

tube bending · cutting · forming



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COMPANY PROFILE

1

CSM, supplies the most innovative CNC bending machines in the world, with machine capacity from OD 6 to OD 254 mm. Our machines are implemented in diverse industries including aviation, automotive, ship building, furniture, health care, gym utilities, HVAC, construction, boiler making, power generation, petrochemical ..., etc. Attributed to our exclusive designs, CSM machines are significantly more compact and consolidated than other manufacturers. In addition to optimum performance, we assure you power efficient, energy economic and environment friendly.

premises : 1st plant @13770 m², 2nd plant @ 18470 m²
employment : 168

- founded in 1982
- release the first CNC bending machine in 1989
- relocated to Taiwan Southern Science Park in 2005
- established 2nd plant in 2010
- certified with ISO-9002 from 1998 and ISO-9001 from 2002
- all machines are approved with CE certification
- 24 international design patents
- winner of Taiwan excellence award in 2003 and 2010
- 2 times national innovation awards in 2002 and 2006
- winner of national CITD + SBIR grant in 2007
- engaged in production of fiber laser cutting machines from 2018



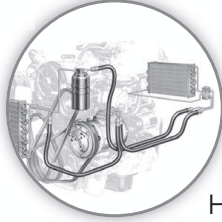
INDUSTRIAL APPLICATION



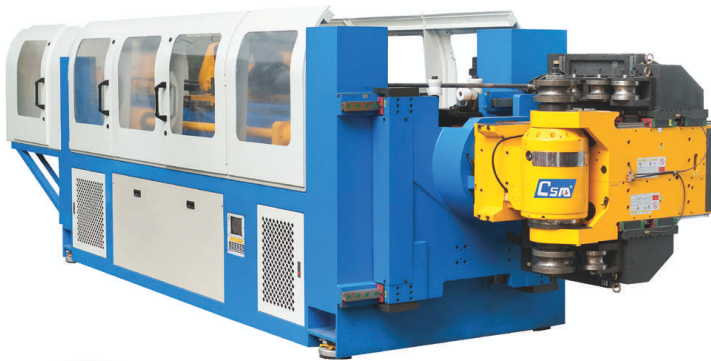
aviation



furniture & health care



HVAC



bus & truck



rail transport



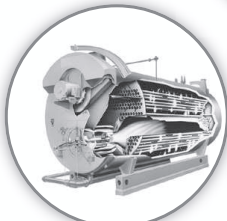
automotive



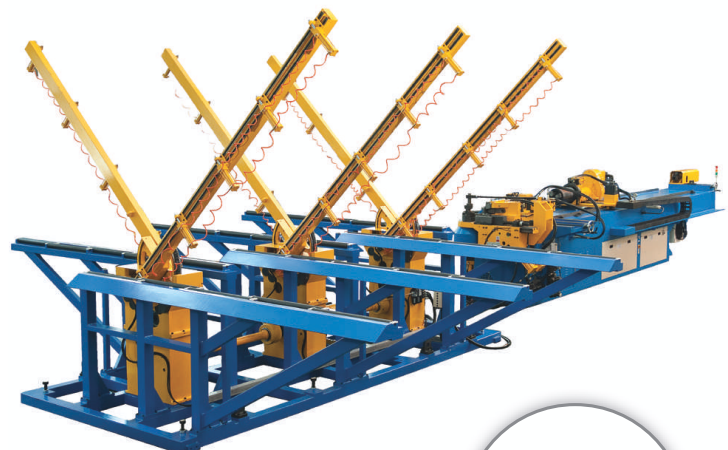
petrochemical



power plant



boiler making



oil rig



shipyard



water supply

CNC LEFT & RIGHT BENDER

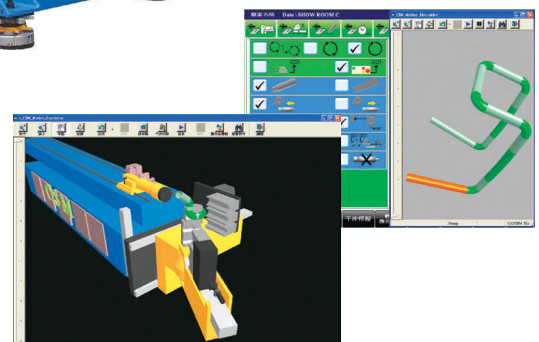
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round tube			mandrel length	tooling capacity	push bending	rear booster	CSM Part no.
OD	WT	CLR					
15	1.5	10-55	1000	3+3			15 EMB
20	1.5	10-80	1500	3+3	yes		20 EMR
30	2	15-90	2800	3+3	yes		30 EMR
45	1.6	30-150	3000	3+3	yes		45 EMR
76.2	2	40-230	3000	3+3	yes	servo	75 EMR

