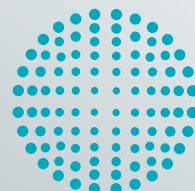


efficiency

F
30i

Dust-tight and high-performance
next-generation tablet production



FETTE
COMPACTING
be efficient



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.

“Digital ready”: The next level of efficiency



FETTE
COMPACTING

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 possibilities thanks to numerous innovations. Clean, system compatible and “digital-ready” – from the dust-tight 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 electronic 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, efficiencyⁱ means that the user continues to retain everything that makes his production so successful today – but with even greater efficiency and more possibilities.

High-performance double rotary tablet press with extremely fast sampling of the first layer

The F30i is the double rotary press in the new i Series. Producers can adapt the tableting press swiftly to various requirements and equip it with a suitable containment package if necessary. Designed for the production of large batches, the F30i provides maximum output of up to 1.6 million tablets per hour.



efficiency **i**

The most important features
at a glance:

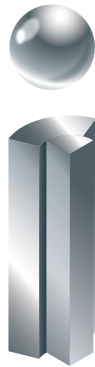


Innovative

**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**

Innovative





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 F30i 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

71% less shrouding parts, with a reduction of 74% 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

External control cabinet with energy monitoring system

Possibility of remote machine shutdown

* 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



Integrative



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 F30i. 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 F30i 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

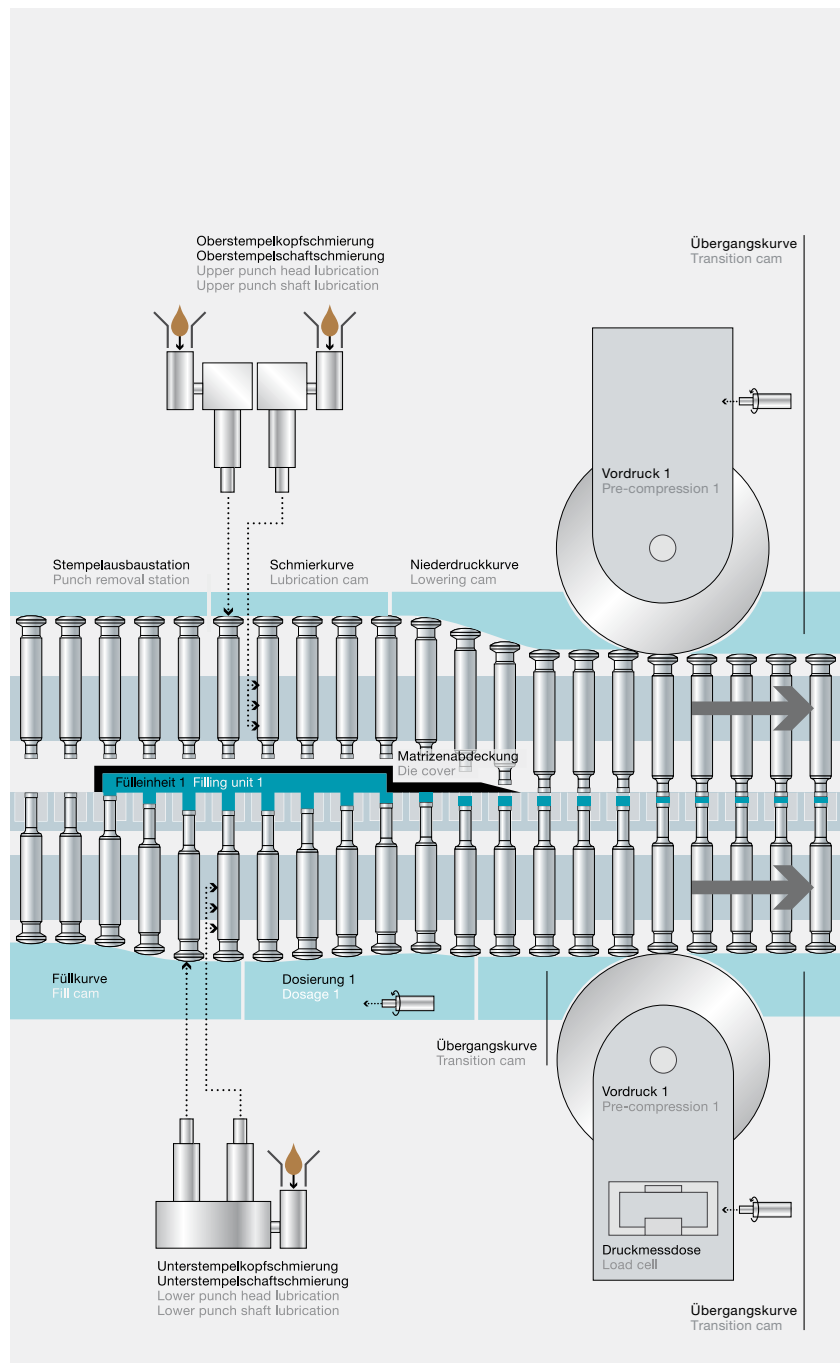
UL/CSA-conformant design available as an option



