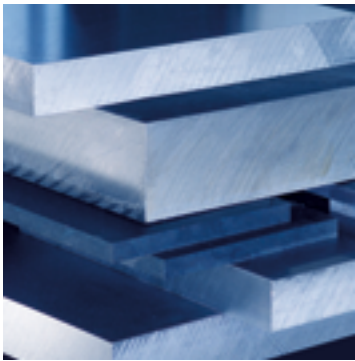
ROUND BAR

- » Ø 12.5 - 160mm*
- » production length
- » in special lengths
- » in various executions
- *larger on request



SHAPED PROFILES/ ROLLED/DRAWN

- » on coils
- » in rings
- » straightened in bars



PLATES/ SHEETS

- » Thickness 1.0 - 100mm
- » in retail sizes
- » customized
- » in various executions



AM POWDER

- » particle size 15 - 45 µm
- » particle size 46 - 90 µm



TITANIUM SHEETS

- » voestalpine BÖHLER Bleche
- » thickness 1.8 - 100mm

OUR CERTIFICATIONS

Only the best steel is used to create suitable products for an industry with perfection as requirement.

- ISO 9001:2015
- EN 9120:2018 Wallisellen
- ISO 13485:2016 Metaltec



MATERIALS IN MEDICAL TECHNOLOGY

Material groups	BÖHLER brand	Material number		Standards, norms / international designation			
		DIN	UNS	ASTM	ISO	AISI	Other
AUSTENITIC STEELS	A220SC	1.4441	S31673	F138	5832-1	316L	
	P504	1.4472	S31675	F1586	5832-9		
	P558	1.3808	S29225	F2581			
	P511		S20910	F1314			XM-19/Nitronic50
MARTENSITIC STEELS		1.4021				420A	
		1.4028				420B	
		1.4034	S42000			420C	
		1.4057				431	
		1.4104				430F	
	N324	1.4197		F899		420F mod.	
	N360	1.4108		F899			
	N664		S44002	F899		440A	
		1.4112	~S44003				
	N690	1.4528					
		1.4122					
	N695	1.4125	S44004	F899		440C	
PRECIPITATION HARDENABLE STEELS	N700	1.4542	S17400	F899		630	17-4PH
	N709	1.4534					13-8 Mo
	N713	1.4543	S45500	F899		631	Custom 455
	N765	1.4614	S46500	F899			Custom 465
NICO / CO ALLOYS	L035	2.4999	R30035	F562	5832-6		MP35N
	L605	2.4964	R30605	F90	5832-5		L-605
	L135		R31537	F1537	5832-12		
TITANIUM	L511	3.7025	R50250	F67	5832-2		CP titanium grade 1
	L512	3.7035	R50400	F67	5832-2		CP titanium grade 2
		3.7055	R50550	F67	5832-2		CP titanium grade 3
	L514	3.7065	R50700	F67	5832-2		CP titanium grade 4
	L531	3.7164	R56400	B265, F1472	5832-3		Titanium alloy Ti6AL4V (grade 5)
	L533	3.7165	R56401	B265, F136	5832-3		Titanium alloy Ti6AL4V ELI (grade 23)

Products bearing the corresponding BÖHLER brand are manufactured by voestalpine BÖHLER Edelstahl. We are happy to offer you other materials on request.

