

LIGHTWEL WELDING & CUTTING MACHINE SOLUTION

PRODUCTS CATALOGUE



LIGHT WEL

www.lightwel.co.kr

LIGHTWEL Co., Ltd., The manufacturing company specialized in welding and cutting machine in the center of world.

Greetings

LIGHTWEL Co., Ltd., which has differentiated and right welding technology to the characteristics of the shipbuilding industry, is the specialized manufacturing company in making welding and CNC Plasma & Gas cutting machine which has strong durability being close to zero ratio of disorder as well as has enough usage ratio. Particularly, LIGHTWEL Co., Ltd. has been doing its business with a view to supply the decreased power cost and safe welding machine with the heart of future preparation since it is mandatory in welding, the so-called core of shipbuilding that many experience, business achievements, safe and elaborate generating power of welding condition should be required.

Our company had pushed on the goal of creating market and future going through with the limited technology because specialized technology and leading market can only make company to last long, so that we have been achieving good business goal in selling about 3,000 various kinds of welding equipments by pushing into foreign market such as Gaya Shipbuilding Co., Ltd. Weihai Sintaewon Shipbuilding Inc., since it was started by making business relationship with Samsung Heavy Industry Youngsung Co., Ltd. in 2000 based on Youngsung city in China, and on the other hand, we have been making our best efforts to lead the market of welding machine by developing more upgraded ONE-BOARD PCB with new welding technology which is the concentration of the whole existing technologies in domestic.

It goes without saying that it was possible for us to do it because there were customer companies' leading, concern, and care, and the whole personnel of LIGHTWEL Co., Ltd. pledge to be the company meeting customers' expectations all the more. We also please ask you to give us continuous support and leadership for our efforts forever.



Cho, Kwang rac / CEO & President
LIGHTWEL Co., Ltd.

Company Profile

- 2004** Feb. Foundation (Starting business by buying building site 1-2 Block, Anjung State Industry Complex, Hwang-ri, Kwangdo-Myeon, Tongyoung-shi, Kyungnam).
July. Starting to sell Kobe Steel welding materials as an agency.
July. Manufacturing/selling CO2 welding machine of LIGHTWEL brand to Wookil Corporation Inc., Daegi Industrial Co., Ltd., Green Zone(Geoje region).
Dec. Completed in building manufacturing factory.
Dec. Registered as an agency of KOIKE KOREA ENGINEERING CO., LTD.
/ Installed AUTO BEVEL, PLASMA cutting machine, starting A/S business.
- 2005** May. Installed Green Zone Plasma cutting machine / trial run.
June. Registered as a vendor in Samsung Heavy Industries (supplying OTC TIG welding machine).
Oct. Manufacturing/supplying Gaya Heavy Industries with CO2 welding machine.
Dec. Registered as a shipboard building team in SPP Plant & Shipbuilding (assisting to install shipboard U/T, lamps, coating equipment).
- 2006** Oct. Contracted to export welding machines of 910 sets to Samsung Heavy Industries Youngsung Co., Ltd. (China) and started exporting.
- 2007** Apr. Contracted to export welding machines of 300 sets to Gaya Shipbuilding Co., Ltd. (China) and started exporting.
May. OEM manufacturing of KOIKE KOREA ENGINEERING CNC GAS CUTTING M/C.
Oct. Manufactured/supplied SPP Plant & Shipbuilding with welding machine, lamp cabinet panel and CARRY AUTO moving bogie.
- 2008** Jan. Contracted to export welding machines of 300 sets to Weihai Sintaewon Shipbuilding Inc. (China) and started exporting.
Feb. Contracted to export welding machines of 510 sets to Samsung Heavy Industries Youngsung Co., Ltd. (China) and started exporting.
May. Succeeded in localization of 2D CNC PLASMA CUTTING M/C.
Aug. Completed in developing ONE-BOARD CO2 welding machine (excessive electric current, FAN power-saving, SOFT ARC, GAS PRE-FLOW, PCB protection functioning).
Oct. Contracted to export welding machines of 400 sets to Samsung Heavy Industries Youngsung Co., Ltd. (China) and started exporting.
- 2009** Jan. Contracted to export welding machines of 1,630 sets to Samsung Heavy Industries Youngsung Co., Ltd. (China).
Mar. Exported shipboard welding machines of 50 sets to Sasebo Shipbuilding Yard in Japan.
June. Supplied to Hanjin Heavy Industries (SUBICK-PILIPPINE) - CNC PIPE COASTER 600A(1EA), PIPE GAS CUTTING M/C 600A(1EA), PIPE ROTATOR 600A(15EA), 1000A(1EA).

Business Partners

Samsung Heavy Industries

Hanjin Heavy Industrial & Construction Co., Ltd.

SLS Heavy Industries Co., Ltd.

Sungji Co., Ltd.

Seojin Co., Ltd.

21st Century Shipbuilding Co., Ltd.

Sungdong Shipbuilding & Marine Engineering Co., Ltd.

Samsung Heavy Industries China Youngsung Co., Ltd.

SLS Shipbuilding Co., Ltd.

