



EKO ES-Series

Rapid and Precise Full Servo Press Brakes

TECHNICAL INFORMATION

EKO ES SERIES - Full Servo Press Brakes

BUILT FOR SPEED, PRECISION AND EFFICIENCY. NO COMPROMISE!

EKO full servo press brakes are manufactured to the strictest quality standards. The Q345E steel frames are annealed to 1200° before undergoing precision machining and a careful assembly process.

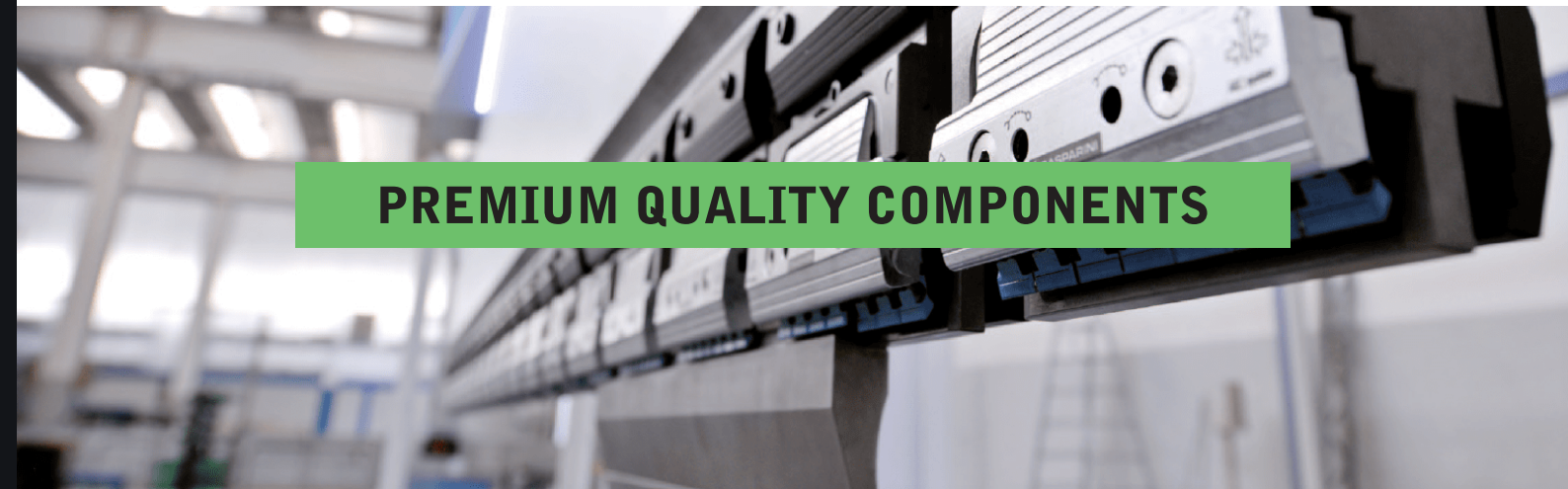
EKO press brakes work on the dual servo principle, with the Y1 (left ram) and Y2 (right ram) axes controlled by powerful Sanyo servo motors. This design allows for the highest speed and precision available, and reduces running costs.

In addition to this, EKO press brakes come equipped with rapid front loading clamps, ensuring efficiency by saving time on tool changes.

EKO have partnered up with high end robot manufacturers such as Kawasaki, Kuka and Yaskawa to ensure their machines are perfectly suited for high speed robot bending applications.

The EKO press brake machines come equipped with "NC Max" CNC Control. STEP (Germany) and Delem (Netherlands) Graphical Controls are also available as a preferred option for the Australian customer. The highly recommended Delem DA66T Control comes with Profile-T offline software and a large touch-screen interface with user-friendly graphics for easy CNC programming and fool-proof operation.

By building on Japanese and European style servo machines, EKO have proven their excellence by dominating 70% of the Chinese domestic market for high speed electric servo press brakes.



PREMIUM QUALITY COMPONENTS

STABLE

EKO's Research and Development Team consists of ex Toyokoki and Amada engineers in a bid to advance EKO's technology while ensuring machine stability and durability.

EKO's major machine components are composed of high quality imported Japanese products.

