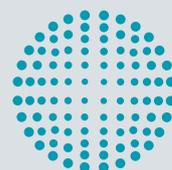




Maximum Economy of Production

3200i

www.fette-compacting.com



**FETTE
COMPACTING**
be efficient



Economic aspects are always intimately related to productivity and to the equipment in use. Under circumstances in which, for example, very large to medium-sized batches of tablets are produced to meet clear specifications, the features of the press can be matched to those particular requirements without losing the benefits of mature, reliable technologies and complete flexibility.

At Fette Compacting we have focused closely on this particular need, and developed a solution that embodies the high-quality of the standard components used in Fette Compacting presses without compromise. The 3200i unites 100% economic viability with the top technology of the leader in this market sector.

Set against the context of the spectrum of modern tablet presses currently in use around the world, the 3200i occupies the position of the “workhorse” so convincingly that any practically relevant cost/benefit calculation comes to one clear result: Fette Compacting 3200i.

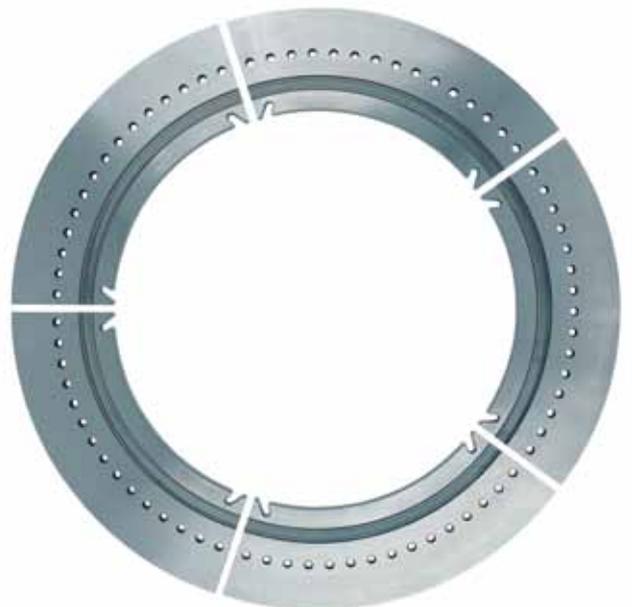
The principal advantages at a glance – 3200i

The innovations

- + High-performance rotary press, effective in practice
- + Productive, precise, reliable in operation, robust
- + Exchangeable die turret
- + Exchangeable segment turret
- + Large number of stations on the turret
- + Operator terminal with 17" touch screen
- + Wide range of accessories and peripherals
- + Maximum security and monitoring
- + Automatic process monitoring
- + High-quality Fette Compacting standard components

Your benefits

- + Excellent cost / benefit ratio
- + Best TCO (Total Cost of Ownership) figures
- + Format change over is very fast
- + High yield, simplified cleaning
- + Maximum profitability with large batches
- + Easy to handle and operate
- + Remarkable flexibility and range of applications
- + 24-hour unmanned operation
- + Future-proof basic equipment and software
- + Conforms to GMP, GAMP and FDA



High productivity through double capacity – 3200i

Double tablet output or 2-layer compression products

- + 2 filling units (Fill-O-Matics)
- + 2 pre-compression and main compression stations
- + 2 tablet outlets
- + Up to 110 punch stations in the segment turret
- + Up to 79 punch stations in the die turret

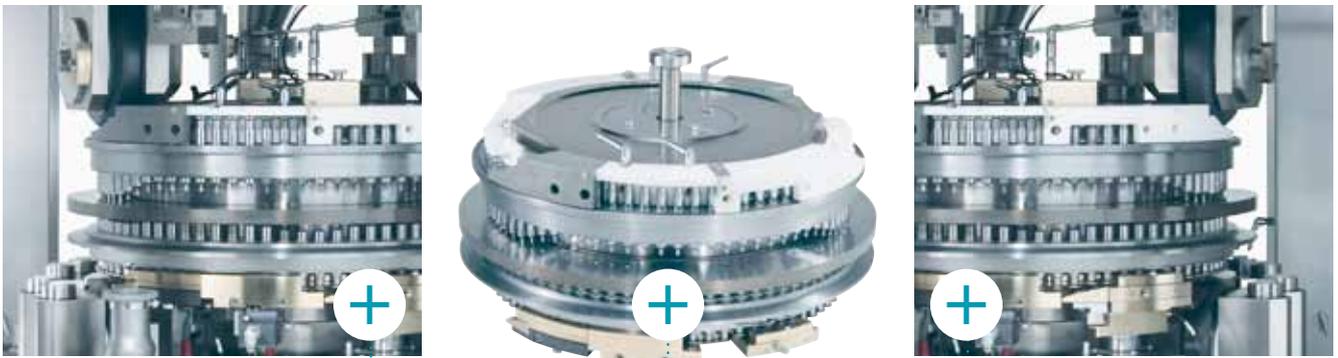
Extremely high performance figures through optimized design

