



## MINING & ROCK HANDLING

# voestalpine MINING & ROCK HANDLING DRILLING APPLICATIONS

### WHEN PERFORMANCE MATTERS

The mining industry is one of the most demanding industry sectors when it comes to component wear and abrasive damage. Premature failure of these components can result in significant asset downtime and negative impacts to productivity.

voestalpine High Performance tool steels have demonstrated exceptional performance in a wide range of drilling components such as tong dies, break out clamps and recovery tools. The resulting increase in component service life means that voestalpine tool steels are an extremely cost effective solution for many high wear applications.

Our tool steels offer an excellent combination of toughness and wear resistance, which makes them an ideal replacement for traditional case hardened, or high tensile steel grades. In addition, they can also be a cost effective alternative to tungsten carbides, where ductility and chipping resistance are required.

### CHARACTERISTICS:

- » Excellent resistance to both abrasive and adhesive wear
- » High hardness (up to 68 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
K100	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	-	-	1.2767	55
K888 MATRIX	-	-	PATENT	64
-	Calmax	-	1.2358	60
W302 ISODUR	8407S / Ovar Supreme	VH13IM	1.2344	54
W360 ISODUR	Unimax	-	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

## 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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ONE STEP AHEAD.