Sungji Heavy Ind. Co., Ltd.

Green Marine Engineering & Shipbuilding Co., Ltd.

Wookil Co., Ltd.

SPP Shipbuilding Co., Ltd.

Guman Heavy Industrial Co., Ltd.

China Gaya Shipbuilding Co., Ltd.

ESTec Co., Ltd.

World Heavy Ind. Co., Ltd.

CO2 WELDING MACHINE



MIRACLE 500A/600A and Shipboard Welding Machine series are adopting simulator control method, so these machines are outstanding in all consecutive welding current range from minimum current to maximum current and thus it can be possible to make the characteristics of stable arc and rated voltage. In addition, in case of controlled welding power supplying equipment which blocks output-shaft power, it has an automatically operated power-reducing circuit in the period of having no arc, while it is controlled by torch switch working as no-load power is consumed at the 1st shaft, therefore it also can reduce no-load power which is not necessary at no-arc originated period.



MIRACLE 600A

PCB 1BOARD



MIRACLE 500A

PCB 1BOARD



Rated Input	40KVA 33KW
Rated Input Voltage	220V/ 380V/ 440V 3Φ ±10%
Rated Frequency	60Hz
Rated Output Current	600A
COUGING Function	Have/Have-Not → Optional (Capacitive Current Method)
Rated Load Voltage	52V
Output Current Range	50A~600A
Output Voltage Range	50V
Max. No-Load Voltage	75V
Usage Ratio	60% / 100%
External Size	500X680X850mm
Weight	210Kg

Rated Input	30KVA 25.5KW
Rated Input Voltage	220V/ 380V/ 440V 3Φ ±10%
Rated Frequency	60Hz
Rated Output Current	500A
COUGING Function	Have/Have-Not → Optional (Capacitive Current Method)
Rated Load Voltage	42V
Output Current Range	50A~500A
Output Voltage Range	50V
Max. No-Load Voltage	62V
Usage Ratio	60% / 100%
External Size	460X680X850mm
Weight	195Kg

SHIPBOARD WELDING MACHINE



- ⇒ If overcurrent occurs, it automatically reversed after it trips for 10 seconds because it has built-in overcurrent blocking circuit.
- ⇒ It is operated at 40 degree, also stopped at 30 degree, and welding operation is automatically stopped at 55 degree because it has built-in dual cooling fan.
- ⇒ There is no wasting of S/W using FUSE, thus there is no troublesome in replacing it.
- ⇒ In case of having short circuit or shot in PCB protecting built-in circuit, PCB FUSE of control circuit is automatically shorted.
- ⇒ It has a built-in WIRE FEEDER operating stop circuit, thus it controls gas supply, WIRE FEEDER sending and feeding motor.
- ⇒ In case of torch-on, it has a built-in control function circuit for GAS TIME, WIRE sending and feeding START TIME.
- ⇒ Wiring is simple so that machines are neat and tidy due to the use of 1 BOARD PCB.

SUBMERGED WELDING MACHINE

Welding penetration is deep inside due to the use of metal inert gas and insulation of melting slag, thus not only the material cost of welding is low because it is possible to make welding groove too narrow but also it is appropriate to make mass production because deformation is happened little after welding.

LW DC1500A

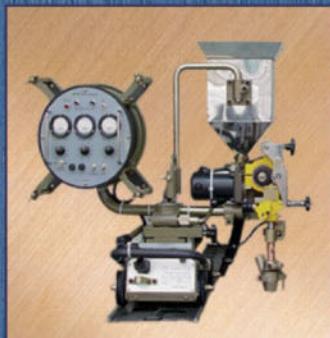


Rated Input	120KVA
Rated Input Voltage	220V/ 380V/ 440V 3Φ ±10%
Frequency	50/60Hz
Welding Current	150~1500A
No-Load Voltage	20~50V
Welding Rated Voltage	85V
Rated Usage Ratio	100%
External Size	800X1160X1390mm
Weight	780Kg

■ Product Features

Free change in input voltage
It is possible to change voltage into 200V/380V/440V with simple manipulation
Selecting various welding mode
Rated current and voltage are specialized into 2 MODE.
It is appropriate for automatic welding on thick board due to excellent welding efficiency.

SW-41 CARRY AUTO



Rated Input	100KVA, 90KW
Welding Current Range	300A~1500A
Applied WIRE	(3.2mm), (4.0mm), (6.4mm)
WIRE Sending & Feeding Speed -Single Gear	2.1 M/Min -----STANDARD
WIRE Sending & Feeding Speed -Double Gear	4.2 M/Min -----OPTION
WIRE Sending & Feeding Motor	80W, DC MOTOR
Adjustment Motor	Arc Voltage Control By Thyristor
Nozzle Adjustment Range	Vertical 50mm, Horizontal 50mm
Traveling Speed Range	0cm ~ 1300cm/Min
Hopper Capacity	6 Liter
Weight	48Kg

■ Product Features

Stable welding is performed by adapting IC + THYRISTOR control method.
CARRIAGE is manufactured with A/C or D/C type according to welding power source.
WIRE sending and feeding is smooth by adopting powerful WIRE FEEDING MOTOR.
It can be used to weld to inclined plane and curved surface by adopting 4-wheel moving carrier method.

