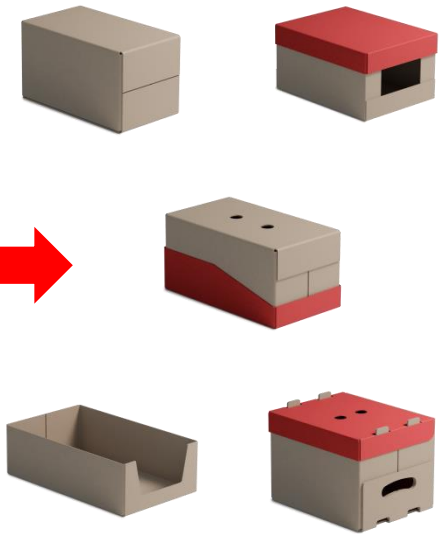
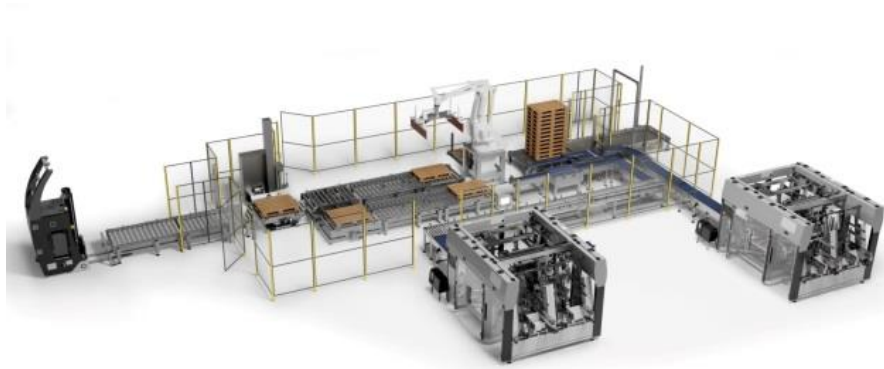




 **END OF LINE SYSTEMS FOR COFFEE MANUFACTURERS:**
From cartoning to logistics



ITALY HEADQUARTERS
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ABOUT US

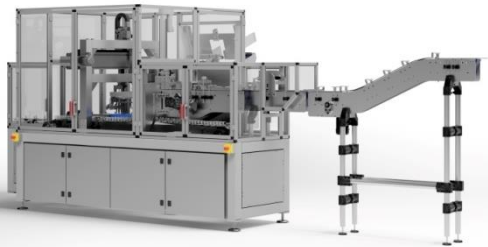


- ▶ Year of foundation 2007
- ▶ Where we are
 - ❑ *Headquarters:* Sansepolcro (AR) – ITALY
 - ❑ *Branch Office:* Boonton Township NJ - USA
- ▶ Personnel Over 50 people
- ▶ Our departments
 - ❑ Software and mechanical design dpt
 - ❑ Workshop
 - ❑ Assembly and testing dpt
 - ❑ Service dpt
- ▶ What we do End of line systems:
 - ❑ Cartoning Machines for coffee capsules
 - ❑ Case Packers
 - ❑ Palletizing Stations
 - ❑ LGVs
 - ❑ Brain 4.0 Software
 - ❑ Integrated Solutions



END OF LINE SYSTEMS:

- ▶ **Cartoning Machine for coffee capsules**
- ▶ Case Packer
- ▶ «All-in-one solution»
- ▶ Palletizing Station
- ▶ LGVs
- ▶ Brain 4.0 Software



**CLICK TO WATCH ONE OF MAD'S
CARTONING MACHINES:**

<https://www.youtube.com/watch?v=klQF2H96TFc>



- ❑ Mad Automation's cartoners range has been designed to meet all Coffee Manufacturers' **specific requirements**. This is the result of Mad's investment in R&D and constant innovation. Every single project is discussed by Mad's technical team in order to define the best solution for every customers' challenge.
- ❑ Mad's cartoners grant high filling speed, up to **600 capsules per minute**. The cartons's magazine infeed speed can be adjusted to the speed of the upstream and downstream lines.
- ❑ These versatile machines are able to handle **every kind of capsule** currently used on the market such as:



