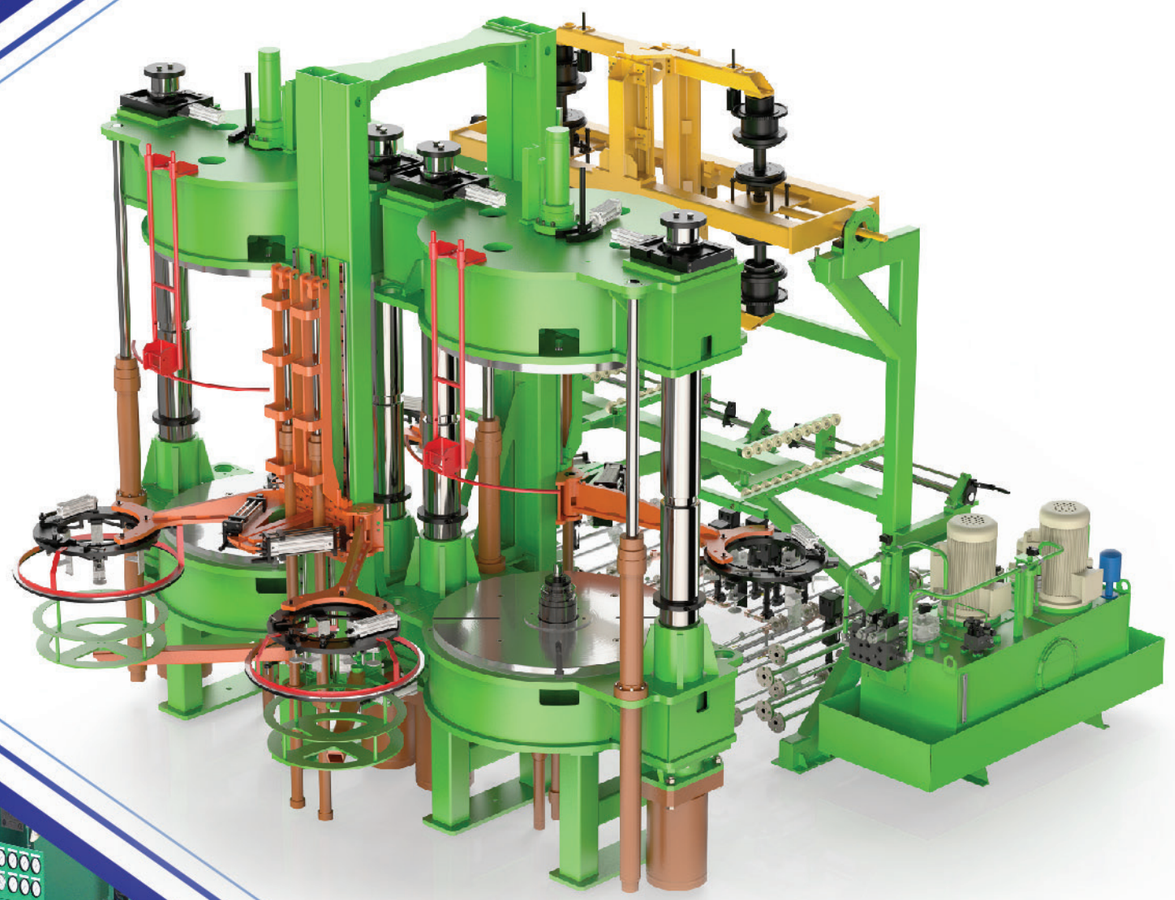
INTEGRATED TIRE CURING SOLUTIONS

UZER MAKiNA

Tire Curing Press Catalogue



INTRODUCTION

Tire curing presses are one of the most crucial assets of whole tire production process both in terms of productivity and its cost to tire makers. Therefore, Uzer Makina offers latest technology tire curing presses to its customers.

Uzer Makina is fully capable of manufacturing tire curing presses for tires including 2-3 wheelers, PCR, LTR and OTR tires. Uzer Makina utilizes three type of technology for this which are floating column type hydraulic presses, frame type hydraulic presses and mechanical presses.

Uzer Makina has been developing the know-how in tire curing field and proving this with its international patents. We are proud of delivering latest technology customer tailored tire curing presses all around the world.

UZER MAKiNA

FLOATING COLUMN TYPE HYDRAULIC PRESSES

• Uzer Makina brings a different perspective to column type presses with its internationally patented floating column type system.

