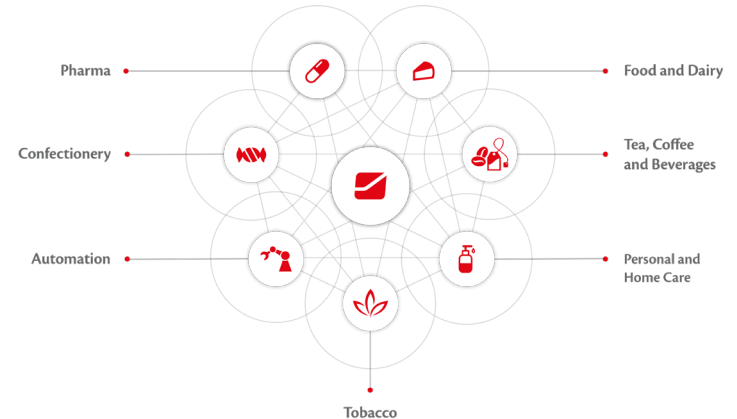


# IMA capsule fillers for multiple dosing



- Founded in 1961, IMA is world leader in the design and manufacture of equipment for the processing and packaging of drugs, cosmetics, tea, coffee and foods.
- Global Pharmaceutical Supplier with the widest range of processing and packaging systems.
- Around 6,000 employees, almost half of them based outside Italy.
- 45 manufacturing sites in Italy, Germany, Switzerland, UK, USA, India Malaysia, China, Argentina and Brazil.
- World-wide presence: sales representatives in over 80 countries.
- Prompt and effective local technical assistance in over 30 countries.



*fluid bed and high shear granulators*



**GRANULATION**

*filling of powder, pellets, tablets, liquids*



**CAPSULE FILLING**

*solid wall and perforated pans*



**COATING**

*containers and machine parts*



**WASHING**

**TABLETING**



*centrifugal and gravity feed*

**WEIGHT CHECKING**



*capsules and tablets*

**HANDLING**



*product transport, machines feeding*

Model	Machine type	Output
<b>Zanasi</b>	Capsule filler for multi product dosing	Up to 40,000 capsules/hour
<b>Zanasi Plus</b>	Capsule filler for multi product dosing	Up to 70,000 capsules/hour
<b>Practica</b>	Capsule filler for single product dosing	Up to 200,000 capsules/hour
<b>Imatic</b>	Capsule filler for single product dosing	Up to 150,000 capsules/hour
<b>Adapta</b>	Capsule filler for multi product dosing	Up to 200,000 capsules/hour

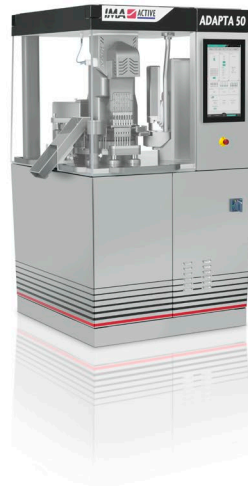


Adapta's DNA has its roots in IMA's 50 years of experience and more than 6,000 capsule filling installations worldwide.

This knowledge and experience have allowed the IMA capsule fillers to evolve and adapt to the ever-changing requirements of the market.

Adapta can dose:

- Powder
- Pellet
- Tablet/s
- Minitablets
- Liquid



The global pharmaceutical industry is expected to be worth 1.5 trillion dollars by 2023.

Within the pharmaceutical industry, capsule filling machines are an important segment (projected value 440 million dollars by 2025) as capsules allow easy formulation of different products with minimal cost:

- product differentiation,
- dose flexibility
- improved speed-to-market.



Combination products are designed with multiple active ingredients and technologies to avoid several challenges associated with formulations:

- Capsule+capsule: avoid drug-drug interaction and incompatibilities.
- Multi pellet dosage: prevents the segregation of pellets.
- Several minitablets dosage: provide accuracy in weight variation and dosage and different release options.