Nespresso



A Modo Mio



Dolce Gusto



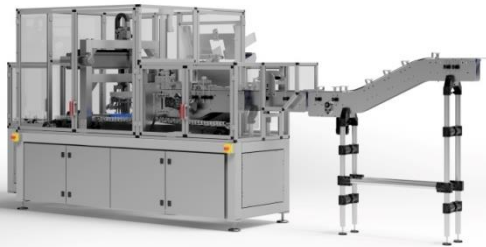
K-Cup



END OF LINE SYSTEMS:

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Mad's cartoning machines can form and fill cartons containing **10 to 55 capsules**. The capsules can be placed on multiple layers and nested according to the customers' requirements. The layers can be also separated by means of layer pads. In the 10ct format **a patterned layer pad*** can be used to hold the capsules in place.



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One layer - 10/11 capsules (min format)



8+2



5+5

*3+3 for K-Cup



8+3



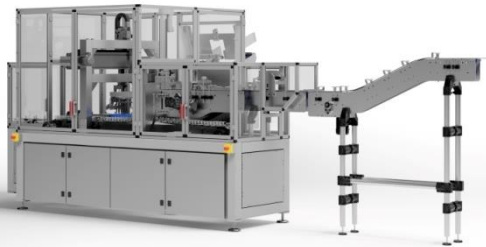
5+5*





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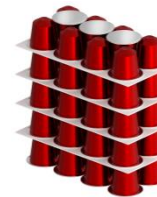
Five layers – 50/55 capsules (max format)



$(8+2) \times 5$



$(8+3) \times 5$



$(5+5) \times 5$



* $(3+3) \times 5$ for K-Cup

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CARTONING MACHINES:**

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Tube carton



$5+5$



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**CLICK TO WATCH THE BULK
LOADING SYSTEM FOR COFFEE
CAPSULES/PODS:**

<https://www.youtube.com/watch?v=3wqJOm7zexs>



BULK LOADING SYSTEM FOR COFFEE CAPSULES AND PODS

- ❑ Mad's bulk filling cartoners feature a **hopper and a counting device**, when the quantity in the hopper is the one set in the recipe, the hopper opens and the carton is filled.
- ❑ The cartons in this case as well are formed from a flat blank so, as the filling is done, the carton is just half-formed and not yet glued. The **sealing section** can be incorporated in the machine's frame or supplied as a separate device and connected to the main machine by means of belt conveyors, according to the customer's requirements.



Bulk loading system for capsules



Bulk loading system for pods with flowpack



END OF LINE SYSTEMS:

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- ▶ **Case Packer**
- ▶ «All-in-one solution»
- ▶ *Palletizing Station*
- ▶ *LGVs*
- ▶ *Brain 4.0 Software*



CLICK TO WATCH SUPERFAST CASE PACKER:

<https://youtu.be/T64UW0oz90g>



CLICK TO WATCH tWRAP CASE PACKER:

https://youtu.be/VeFw_jpwwJE



CLICK TO WATCH EASYWRAP CASE PACKER:

<https://youtu.be/EAjB6TruF6Y>



- ❑ Mad Automation's case packers are sturdy and reliable machines designed to handle **numerous types of packages**. They can feature standard or stainless steel components so to be suitable for all environmental conditions.
- ❑ Every single machine is designed, according to the **clients' specific needs**, so to make the most of the space available. The integration of power switchboards into the top section of the machine optimizes the space, while facilitating the machinery positioning and accessibility from all sides.
- ❑ The **completely automated and easy-to-operate size changeover system** grants an accurate and quick adjustment of the inner parts of the machine from the current product to the next.