Integrative

High-performance sampling of the first layer

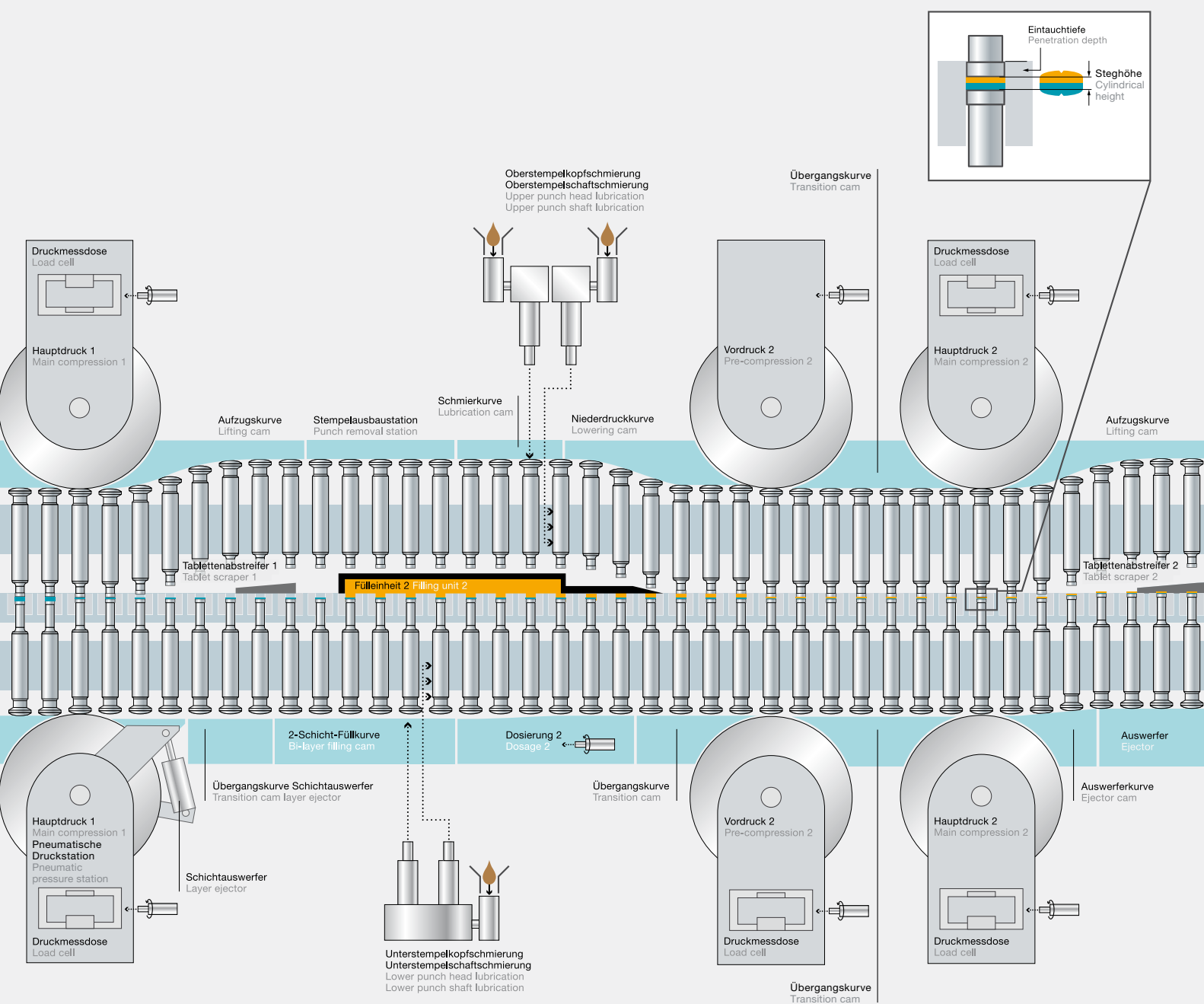
In order to monitor and control the tablet weight precisely, the F30i features optimized high-performance sampling for the first layer. This improved mechanism works with electro-pneumatic pressure roller adjustment and sampling of the first layer ensures that sufficiently hard tablets are swiftly produced. At the same time, this reduces product loss to a minimum.





