



The **AddisonMckee eB80 ESRB** bending machine is an all-electric modular design with bed length variants based upon the same structure – with the capability to design or modify machines specifically to suit individual customer needs. The eB80 ESRB bender has a smaller overall footprint due to the modular design and standard machine mounted guarding.

The eB80 ESRB is designed to bend complex tube shapes up to 80 mm outside diameter and is based on proven technology that is acknowledged globally for its reliability, accuracy, repeatability and control, as well as quiet and clean operation. The base eB80 E machine can be configured with optional Multi-Stack/Multi-Radius (SR) and direct acting Boost (B) systems for the ultimate in bending control and versatility. The direct acting boost system on the eB80 ESRB is full length Y-Axis Boost which allows difficult manifold tube production and complex free form (push) bending for large radii bending.

**The eB80 ESRB bender comes standard with the following features:**

- AddisonMckee MK7 Omega™ Control System featuring color touch screen and Sequence Teach facility
- Up to 10 Programmable Electric Servo Axes (Y, B, C, X, Z, Follower, Clamp, Clamp Adjustment, Pressure Die and Mandrel) controlling all aspects of the bending operation
- Accepts Top or Bottom cut-off units
- Beam Shift (vs. Head Shift)
- Y,B,C or X,Y,Z Data Input
- Phased Mandrel Retraction
- Coordinated Motion between Axes
- Forward and Backward Teach Functions
- C Channel Beam to Protect the Y Axis Gear Rack
- Direct Drive Train on Bend Arm

**eB80-ESRB Bender Capacity Criteria**

- C-Axis torque - 16kNm
- Y-Axis Boost – 50 kN
- Bend Center Line Radius – 250mm.MAX; 25mm MIN
- Max difference in radii – 75mm.
- Y-Carriage Length – 2000 [3000 & 4000 options]
- 80mm OD Max bend capacity
- Variable/Programmable Stack height - 350mm

**Benefits of the eB80-ESRB All-Electric Bender**

- Increased flexibility in bender cell
- Ability to handle a larger variety of parts efficiently
- Ideal for part sequencing
- Rapid tooling changes
- Reduces set up time dramatically
- Low noise level under 75 dB

**MK7 Omega™ Series Digital Control Platform**

- Proven and globally standardized hardware
- Designed to provide maximum bender utilization and up-time
- User-friendly with full teach mode features
- Icon-based, with text, multi language HMI
- Remote error log access and diagnostics

### **eB80-ESRB Strengths:**

- Proven design: The eB80 is based on AddisonMckee's many years of building all electrical CNC tube benders. AddisonMckee has installed over 300 all electric benders in the field since 1999.
- Modular bed length: The eB80 has a standard 2M bed length and can be increased to up to 4M in the field. Only bender on the market with this capability.
- Direct acting bend arm (C axis): No chains or belts are used to drive the C-Axis - making it more reliable versus chain/belt methods.
- Proven Bed Shift design versus a "head shift" design: Bed Shift is a more robust concept and improves bend head rigidity which is critical for quality tube bending.
- Optional Tool Clamp Set Up/Teach Feature: It is ideal for quick set up and long production runs.
- TOP OR BOTTOM cutoff feature can be installed on the eB80 bender.
- 350mm Stack Height (Variable/Programmable) like our previous DB75ESRB model which is one of the largest Z axis shift heights in the industry.
- Actual Multi Radius bending capability
- Utilizes Cat 4 "safety on board" drive control features.
- The eB80 accepts all standard DB75ESRB tooling

<b>Tube Diameter</b>	Maximum (based on standard collet)	82 mm (3.25")
	Minimum (recommended practical limit)	12.5 mm (0.5")
<b>Bending Capacity</b> <b>(See Note 1)</b>	Carbon Steel at 1.5D	82 mm OD x 2.5 mm WT (3.25" OD x 0.100" WT)
	Carbon Steel at 1D	76 mm OD x 2.0 mm WT (3.0" OD x 0.080" WT)
	Stainless Steel at 1.5D	76 mm OD x 2.0 mm WT (3.0" OD x 0.080" WT)
	Stainless Steel at 1D	76 mm OD x 1.50 mm WT (3.0" OD x 0.060" WT)
<b>Maximum Length of tube over the mandrel (bend tangent to collet stop)</b>		2,000 mm (79")
<b>Centreline Radius</b>	Maximum	250 mm (10.0")
	Minimum	25 mm (1.0")
<b>Maximum difference between bend radii in a single bend stack (subject to tooling limitations)</b>		100 mm (4")
<b>Tube centreline height from tooling platform (minimum)</b>		50.0 mm
<b>Tube centreline height from tooling platform (maximum)</b>		400 mm
<b>Axis Strokes</b>		
Mandrel Stroke		300 mm (12")
Follower Boost Axis Stroke		450 mm (18")
Reaction Slide Stroke		380 mm (15")
Direct Carriage Boost Stroke		2800 mm (110")
Horizontal Tool Shift (X Axis)		300 mm (12")
Maximum Bend Angle		193 degrees
<b>Axis Forces</b>		
Direct Carriage Boost Force		50 kN (10,000 lbs)
Follower Boost Axis Force		30 kN (6,000 lbs)
Bend Arm Rated Torque		16 kNm (132,750 in-lbs)
<b>Axis Speeds</b>		
Y Axis Feed		100 M/min
B Axis Rotation		85 RPM
C Axis Bend Speed		18.5 RPM
X Axis Horizontal Shift		18 M/min
Z Axis Vertical Shift		14.5 M/min
Follower		15 M/min
Direct Boost Axis		13 M/min
Mandrel		16 M/min
Reaction Slide		4.7 M/min
Clamp Adjustment Axis		0.1 M/min



### Machine Dimensions (approximate)

Tube Loading Height (in lowest stack position)	1,145 mm (45")
Overall length (bend tangent to rear of machine)	3,850 mm (190")
Bend Arm Radius	1,200 mm (48")
Overall width	2,000 mm (79")
Overall Height (including electrical cabinet)	2,000 mm (79")
Machine Weight	5,500 kg (12,125 lbs)

**Note 1:** Bending capacities shown are indicative only and are intended as a guide. These capacities can change dependant upon the actual tensile strength and elongation factor of the tube material, tooling configuration, bending lubrication and other process factors. For any bending applications approaching these specifications we recommend that you consult our Application Specialists to discuss your specific requirements.