LW AC1500A



Rated Input	100KVA, 90KW
Rated Input Voltage, Constant	220V/ 380V/ 440V 1Φ ±10%
Frequency	50/60Hz
Welding Current	400~1500A
Welding Rated Voltage	44V
No-Load Voltage	90V
Rated Usage Ratio	100%
External Size	753X1200X1235mm
Weight	780Kg

■ Product Features

Simple connection type between power source and carriage
Accuracy in setting on welding conditions
Improved power factor

SHIPBOARD PANEL

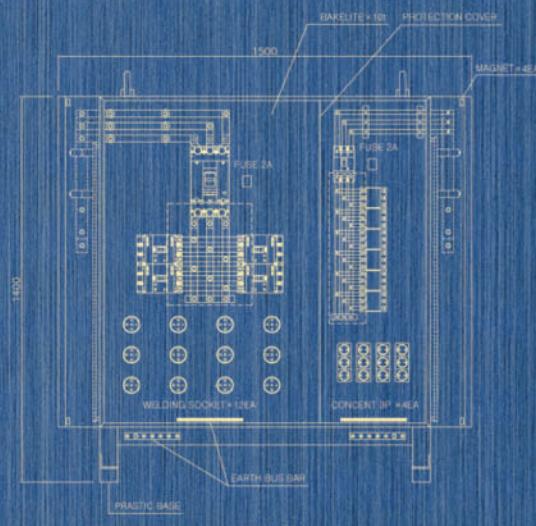
This product is divided for the easy delivery, and then it is wrapped in a way to protect any damage for its function, and physical appearance, and it is delivered based on our company's standard and guideline. It is a principle that all manufactured products are supplied with the form of full assembly, and the large-scaled products which is unable to be fully assembled or the products which beyond transportation boundary are supplied with separated parts.

The parts which are needed at site installation such as connecting conductor, wire, bolts, nuts and washer etc. are separately wrapped and then supplied.



	WELDING	LIGHTING
Rated Voltage For Wiring Breaker	600V	
Rated Voltage For Short-Circuit Breaker	440V	220V
Main Circuit	AC 440V 3P 3W 60Hz	AC 220V 3P 3W 60Hz
Voltage	AC 440V 1 Top 60Hz	AC 220V 1 Top 60Hz
Ground Connecting Type	Direct Connecting	
Main Breaker	MMCB	
Material Quality Of Protection Net	ACRYL (5T)	
Signal Lamp	STEEL BLAKECT Processing	

LW-WELDING/LIGHTING PANEL



AUTO CARRIAGE

■ It is a light-weighted horizontal FILLET automatic welding equipment, its traveling stability is excellent, and it is safe to various noises in on-site operation due to the use of AC geared motor as well as its pulling capacity is excellent by using 4-wheel drive chain.

AUTO CARRY-LW MA 01



■ Product Features

Accurate speed can be checked at the speed display window. MyCom Control with precision speed traveling. Excellent effect in welding quality could be done because precision traveling is operated at all traveling including an inclined plane. It is easy to adjust angle side. It is outstanding to set working location by handling simple torch adjustment device. Welding on inclined plane, and triple welding can be operated.

Rated Input Voltage	Single-Phase 380V ± 10%																
Rated Frequency	50Hz																
Traveling Speed	Max.1.300mm/Min (Variable)																
Guide Roller Adjustment Range	Up To 80mm From Parent Body																
Welding Method	Serial Welding 1 Pole																
Welding Line Tracing Method	2-Guide Roller Inclined Traveling																
Traveling Method	4-Wheel-Dirve Rubber Tire By Motor																
Pulling Capacity	16Kgf																
Diameter Of Applied Wire	1.2Φ, 1.4Φ, 1.6Φ																
Torch Adjustment	<table border="1"> <tr> <td>Up & Down</td> <td>Horizontal : 40mm (±33mm)</td> </tr> <tr> <td>Left & Right</td> <td>Vertical : 40mm (±33mm)</td> </tr> <tr> <td>Welding Degree</td> <td>45 Degree ± 15 Degree</td> </tr> <tr> <td>Direction</td> <td>360 Degree</td> </tr> <tr> <td>Traveling Degree</td> <td>Over 2000 Curve, Under Inclination 25 Degree</td> </tr> </table>	Up & Down	Horizontal : 40mm (±33mm)	Left & Right	Vertical : 40mm (±33mm)	Welding Degree	45 Degree ± 15 Degree	Direction	360 Degree	Traveling Degree	Over 2000 Curve, Under Inclination 25 Degree						
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Left & Right	Vertical : 40mm (±33mm)																
Welding Degree	45 Degree ± 15 Degree																
Direction	360 Degree																
Traveling Degree	Over 2000 Curve, Under Inclination 25 Degree																
Size	220 (W) X 240 (L) X 265 (H)																
Weight	7.5Kg																
Adjustment Function	<table border="1"> <tr> <td>Selection Function For Left, Right</td> <td></td> </tr> <tr> <td>Combined Use For Single And Consecutive Welding</td> <td></td> </tr> <tr> <td>Auto Stop Function</td> <td></td> </tr> <tr> <td>ONE TORCH START/STOP Function</td> <td></td> </tr> <tr> <td>Magnetic Carriage</td> <td></td> </tr> <tr> <td>Two-Way Welding Function By Installing Sensor Stop At Two-Way</td> <td></td> </tr> <tr> <td>Left Type Method</td> <td></td> </tr> <tr> <td>Right Type Method</td> <td></td> </tr> </table>	Selection Function For Left, Right		Combined Use For Single And Consecutive Welding		Auto Stop Function		ONE TORCH START/STOP Function		Magnetic Carriage		Two-Way Welding Function By Installing Sensor Stop At Two-Way		Left Type Method		Right Type Method	
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Power Cable	: 1.25BQ X 3C (Including Connecting) - 30M																
Auto Torch	: 400A Cooling Type Straight Line - 5M																

