



Workhorse for large production quantities

3090i

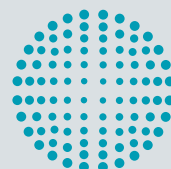
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TECHNOLOGY



COMPETENCE

SERVICE



**FETTE
COMPACTING**
be efficient

Fette Compacting 3090i – Double Rotary Press

The 3090i double rotary press is the ideal solution for producing medium to large batches. The system is designed to meet the demands of flexible, high-performance production. With the FS12® turret/punch package, you can compress more than 1.5 million tablets per hour. At the same

time, switching between products with different formats and shapes is easy. Integral components of the 3090i double rotary tablet press include an automatic turret clamping system and maintenance-free servomotors for adjusting the compression rollers.

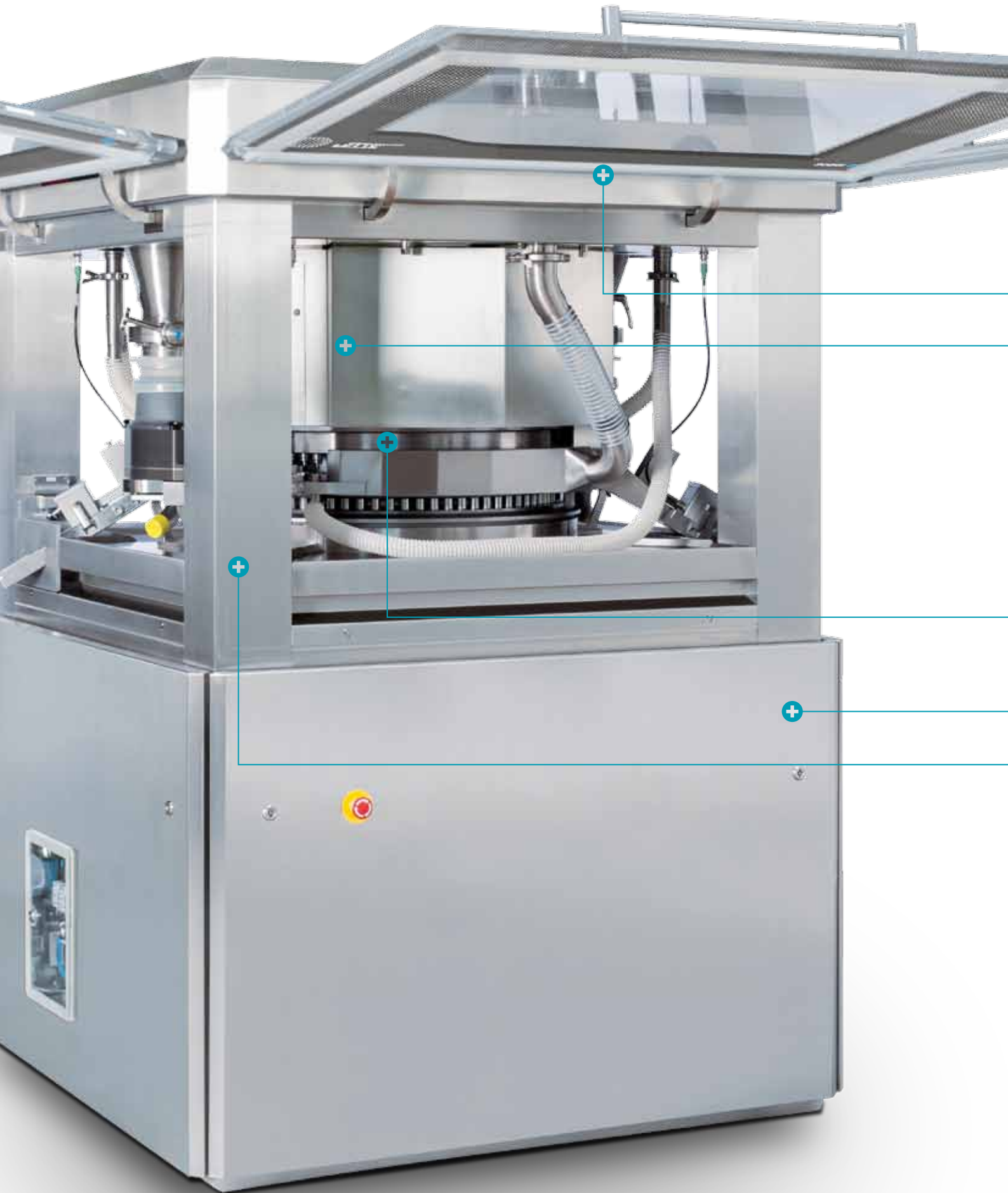


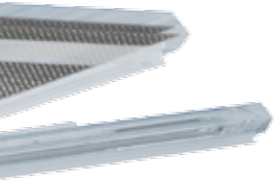
TECHNOLOGY stands for everything we offer in production technology – from tablet presses and capsule filling machines through process equipment to tableting tools and format parts.

