mariani

MBT

MARIANI BUFFER TABLE

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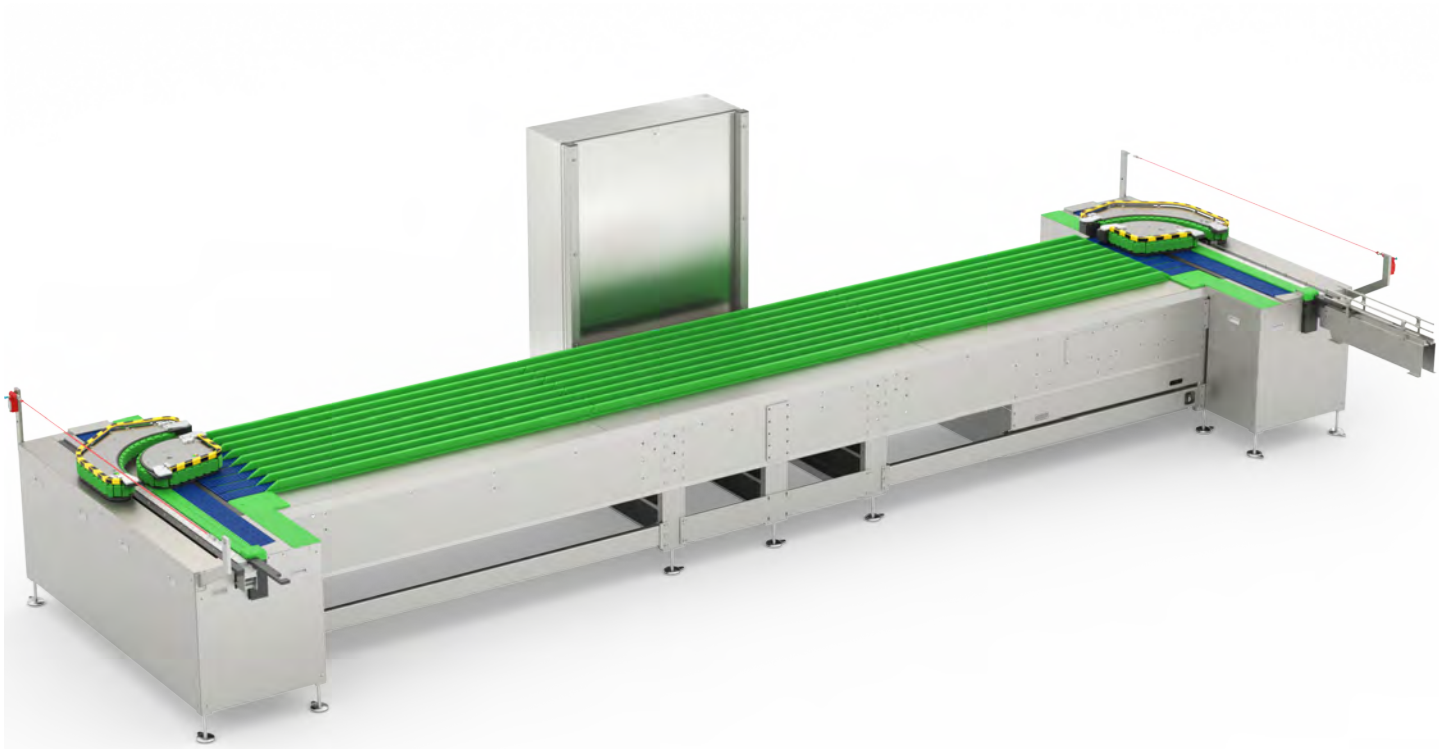
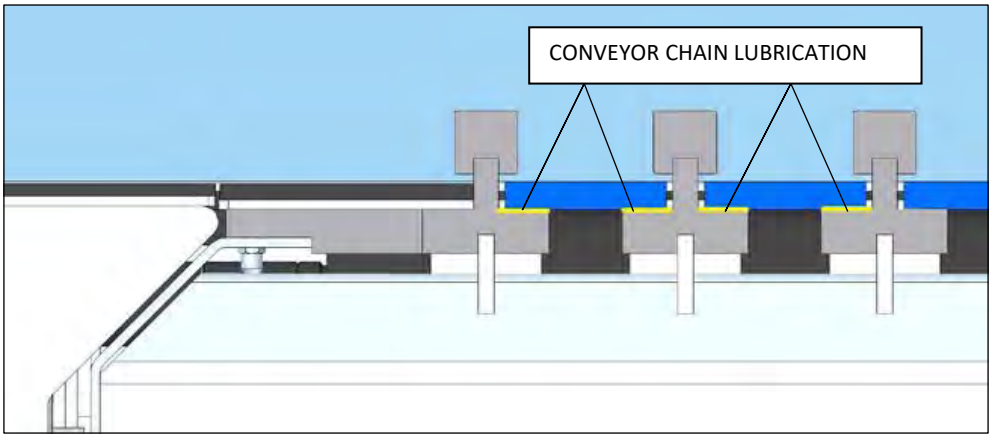
Functional characteristics



