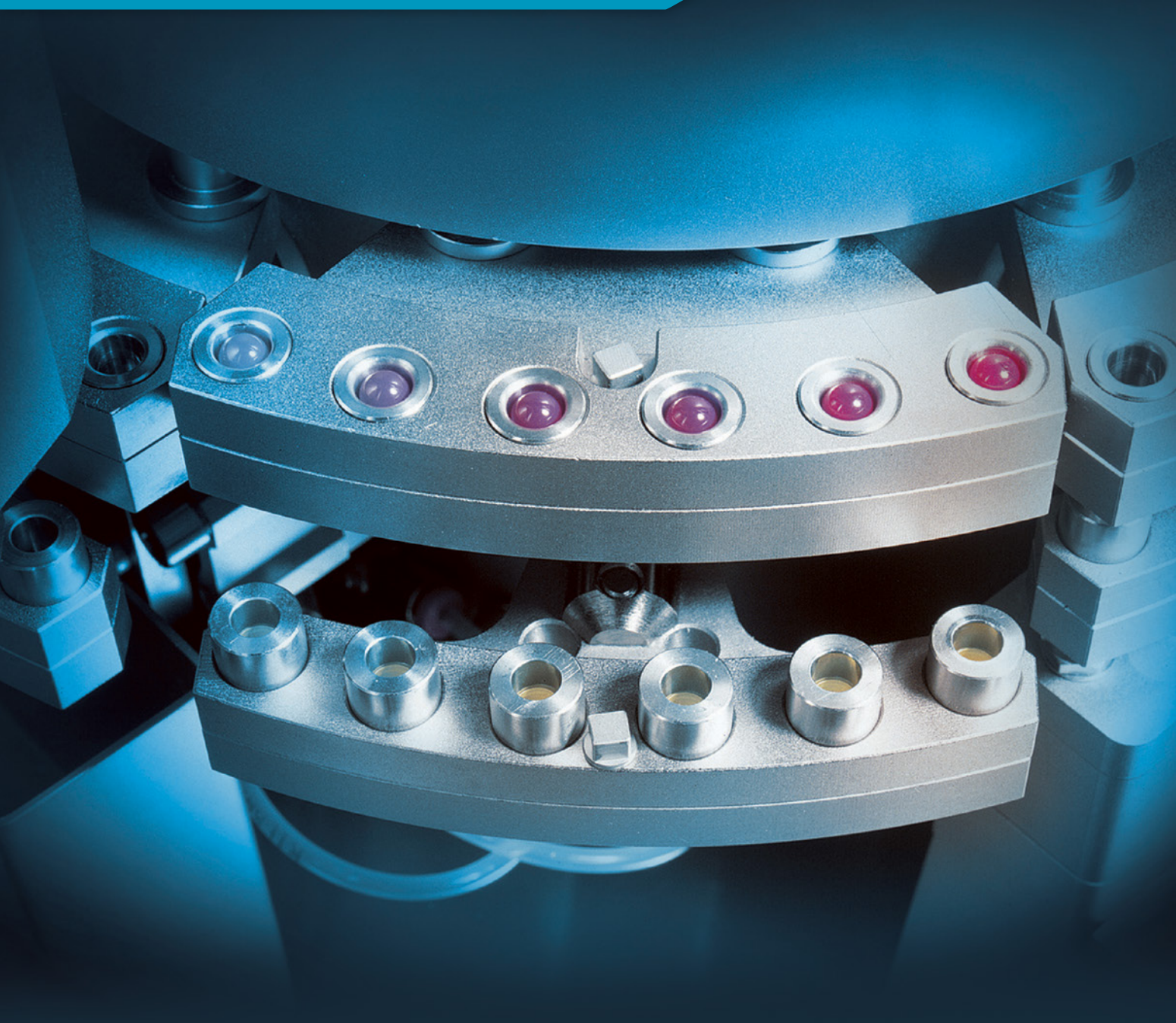


SOLID DOSE

CAPSULE FILLING MACHINE Z SERIES



CIMA[®]
Industries Inc.
Pharmaceutical Equipment



CAPSULE FILLING MACHINE / Z SERIES

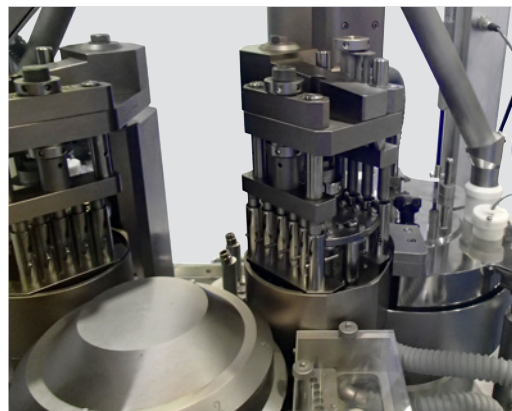
Z series capsule filling machine is specially designed for hard gelatin capsule drug filling available with different models. Thanks to its versatility, flexibility, reliability & accuracy so that is widely used in all kinds of drug filling and offer the maximum versatility in combined dosing of various products within the same capsule.

ACCURACY DOSING

Through parameter adjustment and special dosing unit, Z series capsule filling machine can realize the best combination result in production speed and accuracy dosing.

SIMPLE HANDLING

Fast and easy size change over, quick and easy clean operation, each specified component equipped with the same dimension square heat bolt, only one special tool needed to do adjustment.

