BOXMAT BOXMAKERS

zemat® TECHNOLOGY GROUP

made in EU

BOXMAT HD   BOXMAT PROi   BOXMAT 2   FLEXOMAT

BOXMAT HD

AUTOMATIC *SHORTRUN* **BOXMAKING** MACHINES

Every precious cargo deserves the best, tailored to size, sturdy and reliable packaging. At Zemat Technology Group we are passionate about creating innovative technological solutions for the packaging and shipping industry.

In our design and manufacturing process we implement almost **65 years of European and American expertise.** Providing exceptional equipment for the packaging industry, where customized, short run production series are the key to achieving the market success and satisfying even the most demanding customers.

We are providing a wide range of corrugated boxmaking machines designed for short run production needs to help your company **save time, increase productivity** and create sustainable production flow, while **decreasing costs and waste.**

Our machines offer full technological flexibility in any corrugated cardboard converting organization. With state-of-the-art box design software, no die setup, unsurpassed quality of tools and assembly and the XXI century machine design implementing the best components and industrial solutions.

The design, engineering and manufacturing team is based in the heart of Europe. We have partners and offices in the USA, UK, Mexico and commercial and technical presence in many countries around the World.

boxmat.tech

BOXMAKING TECHNOLOGY WITH THE HUMAN TOUCH

BOX PLANT AUTOMATIC MANUFACTURING SOLUTIONS WITH MODULAR DESIGN:

- Board feeding
- Flexographic printing
- Automatic boxmaking
- Box folding
- Stacking
- Palletizing

NO LONG TERM corrugated board contracts!

With Boxmat machines, you have a freedom to choose your own corrugated supplier and make your own **BOXES ON DEMAND**

The BOXMAT automatic production lines are the perfect solution for the most demanding custom box manufacturing facilities.

INTEGRATED MODULAR SOLUTIONS FOR AUTOMATIC PRODUCTION OF CORRUGATED BOXES

BOXMAT HD

Newest and fastest
corrugated box manufacturing system
for highly demanding **short and medium runs**
of standard and high density corrugated board and fanfold

Slotting, Cutting, Scoring, Creasing, Board Trimming, Die Cutting and optional Gluing and Printing
IN ONE COMPACT MACHINE

FEATURES

- One pass operation to make a perfect box
- Single, Double wall and Heavy Duty board
- Sheets and Fanfold use
- Die Cutting built-in
- Switchover time – less than 30 seconds
- Fully automatic servo-drive setup
- Counter-knife and counter scoring/creasing system
- Large 19" touch screen HMI

INTEGRATED INTELIGO SYSTEM

- JQS Job Queue System production scheduling
- Box Design WIZARD
- MRP/ERP manufacturing integration
- Barcode reader
- Optional 3D product scanning

Under 30 sec. changeover and set-up time

Eco-friendly low power consumption

100'S OF BOX STYLES
45 FEFCO DESIGNS

Intuitive HMI and software with Custom Box Creation WIZARD

Fast servo-drive setup of ALL TOOLS

Conveyor waste/scrap REMOVAL system

Integrated DIE CUTTING, precision Cut-and-Score

COUNTER-CREASE and COUNTER-KNIFE system

Precise cold GLUE APPLICATION system

Boxmat HD - Technical Specification:

Minimum board size: 250 mm (10") width x 750 mm (29½")
Maximum board size: 2400 mm (94") width x 10000 mm (394")
Distance between slotting knives: 75-2100 mm (2¾-79") with 200 mm knives
Slot width: 8 mm (5/16")
Sectional slotting knives: 100 mm (4") each section
Standard slotting knives length: 500 mm (20") each side
Min./max. slotting knives length: 200-700 mm (8-27½")
Glue flap: from 5 mm (3/16")
Footprint: 3600 x 1900 x 1750 mm (142 x 75 x 69")

BOXMAT HD

THE BETTER WAY TO MAKE BOXES!