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.







Press area

- + Precise turret mount
- + Friction-locked and form-fitting connection between turret and turret shaft
- + Identical design for all compression rolls
- + Maintenance-free servomotors for adjustment
- + Easy release of compression rolls
- + Same sized pre-compression and main compression rollers
- + 100 kN pre-compression and main compression possible

Dust-proof upper housing

- + Plug-in dust extraction
- + Efficient dust extraction with low pressure control
- + Two separate feed hoppers
- + Overall machine design includes
 - Noise insulation via sandwich design
 - Sound absorbing supports
 - Vibration-free mounting for all shrouds
 - Reinforced window flaps, modified seals on flaps

Dosing

- + Automatic dosing release and clamping

Drive area

- + Vibration-free mounted floor plate
- + Drive unit mounted and torque stabilized
- + Powerful, state-of-the-art direct torque drive for maintenance-free operation

Enclosed press area

- + Unpainted, clean press area
- + Frameless, double-glazed window flaps
- + Accessible from all four sides
- + Extremely GMP-compliant
- + Easy-to-clean shroudings
- + Smooth surfaces
- + Strict separation from drive units and metering points
- + Removable double-lip seals for window flaps
- + Hopper easily removed by turning downward
- + Fill-O-Matic with proven three-chamber system
 - Easy to remove
 - Easy to clean
 - Filling and dosing wheels exchangeable
 - Stainless steel optional

MODULAR MECHANICAL LAYOUT

- + Maintains precision even under the following stresses
 - Static / dynamic / thermal
- + Optimized strength characteristics (FEM calculation)
- + Peak reliability
- + Enclosed press area
- + Long maintenance intervals
- + Platform strategy with clear division into four sections
 - Upper housing / press area / middle housing / drive area

