

# HOW IT'S MADE

## FROM POWDER TO TABLET

From sprays to syrups and lotions, drugs come in a variety of dosage forms. But tablets are still the most popular method of delivery, making up around 50% of all medicines. During production, it is critical to ensure that each and every tablet contains the correct amount of active agent. So, how are they made?

### WEIGHING



First, the powdered ingredients are weighed out, fed into an intermediate bulk container (IBC) and mixed together. As well as active agents, the formulation will also comprise excipients such as flavoring, dyes, fillers or preservatives.

### GRANULATION



To prevent the ingredients from separating, the mixed powders are blended with a liquid that binds them together and forms free-flowing granules. Their consistency determines how quickly the ingredient is absorbed by the human body. Granulation can impact the efficiency of the entire production line.

### DRYING



The moist granules are fed into a fluid bed dryer and gently dried.

### GRINDING



Coarse-grained granules can cause irregularities on the surface of a tablet, so a dry mill is used to finely grind them.

### COMPRESSION



In a tablet press, the dry granules are fed into dies and compressed using two punches. This is when the tablet is actually formed.

### COATING



Most tablets are coated. Whereas cosmetic coatings can be used to differentiate a product with color or a logo, functional coatings can make tablets more stable and storable. Some coatings protect tablets from gastric acids, ensuring that the active agent is released in the upper tract of the intestine.

### PACKAGING



Finally, the finished tablets are placed in a bottle or individually wrapped in blisters and packaged together with the relevant product information.

### CONSUMPTION



## CONTINUOUS TABLETING

GEA's multi-award-winning ConsiGma™ technology combines all the processes involved in tablet manufacturing in a single production line: it dispenses, mixes, granulates and dries ingredients, compresses them into tablets, and coats them. Cutting-edge monitoring tools assess product quality during operation. The compact unit is suitable for all types and volumes of production – from small quantities for development, pilot and clinical trials, to mass production. Compared with current industry standards, ConsiGma™ halves both labor costs and space requirements.

