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TTL Engineering Systems Co.,Ltd.

74/4 หมู่ที่ 19 ถนนนิมิตรใหม่ ตำบลลำลูกกา
อำเภอลำลูกกา จังหวัดปทุมธานี 12150
โทร. 02 191 1724-6 แฟกซ์ 02 191 1727

CNC Press Brake (เครื่องพับไฮดรอลิค)

Model: **PB6 (4+1 axis) DA53T**

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CNC Electric-hydraulic proportion press brake configuration:

1. CNC system: Holland DA53T control 4+1 axes(Y1,Y2,X,R+ V crowning)
2. Hydraulic system:Original Rexroth Germany.
3. Grating ruler:GIVI,Italy.
4. Pump:SUNNY
5. Electrical element:Schneider.
6. Servo motor and driver: INOVANCE/ ESTUN
7. Toolings:upper tools fast clamping and with compensate, lower tool with 2 V or 1V. Segmented tools according to your requirement.
8. Seal ring: NOK,Japan.
9. Lower-table mechanical crowning mechanism by CNC controlled
10. With safety side doors and back doors.
11. Hydraulic system with security valve, with spool position and manometer
12. With All Security equipment monitored.
13. Optional With the laser safety device.

Machine features

- Machine adopt wholly welding structure, the main parts annealing treatment, releasing internal stress.
- The frame and ram are processed at one time completely by heavy duty boring and milling machine.
- Big daylight, high ram speed
- Ram with fast clamping for up tooling, hydraulic crowning device on working table
- Advanced wholly back gauge, X axis, R axis, with high speed, high precision.
- Standard configuration DA53T from Holland.
- Hydraulic system adopts Germany electric- hydraulic proportional system.

CNC axis function

- Y（Y1、Y2）axis: ram synchronous control axis, controlling bending depth and angle control.
- X（X1、X2）axis: Control for back gauge front-back stroke, using controlling bending flange size
- R axis: Control for back gauge beam up-down
- Z axis: Controlled back gauge finger left-right movement.
- V axis: Working table auto-hydraulic crowning control

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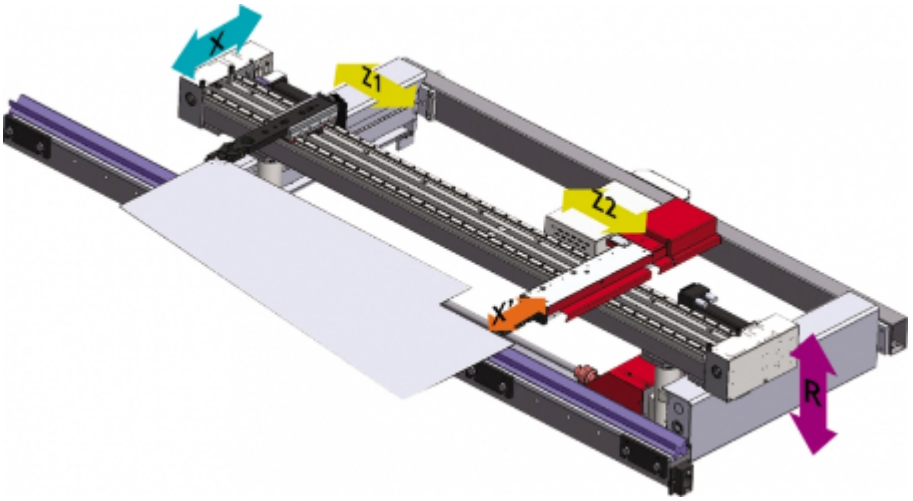

Simulation model engineering and optimization are with famous ANSYS non-linear software (Unique design).