- Fully programmable interface for box creation in any style and size
- Detachable precision cardboard feeder. The machine can be fully configurable to be used with manual feed, printer or fully automatic feed
- The new design of beams provides much less wear of the slotting knives
- **Double die cutting system with independent drives** and die cutting units 210 x 130 mm (8.25 x 5.1") each. It enables cutting out handles, revisions or angular cuts in corrugated box panels
- Upgraded design of slotting knives drive provides much less wear
- Reinforced chassis construction assures less vibrations during production process
- Additional shaft for feeding the corrugated board
- Independent drive for each tool nest provides very fast position setup
- Each tool nest can handle either scoring/creasing wheels or knives
- Minimum distance between tools: 30 mm (3/16")
- **Automatic recognition of the specific tool in the nest**
- **Synchronized counter-crease and counter-knife system**
- Intuitive software with APC capabilities and remote control
- Ability to set the tools in-line, one-after-another e.g. for double creasing of heavy boards
- Built-in VPN secure connection for HMI allowing remote calibration and updates

BOXMAT PRO i

WITH INTELIGO SYSTEM

Under 60 sec. changeover and set-up time

Eco-friendly low power consumption

100's OF BOX STYLES
50 FEFCO DESIGNS

ALL-IN-ONE
AUTOMATIC SHORTRUN BOXES PRODUCTION SYSTEM

The MOST VERSITILE boxmaking machines revolutionizing the short and medium runs serial production of corrugated boxes!

All settings are entered directly from a user-friendly touch screen panel. The switchover time is less than 1 minute with no manual tool adjustment.

Make standard FEFCO/RSC/OPF/FPF preprogrammed box styles or - thanks to our unique software - create your own boxes with the Box Wizard. The limit is the imagination of your box designer. Each of cutting and creasing tools is set independently and allows a full freedom of design.

Cutting, slotting, Creasing, Scoring, Board Trimming and optional Gluing and Printing in ONE COMPACT MACHINE without the need for additional equipment or extra tools/dies.

Built-in secure VPN connection for remote diagnostics and update.

BOXMAT PRO

Standard machine with 12" HMI (no Inteligo features)

Both machines can handle **single and double wall corrugated sheets** as well as center fed **fanfold**

Boxmat PRO / PROi - Technical Specification:

Minimum board size: 250 mm (10") width x 650 mm (25½")
Maximum board size: 2400 mm (94") width x 10000 mm (394")
Distance between slotting knives: 70-2000 mm (2¾-79")
Slot width: 8 mm (5/16")
Sectional slotting knives: 100 mm (4") each section
Standard slotting knives length: 500 mm (20") each side
Min./max. slotting knives length: 200-700 mm (8-27½")
Glue flap: from 5 mm (3/16")
Footprint: 3300 x 1600 x 1600 mm (130 x 63 x 63")

GLUING SYSTEM

Innovative COLD GLUE application system integrated with a cross-cutting knife. Apply the glue in the same cycle as trimming the board - saving time in the production process.

- Double nozzle applicator with laser guide
- Single or double glue lines, dots or dashes
- Precise setup of gluing area
- Easy maintenance and servicing

MINIFLEXO

mini FLEXO Printing System
All the advantages of flexographic printer
- in a mini version!

- Print area: 200 x 300 mm (8 x 12")
- Non-toxic water-based ink - easy to use and service
- Integrated and synchronized with the Boxmat series machines
- Full control of printing process from the HMI panel

ADJUSTABLE DOUBLE CREASING ROLLS

COROPLAST USE

CIRCULAR OR BLADE KNIVES

STACKING UNIT

- Pneumatic control board receiving / drop arms
- Stacking height for palettizing: 800 mm (31.5")
- Board width: max. 2400 mm (94.5"). Recommended:
  1500 mm (59") with corrugated weight: min: 400-500 g
- Length of boards: max. 3000 mm (118")
- Quick manual setup – only compressed air. No electric required!
- Rigid aluminum frame and smooth glide rolls

SLOTTING KNIVES

OUTPUT TABLE

- Detachable ready made
  box receiving table
- Locking casters
- Expandable length
- Foldable for easy storage

FANFOLD USE

The Boxmat series machines are truly universal systems which allow the use of single and double wall corrugated sheets as well as various widths of FANFOLD (Z-Fold) corrugated board.

