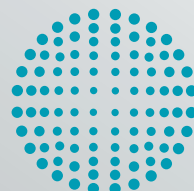




efficiency

F_{10i}

Flexible and dust-tight
next-generation tablet production



FETTE
COMPACTING
be efficient

“Digital-Ready”: The next level of efficiency

The i Series from Fette Compacting has stood for ultra-efficient and flexible tablet production for decades. The new i Series now offers even more options thanks to numerous innovations. Clean, system compatible and “digital-ready” – from the dust-proof equipment to the connection to the “Pharmaceutical production 4.0”. The i Series is the next-generation of tablet production.

Technological platform

Fette Compacting has collaborated with its customers to develop the new generation as a technological platform on which the electrical and mechanical components are based. The special feature is that the components of relevance for validation remain largely unchanged. Accordingly, the i Series retains all features which make it so valuable for customers. In combination with the machine, efficiency¹ means that the user continues to retain everything that makes his production so successful today – but with even greater efficiency and more possibilities.

Flexible single rotary press

The F10i is the first machine in the new i Series: an efficient single rotary press for small batches. Producers can swiftly adapt the tablet press to various requirements, with or without containment. Flexibility and versatility are ensured by a handling arm in particular which supports the operator when changing the turrets, and a mechanical manual turret clamping system. This makes the F10i perfectly equipped for future production requirements.



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.

efficiency

The most important features
at a glance:

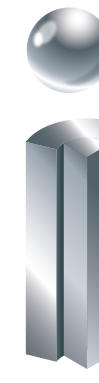


Innovative

Containment Guard –
dust-tight system design

RFID operator login

TRI.EASY Multi-flexible
dust-tight tablet chute



Integrative

Cross-generation
system compatibility

SmartInterface
by Fette Compacting

New HMI software

Uniform interface for
process equipment

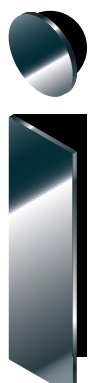


Intuitive

Fast and intuitive
cleaning

HMI software
with operating support

Assistance systems
for easy operation



Intelligent

SmartInterface
by Fette Compacting

location-independent machine
monitoring

Process and
production reliability
thanks to RFID

Recipe-specific,
reproducible
hardware settings



Clean production: from dust-tight to containment
Containment is becoming a core issue for production due to the increased use of new pharmaceuticals, including Active Pharmaceutical Ingredients (API). “Dust-tight” will become the minimum standard for pharmaceutical machines for the foreseeable future. The F10i already features consistent dust-tight design even in its most standard version. For all users who require containment, the Containment Guard-option provides a suitable solution.



Containment Guard* – dust-tight system design

50% less shrouding parts, with a reduction of 70% surfaces to be cleaned
Most efficient and fastest cleaning ever

Savings in costs due to significantly shorter cleaning cycles and machine is ready for production in far less time.

Cleaning effort associated with production areas is considerably reduced by dust-tight connecting elements between the machine and process equipment

Maximum operator protection

TRI.EASY – High-performance, multi-format tablet chute with dust-tight design
Wide range of applications from mini-tabs to effervescent tablets

Extremely compact machine with small switching cabinet
Also suitable for small rooms

* The containment package is required for active substances.

RFID operator login

Operator login by using RFID technology
Easy access for faster processes and machine operation

Time savings as no manual entries are required

Maximum security in the management of the operators
Login for operating and service technicians for various tasks

Various operating authorizations can be defined
21 CFR Part 11 compliant



TRI.EASY Multi-flexible dust-tight tablet chute

Compact housing
Efficient cleaning of components

Safe and extremely fast sorting of bad tablets and sample tablets
Optimal, fast switching processes without tablets being jammed or destroyed

Poka Yoke principle and geometrical similarity of components
Fail-safe, easy and fast assembly and dismantling

LED status display of track positions
Operating mode is apparent at all times

Safety-oriented track drive system with e-drives and end-position damping
Reliable switching processes with end-position confirmation



System-compatible set-up to IoT and MES

For several years, the i Series has been distinguished by its cross-generation system compatibility. The same applies to the F10i. Practically all products with contact to the system assemblies remain unchanged despite its innovative design. Thanks to the possibility of system integration, the new tablet press can be perfectly integrated in existing production environments. The F10i also features technical connectivity for state-of-the-art production environments, up to “Pharmaceutical production 4.0”.