- Shuttles: dedicated brushless motor for each chain movement + brushless motor for sliding traslation
- Line speeds: 6.000 -12.000 -18.000 – 24.000 p/h +20%
- Products: Packs
- Minimum storage time: 3 minutes
- Operating principle: FIFO (First In First Out)
- Access: All the areas of the table can be easily reached by the operator
- Shuttle chains: Produced in soft material to avoid any packs deformation
- Lubrication: The lower part of the chains is lubricated to reduce friction and wear in the area that is in contact with the Polyzene



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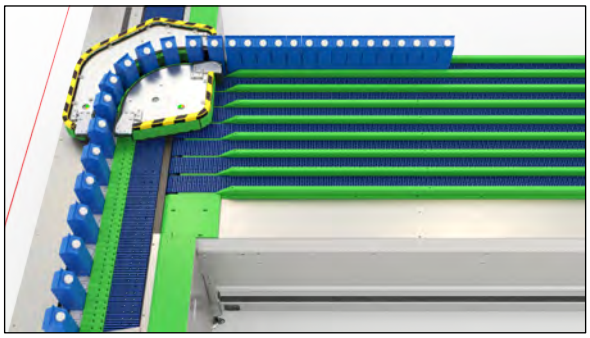
The “First In First Out” storage system in its horizontal configuration is mainly suitable for automatically storing products that have an almost regular shape. Its main features are: a totally flat design along the whole length of the machine, integrated operation, high performance due to the special infeed/outfeed system, and a particularly delicate product handling system that prevents products from being deformed or rotated accidentally. Thanks to its technical characteristics that offer many advantages, the table is suitable for storing large quantities of products without compressing them (thereby avoiding any deformations), and it only occupies a limited surface area. The table is made up of different belt tracks along which the products are conveyed in different rows. Each row operates independently since it is driven by a dedicated motor, which can be easily intervened upon should there be a fault. To convey the products to/from the infeed/outfeed of the different tracks, the device is fitted with two special satellite devices. The product flow in these two units is interrupted by two rotating belts that avoid to set a dosing device upstream in the line.

Storage is performed using alternate tracks, so that the shuttle movement is limited. This minimizes the length of the pack row that is present upstream (because the products have stopped at the infeed to allow the shuttle movement) and therefore also minimises the pressure between the packs themselves. The packs are initially destined for track 1, (image 1); then, when this track is complete, the satellite device belts are stopped. After a few seconds, the device aligns itself with track 3 and starts filling that track, (image 2).

Filling is performed for all the other tracks using the same logic. For example, in a table like the one shown in the images which has 8 tracks, the procedure will be the following: 1-3-5-7 the shuttle moves from the top to the bottom.

This process can continue until the table has been filled to capacity or can stop before then, depending on the downstream system requirements.



