

F_{EC40}

NEXT
GENERATION
CAPSULE
FILLING
TECHNOLOGY



FETTE
COMPACTING
be efficient

WHAT DO YOU EXPECT?

What do you expect from a next generation capsule filling machine? How productive should it be? How efficient? How much time would you allow for changeover and cleaning? Which features are critical for your operators?

These are the questions Fette Compacting asked when developing the FEC40. The end result is an impressive production output of up to 400,000 capsules an hour.

But the output volume is not the only advantage of the FEC40. It also features a revolutionary technical concept, very short product changeover times and intuitive operation. The FEC40 therefore guarantees a smooth and highly-efficient production process.

In addition to this, the FEC40 is complemented seamlessly by the smaller FEC20. The same format parts are used in both capsule filling machines, and can be interchanged seamlessly from one machine to the other.

And that's not all. Expect more!



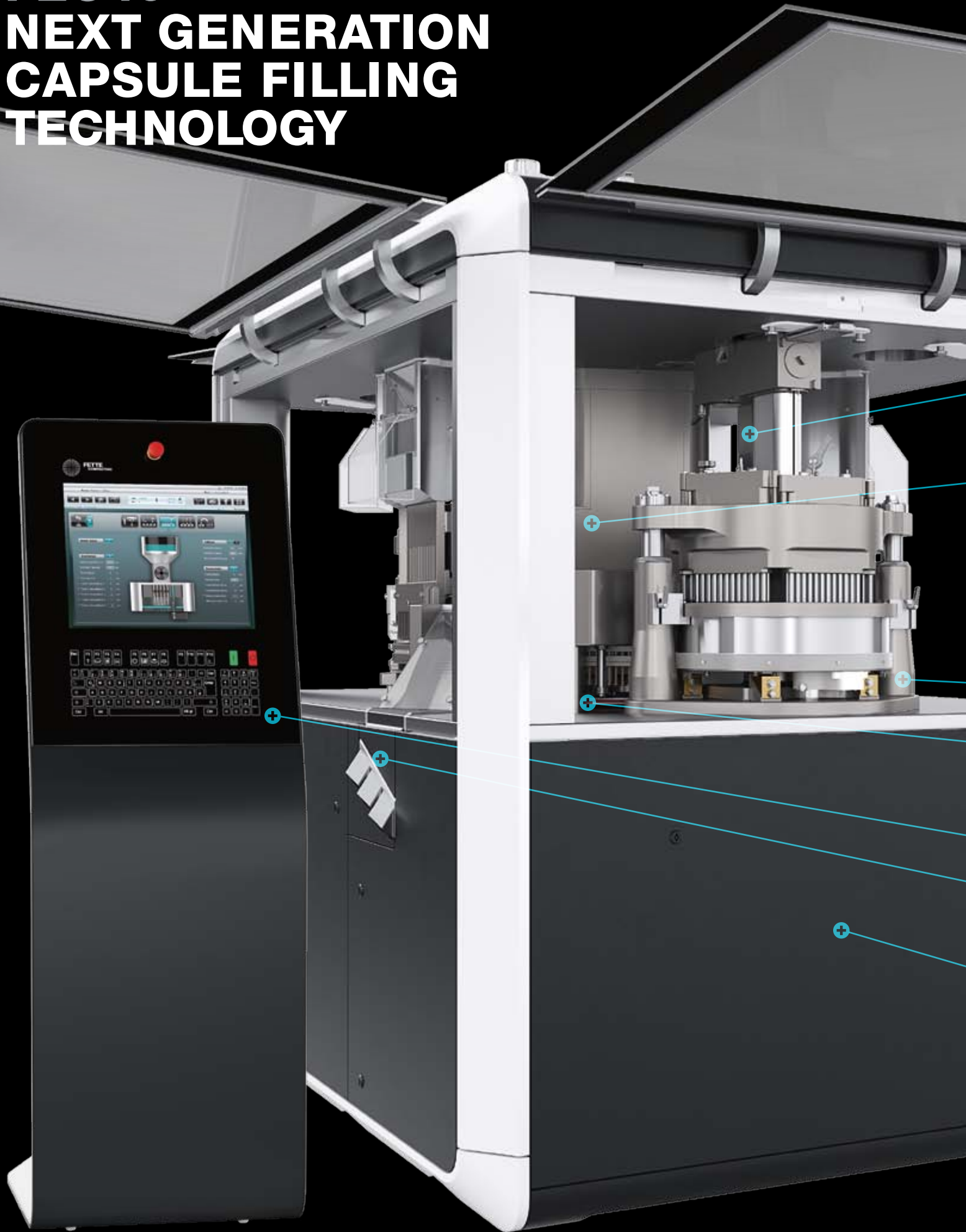
TECHNOLOGY stands for everything we offer in production technology – from tablet presses and capsule filling machines through Process Equipment to tableting tools and format parts.