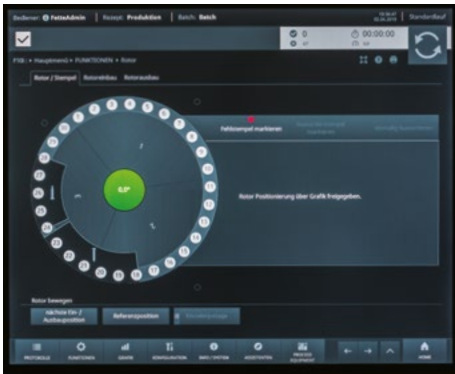


SmartInterface
by Fette Compacting

Machine real-time monitoring

- 24/7 access to data, documentation and machine real-time monitoring by mobile devices (tablet, smartphone, PC etc.)
- Digital value-added function for easier handling and process acceleration
- Key performance indicator (KPI) dashboard
- Individual and simultaneous monitoring of various parameters
- Identical look and feel of the SmartInterface and user interface (Human-Machine Interface, HMI)

- Display of changed process parameters compared to standard settings
- Easy storage of non-executable documents (e.g. SOPs in PDFs, JPGs etc.) on the machine via mobile device
- Instructions / messages can be sent to the machine-HMI
- Automatic detection of process equipment certified by Fette Compacting



Cross-generation system compatibility

A smart interface for the unified process equipment via Ethernet connection

- Automation in one hand and control of all process devices
- Easy monitoring and steering of process equipment

Standard interface for the process equipment

- Fast and easy machine set-up for production





Easy handling with tactile HMI and wizard

An ultra-modern human machine interface (HMI) supports the user in the form of intuitive control, monitoring and documentation of the machine and process-equipment via a terminal with tactile feedback. At the software level, an assistant for workflows (workflow operation wizard) provides support in the safe and error-free implementation of standard operating procedures (SOPs). Intuitive handling of the F10i also includes extremely simplified cleaning processes.

Fast and intuitive cleaning

Optimized design of the components
Intelligent cable management significantly reduces cleaning efforts, and simplifies handling