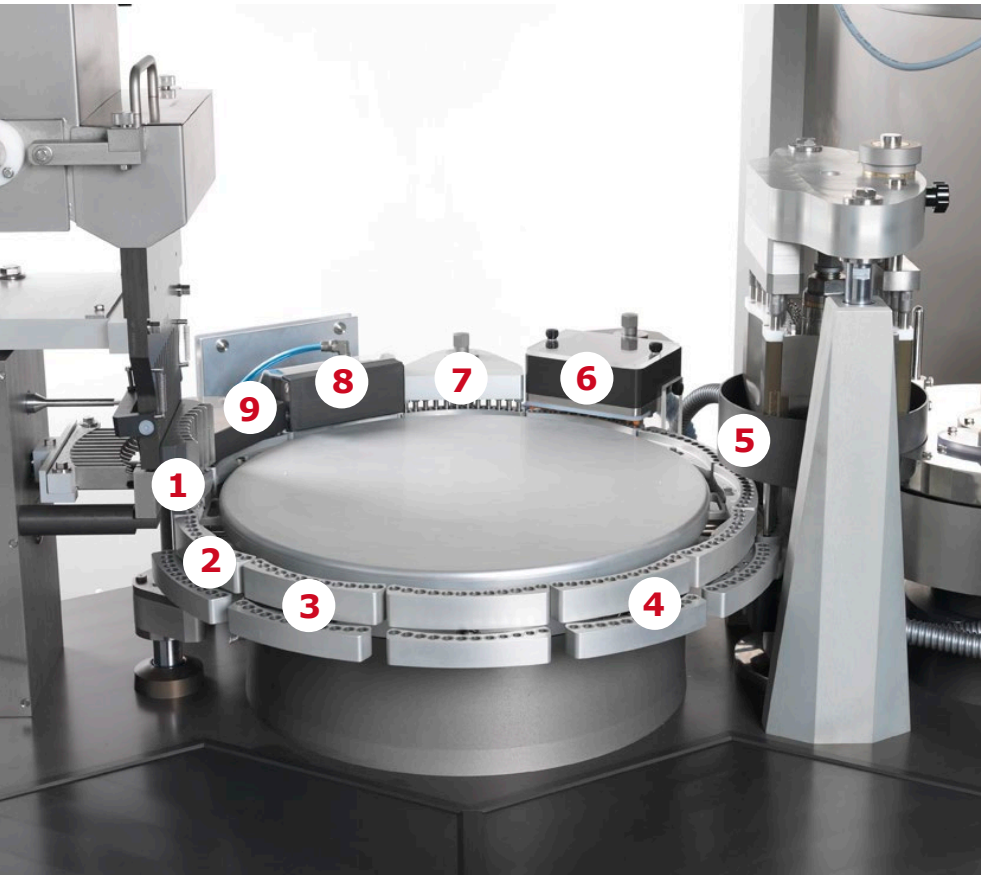
The use of various therapies and doses can be incorporated together into a single capsule for combination therapy. Hard capsules enable filling powder, pellets, minitablets, liquid or even another capsule in the same capsule for offering fixed-dose combinations, once-daily combination, multi-drug resistance therapies avoiding missing doses.