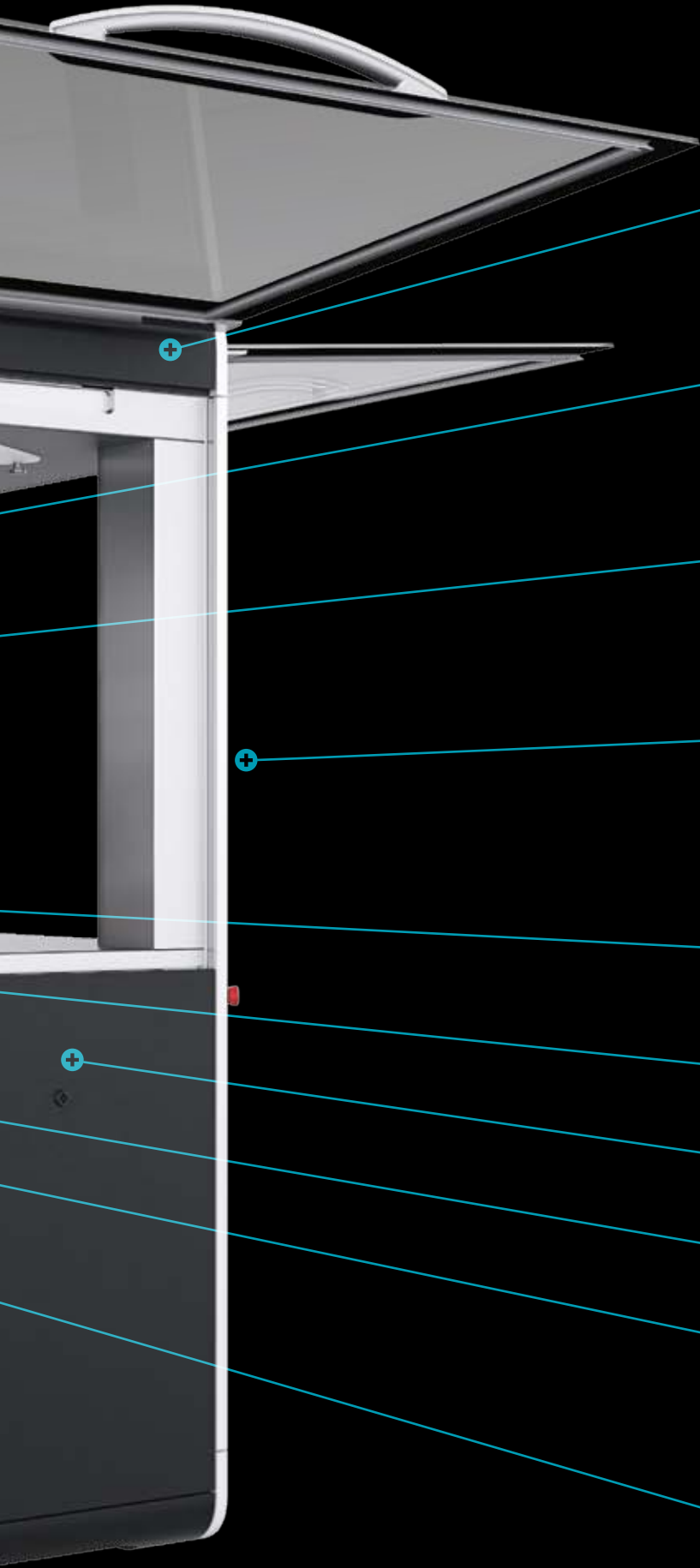
SERVICE covers all the services related to machines, Process Equipment and installations such as spare parts supply, plant modernization and technical field service department.