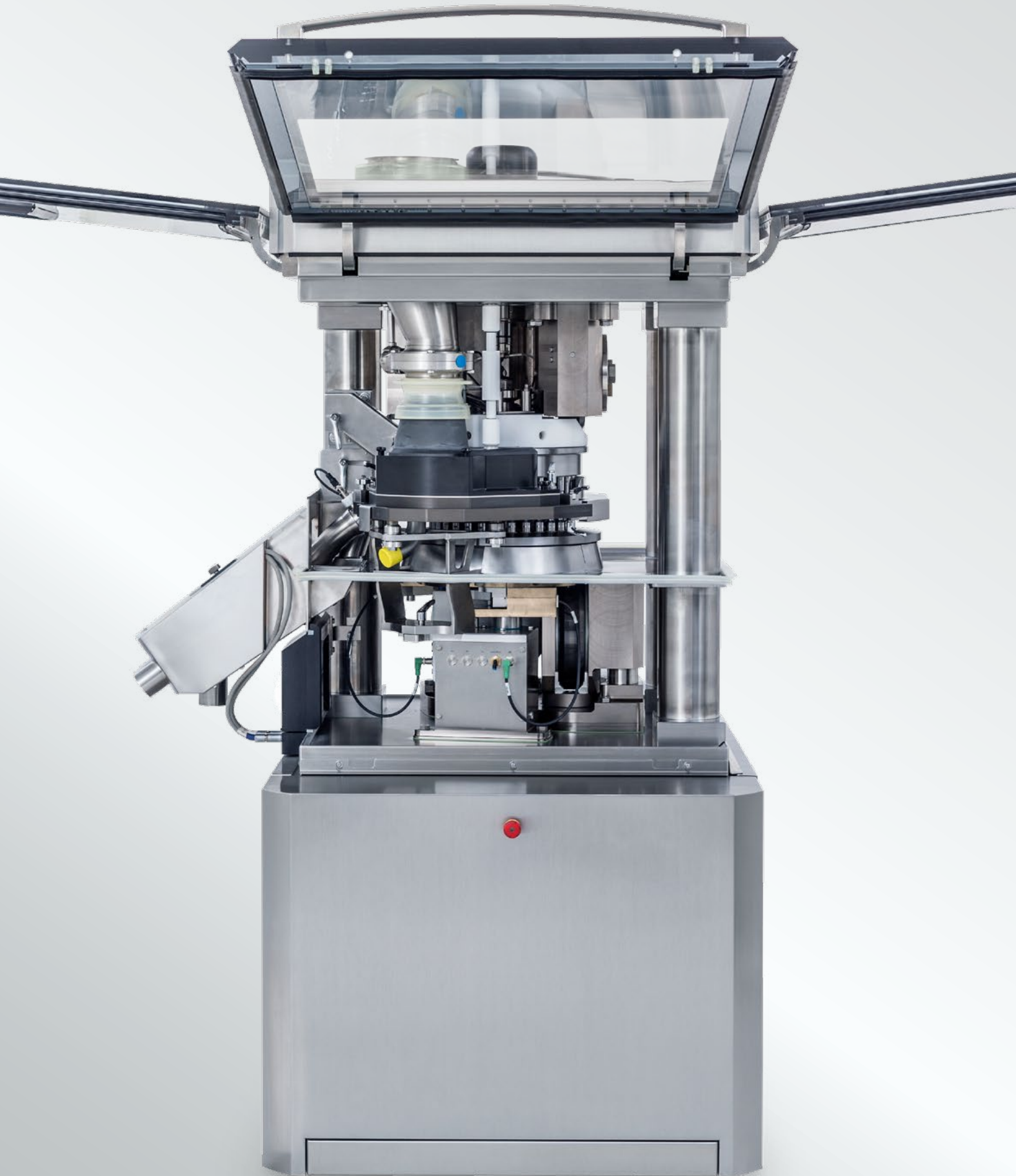
HMI software with operating support

- New 19" "Touch Only" machine operation**
Country-specific keyboard layouts possible
- Unique tactile feedback**
Touch-sensitive keys for start – stop and special functions with feedback for easy operability
- Ultra-vision screen display**
For maximum contrast even in poor lighting conditions
- Microsoft Windows embedded operating system**
Future-proof operating system
- SQL server database**
Real-time intelligence

Assistance systems for easy operation

- Fette Compacting visual software with wizard functions**
Easy and fast operation of the tablet press even for inexperienced operators
- Self-explanatory assistance systems for example Checkmaster**
- HMI operation**
Intuitive operation thanks to self-explanatory pictograms and symbols
- Operating errors are practically eliminated**





Optimized processes with SmartInterface and RFID

The path to intelligent production in the future is paved in particular by the new SmartInterface offered by Fette Compacting. The key component is represented by server-based, real-time monitoring enabling the user to monitor his production processes via mobile end devices. Users can download batch logs at any time and are always on top of the production parameters. In order to further improve process reliability and avoid set-up errors, the F10i also features an RFID option.