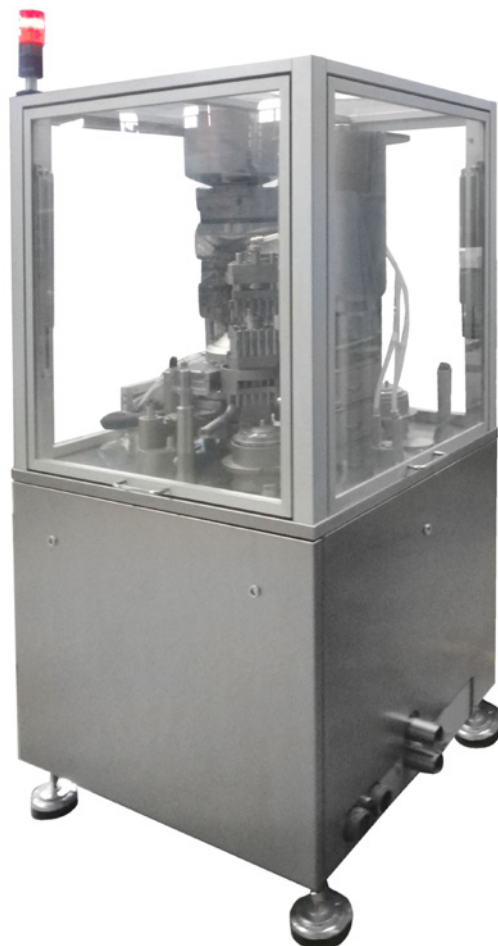


FUNCTIONAL OPTIMIZATION

Employ the advanced dosator type construction, applicable to all kinds of materials, such as sticky powders, irregular pellets & granules.

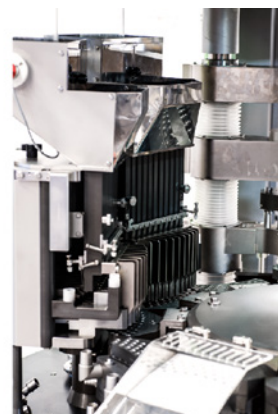
CLEAN WORKING COUNTER

Z series capsule filling machine adopt special dosator structure which can effectively avoid powder spill phenomenon to ensure clean working appearance.



Z180 MODEL

- Output up to 180,000 capsules/h.
- Adopt double-row dosator structure (patented)
- Adopt sleeve shaft structure (patented)
- Industrial PC Operating system.
- Automatic lubrication system.
- Filling process without powder spill and leakage phenomenon.



PATENTED DESIGN

The entire capsule filling cycle entails a unilateral vertical movement so that to ensure the accuracy dosing patented design. The starting position of the piston inside the dosator can be adjusted separately.



