

FETTE
COMPACTING



1200*i* tablet press
Extreme versatility
Economical small batches
Very low space requirement



Leitz Metalworking Technology Group

Feature summary: 1200*i* tablet press (single rotary press)

Key features:

- Handling arm for exchangeable turrets (optional)
- Turrets with different numbers of stations
- Compression compartment accessible from four sides
- Compact construction
- Robust technology
- Menu-driven operation
- Integrated switch cabinet

Your benefits:

- Format change is very fast
- Remarkable flexibility
- High productivity
- Very easy cleaning
- Low space requirement
- Low maintenance
- Simple, logical operation



The production of small batches is a specialized branch of tablet engineering. It is integral wherever the variety of products is wide, in contract production and galenic applications.

At FETTE we have introduced the 1200*i* into our product line to meet these needs. More fully developed, and equipped with the innovative fittings of the *i*-series, it is a particularly small tablet press that sets a benchmark in terms of economy. Extreme versatility, high flexibility, very short changeover times, remarkably easy cleaning, robust technology and a low space requirement are all critical design elements. The calculable lifetime costs and the low maintenance are of import to contract producers.

The 1200*i* occupies the niche for "economically viable small batches" amongst the tablet presses available on the market.



So small – but highly developed, powerful and quickly refitted.

The 1200*i* versatility



Wide range of applications

- Fast format change
- Secure removal system
- Straight forward, robust technology
- Ergonomic height
- Precise turret positioning

Impressive performance data

- Up to 230,400 tablets per hour
- Reproducible production parameters
- High performance basic equipment
- Easy validation



Modular system

- 1200i tablet press with exchangeable turret
- Ergonomic, height-adjustable operating terminal with 15" touch-screen
- Hermetically sealed, integrated control cabinet with CAN Bus technology
- Extremely small footprint, with optimum accessibility from all sides
- Peripheral devices:
 - GRATEX (de-dusting and deburring)
 - CHECKMASTER 4.1 (in-process control of tablet weight, thickness, hardness and diameter)

Versatility through exchangeable turrets

- Reduction of down-time through the use of additional exchangeable turrets, complete with cams and tools
- Short cleaning time through easy accessibility
- Increased yield through the use of the optimum turret for the tablet diameter



Operation of the 1200*i*

Ergonomic operating panel

- 15" Touch screen
- Powerful Pentium industrial PC
- Optional CD writer
- Windows NT® operating system
- Uninterruptible power supply, no data lost
- Computer-controlled, individual height adjustment
- Modem for teleservice
- Optional wireless terminal for remote operation

Easy machine operation

- Touch screen
- Easy screen-guided operation
- Structured diagnostic messages for rectifying malfunctions
- Production-specific process variables displayed, in addition to the parameter lists, using symbols and process graphs
- Help texts provide descriptions of parameters and diagnostic messages
- All production-relevant data is registered
- Pre-determined batch data can be re-used repeatedly
- 9 different user levels available for security
- Optional diagnostic messages by e-mail or SMS
- Optional integrated video support
- Optional digital spare parts list



The 1200*i* control

Reliable control

- Decentralized computer logic
- Direct control of all motor driven adjustments of the machine
- Acquisition of data from all measurement points
- High-speed data transfer to the evaluation unit and operator interface via Ethernet TCP/IP
- Clearly structured control loops
- Extremely stable regulation
- Incorporation of process-specific data into the control process
- High sensitivity measurement points
- Precise single ejection related to compression force

Detailed documentation

- Change log records any and all operator inputs and changes
- Process data documentation (production record/result record)
- Operating status documentation (diagnostic record)
- Complete overview with automatic analysis
- Batch record
- Version management
- Single-channel force curves
- Single-punch graphs
- Punch statistics for each individual punch
- Statistical parameter trend display
- Electronic calibration record



Structure of the 1200i

Modular mechanical construction

- Maximum precision, even under the following stresses:
 - static
 - dynamic
 - thermal
- Optimized stability (FEM calculation)
- Maximum operating security
- Maximum working safety
- Enclosed compression compartment (noise/dust)
- Integrated control cabinet design
- No cross-contamination
- Long maintenance intervals
- Modular design with separation into 4 sections:
 - head section
 - compression compartment
 - middle area
 - drive area

Compression compartment

- Precision turret mounting
- Turret and turret shaft frictionally engaged and form-fitting
- All compression stations have the same construction
- Compression stations can be easily moved out
- Pre-compression roller and main roller have the same dimensions
- Pre-compression and main compression force up to 80 kN possible