AUTO CARRY-LW MA 01 MANUAL

■ This product is the equipment to solve traditional problem, thus light-weighted and down in size were achieved based on our technology for automatic welding carriage.

AUTO CARRY-LW MA5K



Input Power	AC220V 50/60Hz
Traveling Method	4-Wheel
Moving Speed	0~1,200mm/Min
Torch Minute Adjustment	Right/Left : 32mm Up/Down : 39mm
Torch Angle Adjustment	± 45 Degree (At Straight Torch)
Auto Stop Function	Two-Way Stop Sender
Size	210X232X245mm
Weight	5.2Kg
Driving Motor	DC90VA 3,000RPM
Ratio Of Speed Reduction	250 : 1

■ Product Features

It is easy and efficient to adjust up/down rotation angle of welding torch, and the length adjusting of welding torch is also easy, thus it is able to positively deal with the changes in working condition, so working hour can be reduced without any inconvenience to stop and adjust welding machine in the process of welding.

■ It is a light-weighted horizontal FILLET automatic welding equipment, its traveling stability is excellent, and it is safe to various noises in on-site operation due to the use of AC geared motor as well as its pulling capacity is excellent by using 4-wheel drive chain.

■ It is a product that is aimed at optimized utilization of automated welding function that has AUTO CARRIAGE, and it is able to operate two CARRIAGE at the same time. And the tires, which are easy to switch its direction in 360 degree, were fitted and it is convenient to move and keep.

AUTO CARRY-LW-01



AUTO CARRY-LW-02



■ Product Features

Accurate speed can be checked at the speed display window. MyCom control with precision speed traveling. Excellent effect in welding quality could be done because precision traveling is operated at all traveling including an inclined plane. It is easy to adjust angle side. It is outstanding to set working location by handling simple torch adjustment device. Welding on inclined plane, and triple welding can be operated.

Rated Input Voltage	Single-Phase 380V ± 10%																
Rated Frequency	50Hz																
Traveling Speed	Max.1.300mm/Min (Variable)																
Guide Roller Adjustment Range	Up To 80mm From Parent Body																
Welding Method	Serial Welding 1 Pole																
Welding Line Tracing Method	2-Guide Roller Inclined Traveling																
Traveling Method	4-Wheel-Dirve Rubber Tire By Motor																
Pulling Capacity	8Kgf																
Diameter Of Applied Wire	1.2Φ, 1.4Φ, 1.6Φ																
Torch Adjustment	<table border="1"> <tr> <td>Up & Down</td> <td>Horizontal : 40mm (±33mm)</td> </tr> <tr> <td>Left & Right</td> <td>Vertical : 40mm (±33mm)</td> </tr> <tr> <td>Welding Degree</td> <td>45 Degree ± 15 Degree</td> </tr> <tr> <td>Direction</td> <td>360 Degree</td> </tr> <tr> <td>Traveling Degree</td> <td>Over 2000 Curve, Under Inclination 25 Degree</td> </tr> </table>	Up & Down	Horizontal : 40mm (±33mm)	Left & Right	Vertical : 40mm (±33mm)	Welding Degree	45 Degree ± 15 Degree	Direction	360 Degree	Traveling Degree	Over 2000 Curve, Under Inclination 25 Degree						
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Left & Right	Vertical : 40mm (±33mm)																
Welding Degree	45 Degree ± 15 Degree																
Direction	360 Degree																
Traveling Degree	Over 2000 Curve, Under Inclination 25 Degree																
Size	300 (W) X 240 (L) X 255 (H)																
Weight	8.5Kg																
Adjustment Function	<table border="1"> <tr> <td>Selection Function For Left, Right</td> <td></td> </tr> <tr> <td>Combined Use For Single And Consecutive Welding</td> <td></td> </tr> <tr> <td>Auto Stop Function</td> <td></td> </tr> <tr> <td>ONE TORCH START/STOP Function</td> <td></td> </tr> <tr> <td>Magnetic Carriage</td> <td></td> </tr> <tr> <td>Two-Way Welding Function By Installing Sensor Stop At Two-Way</td> <td></td> </tr> <tr> <td>Left Type method</td> <td></td> </tr> <tr> <td>Light Type method</td> <td></td> </tr> </table>	Selection Function For Left, Right		Combined Use For Single And Consecutive Welding		Auto Stop Function		ONE TORCH START/STOP Function		Magnetic Carriage		Two-Way Welding Function By Installing Sensor Stop At Two-Way		Left Type method		Light Type method	
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Left Type method																	
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Power Cable	: 1.25BQ X 3C (Including Connecting) - 30M																
Auto Torch	: 400A Cooling Type Straight Line - 5M																

