Feige
FILLING

COMPETENCE IN PALLET FILLING

HIGHEST EFFICIENCY IN PALLET FILLING

Feige FILLING GmbH is a traditional German medium-sized company in Bad Oldesloe. Founded in Hamburg in 1972, the company has developed into the market and technology leader in the field of filling technology by its innovative strength and open-mindedness. Feige FILLING stands for gravimetric filling equipment for the filling of liquid and pasty products with calibrated accuracy.

Since 2003, the company is a completely integrated member of HAVER & BOECKER. With subsidiaries and agencies on all continents, we stand in a world-wide dialogue with our customers in a spirit of partnership.

We have the suitable filling technology to meet your challenge

The modular assembly system of the range of filling equipment produced by Feige FILLING offers you an appropriate solution for all your needs when it comes to the gravimetric filling of containers with sizes ranging from 0.5 kg to 3000 kg.

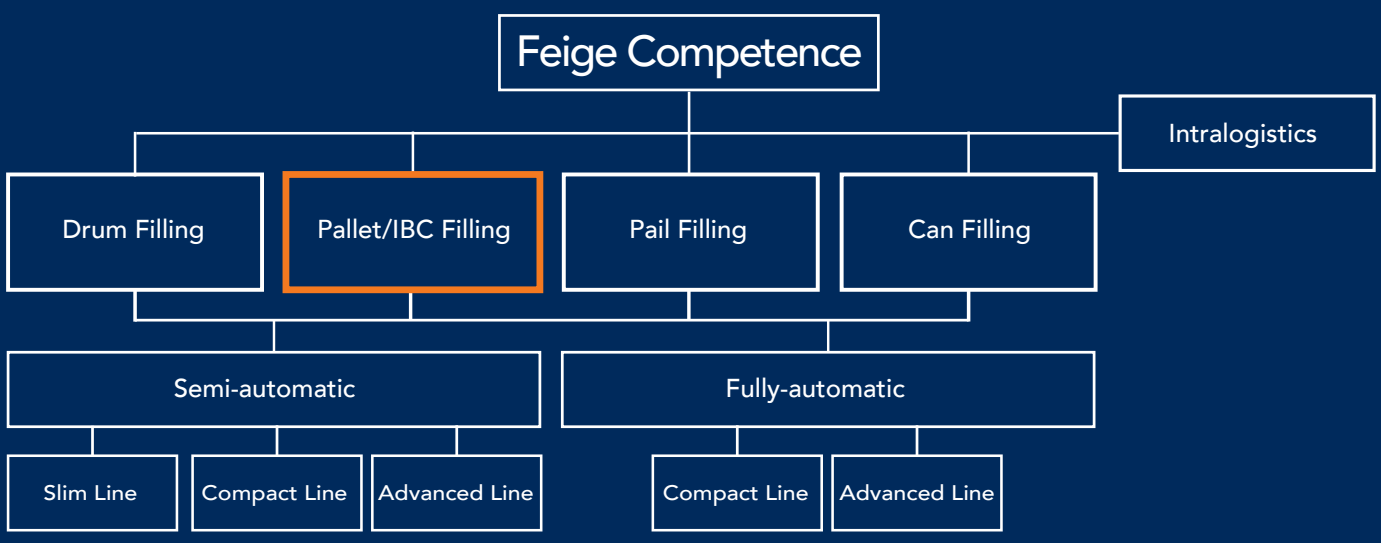
Decades of experience with innovative technology and also considering market requirements guarantee the successful implementation of your wishes.

Let us help you fill your containers on pallets

Whenever containers on pallets need to be filled, the use of filling equipment is inevitable. Decide for a turnkey filling solution – individually matched to your operating sequences:

- Pivoting pallet filler for individual pallets
- Pre-configured pallet filling stations
- Complex pallet filling systems
- Automatic pallet fillers
- Automatic pallet filling systems

Combining the filling equipment with our conveyor technology - from machine-assisted unloading of the empty drums from the truck to load securing - allows you to make use of a complete turnkey solution.



SAFETY - ACCURACY - FLEXIBILITY

Accuracy as well as a high degree of safety during product filling are fundamental requirements which have to be met by filling equipment that satisfies the highest quality standards.