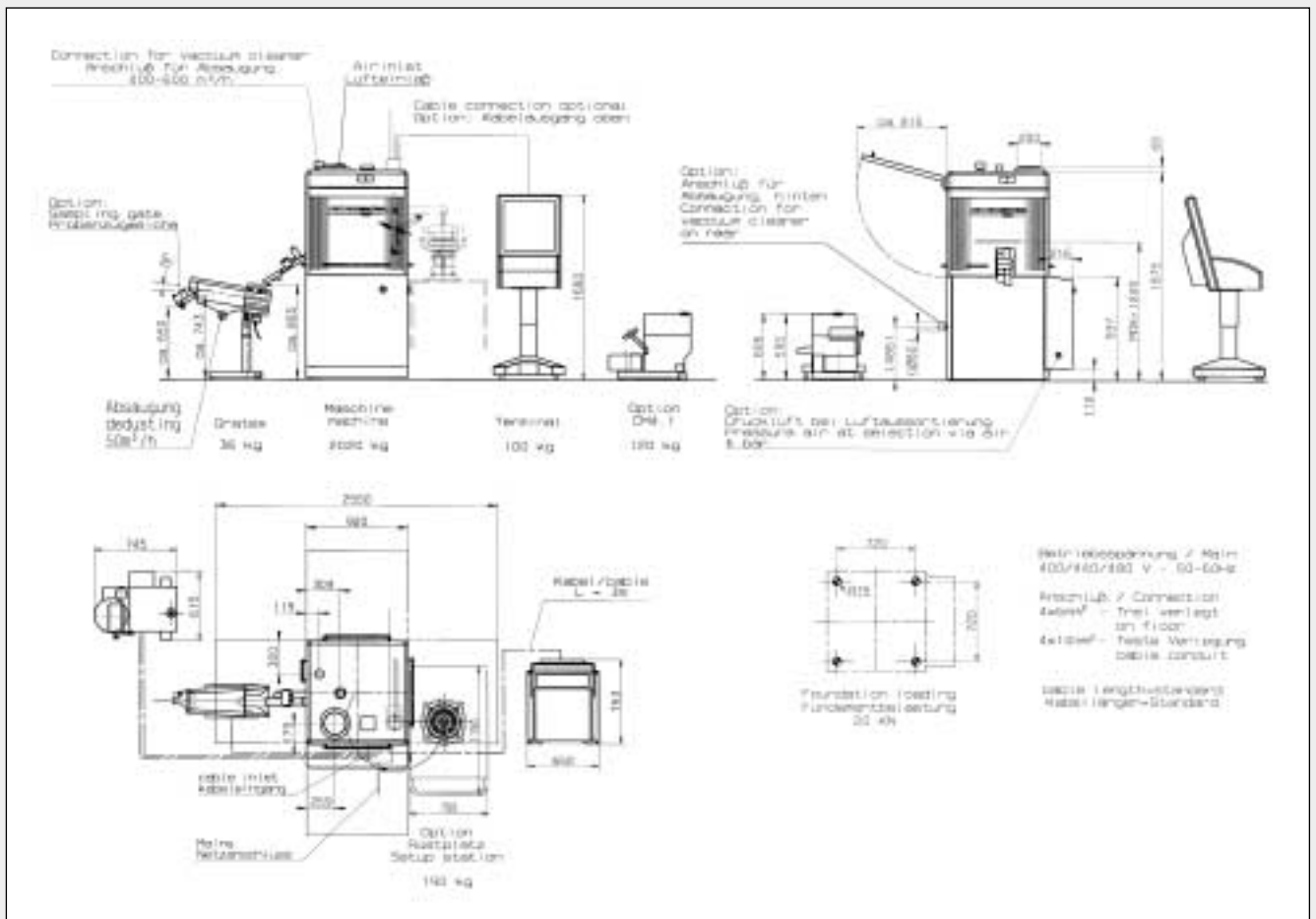
Drive area

- Detachable drive unit with torque support
- Stable straight bevel gear pairing with high efficiency