AUTO CARRY-LW-01,02 MANUAL

LW-TWIN AUTO CARRY UNIT



■ Product Features

Accurate speed can be checked at the speed display window. MyCom control with precision speed traveling. Excellent effect in welding quality could be done because precision traveling is operated at all traveling including an inclined plane. It is easy to adjust angle side. It is outstanding to set working location by handling simple torch adjustment device. Welding on inclined plane, and triple welding can be operated.

WELDING MACHINE ACCESSORIES



► CO2 ACCESSORIES



SINGLE CABLE



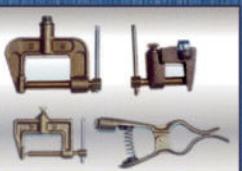
EXTENTION CABLE



WIRE FEEDER



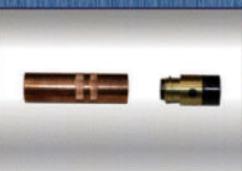
TORCH HOLDER



EARTH CLAMP



TIP



NOZZLE & INSULATOR



CAS DIFFUSER



LINER NIPPLE



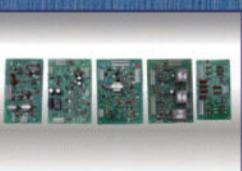
TORCH BODY



POWER CONECTOR



WELDING ROD



PCB (Before)



PCB (Present)



FEEDER ASS' Y

► AUTO CARRIAGE ACCESSORIES

► REGULATOR



ADAPTOR



GAS DIFFUSER



ARGON



CO2



NOZZLE & INSULATOR



TIP



H2 GAUGE



HE GAUGE



TORCH BODY



CABLE SUPPORT



N2



FLOW METER



TORCH HOLDER (SAMSUNG Type)



TORCH HOLDER (LIGHTWEL Type)

CUTTING MACHINE

As an exclusive plasma cutting machine which improved productivity with high-speed mobility and high-quality cutting, productivity improvement was achieved by reducing total processing time through the development of light-weighted torch part, it makes the improvement of the rate of production by getting 45 degree in the angel of cutting torch.

2D PLASMA



MODEL		2D PLASMA
EFFECTIVE CUTTING LENGTH		40,000~60,000mm (OPTION)
CUTTING WIDTH		5,500~11,000mm (OPTION)
SPEED	CUTTING	0~6,000mm/Min
	RAPID	24,000mm/Min
DRIVE SYSTEM	LINE MARKING	24,000mm/Min
	LONGITUDINAL	DUAL SIDE RACK & PINION DRIVE
	TRANSVERSE	TORCH CARRIAGE MOVING RACK & PINION DRIVE
CNC CONTROLLER		FANUC, UNICOM21
PLASMA POWER SOURCE		200 ~ 440A
FUME COLLECTOR		150M ³ /Min
TORCH BEVELING ANGLE		±45 Degree
CUTTING SHAPE		I-Cutting BEVEL-Cutting



This machine is fitted with multitude torch flames that burn oxygen and LPG, it is exclusive cutting machine used for the production of F/P typed sheet steel regardless of its width, which is necessary for mass production.

FLAME PLANER



MODEL		FLAME PLANER
Driving Method	X Axis	Rack & Pinion (Traveling)
	Y Axis	UP / DOWN (BLOCK Concept)
Rail Width		5,000 ~ 8,000mm
Effective Cutting Width		Rail Width - 600
Effective Cutting Length		Rail - 2,000mm
Cutting Speed		100 ~ 6,000mm/Min
Torch Moving Speed		MANUAL
Torch Moving Method		MANUAL
Cutting Shape		FLATE BAR
CNC	Win Plus Control	
	37Kg/M (3M Unit)	
Rail	Basic 20M	
	12 ~ 30EA (Option)	
Gas Torch	Automatic Ignition	
	Water Spraying Device	
	Auto Nesting Program	

CUTTING MACHINE



■ This machine is fitted with multitude torch flames that burn oxygen and LPG, it is exclusive cutting machine used for the production of F/P typed sheet steel regardless of its width, which is necessary for mass production.

■ High-class pressure regulator is used for high-pressure gas, preheating gas, fuel gas, and those are adjusted in gas manipulating device, and also keep certain pressure.

Torch transfer GUIDE-RAIL is a monolithic type with FRAME, and thus there is no bending phenomenon or twisting, on the other hand, large bearing is fitted with TORCH CARRIAGE, so that there is no trembling or vibration as it is transferred.

It is able to make Up/down adjustment on separate TORCH and whole TORCH.

