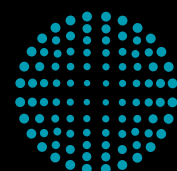
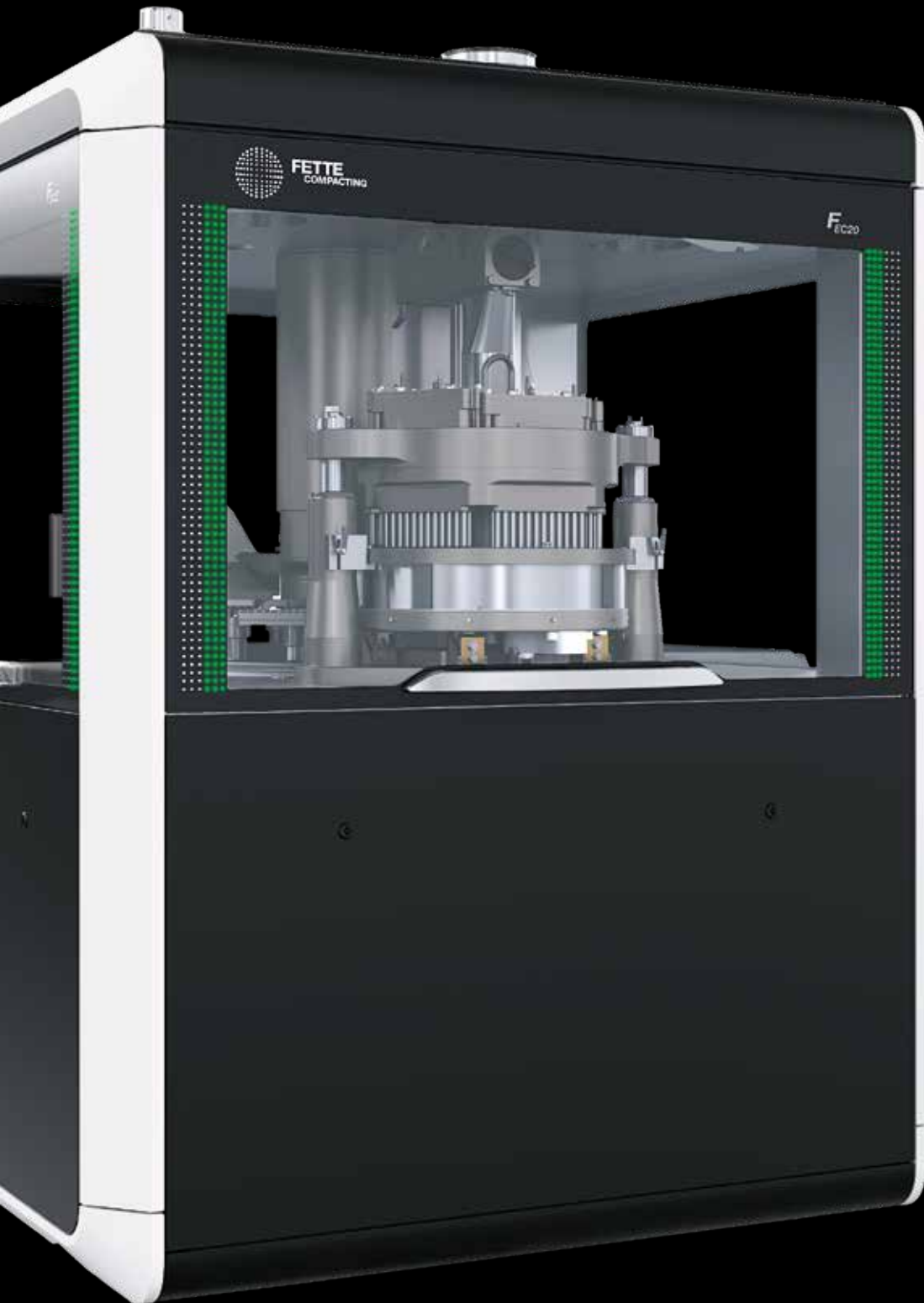


# F<sub>EC20</sub>

NEXT  
GENERATION  
CAPSULE  
FILLING  
TECHNOLOGY



**FETTE  
COMPACTING**  
be efficient

# WHAT DO YOU EXPECT?

What makes a capsule filling machine the best of its kind? Super-fast product changeover? Intuitive operation? Absolute control of each and every production step? That is exactly what Fette Compacting offers with the FEC20, as well as other innovations: Expect more!

