RF VULCANISATION EQUIPMENT FOR NATURAL LATEX AND SBR FOAM

The unique, rapid and cost-efficient solution for latex foam production

Thanks to the partnership with major experts and specialising machinery manufacturers in the latex foam industry, STALAM has developed and introduced to the world markets the Radio Frequency vulcanisation technology, thus revolutionising the traditional Dunlop process.

The use of RF fields, instead of steam heating, makes the vulcanisation process much faster: the electromagnetic energy is instantly absorbed by the water contained in the foam, uniformly throughout its volume. Thus, heating of the foam and its full vulcanisation just take a few minutes, in the centre as on the surface. Proportional to the process time saving is the reduction of the space required by the RF vulcanisation equipment, to achieve a certain production capacity.

STALAM has developed specific solutions to vulcanise natural latex and SBR foam either inside moulds (mattress cores and pillows) or as a continuous sheet (LPC). Moulds are made of light and inexpensive composite materials that allow weight reduction of over 60% compared to traditional metal moulds. The reduced mould mass, along with the negligible heat losses to the environment, make the RF vulcanisation process extremely efficient, thus leading to documented energy savings of over 50% compared to the traditional steam vulcanisation method. Moreover, mould materials developed by STALAM in cooperation with specialising suppliers, allow for an easy and quick stripping of the vulcanised product. Last but not least, mould design is more flexible, not being bound to the presence of a large number of pins, allowing the latex producers to follow easily the latest market trends in mattress and pillow design.

Full latex foam production lines complete with ancillary equipment and automation, as well as consultancy on latex technology to achieve the best quality and develop customised products by exploiting the benefits and versatility of the RF equipment, can be provided by STALAM in cooperation with its partners.
**BENEFITS**

- Energy- and cost-efficient process (-50% energy consumption)
- Faster vulcanisation, shorter (smaller) equipment
- Uniform and complete vulcanisation, no need for post-vulcanisation
- Cheaper, lighter and versatile moulds
- Easy product stripping

**TURN-KEY SOLUTIONS**

STALAM works in partnership with other equipment manufacturers (European and Asian) to supply complete production lines for latex foam products. STALAM also provides consultancy on latex compounding and related chemistry with all the necessary know-how.