



### INTRODUCTION

Tire uniformity, indefectibility and quality greatly depend on tire curing molds. Since 1978, Uzer Makina offers a wide range of tire curing molds for tire manufacturers all around the world.

Uzer Makina is fully capable of manufacturing tire curing molds in requested type and sizes. While producing tread segments for PCR, LTR and TBR tires, we produce two-piece complete molds for 2-3 Wheeler, AG and OTR tires. Uzer Makina also includes sidewall plates, bladder molds and container mechanisms to its mold portfolio.

In addition to manufacturing tire curing molds whose design are given by our customers, we also offer design service according to customers' requirements, production technology and materials used. Our broad equipment pool which consists of more than 50 CNC machineries is always ready for manufacturing any request.





## TIRE CURING MOLDS

• Tire mold line of Uzer Makina includes tread segments, sidewall plates and AG & OTR molds which are manufactured at its latest technology equipment pool.

#### « Tread Segments





At Uzer Makina, we manufacture both summer and winter tire molds. While engraving method is utilized for summer type, winter type molds are casted.



We utilize high strength Aluminum and Steel materials in order to prevent segment junction flashes and decrease the cost of maintenance.

#### « Sidewall Plates



All kind of sidewall letterings and serrations are engraved by 4 – Axis CNC equipments according to clients' requirements.

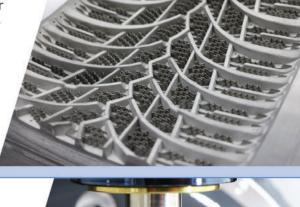


We dedicated a special 5 - Axis CNC for only plug engraving which provides faster milling.

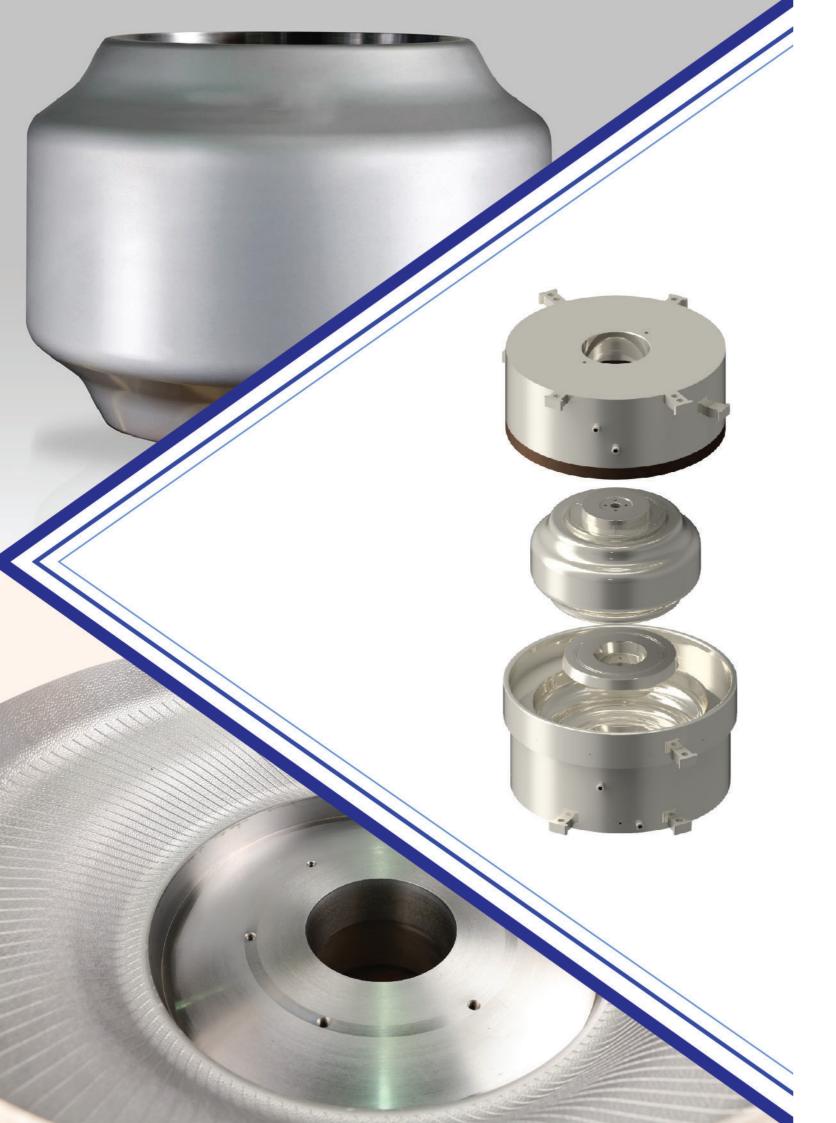
#### « AG & OTR Molds



At Uzer Makina, we are fully capable of engraving 2 pieces AG & OTR molds up to 115"/3.0 m (external diameter) in our CNC machinery pool.





