







# TANASE International Co., Ltd. Specialty Folder-Gluer





### Tanabe and JD Engineers represent you Tanabe's next Generation





















- •Less waste
- Higher Accuracy
- •ECO Friendly
- •Operation use
- JDIS Service



Low energy consumption

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(more than 50% less)
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Board ejection system

(under development)

- JDIS Service
- Easy function upgrade (modular design)
- •Integration with Twin / Tri feed





A total number of 8 feeding belts, 4 of which are vacuum supported.





Constant pressure pile press by means of 2 pneumatic cylinders.



A rotational brush ensures that all feeding belts remain clean. Therefore the feeding performance does not deteriorate.





### **Feeder section**

- Drive through servo motor.
- •Modular design.
- •Start-Stop drive principal possible.
- •600mm longer than Millennium design.
- •Less pressure on bottom sheet,

result in no skewing of sheets.







# A & B section (front & back folding)





#### Front fold by means of JD special fold (4/6 corner trays, lock bottom boxes).





### A & B section (front & back fold process)



### A & B section (back fold process)



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- Back fold by means of fold hooks (4/6 corner trays).
- Back fold hooks are driven by servo motors, meaning direct drive (no clutch), high speed and high accuracy.
- Back fold timing is computer set-up.





Cast iron folding shoes (available in 2 width sizes) for folding of diagonals (4/6 corner trays, lock bottom boxes).





### A & B section (general)



In order to prevent folded flaps from popping back, there is a number of tools that can be applied to fixate flaps as the blank moves through the machine:

- Brushes
- Rollers
- Guiding plates/profiles



Top guiding plates/profiles can be mounted in the machine at just about any position





- Top and bottom carriers are separately driven.
- Top carriers can be lifted pneumatically (in case of a jam).
- The pressure put on the blank (i.e. gap between upper and lower carrier) is manually adjustable through the use of different size stops at the compressed air cylinders.





- Drive through servo motor.
- •Modular design.
- Partial stopping of machine, boxes after stopping point run further.
- •Box tracking available, wrong boxes can be marked.
- •For setting up carriers, linear measuring system in place. Always exact position known.
- Touch screen on every unit available. (option)



# **Glue application**



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![](_page_24_Picture_0.jpeg)

### **Glue** application

![](_page_24_Picture_2.jpeg)

![](_page_24_Picture_3.jpeg)

- Prepared for different brands of glue applications (Nordson, Valco, HHS, ....)
- Glue guns can be positioned anywhere in the folder-gluer, but typically in A and B unit.
- Cold and also hot melt systems can be integrated.
- Glue dispensing possible with contact or non-contact glue heads.
- Bottom gluing through glue gun or wheel.
- Set-up of glue system through computer (glue length and glue pressure control).
- Quick connectors are used for ease of use.

![](_page_25_Picture_0.jpeg)

![](_page_25_Picture_1.jpeg)

Glue setting per gun

![](_page_26_Picture_0.jpeg)

![](_page_27_Picture_0.jpeg)

# Final fold unit (side panel inward folding)

![](_page_27_Picture_2.jpeg)

![](_page_28_Picture_0.jpeg)

### Final fold unit (side panel inward folding)

- Extra long final fold section to ensure accurate folding (apprx. 4.5 mtr at 1700 machine).
- Super grip folding belts, width of 80mm.
- Belt speed of left and right folding belt, separately adjustable (servo driven).
- Side guiding using belts.
- Adjustable rolls.
- Additional third belt in-between folding belts to support transport of blank.

![](_page_28_Picture_8.jpeg)

![](_page_28_Picture_9.jpeg)

![](_page_29_Picture_0.jpeg)

- Drive through servo motor.
- •Modular design.
- •Folding belts can be set individually to different speeds due to the servo drives. Due to the servo technology very accurate.
- •16 connections for glue applicators and sensors available. Max 16 each glue bridge.
- •Standard equipped with glue applicator for the glue flap. Glue wheel still available as option.

![](_page_30_Picture_0.jpeg)

# <u>6 corner infold tray tooling</u> (option)

![](_page_30_Picture_2.jpeg)

![](_page_31_Picture_0.jpeg)

- Speed of left and right transport belt separately adjustable (minimizing fishtailing).
- Jam monitoring system.
- Computer controls (depending on blank length) speed ratio between trombone unit and compression conveyor.
- Adjustable top and bottom carriers.

![](_page_31_Picture_5.jpeg)

- Drive through servo motor.
- Modular design.
- New design pneumatically stoppers to square the folded boxes. Higher accuracy.
- Up to 4 numbers for the batch kicker can be used per bundle.