Process and production safety through RFID

TRI.EASY RFID filling cam query

Automatic detection of filling cams which match the product

Increase of efficiency and user-friendliness as well as simplification of the operation by fast and fail-safe adjustment of the machine

TRI.EASY RFID-monitored air sorting with air curtains

Reproducible and correct settings for all products

Coding element monitoring and display in the event of incorrect installation of mechanical parts

Extensive time savings thanks to Poka Yoke principle

Cost savings through fast and easy efficient set-up of the machine

Process stability

TRI.EASY turret

Self-identification of the most important turret parameters

Recipe-specific and reproducible hardware settings

All pneumatic settings can be made with scales from a central operator panel

Process reliability and fail-safe handling

Faster set-up and reduced set-up times

Scale values can be saved in the recipe

Fill-O-Matic height adjustment with scale rings

Easier handling of components

Optimized settings independent of operator

Error avoidance through fail-safe adjustment

Reduced product loss and improved yields thanks to optimal and consistently reproducible settings

Increased machine availability through saved settings in the recipe

Consistent tablet quality thanks to constant settings





CONTAINMENT GUARD



The F10i Containment is the perfect machine for small batches and active substances.

Maximum operator protection is the essential feature of the containment system offered by Fette Compacting. Maximum operator safety during tableting can only be achieved by appropriate technological solutions and largely automated manufacturing of tablets. A tablet press must compress powder and granulate safely and efficiently.

The tableting process is fully automated. Containment is continuous – from filling the machine to the removal of tablets. In case of a machine stop, it must be possible for the operator to access the tablet press manually from each side without compromising containment.

Glove ports in the window flaps are the most important feature for ensuring this. The Fette Compacting containment system has been developed with maximum operating and system safety in mind. All glove ports and window flaps are integrated in the safety control system where they are also monitored. The possibility of an operating error is practically eliminated.



Cleaning-optimized press room

Reduced dust exposure thanks to optimized press room design

No dust outside the machine

All parameters can be set from the HMI

Tablet chute and press room have a dust-tight design

New window flaps

Double safety barrier system

Window flap sensors for opening and closing

Manual and fail-safe locking of the window flaps

Maximum safety provided by operator-level monitoring

Access to containment controls for authorized users only

Logging of all operator entries and log changes

Sensor for monitoring under-pressure situations

Display of switchable extraction units

Switchable between extraction system in the machine and extraction hose

Audio and visual safety information in case of a leak

Individual monitoring system for each glove port

Glove ports

Safety sensor in each glove port

Ergonomic design

Possibility of changing punches and/or filling cams under containment conditions

No dust released during manufacturing or preparation for cleaning/ Interaction under containment conditions possible without interrupting containment

No special protective suits necessary during production / Savings in time and money

