



efficiency **i**

The new i Series

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 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, efficiency¹ means that the user continues to retain everything that makes his production so successful today – but with even greater efficiency and more possibilities.

F10i – flexible single rotary tablet press

The F10i is the first machine in the new i Series: an efficient single rotary tablet 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.

F20i: Maximum flexibility and efficiency

With an output of 475,000 tablets per hour and Pmax[®] technology, the F20i is the allrounder of the new i generation. It is suitable for a wide range of products and batch sizes and thus enables maximum flexibility in production. Numerous innovations such as an innovative tablet discharge and an optimized turret change system simplify handling and make the F20i the most efficient tablet press in its performance class.

F30i – 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.



F10i



F20i



F30i



efficiency **i**

The most important features of the new iSeries 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 Visual 8

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

F10i – 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 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



F20i – Innovative



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Containment Guard* – dust-tight system design

Optimized cleaning

71 % fewer trim parts, resulting in 74 % fewer surfaces to be cleaned

Most efficient and fastest cleaning ever

Maximum operator protection thanks to minimal Exposure to active ingredients

Dust-tight connections between machine and process equipment for low cleaning effort

Savings in costs due to significantly shorter cleaning cycles

Easy cleaning for faster operational readiness of the machine

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 IP54 certified
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 saving due to automatic operator login

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TRI.EASY Multi-flexible dust-tight tablet chute

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F30i – Innovative





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TRI.EASY Multi-flexible dust-tight tablet chute

Compact housing

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Fail-safe, easy and fast assembly and dismantling

LED status display of track positions

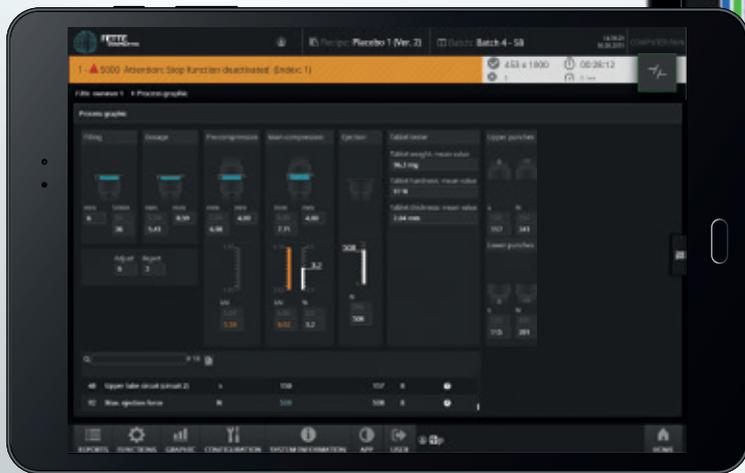
Operating mode is apparent at all times

Safety-oriented track drive system with e-drives and end-position damping

Reliable switching processes with end-position confirmation



i Series – Integrative



System-compatible set-up to IoT and MES

For several years, the i Series has been distinguished by its cross-generation system compatibility. 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 new i Series 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

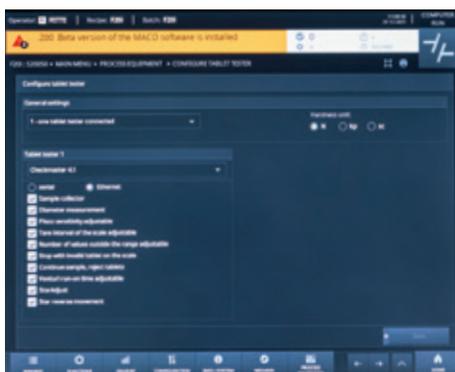
Automation in one hand and control of all process devices

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



i Series – Intuitive



F10i



F20i



F30i

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 new i Series 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 8 software with wizard functions