3D LINK PLASMA



VERSAGRAPH 3D LINK TYPE – VERSAGRAPH DXI (KOIKE)

USE		PLASMA Cutting Machine
Driving Method	X Axis	Rack & Pinion
	Y Axis	Rack & Pinion Double Axis
	Rail Width	3,100~10,500mm
Effective Cutting Width	GAS	Rail Width-600mm
	PLASMA	Rail Width ~1,500mm
	Cutting Speed	100~6,000mm/Min
	Moving Speed	18,000~27,000mm/Min
Cutting Shape		Vertical Cutting (1-CUTTING) BEVEL-CUTTING
CNC		HYBRID-D80
Rail		37Kg/M (3M Unit) Basic 9M
Effective Cutting Width		Rail-2,500mm
Gas Torch		Basic 4EA/ Max. 10EA
PLASMA		SUPER-400/SUPER-400PLUS Automatic Ignition
Option		Water Spraying Device Marking Torch AUTO NESTING PROGRAM

CNC GAS CUTTING MACHINE



CNC GAS CUTTING-LEADGRAPH (KOIKE)

USE		GAS Cutting Machine
Driving Method	X Axis	Rack & Pinion
	Y Axis	Rack & Pinion Double Axis
	Rail Width	3,100~10,500mm
Effective Cutting Width	GAS	Rail Width-600mm
	PLASMA	Rail Width ~1,500mm
	Cutting Speed	100~6,000mm/Min
	Moving Speed	18,000~27,000mm/Min
Marking Speed		Vertical Cutting(1-CUTTING)
Cutting Shape		BEVEL-CUTTING
CNC		HYBRID-D80
Rail		37Kg/M (3M Unit) Basic 9M
Effective Cutting Width		Rail-2,500mm
Gas Torch		Basic 4EA/ Max. 10EA
PLASMA		SUPER-400/SUPER-400PLUS Automatic Ignition
Option		Water Spraying Device Marking Torch AUTO NESTING PROGRAM
Power		220~440V

HYBRID-D80



HYBRID-D80 HARDWARE Model	
10.4' VCA COLOR DSTN LCD DISPLAY	
60GB HDD / 1.4MB FDD	
433MHz CELERON CPU	
256MB RAM	
2 x R232C (RS-244) Communication Port	
WINDOW98 Or XP	
USB Port	

5 diagrams' pattern
Repeat cutting/ deposition of straight line
Moving by setting piercing point
Measuring function for using time of supplies
Manual nesting
Tool changing function
Inch/metric programming

Absence rotating/enlarging/reducing
Zigzag deposition/nesting deposition
Cutting function for remained material
Manual data input(MDI)
Simulation function
Using ESS/EAI program
Absolute value/sufficient value programming

CNC CONTROL DEVICE-D80



Adopting 15-inch TFT color liquid display
Simple program writing though the input of figures in screen
Possible to cut complicated shape into simple and single material by using rotating function of parts
Possible to do multiple cutting by using "repeating function" of parts
Meeting RS-232C interface or floppy diskette for NC data transmission
Possible to do network connection with upper-leveled CAD/CAM system

CUTTING MACHINE

■ LW-CO-600A can compound headstock and traveling rail, and it can cut various pipes by installing air plasma or gas cutting machine as well as it can be used for making complicated and various shapes' pipe fabric (branch pipe/straight pipe/main pipe) and piping parts.
 Verified multiple spindle SERVICE CONTROL SYSTEM on its capability was applied, thus most applications can be performed.
 (YAG laser cutting machine/GAS cutting machine/PLASMA cutting machine are fitted according to customer's order.)

CNC PIPE COASTER



CNC PIPE COASTER (LW-CO-600A)

MODEL	CNC PIPE COASTER-600A (LW-CO-600A)
ROBOT	Win Plus Control
CONTROLLED AXES	3 Axis+ Additional 1 Axis / 4 Axis + Additional 1 Axis
CUTTING CAPACITY	Stpg 50A~600A L=6.000mm Max D-8.000:Max 20T D-12.000:Max 35T
PLASMA CUTTING EQUIPMENT	Air-Cooled Or Water-Cooled Cutting Torch (Option)
PROGRAMMING	Pipe Cutting Program
UTILITY	Power : AC 220V 3Φ 50/60Hz 25KVA Compressed Air : 6~8 Kg/cm ² 50L/Min



PIPE PROCESSING SECTION SAMPLE

■ LW-Pipe Rotator is an automatic welding machine which is used for the case to connect pipe materials or elbows, and it is the device to weld materials by rotating large-caliber metal pipe.

PIPE ROTATOR



PIPE ROTATOR

MODEL	(LW-RO-600A)	(LW-RO-1000A)
LOAD PIPE	50~60A (FLANGE Base)	200~1.000A (FLANGE Base)
C/P	1,500Kg	3,000Kg
ROLL SIZE	Φ150	Φ220
TURNING SPEED	0~600mm/Min	
TLTING ANGLE	± 45 Degree	
CONTROL SYSTEM	MAIN P/L & Emergency S/W	POOT S/W
SAFETY DEVICE	TILTING SAFETY SENSOR	
TLTING Speed Reducer Protection	FRAME Internal Speed Reducer	
TURNING ROLL B.R.G	CHAIN Protection COVER	

CUTTING MACHINE



■ LW-PG-600A is very efficient to cut 50 degree's angle in straight line, particularly in pipe fabric, and manual working is can be done regardless of its length.

