

# Compaction machine for laboratory and special purpose

BT 120 Pharma



*Alexanderwerk*

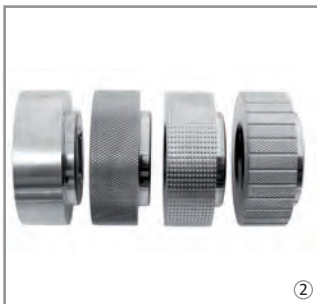
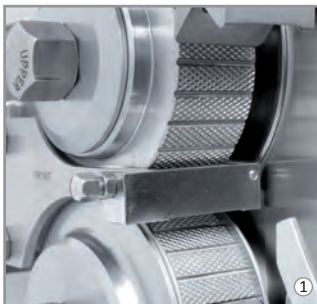
## BT 120 Pharma:

### Compaction machine for laboratory and special purpose

With the introduction of the BT 120 Pharma, Alexanderwerk offers a roller compactor designed to meet the highest requirements and standards in pharmaceutical research and development. With a throughput of up to 8 kg/h (Lactose), the BT 120 Pharma can be used for granulation of biological compounds and active ingredients. With its highly integrated design and the extremely compact size it is the best machine available to advance into galenics.

Because of its modular design, the process technology can be almost completely disassembled without special tools. Due to its cantilever bearing design the rollers can be easily cleaned or replaced. The mobile design provides great flexibility during compaction feasibility studies and allows an easy maintenance.

The BT 120 Pharma is designed to meet cGMP and its mobility is ensured due to its compact design and fully integrated control and operator panel. Moreover, previously determined process parameters can easily be scaled up to larger production machines.



The design and construction are orientated on the strict requirements of pharmaceutical industry and provide the following advantages:

- cGMP design
- consistent separation between process material and technical equipment
- rollers in cantilever design
- made completely of high-quality stainless steel
- non-metallic parts FDA approved
- automated PLC
- URS-conformity as required
- tool free disassembly
- easy and accurate Scale-up

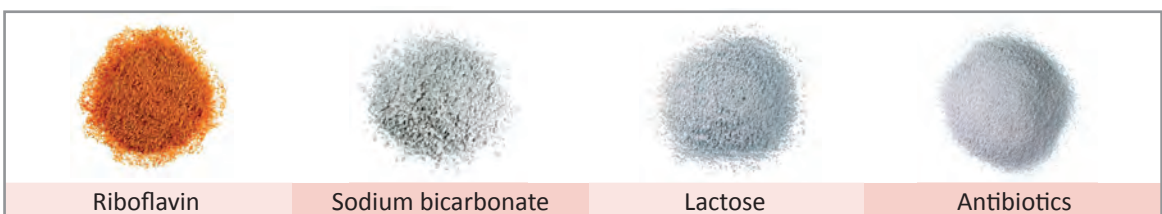
#### Options:

- circumferential side seals (1)
- containment solution with isolator technology
- additional roller surfaces (2) (smooth/grooved/knurled/squared or a desired combination)
- mobile machine base
- insulating transformer

#### Applications

For many years pharmaceutical companies as well as specialized providers all over the world have been using solutions supplied by Alexanderwerk to produce a large range of products, including tablets, capsules, life science products, flavours, instant powders, intense sweeteners and many more.

#### Examples of granules



## Why Alexanderwerk?

### Vertical roller arrangements

Because of the vertical arrangement of the rollers it is possible to feed the product horizontally to the rollers, which allows greater control of feed flow without the influences of gravity as well as a more gently handling of the product. This leads to a minimization of fine material in the finished product without having any negative influence on the consistency and quality of the batch.

### All-round support

Beginning with the manufacture and followed by delivery, installation supervision, commissioning, maintenance, reparation and on-site assistance – Alexanderwerk is at your service.

### Keeping at the forefront of technology

The processing of dry compaction products places extremely high demands on the techniques used and need often to be linked with individual and innovative solutions. For many years international pharmaceutical companies have been relying on the planning, construction and production of our advanced machines and customized designs as well as on our individual adaptations. In addition we can also support our customers in the area of plant construction. To offer the best possible solution for our customers, we provide the combination of our own and third-party components from a single source. We are ready to face the challenge!

### Trial/Test center

To guarantee the optimal processing of each product, Alexanderwerk offers its test center for different tests and process developments. This can be done in the presence of the customer as well as independently through Alexanderwerk. In both cases the customer is given a detailed test report to provide a better basis for further decisions.

Please feel free to contact us – we will be pleased to support you!