COMPETENCE is the overarching idea behind all our process-related services. This includes training, product trials, application and Performance Consulting as well as engineering.



FEC40 NEXT GENERATION CAPSULE FILLING TECHNOLOGY





360° accessibility

Exchangeable filling stations

Innovative drive concept

Production rate up to
400,000 capsules/h

TRI.EASY design

Flexible set-up

Integrated switch cabinet

Intuitive user interface

Capsule discharge

Integrated cooling and
vacuum system

EXPECT MORE! DOUBLE OUTPUT

DUPLEX CONCEPT

Thanks to the Duplex Concept and the tried-and-tested design of the FEC40, production can be more than doubled in existing facilities. Furthermore, this combination of compactness and productivity also reduces production costs by up to 30 percent.

400,000 capsules an hour – outstanding! How does it work? Using the Duplex Concept offered by Fette Compacting. Years of experience in the development of double-rotary tablet presses were applied to capsule filling. Some process steps which were previously separate have now been merged enabling the stations thus released to be used to arrange a dual capsule filling process inside the machine. This doubles the output.

NB: The filling process fully complies with the individual production standards already established. Accordingly, all tried-and-tested process parameters can be applied directly for capsule filling and even further optimized as required. The integrated systems for capsule flow control, capsule separation control and capsule closing control ensure smooth operation.

The FEC40 can be used for powder or pellets. The user can therefore choose between tamping pin and pellet stations. A simple rapid changeover system allows the stations to be changed without difficulty. This enables the user to swiftly change between products as well as between dosing methods.





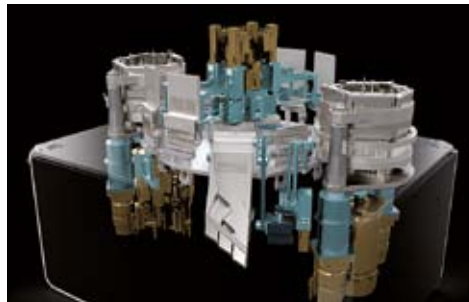
EXPECT MORE! FLEXIBLE SET-UP

The FEC40 is the first capsule filling machine that is fully driven by servo and torque motors. Each process step is monitored and controlled separately. This increases flexibility and process control.

An innovative drive and control concept ensures increased productivity: using servo and torque motors, process steps which have been previously coupled can now be set independently, enabling significant reductions in terms of overall processing times – entirely without any compromises in terms of quality.

Furthermore, users can individually adapt the strokes of the tamping pin station and closing station during ongoing production, entirely in line with the respective products or capsule sizes.

The machine is configured using product recipes: it automatically selects the desired settings without the need for manual mechanical intervention. This improves productivity, yield, quality and safety.



EXPECT MORE!

BEST IN BATCH-TO-BATCH

The FEC40 consistently features the three dimensions of TRI.EASY design by Fette Compacting. After all, it can only be efficient if the technology is equally simple during operation, conversion and maintenance.

One unique feature of the FEC40 is the tamping pin station exchange. Like the pellet station, the tamping pin stations can be dismantled and cleaned outside the machine.