■ LW-EL-600A is exclusive machine for ELBOW cutting, it is easy to adjust rotating speed per pipe size.

While it has free rotation for 360 degree and free adjustment of cutting angle, and also the user can semi-manually manipulate cutting angle of worm. Through these functions, improving productivity and cost reduction can be achieved.

STRAIGHT PIPE GAS CUTTING MACHINE



STRAIGHT PIPE GAS CUTTING MACHINE

MODEL		LW-PG-600A
SUITABLE PIPE DIAMETER		100 ~ 600A
SUITABLE PIPE LENGTH		600 ~ 6.000mm
SUITABLE PIPE WEIGHT		MAX. 3,000Kg
CUTTING PROCESS		OXYGEN
TURNING SPEED (UTTING)		Max. 20mm/Sec
CARRIAGE	TRAVELING METHOD	MANUAL
	TRAVELING STROKE	Max. 5,800mm
TORCH UP/DOWN	METHOD	MANUAL
	STROKE	Max. 800mm
TORCH	METHOD	MANUAL
	ANGLE	-50 & +50
IGNITION		MANUAL
TABLE HEIGHT		(FL +800)
POWER SUPPLY		AC 220V X 3φ X 60Hz
TOTAL ELECTRIC POWER		3Kw

ELBOW CUTTING MACHINE



ELBOW CUTTING MACHINE (LW-EL-600A)

MODEL		LW-EL-600A
CUTTING CAPACITY		200 ~ 6,000A
LOADING CAPACITY		600Kg
CHUCK CLAMPING METHOD		MANUAL BY HANDLE
CHUCK TILTING	METHOD	WORM REDUCER BY GEARED MOTOR
	ANGLE	0~90 Degree
	SPEED	1.5 ~ 5 Degree/Sec
	CONTROL	MANUAL
TABLE ROTATION (CUTTING)	METHOD	WORM REDUCER BY GEARED MOTOR
	ANGLE	± 360 Degree
	SPEED	Max 32mm/Sec
	CONTROL	MANUAL
MACHINE	LENGTH	2,305mm
	HEIGHT	1,500mm
	WIDTH	1,120mm
	WEIGHT	1,800Kg

■ LW-POSITIONER is a worktable that the user can change welding position by attaching welding objects freely, and it has excellent hardness and quality. It is a unique flat, carbon, earth collecting machine, and it has excellent durability while having no problem in deceleration device.

It meets rotation by A/C SERVEMOTOR or high-speed rotation well in the standard design structure.

Rotation driving part is based on the reduction of speed at worm, and it rotates without problem even in eccentric load, on the other hand it is possible to do safe working by self-lock.

Manipulation of speed change is done by dial tongue, thus its response is excellent.

POSITIONER



POSITIONER

MODEL		LW-PO-300A	LW-PO-600A
WELDING CAPACITY		50 ~ 300A	125 ~ 600A
CAPACITY	HORIZONTAL	350Kg	600Kg
	VERTICAL	250Kg	500Kg
CLAMPING METHOD		MANUAL BY HANDLE	
CHUCK	METHOD	GEARED MOTOR & WORM REDUCER	
	ANGLE	Min 0 Degree ~ Max 135 Degree	
	SPEED	Max 5 Degree/Sec	
	CONTROL	MANUAL	
ROTATION (WELDING)	METHOD	GEARED MOTOR & WORM REDUCER	
	ANGLE	± 360 Degree	
	SPEED	Max 4.1 RPM	Max 1.12 RPM
	SPEED CONTROL	MANUAL BY VOLUME	
MACHINE	CONTROL	FOOT & TOGGLE S/W	
	LENGTH	893mm	1,320mm
	HEIGHT	1,000mm	1,220mm
	WIDTH	650mm	922mm
	WEIGHT	550Kg	1,000Kg

CUTTING MACHINE

High frequency bending is a hot rolling processing technology which section steels of various shapes such as pipe, H section steel, channel, I-Beam Are bent by using high frequency inductive heating.

Particularly it guarantees the quality of products in various fields such as pipelines in nuclear power plant that is required for high-quality and inboard pipelines that cost and time limit for product delivery is primarily important. In addition, reduction in terms of works and quality improvement can be achieved by reducing outstanding welding works replacing elbows.

HIGH FREQUENCY BENDING MACHINE



HIGH FREQUENCY BENDING MACHINE

Cold rolling bending is easy to do smooth radius bending of pipes, while those pipes are used as a steel fabric materials in wide-ranging area from large-scaled construction such as various kinds of museums, playground in school, convention center, bridge etc to rebuilding and extension construction on school and auditoriums. And cold rolling bending is cheap compared with high frequency materials as well as it is possible to deliver in short time, and additionally it has the advantage of that high-quality products can be guaranteed without any change in the original quality of steel materiality.