The revolutionary drive concept featuring servo and torque motors, the graphic Human-Machine Interface for effortless control and the user-friendly configuration system for tamping pin and pellet stations: all this makes the FEC20 a state-of-the art capsule filling machine in its performance class at up to 200,000 capsules per hour.

For the FEC20, Fette Compacting has adapted and further developed the technical innovations of the larger FEC40 in order to make it usable for medium-sized batches. The focus here was on efficiency and ease of use.

The quick and easy convertibility of the FEC20 reduces waiting times and increases productivity. This makes it especially appealing to manufacturers who process powder and pellets.

Benefit of combined use: from a technical point of view, the FEC20 and FEC40 complement each other perfectly. The same format parts are used in both capsule filling machines, and can be interchanged seamlessly from one machine to the other.



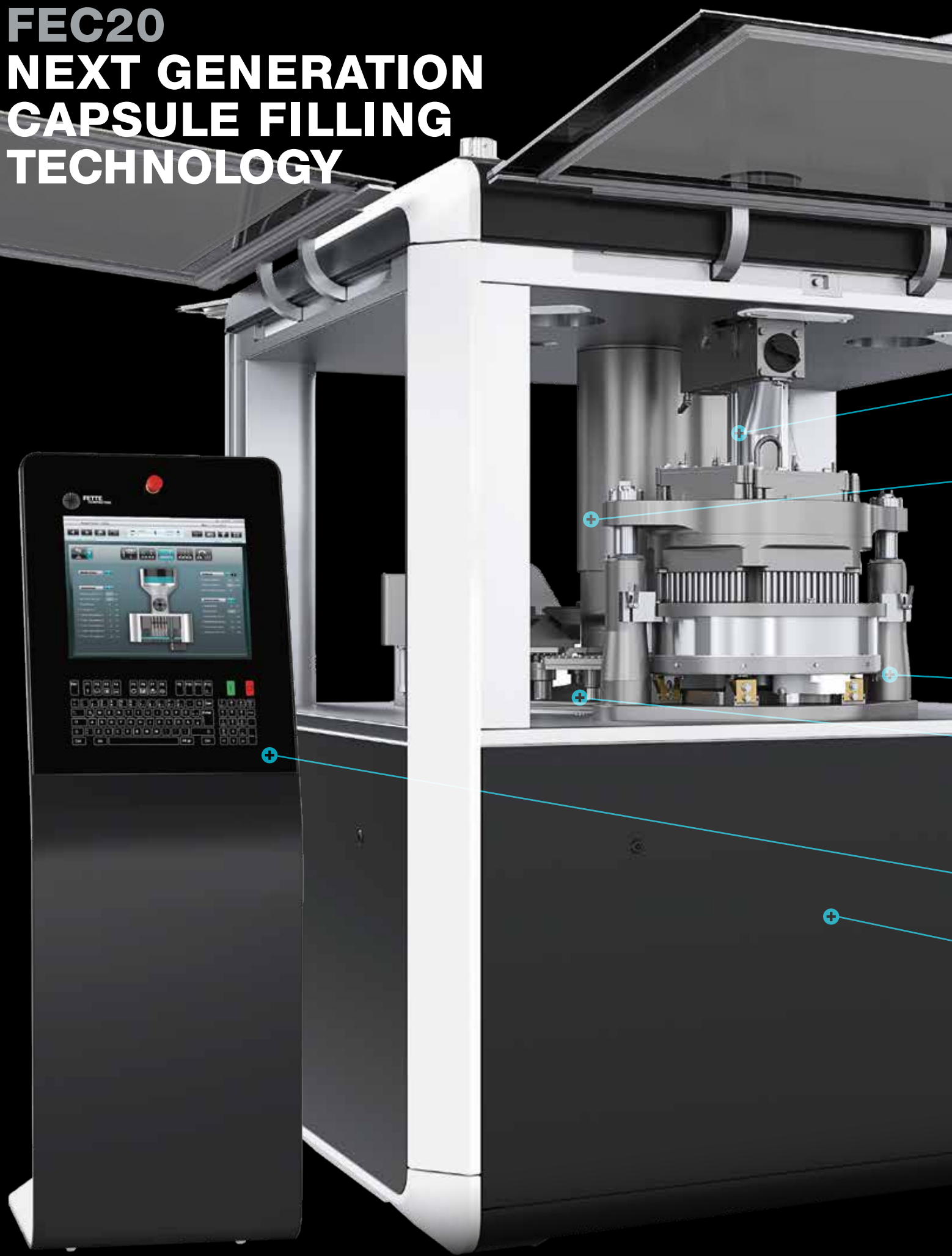
**TECHNOLOGY** stands for everything we offer in production technology – from tablet presses and capsule filling machines through Process Equipment to tableting tools and format parts.

