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Complete Solution for
Tube and Pipe

ALL ELECTRIC TUBE BENDER

3 ~ 12 Electric Servo Axis

Advanced Bending Technology
DGT / Double Blades Shearing (2C) / IB (Material Saving)



160315/01E

TUBE BENDER ▪ LASER TUBE CUTTING ▪ TUBE CUTTING MACHINE ▪ TUBE END FINISHING ▪ SAW BLADES



ALL ELECTRIC TUBE BENDERS (DRAW BENDING)

Equipped with all electric CNC axis, multiple bending stacks and the unique DGT technology, this line of SOCO tube benders can offer one of highest performance solutions available in the market.

Specifications / Model	SB-Oil Tube Master	SB-12X3A-2S	SB-20X6A-MR	SB-39X9A-MR	SB-63X9A-MR	SB-90X11A-MR
Mild Steel Capacity (mm)(CLR 1.5D)	Ø8 x 0.7t x CLR3.0D	Ø10.0 x 1.2t	Ø20 x 1.2t	Ø38.1 x 3.2t	Ø63.5 x 2.5t	Ø88.9 x 2.2t
Stainless Capacity (mm)(CLR 1.5D)	-	Ø8.0 x 0.9t	Ø16 x 1.2t	Ø38.1 x 2.2t	Ø63.5 x 2.0t	Ø88.9 x 1.5t
Max. Tube Length Over Mandrel (mm)	4000 / 5000 (*)	1650	2070	3850	3850	4600
Max. Draw Bending Radius (mm)	15 ~ 35	60	80	180	250	250
CNC axis	3	3	6	9	9	11
Max. Bending Stacks	2	2	6	6	6	6

(*) Without Mandrel

Due to continuous improvements and designs : the manufacturer reserves the right to modify or make any change of all models without notice.



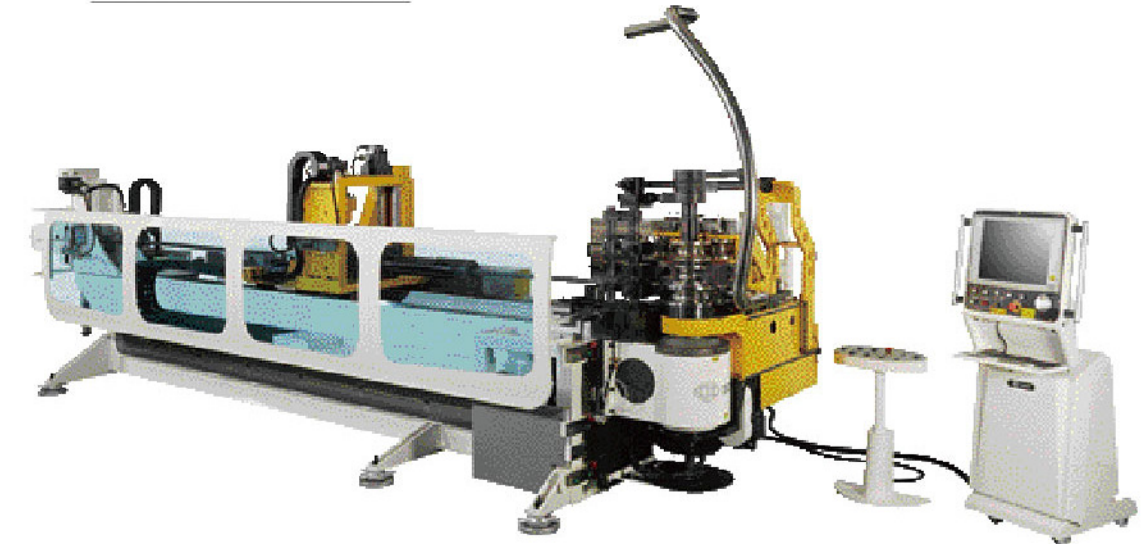
SB-Oil Tube Master



SB-12X3A-2S



SB-39X9A-MRV



SB-80X11A-MRV(+2C)

ROLL + 1D BENDING TUBE BENDERS

The V series CNC tube benders combine Draw, Roll and 1D Bending technology. This combination allows multiple fixed radiuses and large roll bending radiuses in a single part, as well as a programmable carriage boost for CLR = 1D Bending.

