



Tungsten Carbide Cold Rolls

Specifications



Type	Function	Position
RO	Oval reducing	First set of a reduction cassette
RT	Round reducing	Second set of a reduction cassette
CA	Sizing to final diameter	Finishing set for plain-round wire
FO	Forming the section before ribbing	First set of a ribbed finishing cassette
PR	Profiling — rolls the ribs	Last set for ribbed wire

A two-cassette line runs RO + RT in the first cassette, then RO + CA for plain wire or FO + PR for ribbed wire. Reducing and sizing sets are three rings; the ribbing set is three rings for three-sided ribs and two for two-sided ribs. Full detail, including what two passes change, is on the cold rolling cassettes page.

Carbide grades

Grade	Co %	WC %	Density g/cm ³	Hardness HRA	TRS MPa
YG15	14.9	85.1	13.95–14.15	≥ 86.5	≥ 2,220
YG16C	16	84	13.80–14.00	≥ 84.0	≥ 2,480
YG20	20	80	13.45–13.65	≥ 83.5	≥ 2,480

All three grades are used for both reducing and ribbing sets; in practice the grade is not assigned by ring position. Our recommendation: lower cobalt (YG15) where wear sets ring life, higher cobalt (YG20)

where rings crack or chip before they wear — typically the heavier-loaded sets on a two-cassette line. Tell us which set is failing and how, and we will suggest the grade.

The mill matters too. A rigid, precisely set mill spreads the load evenly and can run a harder grade; a less rigid mill, with more shock and misalignment — common on older three-roll cassettes — needs a tougher one.

Sizes

- Finished wire: typically 3–16 mm (down to 2.5 mm on request).
- Ring thickness: standard rings for most sizes; 25 mm-thick rings for finished sizes above 14 mm.
- Two-sided ribs use paired rings, two to a set; three-sided ribs use a three-ring set with different ring dimensions and angles. Under GB 13788-2024 that means a three-ring set for CRB550 and CRB650 and a two-ring set for CRB600H; tell us the grade you make and we will match the set.

Ring dimensions follow the mill model. You do not need to measure anything: give us the model, or the rod and finished diameters, and we match the full ring sequence.