Easy and fast operation of the tablet press even for inexperienced operators

Self-explanatory assistance systems for example Checkmaster

Assistance systems

Recipe assistant for fast creation of new recipes

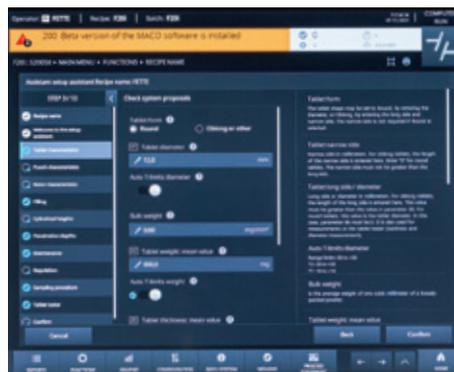
Control loop assistant

SOP Designer

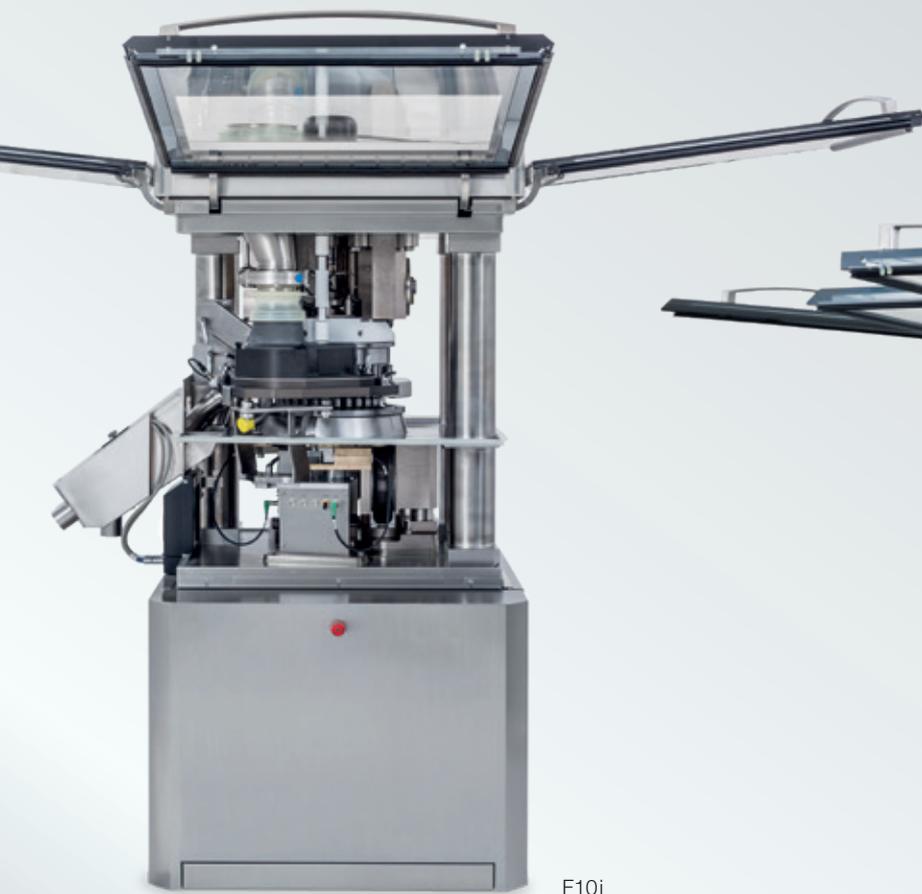
HMI operation

Intuitive operation thanks to self-explanatory pictograms and symbols

Operating errors are practically eliminated



i Series – Intelligent



F10i



F20i



F30i



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 i Generation 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