- 4 • carriage (Y-axis)
by ervo motor with
programmable speed
- 5 • collet (B-axis)
grip by pneumatic
rotation by servo motor
- 6 • mandrel by servo motor
with automatic lubrication &
anticipated retraction
- 7 • work-head rotation by servo motor, capable of
converting between
left- and right-hand bending
- 1 • bend-arm (C-axis) by
servo motor with exclusive
transmission gears
- 2 • clamp die by servo motor
• pressure die by servo motor
• side booster by servo motor
- 3 • tools/radii shifting :
motion up-down by servo motor
motion left-right by servo motor



- Industrial PC assorted with touch-screen display, capable of bending simulation, 3D preview and interference detection
- programmable speed for servo axes
- with USB port, easy for data transfer
- convertible between manual / automatic mode
- convertible between inch / metric setting
- convertible between XYZ / YBC axes
- capable of reading igs/stp file



CNC ALL ELECTRIC BENDER

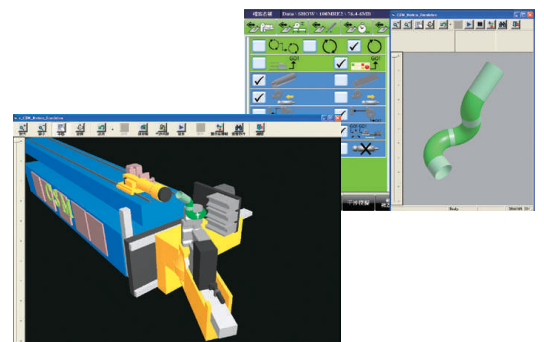
round tube			mandrel length	tooling capacity	push bending	rear booster	CSM Part no.
OD	WT	CLR					
30	1.8	15-120	2200	3	yes		30MRE2
38	1.8	25-150	2200	3	yes		38MRE2
50.8	1.8	30-150	2500	3	yes	servo	50 MRE2-RBE
65	2.5	35-210	3200	3	yes	servo	65MRE2-RBE
80	2.5	40-230	3000	3	yes	servo	80 MRE2-RBE
100	3.6	30-300	3000	3	yes	servo	100 MRE2-RBE

- 4 • carriage (Y-axis) by servo motor with programmable speed
- 5 • collet (B-axis) grip by pneumatic rotation by servo motor
- 6 • mandrel by servo motor with automatic lubrication & anticipated retraction

- 1 • bend-arm (C-axis) by servo motor with exclusive transmission gears
- 2 • clamp die by servo motor
• pressure die by servo motor
• side booster by servo motor
- 3 • tools/radii shifting:
motion up-down by servo motor
motion left-right by servo motor



- Industrial PC assorted with touch-screen display, capable of bending simulation, 3D preview and interference detection
- programmable speed for servo axes
- with USB port, easy for data transfer
- convertible between manual / automatic mode
- convertible between inch / metric setting
- convertible between XYZ / YBC axes
- capable of reading igs/stp file