Specifications / Model	SB-20X6A-MRV	SB-39X9A-MRV	SB-63X9A-MRV	SB-80X11A-MRV	SB-90X11A-MRV
Mild Steel Capacity (mm) (CLR 1.5D)	Ø20 x 1.2t	Ø38.1 x 3.17t	Ø63.5 x 2.5t	Ø76.2 x 2t	Ø88.9 x 2.2t
Stainless Capacity (mm)(CLR 1.5D)	Ø16 x 1.2t	Ø38.1 x 2.2t	Ø63.5 x 1.9t	Ø76.2 x 1.2t	Ø88.9 x 1.5t
Max. Tube Length With Mandrel (mm)	2070	3850	3850	4600	4600
Max. Draw Bending Radius (mm)	80	180	250	250	250
CNC axis	6	9	9	11	11
Max. Bending Stacks	6	6	6	6	6
SOCO 2C system (Hydraulic)	-	-	Optional	Optional	Optional

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LEFT & RIGHT TUBE BENDERS

This line combines Draw + Roll + Dual Direction Bending Way technology.

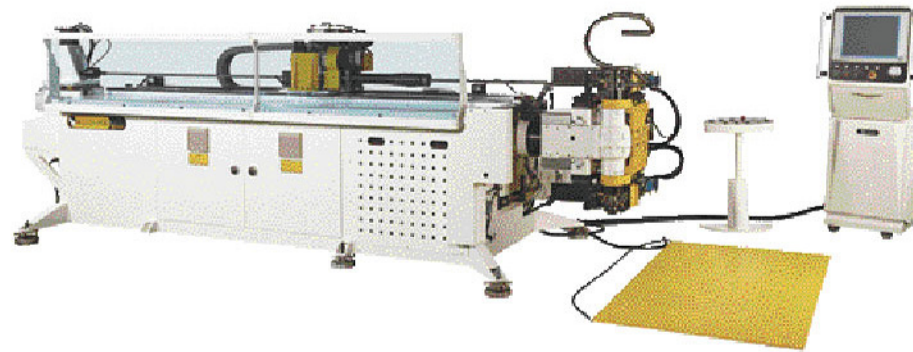
It is especially suitable for complex parts and shapes, such as automotive exhaust pipe, health care and fitness equipment. It also uses SOCO's unique DGT technology (Direct Gear Transmission). It may also be optionally provided with Automatic Loader (AF / AFM / ROBOTS) and Automatic Unloader (AUL / ROBOTS) for full automation.

Specifications / Model	SB-32X7A-2S-V-U	SB-32X9A-2S-V-U	SB-52X10A-2S-V-U
Max. Mild Steel Capacity (mm) (CLR 1.5D)	Ø32.0 X 1.6t	Ø32.0 X 1.6t	Ø50.8 X 2.0t
Max. Stainless Capacity (mm) (CLR 1.5D)	Ø30.0 x 1.0t	Ø30.0 x 1.0t	Ø42.7 x 1.65t
Max. Tube Length with Mandrel (mm) (*)	3750	3750	4500
Max. Draw Bending Radius (mm)	120	120	180
CNC axis	7	9	10
Max. Bending Stacks	2	2	2

(*) Can be extended by request

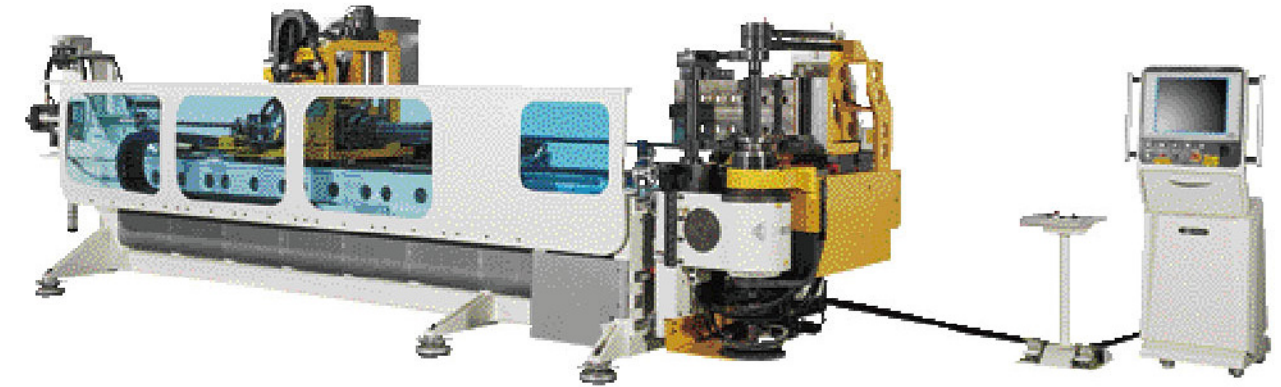
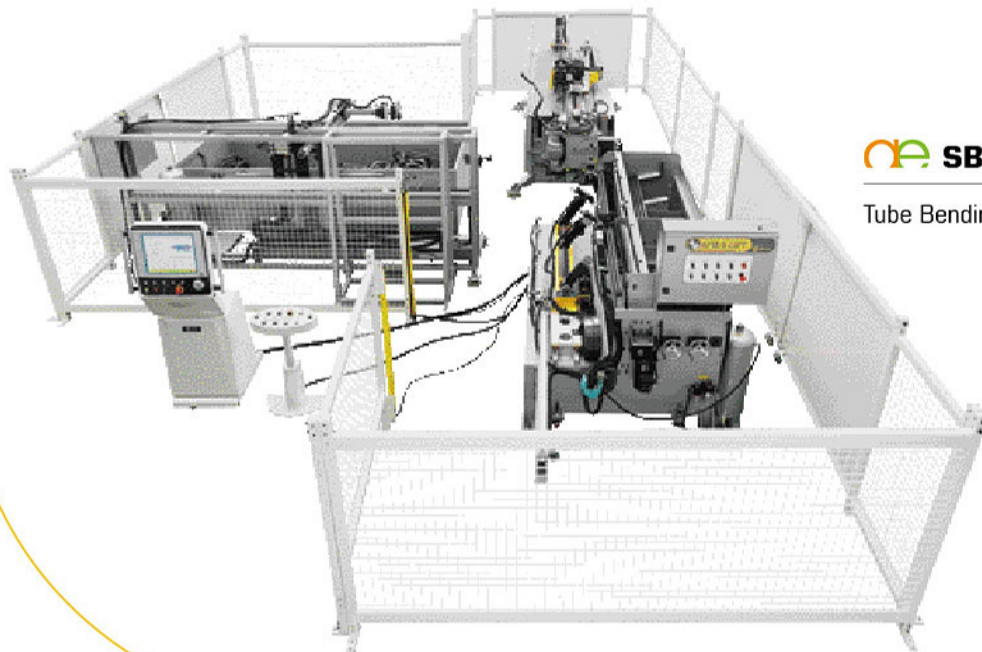
Due to continuous improvements and designs : the manufacturer reserves the right to modify or make any change of all models without notice.