ECO-FRIENDLY

The machine's servo motors drastically reduce energy consumption, making them environmentally friendly.

In addition to this, the motors themselves do not require hydraulic oil, ensuring a cleaner, safer workspace.

ECONOMICAL

EKO servo press brakes will only consume electricity while bending. The motor does not run unless bending.

On average, the ES series uses only 1kW during full time production.

EFFICIENT

EKO high speed servo press brakes operate at over two times the speed of traditional hydraulic machines. This greatly reduces the cost per part while minimising labour costs.

ACCURACY

Y Axis	0.01 / 100mm
X Axis	0.02 / 600mm
Z Axis	0.1 / 100mm
R Axis	0.1 / 100mm

SPEED

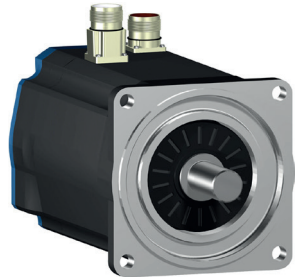
Y1 & Y2	Speed 1 - 25 m/min
X Axis	Speed 1 - 30 m/min
Z Axis	Speed 0.1 - 20 m/min
R Axis	Speed 1 - 15 m/min

MACHINE FEATURES



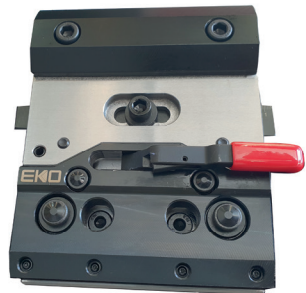
DELEM DA66T CONTROLLER

The machine is synchronised by a Delem 66T state of the art controller with offline programming software. Offering simple CNC programming and an interface with 3D graphics, it ensures a smooth, fool-proof operation by graphically simulating the bend process of the product.



POWERFUL SANYO DENKI SERVOS

The left and right ram are controlled by heavy duty servo drives and motors from Japanese giant Sanyo Denki. Unmatched in durability, these large format servo motors allow accurate bending with up to 125 tonnes of force.



EKO QUICK CLAMPING SYSTEM

The Japanese style quick clamping system ensures simple, fast and safe front load tool changing, eliminating the time-consuming nature of the traditional tool change method.



FULLY ANNEALED FRAMES

EKO use Q345E steel frames and anneal to 1200° before precision machining. This relieves all internal stresses within the frame and ensures a quality machine that will bend accurately for a lifetime.



ITALIAN LASER GUARDING SYSTEM

The DSP laser guarding system ensures safe operation. Optical protection remains active until the tool opening is reduced to 2mm, thereby preventing fingers and hands from entering the point of operation.



MITSUBISHI SERVO DRIVES & MOTORS

The back gauge is driven by premium Japanese servo motors from Mitsubishi Electric. These high speed servos ensure rapid and precise movement of the X, R, Z1 and Z2 axes.



TECHNICAL SPECIFICATIONS

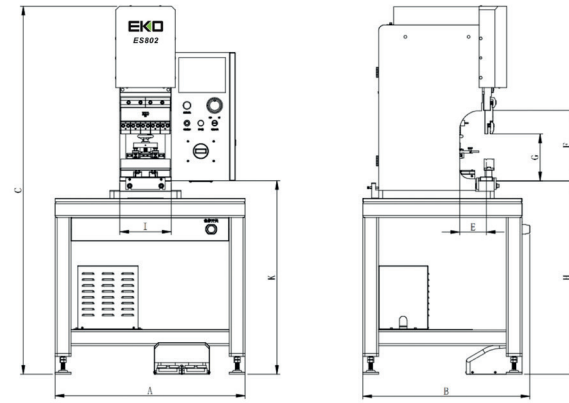
NO	Item	EKO ES802	EKO ES3512	EKO ES6020	EKO ES8525	EKO ES1253	EKO ES2508
1	Capacity (kN)	80	350	600	850	1250	250
2	Bending Length (mm)	260	1200	2000	2500	3000	800
3	Stroke (mm)	70	150	150	150	230	100
4	Approach Speed (mm/s)	200	180	130	120	100	190
5	Open Height (mm)	360	420	420	470	500	370
6	Bend Speed (mm/s)	0.2-50	0.2-50	0.2-50	0.2-50	0.2-50	0.2-50
7	Return Speed (mm/s)	200	180	130	120	100	190
8	Power Requirement (kVA)	5.6	15	22	30	30	11
9	Mass of Machine (kg)	700	3.5	4.8	8.7	13.5	1.5
10	Back Gauge Stroke (mm)	100	500	500	500	600	500
A	Width (mm)	960	1630	2500	3050	3300	1300
B	Depth (mm)	800	1360	1360	1480	1680	1050
C	Height (mm)	1870	2400	2500	2630	2770	2200
E	Frame Gap (mm)	140	255	355	400	475	200
G	Distance between Tables (mm)	240	290	300	350	380	240
H	Upper Table Height (mm)	980	940	990	935	960	880
I	Distance between Frames (mm)	260	1200	2000	2510	3010	880
J	Overall Height (mm)	1870	2550	2640	2800	2950	2400
K	Controller Height (mm)	982	1000	1000	1050	1050	1000

