

October 28, 2010



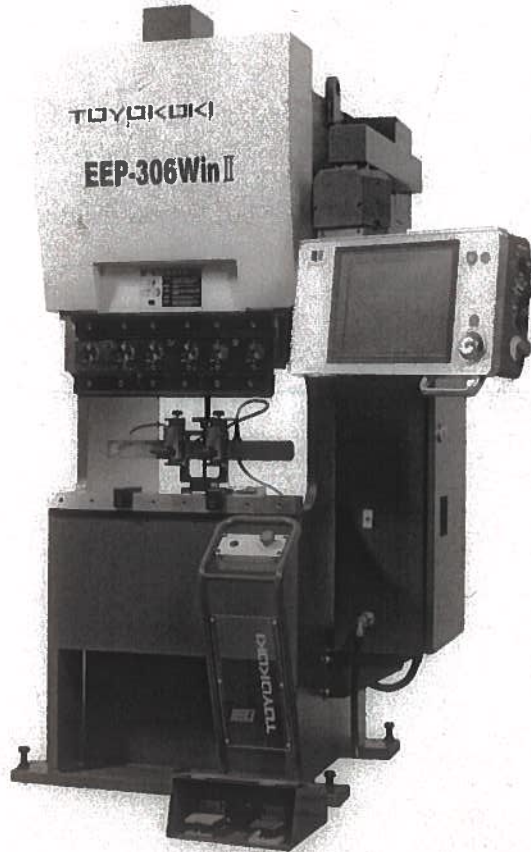
# EEP306

**ELECTRIC PRESS BRAKE  
24 INCH / 33 U.S. TONS**

**Technical Proposal & Quote prepared for:**

## **M3D**

Roger Matar  
309 Laurelwood Rd, Unit 23  
Santa Clara, CA. 95054  
Quote # 10281004JF



North South Machinery., 1400 Pioneer St., Brea, CA 92821

**THE MITSUBISHI EXPERIENCE**

## TABLE OF CONTENTS

---

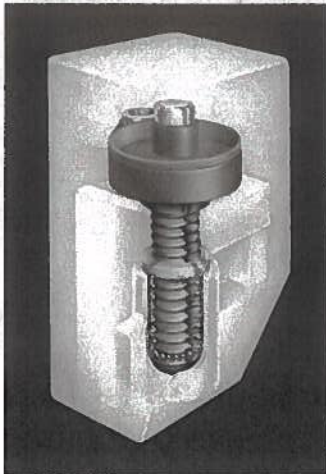
MACHINE FEATURES .....	3
CONTROL FEATURES .....	<b>ERROR! BOOKMARK NOT DEFINED.</b>
SPECIFICATIONS .....	6
MACHINE OPTIONS: .....	8
PRICE.....	8
WARRANTY .....	8
DELIVERY .....	8
VALIDITY.....	9
PAYMENT TERMS .....	9
SECURITY AGREEMENT .....	9
START UP AGREEMENT .....	9
TRAINING .....	9

The patented AC servo technology designed into the EEP provides for high speed, ultra-precision bending, free of temperature and viscosity changes characteristic of hydraulic designs. Superior ram positioning repeatability, along with high speed, and a versatile control, makes the EEP306 a productive and reliable machine tool.

---

## Machine Features

### 100% Electric Ram



Ram movement is powered by a single AC servo motors driving a patented heavy-duty ball screw constructed to withstand 3x the rated machine capacity. A rotary encoder position the ram at bottom dead to within one micron (0.001mm or 0.00004") without frame deflection error introduced by conventional hydraulic designs. Hydraulic fluid warms over time transmitting heat to the frame members which then deflect more readily. The AC servo machines produce no extra heat so bottom dead center is exact all the time.

Back gauge repeatability is ensured via twin linear motion bearings and an AC servo motor for front to rear (X) axis movement.