CNC ELECTRIC HYBRID BENDER

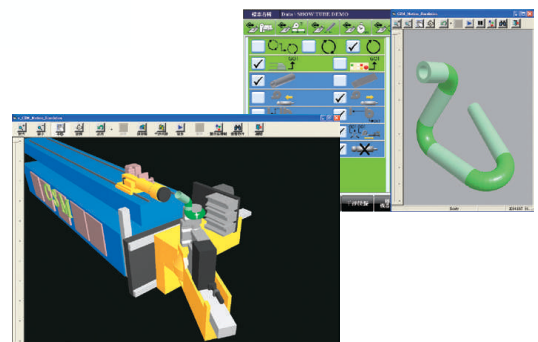
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round tube			mandrel length	tooling capacity	push bending	rear booster	CSM Part no.
OD	WT	CLR					
18	1.6	10-80	1200	3			18 MBE
25.4	1.5	15-120	1500	3			25 MBE
30	2	15-120	2000	3			30 MBE
38.1	1.8	25-150	2200	3			38 MBE
50.8	2	30-220	2500	3			50 MBE
65	2.5	35-250	2500	3			65 MBE
80	2.5	40-280	3500	3			80 MBE
100	3	30-300	3500	3			100 MBE
65	2.5	35-250	3000	3		servo	65 MBE-RBE
80	2.8	40-280	3500	3		servo	80 MBE-RBE
100	3.6	30-300	3500	3		servo	100 MBE-RBE
127	3.8	80-400	4000	3		servo	130 MBE-RBE
18	1.6	10-80	1200	3	yes		18 MRE
25.4	1.5	15-120	1500	3	yes		25 MRE
30	2	15-120	2200	3	yes		30 MRE
32	1.8	25-128	3500	3+3	yes		32 MBRE
38.1	1.8	25-150	2200	3	yes		38 MRE
50.8	2	30-220	2500	3	yes		50 MRE
65	2.5	35-250	3000	3	yes		65 MRE
80	2.5	40-280	3500	3	yes		80 MRE
65	2.5	35-250	3000	3	yes	servo	65 MRE-RBE
80	2.8	40-280	3500	3	yes	servo	80 MRE-RBE
100	3.6	30-300	3500	3	yes	servo	100 MRE-RBE
127	3.8	80-400	4000	3	yes	servo	130 MRE-RBE
152.4	3	90-400	4000	3	yes	servo	150 MRE-RBE

- bend-arm (C-axis) by servo motor with exclusive transmission gears.
Tolerance within $\pm 0.01^\circ$
- clamp die by hydraulic
• pressure die by hydraulic
• side booster by hydraulic
- tools/radii shifting:
motion up-down by servo motor
motion left-right by servo motor
- carriage (Y-axis) by servo motor with programmable speed
- collet (B-axis)
grip by hydraulic,
rotation by servo motor
- mandrel by hydraulic with automatic lubrication & anticipated retraction



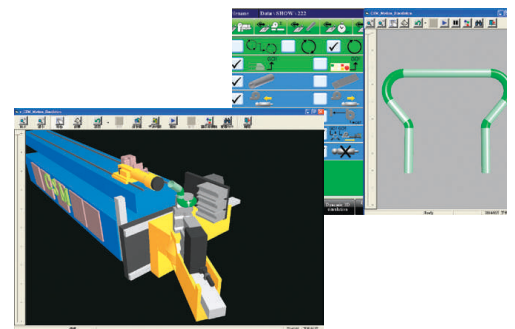
- Industrial PC assorted with touch-screen display, capable of bending simulation, 3D preview and interference detection
- programmable speed for servo axes
- with USB port, easy for data transfer
- convertible between manual / automatic mode
- convertible between inch / metric setting
- convertible between XYZ / YBC axes
- capable of reading igs/stp file