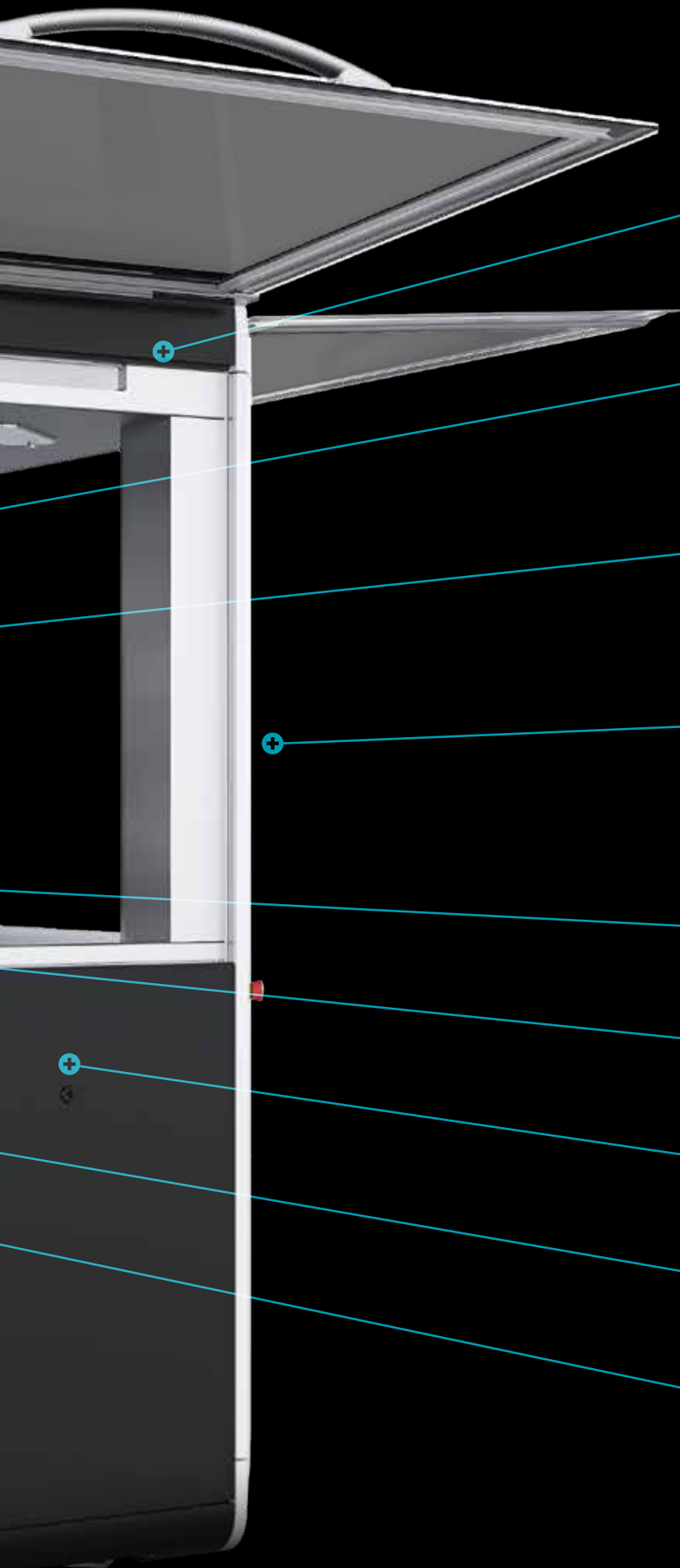
**SERVICE** covers all the services related to machines, Process Equipment and installations such as spare parts supply, plant modernization and technical field service department.