Available for Boxmat HD and Boxmat PROi

- Easy setup and quick switchover
- Center Feed system
- Fanfold use with slotting knives
- Great for double wall corrugated fanfold
- Make Heavy Duty boxes with easy fold flaps
- Lightweigh feeder
- Fanfold up to 2400 mm (94") wide

AUTOMATIC FEEDER

Automatic feeding
with independently controlled feeder system
greatly decreases your production times

Independently controlled Feeder System compatible with the Boxmat machines to help speed up the box manufacturing by automatically feeding the corrugated board into the Boxmat Proi or Boxmat HD machine.

The vacuum pick-and-place replaces the need for manual handling of large sheets and streamlines the production process of large volume boxes. The Automatic Feeder is capable of handling corrugated sheets of up to 2400 x 5000 mm (94 x 197"). The built-in sensors square the sheets for a perfect feed, every time.

BOXMAT 2

Boxmat 2 is an economical and versatile machine designed for short series corrugated boxes production and having an excellent price to performance ratio.

A Boxmat 2 machine allows for both efficient short run production and full volume production. With a maximum corrugated width of 2500 mm (98.5") Boxmat 2 can produce large or small boxes with ease.

While some manual setting is required, the blanks are placed to the left edge with automatically set bumper. This feature allows for the use of a blade knife for cutting off the cardboard excess and a glue flap.

Boxmat 2 - Technical Specification:

Minimum board size: 250 mm (10") width x 550 mm (21½")
Maximum board size: 2500 mm (98") width x 9000 mm (354")
Distance between slotting knives: 70-2000 mm (2¾-79")
Slot width: 8 mm (5/16")
Sectional slotting knives: 100 mm (4") each section
Standard slotting knives length: 500 mm (20") each side
Min./max. slotting knives length: 200-700 mm (8-27½")
Glue flap: from 5 mm (3/16")
Footprint: 3300 x 1400 x 1600 mm (130 x 55 x 63")

PROVIDING *SIMPLICITY* AND *FLEXIBILITY* FOR BOX PRODUCTION

Under 60 sec. changeover and set-up time

Eco-friendly low power consumption

100'S OF **BOX STYLES** 45 FEFCO DESIGNS

UP TO **700** BOXES PER HOUR

BOXMAKERS COMPARE

BOXMAT **HD**

- Single and Double wall corrugated sheets and fanfold (Z-fold)
- 4 (max. 8) cutting knives for blank formatting and cutting off glue flaps
- Circular knife for board length (cross-cut) adjustment
- 4 scoring wheels (max. 8) for along creasing
- Pressure for creasing/scoring wheels set from touch panel
- Working width: up to 2400 mm (94.5") blanks
- Knives and creasing wheels set automatically simultinously
- Pads production available
- Multi-production: 2 or more from the length - standard
- Left blank sheet bumper set automatically
- Right blank sheet bumper locked automatically
- Interior LED lights

INTELIGO
- **Large 19" touch screen HMI**
- **INTELIGO System and expanded user friendly GUI**
- **Box Design WIZARD interface**
- **Job Queue System JQS production scheduling**
- **Cut/Score Allowances correction and editing**
- **Optional Integration with MRP/ERP manufacturing systems**
- **Optional 3D scanning**

- Built-in VPN remote connection
- Optional *mini* FLEXO available
- Optional **Gluing System** available
- **FLEXOMAT** printer integration available
- Automatic **FEEDER** integration available
- **Box Folding** integration available
- Footprint (L x W x H): 3600 x 1900 x 1750 mm (142 x 75 x 69")