Irrespective whether your products are uncritical, foaming, explosive or flammable commodities,
Feige FILLING as specialist for filling equipment will make available appropriate filling technologies. All automatic pallet fillers have a standardised working principle. The pallets reach the automatic filler empty, clean and possibly also closed and leave it filled with calibrated accuracy, clean and closed.

Central components of the automatic pallet fillers are filling valve and weigh scale. The filling operation takes place using the time-tested coarse/ fine fill process. In order to observe calibration error limits, it is necessary to restrict the volume flow towards the end of the filling process.

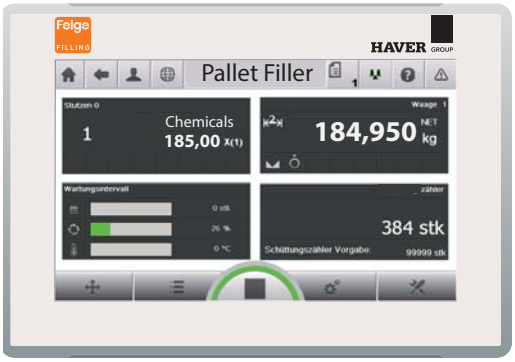
Filling - always with an eye on safety

With the Feige FILLING valve, you fill your liquid and viscous products with a proportional or multi-stage dosing system. The filling valve is dimensioned in accordance with your requirements on filling opening, viscosity and volume flow. Resistant materials such as stainless steel, teflon, Hastelloy, Titanium, nickel, PVDF and PTFE guarantee the reliable use of the filling valve. Depending on the area of application, you can also resort to filling valves of hygienic design, heated and with overfill protection. To enable you to change the filling valve within seconds during operation, a stainless steel quick-action filling valve mount is a standard feature.

Measuring with calibrated accuracy

The FEIGE weigh scale terminal is the heart of the equipment. Measuring the dosed filling volumes with calibrated accuracy is carried out with mass flow meters (minimum filling volume and filling tolerance) or load cells (maximum weight), which are integrated in the filling equipment as a system approved for verification. Safety mechanisms assume the control of all important parameters.

You operate the weigh scale terminal via discrete elements or a touch panel with alphanumerical input. The weigh scale records your operating data, logs the weighing results and puts statistical data at your disposal. The system communicates with your network or outputs the data on a mobile USB flash drive.



The filling valve

- **Filling valve diameter** according to
  – Filling opening
  – Viscosity
  – Flow rate
- **Aseptic**
- Minimum dead space
- **Heated** filling valves
- **Material**
  – Stainless steel
  – Teflon
  – Hastelloy
  – Titanium/Nickel
  – PVDF/ PTFE
- **Multistage dosing**
- **Proportional dosing**

Safety Functions

The filling valves are equipped with important safety functions such as:

- Closing / opening with compressed air
- Closing with spring force
- Relieved of product pressure
- Leakage monitoring of the sealing space
- Fill level check
- Minimum dead space

Above-Surface

Below-Bunghole

Below-Surface

The weigh scale

- 255 product files, expandable
- Protocol of weighing results and statistics
- Alphanumeric entry through prompting
- Storage of operation data
- Label printer
  Protocol printer
- Measuring device
  Load cell
  Mass flow meter

CONCENTRATED KNOW-HOW IN INTRALOGISTICS

If you are planning a seamless overall concept of filling equipment with end packaging, palletising, conveying and marking technology, talking with the specialists of Feige FILLING will certainly be of assistance.

For more than 40 years, Feige FILLING has been building automatic packaging systems for liquid and pasty products. Due to the numerous application experiences the engineers have gathered a wide variety of projects, existing systems are continuously enhanced and always adapted to the latest state-of-the-art.

Due to the affiliation with HAVER & BOECKER, the expertise at Feige FILLING was further enhanced and the services portfolio expanded in synergy. Today, Feige FILLING supplies you with the entire process technology seamlessly from one source.