**IMA**  **ACTIVE** **ADAPTA**

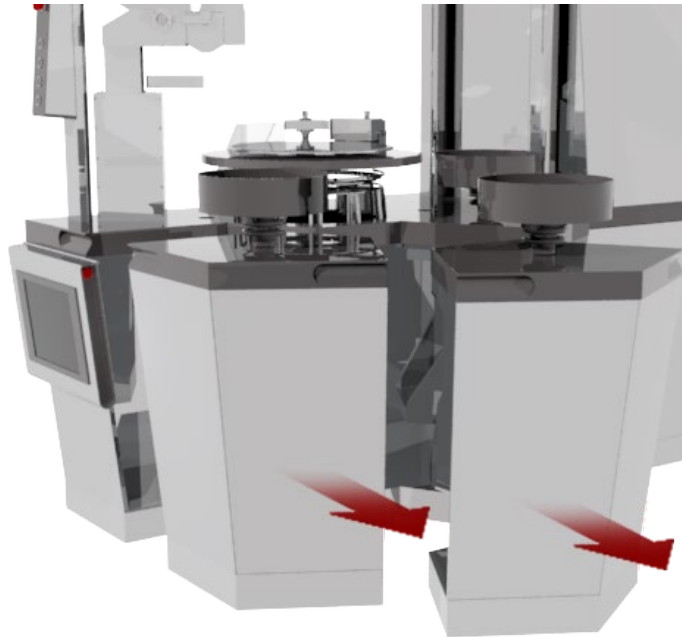
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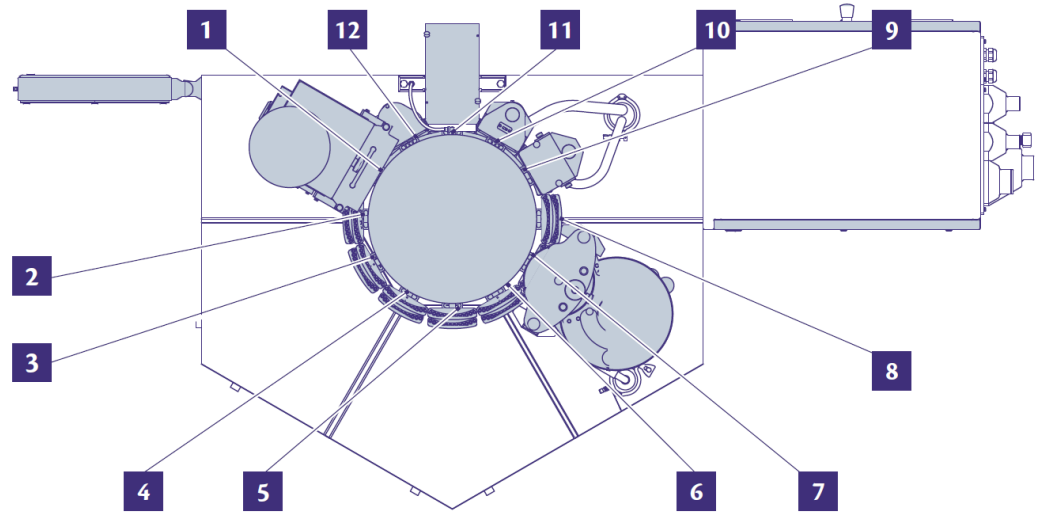


1. Empty capsule feeding
2. Capsule presence control (optional)
3. Dosing station (removable)
4. Dosing station (removable)
5. Dosing station (fix or removable)
6. Rejection of unopened capsules
7. Capsule closing
8. Ejection of filled capsules
9. Cleaning of transport bushes

Stations 3 and 5 are available to fit a removable dosing unit while station 7 can fit either a fix or a removable unit.



**ADAPTA. The capsule filler adapting to your ever evolving needs.**



- Three removable, reversible/interchangeable dosing units.
- Stations 4 and 6 can be used for additional dosing units, making the machine suitable for the combination of up to 5 different products in the same capsule.
- Up to 144 possible dosing configurations.



## **DOSING UNITS**

Working principles

The powder dosing unit features **high accuracy** and employs special dosators and pistons which penetrate the powder bed and can compress the powder to create a slug.

Powder weight is determined by:

- the starting position of the piston inside the dosator. This is freely adjustable. (Different disks/heights are not needed).

Powder slug hardness is determined by:

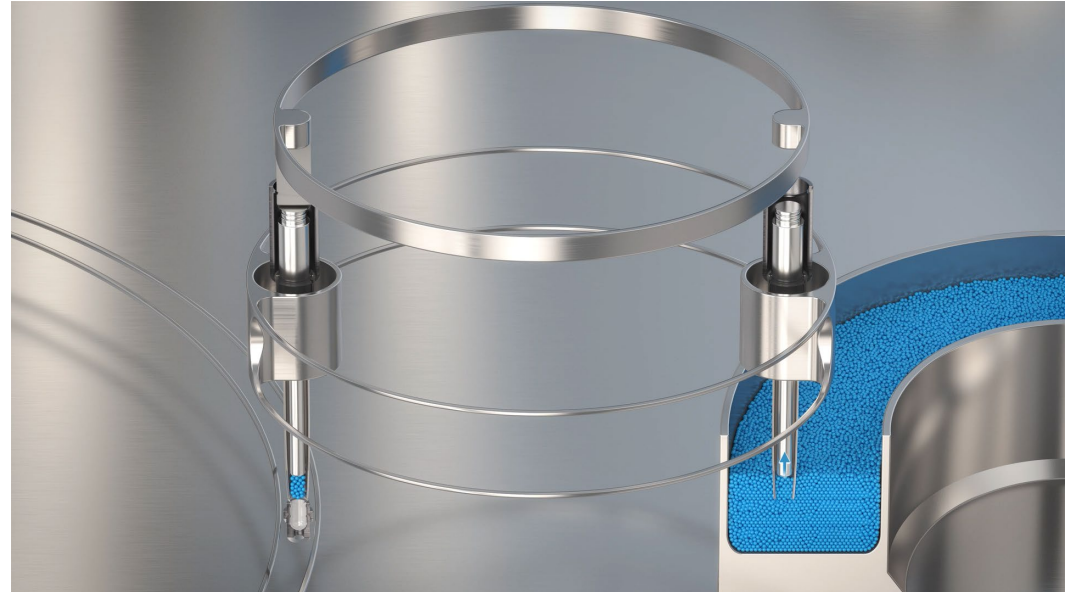
- the stroke of piston inside dosator during compression. This is independent from target weight.



The dosator penetrates the pellet layer inside the bowl and the product is picked up by suction.

The entire capsule filling cycle entails a double vertical and rotary movement so that pellet pick up from the tank and ejection into the capsule body take place simultaneously.

Excess product is eliminated by a brush or an air jet and product is then dosed into the capsule body by stopping vacuum and lowering the piston.





The unit can introduce one or more **tablets/soft gel/hard gelatin capsules** into the capsule body in one stroke, using a blade and feeding tubes.

The filling phase is electronically monitored by a sensor which checks the tablet/capsule presence whilst dosing and the tablet absence upon blade return.

The capsule out of specification is rejected. In case of too many rejects, the machine stops.

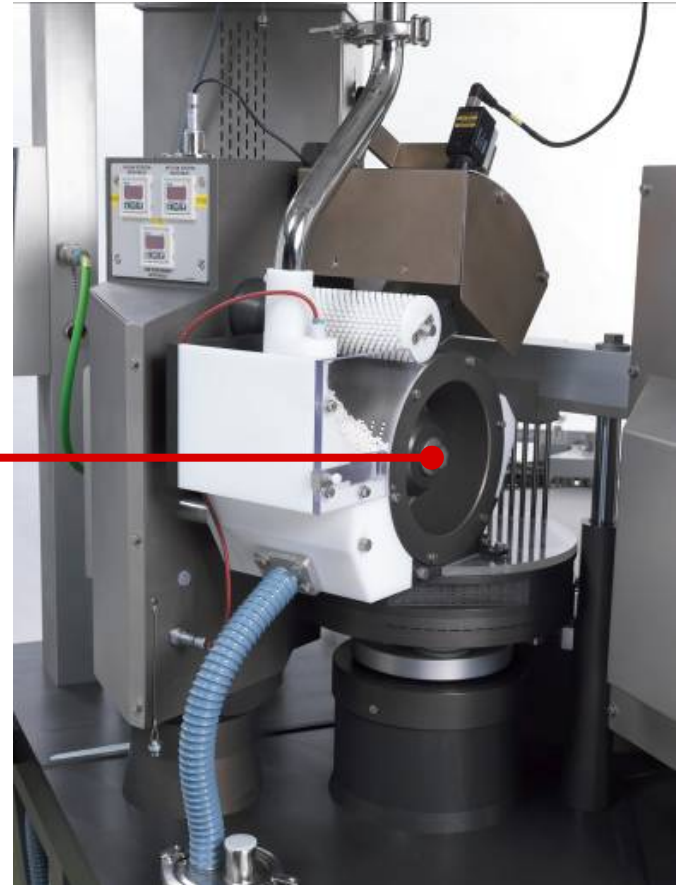
The minitables dosing group is composed by the following components:

- Minitables hopper
- Wheel with a predefined number/dimension of holes

Minitables are aspirated into the holes by means of vacuum.