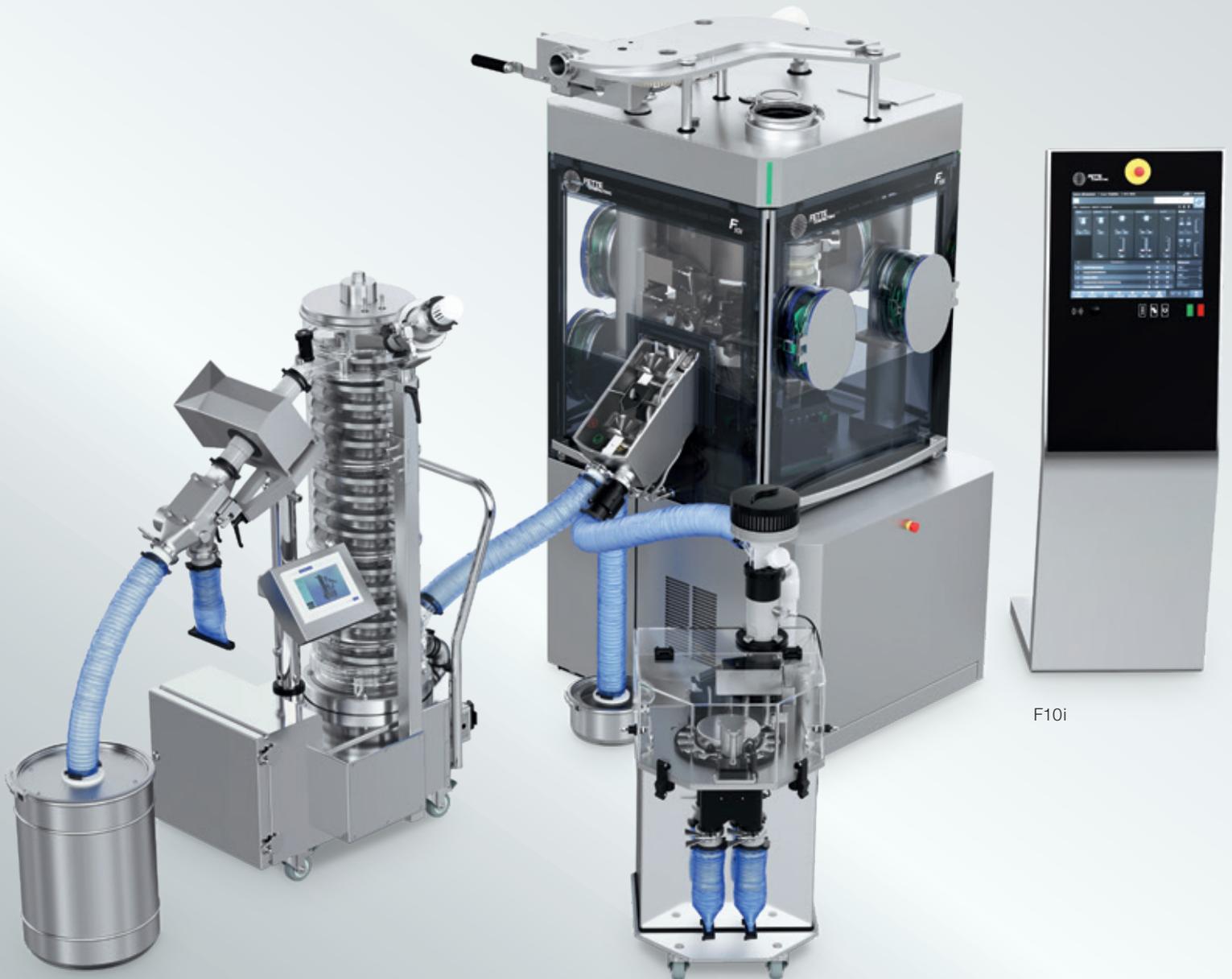
Reduced product loss and improved yields thanks to optimal and consistently reproducible settings

Increased machine availability through saved settings in the recipe





CONTAINMENT GUARD



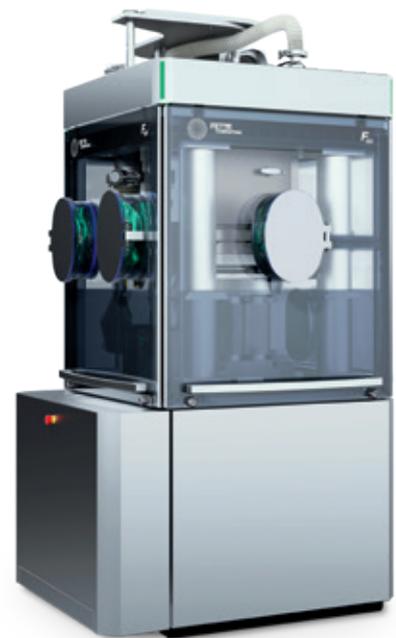
F10i

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.