No contact with active products

Operators protected from impurities and contamination

Dust-tight press room within the machine

Safe manufacturing environment

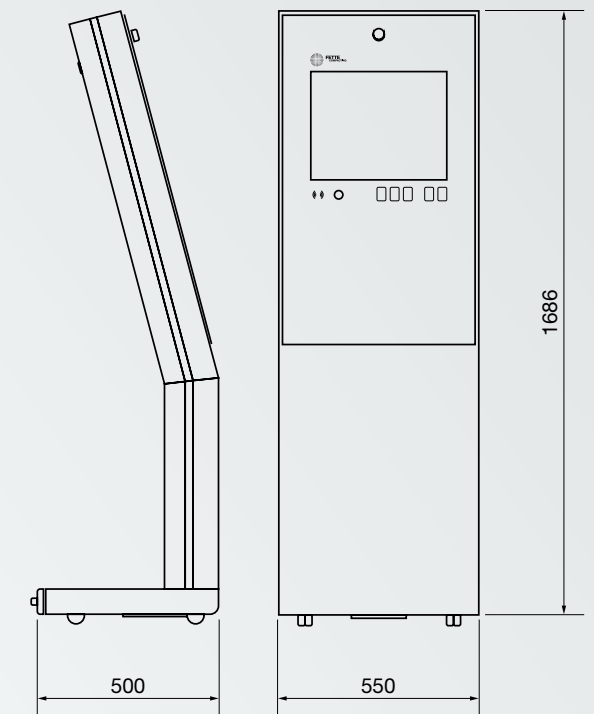