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



# FEC20 NEXT GENERATION CAPSULE FILLING TECHNOLOGY





360° accessibility

Exchangeable filling stations

Innovative drive concept

Production rate up to  
200,000 capsules/h

TRI.EASY-Design

Flexible wet-up

Integrated switch cabinet

Intuitive user interface

Integrated cooling and  
vacuum system

# EXPECT MORE! MORE THAN ONE

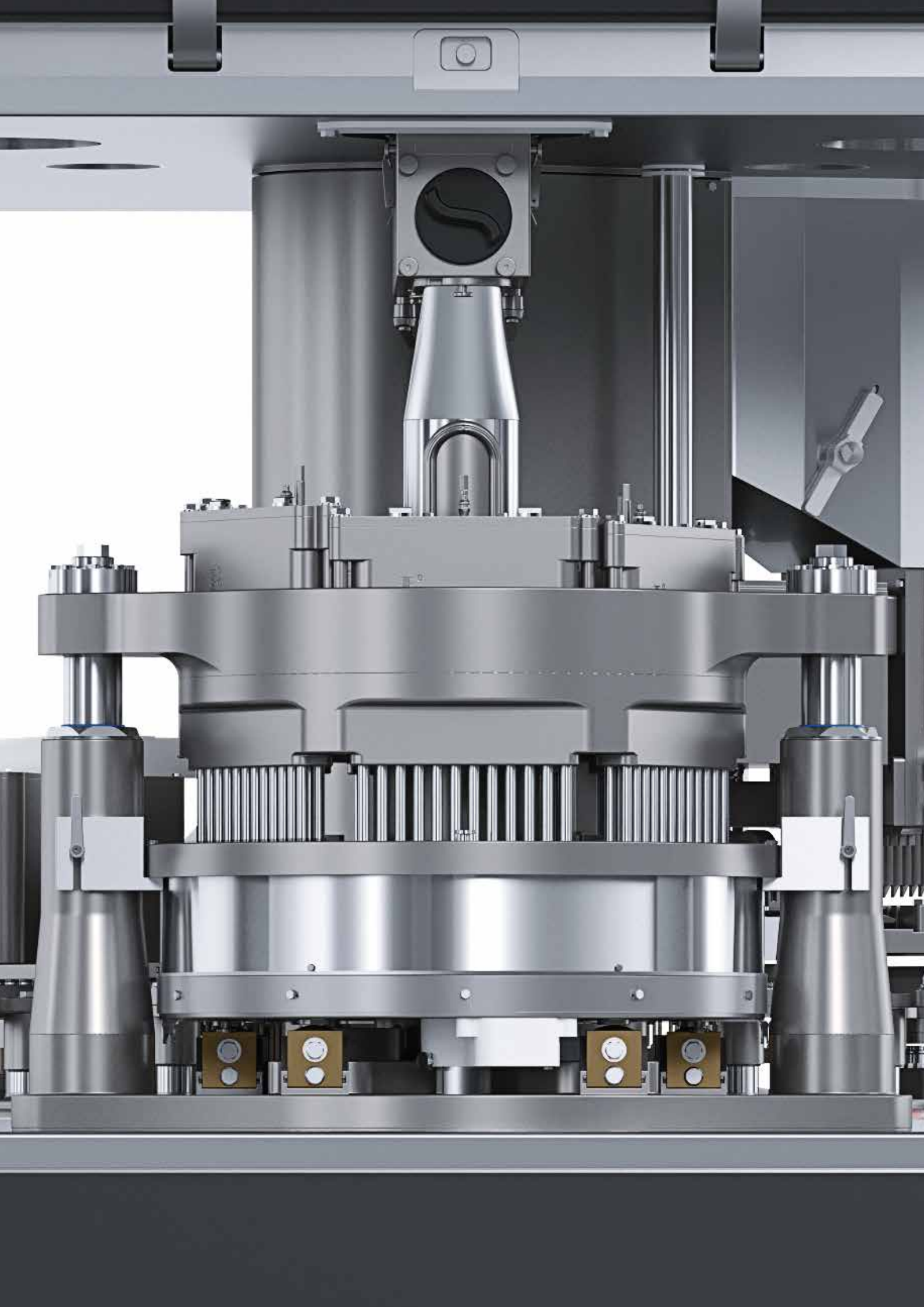
**The FEC20 is a highly-efficient single sided capsule filling machine that Fette Compacting has developed by drawing on decades of experience as a tableting specialist.**

The FEC20 can be used for powder or pellets. The user can therefore choose between tamping pin and pellet stations. A simplified quick 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.

