

GMP-compliant handling of tableting tools

EasyCare

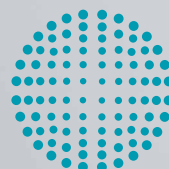
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TECHNOLOGY



COMPETENCE

SERVICE



**FETTE
COMPACTING**
be efficient

The transport, cleaning and preservation of tableting tools play a decisive role when it comes to tablet quality. Fette Compacting recommends the EasyCare solutions for tableting tools to achieve optimal tool life:



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.

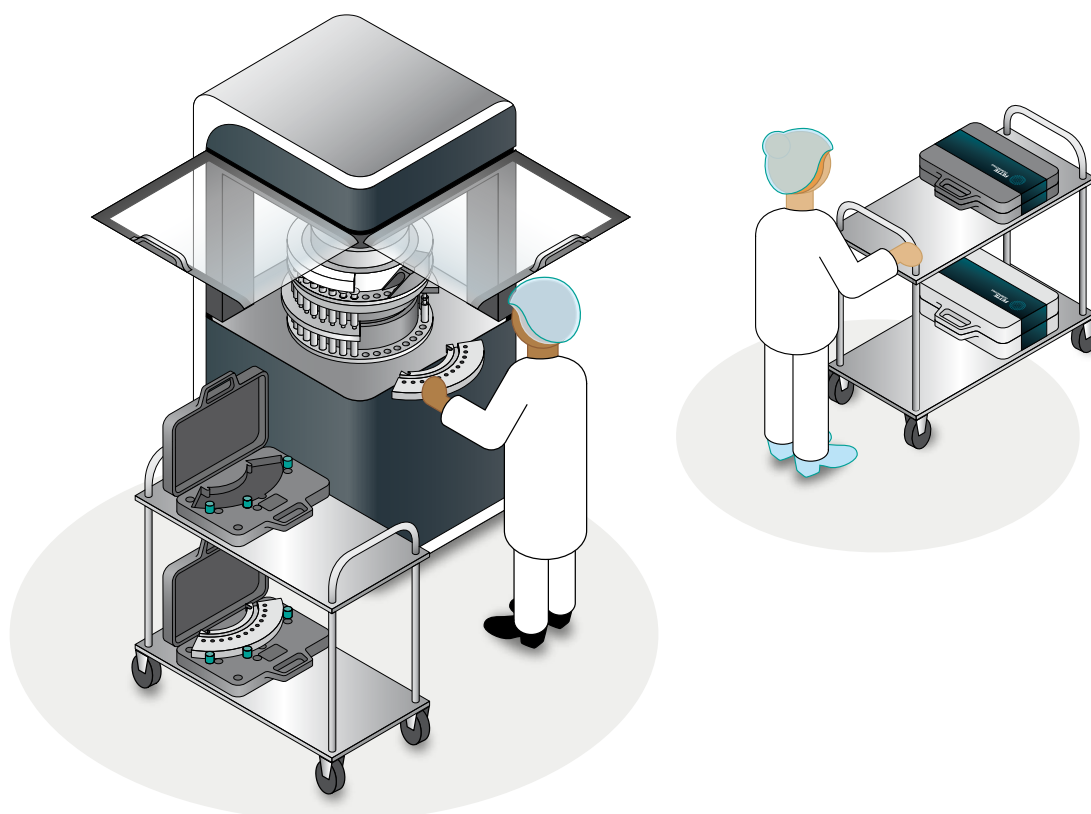
SERVICE covers all the services related to machines, Process Equipment and installations such as spare parts supply, plant modernization and technical field service department.

COMPETENCE is the overarching idea behind all our process-related services. This includes training, product trials, application and Performance Consulting as well as engineering.

