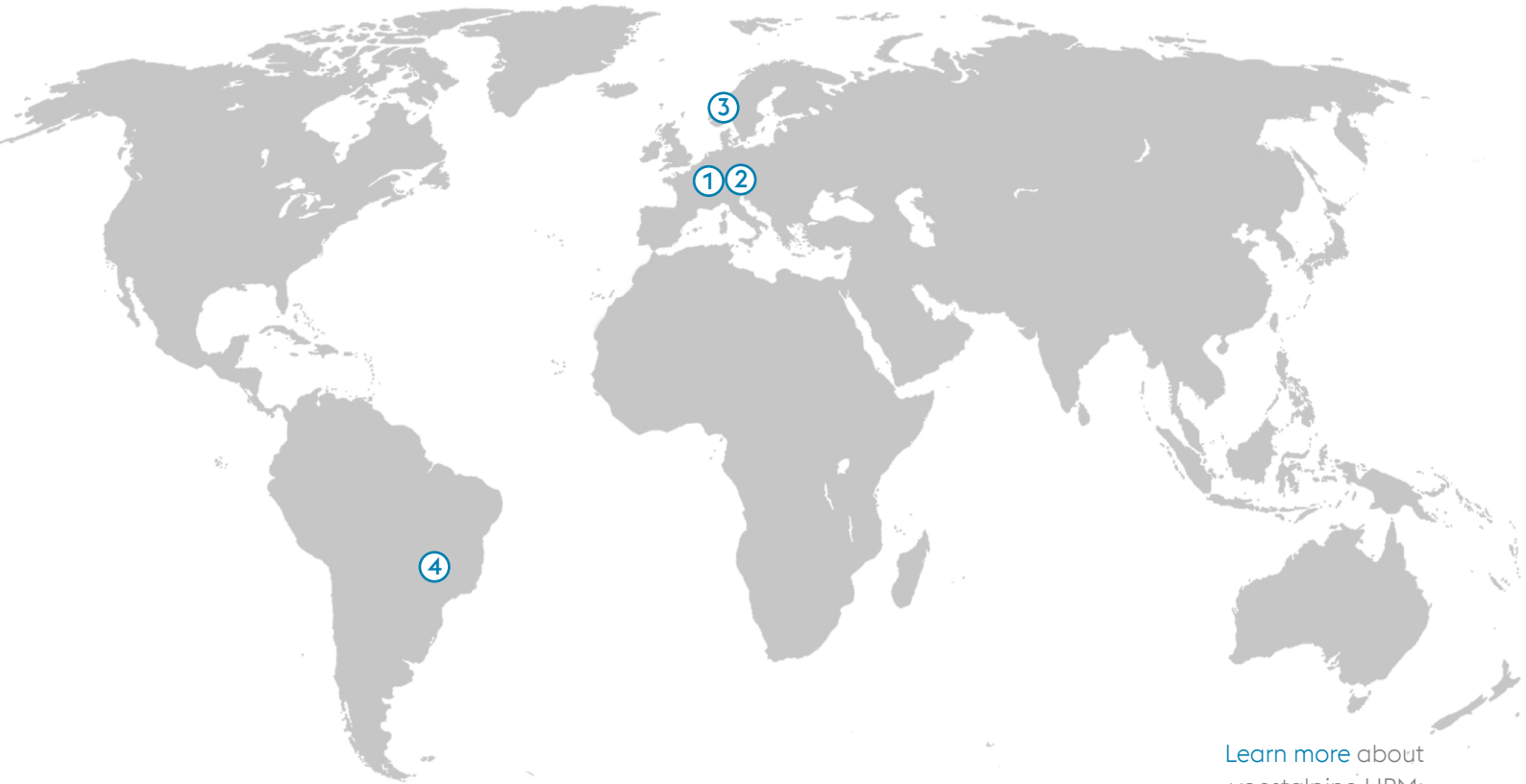




MINING & ROCK HANDLING

High performance materials and solutions for
the mining industry



Learn more about
voestalpine HPM:



OUR COMPANY GLOBAL AVAILABILITY

At voestalpine High Performance Metals, we deliver premium steel and non-ferrous alloys from a unified global network. With multiple production sites and over 130 sales and service locations worldwide, we ensure consistent quality and customer satisfaction across every product, service, and delivery. All our steel mills operate under the highest international standards, guaranteeing reliable, safe, and certified materials for the most demanding applications in the food and beverage industry.

- 1 **voestalpine Böhler Edelstahl – Kapfenberg, Austria:** One of the world's leading suppliers of high-speed steels, tool steels & specialty materials.
- 2 **voestalpine Böhler Bleche – Mürtzzuschlag, Austria:** Delivers cross-rolled sheets and plates as well as products with exceptional uniformity in mechanical and physical properties.
- 3 **Uddeholm – Hagfors, Sweden:** Is one of the world's leading producers of tool steels for industrial applications, with over 300 years of metallurgical expertise.
- 4 **Villares Metals Brazil – Sumaré, Brazil:** Specializes in steel and specialty alloys that combine reliability, strength and customization.

