

American Roller Company DuraShell™ and EquaTherm® Rolls have what it takes to meet your needs for new chill/heat transfer rolls and reconditioning or modification of your existing units.

DuraShell™



Features and Benefits

Built to perform

- Shrink fit double shell spiral design provides uniform temperature control: $\pm 0.5^{\circ}\text{C}$ ($\pm 1^{\circ}\text{F}$).
- Consistent performance under loads up to 2100 N/cm, higher if your process requires.
- High precision: TIR (total indicator runout) of 13 μm standard.
- Our large in house CNC machining capability, offers many diameter and face length combination to meet your requirements.

Built to last

- Low-carbon steel tubing, hard surfaced, overlaid with 420 stainless steel to 52 Rc.
- More resistance to worm tracking than carburized and flame-hardened shells.
- Lower reconditioning costs.

Service Offering

Quality Assurance

- Complete Design Engineering, Manufacturing, Hard Chrome Plating and Finishing
- Hard Chrome Plating
 - 63-65 Rc hardness
- Vertical Stress Relief
 - 42" (1065mm) dia. and 210" (5330mm) lengths
- Dynamic Balancing
 - In accordance with ISO 1940/1

EquaTherm®



Features and Benefits

Benefits

- Maximum heat-transfer rate
- Increased productivity. The heat-transfer efficiency of the EquaTherm® design lets you specify your rolls for maximum line speed, minimum roll size or anywhere in between.
- Energy savings. The efficiency of the spiral design lets you operate at minimum flow rates, reducing costs associated with heating, cooling and pumping process water.
- Improved product quality. Uniform temperature across the roll face, $\pm 1^{\circ}\text{F}$ ($\pm 0.5^{\circ}\text{C}$), combats across-the-web variations in gauge, appearance etc.

Service Offering

Quality Assurance

- Computerized Heat Transfer and Mechanical Analysis
 - For Most Process Applications including: Cast Film, Extrusion Coating, Laminating, Coating, Metallizing; General Heating, Cooling and Roll Design
- ASME Code Certified to manufacture and repair rolls
 - "U" and "R" Stamp Approved
- Hard Chrome Plating
 - 63-65 Rc hardness
- Acid Flushing and Flow Testing
 - Up to 10 tons - 500 GPM max
- Roll Repair & Refinishing
 - Up to 40 in diameter by 120 overall length



Roll Repair and Refinishing Services

Complete repair/remanufacturing services of American Roller Company chill rolls for sheet, film paper coating and heat transfer applications.

Regular maintenance and/or modified finish requirements are our specialty. Combine with total in-house chrome plating and finishing equipment, American Roller offers committed customer service and accurate delivery quotations with every request.

Finish Options, Ra –µ in (µm)

Flawless Super	Bright Mirror	Standard Mirror	Polish Finish	Satin Finish	Coarse Matte
<1" (<.025)	1" - 2" (.025 - .050)	2" - 4" (.05 - .10)	6" - 32" (.15 - .81)	Variable (Variable)	125" - 150" (3.18 - 3.81)

Specialty finishes: water retention, flash plating over matte, pocket release, 30-50% gloss, tungsten carbide coating.

Our precision finishing facility enables us to provide 0.0005" (13 mm) TIR on every order regardless of size or weight.

For finishing, we offer optical mirror "superfinish" to coarse matte applied after chrome plating.



Final process in which repaired roll is receiving a standard mirror finish.

Our capabilities include:

- 48" diameter and 300" lengths (Oversize roll processing also available)
- Re-shell manufacturing
- Acid flush and flow testing
- Journal and body repairs
- Re-polish existing chrome
- Grinding and Re-chroming

Plus specialty industry finishes:

- Water retention
- Flash plating over matte
- Pocket release
- Rubber & polymer covers
- 30-50% gloss
- Tungsten carbide coating
- Anti-dent surfaces
- Tungsten carbide coating