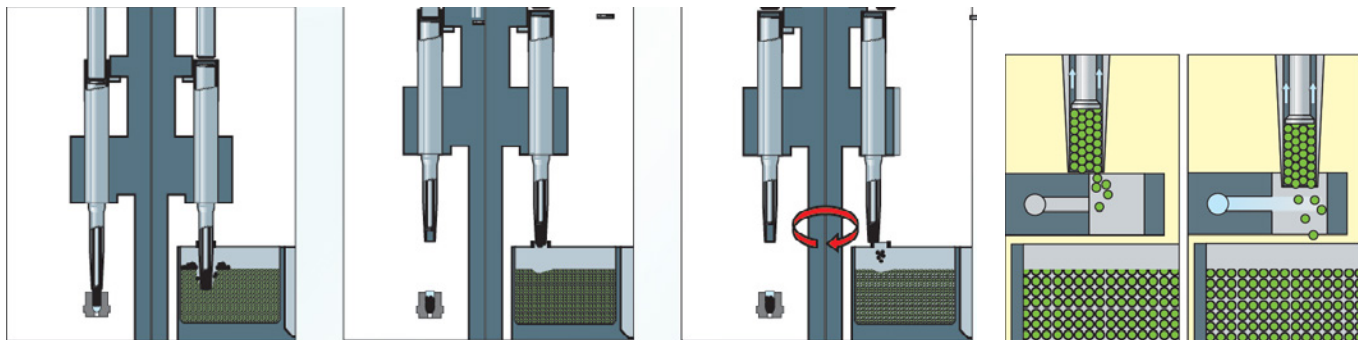
TECHNICAL PARAMETERS

Description	Z25	Z40	Z85	Z120	Z180
Maximum output (capsules/H)	25,000	40,000	85,000	120,000	180,000
Number of capsules per cycle	4	6	11	19	38
Capsule sizes	000L-5 SUPRO A-E, D-B, DBAA		0L-5	0L-5	00L-5
Maximum installed power (kw)	10		14		
Standard voltage	230-400V 50-60 Hz				
Aspiration	3,850L/min 2,500mm H ₂ O		5,100L/min 3,200mm H ₂ O		
Compressed air (l/min)	50-60 Bar	100-6 Bar			
Vacuum	100-20 mbar				
Weight (kg)	1,000		1,400		2,600
Closed size, (LxWxH mm)	960x1216x1800		960x1279x1928		1260x1260x1900
Opened size, (LxWxH mm)	2650x2650x1800		2650x2650x1928		3060x3060x1900

Environment requirements. Temperature 5-40 °C , relative humidity: 70% (maximum)

CAPSULE FILLING MACHINE / DOSATOR TYPE FOR PELLETS & TABLETS

PELLET DOSING UNIT

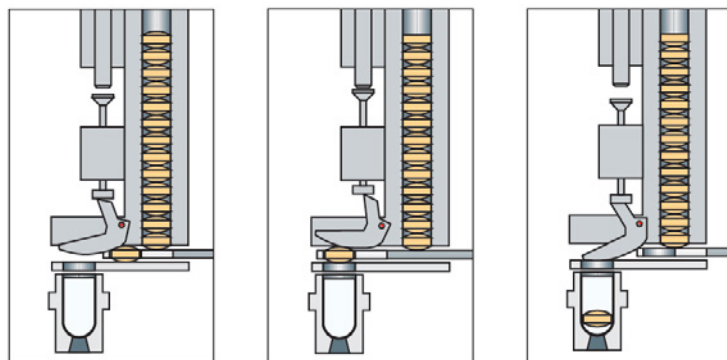


- The block moves down and the dosators on the first segment penetrate the pellets bed, inside the product bowl, whilst the opposite are positioned above the capsule bodies.
- The pistons of the first segment create the dosing volume and vacuum force pellets to fill it; the opposite ones eject the pellets into the capsule bodies, the vacuum is released.
- The block moves up and turns; dosators with pellets are positioned over the next capsule bodies, whilst the empty ones 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.

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 the tablet presence whilst dosing and the tablet absence upon blade return. In case of any malfunction is detected, the machine stops.



