

TECHNOLOGY





Fette Compacting – be efficient!



Tradition and knowledge

Fette Compacting, founded in 1908, is the world's leading provider of integrated solutions for industrial tablet production and capsule filling. The company specializes in high-performance machines for the pharmaceutical, nutraceutical, and chemical industry. The company's head office and global control centre is in Schwarzenbek near Hamburg (Germany). Fette Compacting is represented across the globe in more than 50 countries.

Fette Compacting is the only manufacturer of tablet presses and capsule filling machines to operate its own global network with five fully-equipped and digitally-connected Competence Centers in Germany (Schwarzenbek), Brazil (Campinas), China (Nanjing), India (Goa), and the US (Rockaway, New Jersey). They are offering basic and product trials, training units, courses and a wide range of consulting services to impart practice-oriented know-how for more production safety and efficiency to customer employees.

Fette Compacting is a member of the LMT Group – a medium-sized, family-owned group of companies. The Group also includes LMT Tools, a leading manufacturer of precision tools for industrial processing of construction materials.



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.



Fette Compacting recognized the opportunities for internationalization at an early stage. The company has been represented by its own subsidiary company in China since 2004.

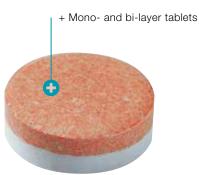
All the machines are made in accordance with German standards, and satisfy the specifications of the American FDA (Food and Drug Administration) regulation authority, as well as the requirements of the international cGMP (Current Good Manufacturing Practices). Fette Compacting delivers installations with computer-supported controller that meet the requirements of Title 21 CFR Part 11 (Code of Federal Regulations of the FDA) for electronic documentation.

Complete solution for your tablet production

We are specialized in high-performance machines for the pharmaceutical industry. Our range of products and services includes tablet presses, from laboratory to small, medium and large batches. Furthermore Fette Compacting offers mono-, bi- and triple-layer tablet presses. For high potent application we also have Containment and WIP machines in our product portfolio.

We are also offering tableting tools and process equipment as well as maintenance, training and consulting.

Our global service network are close to our customers. And our experienced international service team are able to offering various services to meeting the different requirements from our customers. During the start up phase, we offer installation, commissioning service, operation and maintenance training. During the production phase, we offer the calibration, maintenance, repair and spare parts service.



SERVICE

+ Start up phase

- Installation service
- Commissioning service
- Operation and maintenance training

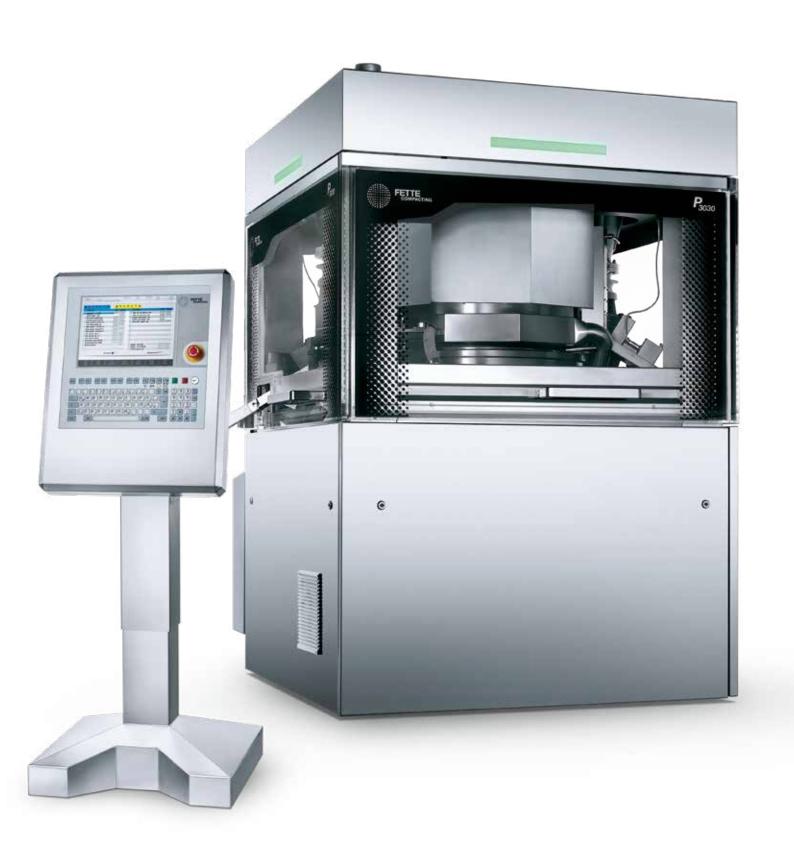
+ Production phase

- Calibration service
- Maintenance
- Repair service
- Spare parts

+ Highlights

- Global service network, close service to customer
- Rich experienced international service team
- Provide customer preventive services guide

The P3030 – high quality for large batches or bi-layer production





Medium to large sized batches – mono- and bi-layer tablets

It provides a high output of over one million tablets per hour at the same quality.