Turnkey complete solutions

In the field of filling, FEIGE will project your complete turnkey equipment for the solution of complex logistic tasks. The equipment required by different industrial sectors for storage, mixing and filling of liquid or pasty products comprises:

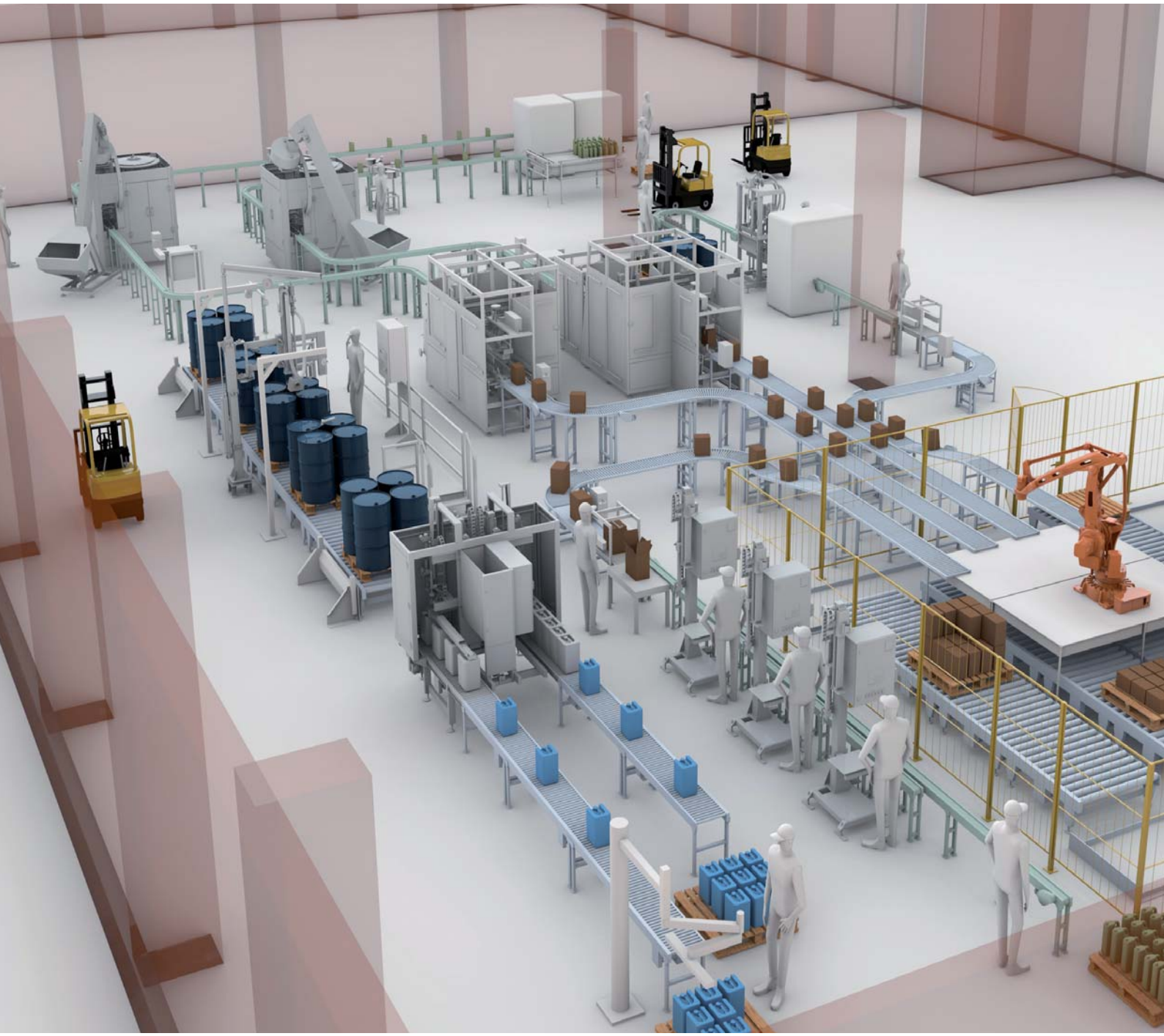
- Computer-controlled process control
- Conveyor systems for container in-feed and out-feed area
- Conveyor systems for pallet feed
- Palletising systems
- Product feed
- Storage facilities for pallets and containers
- Loading facilities
- Cleaning systems
- Marking systems
- Load securing