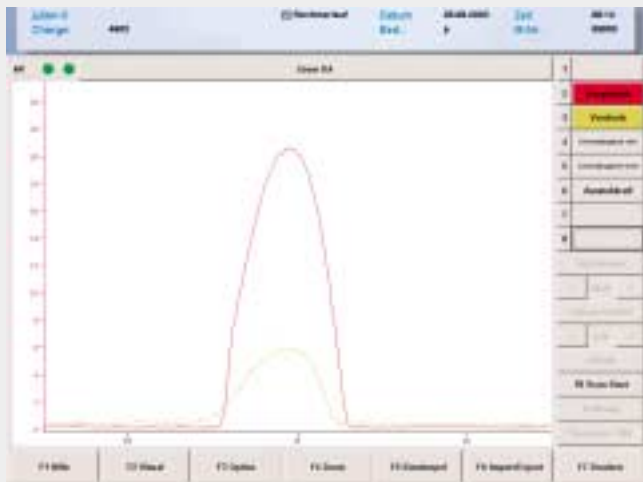
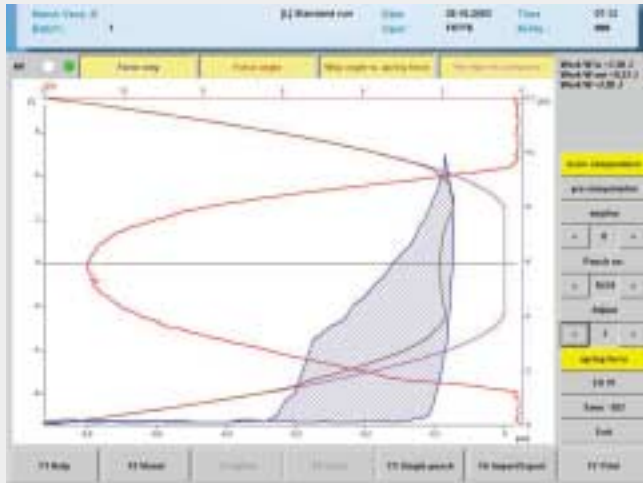
1200i technical data, space requirement

Number of punch stations		32	30	24	20	20
Punch type		EU 19 BBS	EU 19 (IPT/TSM 19) BB	EU 19 (IPT/TSM 19) B	EU1* (IPT/TSM 1*) D	EU 1*-441
Tablet output/h	min. max.	48.000 230.400	45.000 216.000	36.000 170.800	30.000 120.000	30.000 120.000
Max. compression force	kN	80*	80	80	80	80
Max. pre-compr. force	kN	80*	80	80	80	80
Max. tablet diameter	mm	11	13	16	25	25
Max. filling depth	mm	18	18	18	18 (22)	18 (22)
Max. tablet thickness	mm	8,5	8,5	8,5	8,5 (11)	8,5 (11)
Pitch circle diameter	mm	280	280	280	280	280
Turret rotation speed	min ⁻¹	25-120	25-120	25-120	25-100	25-100
Die diameter	mm	22	24	30,16	38,1	38,1
Die height	mm	22,22	22,22	22,22	23,8	23,8
Punch shaft diameter	mm	19	19	19	25,35	25,35
Punch length	mm	133,6	133,6 (133,35)	133,6 (133,35)	133,6 (133,35)	133,6
Upper punch penetr. depth	mm	1-4	1-4	1-4	1-4	1-4
Weights		Tablet press approx. 2500 kg · Operating rack 100 kg				
Power supply data		Operating voltage 330-510 V, 50/60 Hz · Total fusing 35 A/6 · Power consumption 6,5 kW				

*Tools only permit a max. of 70 kN. If tools are large and filling depths are high, the machine cannot be run at the highest capacity. Because of the technical progress we reserve the right of alteration.



The 1200i Galenic package



Convenient Galenics

- No additional instruments required
- Both the measurements and the machine setting data are available on one system
- Punch station selection
- Display of all punches in a full rotation
- Zoom function for x and y displays
- Storage of data on hard disk
- Optional data export and import via storage media or network
- Data evaluation on separate PC
- Printing function
- Directory function
- Automatic encoder zero position adjustment
- Easy scale-up due to the same size pressure rollers, same type of filling and identical pre-compression and main compression force measurement on all FETTE tablet presses
- Force curves accurately assigned to each punch by means of encoder and calculation of the horizontal and vertical punch positions

Principal functions

- Up to 8 measuring channels, currently 5 channels
- Display of force curves for
 - main compression force
 - pre-compression force
 - ejection force
 - upper punch stiffness
 - lower punch stiffness
- Force-displacement diagram of main compression force and pre-compression force for each punch and each rotation of every punch
- Calculation of the mechanical work
- Display of the last three rotations together on one diagram (echo function)
- Punch diagram
- Punch statistics
- Trend display



Effective support for scale-up

- Measurement under production-like conditions
- Measured values provide basic data for higher-yield rotary presses
- The pressure rollers of all FETTE presses have the same geometry, so that the displacement information about the vertical position is always the same
- Simplified scale-up through uniform geometry of the FETTE presses
- Measurement of the main compression force the same on all FETTE machines
- Circumferential speeds can be adjusted to be the same
- Patented measurement of angular position using encoder



Producing small quantities without product loss

- Single-tablet pressing with manual filling
- Optional fitting with a Galenic Fill-O-Matic with the proven 3-chamber system reducing volume by up to 50%
- Fill-O-Matic with 3-point support for easy adjustment
- Fill-O-Matic with sealing frames that can be changed without tools for different tablet diameters