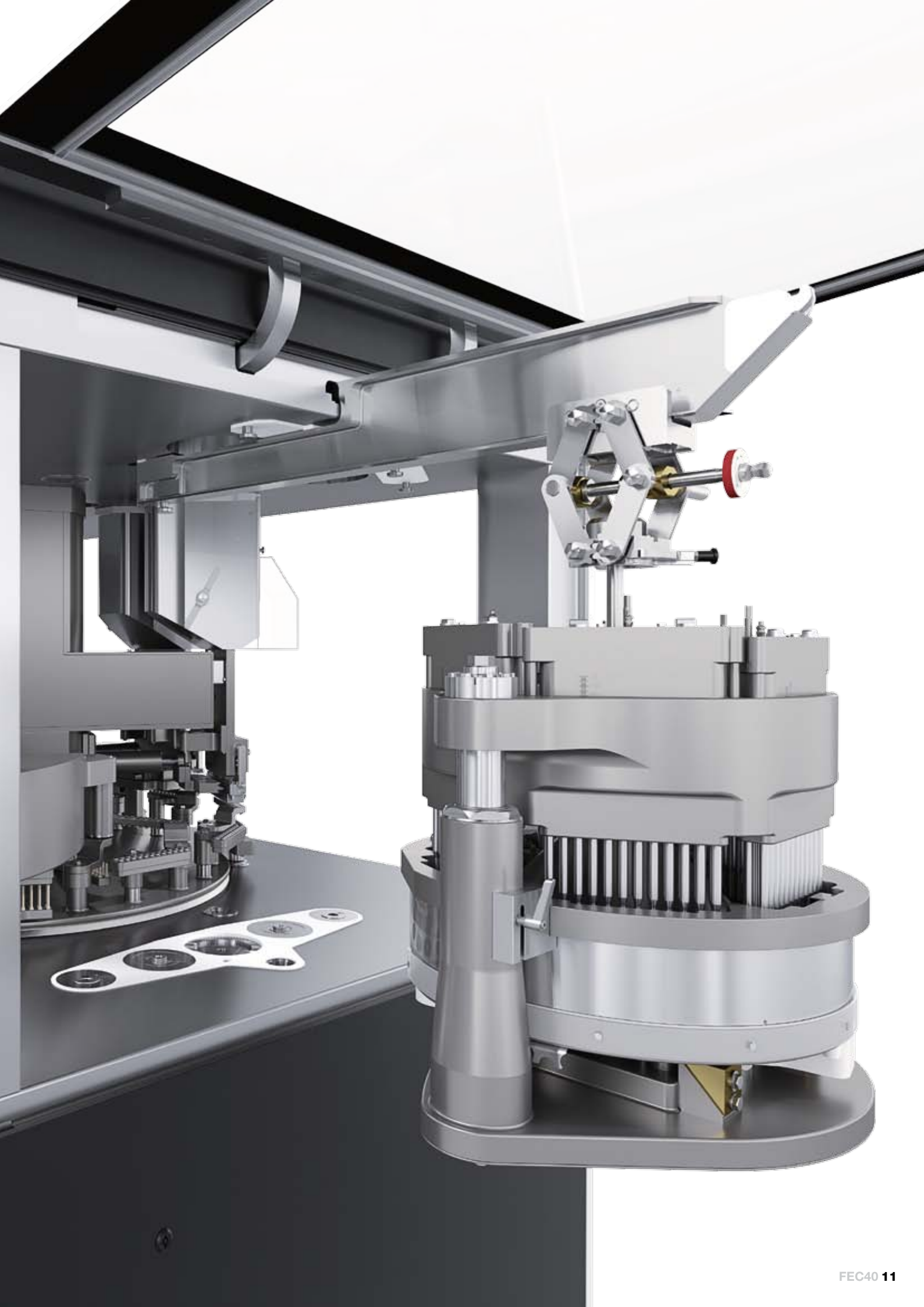
The result: far shorter conversion and cleaning times. When additional pre-fitted filling stations are used, the FEC40 is ready for production within an extremely short period of time.

The FEC40 has been consistently designed to be user-friendly: the specially-developed ergonomic station removal system enables the operator to install and uninstall the tamping pin stations both swiftly and safely. And all of the window flaps on the FEC40 can be opened fully even when process equipment is connected, ensuring access from all sides.

The capsule magazines are positioned at the central column for easy access and visibility on the part of the operator. The process area is separate from the drive area as well as being free of cables and tubes. The shape and materials of the entire process area interior have been designed in such a way that they are easy to clean. This also applies for the enclosure.

An optional RFID system for detecting the appropriate format parts ensures maximum safety when converting the FEC40.