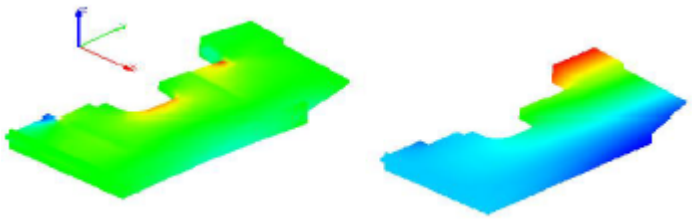

Fig.1 Upright

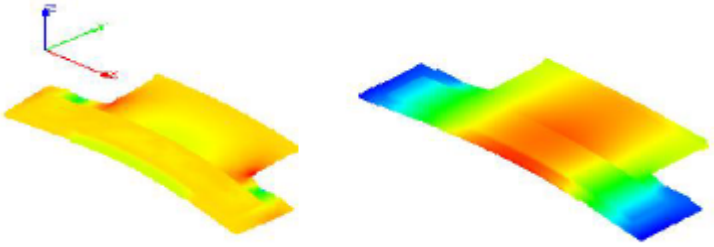

Fig.2 Working table

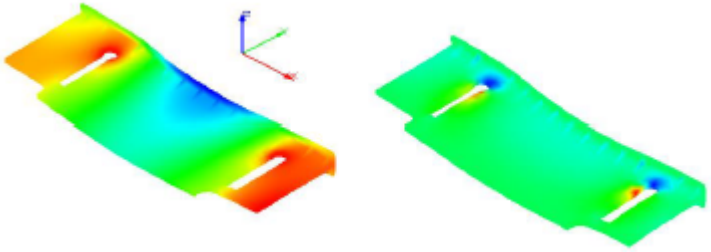

Fig.3 Ram

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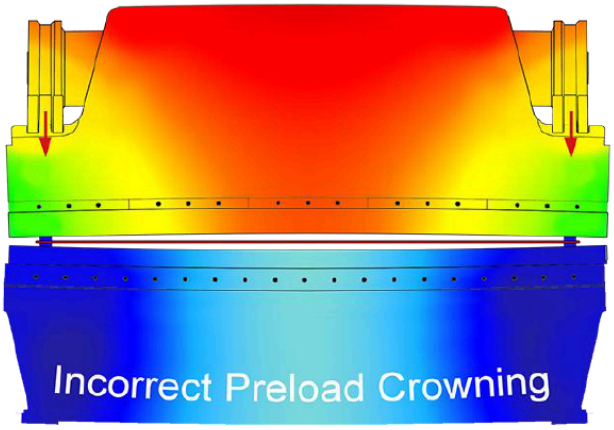
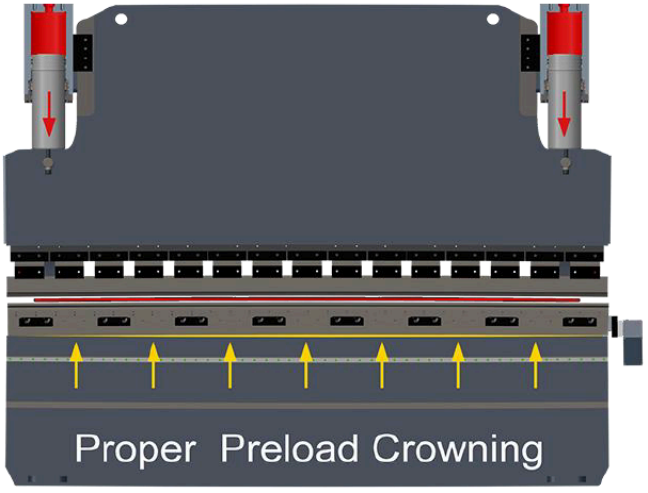
CROWNING SYSTEMS (ระบบแก้การโก่ง)

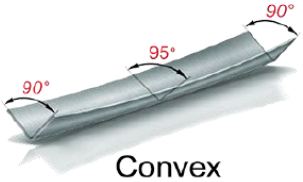
Manual and CNC crowning ensures a constant bend angle across the full length of the machine. This is achieved by pre loading the machine, to offset any possible deflection under load or compensate for any tool wear, so that under load contacting surfaces are parallel to each other,

With CNC crowing systems the press brake control is preprogrammed with machine characteristics and deflection data. With manual crowning a simple spread sheet or chart can be easily developed for each application,