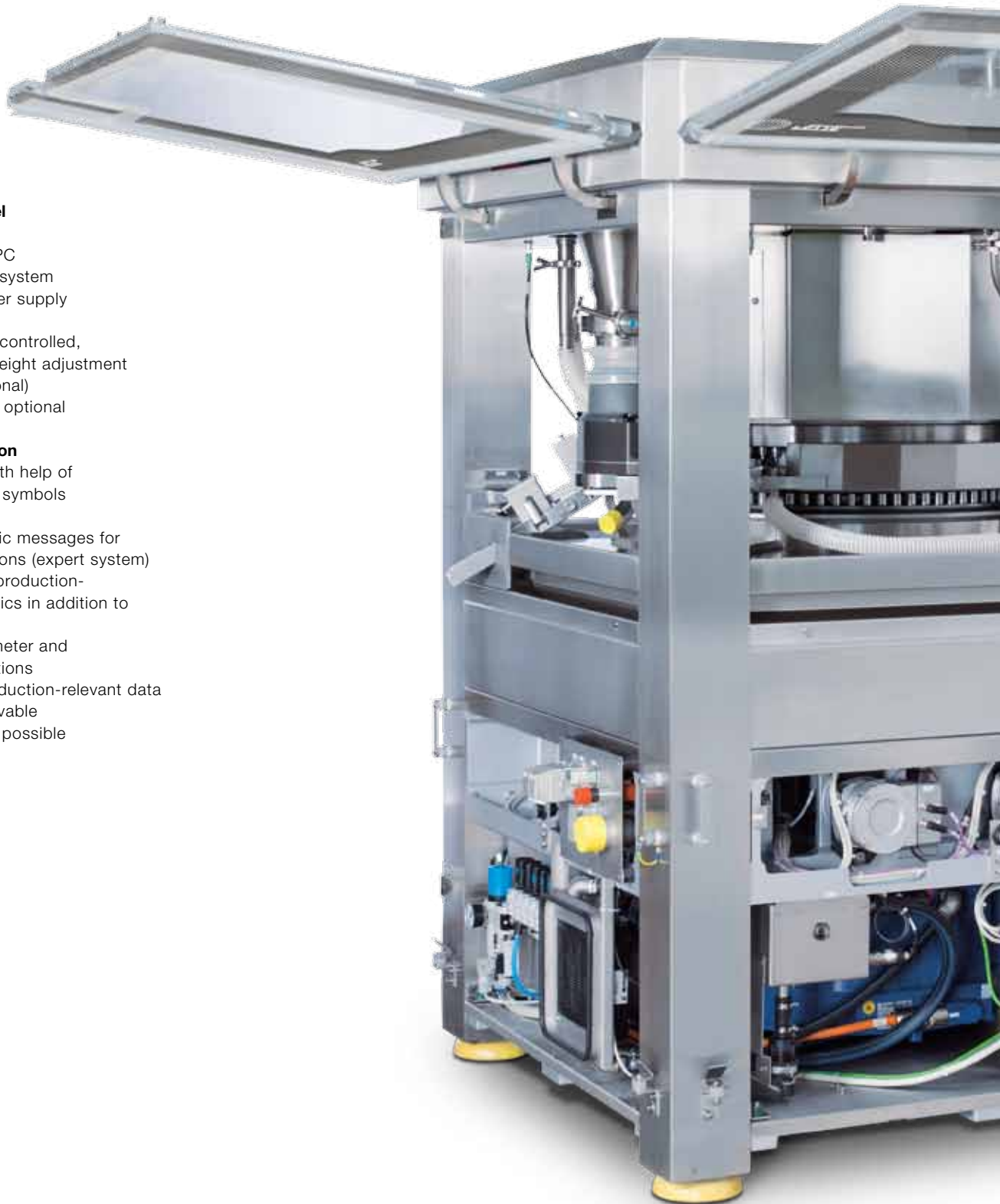
Operation and Control

Powerful control panel

- + 15" touchscreen
- + Powerful industrial PC
- + Windows operating system
- + Uninterruptible power supply prevents data loss
- + Patented computer-controlled, individual terminal height adjustment
- + Service Portal (optional)
- + OCIF/OPC interface optional

Easy machine operation

- + Better operability with help of easy-to-understand symbols and buttons
- + Structured diagnostic messages for correcting malfunctions (expert system)
- + Optional display of production-specific characteristics in addition to parameter lists
- + Help texts for parameter and diagnostics descriptions
- + Recording of all production-relevant data
- + All batch data retrievable
- + Different user levels possible





Comprehensive documentation

- + User intervention consistently documented (change log)
- + Process data documentation (production log/results log)
- + Status documentation (diagnostics log)
- + Overview with automatic analysis
- + Batch log
- + Versioning

Safety-oriented electrical cabinet

- + Flexible separation between grey and white area
- + Real-time, state-of-the-art computer systems
- + Electrical components completely closed off from ambient air
- + All components directly accessible
- + Calibrating unit makes it possible to adjust measuring circuits at any time
- + Easily exchange computer or control components
- + Highly resistant to interference and EMC compatibility
- + All connection cables can be plugged in on either end
- + Strict separation between power and control components
- + Unique cooling design through two separated circuits
- + Temperature reduction through stand-by mode

Stable control

- + Direct control and regulation of all motorized adjustment options on machine
- + Data recording from all metering points
- + Clearly structured control circuits
- + Stable control mode
- + High-precision, compression-based single tablet rejection
- + Redundant compression force measuring
- + Ejection force measuring
- + Punch tightness measuring
- + Patented punch control
- + Punch-based ejection for batch sampling
- + Extraction control and monitoring

Productivity



Double-sided production

- + Two filling devices
- + Two pre-compression and main compression stations
- + Two tablet discharges

Extremely high performance

- + More than 1.5 million tablets per hour
- + 24-hour lights out production
- + Simple, flexible integration in production lines
- + Top format flexibility

PRODUCTIVITY INCREASE THROUGH EXCHANGEABLE TURRET

- + Reduced cleaning time through easier accessibility
- + Reduced down-time through use of second exchangeable turret, complete with cams and tools
- + Increased annual output through use of optimal turret for tablet diameter

Fast, safe turret exchanging

- + Particularly fast turret exchanging through:
 - Releasing and clamping by a central fixing bolt
 - Automatic centering on counter-bearing
 - Threader makes inserting turret easier
- + Wide open window flaps allow access from all sides
- + Turret removal possible from two sides
- + Floating turret mounting bearing
- + Menu-based terminal operation with advanced security via acknowledgement commands prevents user error and damage

Turret with patented features

- + Patented complete turret removal, incl. all cams and punches
- + High machine availability
- + Quickly adapts to various production conditions
- + Lower punch with patented punch retainer prevents punches from dropping
- + Turret also available in stainless steel and chromium-plated
 - Greater resistance to wear
 - Greater chemical resistance
 - Lower surface roughness, smoother surfaces
 - Better and faster cleaning (washable)

Turret mounting options

- + Flexible mounting through standardized EU, IPT/TSM and FS (Fette Compacting Standard) punch head profiles
- + Bi-layer tablets in varying formats

Bi-layer tablets

- + Easy conversion from single- to bi-layer production
- + Optimal layer separation
- + Patented sampling



Stainless Steel Fill-O-Matic



Cleanability and simplicity as design philosophy

The stainless steel Fill-O-Matic's simplicity, smooth, GMP-compliant surfaces and easy cleanability make it captivating not just when installed in the tablet press, but also by itself. Installation and removal have been simplified while retaining the expected high level of precision when filling dies and minimizing product loss.