ONLY IN BOXMAT HD
- **Double die cutting system: 210 x 130 mm (8.25 x 5.1") each**
- **Minimum distance between tools: 30 mm (3/16")**
- **Counter-knife system set automatically**
- **Counter-scoring/creasing system set automatically**
- **Automatic recognition of a set tool (knife or scoring wheel)**
- **Independent servo-drive for each tool nest for very fast setup**
- **Ability to set tools INLINE - one after another**
- **Detachable blank sheets feeder**

BOXMAT **PRO** i

- Single and Double wall corrugated sheets and fanfold (Z-fold)
- 4 (max. 8) cutting knives for blank formatting and cutting off glue flaps
- Circular knife for board length (cross-cut) adjustment
- 4 scoring wheels (max. 8) for along creasing
- Pressure for creasing/scoring wheels set from touch panel
- Working width: up to 2400 mm (94.5") blanks
- Knives and creasing wheels set automatically in series
- Pads production available
- Multi-production: 2 or more from the length - standard
- Left blank sheet bumper set automatically
- Right blank sheet bumper locked automatically
- Interior LED lights

INTELIGO
- **Large 19" touch screen HMI**
- **INTELIGO System and expanded user friendly GUI**
- **Box Design WIZARD interface**
- **Job Queue System JQS production scheduling**
- **Cut/Score Allowances correction and editing**
- **Optional Integration with MRP/ERP manufacturing systems**
- **3D scanning**

- Built-in VPN remote connection
- Optional *mini* FLEXO available
- Optional **Gluing System** available
- **FLEXOMAT** printer integration available
- Automatic **FEEDER** integration available
- **Box Folding** integration available
- Footprint (L x W x H): 3300 x 1600 x 1600 mm (130 x 63 x 63")

BOXMAT **PRO**

- Single and Double wall corrugated sheets
- 4 (max. 8) cutting knives for blank formatting and cutting off glue flaps
- Circular knife for board length (cross-cut) adjustment
- 4 scoring wheels (max. 8) for along creasing
- Pressure for creasing/scoring wheels set from touch panel
- Working width: up to 2400 mm (94.5") blanks
- Knives and creasing wheels set automatically in series
- Pads production available
- Multi-production: 2 or more from the length - standard
- Left blank sheet bumper set automatically
- Right blank sheet bumper locked automatically
- Interior LED lights
- **12" touch screen HMI**
- Built-in VPN remote connection
- Optional *mini* FLEXO available
- Optional **Gluing System** available
- **FLEXOMAT** printer integration available
- Automatic **FEEDER** integration available
- Footprint (L x W x H): 3300 x 1600 x 1600 mm (130 x 63 x 63")

BOXMAT **2**

- Corrugated sheets only
- 2 knives for cutting off glue flap, +1 knife for removing excess board
- **No board length adjustment (cross-cut)**
- 2 wheels for longitudinal scoring/creasing
- Pressure for creasing/scoring wheels set with adjustment knob
- Working width: up to 2500 mm (98.5")
- Knife for removing excess set manually
- Pads production not available
- Creasing/scoring wheel and cut-off knife in line with slotting knife tip
- No multiproduction
- Right cardboard bumper set and locked manually
- No interior lights
- **12" touch screen HMI**
- *mini* FLEXO not available
- **Gluing System** not available
- Works with **FLEXOMAT** printer
- Footprint (L x W x H): 3300 x 1400 x 1600 mm (130 x 55 x 63")

# FLEXOMAT

EXPANDABLE SOLUTION

**PRINT FULL SIZE BOARD UP TO 2400 mm (94") WIDTH**

FLEXOMAT integrates inline with all box making machines (**Boxmat HD / PROi / PRO / 2**) or it can be used as stand alone printer.

Standard configuration has one print drum (cylinder) which is fully programmable and automatically adjustable across the width of the machine, to print image onto different panels.

Optionally, the **FLEXOMAT** can be fitted with a second drum/cylinder to double the print area or utilize the use of a second color.

