

FETTE
COMPACTING



3090*i* tablet press
Highest productivity
Highest flexibility
Double-sided rotary press



Leitz Metalworking Technology Group

Highest productivity while running medium to large size batches, highest flexibility in product, form and execution. These are the unique advantages of the FETTE double-sided tablet presses.

In addition the complex integration in production and in management-execution systems (MES) and enterprise resource planning systems (ERP), FETTE has been addressing the demands of the pharmaceutical and related industries for over 10 years in state-of-art requirements.

Not only in material, but in mechanics, hardware and software, the 3090*i* is equipped with a remarkable combination of know-how from both the manufacturer and users. With the 3090*i* we present a double-sided tablet press for the industry that is the leader in financial and technical considerations.



Make double use of existing capacity.
Double your output and more.

Productivity – 3090*i*



Double tablet discharge

- 2 filling devices
- 2 pre- and main compression stations
- 2 tablet discharge chutes

Extremely high performance data

- More than 1 million tablets per hour
- 24-hour lights out production
- Simple and flexible integration into production lines
- Highest format flexibility



Modular design

- Tablet press 3090*i* with interchangeable turret
- *i* Ergonomic, height-adjustable operating terminal with 15" touch-screen
- Electrical cabinet with VME bus computer
- Peripheral devices:
 - GRATEX (de-dusting and deburring)
 - CHECKMASTER 4.1 (in-process control of tablet weight, thickness and hardness)
 - METALCHECK (checking for metallic impurities)
 - Vertical de-duster
 - LOADING CENTER (for tablets)

Increased availability

- Reduced cleaning time through improved accessibility
- Reduction of down-time through the use of an extra turret, complete with cams and tools
- Increased annual yield through the use of the optimum turret for the tablet diameter

Flexibility – 3090*i*



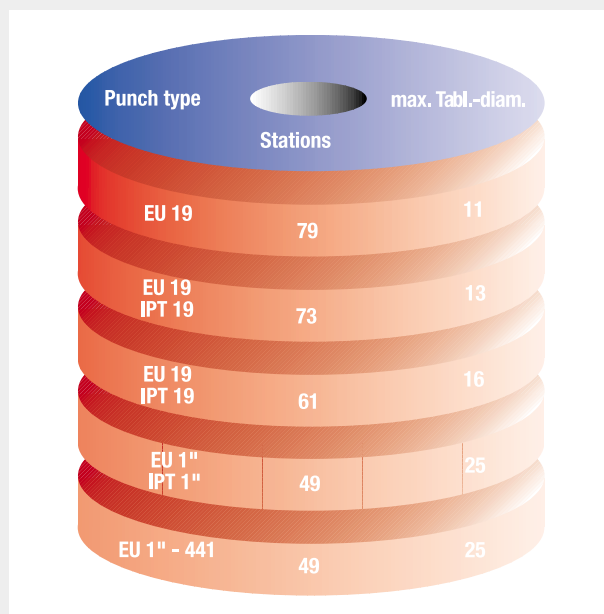
Faster, more reliable turret changeover

- Very rapid turret changeover facilitated by:
 - detaching and clamping by a central shaft
 - automatic centering on the thrust bearing
 - positioning help for centering of the turret
- Large window flaps allow access from all four sides
- Turret changeover from two sides possible
- Cantilevered turret unit mounting
- *i* Menu-driven operation through the terminal, security ensured through acknowledgement function, avoiding incorrect operation and subsequent damage



Turret with patented properties

- Our patented turret is removed complete, including all cams and punches
- Upper cams available in bronze or plastic
- Very high availability
- Increased productivity in 24-hour use
- Minimal adjustment time needed to change production requirements
- Lower punch secured against falling out with patented punch retaining band
- *i* Hard-chrome plated or stainless steel turrets are available as options
 - increased resistance to abrasion
 - increased resistance to chemicals
 - reduced roughness, smoother surfaces
 - improved and faster cleaning (washable)



Turret options

- Standardized EU and IPT formats
- Double layer tablets for all formats



Double layer tablets

- Easy changeover from single to double layer production within twenty minutes
- Optimized separation of both layers
- Patented, automatic tablet sampling

Operation – 3090*i*

Ergonomic operating panel

- 15" touch-screen
- Powerful Pentium industrial PC
- Optional CD-writer available
- Windows NT® operating system
- Uninterruptible power supply prevents data loss
- Color inkjet printer
- Computer-controlled, individual height adjustment
- Modem for teleservice
- Optional wireless terminal for remote operation



Easy machine operation

- Touch-screen
- Easy screen-guided operation of symbols and buttons
- Structured diagnostic messages for rectifying malfunctions
- Production-specific process variables displayed, in addition to the parameter lists, using symbols and process graphics
- 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

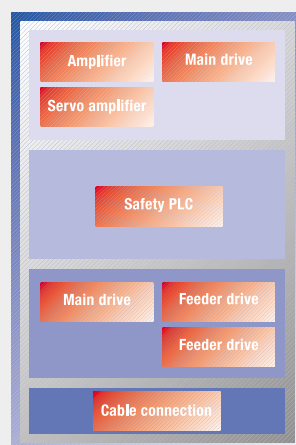
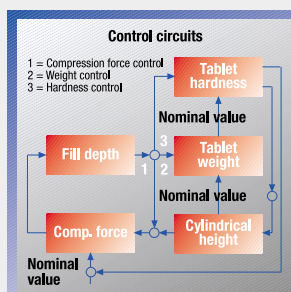
Control – 3090*i*