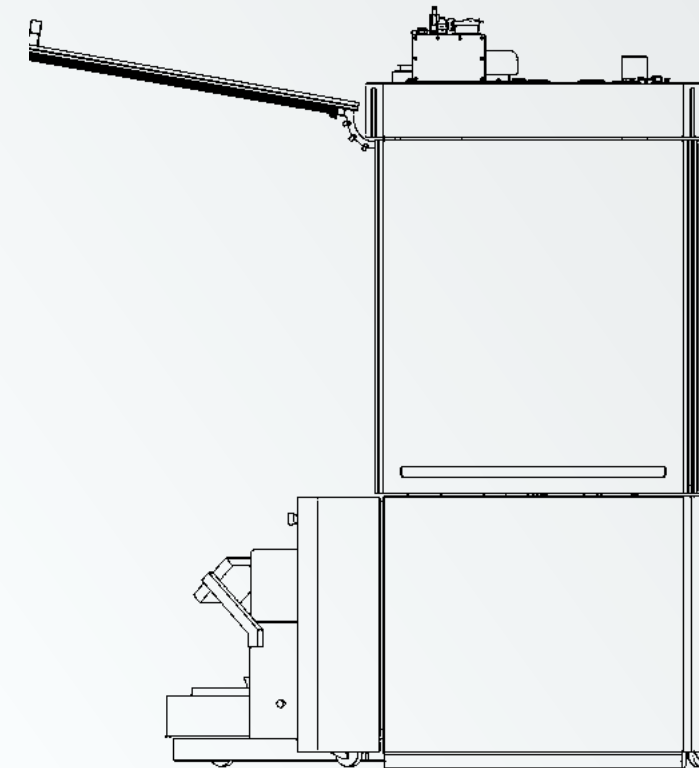
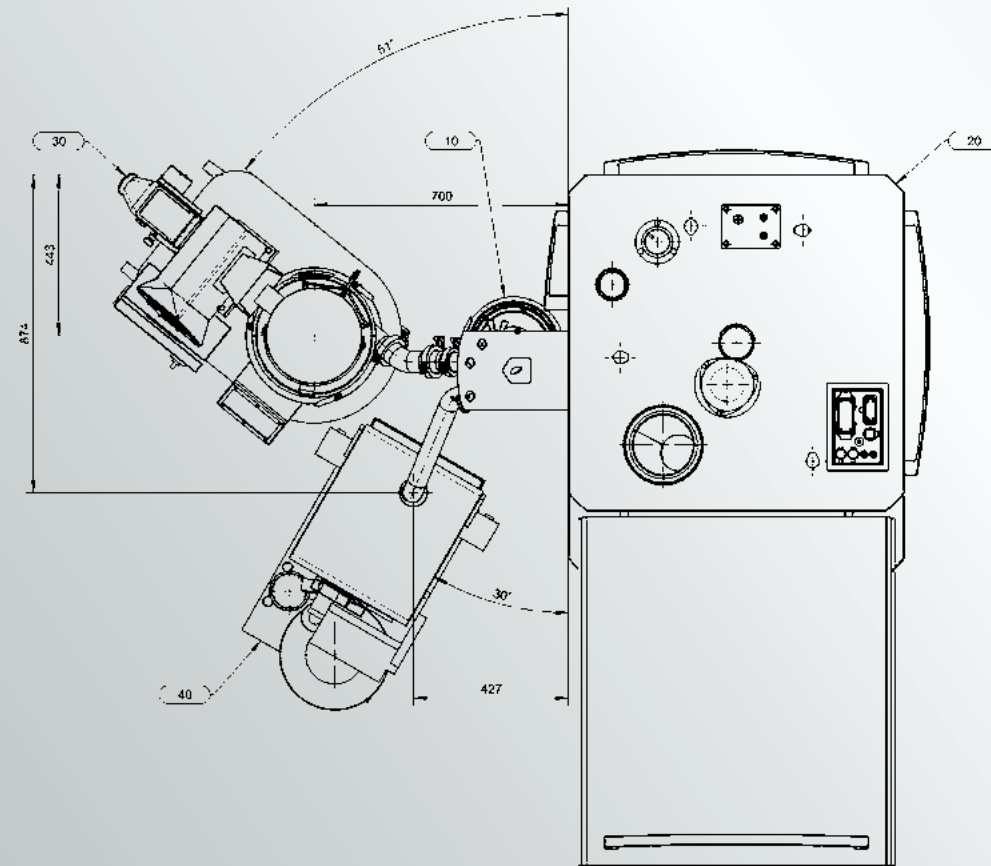
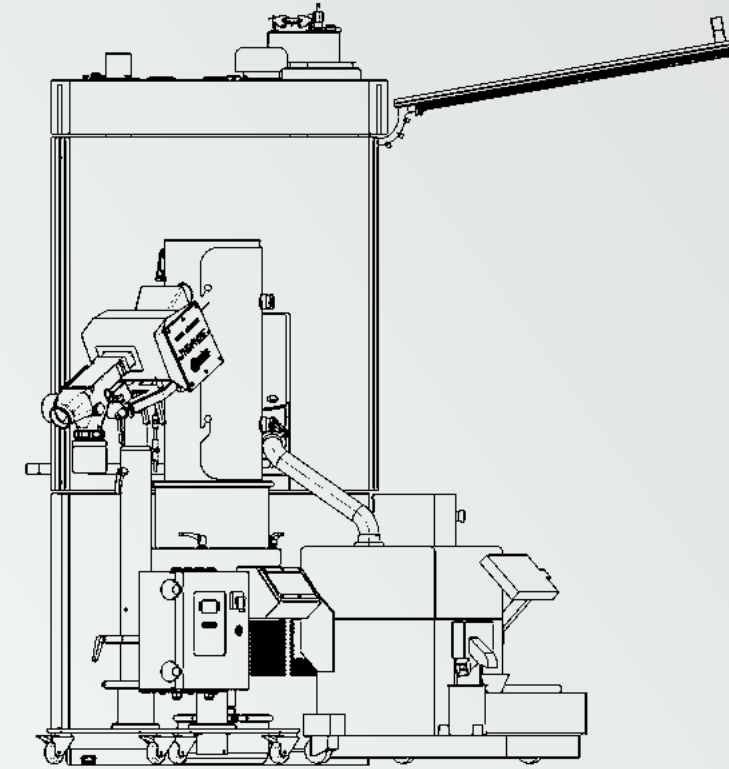
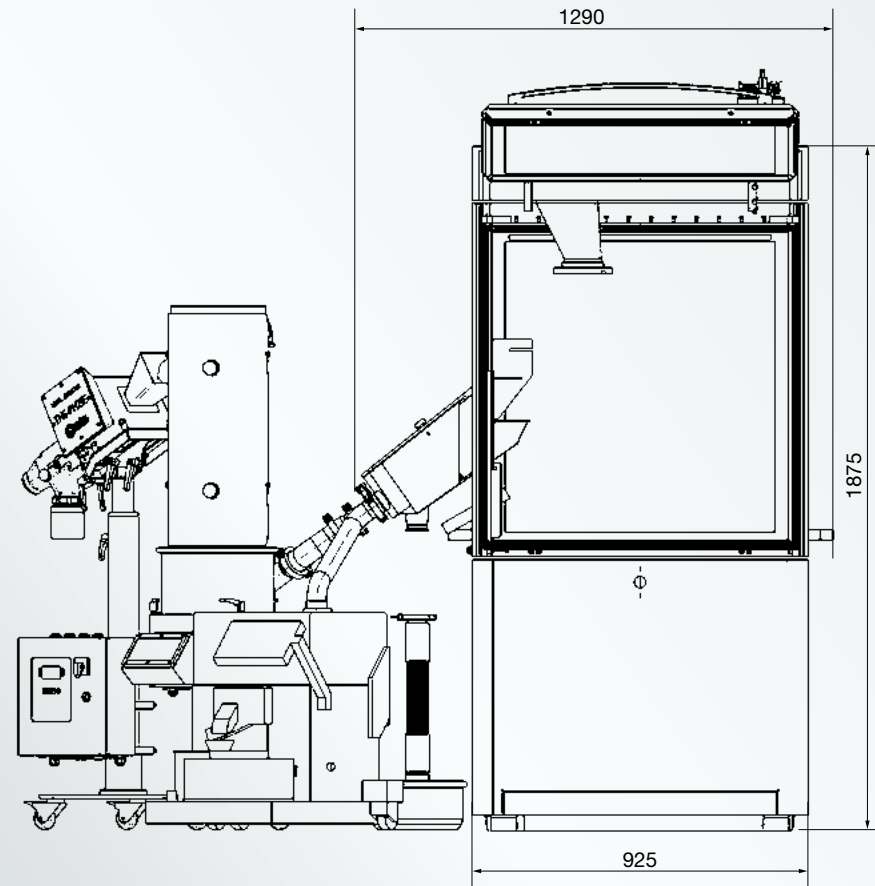
Fail-safe machine operation and control