The filling process parallels the individual production standards already established. 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.

Technically, the FEC20 and larger FEC40 are perfectly matched: the same format parts are used in both capsule filling machines. Manufacturers who use both capsule filling machines, can transfer components from one machine to the other without difficulty.







# EXPECT MORE! FLEXIBLE SET-UP

**The FEC20 is fully driven by servo and torque motors. Each process step is monitored and controlled separately. This increases flexibility and process control.**

Using servo and torque motors significantly increases the productivity of the machine. The innovative drive concept makes it possible to decouple process steps that have previously been coupled and to set them independently. This reduces the overall processing time, with no compromise in terms of quality. Servo and torque motors have proven themselves in industrial applications and have demonstrated their reliability for decades.

Machine control allows the user to configure individual movements to the product features during ongoing production. The machine does not need to be stopped in order to do this.

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

**In order to be efficient, the technology, conversion and maintenance of a capsule filling machine must be as simple as possible. This is why the FEC20 consistently features the three dimensions of the TRI.EASY design by Fette Compacting.**

The FEC20 is fully optimized to be user-friendly. The user experiences this first-hand with the tamping pin and pellet stations. Thanks to the ergonomic assembly system, the stations can be quickly removed, dismantled, and cleaned outside the machine. This reduces the conversion and cleaning times and ensures that the FEC20 is soon fully operational again. If operators also use additional pre-fitted filling stations, then the FEC20 is ready for production within an extremely short period of time.

An optional RFID system for detecting the appropriate format parts ensures maximum safety when converting the FEC20.

The tried-and-tested TRI.EASY design by Fette Compacting provides 360° access to the machine interior. And all of the window flaps on the machine can be opened fully even when process equipment is connected. This allows the operator to access all stations for optimal cleaning of the interior. Cleaning is made easier thanks to the design and materials of the process chamber's interior components.

The capsule magazines of the FEC20 are positioned at the central column for easy access and visibility. The process area is completely separate from the drive area as well as being free of cables and tubes.



# EXPECT MORE! INTUITIVE USE

**The FEC20 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 FEC20 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.