MINING & ROCK HANDLING APPLICATIONS

DRILLING & EXPLORATION

We offer a diverse range tool steels characterized by their high hardness and wear resistance. These properties are ideal for drilling components, such as break out clamps and tong dies. Improving their performance so they maintain their integrity for longer in the most extreme operating conditions.



CLAMPING & GROUND SUPPORT

Our ESR material grades are designed for fatigue, creep and cracking resistance. This combination of properties are ideal for many clamping components, such as rock bolts and clamping plates, ensuring these parts can withstand the high stress conditions typical in mine operations.



PUMPING & FILTRATION

Our experience in the Oil & Gas industry means we have a wide range of steel grades available designed to offer a combination of corrosion and abrasive wear resistance. These properties are ideal for wide range of pumping components, such as valves and valve seats.



MINERAL PROCESSING

Characterized by their high wear and chipping resistance, these material grades are designed with the ideal balance of properties for ore processing components, such as pulverizers and ball mills. Helping your assets maintain consistent production output for longer.



WEAR COMPONENTS

Our unique range of powder metallurgy alloy grades are designed specifically for high hardness, toughness, and wear resistance. These properties are ideal for a range of wear components used in the mining industry. These grades can perform in the harshest mining conditions, helping extend the lifespan of assets and equipment.



MACHINED COMPONENTS

Our tool steels meet the most stringent quality requirements to ensure the highest possible performance. This makes our tool steels an ideal alternative to standard high tensile and tungsten carbide material grades in a wide range of mining and mineral processing applications.



OUR SOLUTIONS

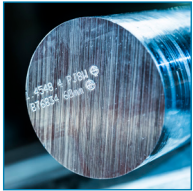
	voestalpine Grades			Standards		
	BÖHLER	ASSAB Uddeholm	Villares	W.N.r. (SEL/EN)	Certificate	Max. HRC / HB / HV
High Toughness / Wear Resistant Grades	M200	-	-	1.2312	-	330 HB
	M238 / M238 HH	718 HH / Impax Supreme	VP20ISO	1.2738	-	330 / 400 HB
	-	Nimax	-	PATENT	-	400 HB
	K100	-	-	1.2080	-	61
	K107	XW-5 / Sverker 3	VC131	1.2436	-	61
	K110	XW-42 / Sverker 21	VD2	1.2379	-	62
	K305	Rigor	-	1.2363	-	61
	K340 ISODUR	88 / Sleipner	VF800ATIM	PATENT	-	63
	K455	-	-	1.2550	-	58
	K490 MICROCLEAN	Vanadis 4E SuperClean	-	PATENT	-	64
	K600	-	-	1.2767	-	55
	K700	-	-	1.3401	-	600 HV
	K888 MATRIX	-	-	PATENT	-	64
	-	Calmax	-	1.2358	-	60
	W302 ISOBLOC	8407S / Orvar Supreme	VH13IM	1.2344	-	54
	W360 ISOBLOC	Unimax	VTMPLUS	PATENT	-	57
	S390 MICROCLEAN	Vanadis 30 SuperClean	-	PATENT	-	68
	S600	-	VWM2	~1.3343	-	66
	S690 MICROCLEAN	-	-	1.3351	-	66
	-	Caldie	-	PATENT	-	60
	K390 MICROCLEAN	Vanadis 8 SuperClean/XL	-	PATENT	-	64
Corrosion Resistant Grades	M333 ISOPLAST	Mirrax ESR	VIMCOR	-	-	50
	M310 ISOPLAST	Stavax ESR	VP420IM	1.2083	-	52
	M303 HH	Mirrax 40	V2316MOD	1.2316	-	40
	M315	RoyAlloy	-	PATENT	-	310 HB
	M340 ISOPLAST	-	-	PATENT	-	55
	M368 MICROCLEAN	-	-	PATENT	-	56
	M390 MICROCLEAN	Elmax SuperClean	-	PATENT	-	60
	N690	-	-	1.4528	-	61
	-	Corrax	V630IM	-	-	50
	-	Tyrax ESR	-	PATENT	-	58
	-	Vanax SuperClean	-	PATENT	-	60
	A903	-	-	1.4462	Upon Request	
	A913A	-	-	1.4410	Upon Request	
	L718	-	-	2.4668	Upon Request	277 HB
	L718 API	-	-	N07718	Upon Request	45