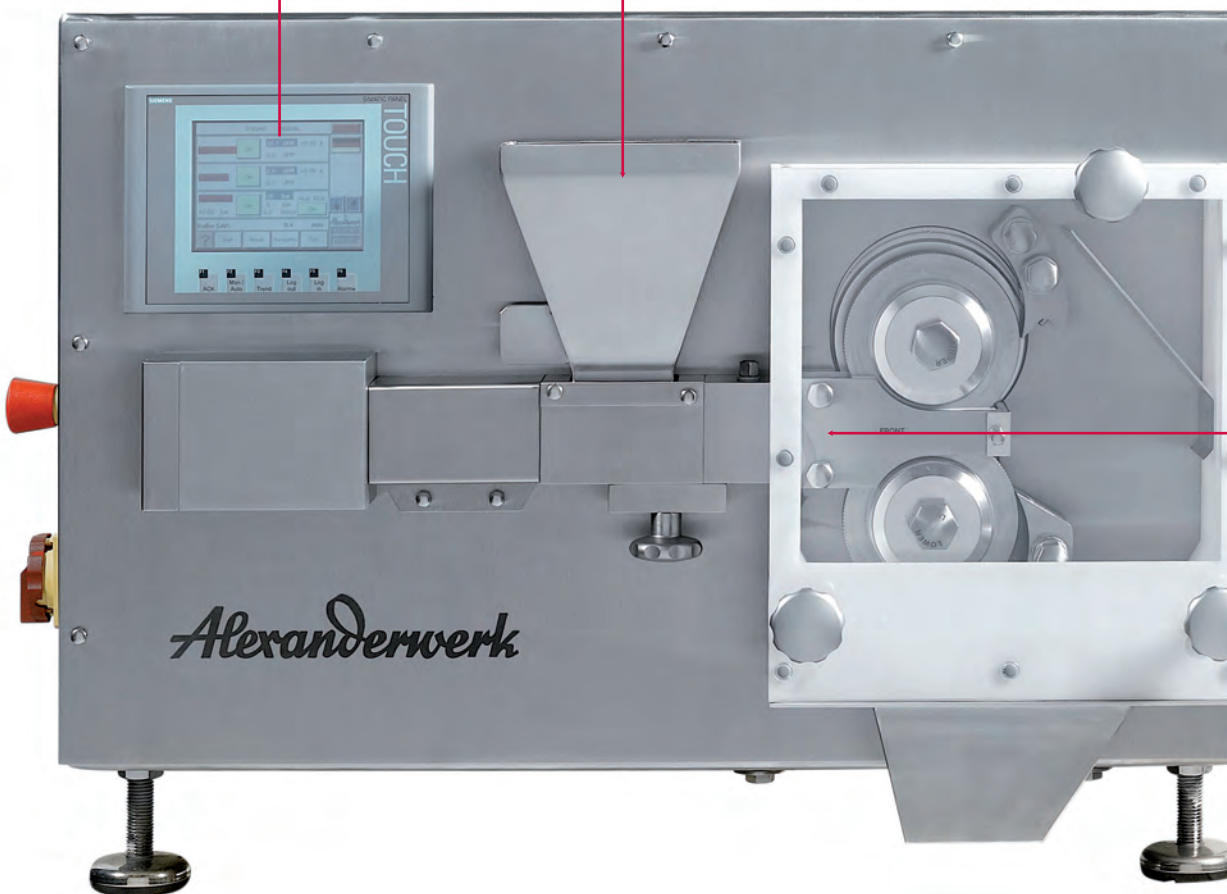
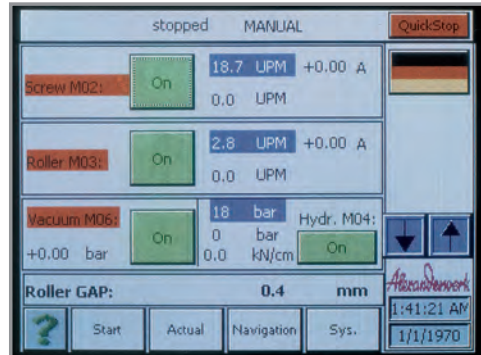
## Functions and features of BT 120 Pharma

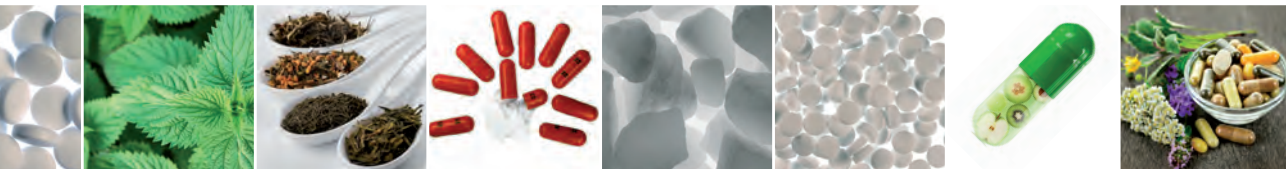
The processing principle of roller compaction is relatively straightforward. However, only the use of modern production technology in connection with highly-developed feeding and control technology enables an accurate and economic production of high-quality granules.



