



ManDos successfully integrated!

The success story of small component weighing in the pharmaceutical sector and integration into the production process

Identification

Weighing

Labelling

Documentation

Adding

The customer

The name HERMES Arzneimittel – one of the leading suppliers and manufacturers of premium self-medication products – is synonymous with expertise based on top-quality technology and tradition.

HERMES is investing in a modern production infrastructure to enable it to cope in future with people's progressive demands relating to their health. This includes granulators, mixers and fully automatic production lines for the manufacture of effervescent tablets in a range of different packaging forms. A workforce of around 100 processes approximately 15 tonnes of raw materials every day to produce around 50 batches of semi-finished and finished products.

The task

A key point in the production of effervescent tablets is the manual weighing of the most diverse raw materials.

However, manual weighing is only one element of the complex production process and, together with the other weighing stages, forms the preparation stage for granulation.

The particular issue here is that both active agents and balancing agents, as well as raw materials without active agents, are weighed at the same weighing station. The products are weighed in different intermediate product containers that, of course, all have to be correspondingly labelled.

The focus

The following points are critical:

- Identification of the raw materials including plausibility check
- Operator-managed weighing process
- Weighing of active agents and simultaneous calculation of balancing agents
- Conversion with metered weighing
- Complete container traceability in the manual weighing section
- Monitoring of the cleaning state of the end containers
- Uninterrupted recording and documentation

THE SOLUTION



The solution

The ManDos manual weighing system is used in the manual weighing section.

A total of five different weighing stations are integrated into the overall process and perform the specific tasks that they receive on schedule from a superordinate process management system and to which they report back the weighing results.

A Touch-Industrie PC to which the weighing scales are connected

forms the core of every weighing station. This displays the user's tasks to him in a clear and well-organised manner and guides him through the weighing process. Every weighing station is equipped with floor and table scales, as well as a barcode reader and label printer.

Various versions are also installed to prevent dust pollution.

Integration

The weighing stations are spread over the production floor and are connected by Ethernet to a central server that coordinates order processing and communicates with the central Kastor process management system. This, in turn, manages the data exchange to the customer-side MOVEX ERP system, guaranteeing an uninterrupted information chain from the ERP system, via the production sections and back to the ERP system.

AZO.[®]

Metered weighing

A unique feature of a weighing station is that it can be used as a conversion work station, as well as for metered weighing. When the work station is solely used for conversion, bagged materials are simply converted for further use at an automatic dosing station. The container is simply filled and only the filled volume is recorded.



Conversion / Metered weighing

If, by contrast, metered weighing is used, then the materials are weighed according to a recipe based on the production order. Following weighing, a proportion of a production order is in the container for immediate further use in the mixing section. A further work station is provided in the form of a laminar flow to offer the employees effective protection from dust pollution.



Work station with laminar flow cabin

Labelling

The labelling of containers is a key task alongside pure manual weighing. All of the containers that have previously been manually or automatically filled with recipe ingredients and leave the weighing centre are again scanned at a further work station and then finally labelled. This task is performed at the i-point work station, with the containers once again being weighed as a control.



I-Point

Weighing of active agents

The ManDos system provides the option of weighing active agents taking into account the actual concentration of active agent.

The concentration of active agent is determined by means of the scanned information on the raw material barcode and the target value is adjusted accordingly to achieve the quantity of active agent specified in the recipe precisely. The associated balancing agent is naturally also adjusted to ensure that the total quantity of the recipe remains constant.

Cleaning control

All of the containers used in the process (containers, drums, tanks) are monitored in terms of their cleaning status to avoid contamination.

After the end container barcode has been scanned, the state of the container is requested by the superordinate process management system and only if there is positive „cleaned“ feedback can the container be used. Of course after weighing, the new „filled“ status of the container is reported back to the process management system.

Identification

As all work stations are equipped with barcode readers, a control and plausibility check of the raw materials, final container and also the operator can be performed.

Raw materials are scanned before use, a check is carried out to ensure that the correct raw material is being used and the raw material batch used is automatically recorded. Alongside the documentation, this is also the basis for calculating the active agent and balancing agent. At the same time the end container is recorded, checked and documented. A barcode is applied to the employees' access authorisation cards and this is also recorded.

Safety

The complete system is of course secured by a systematic security solution.

All employees must authenticate themselves with a company-wide access authorisation card and a password. All work is logged by means of an audit trail and, of course, all of the weighed substances are documented in a manufacturer's log. The information from the manual weighing section is reported to the process management system and recorded centrally there. Complete documentation can therefore also be guaranteed for manual processes.



Two work stations in the weighing centre