Cross-generation compatibility

The F30i is distinguished by its cross-generation system compatibility. Die and segment turrets can be easily adopted from the tablet presses of the previous i Series (3200i and 3090i). Furthermore, the principle of sampling of the first layer is identical for all bi-layer machines produced by Fette Compacting.



Integrative

Press room with cleaning friendly design

- Dust-tight machine concept
- Frameless window flaps with detachable double lip seals
- Optimal access from all four sides
- Maximum conformity with GMP guidelines
- Easy-to-clean drawer elements
- Smooth surfaces
- Strict separation of drive elements and measuring points

Process stability through cross-generation standardization

- All Fette Compacting tablet presses feature identical dwell times and compression rollers

- Mechanical or automatic penetration depth adjustments for optimal utilization of press zones

Pressure relief – Software function for temporary reduction of pressure force at the beginning of the pressing process

Pressure force control – Force-based weight control for optimized yields





System and process compatibility of the new i generation

The tablet presses in the new i generation are consistently designed in accordance with the principle of process and system compatibility. For this reason, all process-related assemblies are the same as in the old i Series. This system-compatible design significantly minimizes the efforts associated with machine validation and qualification.



Compression rollers – Standard for all Fette Compacting tablet presses already installed

Safety-optimized control cabinet

Flexible separation of gray and white areas

State-of-the-art IT for data processing in real time

Electric components sealed off from ambient air

Direct access to all assemblies

Maximum interference resistance and EMC

Strict separation of power unit and control unit

Unique cooling concept thanks to two separate circuits

Temperature reduction by standby mode

Optional UL/CSA-conformant design



Intuitive



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 F30i 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-tight 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



Intelligent





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. This key component is a server-based, real-time monitoring app enabling the user to supervise his production 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 F30i 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





CONTAINMENT GUARD



Perfect containment for large production volumes and active substances

Maximum operator safety is the essential feature of the containment system offered by Fette Compacting. This imperative safety can only be achieved by appropriate technological solutions and largely automated manufacturing.

The tableting process is fully automated in the machines of the new i Series. Containment is continuous – from filling the machine to the removal of tablets. In the event of a machine stop, glove ports in the window flaps allow manual access from all sides without any interruption to containment.

The Fette Compacting containment system has been optimized 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. An RTP (Rapid Transfer Port) permits the input and output of material, tools, and punches. The possibility of maloperation is practically excluded.



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

Manual and fail-safe locking of 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 the underpressure

Display of the switchable extraction plant

Switchable between extraction system in the machine and extraction hose

Acoustic and visual safety information in the event of a leak

Rapid Transfer Port (RTP) for entering and exiting materials into and out of the containment system

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 or 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 Data

Die (D) / Segments (S)		D	D	D	D
Number of punch stations		79	73	61	49
Punch type		FS19® EU19 FS® EU19 BBS	FS19® EU19 FS® EU19 TSM19 BB	FS19® EU19 FS® EU19 TSM19 B	EU1" EU1"-441 TSM1" D
Tablet output units/h	min.	142,200	131,400	109,800	88,200
	max.	1,137,600	1,051,200	878,400	470,400
Max. compression force 1*	kN	100	100	100	100
Max. compression force 2*	kN	100	100	100	100
Max. compression force 3*	kN	100	100	100	100
Max. compression force 4*	kN	100	100	100	100
Max. tablet diameter	mm	11	13	18	25
Max. filling depth**	mm	18	18	18	18
Pitch circle diameter	mm	680	680	680	680
Turret rotation speed min.	min ⁻¹	15	15	15	15
	max.	min ⁻¹	120	120	120
Die diameter	mm	22	24	30.16	38.1
Die-/segment height	mm	22.225	22.225	22.225	23.8
Punch shaft diameter	mm	19	19	19	25.35
Punch length Upper/lower punch	mm	133.6	133.6 (133.35)	133.6 (133.35)	133.6 (133.35)
Upper punch insertion depth	mm	1–4 (8***)	1–4 (8***)	1–4 (8***)	1–4 (8***)
Dimensions	mm	1,394 × 1,394 × 2,030			
Weight		Tablet press 4,600 kg, operating terminal 90 kg, switch cabinet 270 kg			
Electrical supply parameters		Operating voltage 400–480 V, frequency 50/60 Hz, power consumption 17 kW			

Theoretical values or technical limits: These can vary in practice, according to product and application.

Tablet thickness is a size dependent on product and can strongly vary.

