

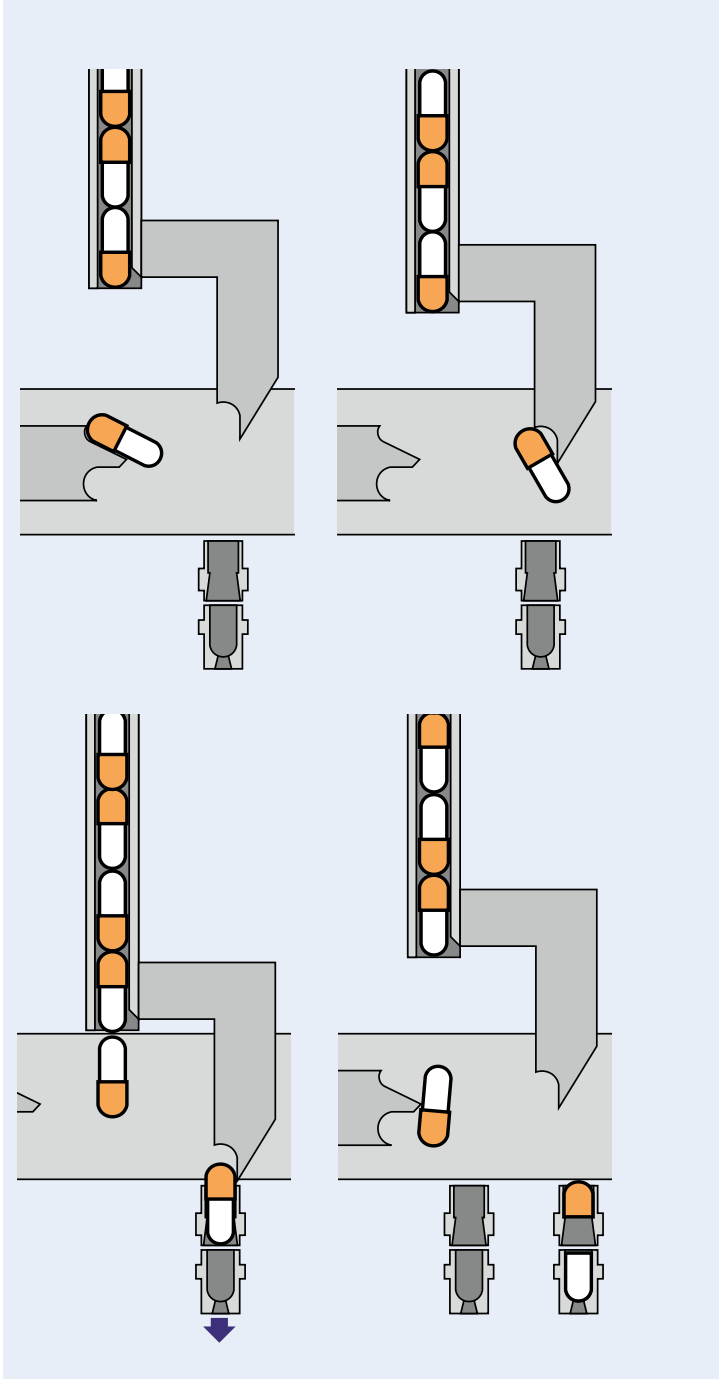
ZANASI

LOW- MEDIUM-SPEED CAPSULE FILLING MACHINES



ZANASI WORKFLOW

ZANASI CAPSULE FILLING MACHINES OFFER MAXIMUM VERSATILITY IN TERMS OF THE COMBINED DOSING OF VARIOUS PRODUCTS WITHIN THE SAME CAPSULE, DEPENDING ON MACHINE CONFIGURATION AND INSTALLED DOSING UNITS.

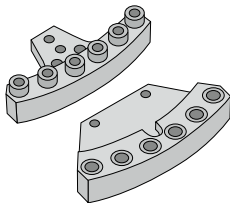


1 CAPSULE INFEEED AND OPENING

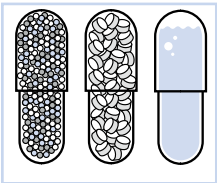
The capsules arriving from the infeed hopper are accurately positioned and inserted into the bushings where the cap is removed from the body by means of a vacuum.