Safe and efficient handling of tableting tools



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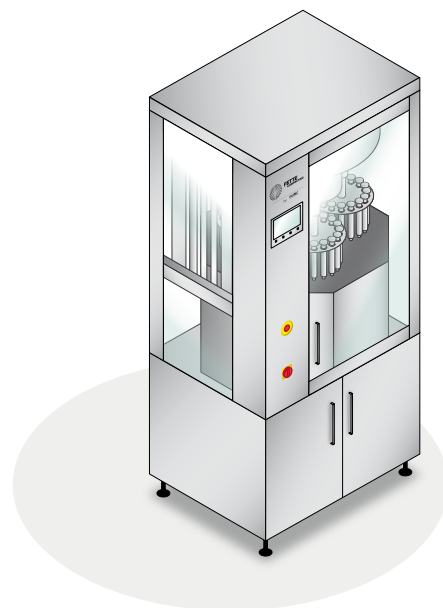
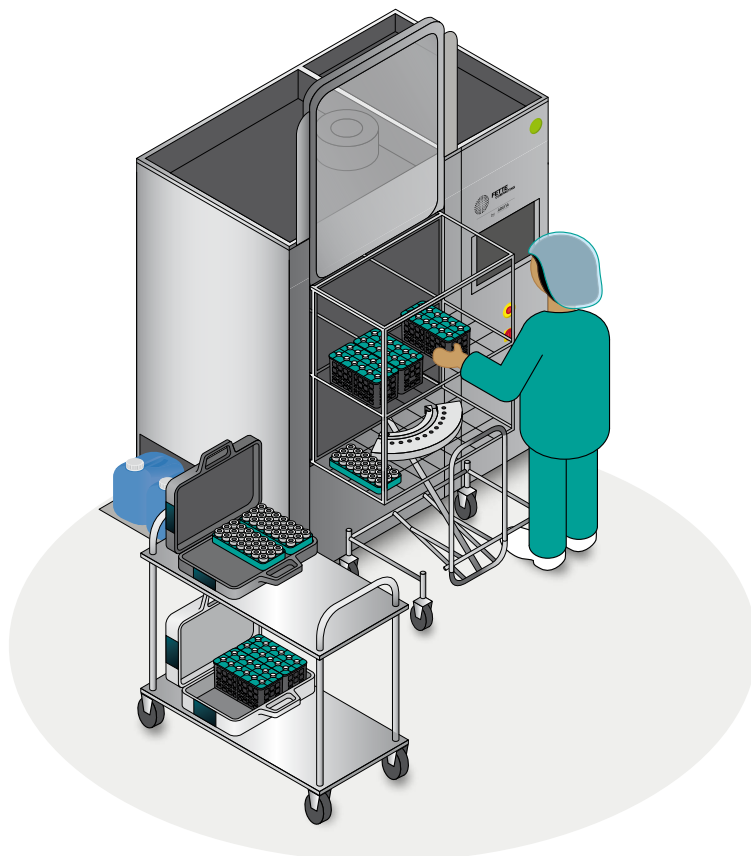
Daily tablet production demands quite a lot of the requisite tools. Although many manufacturing steps are entirely automated, tableting tools are still usually handled manually. This gives rise to a significant risk of damage to these sensitive and key tableting components. Even a minor collision – as is often possible during transport, removal from the warehouse or during cleaning – can damage the punches. A user-friendly solution is now available for risk-free handling.

TRI.EASY box system

Fette Compacting offers an all-in-one solution for optimal transport and storage, which covers all of the steps associated with tool handling in a single system. The ergonomic design means that the risk to operators is significantly reduced. Fewer steps are required, which enables optimization of the production speed and quality.

The patented TRI.EASY box system comprises different types of boxes for punches, segments and dies for safely storing and transporting tools. The punches are accommodated in special trays, enabling the user to transfer them directly from the box to the cleaning machine. This also dispenses with the time-consuming task of rearrangement.

EasyCare – easy cleaning, polishing and storage of tableting tools



Cleaning the tools

The following components are recommended for GMP-compliant cleaning of single or multiple punches, segments, dies, bellows and dust caps:

- TRI.EASY trays with predefined positions for punches, segments, dies, bellows and dust caps from Fette Compacting
- Cleaning plant with GMP-compliant hygiene design from ARUNA AG, including specially developed wash racks with predefined position for Fette Compacting TRI.EASY trays
- Cleaning agent and corrosion protection from Borer Chemie AG for residue-free validated cleaning and preservation

Cleaning agents: deconex® CIP power-x, special alkaline cleaning agent and deconex® CIP fresh for the pharmaceutical industry

Corrosion protection: deconex® HT 1191, specially suitable for preserving tableting tools. The remaining corrosion protection is approved as a food additive in line with U.S. CFR 21, sections 172, 175 and 181.

Polishing the tools

After cleaning, we recommend mechanical polishing of the tools. This ensures that the tools and surfaces are polished evenly for improved efficiency and maximum productivity. It also reduces the risk of damage compared to manual polishing. And there is also a reduction in tablets sticking to the punches.