- + More than 1 million tablets/h
- + 24-hour unmanned production
- + Reduction of down-time through the use of a second exchangeable turret or a second segment set
- + Increased yield through segment turret
- + Increase in annual yield through use of the optimum turret in relation to the tablet diameter
- + Shortening of cleaning time through easy accessibility and assembly without special tools
- + Simple and flexible integration into production lines

Fully modular system, with a wide range in optional peripheral units

- + 3200i tablet press with exchangeable die or segment turret
- + 17" touch screen with clearly structured user interface
- + Switch cabinet with VME bus computer
- + Peripheral devices:
 - PKB stearate distributor
 - GRATEX (dust removal and de-burring of tablets)
 - VERTICAL DEDUSTER (de-dusting and vertical transport for further treatment stages)
 - CHECKMASTER 4.1 (in-process control of tablet diameter, thickness, weight and hardness)
 - WEIGHTMASTER 4.1 (alternative, for weightchecking only)
 - METALCHECK (inspection and rejection of tablets contaminated by metal)
 - LOADING CENTER (tablet filling unit)
 - HANDLING SYSTEM for turret exchange





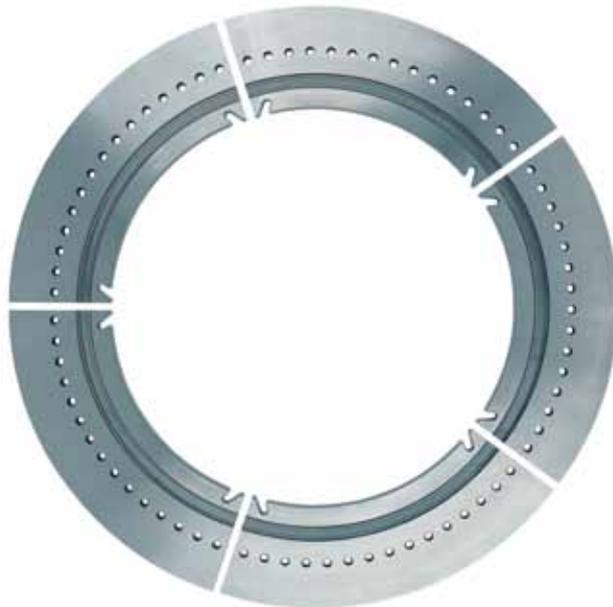
Two identically sized pre-compression and main compression stations on one turret: double capacity



High flexibility with exchangeable segment turrets – 3200i

Turret with patented properties

- + Complete die table package is removed, including all cams and punches, patented
- + Adjustment to changing production requirements in very little time
- + Flexible fitting through standardized parts
- + Lower punch secured by patented punch brake against falling out during exchange
- + Turret optionally manufactured of stainless steel and hard-chromed
 - increased resistance to abrasion
 - increased resistance to chemicals
 - reduced surface roughness, smooth surfaces
 - fast cleaning in the washing centre