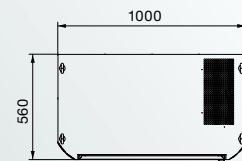
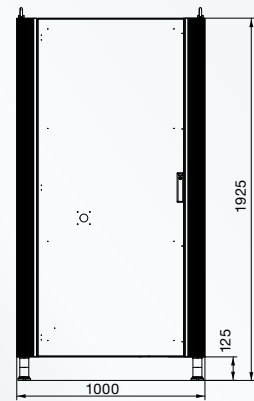
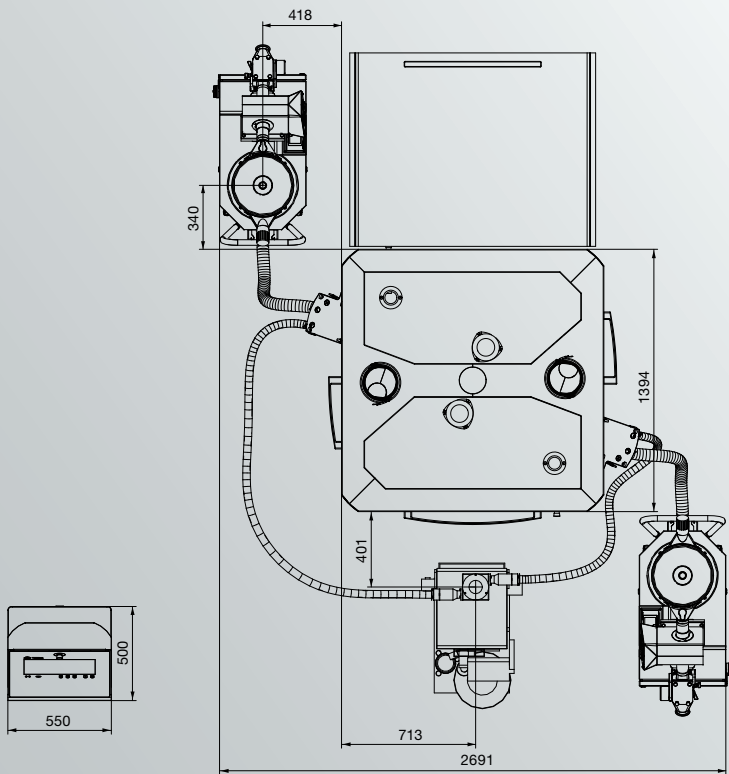
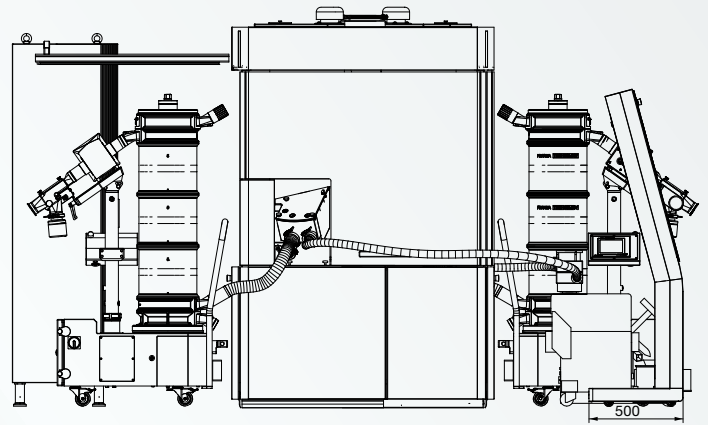
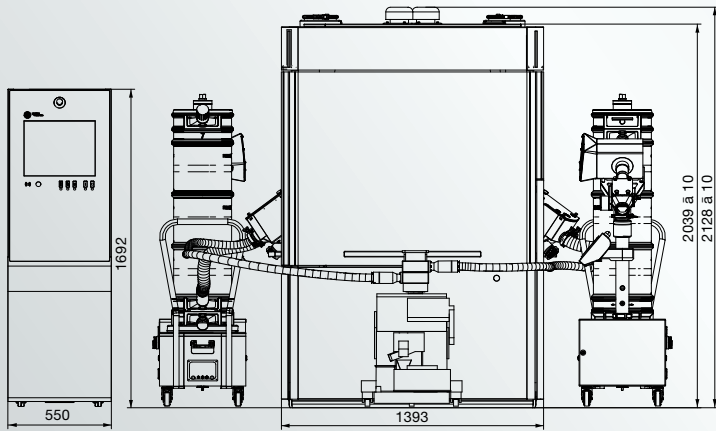
* limited by punch properties