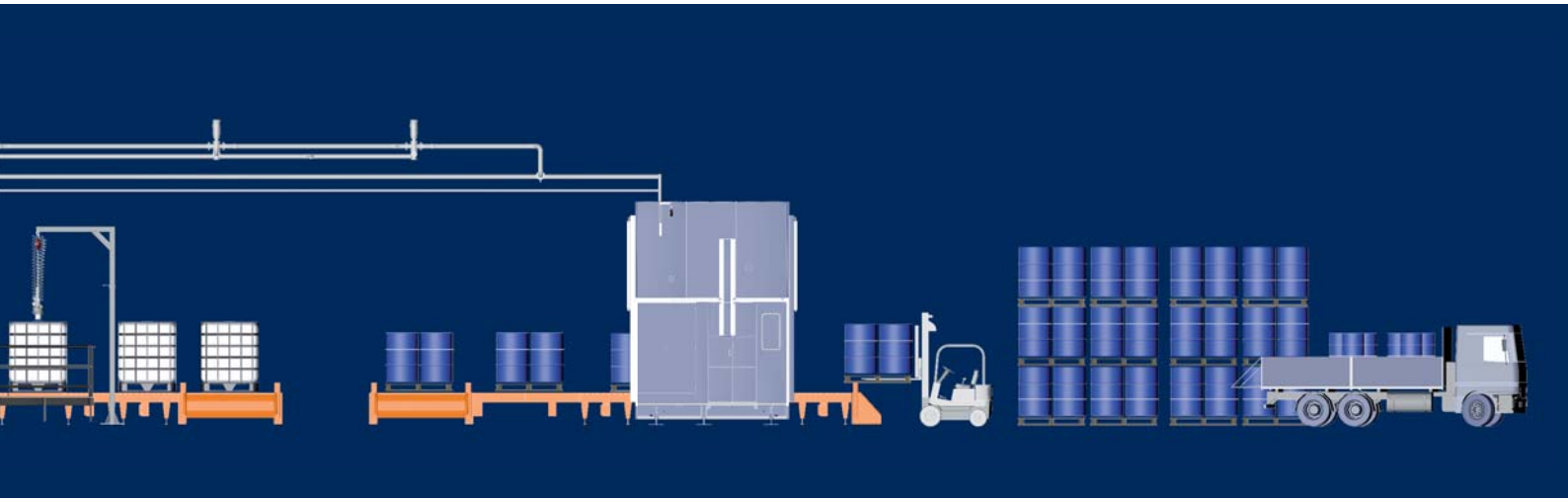
Innovative factory and system design (FEIGE FACTORY DESIGN)

You would like to look at your new equipment long before it is implemented in your production hall? FEIGE FACTORY DESIGN shows you how. With an accurate, photo-realistic visualisation, you can marvel at your future equipment already before it is assembled. To make this possible, the planned equipment is adapted to the intended environment. Particularities inside the hall, e.g. an old system comprising subsequent extensions and conversions, are recorded by means of a 3D laser scan and taken into consideration.

This new procedure saves you time and costs. Planning is clearly simplified and accelerated. Disruptive ambient conditions are already given consideration during the tendering stage. Tedious drawing work or on-site actions have become superfluous. The accurate and realistic pre-visualisation offers you the perfect basis for a decision.

FROM THE IDEA TO THE FINISHED EQUIPMENT





AGILE SOLUTIONS ENTIRELY TAILORED TO YOUR WISHES

Compile your semi-automatic pallet filling system in accordance with your individual requirements from the FEIGE modular system. You decide on the degree of automation.

Select the equipment that suits your type of filling - gravimetric filling of drums and cans on pallet or containers/IBC. The semi-automatic machines from Feige FILLING will support you during the entire filling process.

Speed up your filling processes

The three product lines of Feige FILLING for semi-automatic pallet filling offer you all the functions of a filler working with calibrated accuracy, ranging from the reasonably priced pivoting pallet filler "Slim Line" and the pre-configured pallet filling station "Compact Line" to the coordinate pallet filling system "Advanced Line" with extensive conveyor system and further peripheral equipment.

The Feige FILLING systems convince by their ease of operation and installation. Depending on the application, they are also available in a design conforming to ATEX requirements. All main functions of a gravimetric filler are executed in time-tested FEIGE quality.

