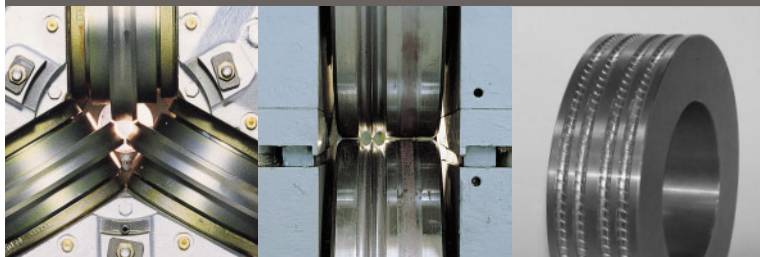


# DANIELI CARBIDE ROLLING RINGS TECHNICAL CHARACTERISTICS



**innovation**  
**DANIELI SERVICE**

**Danieli long-lasting experience in design, engineering, construction, and commissioning of rolling mill for long products had lead Danieli to develop its own know-how in define and provide the Customer with the best solution of Carbide Rolling Rings for hot and cold long product rolling mills.**

**Cemented carbide roll rings is a kind of tool material which consists of tungsten carbide and cobalt with high hardness and wear resistance. Danieli roll rings (DRR) for high speed rolling of steel bars has a higher resistance to impact and thermal fatigue and very high wear resistance as well.**

#### The products

Rolling rings for rolling smooth or ribbed metal wire are available in the following types:

- > as sintered rough material with standard sintering tolerance;
- > with all sides ground without grooves;
- > ready for fixing, with ground ribbed grooves.

#### Advantages

- > Danieli experience able to provide rings for hot and cold rolling for all type of mill.
- > Improved transversal rupture strength.
- > Improved compression resistance.
- > Excellent wear resistant.
- > Low specific weight.
- > Resistance to oxidation.
- > Impact resistant.
- > Toughness

Danieli grade	Co+Ni +Cr (%)	WC (%)	Minimum hardness (HRA)	Minimum density (g/cm <sup>3</sup> )	Recommended applications	Recommended use
DRR101	10	90	85.0	14.2	High wear and corrosion resistance.	Last 1-2 stands of finishing mills.
DRR102	12.5	87.5	83.0	14.0	High wear and corrosion resistance.	Last 1-3 stands of finishing mills.
DRR103	15	85	83.0	13.8	Good toughness, wear resistance, corrosion resistance and thermal crack resistance.	The middle and rear stands of finishing mills.
DRR104	18	82	82.0	13.5	Good toughness and thermal crack resistance, good for general purposes.	The most of the finishing mills and the rear stands of common mills.
DRR105	20	80	80,5	13.4	Good toughness and thermal crack resistance.	In the front stands of finishing mills.
DRR106	25	75	79.0	12.9	Good impact resistance.	The stands of pre-finishing rolling mills for hot rolling ribbed steel bars and they can be machined with turning and milling.
DRR107	30	70	78.5	12.6	Good impact resistance.	Hot rolling ribbed steel bars and in the first and second stands of pre-finishing mills.



**DANIELI** THE RELIABLE  
AND INNOVATIVE PARTNER  
IN THE STEEL INDUSTRY

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