Safety-oriented electrical cabinet

- *i* Flexible separation of gray and white zone
- *i* Modern computer system, real-time
- *i* Total encapsulation of electronic components from surrounding air
- *i* Integrated modem for remote service
- All systems are easily accessible
- Status display via LEDs
- Calibration unit allows control circuit adjustments at any time
- Easy exchange of computer or control components
- Maximum fault reliability and EMS tolerance
- All cables can be plugged in on both sides
- Power and control circuitry is clearly divided
- *i* Unique cooling design using two separate circulation systems
- Temperature reduction through standby operation

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
- Redundant, highly-sensitive measuring points
- Precise single ejection via compression force at high speeds of operation
- Redundant fail safe measurement
- Ejection force monitoring
- Punch tightness measurement
- Patented punch control
- Punch related sampling
- Vacuum control



Detailed documentation

- Electronic change record documents any and all operator entries, adjustments or changes
- Process data documentation (production record/result record)
- Operating status documentation (diagnostic record)
- Complete overview with automatic analysis
- Batch record

Structure – 3090*i*

Modular mechanical construction

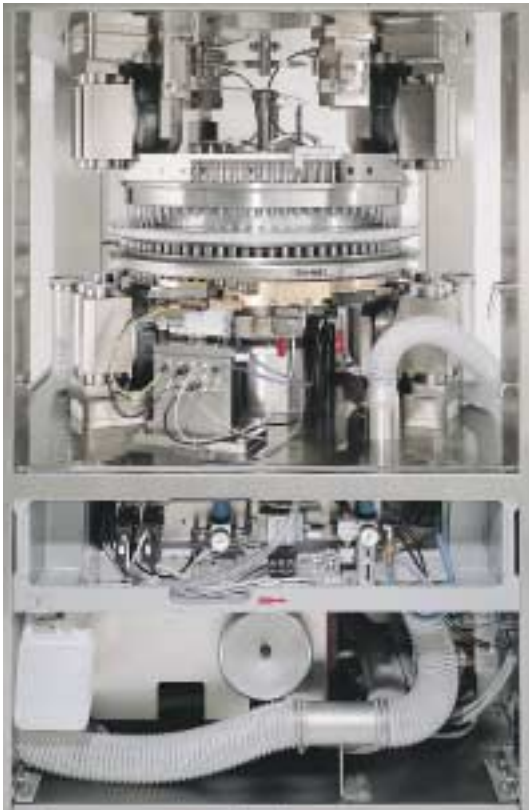
- Greatest accuracy, even under following stresses:
 - static
 - dynamic
 - thermal
- Optimized stability (Finite Element Analysis calculation)
- Maximum operating security
- Maximum working safety
- Enclosed compression compartment (reduces noise and dust)
- Extended maintenance intervals
- Modular design with separation into four sections:
 - head section
 - compression area
 - middle area
 - drive area

Middle section

- Precision mounting of the turret
- Turret and turret shaft frictionally engaged and form-fitting
- All compression stations of same construction
- Maintenance-free servo motors for all adjustments
- Compression stations can be easily moved out
- Pre and main compression stations of the same size can be exchanged for one another
- Pre-compression and main compression force up to 100 kN possible

Drive area

- Suspended base plate with vibration insulation
- *i* Main drive via straight bevel gear pair, improved efficiency, reduced heat generation
- Main drive is held in place by torque
- Turret shaft is stabilized by precisely tapered roller bearings



Dosing

- Automatic detaching and fitting of the dosing station





Sealed compression area

- Paint-free, easily accessible compression compartment
- Double-glazed, frameless window flaps
- Accessible from all four sides
- Conforms with highest GMP standards
- Easy to clean shrouding
- Smooth surfaces
- Strict separation of drive and compression areas
- Removable double-lip seals on the window flaps
- Filling hopper easily removed by twisting and lowering
- *i* Fill-O-Matic with proven three-chamber system
 - easily dismantled
 - easy to clean
 - exchangeable filling, dosing and distribution wheels
 - minimized product loss
 - available in stainless-steel as an option for washability

Dust-free head section

- Plug-in dust extraction
- Efficient dust extraction with vacuum regulation
- Separated material supply
- Design of the machine is refined by
 - noise insulation due to sandwich design
 - noise insulated columns
 - *i* shrouding panels with sandwich structure
 - *i* strengthened window flaps, modified flap seals

Technical Data – 3090i

Number of stations		79	73	61	49	49
Punch type		EU 19	EU 19 (IPT 19)	EU 19 (IPT 19)	EU1" (IPT 1")	EU 1"-441
Tablet output/h	min. max.	284,400 1,137,600	131,400 700,800	109,800 585,600	88,200 470,400	88,200 470,400
Max. compression force	kN	100*	100	100	100	100
Max. pre-compr. force	kN	100*	100	100	100	100
Max. tablet diameter	mm	11	13	16	25	25
Max. filling depth	mm	18	18	18	22	22
Max. tablet thickness	mm	8.5	8.5	8.5	8.5	8.5
Pitch circle diameter	mm	680	680	680	680	680
Turret rotation speed	min ⁻¹	30-120	15-80	15-80	15-80	15-80
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 (133.35)	133.6 (133.35)	133.6 (133.35)	133.6 (133.35)	133.6
Upper punch pen. depth	mm	1-4	1-4	1-4	1-4	1-4
Weights	Tablet press approx. 4500 kg · Operator terminal 100 kg · Electrical cabinet 350 kg					
Power supply data	Operating voltage 330-528 V, 50/60 Hz · Total fusing 25 A · Power consumption 12 kW					

*Tools only permit up to 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.