PELLET DOSING WITH DOSATORS: MAIN ADVANTAGES

- The pellet dosing system with dosators is more precise than the gravimetric dosing, guarantees the integrity of pellets coating.
- The group has less electrostatic problems, anti-electrostatic equipment is available upon request.
- Pellet filling is realized through vacuum suction, more precise, efficiency and good quality.
- Pellet dose into the capsule bodies by pushers, different from gravimetric dosing, so the filling speed can be guaranteed.



Z40 MODEL

Z40 series intermittent capsule filling machine, the maximum output up to 25,000-40,000 capsules/hour, can meet different production requirements at low speed or medium speed. It can realize two products combined dosing within the same capsule. Easy access to the working area, fast and easy size changeover, quick and easy clean operation, the work parameter can be adjusted respectively or overall, greatly satisfy the production process requirements, up to the perfect dosing and filling speed. User friendly, no skilled operator required.



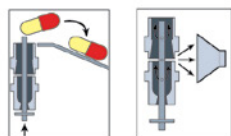
Z40 COMBINED DOSING



Z40 WORKING CYCLE

CAPSULE DISCHARGE

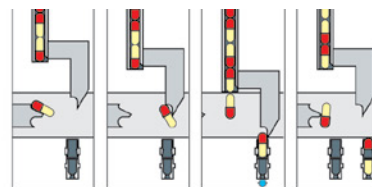
Closed capsules are discharged: by the combined action of pushers and compressed air. A conveyor chute transports the capsules towards the finished product container. Upper and lower bushings are cleaned of any residual dust by means of compressed air and aspiration nozzles.



BUSHINGS CLEANING

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.

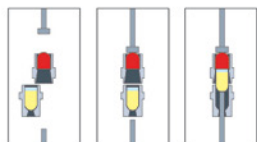


AVAILABLE FOR SIZE CHANGE-OVER OR PRODUCT DOSING UPON REQUEST

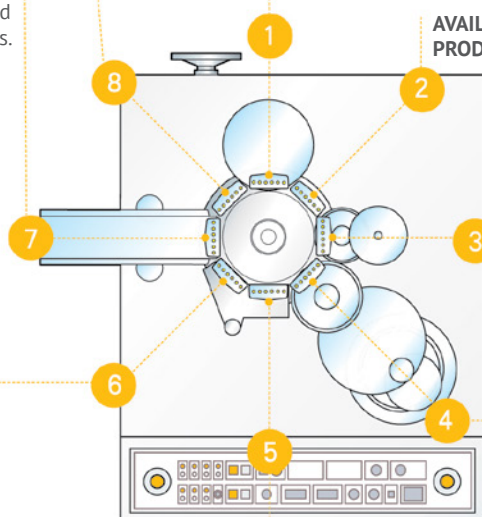
The station can be used for product dosing upon request. Alternatively it is available for size change-over.



CAPSULE CLOSING



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

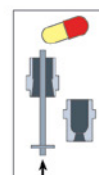


PELLETS/MICROTABLETS, TABLET DOSING

POWDER OR PELLETS/ MICROTABLETS DOSING

UNOPENED CAPSULE SELECTION AND REMOVAL OR PRODUCT DOSING UPON REQUEST

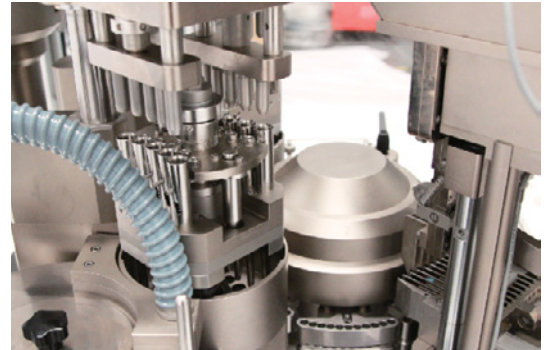
The station can be used for product dosing upon request or to eject any unopened capsules by means of appropriate pushers.



Z85, Z120 MODEL

Z85 maximum output 85,000capsules/h, Z120 maximum output 120,000 capsules/h.

Z85, Z120 series capsule filling machine can be installed 3 dosing stations, in order to realize the combined dosing of various products within the same capsule. Z120 only for pellets.