In 2007, our design team came up with a design innovation that includes a new column design (floating columns) that eliminates the necessity of mold height adjustment equipments.

Uzer Makina is fully capable of manufacturing floating column type hydraulic presses in various sizes starting from 36" to 52" for 2-3 wheeler, PCR and LTR tires.

« Benefits

- « Simple Design
- « Trouble Free Operation
- « Suits Customer Request
- « Low Energy Consumption
- « Easy Maintenance
- « Long Lasting Design

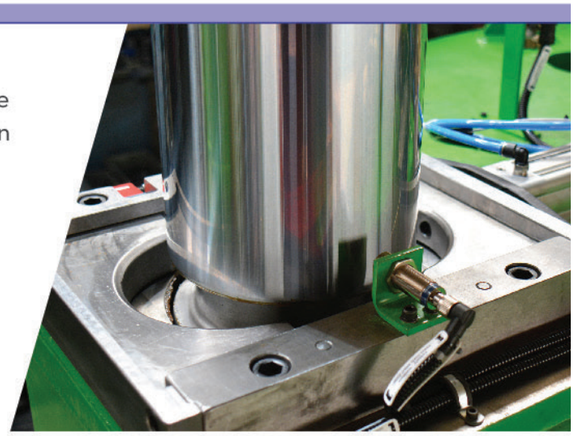
FLOATING COLUMN TYPE HYDRAULIC PRESSES

« Simple Design

Our patented automatic mold height adjustment system provides trouble-free operation without the necessity of any manual setting or data input. Piston rods of squeezing cylinders are directly connected to the columns that adjust the mold height.

Presses do not require any pits prior to installation.

Independent cavities is an option which allows the presses to cure tires in one cavity while the other is free



« Trouble Free Operation

Floating column type hydraulic presses are highly accurate in terms of green tire loading and unloading due to utilising shock absorbers and stoppers.

Loader adjustment range is wide enough not to need any additional auxiliary equipment.

Automatic top ring movement during loading/unloading process prolongs bladder life.

« Suits Customer Request

Control panels, PLC programming and HMI are specifically designed for customer needs.

Design flexiblity in many press parts (e.g. Centerpost, locking mechanisms etc.) provides easy adaptation to existing equipments and practises.

Floating column type hydraulic presses can be equipped with Post Cure Inflation (PCI) as well.

« Low Energy Consumption

Floating column technology decreases the cycle time significantly compared to fixed column presses.

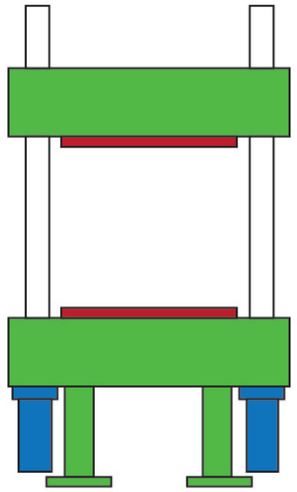
Utilization of variable displacement pump enables hydraulic units to consume energy just as much as the moving parts require which means less energy consumption.
- High Pressure for Up & Down Movement
- Low Pressure for the rest of the movements

Squeezing pressure is provided by Air Booster, so that hydraulic unit does not need to work during the curing process.

FLOATING COLUMN TYPE HYDRAULIC PRESSES

« Easy Maintenance

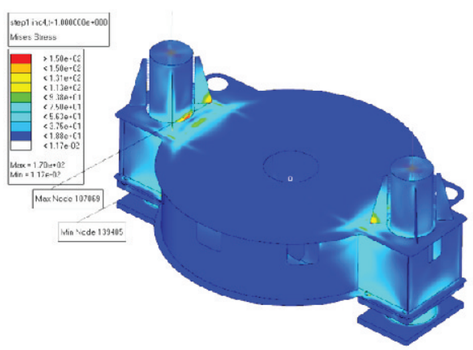
- No need of additional maintenance for mold adjustment system
- Squeezing cylinders are not affected from rising hot air
- Easy to access squeeze cylinders