### Interface for comprehensive control

The modern control and advanced technology of BT 120 Pharma enables a stable and continuous process, whereby the compaction pressure and roller gap are kept constant while the automatic feed control will compensate for any physical fluctuations in the product. Process parameters such as throughput, flake density, compacting pressure, roller RPM and others can be precisely and repeatably adjusted.





### **Optimal raw material feeding for maximum throughput**

The raw material is fed via a product feed hopper with a horizontal stirrer into the horizontal screw feeder unit. In most cases, for this machine the product feed is carried out manually. The height of the powder column above the feed hopper does not affect the performance of the screw feeder. The function of the screw feeder is to accurately feed products to the rollers. Various special designs and materials ensure that a constant product feed is guided to the compaction unit without being pre-compacted. Close to the end of the screw feeder there is a vacuum area, which improves throughput and facilitates the processing of fluidizing products of low bulk density.

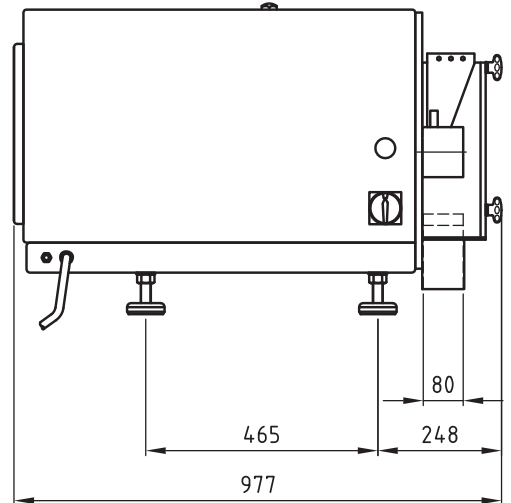
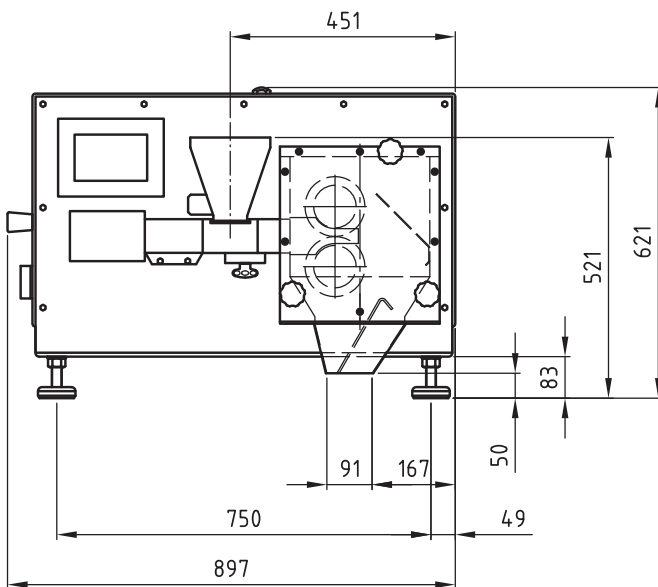


### **Individualized compaction unit**

The thickness of the flakes (compacted material) produced on the roller compactor is measured by position transducers and kept constant by a roller gap control unit. The pressure force, a reference value for the degree of compaction, is variably adjustable by the hydraulic system. In case of possible fluctuations in the bulk weight, these are compensated by the screw speed. Furthermore there are different roller combinations available to ensure the optimal compaction. Depending on the product, roller patterns in different widths are available. Circumferential side seal design prevents excessive side seal powder leakage during compaction which leads to an increased quality of the granule and a minimization of undersize, fine material.

## Technical data

roller diameter	120 mm
roller width	25 mm
throughput, continuous operation	up to 8 kg/h (Lactose)
maximal pressure force	20 kN/cm
maximal roller gap	4 mm
maximal roller speed	15 rpm
weight (incl. control system)	approx. 425 kg
dimensions	977 mm x 897 mm x 621mm



## Alexanderwerk: The Compaction People

Alexanderwerk is a world leader in producing advanced compaction and granulation solutions for the pharmaceutical and chemical industry. For over 125 years Alexanderwerk has been dedicated to its customers and offers a wide range of custom made solutions. From stand-alone equipment to complete integrated, state of the art compaction plants – we aim to exceed our customer expectations by meeting the markets growing demand for higher quality and higher performance equipment.

*So, whatever you need, just ask the compaction people.*