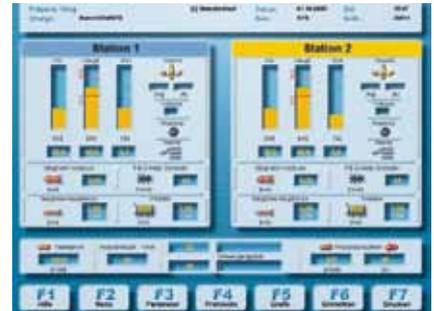


Great simplification achieves powerful performance potentials

- + Die table segments for all current Fette Compacting presses
 - + All the positive features of conventional exchangeable turrets are retained
 - + More stations bring up to 50 % increase in yield, depending on tablet diameter
 - + Radically shortened fitting time through an 88 % reduction in the number of parts
 - + Simplified cleaning without the cracks, bolts and holes of a standard die plate
- + More than 50 % reduction in the loss of product, depending on product properties, through smooth surfaces and the absence of gaps between the die table and the dies
 - + Reduced wear through optimum material properties
 - + Simplified logistics through fewer parts
 - + Lower ejection forces bring higher tablet quality due to smooth surfaces – fast cleaning in the washing centre

Two-layer tablets

- + 2-layer tablets in a wide range of formats
- + Easy refitting from single to double layer
- + Optimum layer separation



Optimum operation with the latest hardware and software – 3200i

Powerful operating panel simplifies secure operation

- + 17" touch screen for an improved overview
- + Powerful Pentium industrial PC offers ideal data processing and storage
- + Windows XP® operating system ensures compatibility
- + Uninterruptible power supply protects against data loss
- + Computer-controlled, user-friendly adjustment of the terminal height, patented
- + Teleservice optional available

Greatly simplified press operation

- + Improved operation with the aid of easily understood icons and buttons
- + Structured diagnostic messages for rectifying malfunctions (expert system)
- + Product-specific magnitudes can be displayed in addition to parameter lists
- + Help texts provide descriptions of parameters and diagnostic messages
- + All production-relevant data are brought together in one view
- + All batch data can be examined
- + Different user levels available for security
- + Full conformity with 21 CFR Part 11

Detailed documentation

- + Any and all operator inputs and changes are recorded in a change log
- + Process data documentation (production record/result record)
- + Operating status documentation (diagnostic record)
- + Complete overview with automatic analysis
- + Batch record
- + Optional version management

Maximum security and monitoring with optimized control – 3200i

Reliable control

- + Direct control of all motor driven adjustments on the machine
- + Optimal monitoring through data collection from all measuring points
- + High-speed data transfer with the evaluation unit and operator interface via Ethernet TCP/IP
- + Clearly structured control loops
- + Highly sensitive measuring points
- + Extremely stable regulation for best tablet quality
- + Incorporation of production-specific data into the control process
- + Precise single-tablet ejection based on compression force ensured

- + Ejection force measurement for production monitoring
- + Measurement of punch tightness
- + Patented monitoring for punch protection
- + Individual quality control, with samples drawn for specific punches
- + Extraction control and monitoring for dust-free compression compartment

Safety-oriented switch cabinet

- + Flexible separation of grey and white areas
- + The most up-to-date computer, real-time
- + Total encapsulation of electronic components from surrounding air

- + Integrated modem for remote service
- + All assemblies are easily accessible
- + Display of current status via LEDs
- + Calibration unit allows control loop adjustments at any time
- + Easy exchange of computer components
- + Maximum resistance to interference and electromagnetic compatibility
- + All cables plugged in at both ends
- + Power and control circuitry are strictly isolated
- + Unique cooling design using two separate circulation systems
- + Temperature reduction through standby operation



Divided structure with encapsulated compression compartment – 3200i

Modular mechanical construction achieves functional benefits

- + Optimized strength (FEM calculation) for long service life
- + Maximum operating security
- + Ideal working safety
- + Low maintenance costs through long service intervals
- + Modular design with separation into 4 sections:
 - head section
 - compression compartment
 - middle area
 - drive area

Dust-free head section

- + Plug-in, easily fitted dust extraction
- + Efficient dust extraction with optional vacuum regulation
- + Separate material feed essential for 2-layer tablets
- + Construction of the whole machine completed by
 - sound insulation through sandwich construction and sound-insulating pillars; less than 80 dB, depending on production data
 - all cladding suspended to minimize vibration
 - reinforced window flaps, modified flap seals