« Long Lasting Design

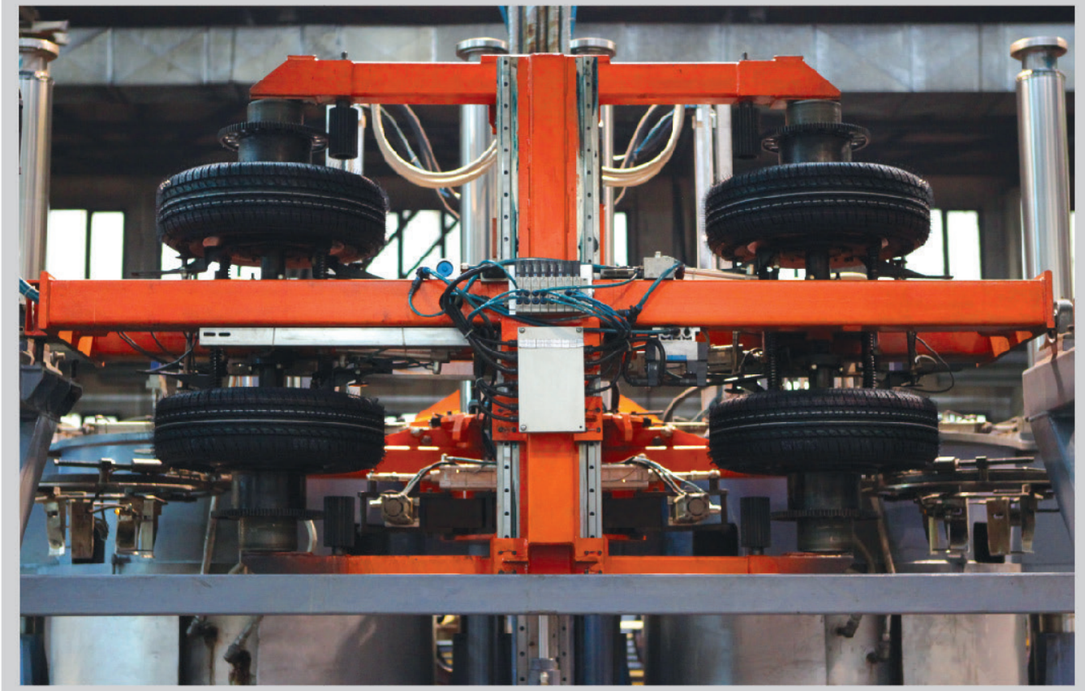
Main parts are tested by finite element analysis under maximum load and adjustments are made accordingly.

Floating column hydraulic presses are under 10 years of mechanical warranty and 2 years of component warranty.



SPECIFICATIONS

	Sizes			
	36"	46"	48"	52"
‹ Closing Force	‹ 890 kN	‹ 1600 kN	‹ 1800 kN	‹ 2000 kN
‹ Max. Mold / Container O.D.	‹ 900 mm	‹ 1170 mm	‹ 1220 mm	‹ 1320 mm
‹ Mould / Container Height	‹ 100-300 mm	‹ 265-530 mm	‹ 280-545 mm	‹ 295-560 mm
‹ Bead Diameter Range	‹ 10"- 18"	‹ 13"- 20"	‹ 13"- 20"	‹ 13"- 20"
‹ Platen Pressure	‹ Max. 16 bar	‹ Max. 16 bar	‹ Max. 16 bar	‹ Max. 16 bar
‹ Jacket Pressure	‹ Max. 16 bar	‹ Max. 16 bar	‹ Max. 16 bar	‹ Max. 16 bar
‹ Internal Pressure	‹ Max. 28 bar	‹ Max. 28 bar	‹ Max. 28 bar	‹ Max. 28 bar
‹ Cavity Type	‹ Common	‹ Independent	‹ Independent	‹ Independent
‹ Cavity Control	‹ Common	‹ Common/Independent	‹ Common/Independent	‹ Common/Independent

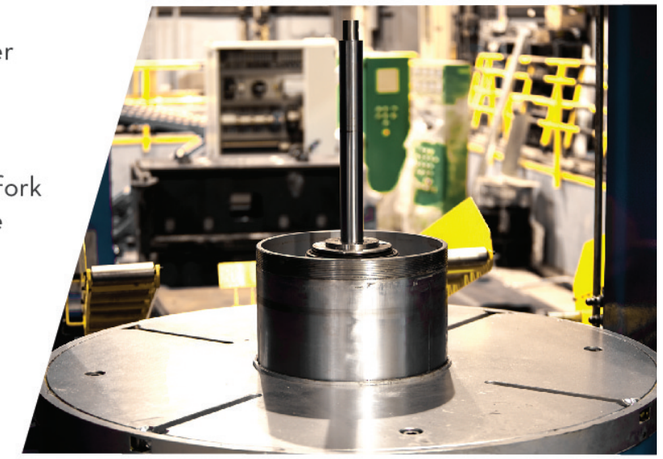


FRAME TYPE HYDRAULIC PRESSES

• Uzer Makina manufactures frame type hydraulic curing presses between 62” – 67” for TBR tires.