 SB-32x7A-2S-V-U



 SB-32x7A-2S-V-U+AF+AUL

Tube Bending + Auto Loader + Auto Unloader



 SB-81x12A-MR-PT (+2C)

1D BOOSTER TUBE BENDERS

SOCO introduces the most advanced and complete line of Booster Benders for the automotive industry.

With machines ranging from O.D. 76.2mm~127mm, this line of booster benders fulfills all needs for the manufacturing of exhaust systems for cars, motorcycles, trucks and buses.

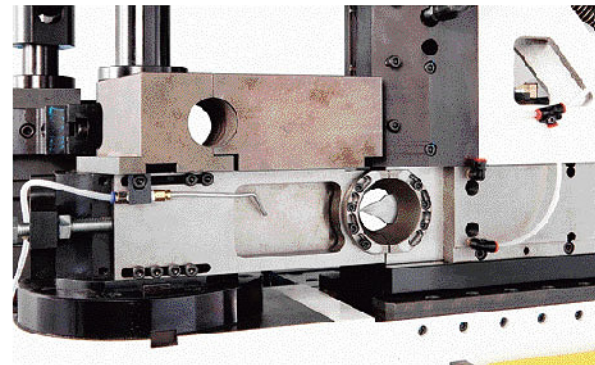
Specifications / Model	SB-81X11A-MR-SR	SB-81X12A-MR-PT	SB-90X11A-MR-SR	SB-131X12A-MR-SR
Max. Mild Steel Capacity (mm) (CLR 1.5D)	Ø76.2 X 2t	Ø76.2 X 2t	Ø88.9 X 2.2t	Ø127 X 3.5t
Max. Stainless Capacity (mm) (CLR 1.5D)	Ø76.2 x 1.2t	Ø76.2 x 1.2t	Ø88.9 x 1.5t	Ø125 x 2.5t
Max. Tube Length with Mandrel (mm)	4700	4700	4600	5700
Max. Draw Bending Radius (mm)	150	150	250	380
CNC axis	11	12	11	12
Max. Bending Stacks	6	6	6	6
SOCO 2C system (Hydraulic)	Optional	Optional	Optional	Optional

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ADVANCED BENDING TECHNOLOGY

2C - THE SOCO DBS SYSTEM (Hydraulic)

- The Double Blade Shearing System allows for automation of bending and cutting processes in one machine, from a single tube
- This system creates the least amount of cutting deformation, enabling the finished part to be immediately used for a subsequent process without having to calibrate or deburr it
- By bending and cutting continuously, there is virtually no waste between bends, saving vast amounts of material per year
- Savings on space, manpower, machinery and material, while increasing production rates
- Higher precision and quality in finished parts, as the bent part does not need to be manually taken to a separate machine to be cut into pieces on a semi-automatic saw
- The software allows for programming up 4 different parts on the same stock material, maximizing utilization of the complete tube.

