Product Range Catalog

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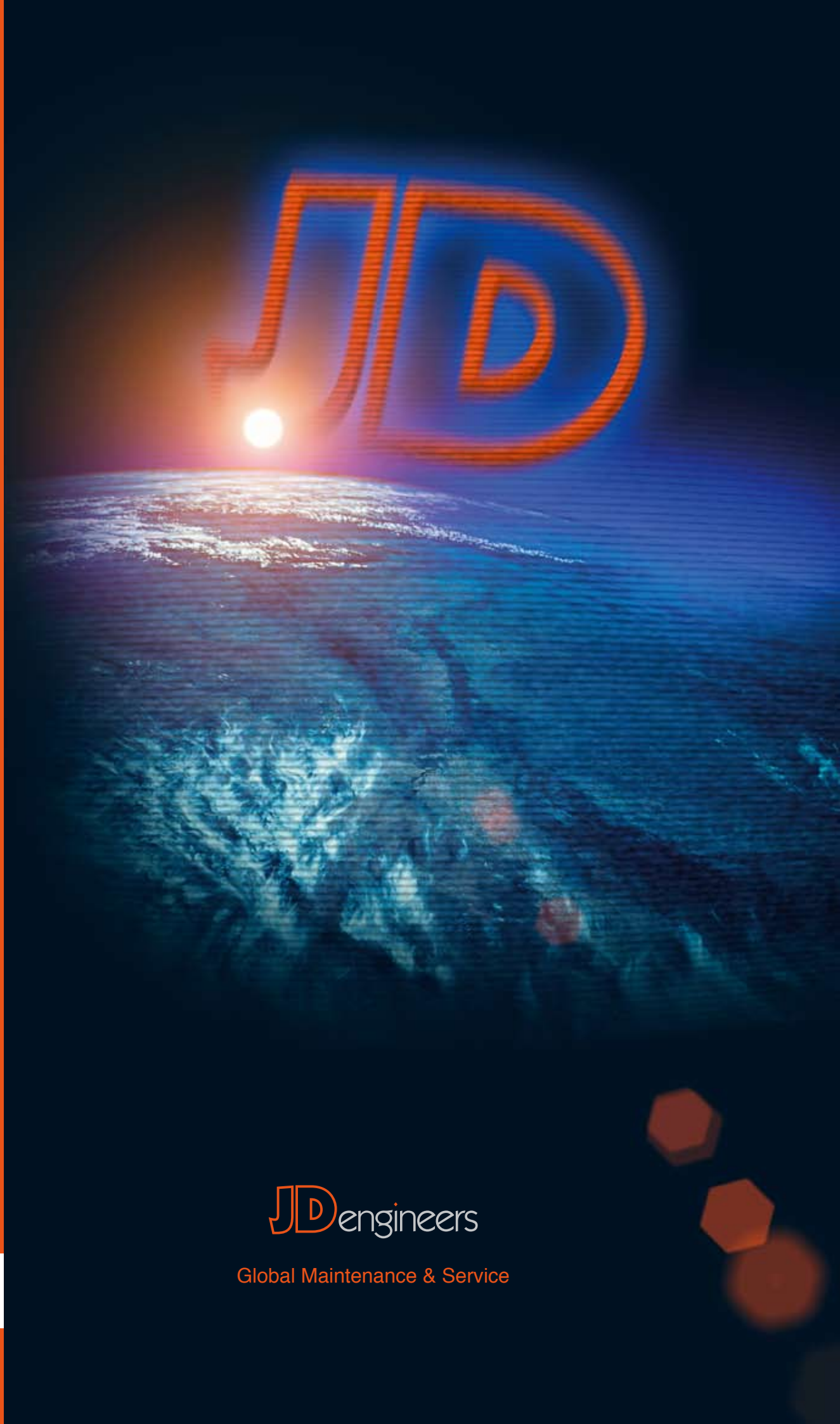


JDengineers

Global Maintenance & Service

JD Machine control

The development of the JD Machine control is the consequence of a lot of parts of the current controls on the speciality folder gluer to be obsolete. The base for this JD Machine control are JD Servo System or the JD Glue Controller

The “intelligence” on the JD Machine control is a CPU/ Machine controller with a “HMI” (touch screen) This CPU/ Machine control can take over all machine functions. Also all the calculations that are needed can be processed in this control