2 AVAILABLE FOR SIZE CHANGE-OVER OR PRODUCT DOSING UPON REQUEST

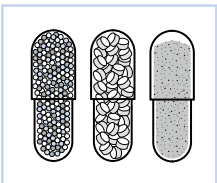
This station can be used for product dosing upon request, alternatively it is available for size change-over.



3 PELLET/MINITABLET, TABLETS OR LIQUID DOSING

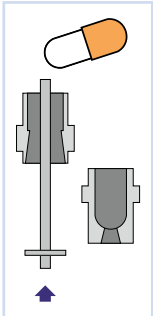


4 POWDER OR PELLET/MINITABLET DOSING



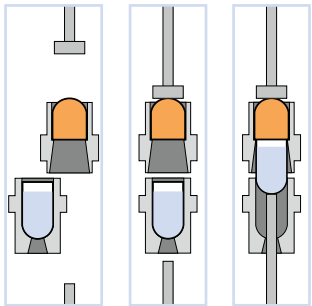
5 UNOPENED CAPSULE SELECTION AND REMOVAL OR PRODUCT DOSING UPON REQUEST

This station can be used for product dosing upon request or to reject any unopened capsules by means of appropriate pushers.



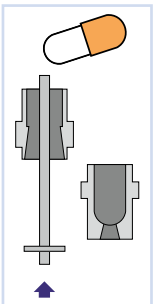
6 CAPSULE CLOSING

The bushings containing the capsule bodies realign themselves with the corresponding capsule caps. The capsules are then closed by appropriate pushers.



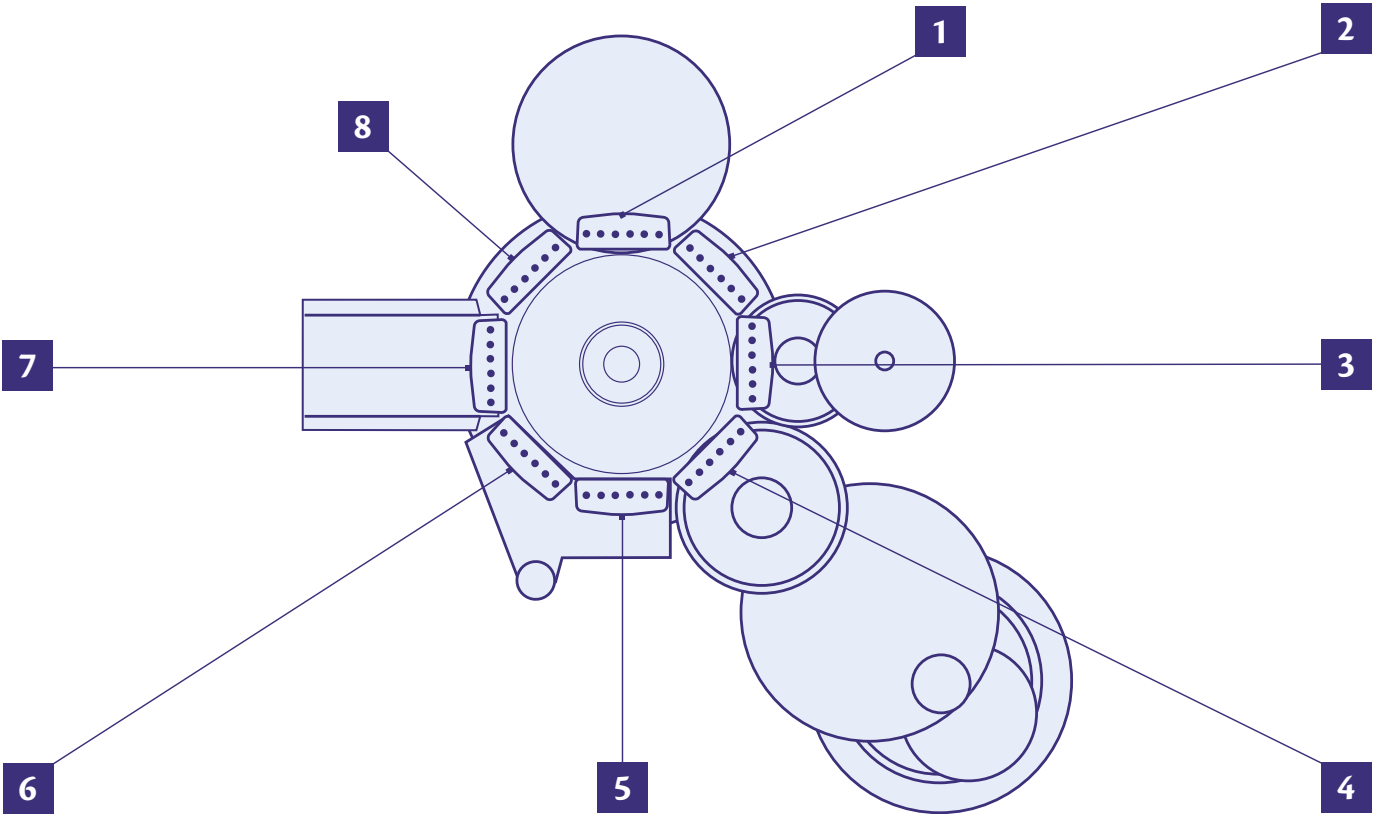
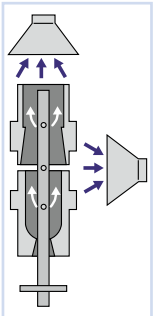
7 CAPSULE DISCHARGE