Form of delivery							Applications
bar	bright	wire	flat	profile	sheet	powd.	
	S	P		P	P		Intramedullary nails, pins and fixation systems, wires, hip screw systems
	P			P			Hip joint and shoulder systems, devices for osteosynthesis
P	P	P					Nickel-free; bone screws and plates, bone scissors, cutting blades, scalpels
P	P						Bone plates and screws, pliers, clamps, bone saws, brackets
M	M	P	P				Bone cutting forceps, curettes, chisels, forceps, probes, handles, branch forceps, scissors
P	P	P					Bone cutting forceps, scissors, chisels, curettes, cutting instruments, skin punches, conchotomes
S					S		Scissors, bone rongeurs, bone cutting forceps, curettes, shells, scalpels, knives, chisels
S	S		S/P		S		Cheek retractors, insertion wrenches, orthopaedic instruments
	S						Handles, brackets, orthopaedic screws and bolts, dental tools
	S	P					Dental drills, dental milling cutters, reamers, scalpels, knives, scissors, pliers, tweezers
	S*	P					Chisels, knives, osteotomes, reamers, dental drills, dental milling cutters, tongs
S**	S**						Chisels, knives, osteotomes, reamers, drills, retractors, raspatory, tongs
S	S		S/P		S		Scalpels, reamers, dental drills, knives, tongs
M							Scalpels, knives, scissors, tweezers, bone saws, drills, milling cutters
S	M	P					Pliers, scalpels, drills, cutters, scissors
M	P						Reamers, scissors, rasps, knives, clamps, punches, blow bars, striking plates
S	S		S/P		S	P	Reamers, bone rasps, screws, plates, forceps, tweezers, pedicle screws
P	P						Reamers, bone rasps, bone shears, screws systems, drills, milling cutters
							Clamps, pliers, scissors, scalpels, drills, forceps, plates, screws
S*	S*	P*					Reamers, scissors, clamps, impactor guides, strike plates, screwdrivers, hex drivers
P	P	M/P					Stents, pacemaker electrodes, dental implants, bone saw blades, needles, wires
P	P	P					Heart valve prostheses, vascular stents, cardiovascular components, dental implants
							Hip, knee, shoulder and elbow prostheses, spinal fixations, dental implants
P	P						Ear implants, housings, components for pacemakers, medical containers
P	P	P	P		P		Hip and knee prostheses, screws, plates, nails, heart valves and pacemakers, vascular stents
P	P						Light surgical instruments, screws and nails for smaller bones
P	P	P	P		P		Dental implants, spine, plates, screws, vascular prostheses and stents
P	P	P	P		P		Jaw and facial implants, prostheses and exoprotheses, knee, shoulder and hip implants
P	P	P	P		P		Dental implants, hip and knee prostheses, pedicle screws, fixation systems, facial reconstructions

S = stock | M = mill stock | P = production

* = 2025 | ** = 2026



Heat recovery

FOCUS ON THE ENVIRONMENT

THE SPECIAL STEEL PLANT OF VOESTALPINE BÖHLER EDELSTAHL IS THE MOST MODERN IN THE WORLD, ALSO REGARDING ENVIRONMENTAL PROTECTION. THE USE OF RENEWABLE ENERGY, SUSTAINABLE HEAT UTILIZATION, AND EFFECTIVE EMISSION PROTECTION ARE CRUCIAL.

