

**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 P1010 – high quality with many varieties for small batches





Solution for many varieties and small batches

It's the third model in the P series.
The suitable output, small footprint,
easy clean, changeable turret,
make it become one of the prior choice
for your small batch production.

#### 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
+ VME-bus controlled, user-friendly, high-performance rotary press	+ Excellent price/performance ratio
+ Exchangeable turrets	<ul> <li>+ Rapid format changeover results in high annual yields</li> </ul>
+ Productive, precise, safe and robust	+ Continuous use
+ Pressure and filling depth adjusted by servo motor	+ Outstanding format and production flexibility
+ Wide range of accessories and process equipment	+ Can be adapted for a wide range of production requirements
+ Perfect overall design of machine and terminal	+ Easy to handle and operate
+ High-quality standard Fette Compacting components	+ Conform to GMP and FDA
+ 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, main compression station can offer no more than 80\* KN force
- + Roller is made in Germany with special material and technology, longer lifetime

#### **Tablet discharge**

- + Each discharge chute includes good tablet channel and reject tablet channel
- + 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
- \* Subject to product properties









## 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

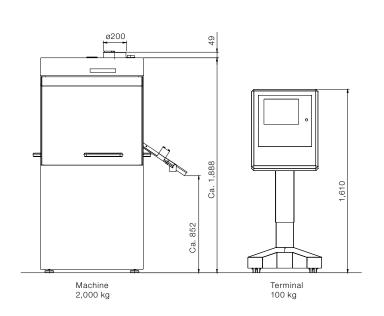


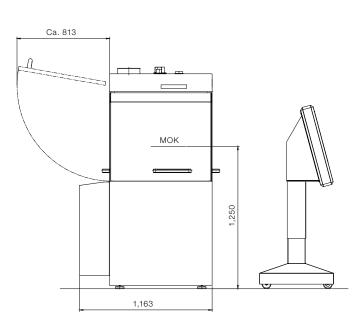
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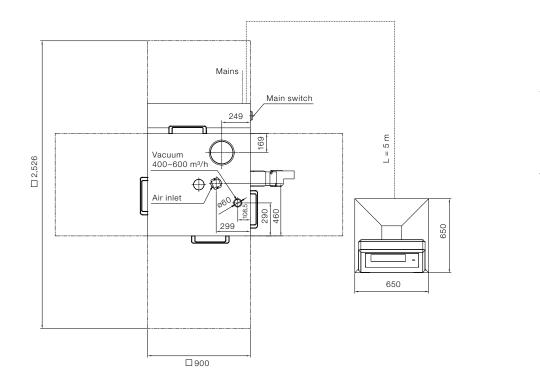


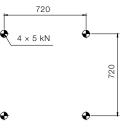
**Tableting Tools** 

## **Dimensions**









Foundation loading

Main 380-480 V ~50-60 Hz

 $\begin{array}{l} \text{Connection} \\ 4\times 6 \text{ mm}^2 - \text{on floor} \\ 4\times 10 \text{ mm}^2 - \text{cable conduit} \end{array}$ 

## Technical Data



Die (D)		D	D	D	D	
Number of punch stations		32	30	24	20	
Punch type		EU19 FS/EU19 TSM19 BBS	EU19 FS/EU19 TSM19 BB	EU19 FS/EU19 TSM19 B	EU1"/EU1"-441 TSM 1" D	
Tablet output/h	min.	28,800	27,000	21,600	18,000	
	max.	230,400	216,000	172,800	120,000	
Max. compression force	kN	80*	80*	80*	80*	
Max. pre-compr. force	kN	60	60	60	60	
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	280	280	280	280	
Die table rotation speed	min <sup>-1</sup> min.	15	15	15	15	
	min-1 max.	120	120	120	100	
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 (133.35)	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	mm	900 × 1,163 × 1,888				
Weight		Tablet press approx. 2,000 kg, operating terminal approx. 100 kg				
Electrical supply parameters		Operating voltage 380 – 480 V, 50/60 Hz, power consumption 10 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.

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<sup>\*</sup> Subject to product properties

<sup>\*\*</sup> Special filling depth available on request

#### **Fette Compacting GmbH**

Grabauer Strasse 24 21493 Schwarzenbek, Germany Phone +49 4151 12-0 Fax +49 4151 3797 tablet@fette-compacting.com

#### Fette Compacting America, Inc.

400 Forge Way Rockaway N.J. 07866, USA Phone +1 973 5868722 Fax +1 973 5860450 sales@fetteamerica.com

### Fette Compacting America Latina Ltda.

Campinas / SP, Brazil

Av. Cambacica, 1200 módulo 10 Parque Imperador CEP 13097-160

Phone/Fax +55 19 37969910 contato@fette-compacting.com.br

### Fette Compacting Mexico, SA de CV

Adolfo Prieto No. 1638 Colonia Del Valle Sur 03100 Mexico, DF, Mexico Phone +52 55 40000653 tablet@fette-compacting.com

#### Fette Compacting (China) Co., Ltd.

No. 9 Shengtong Road, Moling Sub-District, Jiangning Development Zone, 211111 Nanjing Jiangsu Province, P.R.C., China Phone +86 25 52121818 Fax +86 25 52129951 fcn@fette-compacting.com

## Fette Compacting Machinery India Private Limited

A - 406 /407, 4th floor, Atrium 215, Next to Hotel Courtyard Marriott, Near J. B. Nagar Metro station, Andheri – Kurla Road, J. B. Nagar, Andheri (East) 400 093 Mumbai, India Phone +91 22 62763399 sales@fette-compacting.com

Competence Centre Plot No S 115, Phase III B Verna Industrial Estate Verna, Goa 403 722, India Phone +91 22 62763356

## Fette Compacting Asia Pacific Pte Ltd.

107 Eunos Avenue 3, #01-01 Singapore 409837, Singapore Phone +65 659 25654 Fax +65 654 71939 infoasiapacific@fette-compacting.com

#### Fette Compacting Ibérica SL

Avenida Labradores, 1 2ª Planta, Oficina 3 28760 Tres Cantos, Spain Phone +34 91 8039689 Fax +34 91 3483052 fcib@fette-compacting.com

#### Fette Compacting et Uhlmann France

1, Rue du Centre 93160 Noisy Le Grand, France Phone +33 155 812121 Fax +33 155 812120 contact@fette-uhlmann.fr

#### **Fette Compacting Belgium BVBA**

Schaliënhoevedreef 1b 2800 Mechelen, Belgium Phone +32 15 684260 Fax +32 15 684269 fcbe@fette-compacting.com

#### **EuroPharma Machinery Ltd**

Unit 12 Highview Bordon, Hampshire, GU35 0AX United Kingdom Phone +44 1420 473344 Fax +44 1420 488030 admin@europharma.co.uk

#### Fette Compacting Middle East FZE

Jebel Ali Free Zone, Jafza Lobby 14, Office 308, Dubai United Arab Emirates Phone +971 4 8808226 dubai@fette-compacting.com

www.fette-compacting.com