The production of medium and large sized batches requires equipment with advanced safety measures and technology. At the same time the increasing costs of raw materials necessitate companies to look for more economical options when purchasing capital equipment. Resulting from this situation the challenge for Fette Compacting is clear: to offer a machine with the flexibility, technology and performance only achievable with Fette Compacting components at an economically viable price.

The P3030 is the perfect answer to these requirements. It provides renowned Fette Compacting technology at the excellent price/performance ratio. The P3030 is an economical solution that doesn't compromise the standards and quality of the basic Fette Compacting components.

The success of the P3030 is due to the perfect blend of technology and efficiency on which Fette Compacting has built its reputation.

Support for your tablet production

We are always present where our customers are, and where they need our support.

We have five Competence Centers in Germany, India, China, Brazil and the USA, and these allow us to make comprehensive consultation, training and product trials possible.

Here again, we are starting with ourselves, and orienting ourselves around international standards. This begins with the guidelines for Good Manufacturing Practice (GMP), and extends through to standards for Technical Safety Management (TSM) or those of the European Union (EU). In fact our product tools even surpass these.

This is a central topic, and one for which we have achieved a lot through the development of the Competence Centers. For example, we can now offer a wide range of training courses, and these are almost identical in different parts of the world.

In other words, a pharmaceutical concern that produces globally can train its machine operatives everywhere, and knows that every worker has the same know-how.

Our service consultants actively approach customers, working together with them to see how they can optimize production.

Fette Compacting has several thousand contacts with customers globally every day in the support context alone. Each of these contacts is important to us!

Continuous improvement

Fette Compacting always pays attention to the latest developments in the pharmaceutical industry and customer needs, constantly upgrades and optimizes our P Series, provides customers with higher quality products and services.

FEATURES	BENEFITS
+ Computer-controlled, user-friendly, high-performance rotary press	+ Excellent price/performance ratio
+ Double sided rotary press with up to 79 punch stations	+ Rapid format changeover results in high annual yields
+ More than 1 million tablets per hour possible	+ Continuous use
+ Exchangeable turret	+ Outstanding format and production flexibility
+ Productive, precise, safe and robust	+ Can be adapted for a wide range of production requirements
+ Wide range of accessories and process equipment	+ Easy to handle and operate
+ Capability for mono- and bi-layer tablets	+ Excellent format flexibility
+ Tablet weight monitor control function	+ High automation level reduce man-power and increase the quality of the tablets

Performance and quality







Upgrade Features

- + Design & functionality
- + Full stainless steel terminal, easy to clean
- + Optimized dust collection system
- + Metal handle for easy cleaning and durability
- + System integration of deduster and in process control
- + On-line tablet weight monitor & control function
- + MES system support

Structure

- + Modular design with enclosed compression area to avoid the risk of cross-contamination, in compliance with cGMP regulations
- + High operating safety
- + Robust design ensure consistent accuracy even over long periods of high pressure
- + Quick-connect for easy disassembly of components, easy for maintenance and repair
- + Full accessibility to the compression zone – double layer window flaps on all four sides

Exchangeable Turret

- + Turret is made in Germany, super precision
- + High level of format flexibility
- + High output by selecting the suitable turrets according to different product size
- + Unique turrets can be interchanged with cams and tools
- + Signifisant reduction of down-time by using extra turret complete with cams and toolings
- + Rich options for turret changing are available

Fill-O-Matic

- + Unique three chamber filling system, more than 40 years experience on it
- + Metering wheels can increase powder flowability and uniform density
- + Filling wheels and dosing wheels can precisely fill and dose powder
- + Different options for products with poor flowability, and reduce the product loss

Compression station

- + Main compression roller and pre-compression roller are same size (250 mm, exchangeable)
- + All compression roller are independent mounted, each can offer no more than 100 KN force
- + Roller is made in Germany with special material and technology, longer lifetime

Tablet discharge

- + Two tablet discharge chutes
- + Each discharge chute includes good tablet channel and reject tablet channel
- + Optional first-layer sampling system and sampling gate, easy to check tablet quality
- + Optional air sorting system, reject single tablet precisely, reduce the product loss
- + Optional sampling gate, easy to take sample and check tablet quality