The electric machines are also clean in operation and maintenance. There's no oil to stock, transport, and dispose of. They are also quiet and highly energy efficient. Hydraulic gear pumps on conventional machines make a lot of noise and continue to cycle even when not bending. The electric machines produce no sound between bends while consuming 18 times less energy that the same size hydraulic machine!

TOYOKOKI press brakes utilize absolute rotary encoders that contain a set origin position. The ram origin is not a function of the tools used, nor set visually by the operator or by pressure feedback. Ram position accuracy is 10X better than conventional hydraulic press brakes ensuring the highest possible repeatability of any press brake.

### MITSUBISHI 3D Touch Screen Control\*

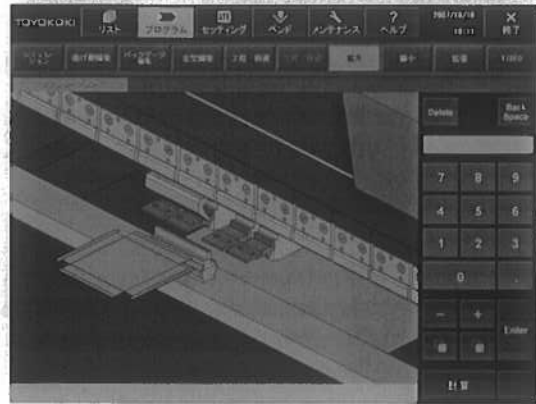
Each machine is equipped with a MITSUBISHI Windows XP control specifically adapted for the EEP servo press brake. Standard features include a 15" color touch screen, Ethernet and USB ports, 3D graphics, and a rotary pulse handle for manual control ram and back gauge movements.

Bending force is computed and displayed to the operator who can set maximum pressure by a rotary force selector. While in the die changing mode, pressure is automatically limited to a safe minimum that cannot damage the tools.



First time parts are programmed quickly at the machine by one of three methods: simple numeric data entry, 2D Quick Draw by finger tip with 3D conversion, or off-line 3D program import. Bends can be set by either pressing the foot pedal or by rotating the pulse handle manually to the desired ram depth.

The control calculates bending pressure, ram position, and back gauge positions while keeping the ram parallel at all times. Manual forming with the pulse handle facilitates safe forming for "one-offs" or special tools such as off-set and bottoming dies.



*\*NOTE: 3D graphics, bend simulation, and 2D draw are an option package*

### Tool Library

Multiple libraries of tools can be set into the EEP WIN II along with the maximum pressure allowed for any die. The unit uses this information to alert the operator if he is exceeding the tool strength limits.

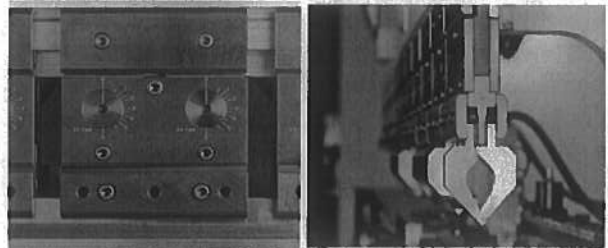
### Automatic Tool Recognition

When programs are recalled, the HYB indicates which dies to place in the machine and runs a quick confirmation routine to verify the tools are actually in place. This eliminates the possibility of mismatched dies and damage

**Ground surfaces** of the lower bed and upper tool holders ensure the highest level of tool alignment and angular bend accuracy.

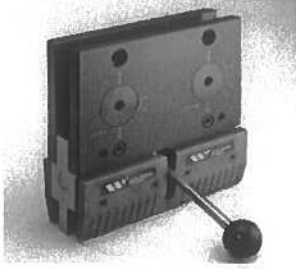
### Tool Holders

The patented segmented upper tool holders are each 8 inches wide and 6.75 inches. Either European or American punches can be mounted manually. A lower table die riser is available for European V dies and an American riser with a groove for 1/2" V tangs is available. Hydraulic clamping is not available or necessary for the Electric models. Please specify tool style at time of order.