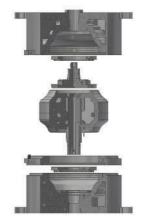


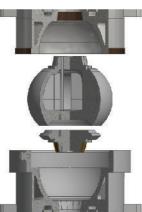
## **BLADDER MOLDS**

• Just like tire curing molds, Uzer Makina is a well experienced bladder mold manufacturer who offers both injection type and compression type.

#### « Injection Type

### « Compression Type





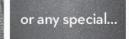
We utilize both engraving and acid etching method for pebble etchings and vent grooves. Plus, we are fully capable of engraving/acid etching any kind of bladder pattern requested.







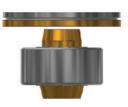


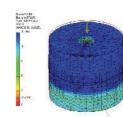


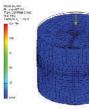
We prefer to weld the surfaces that work conjointly with bronze so that maintaining the surface deformations becomes less challenging.

All bladder molds are subject to stress analysis according to ASME standards.



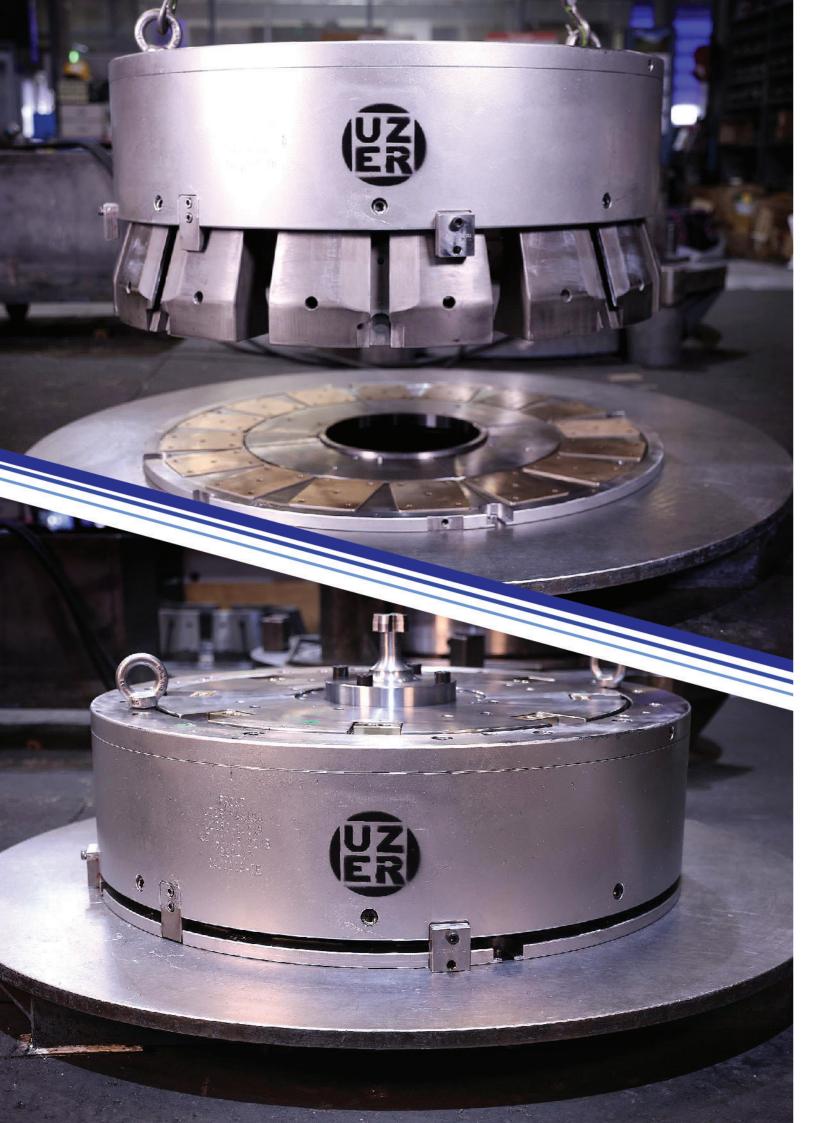










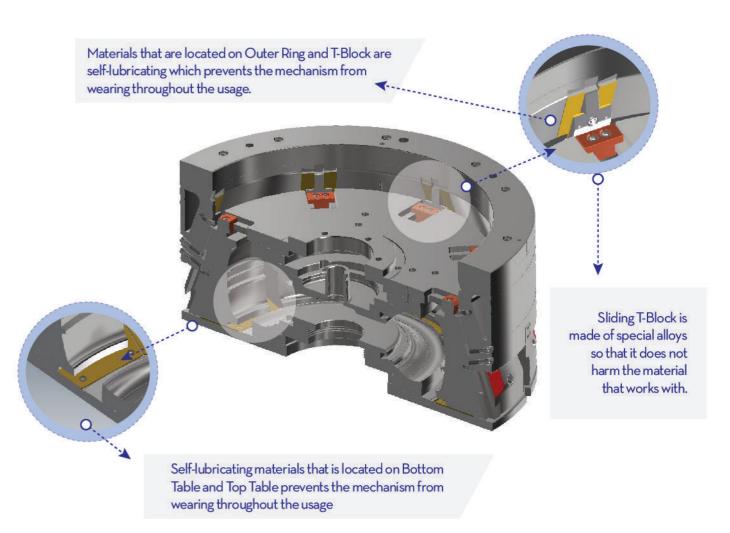


### CONTAINER MECHANISMS

 Container mechanisms form the backbone of the whole curing mold system and make the system work smoothly.



Materials that we utilize in our mechanisms are made of special alloys that are self-lubricating; thus it prolongs the lifetime of the parts which have high maintenance cost such as outer ring, segment etc...



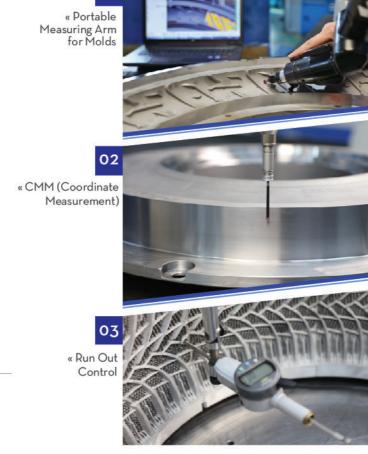