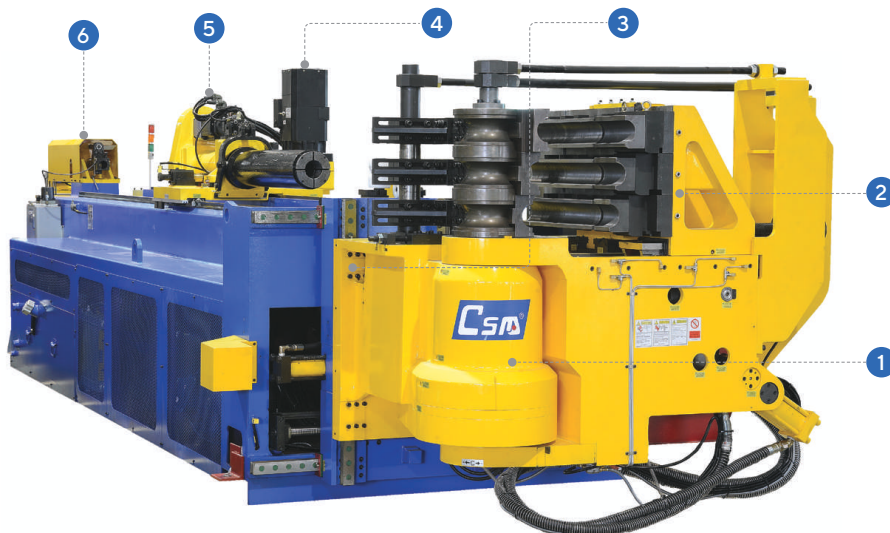
CNC ELECTRIC HYBRID BENDER

round tube			mandrel length	tooling capacity	push bending	rear booster	CSM Part no.
OD	WT	CLR					
25.4	1.5	15-120	1500	2	yes		25 TBRE
30	2	15-120	2200	2	yes		30 TBRE
38.1	1.8	25-150	2200	2	yes		38 TBRE
50.8	2	30-220	2500	2	yes		50 TBRE
65	2	35-250	2500	2	yes		65 TBRE
80	2.5	40-280	3500	2	yes		80 TBRE
100	3	30-300	3500	2	yes		100 TBRE
65	2.5	35-250	2500	2	yes	servo	65 TBRE-RBE
80	2.8	40-280	3500	2	yes	servo	80 TBRE-RBE
100	3.6	30-300	3500	2	yes	servo	100 TBRE-RBE
127	3.8	80-400	4000	2	yes	servo	130 TBRE-RBE
25.4	1.5	15-120	1500	3	yes		25 TMRE
30	2	15-120	2200	3	yes		30 TMRE
38.1	1.8	25-150	2200	3	yes		38 TMRE
50.8	2	30-220	2500	3	yes		50 TMRE
65	2	35-250	2500	3	yes		65 TMRE
80	2.5	40-280	3500	3	yes		80 TMRE
100	3	30-300	3500	3	yes		100 TMRE
65	2.5	35-250	2500	3	yes	servo	65 TMRE-RBE
80	2.8	40-280	3500	3	yes	servo	80 TMRE-RBE
100	3.6	30-300	3500	3	yes	servo	100 TMRE-RBE
round tube			mandrel length	tooling capacity	push bending	rear booster	CSM Part no.
OD	WT	CLR					
12	1	12-55	1000	2			12 TDRE
18	1.6	10-80	1200	2			18 TDRE
25.4	1.5	15-120	1500	2			25 TDRE
30	2	15-120	2200	2			30 TDRE
38.1	1.8	25-150	2200	2			38 TDRE
50.8	2	30-220	2500	2			50 TDRE
65	2	35-250	2500	2			65 TDRE
80	2.5	40-280	3500	2			80 TDRE
100	3	30-300	3500	2			100 TDRE
65	2.5	35-250	2500	2		servo	65 TDRE-RBE
80	2.8	40-280	3500	2		servo	80 TDRE-RBE
100	3.6	30-300	3500	2		servo	100 TDRE-RBE

- Industrial PC assorted with touch-screen display, capable of bending simulation, 3D preview and interference detection
- programmable speed for servo axes
- with USB port, easy for data transfer
- convertible between manual / automatic mode
- convertible between inch / metric setting
- convertible between XYZ / YBC axes
- capable of reading igs/stp file



- bend-arm (C-axis) by servo motor with exclusive transmission gears. Tolerance within $\pm 0.01^\circ$
- clamp die by hydraulic
• pressure die by hydraulic
• side booster by hydraulic
- tools/radii shifting:
motion up-down by hydraulic
motion left-right by servo motor
- carriage (Y-axis) by servo motor with programmable speed
- collet (B-axis)
grip by hydraulic,
rotation by servo motor
- mandrel by hydraulic with automatic lubrication & anticipated retraction