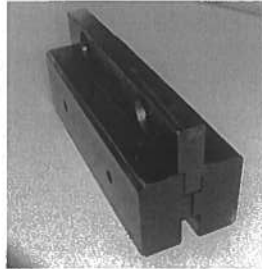




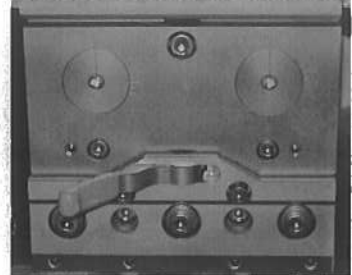
## Tool Options



Wilson Express Clamp



Manual American Clamp

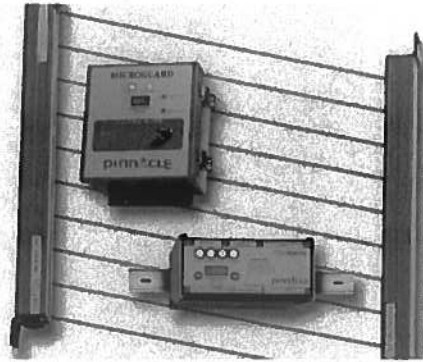


TOYOKOKI One Touch

## Safety Light Guards



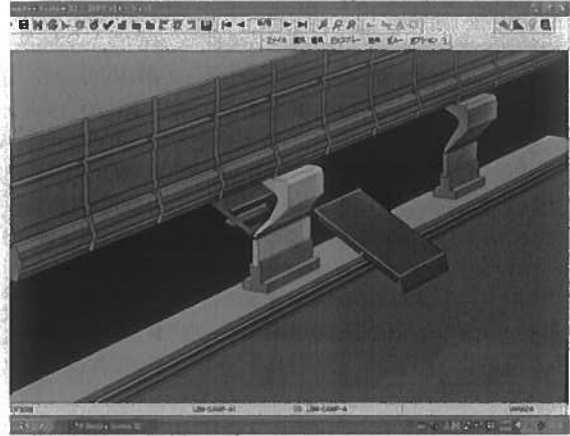
AKAS-3 Motorized Laser



Pinnacle Systems Micro Guard

## Software Options

MITSUBISHI Diamond Soft facilitates CAD/CAM operations for our Laser and Bending systems. With the LSB Bend Cam module, 2D and 3D files can be imported to automatically set tool locations, simulate the bending and create a HYB WIN II program. Native files such as Solid Works and Solid Edge can be opened directly and with a few keystrokes a 3D simulation is made complete with tool locations, bend sequence, and interference checking. Program code and graphic files can then be opened from a network directly into any WIN II control.



Diamond Soft integrates multiple machine tools such as laser, water-jet, and turret. The properly unfolded parts with correct bend allowances are ready for cutting in the flat with assurance of exact dimensions after forming.

## SPECIFICATIONS

Machine Specifications	Metric	U.S Tons/Inches
Capacity	30 (METRIC TONS)	33(U.S. TONS)
Table Length	600	24n.
Stroke Length	150 mm	5.9 in.
Ram Speed		
Approach	0.7~67m/sec	0.3 ~2.6PS
Bending	0.02~20 mm/sec	(.0008~.79 IPS
Return	0.7~67m/sec.	(.03 ~ 2.6 IPS
Ram Position Accuracy	± 0.001 mm	0.00004 in.
Open Height (excluding punch holders)	480m	18.9 in.
Ram AC Servo Motor	1 x 6 kW	1 x 8 HP
Frame Gap	200 mm	7.9 in.
Standard Table Height	820 mm	32 in.
Distance Between Housings	716 mm	28.2 in.
208Vac ± 5% 3 phase, 8.3KVA, maximum electrical draw 29.4 A, 40 Amp breaker on machine, see Options for transformer		

<b>CONTROL UNIT SPECIFICATIONS</b>		
Type	MITSUBISHI 15" color touch screen	
Main Control Unit	CPU	Pentium M738 1.4Gz
	OS	WINDOWS XP embedded
	Upper Dies	unlimited
	Lower Dies	unlimited
	Max. # Programs	unlimited
	External connections	LAN, 100Base-T, 1000Base-T, RS232C, SSCNST3
		USB, flash memory
	Standard axes controlled	3 (Y, X, R)

<b>Back Gauge Specifications</b>	<b>Metric</b>	<b>Inches</b>
X axis range	300mm	11.8 in.
X axis speed	30m/min	1181 in./min.
R axis range	20mm	7.8 in.