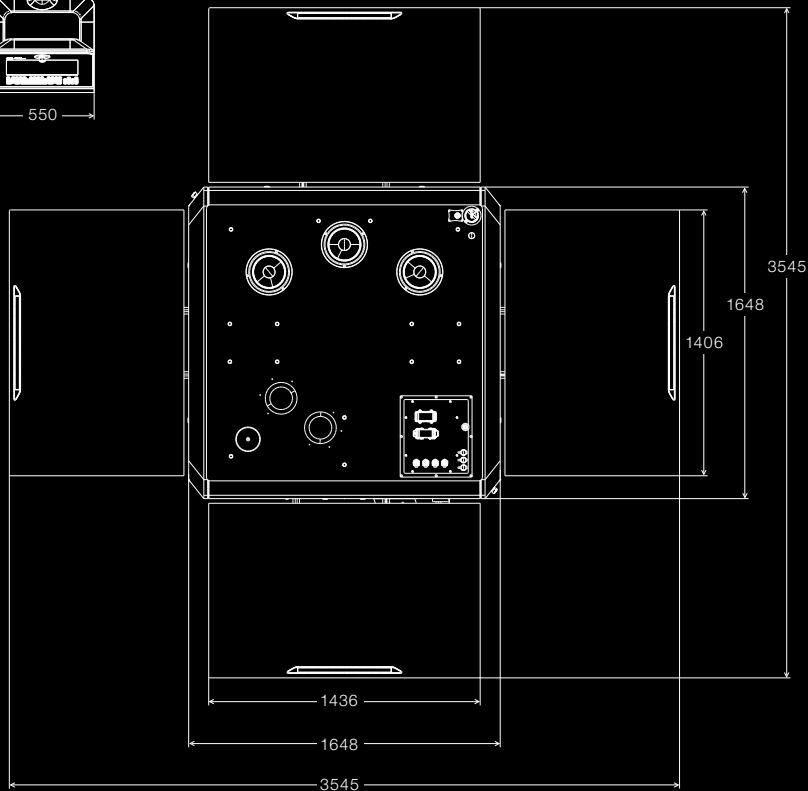
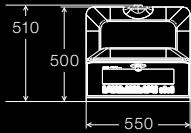
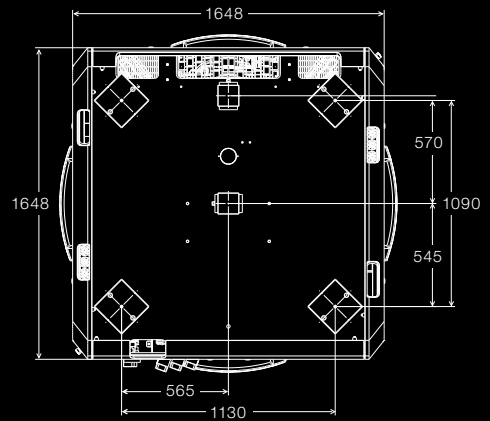
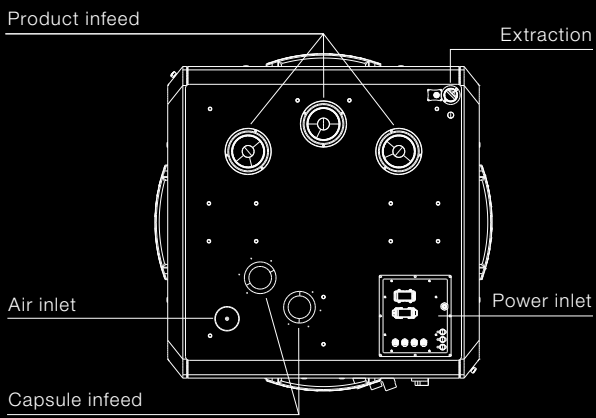
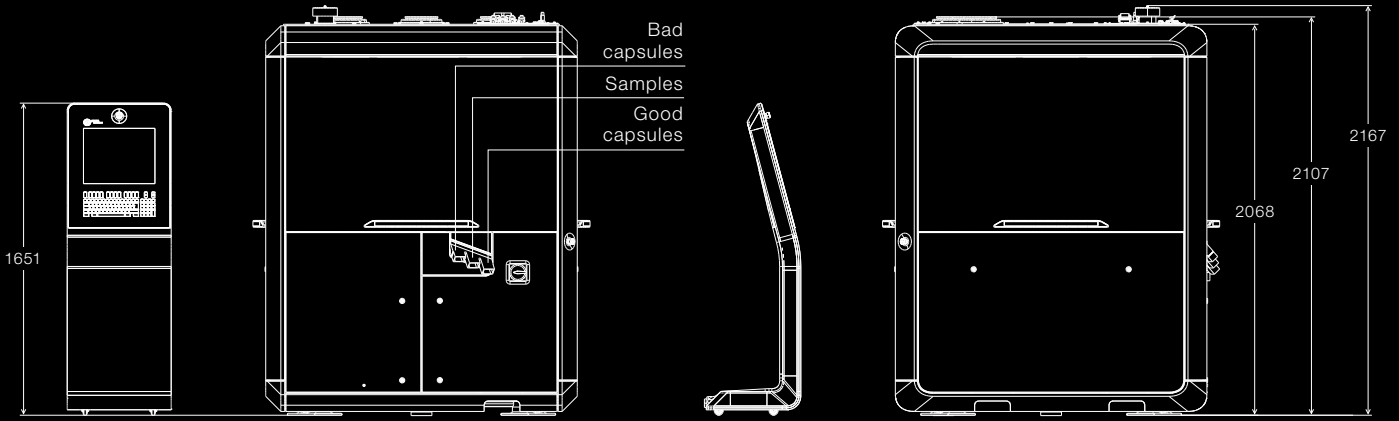
All formulations, including the process parameters, are saved in the FEC20 database, and can be accessed at any time. The formulation check automatically examines the entries for consistency.