Applications

Drilling Systems	Clamping Systems	Pumping Systems	Mineral Processing	Wear Parts	Machined Parts	Applications
●	●	-	-	●	●	Shaft keys, Manifolds, Holders
●	●	-	-	●	●	Drill rod tools, Manifolds, Pins, Shafts, Gears
●	●	-	-	●	●	Wear plates, Impact tools, Pins, Shafts, Gears
●	●	●	●	●	●	Wear plates, Pump valve seats, Vibrating mill cups
●	●	●	●	●	●	Wear plates, Pump valve seats, Tong dies, Liner bolts
●	●	●	●	●	●	Wear plates, Pump valve seats, Tong dies, Liner bolts
●	●	-	●	●	●	Breakout clamps, Tong Dies
●	●	-	●	●	●	Breakout clamps, Tong Dies
●	●	-	●	●	●	Breakout clamps, Tong dies, Rock breaker tools
-	-	-	●	●	-	Breakout clamps, Cutting inserts, Knives
●	●	●	●	●	●	Breakout clamps, Tong dies, Rock breaker tools
-	-	●	●	●	-	Wear plates, Spreaders, Grading plates
●	●	-	●	●	●	Breakout clamps, Cutting inserts
●	●	-	●	-	●	Breakout clamps, impact tools, Pins, Shafts
●	-	-	●	●	●	Shafts, Pins, Bolts, Pistons, Gears, Wrenches
●	-	-	●	●	●	Shafts, Pins, Bolts, Pistons, Gears, Wrenches
●	-	-	●	●	●	Wear plates, Rotary drill components, Cutting tools
●	●	-	●	●	●	Wear plates, Cutting tools
●	-	-	●	●	●	Wear plates, Cutting tools
●	-	-	●	●	●	Breakout clamps, Impact tools, Pins, Shafts
●	-	-	●	●	●	Wear plates, Cutting tools
-	-	●	●	●	●	Pump blocks, Pins, Gears, Hydraulic parts
-	-	●	●	●	●	Pump blocks, Pins
-	-	●	-	●	●	Manifolds, Pump blocks, Pins, Gears, Hydraulic parts
-	-	●	●	●	●	Manifolds, Pump blocks, Pins
-	-	●	●	●	●	Pump valves, Seats, Disks
-	-	●	●	●	●	Pump valves, Seats, Disks
-	-	●	●	●	●	Floatation sparges, Strainers
●	-	●	●	●	●	Pump valves, Seats, Disks, Wear parts
-	-	●	●	●	●	Manifolds & Pump Blocks
-	-	●	●	●	●	Pump valves, Seats, Disks
-	-	●	●	●	●	Pump valves, Seats, Disks, Wear parts
-	-	●	-	●	●	Impellers, Inducers
-	-	●	-	●	●	Impellers, Inducers
●	-	●	-	●	●	Manifolds, Flow diverters, Stators, Rotors
●	-	●	-	●	●	Manifolds, Flow diverters, Stators, Rotors

PRODUCT VERSIONS AND DELIVERY SIZES

ROUND BAR



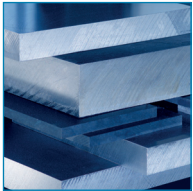
- » Ø 12.5 – 610mm*
- » production lengths
- » special lengths
- » *larger sizes upon request

FLAT BAR



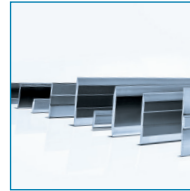
- » hot rolled
- » blasted
- » pickled
- » surfaces / edges ground
- » dimensions on request

PLATES / SHEETS



- » thickness 0.8 – 100mm
- » retail sizes
- » various delivery conditions (sawn, ground, 6-side machined, etc.)

SHAPED PROFILES - ROLLED / DRAWN



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

WIRE ROD



- » Ø 5 – 15 mm
- » pickled / on coils
- » blasted and pickled
- » hot rolled
- » in various executions

ENGINEERED PRODUCTS



- » tailor-made solutions
- » machined "ready-to-use"
- » heat treatment & surface treatments available

HEAT TREATMENT



- » vacuum & controlled atmosphere processes
- » optimized hardness and microstructure
- » stress relieving and annealing

SPECIALTY COATINGS



- » reduce abrasive wear and friction
- » hard coatings based on ionized metal vapor

SUSTAINABILITY AND CIRCULAR ECONOMY

THE LATEST TECHNOLOGY AND NEWEST ENVIRONMENTAL STANDARDS

At all our production sites, we set new standards for production quality, process reproducibility, and environmental impact. In addition to using resources responsibly, we are constantly implementing new measures for environmentally friendly processes and production.

The most important raw material is metal scrap. Therefore, establishing closed material loops internally and with customers is essential to ensure a sustainable supply chain, reduce our usage of primary raw materials and improve our carbon footprint.

With our integration of products, services and technical advisory, we drive meaningful change across our business sectors.

CIRCULAR ECONOMY

Through our unique, integrated service network, we create long-lasting performance that meets the needs of our planet and future generations.

We collaborate closely with our customers on their demanding applications. Leading by example, we enable them to engage in sustainable initiatives like the reuse of their own scrap and thereby enabling the production of more sustainable products.

Together, we inspire the change in our industries by always thinking and walking one step ahead.



Reducing **CO₂ emissions**
by 50 % in our operations
by 2029



Using **over 90% of recycled**
scrap and secondary raw
materials in our production
processes by 2030



Contributing to the voestalpine
group target of reducing **CO₂**
emissions by 25% in our supply
chain by 2029



[Learn more](#)
about inSPire, our
sustainability initiative:



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voestalpine

ONE STEP AHEAD.