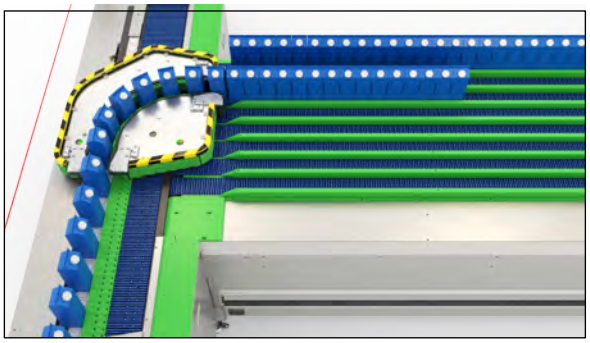
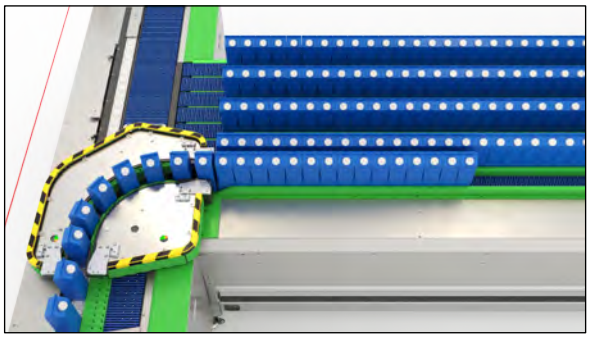
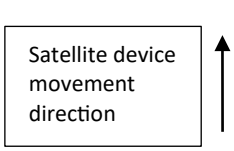


Image 1

Image 2

If the filling phase continues, then, after having completing row 7, the shuttle will move to row 8 and then reverse its running direction so as to continue with tracks 6-4-2 (image 3 and image 4).





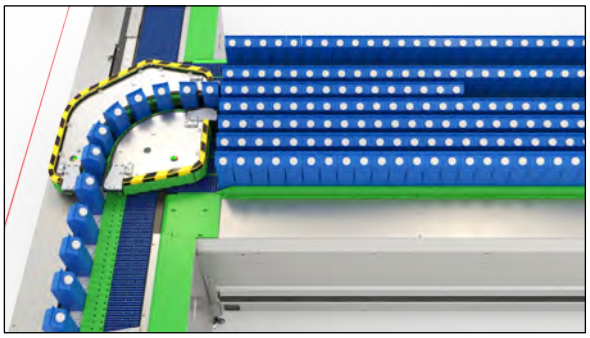


Image 3

Image 4

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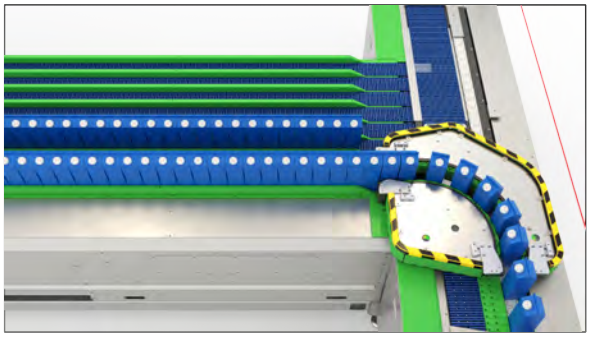