Z85 series offer the maximum versatility of combined filling. Except standard dosing combination, according to the request, customized dosing combination is available.



COMBINED DOSING



Powder



Powder A
Powder B



Powder
Pellet



Powder A
Pellet
Powder B



Pellet



Pellet A
Pellet B



Pellet A
Pellet B
Pellet C



Pellet A
Pellet B
Powder



Tablet



Tablet A
Tablet B



Powder
Tablet



Pellet
Tablet



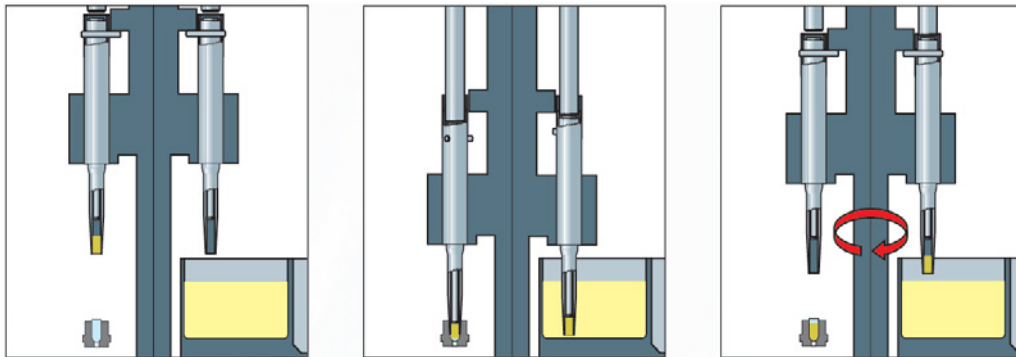
Powder
Pellet A
Pellet B



Pellet
Tablet
Powder

CAPSULE FILLING MACHINE / DOSATOR TYPE FOR POWDER

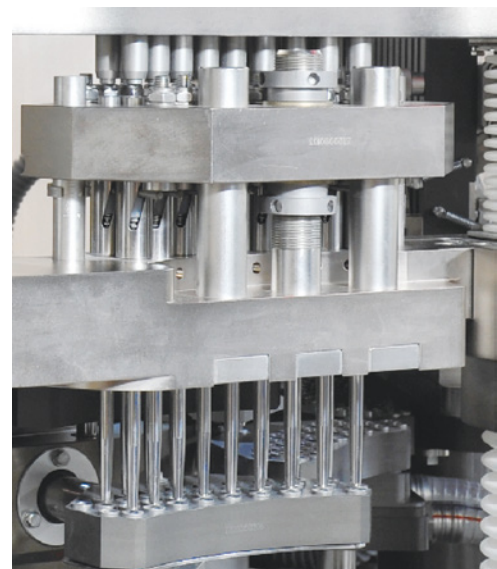
POWDER DOSING UNIT



- The block moves down and the dosators on the first segment penetrate the powder bed, whilst the opposite are positioned above the capsule bodies.
- The pistons of the first segment compress the powder forming slugs; the opposite ones eject the powder slugs into the capsule bodies.
- The block moves up and turns; dosators with slugs are positioned over the next capsule bodies, whilst 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 SMA PATENTED VACUUM BOWL CAN BE SUPPLIED FOR POWDER PRE-DOSING OF VERY FINE POWDERS.

DOSATORS



POWDER DOSING WITH DOSATORS: MAIN ADVANTAGES

- The powder dosing unit features high accuracy and employs special dosators and pistons which penetrate the powder bed and can compress the powder.
- Rotating bowl for normal powders and powders for inhalation; Aspirating bowl(patented) for hardly compactable powders (light or aerated powders), allowing a constant product bed density and a lower weight standard deviation.
- Wide range for dosing adjustment, loosen one adjusting part can realize dosing adjustment from dozens of mg to hundreds of mg.
- Only one powder bowl is enough for different powder dosing/different capsule sizes, no additional powder bowls needed.
- The filling accuracy will keep stable, don't change over time
- Micro-dosing 1 0-50mg is available.
- Filling accuracy will not be affected by nonuniform granules, it can fill irregular Chinese Medicine particle mixture.



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