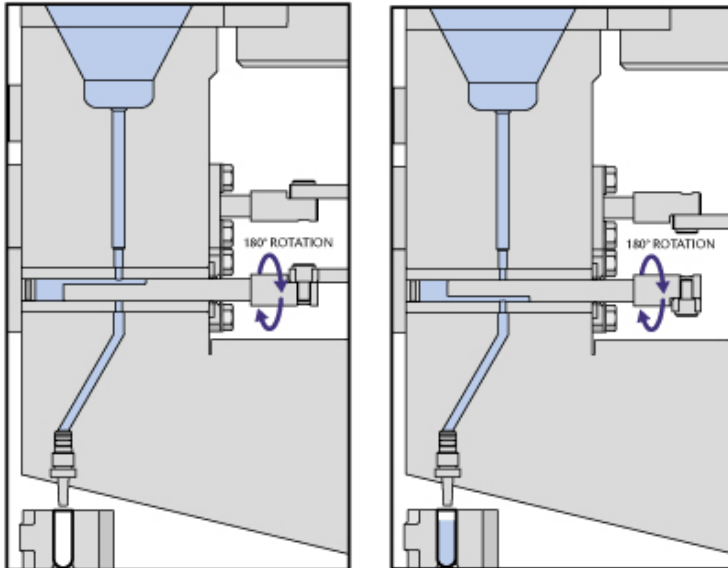
Wheel





The group uses an extremely precise volumetric dosing system composed of a series of syringes, drawing liquid from the container and pushing it into the capsule bodies.

The syringes are rotating 180 degrees to alternatively pull out the liquid from the container and then push it to the outlet tubes.





**100% WEIGHT CONTROL AND SELF-ADJUSTMENT**

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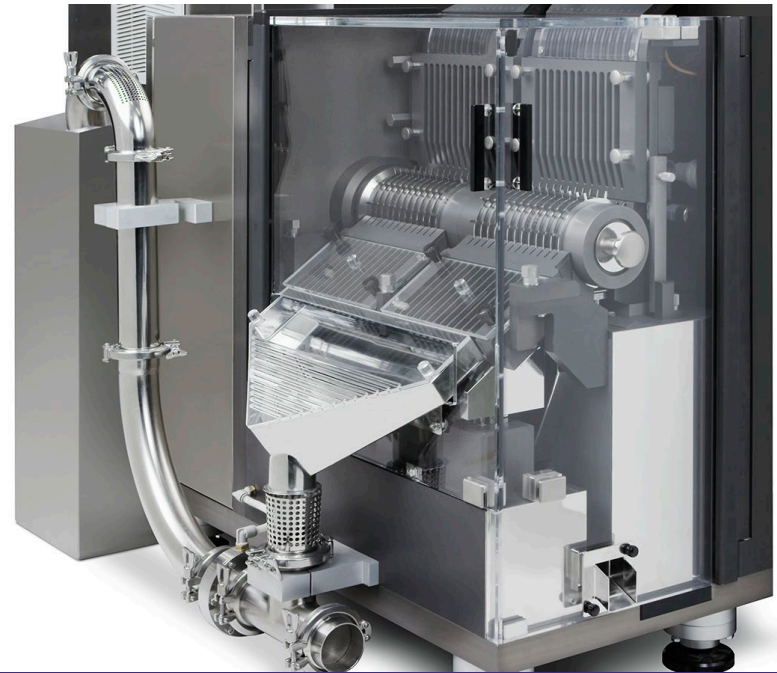
All capsules are positioned on **gravimetric** weighing cells.

The net fill-weight and/or the gross weight (i.e. including capsule shell) of 100% all capsules is determined.

In case of multiple-dosing, 100% or sample weight of each single product is determined.

Capsules out of limits are rejected, and automatic adjustment of machine working parameters is carried out.