Both the granulate used and the polishing paste used are suitable for use in the pharmaceutical industry due to their food conformity.

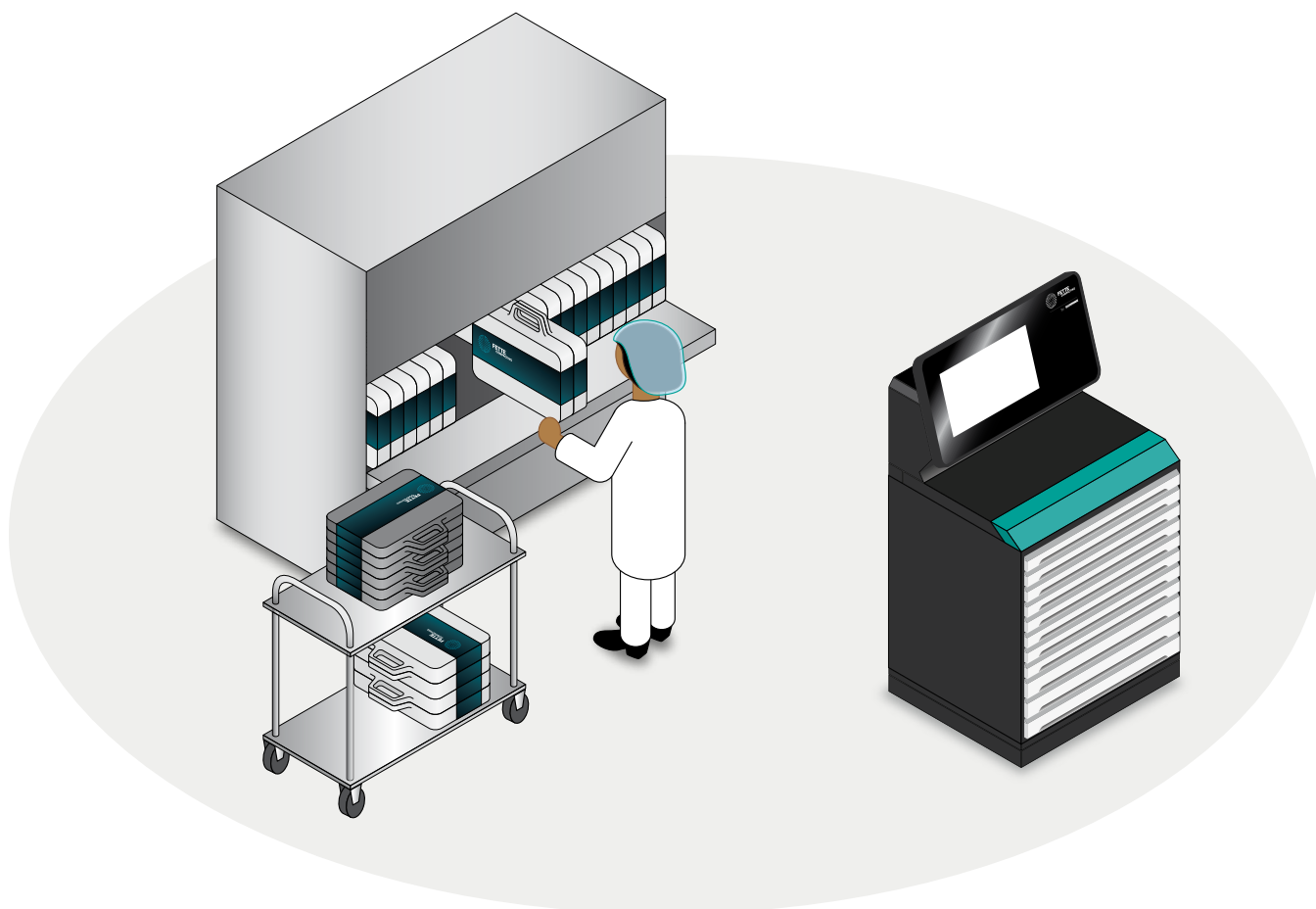
Note:

The tableting tools must never come into contact with demineralised water alone. Tools in water (regardless of the water quality) can start to rust. They must be in a solution of either deconex® CIP power-x or deconex® HT 1191.

Fette Compacting recommends the use of IXP steel for WiP tablet presses.