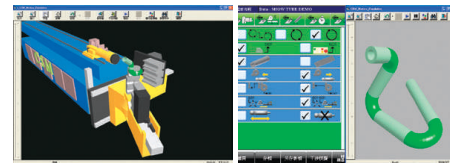
CNC HYDRAULIC BENDER

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round tube			mandrel length	tooling capacity	rear booster	CSM Part no.
OD	WT	CLR				
38.1	3	25-150	2200	1		38 TSR
50.8	3	30-220	2200	1		50 TSR
65	3	35-250	2500	1		65 TSR
80	4.5	40-280	3000	1		80 TSR
101.6	5.5	60-400	3600	1		100 TSR
120	5.5	80-450	5000	1		120 TSR
152.4	7	90-500	6000	1		150 TSR
180	9	100-600	6000	1		180 TSR
220	15	100-800	6000	1		220 TSR
80	5.5	32-345	3000	1	hydraulic	80 TSR-RBF
101.6	5.5	30-400	3600	1	hydraulic	100 TSR-RBF
120	5.5	80-450	5000	1	hydraulic	120 TSR-RBF
50.8	3	30-220	2200	1	hydraulic	50 TSR-RBH
65	3	35-250	2500	1	hydraulic	65 TSR-RBH
80	4.5	40-250	3000	1	hydraulic	80 TSR-RBH
101.6	5.5	60-400	3600	1	hydraulic	100 TSR-RBH
120	5.5	80-450	5000	1	hydraulic	120 TSR-RBH
152.4	7	90-500	6000	1	hydraulic	150 TSR-RBH
180	9	100-600	6000	1	hydraulic	180 TSR-RBH
38.1	3	25-150	2200	2		38 TDR
50.8	3	30-220	2200	2		50 TDR
65	3	35-250	2500	2		65 TDR
80	4.5	40-280	3000	2		80 TDR
101.6	5.5	60-400	3600	2		100 TDR
120	5.5	80-400	5000	2		120 TDR
152.4	7	90-500	6000	2		150 TDR
101.6	5.5	60-400	3600	2	hydraulic	100 TDR-RBH
152.4	7	90-500	6000	2	hydraulic	150 TDR-RBH

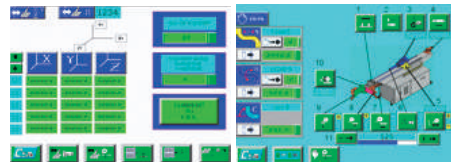
IPC based controller

- Industrial PC assorted with touch-screen display, capable of bending simulation, 3D preview and interference detection
- programmable speed for servo axes
- with USB port, easy for data transfer
- convertible between manual / automatic mode
- convertible between inch / metric setting
- convertible between XYZ / YBC axes
- capable of reading igs/stp file

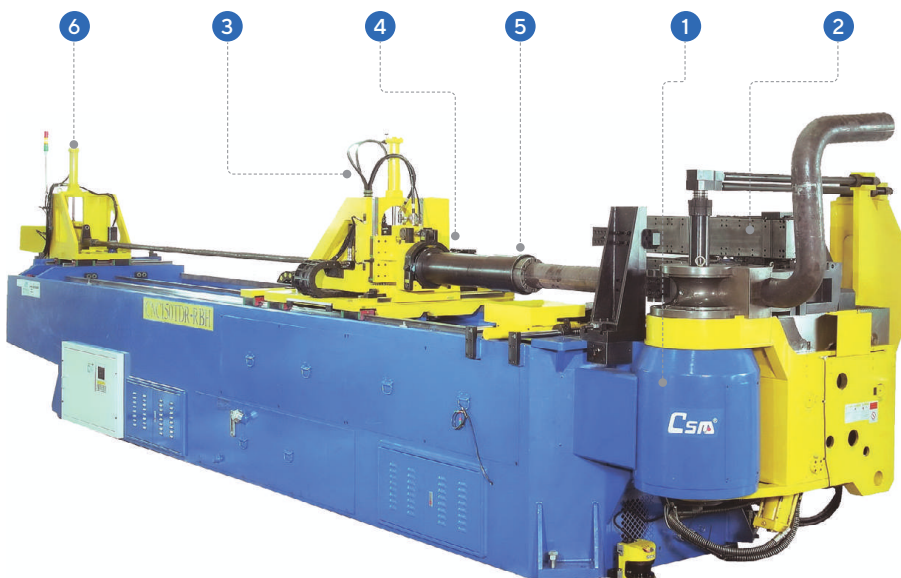


PLC based controller

- PLC controller with touch screen display
- programmable speed for servo axes
- with USB port, easy for data transfer
- convertible between manual / automatic mode
- convertible between XYZ / YBC axes (optional)