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 displayed 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 only to 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 step-by-step graphic representations of all of the necessary workflows. Users can also specify their own Standard Operating Procedures (SOP).

The FEC20 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!

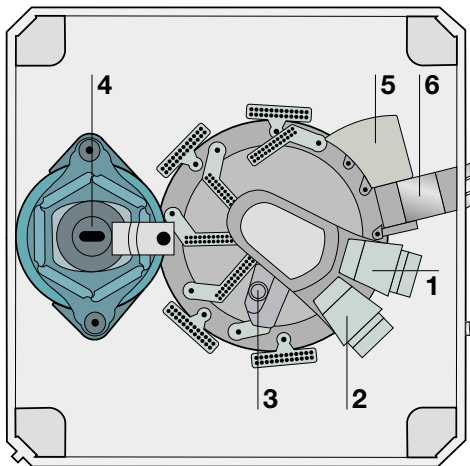
## TECHNICAL DATA

<b>Type</b>	Single sided capsule filling machine	
<b>Cycles</b>	min <sup>-1</sup>	max. 140
<b>Capsule output</b>	units/h	max. 200,000
<b>Number of stations</b>	9	
<b>Number of capsules per holder</b>	24	
<b>Capsule sizes</b>	000 to 5	
<b>Capsule types</b>	HGK and HPMC*	
<b>Dosing systems</b>	Tamping pin, pellet**	
<b>Dimensions</b>	mm	1,648 × 1,648 × 2,068
<b>Weight</b>	kg	approx. 3,500
<b>Electrical supply parameters</b>	3 phases + PE, 400–480 V, frequency 50/60 Hz	

\*) other types upon request

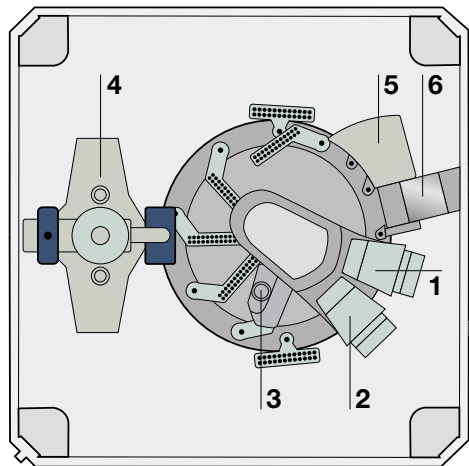
\*\*) up to max. three types of pellets

### Configuration with one tamping pin station and up to three pellet stations



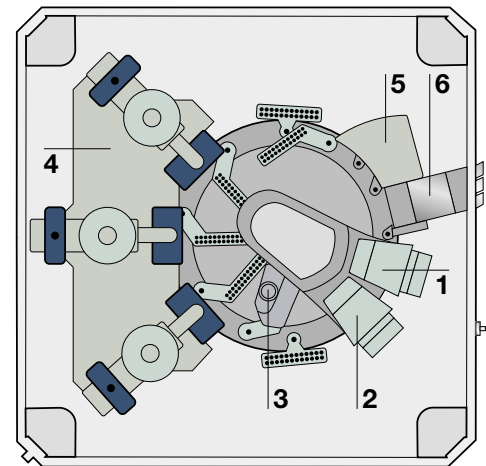
#### Configuration with one tamping pin station

- 1 Capsule orientation
- 2 Capsule orientation/  
opening and verification
- 3 Evacuation of non-separated capsules
- 4 Tamping pin station
- 5 Capsule closure and verification
- 6 Capsule outlet, segment cleaning



#### Configuration with one pellet station

- 1 Capsule orientation
- 2 Capsule orientation/  
opening and verification
- 3 Evacuation of non-separated capsules
- 4 Pellet station
- 5 Capsule closure and verification
- 6 Capsule outlet, segment cleaning



#### Configuration with three pellet stations

- 1 Capsule orientation
- 2 Capsule orientation/  
opening and verification
- 3 Evacuation of non-separated capsules
- 4 Pellet stations
- 5 Capsule closure and verification
- 6 Capsule outlet, segment cleaning

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**Fette Compacting GmbH**

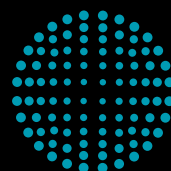
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