

DESCRIPTION OF THE MACHINE AND TECHNICAL SPECIFICATIONS

RING FITTING MACHINE

THE RING FITTING MACHINE is used for automatically fitting plastic or metal rings into a rubber packing ring.

The machine is composed of a mechanical hand with a vertical electrical axis, which draws the packing into which the plastic ring is to be fitted from an accumulation store and places it on centering pliers. The pliers take the packing to the fitting area through a linear movement. At the same time, a horizontal saddle draws the plastic ring to be fitted into the rubber packing from a vertical store placed at 90° from the packing store. The saddle places the plastic ring under the pliers, which draw the ring with a vertical movement. While the horizontal saddle moves back to the inserts store and gets ready to take a new plastic piece, a pushing disk lifts the rubber packing into position so that it can be expanded. A multi-finger retractor expands the packing upper lip to make the fitting of the plastic insert easier. When the upper lip has been expanded, the holding pliers group descends and fits the insert into the packing. While the holding group ascends to its previous position, ready to draw a new plastic insert the pushing discs rivet the fitting with a short run during the phase when the lip is being closed again. The vertical pushing disc descends together with the rubber packing coupled with the plastic insert. At the end of the descent the fitted packing is transported outside the machine because a new packing to be fitted is being pushed and falls into a special container.

The mechanical hand is composed of:

For the rubber ring

- A vertical store in which plastic or metal rings are manually pre-loaded
- A holding group for rubber rings
- A group for moving rubber rings from the accumulation store to the loading table
- A group for vertically moving the rubber rings from the store to the loading table
- A group for centering the rubber ring
- A group for translating the rubber ring from the centering position to the plastic ring fitting position
- A lifting group that goes up to the plastic ring fitting position
- A rubber ring expanding (opening) group

For the plastic or metal ring

- A vertical store in which plastic or metal rings are manually pre-loaded
- A group for moving plastic or metal rings from the accumulation store to the loading table
- A group for translating plastic or metal rings from the accumulation store to the hold position
- A hold group for plastic or metal rings
- A group for approaching the plastic/metal hold group to the plastic ring to be drawn
- A group for approaching the plastic/metal rings to the rubber ring on which they have to be fitted