COMPACT PRESS BRAKES

EKO ES802



- 8 Tonne
- 270 mm
- 3 Axis (Y1, Y2, X)

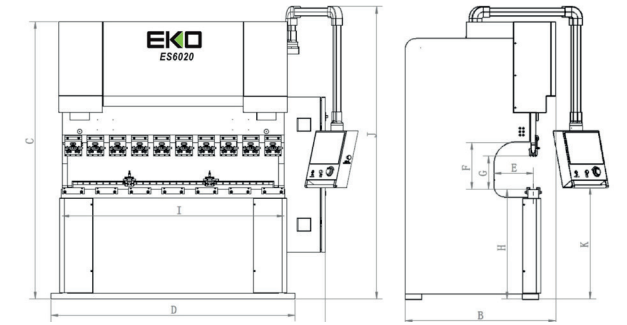


STANDARD SIZE PRESS BRAKES

EKO ES6020



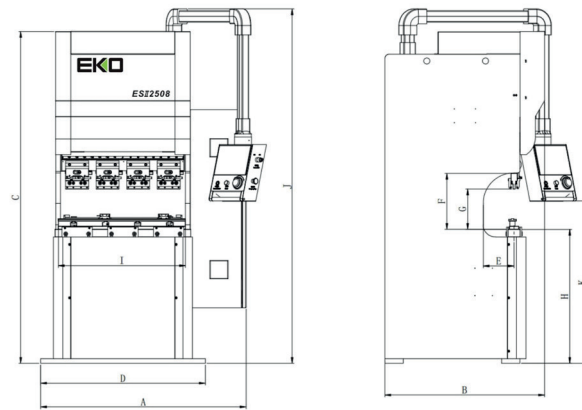
- 60 Tonne
- 2000 mm
- 6 Axis (Y1, Y2, X, R, Z1, Z2)



EKO ES2508



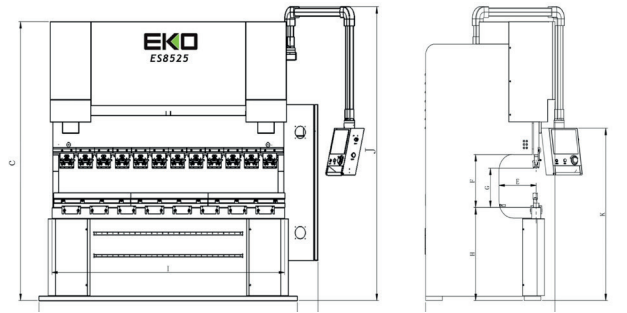
- 25 Tonne
- 800 mm
- 4 Axis (Y1, Y2, X, R)



EKO ES8525



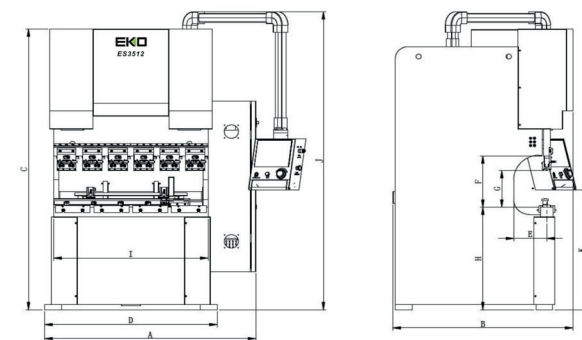
- 85 Tonne
- 2500 mm
- 6 Axis (Y1, Y2, X, R, Z1, Z2)