Proven parts retained, new parts integrated effectively

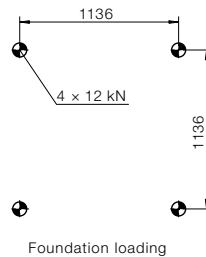
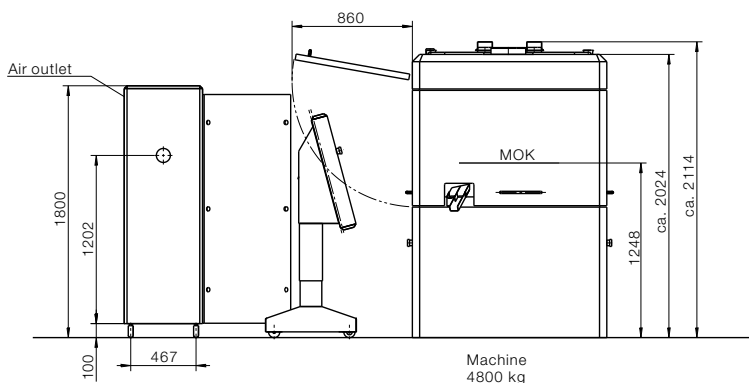
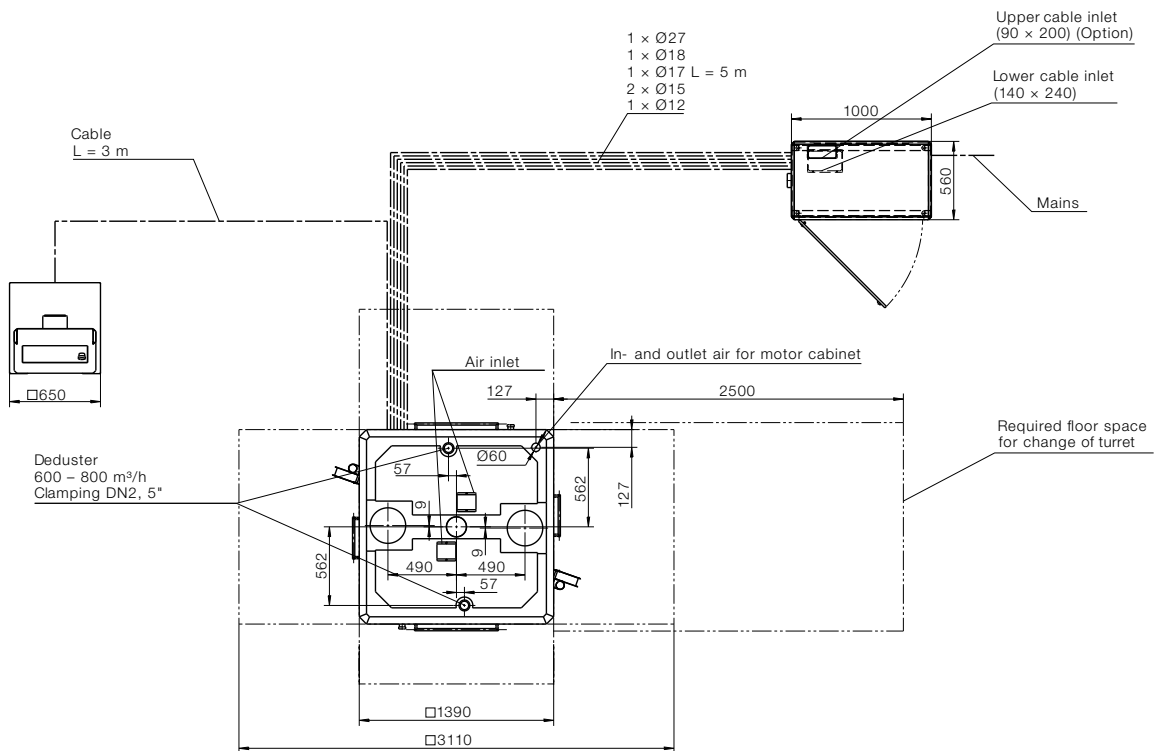
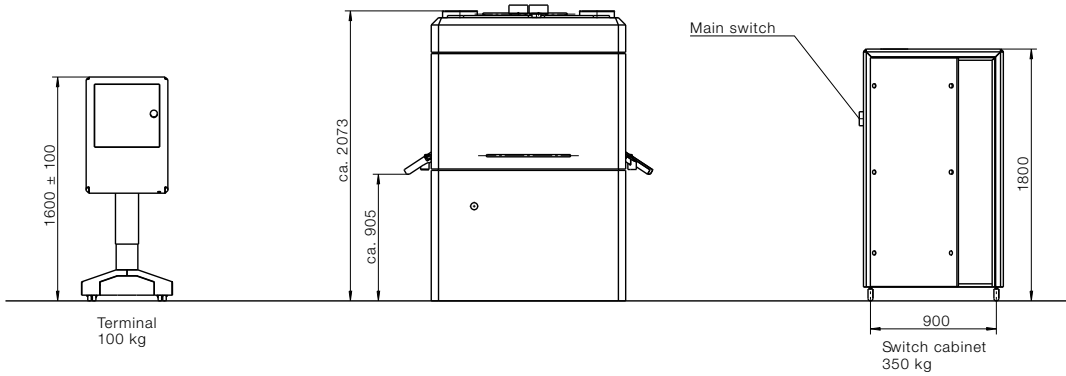
- + Maintains proven three-chamber system
- + Exchangeable for aluminum Fill-O-Matic
- + Easy to remove
- + Easy to clean – high chemical resistance
- + Smooth, GMP-compliant surfaces with minimal surface roughness
- + Filling, dosing and distribution wheels with flat bars in stainless steel, with round rods optional
- + Easily change direction on dosing wheel
- + Clean separation in filling chambers between gearbox and drive system
- + All parts in contact with product can be cleaned in a wash center
- + Optional baseplate with interchangeable slide-in inserts for adapting to different tablet diameters and reducing product loss
- + Integrated mount for product scraper behind Fill-O-Matic
- + GMP-compliant surfaces with a surface roughness of $< 0.3 \mu\text{m}$; advantage: quick cleaning
- + Filler plate with three replaceable sealing segments to adapt to the tablet diameter; Advantage: Reduction of product loss