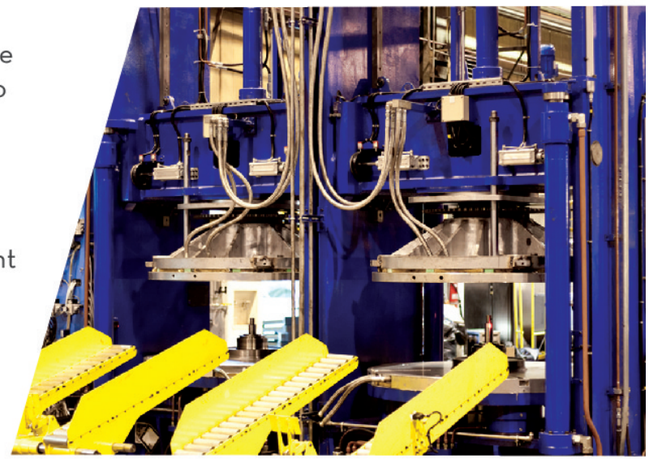
Main body of frame type hydraulic presses consist of lower body, upper body and side walls.

There are two independent loader mechanisms and two independent fork type unloader mechanisms in frame type hydraulic presses.



Frame type hydraulic presses are equipped with RIB type or BOM type centerpost mechanisms according to customer request.

Frame type hydraulic presses are equipped with motorized mold height adjustment mechanism.



SPECIFICATIONS

	Sizes		
	62”	65”	67”
‹ Closing Force	‹ 4450 kN	‹ 4900 kN	‹ 4900 kN
‹ Max. Mold / Container O.D.	‹ 1575 mm	‹ 1650 mm	‹ 1700 mm
‹ Mould / Container Height	‹ 250-650mm	‹ 250-650mm	‹ 250-650 mm
‹ Bead Diameter Range	‹ 16"- 24.5"	‹ 16"- 24.5"	‹ 16"- 24.5"
‹ Platen Pressure	‹ Max. 16 bar	‹ Max. 16 bar	‹ Max. 16 bar
‹ Jacket Pressure	‹ Max. 16 bar	‹ Max. 16 bar	‹ Max. 16 bar
‹ Internal Pressure	‹ Max. 28 bar	‹ Max. 28 bar	‹ Max. 28 bar
‹ Cavity Type	‹ Independent	‹ Independent	‹ Independent
‹ Cavity Control	‹ Common/Independent	‹ Common/Independent	‹ Common/Independent

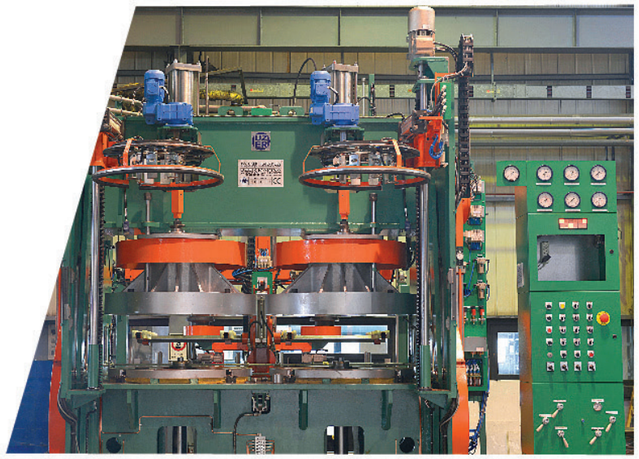
MECHANICAL PRESSES

• Uzer Makina produces mechanical presses for all types of tires. 45” presses are produced for PCR and LTR tires; 65.5” presses are for TBR; and presses between 85” – 104” are produced for AG tires.

Main body of mechanical presses consist of lower body, upper body, side walls and crank gears.