## PRICING

Quantity	Item	Part #	Price
1	EEP 306 Electric AC Servo Press Brake with WIN II control		\$56,500.00
	<b>Options</b>		
1	Palm Buttons (choice foot, palm, combination)	WH-A02-3MSK-EM-UNIT	\$2800.00
1	Four inch wide upper punch holder (order both part numbers)	PH-FW10P & AHS-100-0.6	<del>\$1,499.00</del>
1	Magnetic back gauge stopper (one)	BG94C5-1211457M	\$399.00
1	Wilson Express Clamp	APB43033	\$683.00
1	Magnetic back gauge stopper (one)	BGUDCL-313A-12M	\$399.00
1	Wilson Express Clamp	APB43033	\$683.00
1	American Punch Holder	PH-A20P-911R-ASSY	<del>\$469.00</del>
1	Micro Guard safety light curtains		\$3,900.00*
1	AKAS-3 motorized laser light curtain		\$11,500.00*
1	LSB MC Diamond Soft		\$11,495.00
1	Additional Seat LSB		\$5,748.00
1	Transformer 480/240V to 208V	1167B	\$2,100.00
1	Metabend 3D options on control		\$5,000.00
	<b>TOTAL</b>		\$

??  
x 4

\* Safety Curtain installation is by independent integrators and not necessarily MITSUBISHI service technicians. Micro Guard curtains can be installed by customer directly. Curtain prices approximately reflect inclusion of installation and travel expenses. Please request specific quote for your specific location.

NOTE: Optional items may not be in stock. Please inquire for availability.

### Warranty

The Mitsubishi warranty covers all parts found to be defective within a period of one (1) year (12 calendar months) from date of delivery. Labor is also covered during this period.



## **Delivery**

Actual delivery will be calculated after receipt of all Mitsubishi paperwork. F.O.B. Mitsubishi warehouse.

## **Validity**

This proposal is valid for 30 days.

## **Payment Terms**

Agreed terms are indicated on a Mitsubishi Sales Acknowledgement that must be signed following issue of purchase order. Net 30 days unless otherwise agreed upon.

## **Security Agreement**

Mitsubishi shall retain a security interest in the equipment and goods until full payment is made. In case of default, Mitsubishi shall be entitled to possession of the goods and/or the entire balance shall become due and payable immediately. A Security Agreement to that effect shall be executed between the Seller and Buyer.

## **Start Up Agreement**

Mitsubishi Inc. or your authorized dealer will provide factory trained service for machine start-up after the customer has leveled the machine on the foundation, and the electrical connections and other pre-installation requirements have been completed by the customer. Electrical service to the press brake (and possibly air depending on the model) must be in place prior to our technician's arrival.

## **Training**

Operator training covering machine operation and programming will be provided at time of installation at the press brake installation location. Three day on site off-line software training is included with the LSB software.

## **Important Notice:**

Official orders for goods are only accepted with our Sales Acknowledgement Agreement, duly signed and returned to Mitsubishi.

Filing of a UCC-1 Form prior to delivery will be required, unless 90% of the full purchase price of the equipment has been received by Mitsubishi prior to shipment.

Thank you for the opportunity to present this quotation for your review. Please contact us at (562) 690-7616 if we can be of further assistance.

Sincerely,

*Lani Christensen*

Lani Christensen  
Vice President  
North South Machinery, Inc.