Satellite device movement direction

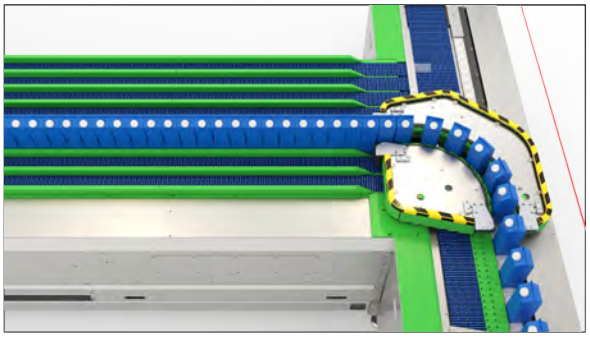


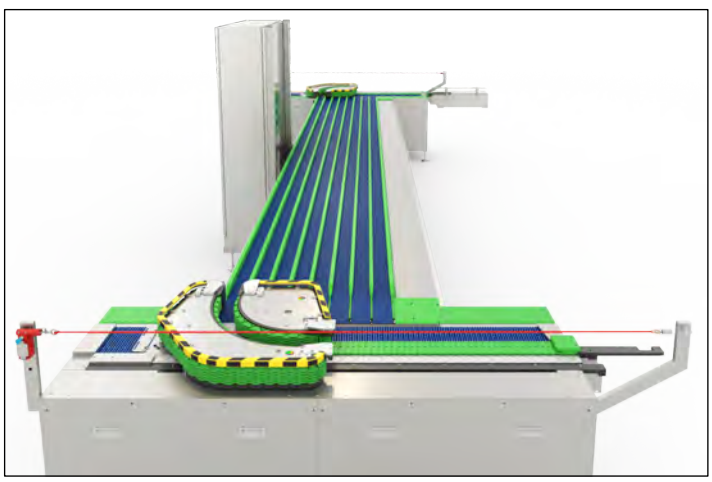
Image 5

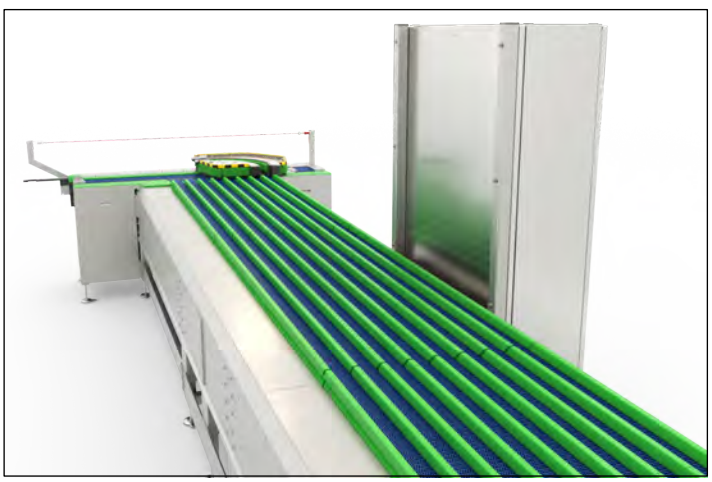
Image 6

The table emptying procedure is performed using the same operating principle, so that the products do not remain still beyond a certain period of time. Emptying starts from the first line that was filled and then follows the same order used for the filling procedure (images 5-6).

Technical overview

Nominal power	6 KW 3x400 V, 50 Hz neutral + earth
Track motor drive	1 three-phases asynchronous per track
Motor drive for satellite devices	1 brushless motor for the belt movement + 1 brushless motor for the belt rotation
Machine structure	Stainless steel 304
Chains	Primary brand washable plastic polymer
Pack capacity for the MBT-L model	From 441 pcs to 1.464 pcs
Pack capacity for the MBT-S model	From 315 pcs to 1.276 pcs
Minimum pack width	37 mm
Maximum pack width	74 mm
Handling system	Using a fork lift truck and suitable hooks