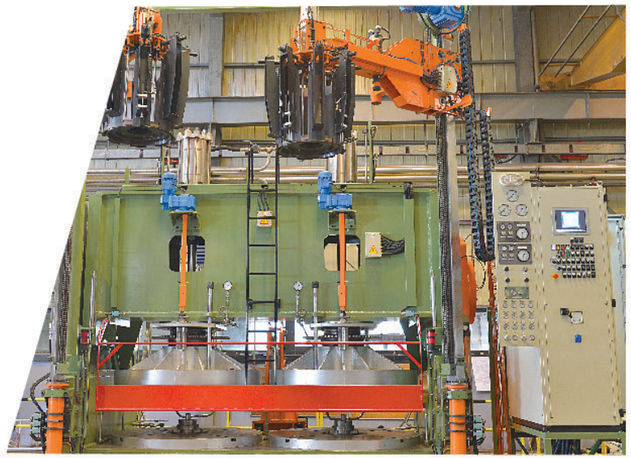
Automatic loading and unloading are also included in mechanical presses.

Beam movement options include tilt-back and slide-back motion.



Heating could be done by platens or dome according to the requirement.

Mechanical presses are equipped with motorized mold height adjustment mechanism.



SPECIFICATIONS

	Sizes					
	45"	65.5"	85"	91"	95"	104"
Closing Force	1500 kN	4450 kN	6000 kN	9785 kN	9785 kN	12000 kN
Max. Mold / Container O.D.	1150 mm	1500 mm	2000 mm	2220 mm	2290 mm	2540 mm
Mould / Container Height	250-505 mm	280-676 mm	478-834 mm	610-1067 mm	650-1100 mm	864-1270 mm
Bead Diameter Range	13"-20"	15"-25"	18"-40"	20"-42"	22"-46"	24"-46"
Dome Pressure	N/A	N/A	Max. 7 bar	Max. 7 bar	Max. 7 bar	Max. 7 bar
Internal Pressure	Max. 28 bar	Max. 28 bar	Max. 28 bar	Max. 28 bar	Max. 28 bar	Max. 28 bar
Cavity	Double Cavity	Double Cavity	Single Cavity	Single Cavity	Single Cavity	Single Cavity
Press Open Close	Slide Back	Slide Back / Tilt Back	Slide Back	Tilt Back	Slide Back	Slide Back / Tilt Back

HIGHLIGHTS FOR ALL PRESS TYPES

• Besides the fact that all three press types have its own characterisics, they have some mutual features and options in common.

We collaborate with all well-known brands for electrical, control, hydraulic, pneumatic and mechanical components.

SMC	SIEMENS	samson	Rexroth Bosch Group	SCHUBERT SALZER	Rockwell Automation / Allen-Bradley
OMRON	FESTO	BALLUFF	Parker	airtec	

All presses can optionally be equipped with isolation material in order to prevent the heat loss, therefore keep energy consumption at minimum.

Our presses optionally include all kind of safety components including:

- Safety PLC
- Emergency Buttons
- Safety Fences
- Heat Shield
- Secondary Locking Mechanism
- Area Sensors/Light Curtains

All presses could optionally be equipped with latest technology monitoring systems which enable to track the whole vulcanization process and therefore help tire manufacturers spot root causes of defections throughout the plant.

Simple design enables quick installation and start up. All presses are installed and tested in house and prior to shipment, minimum number of parts are dismantled in order to assure problem free delivery.

Our commissioning team manages the whole installation and commissioning process including providing our customers with operation and maintenance trainings.

QUALITY CONTROL

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

Main components such as bodies and platens are subjected to geometrical inspections prior to assembly.

Moreover, platens are subjected to some additional quality control processes including penetrant, ultrasonic, water and steam tests in order to ensure that platens are leakage free after welding processes. Lastly, platens are tested to ensure whether the steam heat is evenly distributed or not.

After the final assembly, automation controls are done by the automation team carefully before the shipment.

CERTIFIED ISO14001 · International Organization for Standardization ISO 9001:2015 · OCCUPATIONAL HEALTH & SAFETY OHSAS 18001

UZER MAKiNA

Our Sign| Just Everywhere

Arslanbey OSB, 5. Sok. No:5|A 41285
Kartepe - Kocaeli|TURKEY

+90 262 351 31 84
+90 262 351 31 93
www.uzermakina.com