F10i

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



**CONTAINMENT
GUARD**

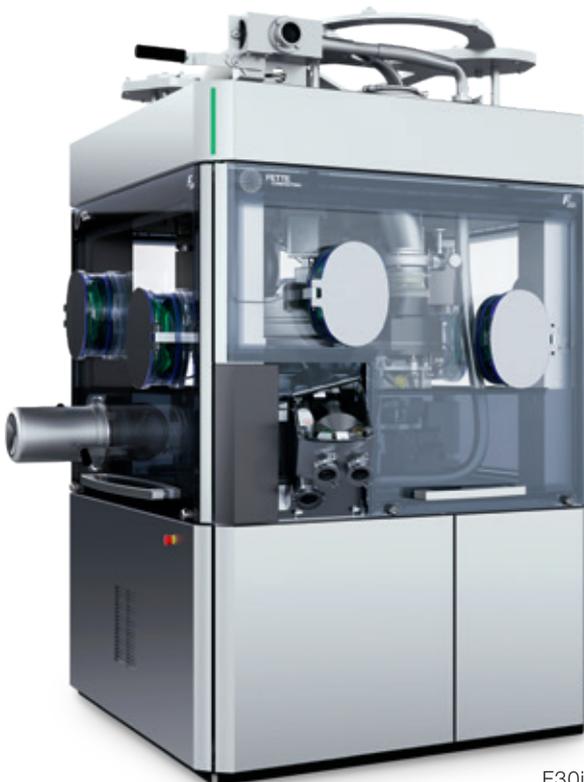




F20i

Containment Guard i Generation

The Containment Guard marks the efficiency of the comprehensive solutions offered by containment tableting systems. The technical basis is formed by a modular system based on the FE and i Series offered by Fette Compacting. Apart from tablet presses, this also includes the process and safety equipment as well as services and consulting specially tailored to containment requirements.



F30i

Technical Data – F10i

Die (D) / Segments (S)		D	D	D	D
Number of punch stations		32	30	24	20
Punch type		EU19 EU19 FS® TSM19 BBS	EU19 EU19 FS® FS19® TSM19 BB	EU19 EU19 FS® FS19® TSM19 B	EU1" EU1"-441 TSM1" D
Tablet output units/hour	min.	48,000	45,000	36,000	30,000
	max.	230,400	216,000	172,800	120,000
Max. compression force 1*	kN	80	80	80	80
Max. compression force 2*	kN	80	80	80	80
Max. tablet diameter	mm	11	13	18	25
Max. filling depth**	mm	18	18	18	18
Pitch circle diameter	mm	280	280	280	280
Turret rotation speed min.	min ⁻¹	25	25	25	25
Turret rotation speed max.	min ⁻¹	120	120	120	100
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 (133.35)	133.6 (133.35)	133.6 (133.35)	133.6 (133.35)
Upper punch insertion depth	mm	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 parameters		Operating voltage 400–480 V, frequency 50/60 Hz, power consumption 9 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

*** dimensions may vary depending on option

**** weight may vary depending on option



S	S	S	S
45	30	24	21
FS12®	EU19 EU19 FS® FS19® TSM19	EU1" TSM1"	EU1"-441
67,500	45,000	36,000	31,500
324,000	216,000	144,000	126,000
34	80	80	80
34	80	80	80
11	18	25	25
20	20	20	20
280	280	280	280
25	25	25	25
120	120	100	100
-	-	-	-
25	25	25	25
12	19	25.35	25.35
133.6	133.6 (133.35)	133.6 (133.35)	133.6
1-4	1-4	1-4	1-4

Technical Data – F20i

Die (D) / Segments (S)		D	D	D	D
Number of punch stations		47	43	36	30
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/hour	min.	42,300	38,700	32,400	27,000
	max.	338,400	309,600	259,200	180,000
Max. compression force 1*	kN	100	100	100	100
Max. compression force 2*	kN	100	100	100	100
Max. tablet diameter	mm	11	13	18	25
Max. filling depth	mm	18	18	18	22
Pitch circle diameter	mm	410	410	410	410
Turret rotation speed min.	min ⁻¹	15	15	15	15
	max.	min ⁻¹	120	120	100
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	1–4	1–4	1–4
Dimensions L × W × H	mm	1,220 × 1,220 × 2,022			
Weight		Tablet press 3,300–3,500 kg, operating terminal 90 kg, switch cabinet 270 kg			
Electrical supply parameters		Operating voltage 400–480 V, frequency 50/60 Hz, power consumption 13,2 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



S	S	S	S
66	45	36	33
FS12®	FS19® EU19 FS® EU19 TSM19	EU1" TSM1"	EU1"-441
59,400	40,500	32,400	29,700
475,200	324,000	216,000	198,000
34	100	100	100
34	100	100	100
11	18	25	25
20	20	20	20
410	410	410	410
15	15	15	15
120	120	100	100
-	-	-	-
25	25	25	25
12	19	25.35	25.35
133.6	133.6 (133.35)	133.6 (133.35)	133.6
1-4	1-4	1-4	1-4

Technical Data – F30i

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 350 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
34	100	100
34	100	100
34	100	100
34	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***)

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