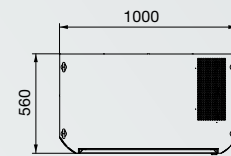
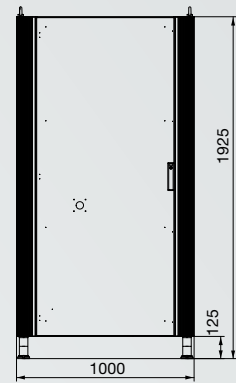
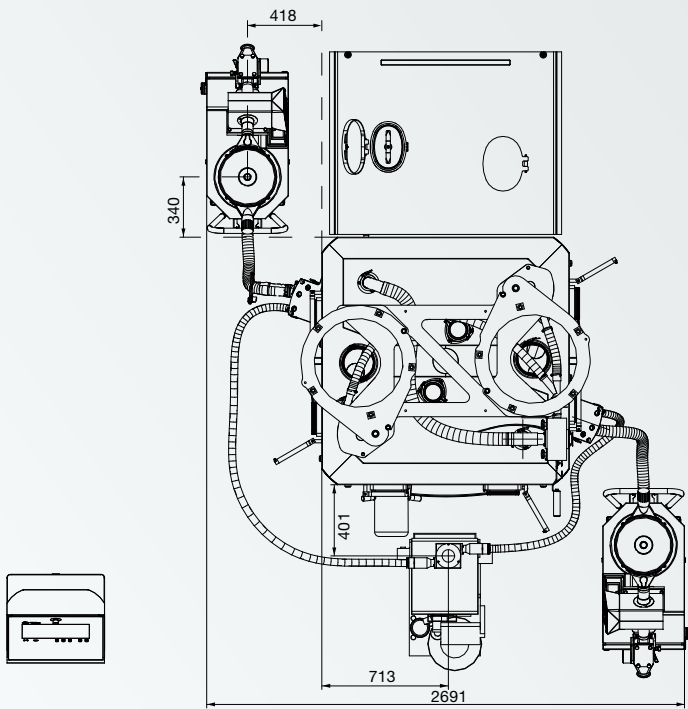
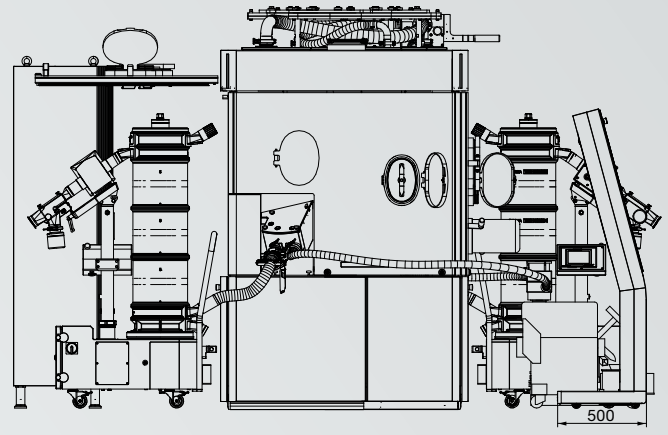
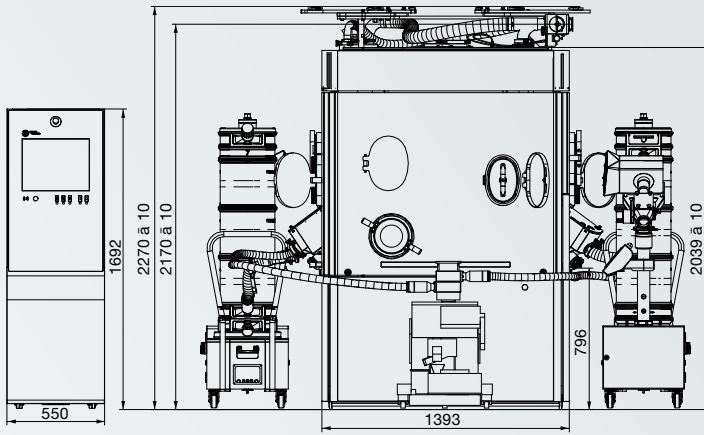
** special filling depth available on request

*** bi-layer-operation

S	S	S
110	75	55
FS12®	FS19® EU19 FS® EU19 TSM19	EU1" EU1"-441 TSM1"
396,000	135,000	99,000
1,584,000	1,080,000	528,000
33	100	100
33	100	100
33	100	100
33	100	100
11	18	25
20	20	20
680	680	680
15	15	15
120	120	80
-	-	-
25	25	25
12	19	25.35
133.6 (133.35)	133.6 (133.35)	133.6 (133.35)
1-4 (8***)	1-4 (8***)	1-4 (8***)

Standard floor plan





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