EXPECT MORE! INTUITIVE USE

The FEC40 is a sophisticated technical system. Nevertheless, it is easy and convenient to operate thanks to the innovative Human-Machine Interface (HMI). User guidance is graphic and intuitive. It provides users with a continuous, comprehensive overview of all relevant process and quality parameters.

The FEC40 is operated intuitively via a 19" touchscreen and an integrated keypad. Its user interface follows the tried-and-tested logic of the tablet presses in the FE Series offered by Fette Compacting.

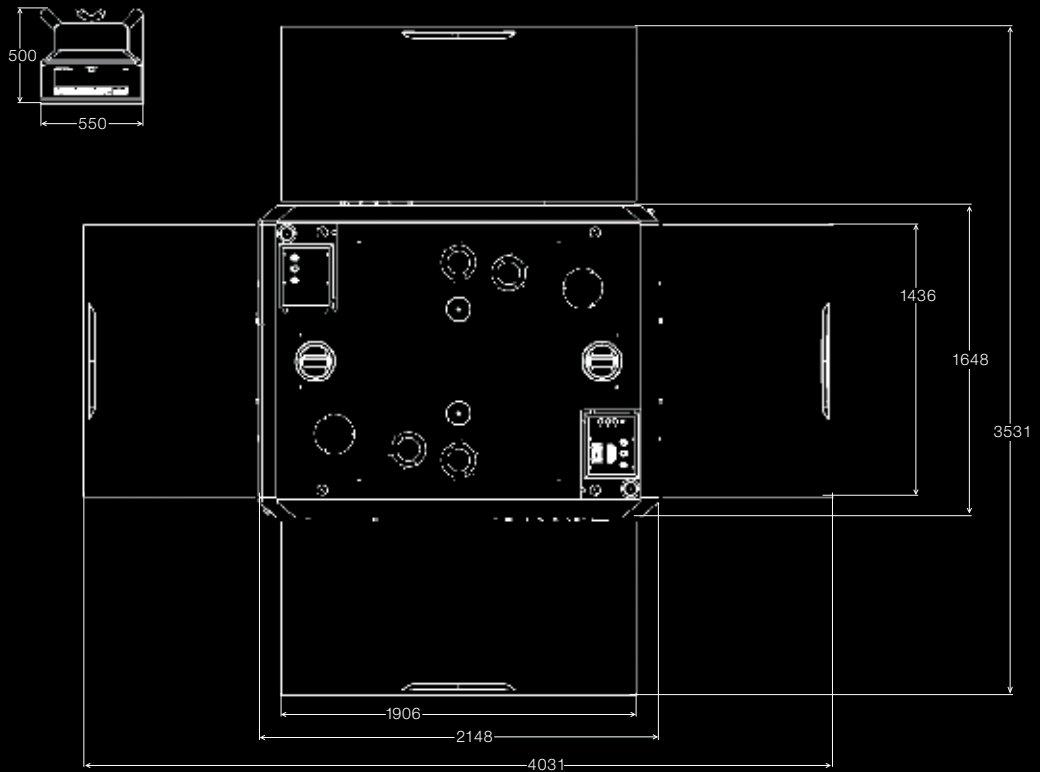
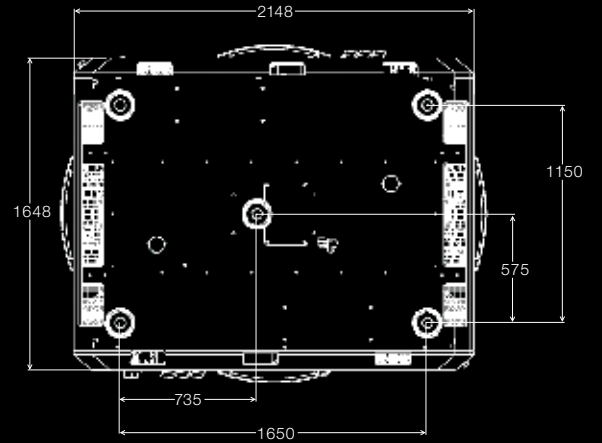
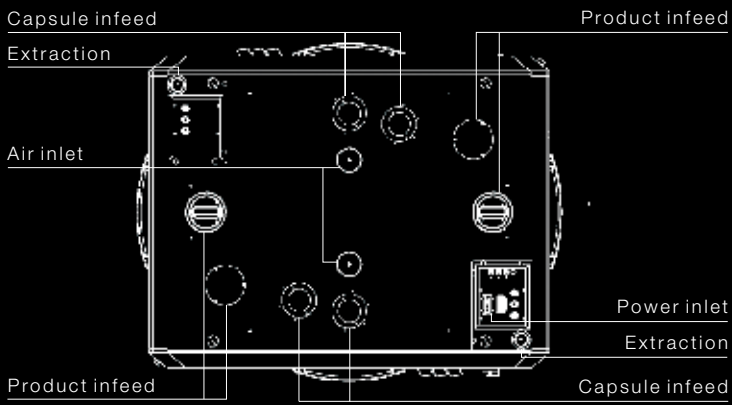
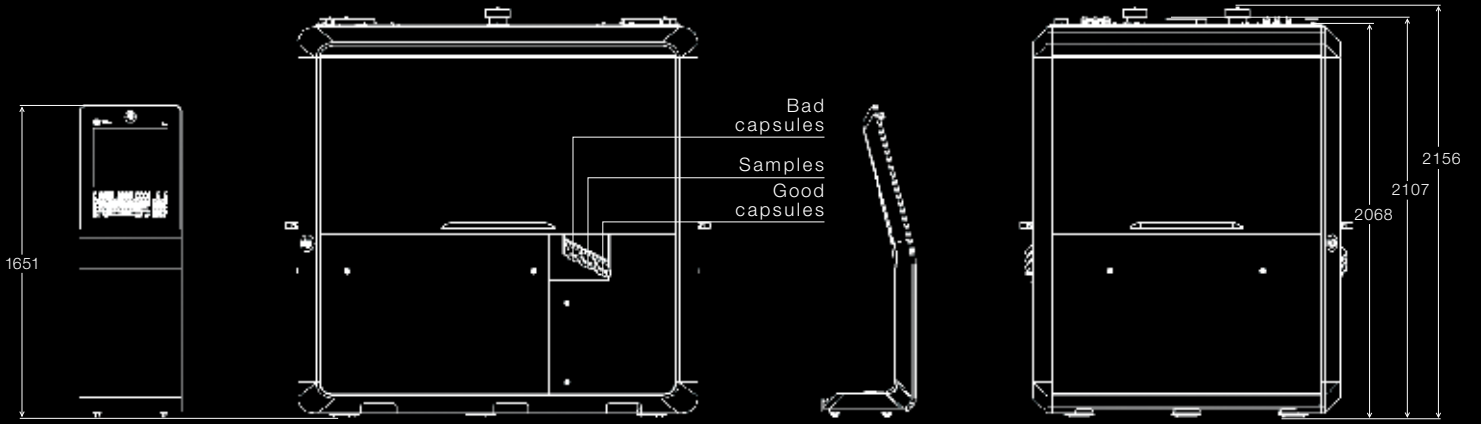
All formulations, including the process parameters, are saved in the FEC40 database, and can be accessed at any time. The formulation check automatically examines the entries for consistency.

