

COLD WORK STEELS

Available Product Shapes

Long Products

Product Description

An increase in productivity in high-tech toolmaking can only be achieved by using the appropriate highly wear-resistant PM materials. The decisive factors are toughness, wear resistance, compressive strength and edge-holding ability. Factors which are combined to formidable advantage in BÖHLER K190 MICROCLEAN.

Properties

- Extremely high wear resistance
- Outstanding toughness
- High compressive strength

Material designation

~1.2380	SEL
~ X230CrVMo13 4	EN

Chemical composition

C	Si	Mn	Cr	Mo	V
2.30	0.60	0.30	12.50	1.10	4.00

Material characteristics

	Compressive strength	Dimensional stability during heat treatment	Toughness	Wear resistance abrasive	Wear resistance adhesive
BÖHLER K190 MICROCLEAR®	★★★★	★★★★★	★★★★	★★★★	★★★★
BÖHLER K100	★★	★★	★	★★★	★★
BÖHLER K105	★★	★★	★	★★	★★
BÖHLER K107	★★	★★	★	★★★	★★
BÖHLER K110	★★	★★★	★	★★★	★★
BÖHLER K294 MICROCLEAR®	★★★★★	★★★★★	★★★	★★★★★	★★★★★
BÖHLER K340 ISODUR®	★★★	★★★★	★★★	★★★	★★★★
BÖHLER K340 ECOSTAR®	★★★	★★★	★★	★★	★★
BÖHLER K360 ISODUR®	★★★	★★★★	★★★	★★★★	★★★★
BÖHLER K346	★★★	★★★	★★★	★★★★	★★
BÖHLER K353	★★	★★★	★★	★★	★★
BÖHLER K390 MICROCLEAR®	★★★★★	★★★★★	★★★★	★★★★★	★★★★★
BÖHLER K890 MICROCLEAR®	★★★★	★★★★★	★★★★★	★★★	★★★
BÖHLER K490 MICROCLEAR®	★★★★	★★★★★	★★★★	★★★★	★★★★
BÖHLER K497 MICROCLEAR®	★★★★★	★★★★★	★★★	★★★★★	★★★★★

Physical Properties at 20°C / 68°F

Thermal Expansions

Temperature (°C / °F)	100 / 212	200 / 392	300 / 572	400 / 752	500 / 932	600 / 1112	700 / 1292
Thermal expansion (10 ⁻⁶ m/(m.K) / 10 ⁻⁶ inch/(inch.F))	12.2 / 6.778	12.5 / 6.944	13 / 7.222	13.2 / 7.333	13.7 / 7.611	14 / 7.778	13.7 / 7.611

For more information see www.voestalpine.com/boehler-edelstahl

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ONE STEP AHEAD.