END OF LINE SYSTEMS:

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- ▶ **Case Packer**
- ▶ «All-in-one solution»
- ▶ Palletizing Station
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CLICK TO WATCH tWRAP CASE PACKER:

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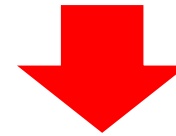


CLICK TO WATCH EASYWRAP CASE PACKER:

<https://youtu.be/EAjB6TruF6Y>



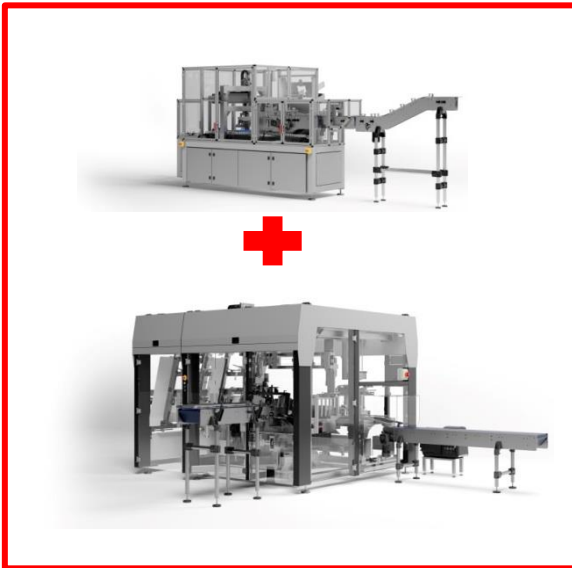
- ❑ Mad's case packers are suitable for all kinds of products and they can work with **numerous kinds of cases**: Wrap Around, Display Tray, Ledge Tray, American Case, Tray + Ext./Int. Lid





END OF LINE SYSTEMS:

- ▶ Cartoning Machine for coffee capsules
- ▶ Case Packer
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- ▶ Palletizing Station
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CLICK TO WATCH MAD'S «ALL-IN-ONE SOLUTION»:
<https://www.youtube.com/watch?v=9jThVxzS5iY>



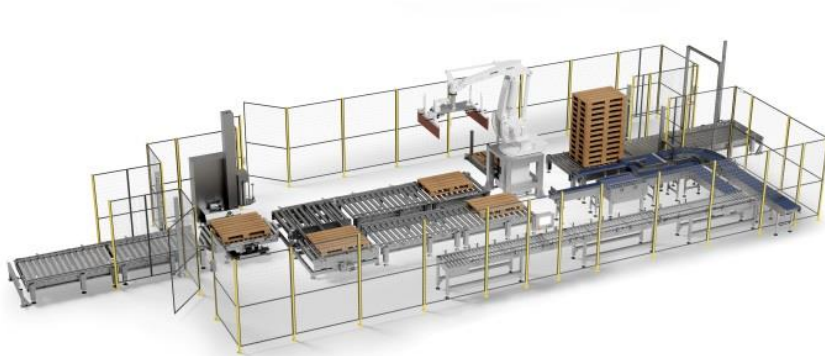
The All in One Solution designed by Mad Automation combine two machines into a complete packaging line “from capsule to case” in a **single frame**. This machinery, fully scalable, can be composed of:

- ❑ **CARTONING MACHINE FOR CAPSULES**
- ❑ **WEIGHT CONTROL SYSTEM:** it's an essential tool to guarantee the quality of the final package and **to ensure the respect of the correct product quantity in the case**. It is a high-performance device, integrated into the system, which suitable for a wide range of weights and sizes. It can also control the cases' loading and the non conforming product rejection before they reach the marking and loading stations
- ❑ **CASES MARKER:** the all-in-one solution can be equipped with a Case Marker easy to set up and operate. It is available either with **laser or ink marking technology** both in colors or black and white. The print position is adjustable and settable on multiple lines. The marker can print all the data relevant to the production lot to grant total product traceability.
- ❑ **CASE PACKER**



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- ▶ Case Packer
- ▶ «All-in-one solution»
- ▶ **Palletizing Station**
- ▶ LGVs
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CLICK TO WATCH ROBOTIC PALLETIZER:

<https://youtu.be/zVpMPqjLA4g>



CLICK TO WATCH GANTRY PALLETIZER:

<https://www.youtube.com/watch?v=rIkXY1ULruU>



- ❑ Mad Automation palletizing stations are designed to handle a **wide range of products** including: wrap around cases, display trays with lid, display trays, ledge trays, american cases, packs, bags
- ❑ The palletizers' layout are **widely customizable** as for their dimensions, layer pads use, double stacked pallets, products' pattern, multiple reference handling
- ❑ Mad Automation offers **two palletizing solutions**
 - robotic palletizer
 - gantry palletizer
- ❑ In both cases the picking heads are designed and built in-house in order to **maximize the performance of the system**