Economical pallet filling

The pallets are fed to the weigh scale platform. The empty containers are successively filled on the pallet after the filling valve has been manually positioned. After actuating the start button, the container is automatically tared and filled with calibrated accuracy using the coarse/fine fill process. Drip collecting, overflow protection, base height adjustment for different container heights or multiple layer filling assist you in optimising your filling processes even further. The necessary auxiliary tools for the correct bunging of the drums are also made available to you.

SEMI AUTOMATIC FILLING

SEMI-AUTOMATIC FILLING EQUIPMENT

SLIM LINE

JUST FILL

- Cost-effective filler
- Designed in well-proven FEIGE quality and accuracy
- Simple installation – easy use

PIVOTING PALLET FILLER TYPE 6
IBC FILLER TYPE 8

COMPACT LINE

PLUG & FILL

- Pre-configured / pre-assembled compact filling station
- Stainless steel load cells / 255 product parameter sets
- Conveyors with up to three motors

PIVOTING PALLET FILLING STATION TYPE 16
COORDINATE PALLET FILLING STATION TYPE 17
IBC FILLING STATION TYPE 18

ADVANCED LINE

COMPLEX CONFIGURATION

- Large conveying systems for empty and filled containers
- Filling products or environment require special features

PIVOTING PALLET FILLING EQUIPMENT TYPE 26
COORDINATE PALLET FILLING EQUIPMENT TYPE 27
IBC FILLING EQUIPMENT TYPE 18

VERSATILE EQUIPMENT ACCESSORIES

A wide range of customer requirements and factors require tailor-made solutions. To ensure that you can put your filling equipment to the best possible use, we have made available an extensive selection of modules and equipment accessories for you.

Feige FILLING technology is process automation with a modular design. Use the scalability of the equipment to your advantage by optimising your production processes entirely according to your ideas.

Increased Productivity

- Perforated disc
- Valve heating
- Roller conveyor on scale
- Roller conveyor in the in-feed and out-feed area

Simplified Handling

- Drip scoop
- Drip extraction
- Valve rack
- Fine fill via product file
- Product hose suspension
- Manual bunging and sealing station

SEMI-AUTOMATIC FILLING TECHNOLOGY

Increased Productivity

- Level controlled ascent
- Filling valve principle and geometry
- Base height adjustment
- Cleaning station
- Drain funnel
- Product hose
- Valve encoding

Utmost Process Reliability

- Reduced fill start
- Bunghole extraction
- Inerting
- Earthing
- Gas hood
- Collecting basin
- Overflow protection
- Pressure surges reduction

MAXIMISING VALUE ADDED CHAINS

You need automated filling processes and a linking of individual filling, packaging and palletising technologies to make up a complete value added chain. The standardisation and modular design of many individual process steps is an indispensable requirement to do so. Benefit from the cross-linking of different process steps during the production process and optimise your entire product flow with FEIGE pallet filing technology.

After installation of the pallet filling system, you can immediately start with production. This is made possible by the Feige FILLING "Plug&Fill" concept, which integrates all the components of the electronic and pneumatic control system of the automatic machines directly into the machine.

For fully automatic pallet filling, you can choose from two lines of automatic pallet fillers.

Compact and highly flexible

With the Compact Line you can fill cans, drums and IBC from 10 to 1500 kg, of which several are arranged on one pallet. Design and construction dimensions of the machine enable you to fill several layers as well as large containers (IBC). Executed with a full screen camera, the equipment detects the coordinates of the individual filling openings with utmost precision. Not even dirt, water stains or labels on the top face of the containers can irritate the system. This is due to the image recognition system, which Feige FILLING is continuously adapting to the latest state-of-the art in sensor and image recognition technology.

It goes without saying that all subsidiary work steps such as marking, labelling, printing, inerting, pressure application and leakage tests can be integrated into the automatic operating sequence.

Tailor-made engineering

With the Advanced Line you are opting for a high degree of user comfort and the optimisation of your work organisation. The automatic pallet fillers carry out the filling operation fully automatically and offer you the highest degree of product, environment and personal protection. You can seamlessly use the entire process technology from pallet in-feed and filling with calibrated accuracy to closing, labelling and removal.