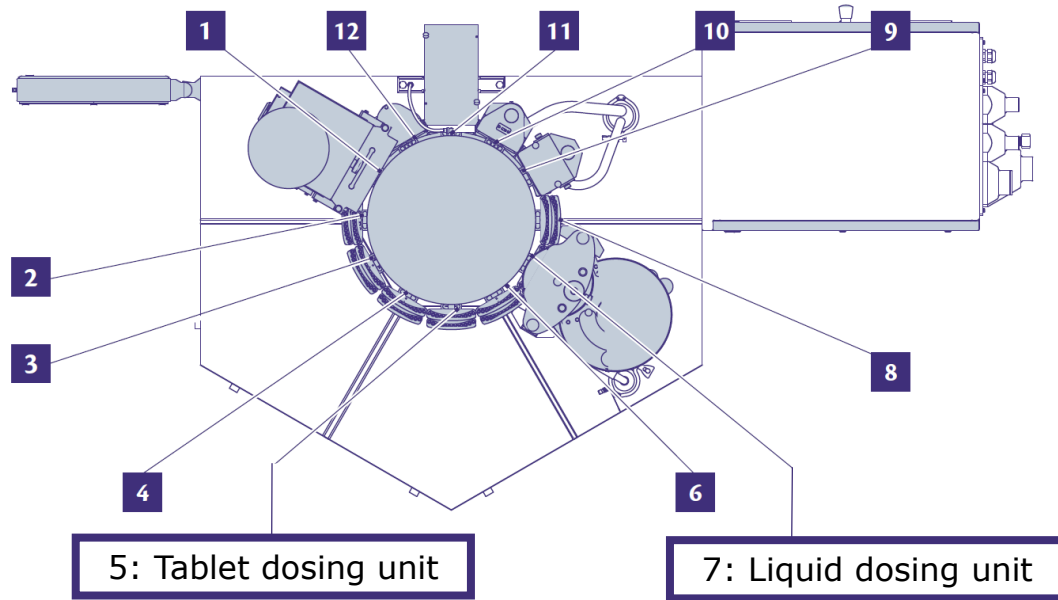
The output speed is not affected by dosing combinations and/or by net/gross weighing.





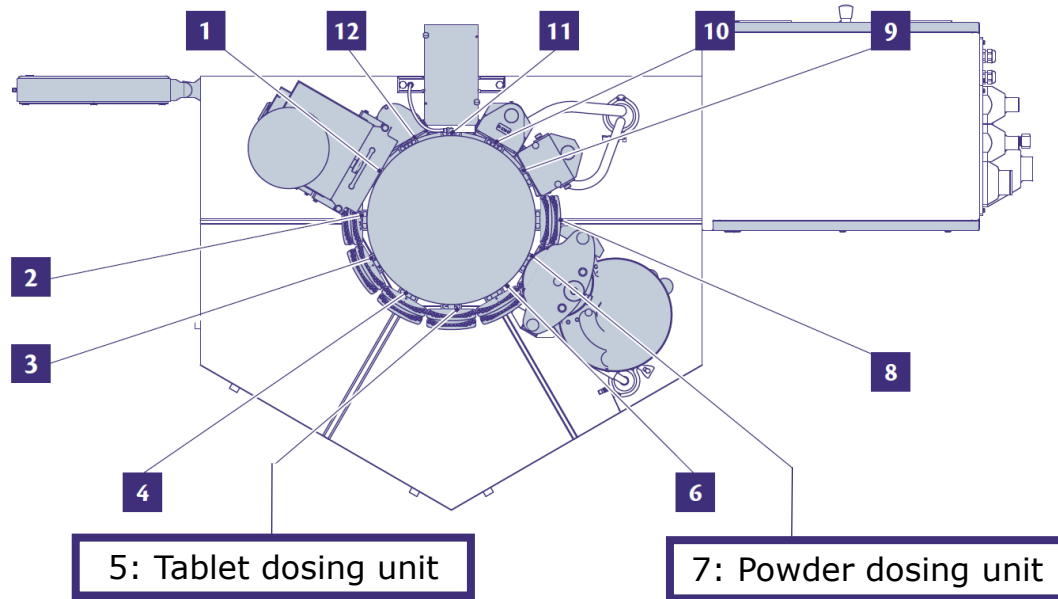
## **MULTIPLE DOSING APPLICATIONS**

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- One tablet dosing unit in station 5
- One liquid dosing unit in station 7