Closed capsules are discharged by the combined action of pushers and compressed air. A conveyor chute carries the capsules to the finished product container.



8 BUSHING CLEANING

Upper and lower bushings are cleaned of any residual dust by means of compressed air and aspiration nozzles.



ZANASI DOSING UNITS



POWDER DOSING UNIT

Dosators are mounted on one block and are positioned on two opposite segments.

1. The block moves down and the dosators on the first segment penetrate the powder layer, inside the product bowl, while the opposite ones are positioned above the capsule bodies.
2. The pistons of the first segment compress the powder to form slugs; the opposite ones eject the powder slugs into the capsule bodies.
3. The block moves up and turns; dosators with slugs are positioned over the next capsule bodies, while the empty ones are positioned over the product bowl and the cycle begins once more.

In addition to the rotary bowl fitted on standard machines, the IMA-patented vacuum bowl can be supplied for powder pre-compacting for dosing very fine powders or nutraceutical powders.



PELLET/MINITABLET DOSING UNIT

Dosators are mounted on one block and are positioned on two opposite segments.

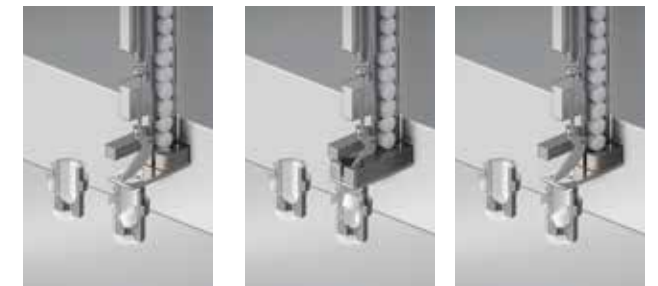
1. The block moves down and the dosators on the first segment penetrate the pellet layer, inside the product bowl, while the opposite ones are positioned above the capsule bodies.
2. The pistons of the first segment create the dosing volume and vacuum-force pellets to fill it; the opposite ones eject the pellets into the capsule bodies, and the vacuum is released.
3. The block moves up and turns; the dosators filled with pellets are positioned over the next capsule bodies, while the empty dosators are positioned over the product bowl and the cycle begins once more.

Excess pellets can be removed either mechanically or by a jet of air. The latter system is particularly suited for pellets with a delicate coating.



