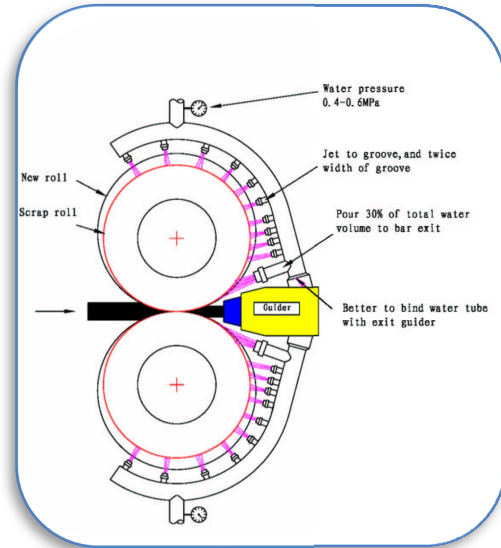


TC (TUNGSTEN CARBIDE) RINGS COOLING INFORMATION

The parameters of the cooling water pressure and flow rate for traditional high-speed finish rolling rings are as follows:

The Control Range of pressure: 0.4 – 0.6 Mpa

The water pipe should be properly installed to ensure a radial spray, with an angle of 15-30 degrees to the roller rotation direction. Approx. 30% of the water flow should come from the hot steel exit. The distance of nozzle and carbide rings should be 150-250 mm, the water should be jetted directly into the grooves, with the width of the water stream, twice of groove width. The water stream should not be scattered or sprayed as mist.



The following table shows water flow rate:

Groove width (mm)	<12	12-24	24-36	36-50
Water flow rate (m ³ /stand ·hour)	18	20	22	25

The following table shows water volume:

Binder content (%)	6	10	15	20	25	30
Water volume (L/groove width mm*minute)	56	48	40	32	24	16

Water quality requirements

- Water PH value : 7.5≤PH≤7.8
- PH≥7.2 : KTPL H Series
- PH<7.2 : KTPL R Series
- The content of solid particles in the water to be <15 mg/L, the biggest size <40um.
- Water temperature ≤ 35 °C

The following table shows cooling water composition requirements:

Composition	Chloride	Ca ⁺	Sulfate	Suspended substance
Quantity (mg/L)	≤ 40	≤400	≤75	≤ 15