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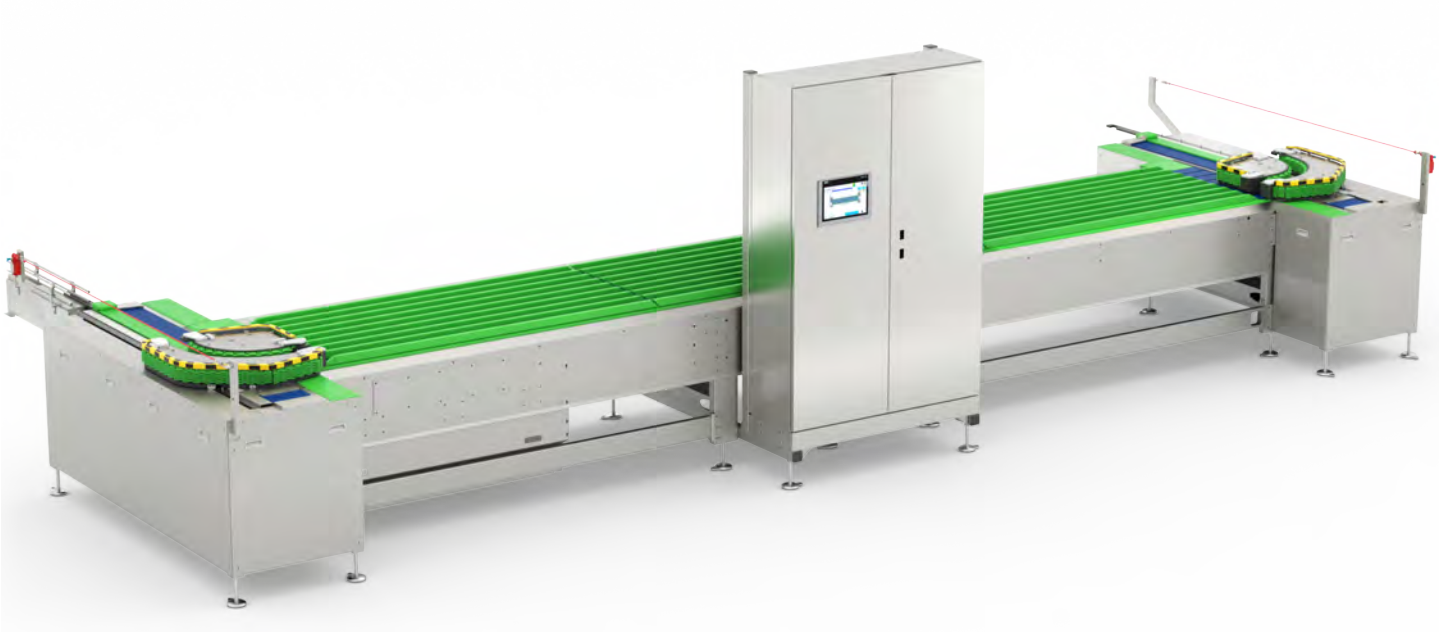
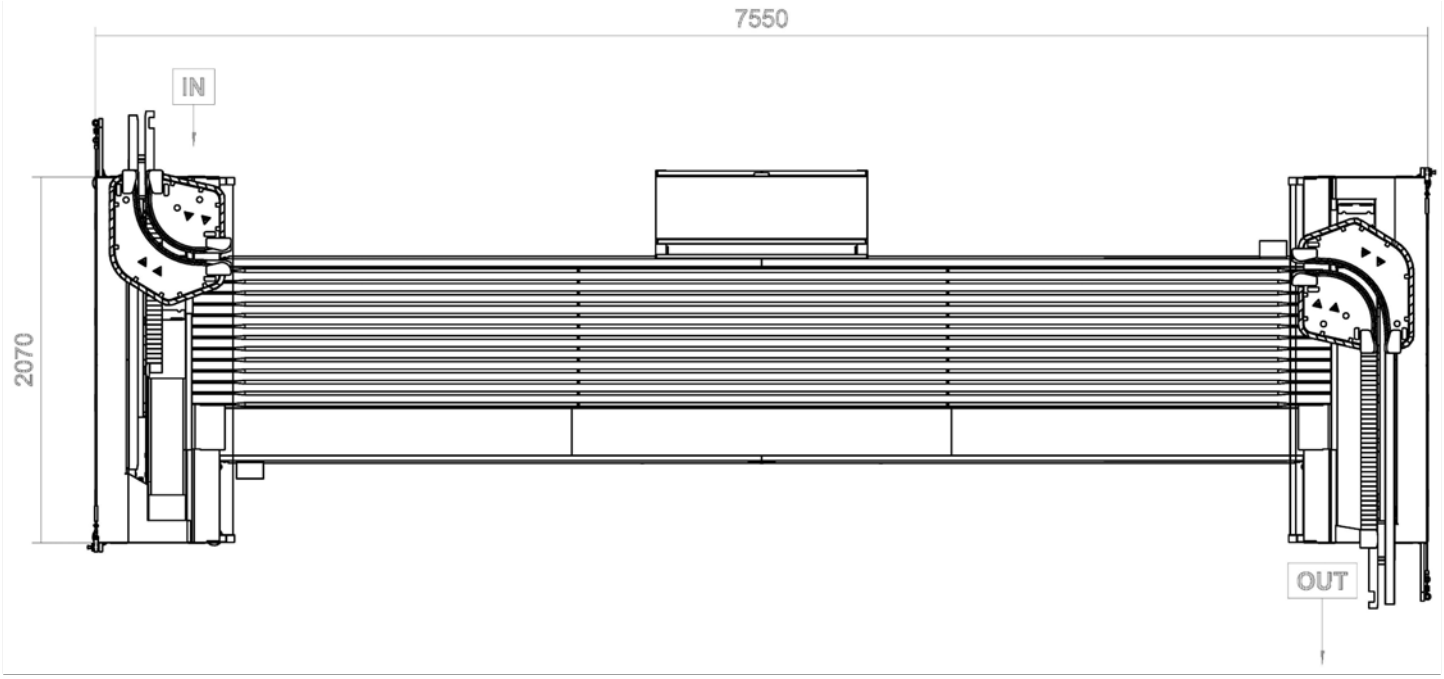