- Special design steel/AL profile structure for vibration free printing
- Single or double print cylinders
- 1 or 2 color printing (SIDE BY SIDE)
- **Ultra-Raster printing with ceramic Anilox cylinder**
- **FRR - Fast Repeat Rotation of print cylinder**
- Print width: 760 mm (30") – single cylinder
- Print length: 900 mm (35") with FRR for multi-panel printing
- Max. working width: 2400 mm (94")
- Independent drives and motion control of each cylinder
- Servo control for maximum print quality
- Infeed and outfeed system for precision registration
- Easy access for clean up and quick changeover of polymer plates
- Intuitive touch screen HMI for easy setup and control
- EPC - Edge Position Control
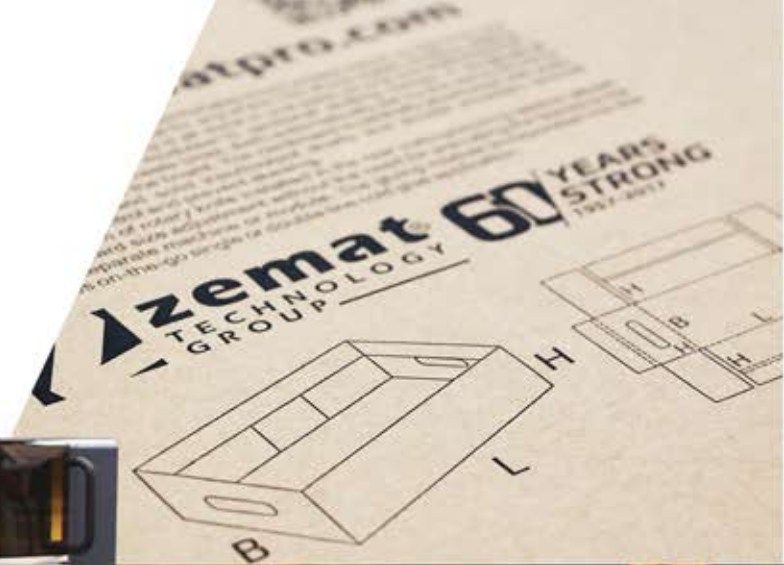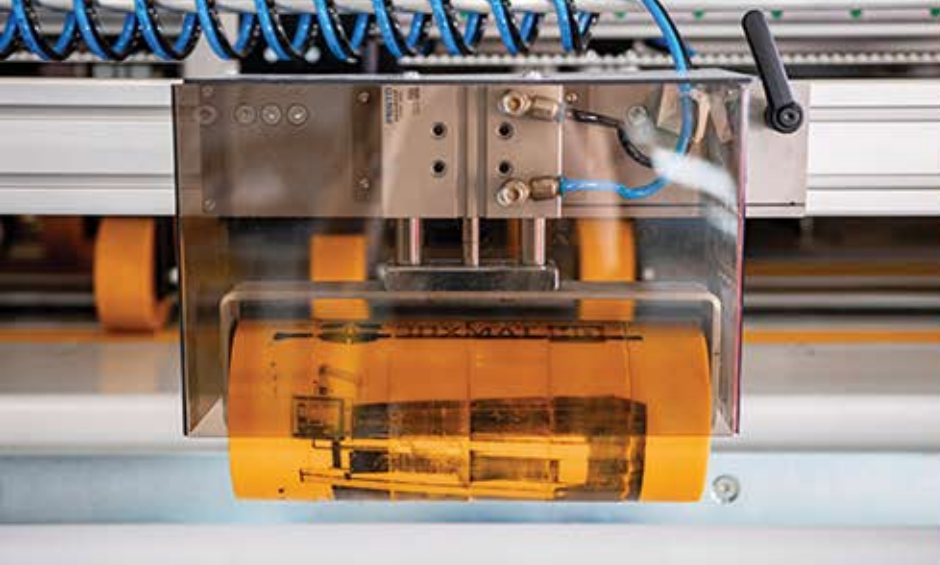
mini FLEXO

Compact *mini* FLEXO printer

mini FLEXO is the latest printer model for the Boxmat PRO, PROi and HD series machines, which was created from our experience in the box printing technology. From now on, printing, so widely present on cardboard boxes produced today, has never been so easy to do.