Electronic control

- + Equipped with advanced VME-bus control system and top class electrical parts, faster and more stable
- + Professional software developed by Fette Compacting, verified by a lot of customers including many MNCs
- + Ergonomical HMI consisting of a large touch screen, screen-guided interface simplify the operation
- + Structured diagnostic messages for troubleshooting
- + Support FDA 21 CFR Part 11









Optional accessories and process equipment





The quality requirements for tablet production are constantly increasing. Process equipment from Fette Compacting ensures that your production fully complies with the applicable regulations and effectively reduces the workload of your staff. Extensive automation of all process steps reduces manual intervention and provides for excellent tablet quality.

Your advantages: more reliability, high quality and efficiency in tablet production.

Weightmaster 6.2P

- + Fully automatic measurement of tablet weight
- + Automatic feedback to Fette Compacting tablet press with stop function
- + Precise monitoring of tablet weight within freely adjustable stop limits
- + Documented tablet inspection results in your batch report
- + 21 CFR Part 11 compliant operation via the operator and password management on the Fette Compacting HMI (Human Machine Interface)
- + GMP-compliant design





Handling system

Deduster stand-alone or with metal detector

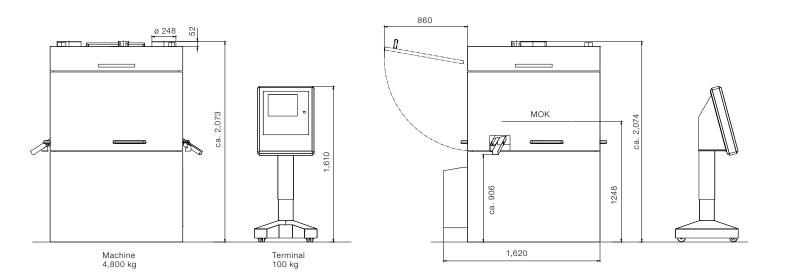


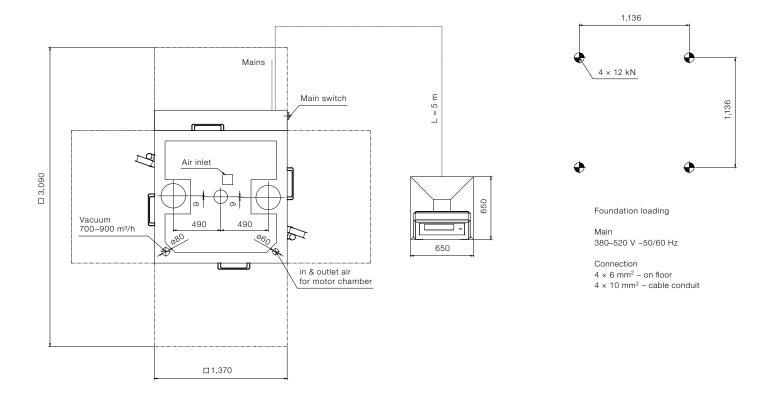
PKB-II



Tableting Tools

Dimensions





Technical Data



Die (D)		D	D	D	D	
Number of punch stations		79	73	61	49	
Punch type		EU19 FS/EU19 BBS	EU19 FS/EU19 TSM19 BB	EU19 FS/EU19 TSM19 B	EU1"/EU1"-441 TSM 1" D	
Tablet output/h	min.	142,200	131,400	109,800	88,200	
	max.	1,004,880	928,560	775,920	470,400	
	bi-layer max.	502,440	464,280	387,960	235,200	
Max. compression force	kN	100*	100	100	100	
Max. pre-compr. force	kN	100*	100	100	100	
Max. tablet diameter	mm	11	13	16	25	
Max. filling depth	mm	18	18	18	18**	
Max. tablet thickness	mm	8.5	8.5	8.5	8.5	
Pitch circle diameter	mm	680	680	680	680	
Die table rotation speed	min ⁻¹ min.	15	15	15	15	
	min ⁻¹ max.	106	106	106	80	
Die diameter	mm	22	24	30.16	38.1	
Die height	mm	22.22	22.22	22.22	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	1,370 × 1,620 × 2,073				
Weight		Tablet press approx. 4,800 kg, operating terminal 100 kg				
Electrical supply parameters		Operating voltage 380 – 520 V, 50/60 Hz, power consumption 16 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 up to 70 kN; ** Special filling depth available on request; *** Bi-layer

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