Maximum operator safety during the entire production process, reduced costs during operation

Technical specifications

Die (D) / Segments (S)		D	D	D	D	S	S	S	S
Number of punch stations		32	30	24	20	45	30	24	21
Punch type		EU19 EU19FS® TSM19 BBS	EU19 EU19 FS® FS19® TSM19 BB	EU19 EU19 FS® FS19® TSM19 B	EU1" EU1"-441 TSM1" D	FS12®	EU19 EU19 FS® FS19® TSM19	EU1" TSM1"	EU1"-441
Tablet output pieces/hour	min.	48,000	45,000	36,000	30,000	67,500	45,000	36,000	31,500
	max.	230,400	216,000	172,800	120,000	324,000	216,000	144,000	126,000
Max. compression force Station 1*	kN	80	80	80	80	33	80	80	80
Max. compression force Station 2*	kN	80	80	80	80	33	80	80	80
Max. tablet diameter	mm	11	13	18	25	11	18	25	25
Max. tablet thickness	mm	20	18	20	22	22	22	22	22
Pitch circle diameter	mm	280	280	280	280	280	280	280	280
Die table rotation speed min.	mm ⁻¹	25	25	25	25	25	25	25	25
Die table rotation speed max.	mm ⁻¹	120	120	120	100	120	120	100	100
Die diameter	mm	22	24	30.16	38.1	–	–	–	–
Die/Segment hight	mm	22.225	22.225	22.225	23.8	25	25	25	25
Punch shaft diameter	mm	19	19	19	25.35	12	19	25.35	25.35
Punch length Upper/lower punch	mm	133.6 (133.35)	133.6 (133.35)	133.6 (133.35)	133.6 (133.35)	133.6	133.6 (133.35)	133.6 (133.35)	133.6
Upper punch penet. depth	mm	1 – 4	1 – 4	1 – 4	1 – 4	1 – 4	1 – 4	1 – 4	1 – 4
Dimensions L x W x H	mm	925 x 1,112 x 1,875 *							
Weight	kg	Tablet press approx. 2,100 kg**, Operating terminal 90 kg							
Electrical supply data		Operating voltage 400 – 480 V, frequency 50/60 Hz, power consumption 9 kW							

* Dimensions may vary depending on option
** Weight may vary depending on option



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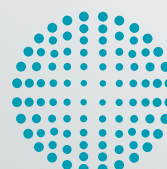
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