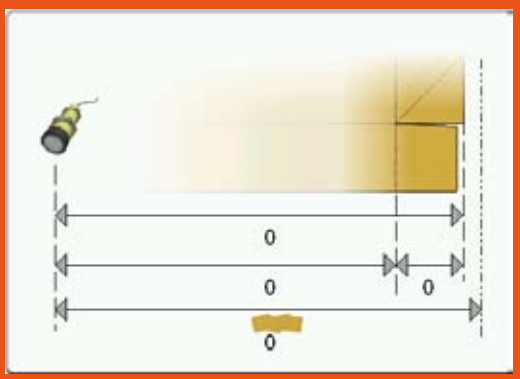
The existing Tanabe controls can not be controlled with this JD Machine control

Used drives all have internal safety and are connected to the safety CPU in the JD Machine Control

If desired JD Engineers will also offer you individual solutions. Tailor-made to your requirements and needs, including special considerations and tailor-made equipment to perfectly suit your box manufacturing needs

1 Glue control

2 Back fold control



For machine control scheme see on page 4-5

3 Feeder Belt speed Control

A flexible solution to control the speed of the feeder belts. This control is an independent speed control for adjustable feeder belt speed. Upgrade is controlled with a multiple operator touch screen

Special options:
Timed feeding. Multiple drive is possible. The used drives all have internal safety and are connected to the safety CPU in the JD Machine Control

4 Special Fold

The Special fold is servo driven rotating front folding hook on a hexagon shaft. With this upgrade you will have the possibility to run boxes with minimal gap between the boxes Upgrade is controlled with a multiple operator touch screen

The used drives all have internal safety and are connected to the safety CPU in the JD Machine Control.

5 T-Fold

The T-Fold is a folding hook above the paper line. This hook will allow you to fold boxes over the full width of the blank. The hook will support/guide the box through the folding process

The used drives all have internal safety and are connected to the safety CPU in the JD Machine Control

6 Jam detect

The Jam detection uses optical sensors to measure the length, twist and position of the blank during production. In case an unacceptable difference is detected that could lead to severe damage, the machine will be (partly) switched off. Signal lights can be connected and a message, with time stamp, will be logged. Standard a total of 16 optical sensors and 16 signal lights can be connected to the system

The detection sensors can be placed anywhere in the machine. The system is self teaching to minimize set-up times

7 Auto set

The parts for the Tanabe frame computers are obsolete, so JD developed the JD Quick set system. The JD Quick set system is a replacement for the frame movement computers. With a remote control you will be able the move the frames to the required position. More then one frame can be moved at the same time simply by pushing more buttons

The JD Quick set is a stand alone system which is not integrated in the JD machine control

8 Glue Detection

The Glue detection uses optical sensors to measure the length and position of glue on the blank during production. In case an unacceptable difference is detected the machine will be (partly) switched off. Signal lights can be connected and a message, with time stamp, will be logged. Standard a total of 16 optical sensors can be connected to the system

The system is self teaching to minimize set-up times. Applicable for PVA as well as hot melt glues

9 Folding belt control

The Folding belt control is a flexible solution for controlling the speed of the folding belts. Both belts can be adjusted separately, and also can be adjusted during production. This upgrade is controlled with a multiple operator touch screen

The used drives all have internal safety and are connected to the safety CPU in the JD Machine Control

10 Squaring system

A Stopper System containing 3 units in case of a 3 transports. In case of 2 transports this system contains 4 units. If no control units hare available a extra controller is necessary

The Stopper for the final folding section or Trombone section. This unit is easy adaptable to most folder gluers. The unit is specially designed for shorter boxes. It can straighten, crash lock and RSC boxes up to about 12.000 pc/h. (Depending on the box style). This stopper can also be used in other sections to straighten sheets in the machine before problems occur

11 Kicker

The Kicker system is a system that usually is mounted in to the Trombone section for kicking a box a little bit to the right or the left

This is for easier counting of the boxes at the take of the end of the conveyor

12 Rotating Squaring

The servo driven Rotary Squaring of the final folding or trombone section is specially designed for cases were

> Read more on page 6

Machine control scheme

Main drive

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Machine safety

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JDIS Online support system

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Servo System for back folding

Servo System

The servo driven Back-folding makes it possible to reduce the minimal distance between the blanks. Because of the minimal distance between the blanks it will result in more blanks per meter, this results in more output at a relative low belt speed

Description of servo system for back folding
The servo system contains the following parts:

Main cabinet.
Operator terminal with touch screen
Servo motors with special gearboxes
Set photocells en sensors with the mounting brackets
Set reference encoder with the mounting bracket
Set cables en connectors
Mounting set servo motors
Software in English, Dutch and German
Schematics, parts list and operator manual in English

The servo system can be used within a temperature range of 0 to 40 °C.
Used drives have internal control and all are connected to the safety CPU in the Machine Control

The operator panel

Operator panel is a touch screen
Operator panel is mounted on the operators side of the machine
The folding data is easily entered through the touch screen panel
When an error occurs, a message will be displayed

LSU (Lateset Squaring Unit)

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Conveyor control

14

Counter

13

R

12

eder Belt speed Control

Special Fold

T-Fold

Jam detect

Auto set

Glue Controller

1 Glue Control

The basic glue control can control up to 16 glue heads. Whit the possibility to extend this to 32, 64 glue heads. Whit the Glue control almost every brand of glue head can be controlled. For example, Nordson, Valco, Reuther, etc. Wiring and tubing is integrated in to the machine

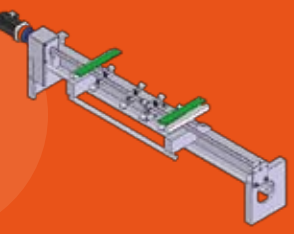
Special functions:

Stitch, Auto-stitch, and the unique JD Glue-reducer for each glue bead. Special copy/paste functions and visual display

Glue Detection

Folding belt control

otating Squaring



Kicker

Squaring system

the JD Stopper is too slow. This unit is specially designed for shorter boxes that run at high speed and is capable of handling short distances between the boxes. It can straighten crash, lock and RSC boxes up to about 30.000 pc/h. (Depending on the box style)

This Rotary Squaring can also be used in other sections to straighten sheets in the machine before problems occur

13 Counter

Controlled by a touch screen. (Stand alone version) Can be connected to LED display and Computer. Has a memory for storing data, as well as a "Dual counter" function so 12/13 batches can be counted. It also has an option to supply the conveyor, jam detection, stopper, LSU straighter and Kicker

(If a JD Machine Control is part of your machine this counter option can also be part of the software)

14 Conveyor control

The JD conveyor control detects the flow of boxes in the main machine. According to this box flow, the press-conveyor is switched to remain a optimal shingling for counter-stackers or easy manual take-of. Irregular feeding will hardly have any effect on the shingling

In case the drive of the press-conveyor is included in the JD main-drive, the shingling can be improved even more

15 LSU (Latest Squaring Unit)

The unit is specially designed for shorter boxes that are also difficult to stack in front of the conveyor. It can straighten, crash lock and RSC boxes up to about 15.000 pc/h. (Depending on the box style)

A. This type is usually mounted on Press conveyors with a maximal width of 1200 mm

B. This type is usually mounted on Press conveyors with a minimal width of 1200 mm

16 Online support system

JDIS is the JD online system

With this system we will be able to provide you the following items online:

- *Checking the current state of the control*
- *Checking the control settings (if necessary we can adjust them)*
- *Read the log files*
- *Updating the software*
- *Overtake the controls for training or when there are problems*

17 Main drive

The Main-Drive has two versions:

JD Main-Drive FD is equipped with frequency drives. These drives control the speed of the machine. The used drives all have internal safety and are connected to the safety CPU in the JD Machine Control

JD Main-Drive SD is equipped with servo drives. Each section will be equipped with one ore more servo drives. These drives control the speed of the machine as well as the position of the boxes. In case of a detected error (see also JD Jam-detection and JD Glue-detection), the machine can be switched of in sections. This will result in lower waste. Especially in cases where hot-melt glue is used

The used drives all have internal safety and are connected to the safety CPU in the JD Machine Control

18 Machine safety

The JD Machine Safety is part of the JD Machine control. As soon as the JD Machine control is equipped with one or more servos or frequency drives, a safety CPU with safety I/O will be added to the system

This safety CPU controls all motion parts and will switch the drives in to a safe mode. Stop and emergency stop buttons as well as light curtains, sensors and safety mats can be connected to the special inputs of the JD Machine safety I/O to create a safe environment for the operators

All used drives all have internal safety and are connected to the safety CPU in the JD Machine Control

We deliver what we promise...

JDengineers

www.jdengineers.nl

JD Engineers BV | Jetze Veldstraweg 109 | 8515 CP Oldeouwer | The Netherlands
T +31(0) 513 552 125 | F +31(0) 513 552 202

info@jdengineers.nl | www.jdengineers.nl