Gloves must be worn each time the tableting tools are handled (e.g. medical examining gloves made of Nitril, powder-free).

Tools may only be handled by trained personnel. Fette Compacting offers training courses on handling tableting tools.

**Inspecting tools prior to storage**

Fette Compacting recommends a visual inspection of all tableting tools after each use. This includes, in particular, the pressing area, the flat head and, if necessary, the key. A suitable microscope can be used for this (e.g. from Hexagon). Further test equipment, such as templates for head profiles and test rings for feather keys, is available from Fette Compacting.

Storing the tools

After polishing, tool boxes from Fette Compacting are recommended for optimal storage:

- Protection from environmental influences
- The boxes and trays can be stacked in the respective storage systems.
- The deconex® HT 1191 long-term preservative is recommended for preserving tableting tools.
- Tools can be stored without preservation at a humidity level of < 35%, at a temperature of 20 °C, ± 2 °C.

PartSite

This tool management system offers easy and reliable system-supported management of tools and machine parts. It provides information on tool status and availability for reliable tablet production.

TRI.EASY box system



The tool boxes are made of food-safe polypropylene plastic with trays and inlays made of polyoxymethylene for high strength, hardness and rigidity at a wide range of temperatures during washing. The boxes, including tools, weigh max. 25 kilograms.

ADVANTAGES OF THE TRI.EASY BOX SYSTEM

OPTIMAL TRANSPORT

One inlay for different FS®, EU and TSM punch standards

Reduced administration costs

Click system with fixed inlays in the trays and boxes

Protected punch tip: two retaining rings, lower and upper inlay

OPTIMALE STORAGE

Easy tool box identification using colors: silver (punch box) and dark gray (segment and die box)

Individual lettering possible on each box

Reduce space in storage systems: 544 × 436 × 175 mm (punch box), 544 × 436 × 87.8 mm (segment and die box)

Stackable boxes and trays with tongue and groove

OPTIMAL CLEANING

In accordance with cleaning validation

Special box design and flat surface of boxes for easy cleaning

Punches, segments, dies and bellows / dust caps remain in the trays for storage and cleaning. However, the bellow / dust cap trays are not suitable for transporting in the boxes.

Flat surfaces and washable trays, including tools, as compact units for washing machines

Heat-resistant and FDA-approved plastic

PUNCH BOXES AND BELLOWS/ DUST CAP TRAYS



Properties

- Box dimensions 544 × 436 × 175 mm
- Max. total weight < 25 kg and individual trays < 8 kg
- Boxes are heat-resistant up to 70 °C
- Trays and inlays are heat-resistant up to 110 °C
- Patented (EP3106268B1)

PUNCH BOX WITH 3 TRAYS AND INLAYS

	Item No.
for FS12® with max. 120 punches	7256272
for EU19 FS®/TSM19/FS19® with max. 87 punches	7256273
for EU1"/EU1"-441/TSM1" with max. 36 punches	7256274
for EU28 with max. 36 punches	7331096

COMBINATION BOX WITH 2 PUNCH AND 3 DIE TRAYS

for EU19 FS®/TSM19/FS19® punch trays plus BBS (Ø22)/BB (Ø24)/B (Ø30,16) die trays	7274260
for EU1"/EU1"-441/TSM1" punch trays plus D (Ø38,1) die trays	7274265

INDIVIDUAL COMPONENTS WITHOUT BOXES

FS12® tray incl. inlays for 40 punches	7259575
EU19 FS®/TSM19/FS19® tray incl. inlays for 29 punches	7259577
EU1"/EU1"-441/TSM1" tray incl. inlay for 12 punches	7259578
EU28 tray incl. inlay for 12 punches	7331095
Bellows/Dust cap trays Ø12, Ø19 and Ø1"	7399502

SEGMENT BOX



Properties

- Box dimensions 544 × 436 × 87.8 mm
- Max. total weight < 15 kg
- One segment box for PT, i Series, FE Series and WiP
- Compatible with all segment types
- Easy plug-in system
- Boxes are heat-resistant up to 70 °C
- Trays are heat-resistant up to 110 °C
- Patented (EP3103594B1)

SEGMENT BOX WITH PLUGS

	Item No.
1 segment for PT and i Series (F10i/F30i/1090 WiP/1200/2090/3090/4090) and FE Series (FE35/FE55/FE75)	7256277
1 WiP segment for PT and i Series (2090 WiP/3090 WiP)	7285620