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CLICK TO WATCH SWAPPING SYSTEM:

<https://www.youtube.com/watch?v=mipmskHTQKY>



CLICK TO WATCH BATTERY CHARGING SYSTEM:

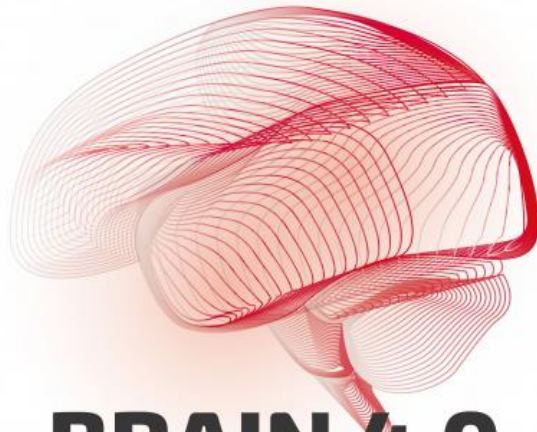
<https://www.youtube.com/watch?v=XmX5ZNeN5kY>



- ❑ Mad Automation has developed a new generation of Laser Guided Vehicles for transporting materials which **can operate in any industrial sectors**
- ❑ The total absence of ground infrastructure ensures **maximum flexibility and freedom of movement**, it also allows to modify or add routes at any time, just with the help of Mad's PC software (CAD for routes creation).
- ❑ The supervision of LGV systems is ensured by **intuitive synoptics panels** that describe moment by moment the stock and the production department status.
- ❑ There are 2 different **automated** way to charge the batteries:
 - **battery swap**
 - **battery charging system**

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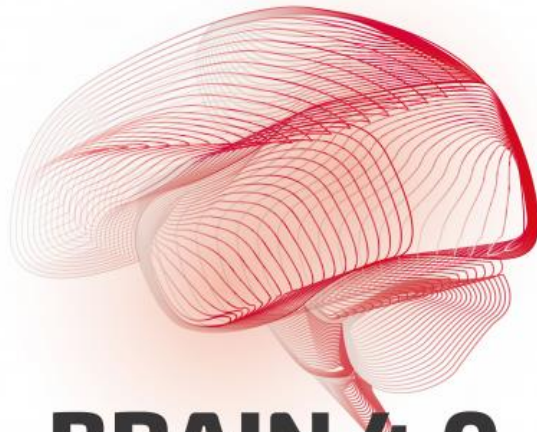
BRAIN 4.0
EVERYTHING IS CONNECTED

- ❑ The **Brain 4.0** machine supervision software, is a **scalable software package**. By means of a centralized production process and logistics control it optimizes the Companies' efficiency.
- ❑ Entirely developed in-house, its main feature is the possibility **to be adapted** to the customers' machines and to be tailored to the customers' production goals.
- ❑ By using Brain 4.0 the customer will: fully control the whole production process and avoid the lack of flexibility normally caused by software supplied by general software houses; **make sure that machines, devices, databases and software all communicate in the same language thanks to a common "Brain"**.



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- ▶ *LGVs*
- ▶ **Brain 4.0 Software**



BRAIN 4.0
EVERYTHING IS CONNECTED

- ❑ Big Corporations can create a whole network of interconnected “Brains” controlled by one “**Master Brain**”. If Brain is the head, the **Clients** are the arms of the system. They are remote interfaces to control the procedures.
- ❑ For instance you can create Clients to launch and control the production from a “**Control Room**”. This way it is possible to take timely actions in case of problems on the line.
- ❑ Brain can **handle specific production orders** on every single machine. Production orders are usually generated by means of file inputs or through data generated on the server. Once the order is available to Brain it sends both data and recipes to every single machine composing the line and it makes sure the production quantities are respected.

Thanks for your attention



FIND OUT MORE:

- ❑ Website: <https://www.madautomation.it/en>
- ❑ LinkedIn Page: 
- ❑ YouTube Channel: 

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