Dimensions



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Pressure air min 6 bar for
Option: air rejectsystem

Main
400/440/480 V
50 – 60 Hz

Connection
4 × 6 mm² – on floor
4 × 10 mm² – cable conduit

Technical Data

Die (D) / Segments (S)		D	D	D	D
Number of punch stations		79	73	61	49
Punch type		FS19®/EU19 BBS	FS19®/EU19 TSM19 BB	FS19®/EU19 TSM19 B	EU1"/ EU1"-441 TSM1" D
Tablet output units/h	min.	284,400	131,400	109,800	88,200
	max.	1,137,600	1,051,200	878,400	470,400
Max. compression force 1*	kN	100	100	100	100
Max. compression force 2*	kN	100	100	100	100
Max. compression force 3*	kN	100	100	100	100
Max. compression force 4*	kN	100	100	100	100
Max. tablet diameter	mm	11	13	18	25
Max. filling depth 1st layer	mm	18	18	18	22
	2nd layer	mm	8	8	8
Pitch circle diameter	mm	680	680	680	680
Turret rotation speed min.	mm ⁻¹	15	15	15	15
	max.	mm ⁻¹	120	120	120
Die diameter	mm	22	24	30.16	38.1
Die-/segment height	mm	22.225	22.225	22.225	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	1,390 × 1,390 × 2,024			
Weight	kg	Tablet press 4,500 – 4,700 kg, operating terminal 100 kg, switch cabinet 350 kg			
Electrical supply parameters		Operating voltage 400 – 480 V, 50/60 Hz, power consumption 17 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, ** 2-layer-operation

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S	S	S
110	75	55
FS12®	FS19®/EU19 TSM19	EU1"/ EU1"-441 TSM1"
396,000	270,000	99,000
1,584,000	1,080,000	528,000
33	100	100
33	100	100
33	100	100
33	100	100
11	18	25
22	22	22
8	8	8
680	680	680
15	15	15
120	120	80
-	-	-
25	25	25
19	19	25.35
133.6	133.6 (133.35)	133.6 (133.35)
1-4 (8**)	1-4 (8**)	1-4 (8**)

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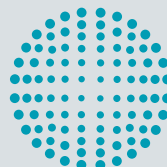
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