SEGMENT BOX WITH PLUGS AND TRAY

	Item No.
1 segment for PT and i Series (F10i/F30i/1090 WiP/1200/2090/3090/4090) and FE Series (FE35/FE55/FE75)	7402236
1 WiP segment for PT and i Series (2090 WiP/3090 WiP)	7402228

INDIVIDUAL COMPONENT

Segment tray for one segment	7345582
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DIE BOXES



Properties

- Box dimensions 544 × 436 × 87.8 mm
- Max. total weight < 15 kg with max. 63 parts
- Boxes are heat-resistant up to 70 °C
- Trays are heat-resistant up to 110 °C
- Patented (EP3106268B1)

DIE BOXES WITH 3 TRAYS

	Item No.
for BBS (Ø22)/BB (Ø24)/B (Ø30,16) and D (Ø38,1) with max. 63 dies	7256276

INDIVIDUAL COMPONENT

Die tray for 21 dies	7256243
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GMP-compliant cleaning system harmonized to tableting tools



Interplay by chemicals and mechanics for optimum cleaning

The washing trays from Fette Compacting are ideally suitable for the fully-automatic ARUNA cleaning plants, with integrated drying unit and GMP-conformant hygiene design. This guarantees residue-free removal of dirt. The cleaning process is coordinated to tableting tool care and comprises preservation as well as cleaning cycles. After the care program has been completed, the tools come out of the machine fully preserved.

SDC800 AND SDC1200 MODELS

Cleaning chamber L x W x H	800 x 800 x 900 mm / 1200 x 1200 x 900 mm
Number of doors	1 or 2
Door opening	Vertical
Water consumption	40 – 80 liters per water change
Water media connections	Up to 3, more available on request
Detergent connections	Up to 4, more available on request
Maximum washing pressure	3 bar
Maximum delivery rate	500 l/min or 666 l/min
Heating	Steam or electrical



The remaining corrosion protection from Borer Chemie AG is approved as a food additive. This automatic surge cleaning prevents cross-contamination and ensures maximum hygiene. Compared to the other two cleaning processes, manual and ultrasonic cleaning, it is distinguished by maximum operational reliability and reproducibility.

In addition, all process steps are precisely documented and can be verified in a report. Process monitoring, detergent dosing, parameter adjustment as well as drying and preservation are carried out entirely independently in automatic cleaning. Thanks to this efficiency maximization, the SDC800 cleans more than twice as many punches per hour than a comparable ultrasonic cleaner.

Moreover, since all parts are washed in trays, operators have no direct contact with the tools and chemicals when unloading the cleaning system.

- Compact footprint
- Low water consumption
- Highly efficient heating of air and water
- Shortest drying times
- Uncompromising hygiene design
- Self-cleaning pipe system
- Flow-optimized design for minimum electricity consumption
- Ultra-precise and flexible dosing system

Professional polishing of tableting tools



Professional polishing

Polishing in an automatic polishing machine from nortec enables a consistent polishing result over sets of up to 120 punches. Thanks to the special orientation toward tableting tools, the punches and dies can be safely suspended in holders specially designed for this purpose. The granulate used with the respective polishing paste is suitable and approved for use in the food sector.



PA500 MODEL

External dimensions L × W × H	970 × 740 × 1950 mm / 1100 × 870 × 1950 mm
Output	1,5 kW / 2 kW
Power supply	230 V, 50 Hz, 3 m cable

HOLDER TYPES FOR PA500

FS12® punch holder	110 punches
EU19/FS19®/TSM19 punch holder	80 punches
EU1"/EU1"-441 punch holder	60 punches
EU28 punch holder	60 punches
BBS, B, BB and D die holders	80 dies



Easy and reliable tool management system

The Gühring tool management system offers the user application and individual setting options in all areas of production. Thanks to its modular structure, processes in production can be precisely mapped and all sub-areas of the tool cycle from storage to provisioning to scrapping can be transparently displayed. The software documents all relevant movement data of the warehouse stock, triggers ordering processes, and enables evaluations according to various criteria. This comprehensive and detailed reporting offers a multitude of optimization potentials in the tool cycle.

- Warehouse management and process tracking
- Life cycle documentation
- Independent of supplier
- Reporting
- Authorization concept and audit trail
- Connection to interfaces possible on request
- Quality modul with inspection instrument management
- Multilingual software

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