During production, the system continuously measures the filling levels of the capsule and product tanks and processes them in the control unit. The corresponding user information is visualized on the HMI. All batches are also monitored, logged and saved in full. Extensive rights management is available for optimal production control. Individualized authorization allows specific users access to only certain functions. Using the stored event logs, it is also possible to evaluate the individual production steps.

Conversion and maintenance must be as easy as possible. To this aim, the HMI features interactive user instructions offering the user step-by-step graphic representations of all of the necessary workflows. Users can also specify their own Standard Operating Procedures (SOP).

The FEC40 is configured so that it can be connected to the Fette Compacting service portal, providing users with unique round-the-clock support via the secure, TÜV-certified platform.



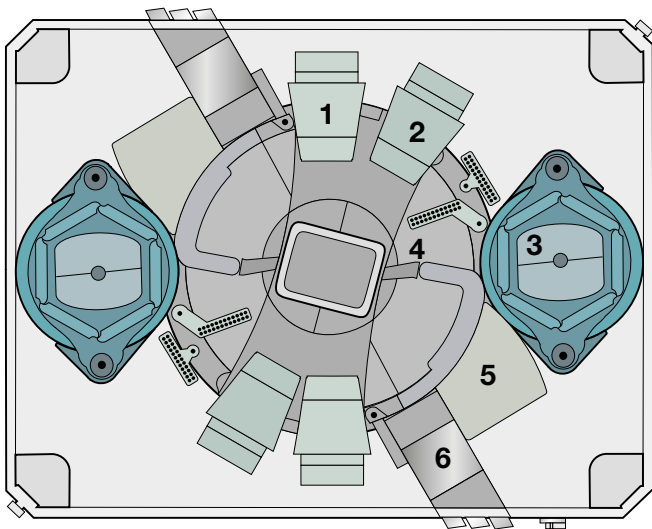


EXPECT MORE!

TECHNICAL DATA

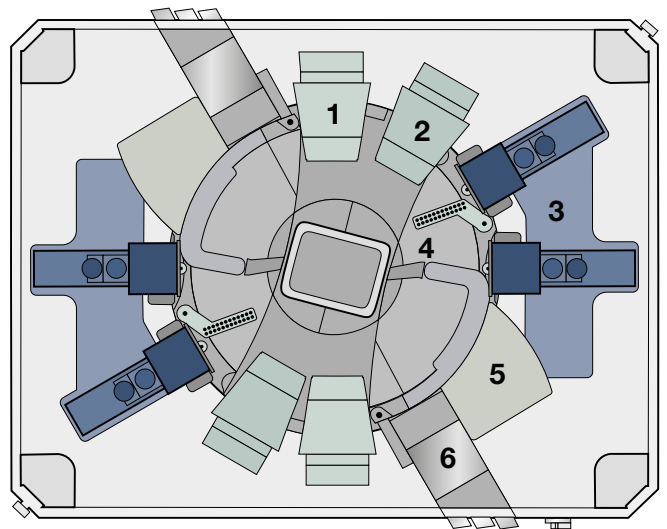
Type	Duplex Concept	
Cycles	min ⁻¹	max. 140
Capsule output	units/h	max. 400,000
Number of stations	12	
Number of capsules per holder	24	
Capsule sizes	000 to 5	
Capsule types	HGK and HPMC*	
Dosing systems	Tamping pin, pellet**	
Dimensions	mm	2,148 × 1,648 × 2,068
Weight	kg	approx. 4,500
Electrical supply parameters	3 phases + PE, 400–480 V, frequency 50/60 Hz	

*) other types upon request
 **) up to two types of pellets



Configuration with two tamping pin stations

- 1 Capsule orientation
- 2 Capsule orientation/opening and check
- 3 Tamping pin station
- 4 Discharge of non-separated capsules
- 5 Capsule closing and check
- 6 Capsule discharge, holder cleaning



Configuration with four pellet stations

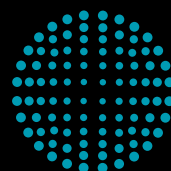
- 1 Capsule orientation
- 2 Capsule orientation/opening and check
- 3 Pellet stations**
- 4 Discharge of non-separated capsules
- 5 Capsule closing and check
- 6 Capsule discharge, holder cleaning

© by Fette Compacting GmbH

This publication may not be reprinted in whole or part without our express permission. All rights reserved. No rights may be derived from any errors in content or from typographical or typesetting errors. Diagrams, features and dimensions represent the current status on the date of issue of this leaflet. We reserve the right to make technical changes. The visual appearance of the products may not necessarily correspond to the actual appearance in all cases or in every detail.

Fette Compacting GmbH
Grabauer Strasse 24
21493 Schwarzenbek
Germany
Phone +49 4151 12-0
Fax +49 4151 3797
capsule@fette-compacting.com

www.fette-compacting.com



**FETTE
COMPACTING**
be efficient