The system is an ideal solution for customers producing boxes both for their own needs and as a subcontractor.

- **Print area: up to 200 mm width (roller width)**
- **Print area: up to 300 mm length (cylinder circumference)**
- Non-toxic water-based ink - easy to use and service
- One-color printing with high-quality flexographic technology
- Use of standard flexographic polymers
- Full synchronization with the box production / cutting cycle
- Full control of printing from the HMI panel
- Independent drive system for rollers and cylinder
- Programmable indexation of the printed area
- Printing on several panels / sides of one box
- Possible printing on the flaps of the box
- Possibility to use two mini FLEXO printers side-by-side
- Electric pump with automatic ink supply
- Very easy cleaning of the ink system

INTELIGO HMI SYSTEM

Every intelligent machine needs a smart programming to interact with its human operator

The **INTELIGO** system creates **the most user friendly interface** for the Boxmat series of machines. The logic behind this creation is to make the interaction with the machine intuitive and allow it **to think ahead** – to predict the next move of the operator, to help to **create the best box in a fastest time frame** available.

Large **19" touch screen HMI** providing the most user friendly, multi-panel, ergonomic operator interface.

Box Design WIZARD allows you to create any box intuitively right on the screen. It will show and place the scoring/creasing and cutting lines exactly where they will be in the finished box.

Job Queue System JQS can be programmed each day for smart scheduling of the box production flow process or synchronized (with custom modification) with any internal MRP, MES, ERP, MOM and production control software.

3D Product Scanning and data input capability. With **INTELIGO** system you can scan dimension and weight of the product to be packaged and send this data directly to the machine which will calculate the required box size.

Barcode Reader integration allows for fast and efficient production data input into the work flow scheduling process.

We use the state-of-the art PLCs and programming platforms to achieve the best results, both visual and logical. Our team designs and builds highly reliable HMI/PLC systems that delivers safe, cost-effective, consistent and intuitive performance which relies on the application of engineering best practices throughout design, panel layout, production, testing and quality assurance processes. They apply a thorough knowledge of technical ergonomic, design and manufacturing standards ISO, IEEE, ANSI, CE which are fundamental to HMI system design. Each HMI/PLC system we provide has built in secure VPN interface allowing remote calibration, servicing and updating.

ROLLMAT

FLAT DIE ROLLER CUTTER

Available work table widths:
80/120/150/180/250 cm

- Synchroset Rolls and belt drive work tables
- Manual and automatic shuttle production cycles
- Precision cutting with simple flat bed wood/steel blade dies
- Widths from 800 mm (31") to 2500 mm (98")
- Max die height: 75 mm (3")
- Production speed max: 20-30 cut cycles/min
- Touch screen setup and PLC control
- Change from one die to the next in seconds
- Convert a range of materials from 0-12 mm (1/2") thickness
- Powered belt drive in-feed and out-feed of the die
- Double safety system
- Compact and foldable design
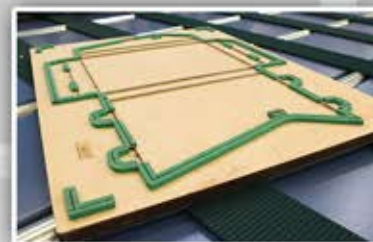
Programmable semi-automatic shuttle operatoin

100+ BOX STYLES WITH BOX WIZARD. IT'S ALL YOU NEED!