EKO ES3512



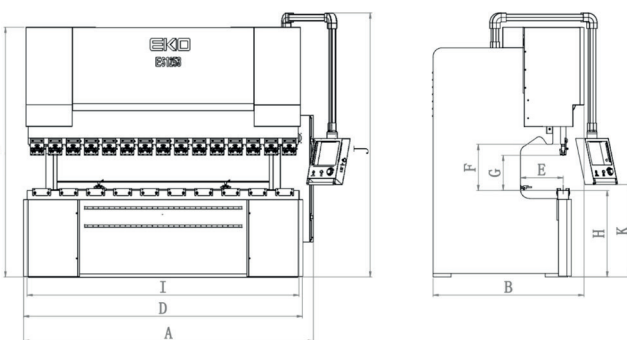
- 35 Tonne
- 1200 mm
- 6 Axis (Y1, Y2, X, R, Z1, Z2)



EKO ES1253



- 125 Tonne
- 3000 mm
- 6 Axis (Y1, Y2, X, R, Z1, Z2)





COMPANY BACKGROUND

EKO is a national innovative enterprise, which integrates extensive research and development, diligent manufacturing and excellent customer service. Since 2009, the company has enjoyed great success in the manufacturing of environmentally friendly, high tech, full servo press brakes. Since 2014, EKO have earned 50 national patents for their advancements in full servo bending.

EKO have been developing their full servo press brakes for over ten years and currently hold over 70% of the market share in China. EKO boast the latest in innovative high tech development facilities and equipment, with a professional development team consisting of ex Toyokoki and Amada engineers.

EKO adheres to the principle of "Continuous Improvement" and "Continuous Innovation."



EKO EKO CNC Technology Co.,Ltd.																																
Bending Diagram	V	4	5	6	7	8	10	12	14	16	18	20	24	28	32	36	40	45	48	50	55	60	65	70	80	90	100	120				
	B	2.8	3.5	4	5	5.5	7	8.5	10	11	12.5	14	17	20	22	25	28	31	32	35	38	42	46	49	56	63	70	85				
Bending Diagram	R	0.7	0.8	1.0	1.1	1.3	1.6	2.0	2.3	2.6	3.0	3.3	3.8	4.5	5.0	6.0	6.5	7.0	7.5	8.0	9.0	10.0	10.5	11.0	13.0	14.0	16.0	19.0				
	S	0.5	40	30	30	20																										
Bending Diagram	S	0.6	60	50	40	40	30																									
	S	0.8	80	70	60	50	40																									
Bending Diagram	S	1.0		110	100	80	70	50	50	40																						
	S	1.2			130	120	100	80	70	60	50																					
Bending Diagram	S	1.4				160	130	110	90	80	70	70																				
	S	1.6					170	140	120	100	90	80	70																			
Bending Diagram	S	2.0						220	190	170	140	130	110																			
	S	2.2							250	230	180	160	130	110																		
Bending Diagram	S	2.5								230	200	170	150	130																		
	S	3.0									330	290	240	210	180	160																
Bending Diagram	S	3.5										400	330	280	250	220	200	180														
	S	4.0											430	370	330	290	260	230														
Bending Diagram	S	4.5												470	410	370	330	290	280	270	250											
	S	5.0													510	450	410	360	350	330	270	250										
Bending Diagram	S	6.0														650	590	520	500	470	430	390	360	340	300							
	S	8.0																830	760	700	640	600	520	460	420							
Bending Diagram	S	10.0																	1080	1000	930	810	720	650								
	S	12.0																								950	780					
Bending Diagram	S	14.0																									1300	1100				

S: Sheet thickness(mm)
 V: Die opening(mm)
 L: Sheet length(mm)
 P: Bending force(KN)

$$P = \frac{650S^2L}{V}$$

P.S:
 Stainless steel double the P value
 Aluminium P value times 0.7

This chart is base on tensile strength $\delta = 450\text{KN}/\text{mm}^2$ and length $L = 1\text{m}$