The Advanced Line is your first choice when you decide for a cost-efficient system of standard components, sub-assemblies and control concepts, but at the same time wish tailor-made engineering for your individual requirements.

For your explosion-proof areas you may obtain both the filling equipment and all peripheral equipment from Feige FILLING in a design that complies with ATEX requirements.

Turnkey - filling logistics

FULLY AUTOMATIC PALLET FILLING SYSTEMS

FULLY AUTOMATIC FILLING

COMPACT LINE

PLUG & FILL

- Pre-configured / pre-assembled compact filling machines
- Operated via touch screen

AUTOMATIC PALLET FILLING MACHINE **TYPE 37**
Automatic positioning of filling lance via camera system

ADVANCED LINE

COMPLEX CONFIGURATION

- Large conveying systems for empty and filled containers
- Operated via touch screen
- Filling products or environment require special features

PALLET FILLING ROBOT **TYPE 71**
Automatic de-bunging, bunging and cap sealing
With camera system

TECHNICAL COMPETENCE LEADS TO HIGHEST QUALITY

Correctly closed

The high standards required by occupational health and safety and environmental protection require a correct closing of the containers. To be able to meet the corresponding requirements, closing at defined torques is indispensable.

The FEIGE bunging station offers you safety and accelerates the closing procedure of your containers. The bunging station consists of a plug bunging head with adjustable torque. In the automatic bunging station, the torque control integrated in the bunging head ensures that the plugs are reliably bunged into the filling openings with the correct torque.

A leak test may be carried out afterwards to check the bunging process and the seal inside the plug for reliable closure.

Seal of trust

The sealing cap as original plug is an important factor and a quality feature. For this sealing process, Feige FILLING has developed a special sealing tool. To carry out this process, a metal sealing cap is automatically fed to the equipment and the closure is then applied by the automatic machine with the sealing tool. The correct sealing procedure is monitored.

Quality control of the production process

Already for decades, Feige FILLING has assured the clean filling of containers with calibrated accuracy. With the "quality-cam" that is based on a camera system, another tool is now available to you for the quality assurance of filling processes. It optionally supplements the automatic pallet filler and in addition to the high degree of availability of the equipment also offers a 100% monitoring of the entire production process.

Torque monitoring of the screw caps

The correct and secure bunging of drums is one of the most important topics when it comes to automatic filling. The FEIGE torque monitoring system checks the specified container or plug-dependent target torques. In order to do so, the torque achieved during the bunging procedure is continuously determined by a force sensor and monitored by the control system.

Evaluating the measurement curve makes it possible to reliably determine any faults such as missing bunghole seal or plugs getting wedged. The data thus determined can be fed back to a PCS (production control system) for statistical evaluation. In case of a fault, a drum that has not been closed according to the specifications can be rejected.

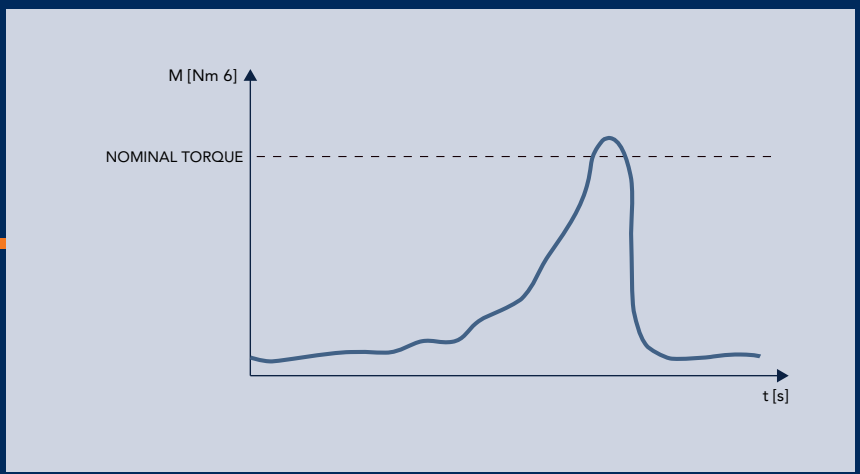
Sealing

Bunging

Torque monitoring

FULLY AUTOMATIC PALLET FILLING TECHNOLOGY

Torque monitoring



INVESTMENT SECURITY AND SUSTAINABILITY

You want investment security and sustainability for your filling equipment? Then you have found the right partner with Feige FILLING. From the start, our strategy aims at sustainability. We advocate lasting values – for ourselves just as much as for our customers.