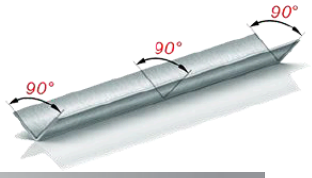


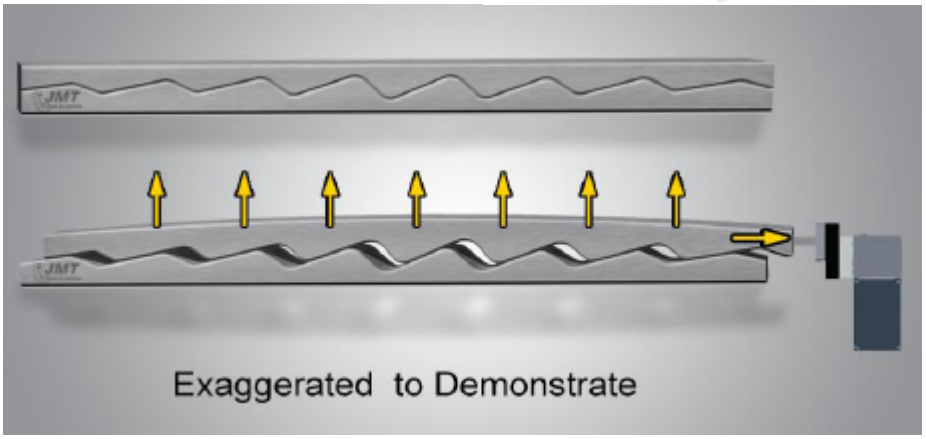


Concave

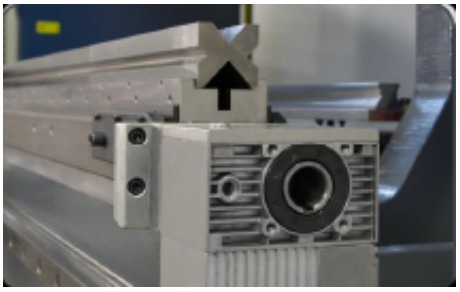


Convex






Manual Crowning


CNC Motorized Crowning

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DA-53T

Compact 4-axes touch colour CNC system for press brakes

Delem

Compact without compromise

The DA-53T touch CNC control provides a modern compact and versatile solution for a wide range of press brake applications without compromising machine functionality.

The **DA-50T-series** offers easiest CNC programming based on the Delem graphical **touch screen** user interface. The new compact **DA-53T** adds a state of the art complete touch control solution for synchronized press brakes.

This panel based control, standard capable of controlling up to 4 axes, can be integrated in cabinets as well as used in an optional pendulant arm housing. Its 10.1" wide screen high resolution colour TFT, with industrial grade **multi touch technology,** gives access to the proven Delem user-interface. It enables **direct "hot-key" touch navigation** between product programming and actual production. Functions are located where needed, offering **optimised ergonomics** throughout the entire application.

Machine adjustment and test bends are reduced to a minimum with a quick and easy **program-to-production** work sequence.

USB interfacing enables fast product and tool backup using USB memory sticks.

The standard machine control functions are Y1-Y2, X, R-axis and crowning. The second back gauge axis can also be set as Z axis.

DA-53T features:

- "Hot-key" touch navigation
- 10.1" high resolution colour TFT
- Up to 4 axes (Y1,Y2 + 2 aux. axes)
- Crowning control
- Tool / material / product library
- Servo and frequency inverter control
- Advanced Y-axis control algorithms for closed-loop as well as open-loop valves.
- TandemLink (option)
- USB memory stick interfacing
- Profile-53TL offline software

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Specifications DA-53T

Product configuration

Standard
- Colour high brightness LCD display
- 10.1" wide screen TFT
- LED backlight
- 1024 x 600 pixels
- Industrial grade touch screen
- Storage capacity 1 GB
- Data backup / restore via USB
- USB flash memory stick
- Integrated valve amplifier
- Power-down memorisation
- Profile-53TL offline software

Factory option
- Pendulant arm type housing

Field options
- TandemLink

Panel type housing DA-53T-P

Ordering information
- DA-53T, CNC in robust housing
- DA-53T-P, CNC panel version

Technical specification

General
- Multi touch industrial touch screen
- Instant Shut Off

Electrical / interfacing
- Power supply: 24V
- Opto-isolated digital I/O
- Integrated valve amplifier Y1, Y2, P
- Encoder inputs (single/diff.5V/12V)
- RS232 port for safety PLC
- USB port

Control
- Servo control
- Unipolar / frequency inverter control
- Pressure valve control
- Proportional valve control
- Crowning control
- Multiple digital function outputs

Mechanical
- Housing 373x368x122 mm
- Panel 311x222x60mm
- Design, glass surface, aluminium edge
- IP54
- Weight 9 kg (incl. housing)

Programming
- Alphanumerical product naming
- Hemmed products programming
- Radius programming (bumping)
- One page programming table
- Programmable material properties
- Programmable axis speed
- Millimetres/Inches, kN/Ton selection
- Stock counter

Tooling
- Tool library 30 punches / 30 dies
- Alphanumeric tool identification
- Hemming tools
- Radius tools

Computed
- Tooling safety zones
- Press force
- Bend allowance
- Crowning adjustment
- Bottoming force
- Hemming force
- Auto bumping calculation
- Learned angle correction database

Miscellaneous
- 'Teach-in' on all axes
- Operator selectable dialogue languages
- Error messaging system
- Diagnostic program
- Machine time + stroke counter
- On board Analysis Tool
- Sequencer functionality (PLC)
- Safety PLC interfacing