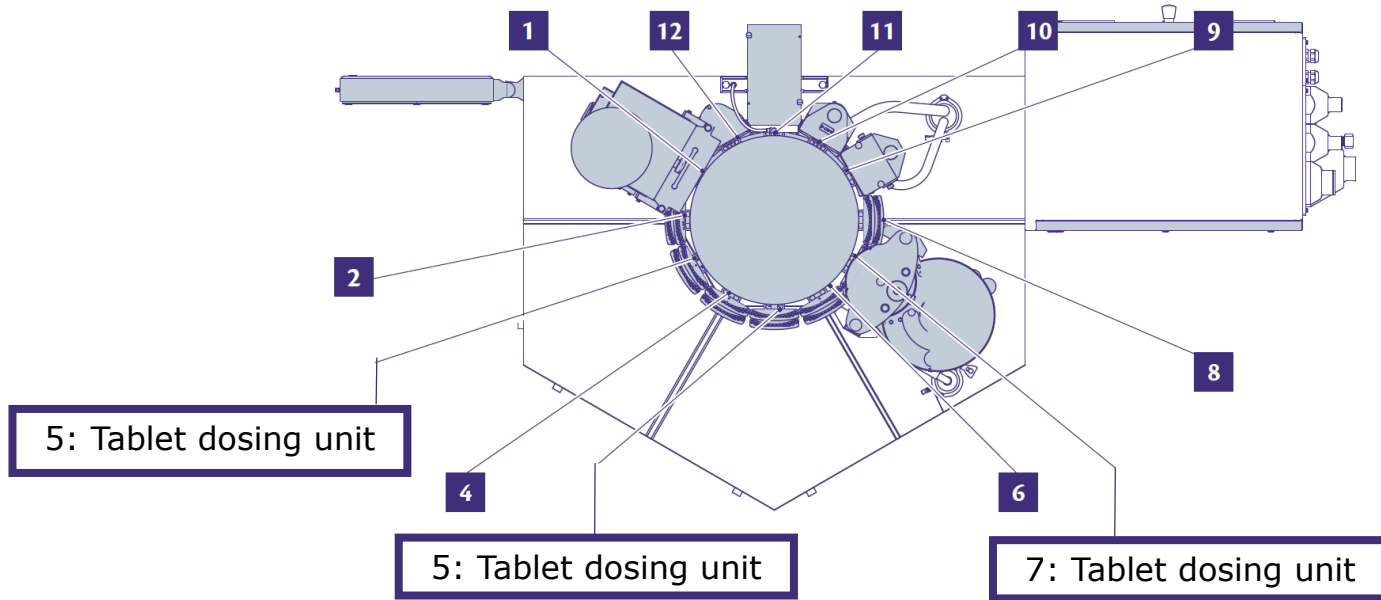




- One tablet dosing unit in station 5
- One powder dosing unit in station 7





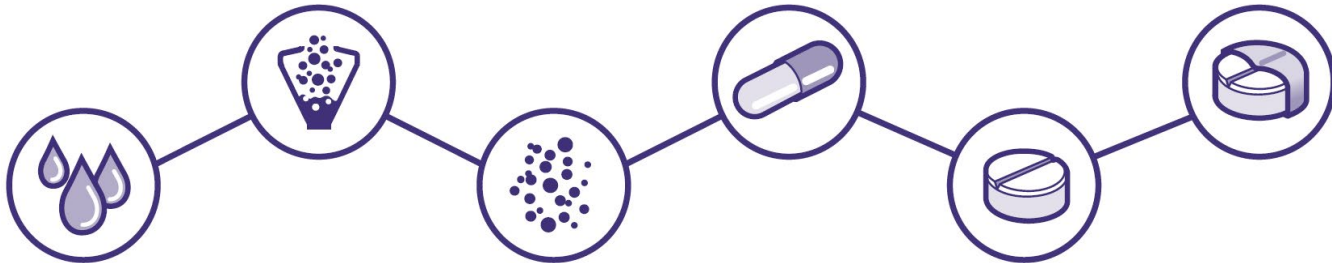


- One tablet dosing unit in station 3
- One tablet dosing unit in station 5
- One tablet dosing unit in station 7



Discover more about IMA Active <https://ima.it/pharma/brands/ima-active/>

If you wish to contact us [marketing.active.it@ima.it](mailto:marketing.active.it@ima.it)



**IMA**  **ACTIVE**

