GKF 702 – Capsule Filling and Closing Machine

Packaging Technology

BOSCH
Invented for life
GKF 702 – Capsule Filling and Closing Machine

Product development > product launch > high yield production – the GKF 702 provides the best conditions for modern, flexible and safe production. Whether in the laboratory, for the production of clinical samples, or in industrial production, the GKF 702 is a real all-around machine, which is suited for production in the product development phase through market introduction.

All of the typical filling options on the market are available for the GKF 702.

The modular layout allows modification or upgrade of the machine processes at any time, making the GKF 702 a “future-proof” and safe investment. Long idle times for product changeovers are therefore a thing of the past.

The processing range of the GKF 702 includes (micro) tablets, powders, pellets, and even liquids and combination filling. Powders are dosed using the tamping pin method. For optimized batch yields, the slide-gate technology from the GKF 1400 and GKF 2500 machine series is available as an option. With this system, free flowing granulates can be dosed in a very...
Format parts from the GKF 700 and 701 can also be used on the GKF 702 without problem, with the exception of the dosing disks associated with the slide-gate system.

For your liquid filling needs, the GKF 702 offers an optional servo-controlled liquid pump, which provides step-less control of the fill volume for high precision dosing and includes an adjustable drip retraction feature. Additionally, the gentle handling of the product is ensured by constant temperature control via a fully automated product heating system.

The changeover from liquid filling to other types of filling can be made in the shortest time due to its modular construction.

gentle manner. Additionally, the slide-gate technology can provide production flexibility by providing the ability to fill powders and pellets using the same station, thereby also reducing capital costs.

GMP-compliant design and good accessibility simplify and shorten the cleaning and re-assembly of the machine. The GKF 702 is equipped with an industrial PC and a touch screen interface with intuitive operation, which provides for easy and safe operation. Batch reports and other data can be accessed via various interfaces such as LAN, USB or DVD burner. The software used provides all functionality in accordance to CFR 21 part 11, e.g. audit trail and password protected user administration.
High potency products that are administered by inhalation and require exact medication require precise filling without agglomeration effects.

Therefore a newly designed vacuum dosing system is available that has been developed for the GKF 702, which can gently and safely dose very small powder volumes. Additionally, difficult products can be processed with the flexible and modular exchangeable filling station.

In the laboratory, as well as in R&D use, the GKF 702 can operate under production and laboratory conditions.

The newly developed “mini-bowl” is a container designed for very small product volumes. This provides a very high powder yield, and therefore a very economical solution, which is especially desirable for expensive powders and powders with limited availability during the development phase. This permits the smallest laboratory batches to be processed under production parameters (e.g. full machine speed using a reduced number of filling positions).
**Description of Function**

1. Capsule alignment and separation
2. Separation of segments
3. Pellet, tablet station or capsule scanning optional
4. Empty station
5. Dosing station for powder/pellets via dosing disk or liquid filling station or mini-bowl or micro dosing
6. Empty station
7. Optional pellet or tablet station
8. Extraction for non-open capsules
9. Uniting of the segments
10. Capsule closing station
11. Capsule ejection
12. Segment cleaning
**Liquids**
The liquid station enables the precise volumetric dosing of thixotropic to hydrophilic liquids, as well as the ability to heat or cool liquids during the filling process.

**Powder/Pellets**
Dosing station with patented slide-gate technology for the filling of powder and pellets.

**Pellets**
The pellet station provides a gentle, precise, and compact option for pellet dosing. This station can also be utilized along with other dosing stations to fill combination products.
The GKF 702 is the flexible filling machine for whatever filling solution the future may require.

Micro dosing
Highly accurate, agglomeration-free micro dosing of powders (e.g. for inhalation)

Tablets/Micro-tablets
The tablet station offers a gentle and exact dosing of single and multiple tablets into capsules.

Combinations
A wide array of product combinations are possible on the GKF 702, thanks to its modular assembly.

Kundenspezifische Anforderungen
The GKF 702 is the flexible filling machine for whatever filling solution the future may require.
Technical specifications

Output
• 42,000 capsules/h

Machine cycles
• 140 cycles/min

Number of segment borings
• 5

Mains voltage, machine
• 400 V+/−10%, 50/60 Hz,
• 3 ph/ PE, 2.5 kW,
• nonstandard voltages

Maximum infeed fuse
• 16 A

Mains voltage, vacuum pump
• 230 V, 550 W

Vacuum requirement
• 19 m³/h at 0.2 to 0.5 bar

Mains voltage, vacuum cleaner
• 230 V, 1.5 kW

Suction air requirement
• 200 m³/h

Connections
• Compressed air supply Ø 13 mm
• Vacuum connection Ø 30 mm
• Plug socket for vacuum cleaner
• Plug socket for vacuum connection
• Main electrical connection

Feeds
• Powder feed Ø 100 mm
• Pellet/tablet feed Ø 90 mm
• Empty capsule feed Ø 90 mm
• (all feeds optionally with Triclamp DN100)

Standard equipment
• Basic machine with integrated electrical cabinet and integrated control panel
• Machine control system based on Windows CE
• Empty capsule supply hopper with minimum and maximum level control
• Dosing station with product supply hopper
• Capsule closing station with concave closing pins
• Capsule ejection station
• Cleaning station with extraction

Sizes
• Capsule size set optionally for all popular capsule sizes 00 to 5, DB
• optionally fixed or height-adjustable dosing disk

Optional
• Pellet filling station
• Tablet filling station
• Liquid filling station
• Enhanced segment cleaning

Accessories
• Vacuum pump
• Vacuum cleaner
Right reserved to effect technical modifications
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