LIQUID DOSING UNIT

The group uses an extremely precise volumetric dosing system composed of a series of syringes that draw liquid from the container and push it into the capsule bodies, and with a series of sliding valves connecting the syringes with the container or the outlet tubes. The liquid container can be fitted with a mixer and a heating and temperature control system, so that thixotropic or heat-sensitive products can be dosed as well as oily substances.

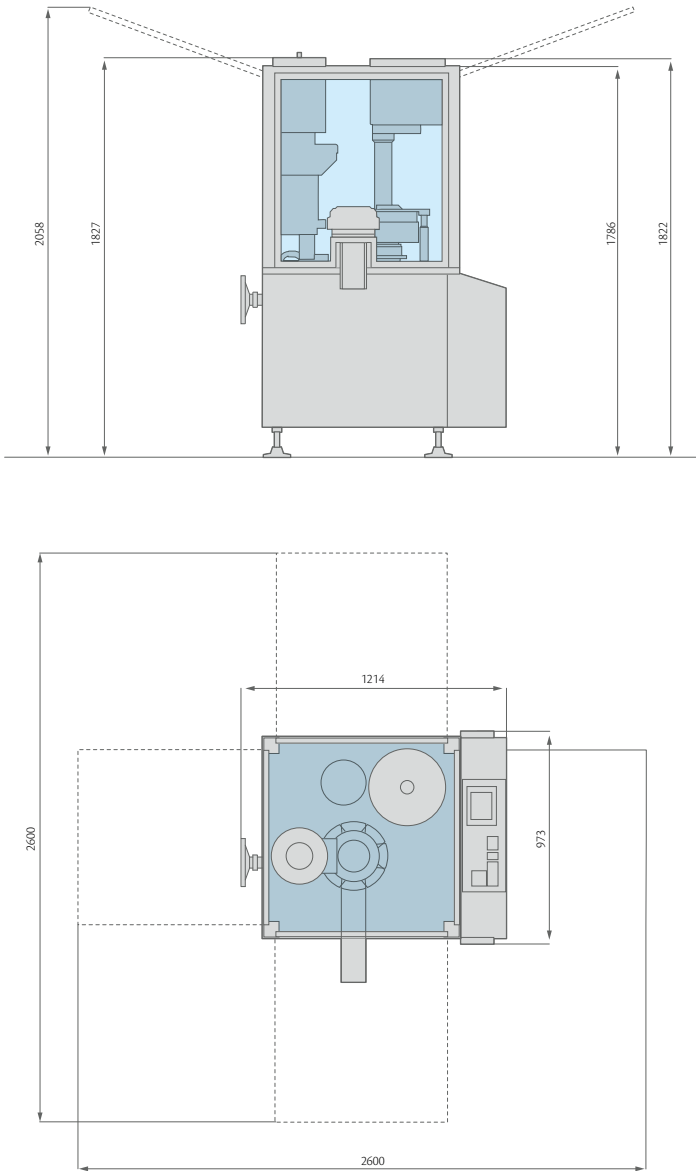


TABLET DOSING UNIT

The unit can introduce one or more tablets into the capsule body in one stroke, using a blade and suitably-shaped feeding tubes. The filling phase is electronically monitored by a sensor which checks tablet presence while dosing, and when the blade returns. The machine stops if any malfunction is detected.

WEIGHT CHECK UNIT

All Zanasi machines are prearranged to be equipped with a statistic weight-checking unit for production monitoring. The group is prepared for 21 CFR part 11 compliance.



	ZANASI 6	ZANASI 12	ZANASI 25	ZANASI 40
Maximum output (capsules/hour)	6,000	12,000	25,000	40,000
Number of capsules per cycle	1	2	4	6
Capsule size	000-S, supro A-E, DB, DBAA			
Maximum installed power (kW)	10			
Aspiration	3,850 l/min – 2,500 mm H ₂ O			
Compressed air	30 l/min – 6 bar		50 l/min – 6 bar	100 l/min – 6 bar
Vacuum	40 m³/h – 3 mbar		100 m³/h – 3 mbar	
Standard voltage	230/400 V (±10%) – 50/60 Hz			
Weight (kg)	1,000			

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