![](_page_32_Picture_0.jpeg)

### Trombone unit (shingling)

Under shingle

![](_page_32_Picture_3.jpeg)

#### Over shingle

![](_page_32_Picture_5.jpeg)

![](_page_33_Picture_0.jpeg)

### Trombone unit (shingling)

UV ink spray system

#### Mechanical batch kicker

![](_page_33_Picture_4.jpeg)

![](_page_33_Picture_5.jpeg)

![](_page_34_Picture_0.jpeg)

![](_page_35_Picture_0.jpeg)

![](_page_36_Picture_0.jpeg)

![](_page_36_Picture_1.jpeg)

![](_page_37_Picture_0.jpeg)

- Drive through servo motor.
- •Modular design.
- •Level control sensor for detecting and controlling hopper level at entrance compression section.
- •All pneumatically settings will be stored and retrieved by computer.
- Front end height set by servo motor.
- •Front roll height set by servo motor.
- •All positions will be stored and retrieved by computer.
- •1600mm retractable length of upper belt.
- •5500mm curing length.
- •Glue lap pressure device

![](_page_37_Picture_11.jpeg)

### **Compression conveyor** (squaring)

![](_page_38_Picture_1.jpeg)

![](_page_38_Picture_2.jpeg)

Three LSU squaring units that can move up/down pneumatically, equipped with driven belts.

For each blank, the units will move down, the belts will drive the blank against a stop and thus squaring the blank. Then the units move up till the next blank arrives.

Large ratio (width: length) boxes and all other boxes that are difficult to square with the conventional squaring devices, benefit from this optional functionality.

# Compression conveyor (squaring)

CE

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![](_page_39_Picture_1.jpeg)

![](_page_40_Picture_0.jpeg)

![](_page_40_Picture_1.jpeg)

- •Offers remote I/O Check
- Support with fault resolving
- Provides more machine availability.
- Provides Function expansion

![](_page_41_Picture_0.jpeg)

#### Improved safety system

![](_page_41_Picture_2.jpeg)

- Light screens close on the machine.
- Let lights to indicate machine state.

![](_page_42_Picture_0.jpeg)

### **Control system**

![](_page_42_Picture_2.jpeg)

![](_page_43_Picture_0.jpeg)

The Tanabe comes standard with 3 master 19" touch screens. (as an option every unit on both sides of the machine can get a touch screen)

![](_page_43_Picture_2.jpeg)

![](_page_44_Picture_0.jpeg)

## **Control system**

![](_page_44_Picture_2.jpeg)

![](_page_45_Picture_0.jpeg)

### **Control system**

#### Completely visualized setup

![](_page_45_Picture_3.jpeg)

![](_page_45_Picture_4.jpeg)

![](_page_46_Picture_0.jpeg)

The T-unit is an extra unit to make leak proof boxes and double fold boxes. Double fold means folding the side panels 2 times for more strength.

![](_page_46_Picture_2.jpeg)

![](_page_47_Picture_0.jpeg)

#### The E-unit is an extra unit to eject bad boxes or sample boxes.

![](_page_47_Figure_2.jpeg)

![](_page_48_Picture_0.jpeg)

# **Options: E-unit**

![](_page_48_Picture_2.jpeg)

![](_page_49_Picture_0.jpeg)

The Tri-feeder is a unit to put 2 or 3 boxes together. Ready shelve boxes and boxes with inserts can be made like this.

![](_page_49_Picture_2.jpeg)

![](_page_50_Picture_0.jpeg)

![](_page_50_Picture_1.jpeg)

![](_page_51_Picture_0.jpeg)

### **Box editor**

![](_page_51_Picture_2.jpeg)

- Entering new boxes by following the box editor.
  - 1. Choose box type.
  - 2. Choose box style.
  - 3. Give in all dimensions.
- Computer calculates all settings and positions.
- If within 20mm of existing box, the computer takes the settings from that already stored box.
- Options can be chosen.

![](_page_52_Picture_0.jpeg)

### Data manager

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				12	49

- Unlimited number of boxes can be stored.
- Smart searching by number, customer name or other stored information.

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ass	room	trai	n	ng

4 Corner Infold, Outfold

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Machine Systems Europe BV

TANABE				JDer	ngineers
	С	rash lo	ck		
<b>Trombone unit</b>		Main folding unit	B unit	Aunit	Feeder
					£
	-				

• Class room training for operators and designers.

![](_page_54_Picture_0.jpeg)

### Servo controlled design

- Less waste
- Higher Accuracy
- Modular design
- •Section control during finish runs and board jam
- Shorter install time

![](_page_54_Figure_8.jpeg)

![](_page_55_Picture_0.jpeg)

### Other Benefits / features

- •Better product overview with Video system.
- Digital Air pressure control for compression conveyor.
- •Less sensor fault by smart placing and use of laser photocells.
- Remote control on each section.
- •Quicker setting times, up to 10min per box quicker.
- •Fewer rejected boxes, up to 70% less per box style.
- •Ejection system available.

![](_page_56_Picture_0.jpeg)

# Thank you for your attention !

![](_page_56_Picture_3.jpeg)