MACHINES FOR TIRE MANUFACTURING
TIRE CURING PRESSES FROM HERBERT

HERBERT tire curing presses are application specific solutions. They are always customized according to the requirements. This high quality machinery and equipment provides best productivity at an optimum tire quality level with a maximum availability. In general all kinds of tire curing presses can be equipped with different features:

- standing post - or various roll-in bladder mechanisms
- for all kinds of curing processes: superheated water, steam, inert gas, electrical ...
- different loading and unloading devices
- diverse green tire holders
- automatically operated continuous mold height adjustment
- mold quick clamping mechanisms
- optimized insulation with high efficiency
- ... and many more

The reliability of these machines has been proved now for many years even under most severe tire production conditions. Stresses and deflections within the load bearing structural components are far beyond the material limitations. This has been calculated by using Finite Element Analysis and verified with million load cycle tests.

HYDRAULIC FRAME TYPE TIRE CURING PRESSES

HERBERT, as one of the pioneers in tire manufacturing equipment, supplies hydraulic tire curing presses around the globe for many decades now. During this time the technology has been optimized resulting in absolute reliability with high productivity at an optimum state of availability.

These frame type tire curing presses are built with 2 independently operating cavities and can be equipped with a continuous mold height adjustment. High precision ball guidings - free of wear and easy to maintain - also contribute to the perfect quality of the tires cured on HERBERT's presses.

Segmented molds in container mechanisms can be used on these presses as well as two piece molds. Simple and reliable chuck, clamp and locking mechanisms help significantly to reduce the retrofitting time i.e. during mold or bladder change.

Not to forget the optimized electric, hydraulic and pneumatic controls, which also have a big influence on this high availability level of the HERBERT presses at a minimum maintenance effort.
HYDRAULIC COLUMN TYPE TIRE CURING PRESSES

The hydraulic column type presses "HCP" from HERBERT set up a new standard in tire vulcanization. This concept is based on the broad experience of more than 3 decades of hydraulic tire curing presses at HERBERT.

This kind of machine is unique, since only with this type of press it is possible to replace mechanical 40.5" presses on a 1:1 base by bigger, more reliable and more flexible 52" presses, which also provide a higher productivity. Besides the compact shape of this machine the perfect accessibility (i.e. for mold change) is another highlight. With this feature it is easy to install big molds (for bigger presses) even in production places with strong space restrictions.

This is ensured by the "V" shaped arrangement of the columns, which are exclusively used for guiding the upper cross beam and do not need to bear any load from press squeeze. These high forces are born by 4 tie rods, which are arranged symmetrically around each cavity. These tie rods are locked underneath the lower bolster and drawn down by ring piston cylinders.

This results in a very uniform squeeze distribution over the entire mold area, which contributes significantly to an optimum tire uniformity. Moreover this feature also minimizes the wear of molds and guide bushings, which helps to increase the productive up-time of machinery and equipment.

Just like the HERBERT frame type presses the column type press HCP is designed for individual operation of each cavity, which guarantees flexibility in the production of tires on a high quality level. Many features such as the continuously adjustable mold height and the precision guidings of the approved HERBERT frame type presses are available for the column type machines as well.

The advantages of this type of press at a glance:

- optimum product quality due to the most uniform squeeze distribution
- best availability because of wear optimization and the use of high quality components
- perfect access i.e. for mold- and bladder change
- space saving arrangement of 52" presses on the same footprint as mechanical 40.5" presses
- highly economic and absolutely flexible due to the independent cavities
- main press guides free of loads
- locking and squeeze application separate from the guiding columns
  - no load on the columns and no grooves
- highest productivity due to fast reload cycle time
HYDRAULIC CURING PRESSES
FOR TRUCK-L/T-TIRES

This hydraulically operated curing press AUBO 66-RH from HERBERT provides all the advantages of hydraulic presses for the production of truck, light truck and similar tires. The pure vertical motion prevents the molds from excessive wear and the hydraulic drive technology leads to shorter reload cycle times, resulting in a higher productivity compared to mechanical presses.

Both cavities of this 66” press are operated commonly, just like the mechanical presses. But the locking and the squeeze mechanisms are arranged symmetrically around each cavity, which provide a higher product quality than with mechanical presses.

The load bearing elements of this type of machine are separate from the guiding components, similar to the HERBERT column type press. This contributes to a significant decrease of mold wear at highest possible level of precision.

And the optimum product quality is ensured by a very uniform squeeze distribution resulting from the 4 tie rods, which are arranged around each cavity, similar to the HCP press type.

Underneath the lower bolsters, ring piston cylinders are located, which generate the squeeze after the tie rods have been locked by pneumatically actuated and monitored mechanisms.

This kind of press can be equipped with two piece or segmented molds and it goes without saying that other characteristics can be customized as well according to the requirements for the particular conditions of operation. And upon request this machine is also available in other sizes.

The main features of this piece of machine at a glance:

- highly economic
- best tire quality due to absolutely uniform squeeze distribution
- optimized access i.e. for bladder or mold change
- guiding components without locking grooves and free of squeeze loads
- minimized secondary processing time due to short reload cycles
- highest availability resulting from minimized wear and use of quality components
MECHANICAL CURING PRESSES FOR TRUCK-OTR-EM TIRE MANUFACTURING

The technology of mechanical tire curing presses at HERBERT is proved for many decades. Up to a cavity size of 65” the machines feature two commonly operated cavities. Bigger presses have one cavity.

In general these machines can be supplied with different designs:

- as dome or platen type curing press
- for the use of two piece or segmented molds
- ... or according to your requirements

POST CURE INFLATOR (PCI)

If required all HERBERT tire curing presses can be completed with adequate post cure inflators. HERBERT PCIs also reflect the latest technology with a compact design as well as a high availability and reliability. These machines are designed for 2 or 4 cool down positions, each available for individual or common operation.

HERBERT post cure inflators are directly integrated in the tire curing press control, which guarantees a quick tire delivery from the press to the PCI.

And it goes without saying that they are available as stand-alone solutions as well.

BLADDER CURING PRESSES

Just like the other HERBERT machines the bladder curing presses - operating according to the displacement molding technology - provide an economic fabrication of high quality products.

The displacement process is divided in 2 phases in order to achieve shortest possible mold closing times, which are extremely important for the quality of the bladders. In the beginning of the compression phase the mold closing speed is reduced automatically, resulting in a very uniform squeeze distribution on the green rubber for a constant flow.

Depending on the type of bladders to be produced, the presses can be equipped with different demolding auxiliaries.
FURTHER ACTIVITIES

HERBERT can even provide more. Please contact us, if you need further information concerning the following items:

- tire building machines
- components and accessories for tire building machines, such as drums, servicer, transfer rings, stitching devices
- modification and upgrade of existing plant and machinery
- maintenance, repair, service
- ...

QUALITY, COMPETENCE & EXPERIENCE

HERBERT has established a quality management system and in every business process these guidelines are applied. Competent and experienced personnel is involved throughout all process steps and up-to-date methods and technology is used for the benefit of our customers. Depending on the requirements different standards can be met. The machines and equipment can be designed and built - for example - in accordance with various rules and guidelines:

- EC machine directive (CE)
- GOST-R
- ASME
- ...

HERBERT SUPPLIES INTEGRATED SOLUTIONS

Besides the mentioned plant and machinery our customers can get more from HERBERT. Tire molds, container mechanisms and bladder molds for instance complete the range of products in the field of vulcanization. And for tire building diverse drums and transfer rings are available.

At HERBERT you can get all from only one source! HERBERT is your partner for tire manufacturing technology and service!

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