Optimally aligned pressing equipment

- + Precision turret mounting
- + Turret and turret shaft both frictionally engaged and form-fitting
- + All compression stations of the same construction
- + Adjustment of the upper compression rollers through an eccentric unit
- + Lower compression rollers adjusted by servo motors
- + Compression stations can be moved easily
- + Pre- and main compression rollers have the same dimensions for long dwell times
- + Pre- and main compression force can be up to 100 kN



Encapsulated compression area

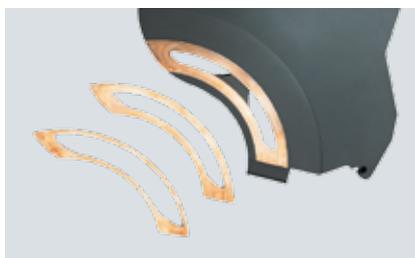
- + Unpainted, uncluttered compression compartment
- + Ideal visibility through window flaps with no frames, double-glazed
- + Very accessible from all 4 sides
- + Conforms to the highest GMP standards
- + Easily cleaned and easily exchanged push-in elements shorten fitting times
- + Smooth surfaces for best possible cleaning
- + Strict separation of drive and compression areas
- + Removable, without tools, double-lip seals on the window flaps
- + Filling hopper easily removed by twisting and lowering

The latest filling system

- + Fill-O-Matic with proven three-chamber system
 - easily dismantled
 - easily cleaned
 - filling and dosage wheel easily exchanged
 - sealing segments matching the tablet diameter brings an enormous reduction in product loss
 - optionally available in washable stainless steel

Drive chamber optimized for fittings

- + Suspended base plate with vibration insulation
- + High performance torque drive unit
- + No gear boxes
- + Precisely tapered roller bearings



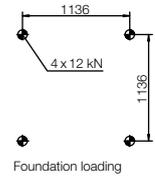
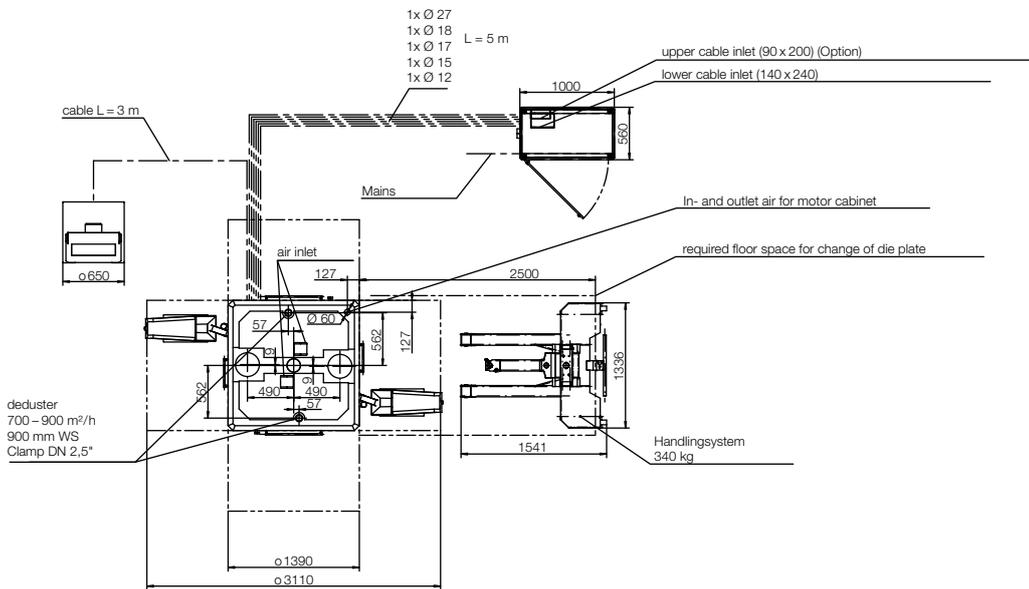
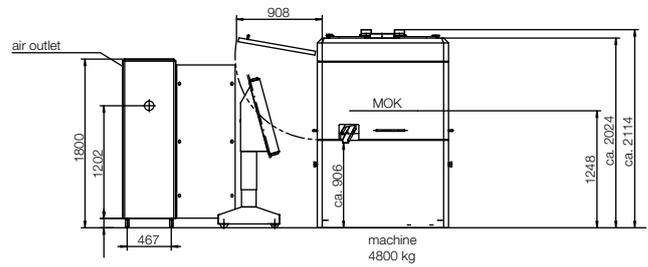
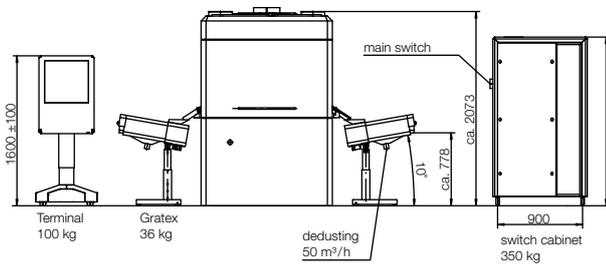
Single sided production optional – 3200i