This is why we constantly keep developing ourselves and our products. The fully automatic pallet filling systems are innovative and sustainable. With this equipment you create the requirements for meeting the demands of your customers. And with the individual extensions you are at any time ready to face the requirements of the future.

Clean

- Level controlled ascent
- Drip scoop
- Drip extraction
- Cleaning station
- Drum holding device
- Overflow protection
- Collecting basin

Flexible

- Valve heating
- Filling valve principle and geometry
- Base height adjustment
- Product hose
- Product hose suspension
- Valve rack
- Valve encoding

FULLY AUTOMATIC PALLET FILLING

Safe

- Reduced fill start
- Inerting
- Earthing
- Pressure surges reduction
- Gas hood
- Overpressure bunging station
- Nitrogen blanketing
- Leakage test
- Protective cabin
- Bunghole extraction

Efficient

- Touch panel
- Fine fill via product file
- Roller conveyor on scale
- Roller conveyor in the in-feed and out-feed area
- Manual bunging station
- Manual bunging and sealing station
- Template

SAFETY AND COST EFFECTIVENESS FOR YOUR EQUIPMENT

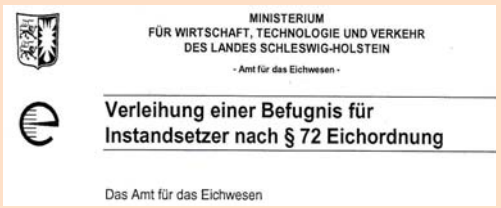
Resort to a competent and friendly service team to ensure that the reliability and precision of your Feige FILLING system are retained at all times.

Your partner for all circumstances

You are at the centre of all our considerations! We will support you as a partner at any time. An individual service package covers your requirements from straight-forward service intervals to a complete "no care" package.
Make use of our know-how, our consulting skills and our experience to keep your equipment's availability at the highest level.

Whether hotline, teleservice, training, calibration, equipment inspection and maintenance, troubleshooting, spare part service or equipment extension and optimisation, committed and imaginative employees will offer you efficient and individual solutions combined with the know-how of experienced specialists.
We will take good care of your equipment!

24-hour hotline
Phone: +49 (0) 4531 - 8909-222
E-mail: hotline@FEIGE.com


MINISTERIUM
FÜR WIRTSCHAFT, TECHNOLOGIE UND VERKEHR
DES LANDES SCHLESWIG-HOLSTEIN
- Amt für das Eichwesen -

Verleihung einer Befugnis für Instandsetzer nach § 72 Eichordnung

Das Amt für das Eichwesen

Teleservice
Dial-up access to your equipment control system via modem or Internet connection for trouble-shooting and diagnosis.

Equipment inspection
Detailed status report for your equipment with function test.

Equipment maintenance
Any measures to retain the required condition of your equipment with logging.

Spare part service
Prompt and optimum supply of your equipment with any wear and spare parts required.

FEIGE FILLING SERVICE CENTER

Training
Certified training courses on your own equipment or at our plant.

Equipment optimisation
Adaptation and/or extension of your equipment to new requirements in your company.

Equipment testing
Support with recurring tests in spect of equipment safety and with calibration.

HAVER & BOECKER OHG
Carl-Haver-Platz 3
59302 Oelde, Germany
Tel: +49 2522 30-0
Fax: +49 2522 30-403
E-Mail: haver@haverboecker.com
www.haverboecker.com

Sommer GmbH & Co. KG
Burgunder Str. 35
40549 Düsseldorf, Germany
Tel: +49 211 230 82 02
Fax: +49 211 230 82 36
E-Mail: info@sommer-anlagenbau.com
www.sommer-anlagenbau.com

Feige FILLING GmbH
Rögen 6a, Gewerbegebiet West
23843 Bad Oldesloe, Germany
Tel: +49 4531 8909-0
Fax: +49 4531 87296
E-Mail: info@feige.com
www.feige.com

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