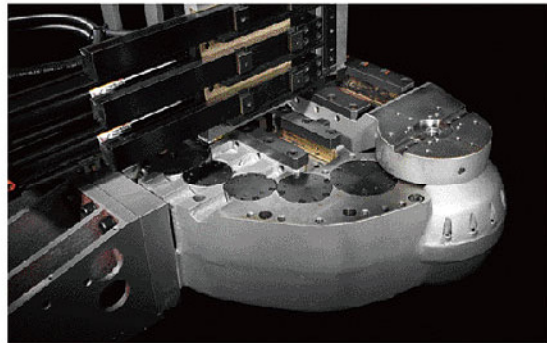


SOCO Patent - DBS System



DBS System - Perfect Cutting Face Non-DBS System

ADVANCED DGT



SOCO's unique DGT technology (Direct Gear Transmission) is the worldwide patented bending system that brings you the most efficient and stable bending process, offering the highest accuracy and repeatability in draw and roll bending.

The Advantages of DGT

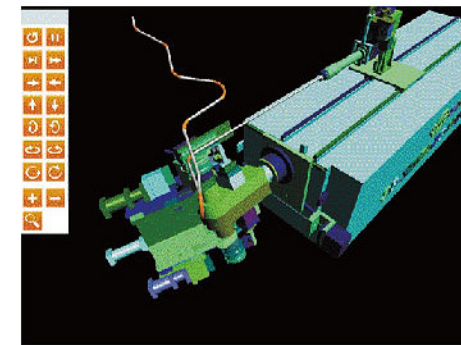
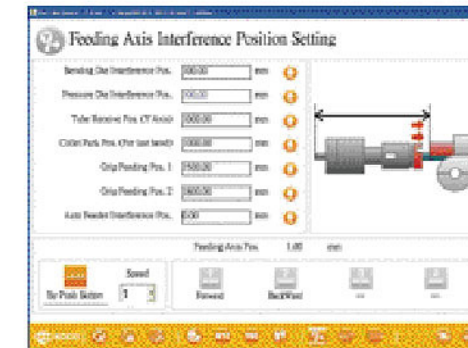
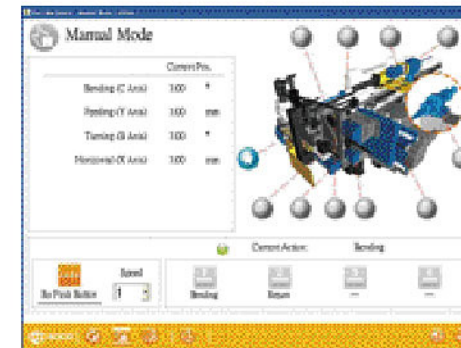
- Chain free transmission
- Built-in gearbox with direct connection to electric servo
- Highest transmission performance (90%+ efficiency) against other gear based systems
- High bending accuracy ($\pm 0.05^\circ \sim \pm 0.1^\circ$)
- Low noise level
- Maximum Working Area = Minimal Interference
- Elongated neck for superior clearance (***)
- Compact bending head
- Side carriage and bending head (***)
- Lowest maintenance



IB - MATERIAL SAVING



Interference Zone Booster for short pieces
SOCO Patent - IB for Material Saving



SOFTWARE AND OPERATION INTERFACE

SOCO bending range is available with an Industrial PC (IPC) + Touch Screen (TS version). Here are some of the features included:

Software Features:

- Automatic Interference Zone Calculation
- Automatic Tube Length Calculation
- Automatic springback compensation
- Recapturing function for short lengths
- Data entry for both XYZ and YBC coordinates
- XYZ to YBC coordinates conversion
- YBC to XYZ coordinates conversion
- Arm Return programming mode (Overmode / Teach Mode)
- Arc Radius calculator for large radius bending
- Carriage Booster settings' page for 1D Bending
- Ability to use Positive and Gripper Mode Feeding in the same part
- File management for parts and tooling
- Data storage of files (2 million files, 50 bends per file) (*)
- 3D display and rotation of parts
- Bending + Cutting Interface (For 2C Option)
- IRMS-Internet Remote Monitoring System

- Mirroring and image reversal of parts
- Elongation ratio + Cycle Time display for each bend
- Windows platform
- Self diagnostics + Error messages display
- Connection and Auto compensation to CMM systems (**)
- Simultaneous opening of files (4 files at one time)
- Programmable mandrel extraction and mandrel lubrication
- Individually programmable axes
- Multiple built-in action and bending sequences
- Built-in internet connection for Remote troubleshooting

Options

- SOCO Bending Interference and Collision Simulator (***)
- Report system for Production Management
- SOCO CAD Reader
- VRM

(*) May be extended upon request

(**) On most CMM, non-contact probe measuring systems

(***) On IPC CNC tube bender models