Machine layout



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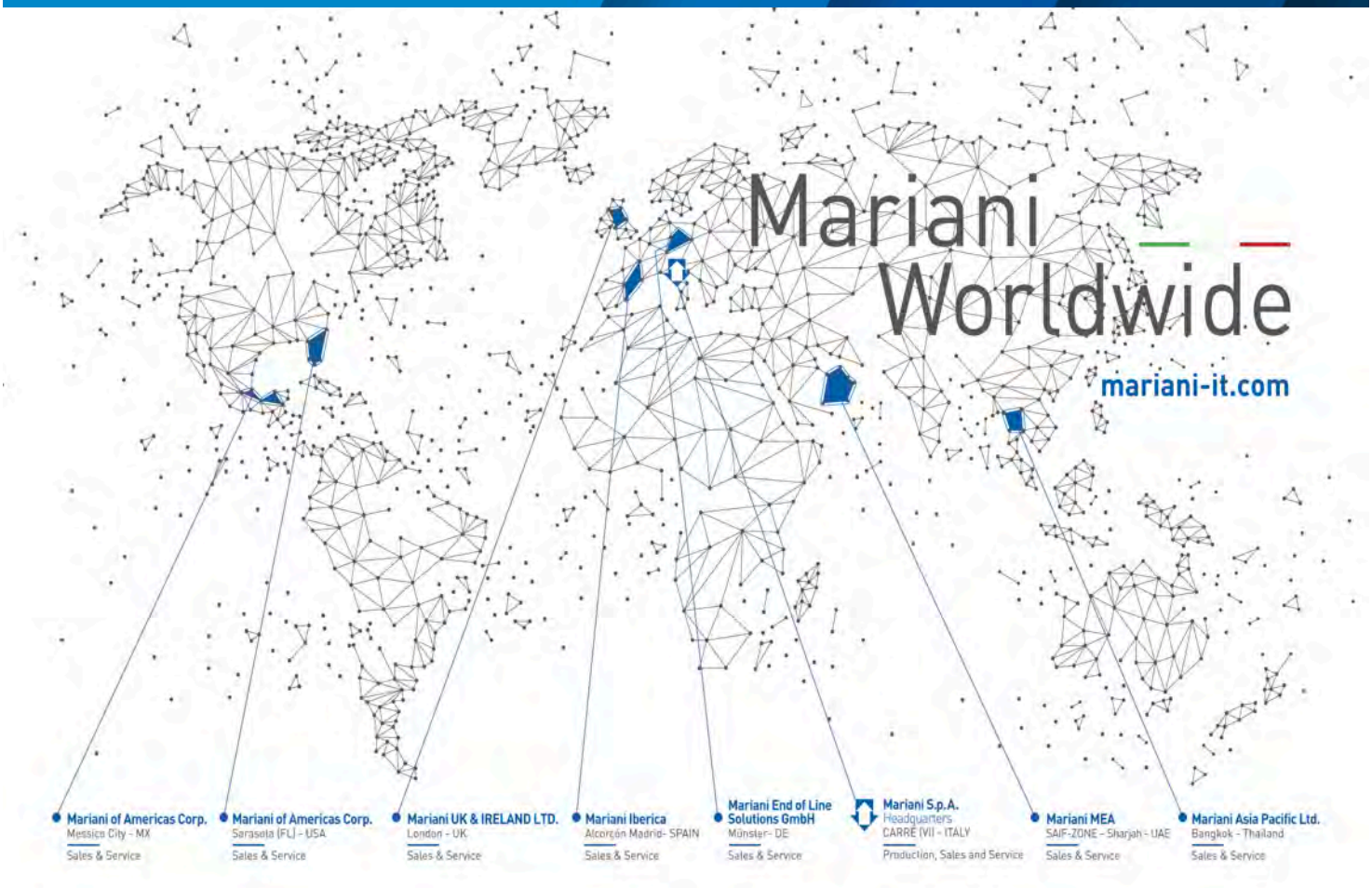

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