# **QUALITY CONTROL**

• Uzer Makina is committed to deliver high quality products, therefore quality inspections are one of most critical processes for us.

#### « Geometric Inspection

All products are subjected to quality control prior to shipment.

All tire curing molds are geometrically inspected either via the Coordinate Measuring Machine (CMM) or Portable Measuring Arms. It is faster and more accurate to utilize portable measuring arms for larger and more complex products. Also run-out values of tread segments are measured in order to ensure uniformity of molds.









#### « Special Tests for Container Mechanisms

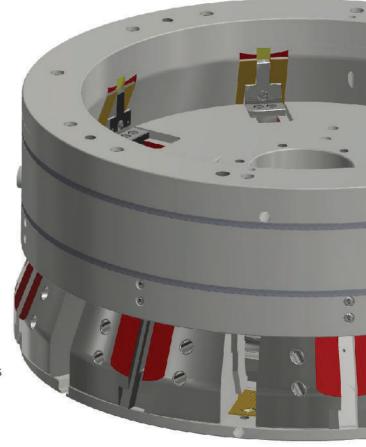
In addition to geometrical inspections, container mechanisms and its welded parts with steam chambers are also subjected to some special tests.

- 01 Penetrant Test
- 02 Ultrasonic Test
- 03 Water Pressure Test
- 04 Steam Pressure Test

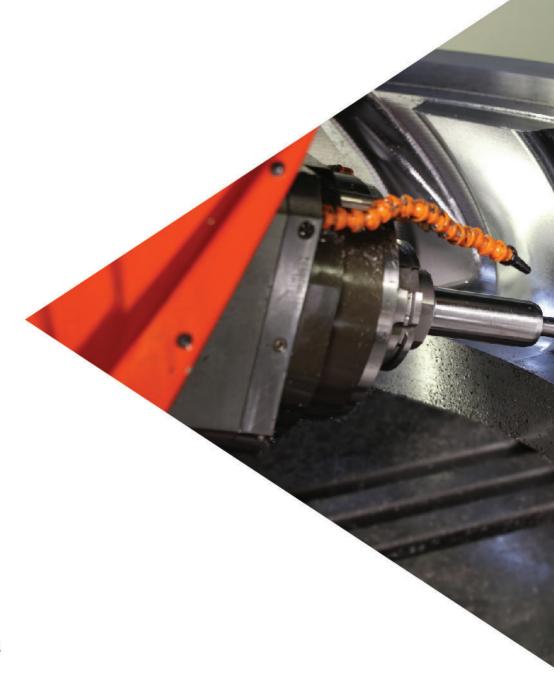
All the tests above are for ensuring the mechanism is leakage free after welding processes.

05 Pre-Loading Test

Finally, container mechanisms are subjected to pre-loading test in order to verify pre-loading values and to make sure that the gap between segments and outer ring is within the required tolerances.









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