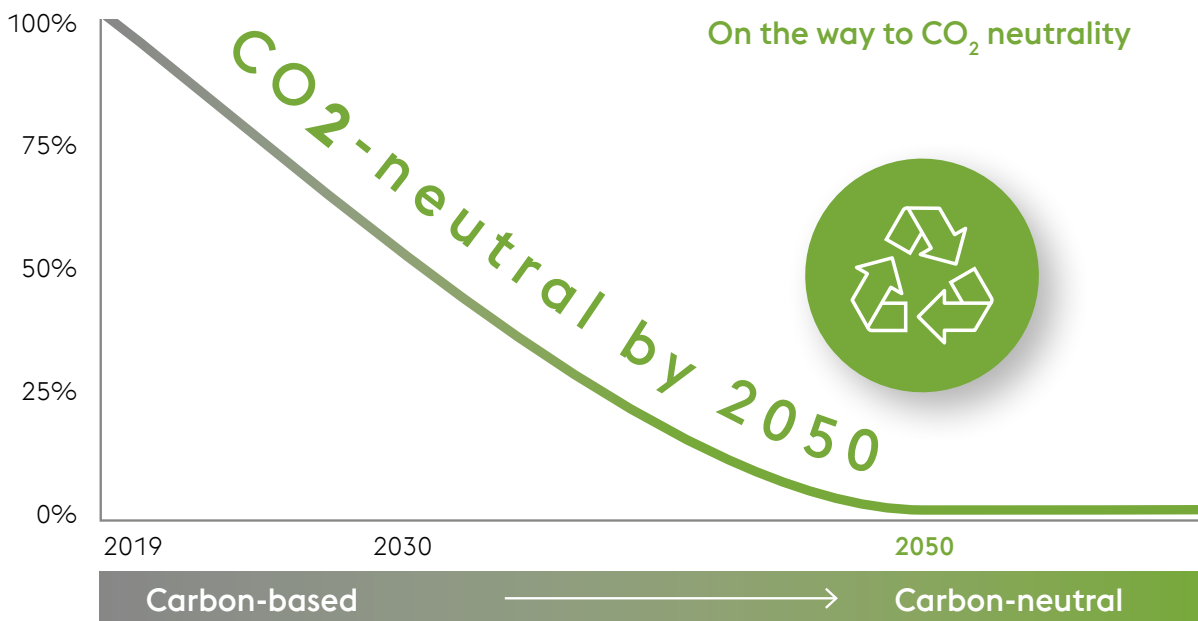
HEAT CIRCUIT

Where 205,000 tons of high-performance materials are produced every year, a lot of heat is used: when the sun-hot electric arc melts down the raw materials, the liquid steel reaches temperatures of up to 1,800 °C.

Water is still the method of choice for cooling these systems. In order to conserve this important natural resource, voestalpine works with a modern heat recovery and waste heat concept. Thanks to a closed cooling circuit, the cooling water withdrawal and return in the new stainless steel plant is reduced by 90% compared to its predecessor.

PASSING ON WARMTH

Heat is a valuable source of energy. The vacuum AOD converter and the electric arc furnace are equipped with a heat recovery system. The energy content of the cooling water can be used to generate a heat output of up to 12.5 MW. For this purpose, a 1,500 m long truss connects the special steel plant with the central boiler house. From here, the heat is passed on to internal consumers and local energy providers. This saves up to 20 GWh of district heating per year and reduces CO₂ emissions by over 4,000 tons.



A big plus of the high-tech stainless steel plant in Kapfenberg is the 100% use of green electricity for the operation of the electric arc furnace, the heart of the plant. A comprehensive package of measures contributes to the conservation of resources and protects the environment, local residents and employees. Special attention was paid to environmental protection right from the planning stage. The air and wastewater treatment systems are state of the art, meeting the strictest of environmental requirements. High-performance heat recovery systems also help to reduce emissions.

COOLING WITH HEAT

Computer systems and control stations in the stainless steel plant need to be cooled as well. By using absorption technology, cooling is obtained from the plant's internal heat supply. Electrically operated compression machines are no longer required for this process. An absorption cooling system offers the lowest operating costs, requires little maintenance and generates no additional CO₂ emissions while consuming hardly any electricity.

QUIET AND CLEAN

To ensure that the noise of individual processes, e.g. the electric arc during the melting process, does not become a burden, voestalpine minimizes the noise of feeding, tapping, and extraction systems with efficient sound-absorbing cladding and insulation. Every hour, 3.8 million m³ of exhaust air is dedusted.

This reduces the amount of dust produced by the new plant by 75%. A highly digitalized process control system ensures that the blower output is regulated in line with the process. This means that in the new special steel plant it is linked to the production situation, e.g. the feeding and tapping operation.

FOCUS ON RESPONSIBILITY

SUSTAINABLE PRODUCTS

We work on the development and production of sustainable stainless steel that offers ecological, social and economic benefits. At the same time, it protects health and the environment over the entire life cycle, from raw material extraction to final disposal.



SUSTAINABLE TRANSPORTATION

We gradually convert our vehicle fleet to e-mobility, optimize our delivery logistics and support “soft mobility” for our workforce (environmentally friendly and low-accident modes of transportation such as walking, cycling and the use of public transport).



SUSTAINABLE OPERATION

We embrace overall corporate responsibility: the best technologies are used in our production facilities. Increasing efficiency, reducing emissions and saving resources and energy are continuously driven forward as part of existing steel production.



SUSTAINABLE SUPPLY CHAIN

We practice active supply chain management. The social and environmental impacts and risks of suppliers' activities are systematically collected, evaluated, and taken into account in supplier development.



SOCIAL RESPONSIBILITY

Social responsibility has been exemplified since our foundation and is seen as a mandate for all future generations. We take our obligation to consciously deal with the diversity, performance and potential of our employees, society and other organizations seriously.





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voestalpine

ONE STEP AHEAD.