Continuous production

- + If a packaging machine is attached to each station of a 3200i, it can happen that one of them stops, for reasons associated with the packaging machine, while the other one continues to run. The “single-sided production operation” option makes it possible to continue production at just one of the stations of the press.
- + Advantage when producing singlelayer tablets: if the press is fed from two containers, which will almost never become empty at exactly the same time, then when one of the containers has run out it is possible to continue production from the material remaining in the second.
- + Since the 3200i is a symmetrical double press, the “single-sided production operation” function can also be used if components on one side fail, in order to continue operation with the other half.



Floor plan – 3200i



pressure air min 6 bar for
 Option: air rejectsystem
 Main
 400/440/480 V – 50–60Hz
 Connection
 4 x 6mm² on floor
 4 x 10mm cable conduit

Technical data – 3200i

NUMBER OF PUNCH STATIONS		110 SEGMENTS	75 SEGMENTS	55 SEGMENTS	45 SEGMENTS	79 DIES
Punch type		FS12	EU 19 (IPT 19)	EU1"/EU1"-441 (IPT 1")	EU 35	EU 19 BBS
Tablet output/h	min.	396,000	135,000	99,000	81,000	142,200
	max.	1,584,000	1,080,000	528,000	432,000	1,137,600
Max. compression force	kN	25 **	100	100	100	100 *
Max. tablet diameter	mm	11	11 (18)	25	34	11
Max. filling depth	mm	18	22	22	26	18
Max. tablet thickness	mm	8.5	8.5	8.5	8.5 (11)	8.5
Pitch circle diameter	mm	680	680	680	680	680
Turret rotation speed	min ⁻¹	30–120	15–120	15–80	15–80	15–120
Die diameter	mm	–	–	–	–	22
Die height	mm	–	–	–	–	22.22
Punch shaft diameter	mm	12	19	25.35	35	19
Punch length	mm	133.6 (133.35)	133.6 (133.35)	133.6 (133.35)	133.6	133.6 (133.35)
Upper punch pen. depth	mm	1–4	2–4 (8)	2–4 (8)	2–4 (8)	2–4 (8)
Weights	kg	Tablet press approx. 4,500 kg, Operator terminal 100 kg, Electrical cabinet 350 kg				
Power supply data		Operating voltage 360–528 V, 50/60 Hz, Total fusing 50 A, Power consumption 12 kW				

73 DIES	61 DIES	49 DIES	49 DIES	49 DIES
EU 19 (IPT 19) BB	EU 19 (IPT 19) B	EU 1" (IPT 1") D	EU 1"-441	EU 35
131,400 700,800	109,800 585,600	88,200 470,400	88,200 470,400	66,600 355,200
100	100	100	100	100
13	16	25	25	34
18	18	22	22	26
8.5	8.5	8.5	8.5	8.5 (11)
680	680	680	680	680
15-80	15-80	15-80	15-80	15-80
24	30.16	38.1	38.1	52
22.22	22.22	23.8	23,8	30
19	19	25.35	25.35	35
133.6 (133.35)	133.6 (133.35)	133.6 (133.35)	133.6	133,6
2-4 (8)	2-4 (8)	2-4 (8)	2-4 (8)	2-4 (8)

* Tools only permit up to 70 kN.

** FS 12 punches only permit up to 25 kN.

If tools are large and filling depth is high the machine cannot be run at the highest capacity. (8) at 2-layer for first layer

Because of the technical progress we reserve the right of alteration.

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