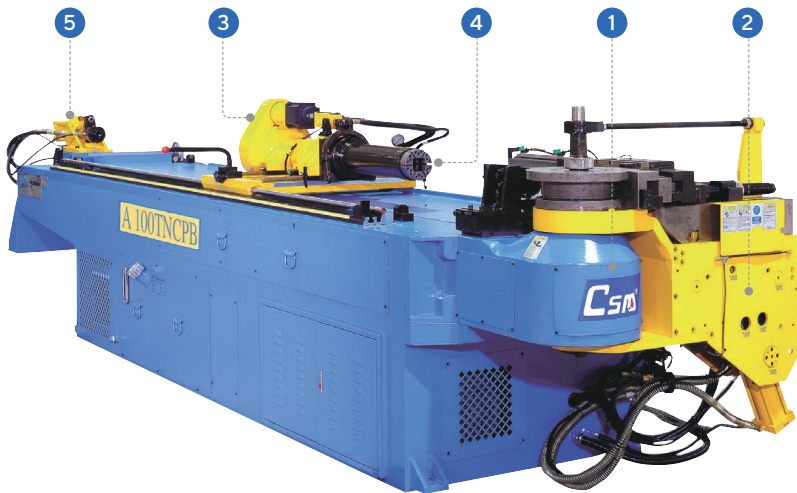


- 1 • bend-arm (C-axis) by hydraulic
- 2 • clamp die by hydraulic
• pressure die by hydraulic
• side booster by hydraulic
- 3 • tools/radii shifting (TDR) :
motion up-down by hydraulic
motion left-right by hydraulic
- 4 • carriage (Y-axis) by servo motor with programmable speed
- 5 • collet (B-axis)
grip by hydraulic,
rotation by servo motor
- 6 • mandrel by hydraulic with automatic lubrication & anticipated retraction



round tube			mandrel length	tooling capacity	rear booster	CSM Part no.
OD	WT	CLR				
50.8	3	30-220	2100	1		50 TNCPB
76.2	3	40-250	2400	1		75 TNCPB
88.9	2.5	50-300	2600	1		89 TNCPB
101.6	5.5	60-400	3600	1		100 TNCPB
round tube			mandrel length	tooling capacity	rear booster	CSM Part no.
OD	WT	CLR				
38.1	3	25-170	1900	1		38 TNCB
50.8	3	30-250	2200	1		50 TNCB
76.2	3	40-300	2600	1		75 TNCB
88.9	2.5	40-350	2600	1		89 TNCB
127	3.5	80-450	5200	1		120 TNCB
152.4	7	90-500	6000	1		150 TNCB
180	9	100-600	6000	1		180 TNCB
220	8	100-700	6000	1		220 TNCB
76.2	3	40-300	2600	1	hydraulic	75 TNCB-CBF
127	5.5	80-400	5200	1	hydraulic	120 TNCB-CBF
127	5.5	60-450	5200	1	hydraulic	120 TNCB-RBF
220	7	100-1000	6000	1	hydraulic	220 TNCB-RBF

- PLC controller with touch screen display
- programmable speed for servo axes
- with USB port, easy for data transfer
- convertible between manual / automatic mode
- convertible between inch / metric setting



- 1 • bend-arm (C-axis) by hydraulic
- 2 • clamp die by hydraulic
• pressure die by hydraulic
• side booster by hydraulic
- 3 • carriage (Y-axis) by manual
- 4 • collet (B-axis)
grip by hydraulic,
rotation by servo motor
- 5 • mandrel by hydraulic with
automatic lubrication &
anticipated retraction
- 6 • mechanical stopper (TNCB)



WIRE BENDER

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wire bender WB 10-A	unit	Spec
Bending capacity / O.D.	mm	4~10
Bending speed	deg/sec	1000
Bending repeatability	degree	±0.01
Feeding speed	m/min	50
Feeding repeatability	mm	±0.1
Work-head rotation speed	deg/sec	440
Work-head rotation repeatability	degree	±0.01
Max pressure	kgf/cm2	140
Total power	kw	13.4
Width	mm	1300
Height	mm	1715
Length	mm	3450
Weight	kg	2400
wire bender WB 14-A	unit	Spec
Bending capacity / O.D.	mm	6~14
Bending speed	deg/sec	600
Bending repeatability	degree	±0.01
Feeding speed	m/min	50
Feeding repeatability	mm	±0.1
Work-head rotation speed	deg/sec	440
Work-head rotation repeatability	degree	±0.01
Max pressure	kgf/cm2	140
Total power	kw	14.9
Width	mm	1300
Height	mm	1715
Length	mm	3450
Weight	kg	2400

- bending by servo motor
• cutting by hydraulic
• tooling shift by servo motor
• concentric tooling design, enhance bending versatility
- customized work-head, eliminates possibility of interference
• work-head rotation by servo motor
- straightening by hydraulic
• feeding by servo motor
- uncoiling driven by AC motor

Controller

- IPC base
- 15" inches touch screen display
- facilitated with 3D simulation