FEFCO
Corrugated Packaging

200 (HSC) 200 FL 201 (RSC) 202 (OSC) 203 (FOL) 415 (CSSC) 206 (SFF) 208

209 228 (RSC) 230 301 (FTD) 302 306 (DSC) 310 (DC) 312

313 320 (FTHS) 400 401 (OPF) 402 403 404 405

410 (FPF) 411 (FPF) 415 (OPF) 430 452 453 501 FL 933

CUSTOM DESIGNED BOX

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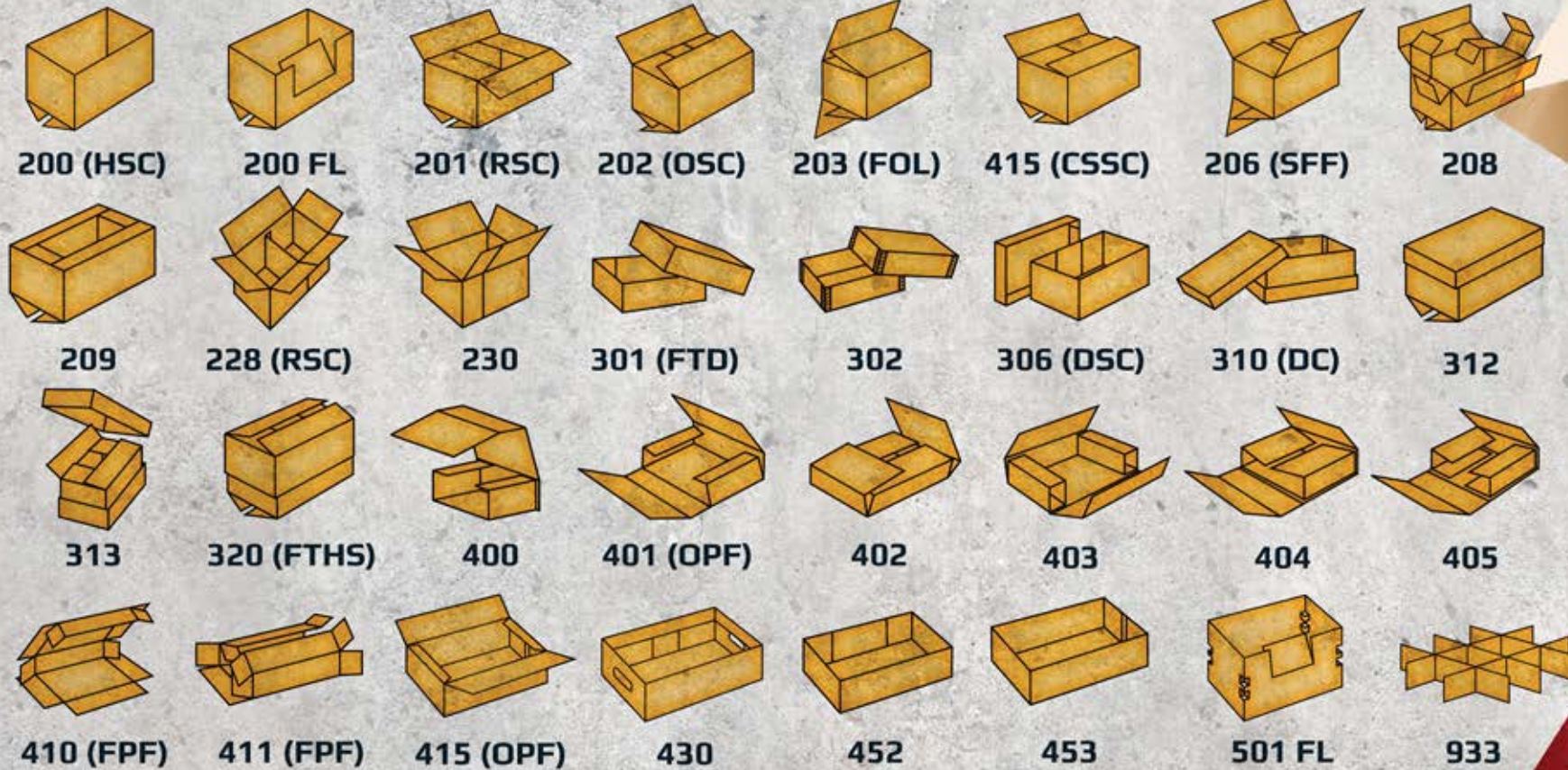
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