



MINING & ROCK HANDLING

## voestalpine MINING & ROCK HANDLING CLAMPING & GROUND SUPPORT

### WHEN PERFORMANCE MATTERS

The mining industry is one of the most demanding industry sectors when it comes to component failure from fatigue and cracking. Premature failure of critical retaining components can result in significant downtime and negative impacts to productivity.

voestalpine High Performance tool steels have demonstrated exceptional performance in a wide range of clamping system components such as bolts, drivers and retainer plates. The resulting increase in component service life means that voestalpine tool steels can be an extremely cost effective solution for many applications.

Our tool steels offer an excellent combination of toughness and creep resistance, which makes them an ideal replacement for traditional case hardened, or high tensile steel grades.

### CHARACTERISTICS:

- » Excellent resistance to both creep and gross cracking
- » High hardness (up to 66 HRC)
- » High strength & excellent ductility
- » High degree of purity and cleanliness thanks to the production remelting processes
- » High work-hardening potential
- » Sustainable production (up to 97% recycled content)

STRONG. SAFE. SUSTAINABLE.

## VOESTALPINE PREMIUM MATERIAL GRADES

BÖHLER	Uddeholm / ASSAB	Villares	W.N.R (EN/SEL)	MAX. (HRC/HB/HV)
M200	-	-	1.2312	330 HB
M238 / M238 HH	718 HH / Impax Supreme	-	1.2738	330 / 400 HB
-	Nimax	-	PATENT	400 HB
K100	-	-	1.2080	61
K107	XW-5 / Sverker 3	-	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
K600	-	-	1.2797	55
K888 MATRIX	-	-	PATENT	64
-	Calmax	-	1.2358	60
S600	-	VWM2	1.3343	66

## PERFORMANCE IS IN OUR DNA

voestalpine High Performance Metals is the global market leader in the production of tool steels and one of the world's leading suppliers of high-speed steels, valve steels, special steels, powder metallurgy steels, and nickel-based alloys. We also manufacture die-forged components and large castings from nickel-based alloys and high, medium and low alloy steels.

Customers rely on our key brands of Bohler, Uddeholm and Villares, to set the highest standards of innovation, quality and service across a wide range of industries including automotive, aerospace, consumer electronics and oil & gas. We are fully integrated from steel production through to local customer sales, ensuring we keep our customers One Step Ahead.

## EXPLORE WHAT IS POSSIBLE.



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**voestalpine**  
 ONE STEP AHEAD.