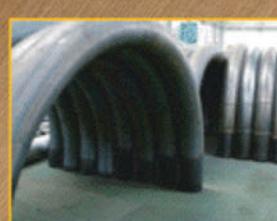
COLD ROLLING BENDING MACHINE



COLD ROLLING BENDING MACHINE

CAPACITY

MODEL	INCH	RANGE
100A	4"	Min2D~Max Non Limit
125A	5"	Min2D~Max Non Limit
150A	6"	Min2D~Max Non Limit
200A	8"	Min2D~Max Non Limit
250A	10"	Min2D~Max Non Limit
300A	12"	Min2D~Max Non Limit
350A	14"	Min2D~Max Non Limit
400A	16"	Min2D~Max Non Limit
450A	18"	Min2D~Max Non Limit
500A	20"	Min2D~Max Non Limit
550A	22"	Min2D~Max Non Limit
600A	24"	Min2D~Max Non Limit



STPG



SUS



CHANNEL

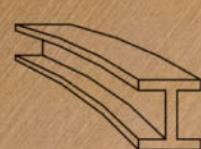


H-Beam

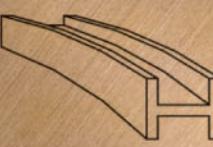
HIGH FREQUENCY BENDING PRODUCTS



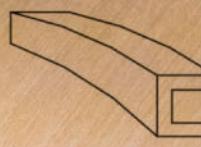
ANGLE



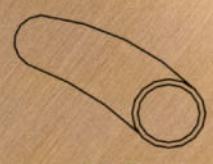
H-BEAM 1



H-BEAM 2



CHANNEL



PIPE



ROUND BAR

BENDING PATTERN PER PRODUCTS



COLD ROLLING BENDING PRODUCTS

CUTTING MACHINE ACCESSORIES



► CUTTING MACHINE ACCESSORIES



LEAD CABLE



TIP · NOZZLE · ELECTRODE



SOLANOID VALVE



IHS CYLINDER



DUST COLLECTOR HOOD ROLLER



TORCH ASSEMBLY



CARTRIDGE FILTER



SPONGE-JET Blasting



1. Technology

Patented sponge media is used which is mixed Aluminum Oxide Steel Grit with urethane sponge that has excellent durability. Among injected sponge media, aluminum oxide peels pollutants on surface off, and then it makes required surface illuminance (0~1,000 Microns) perfectly. At that moment, sponge pulls dust and most grits do not go to a distance because sponge absorbs repulsive impulse energy too.

2. Economical Effect following the introduction of SPONGE-JET Blasting Equipment

	POWER TOOL	SPONGE JET (BVAC)	REMARK
Working Labors (Person/Tank)	6 Persons	6 Persons	Welding Seam Blasting (13K BASE)
Labor Cost	660,000W/Tank A,B,C Class, Each 2 Persons	160,000W/Tank C class 2 persons	A Class : 150,000W B Class : 100,000W C Class : 80,000W
Cost of supplies	Disc & Brush 108,000W/Tank	Sponge Media 137,500W/Tank	-
Total Coat In A Day	768,000W/Tank	297,000W/Tank	Labor Cost+Cost Of Supplies
1 Month (25 Days)	19,200,000W	7,437,500W	-
Annual Cost	230,400,000W	89,250,000W	-
Annual Amount Of Cost-Saving	-	141,150,000W	-
Working Condition	Much Dust	Little Dust	Little Handling Charge For Wastes
Collecting & Cleaning	AIR BLOW & VACUUM	AIR BLOW & VACUUM	-
Job Offer	Hard To Find Worker	Easy To Find Worker	-

3. Working Flow of SPONGE-JET Blasting



SPONGE-JET Blasting

4. Types and characteristics of equipment I Feed (Shooting) Unit



① 100-HP Feed Unit

FEATURE	Easy To Move Equipment And Suitable For Medium/Small-Sized Working
HEIGHT	127cm
WIDTH	74cm
LENGTH	115cm
WEIGHT	230Kg
PRESSURE	7~8.6Bar(125Psi)



② 400-HP Feed Unit

FEATURE	Blasting Time Is Long, And Suitable For Large-Scaled Working
HEIGHT	183cm
WIDTH	92cm
LENGTH	130cm
WEIGHT	554Kg
PRESSURE	7~8.6Bar(125Psi)

Recycler

It is the equipment to recycle Sponge Media abrasive, and it is easy to move as well as to handle in a simple way.
It is possible to recycle 95% of abrasive for 6 ~ 15 times.



① 35-P Recycler

HEIGHT	122cm
WIDTH	84cm
LENGTH	84cm
WEIGHT	136Kg
PRESSURE	2Bar(30Psi)



② 35-E Recycler

HEIGHT	137cm
WIDTH	74cm
LENGTH	61cm
WEIGHT	148Kg
POWER	115V, 30A, 60Hz



① 70-E Recycler

HEIGHT	130cm
WIDTH	117cm
LENGTH	107cm
WEIGHT	294Kg
POWER	115V, 30A, 60Hz



B-VAC PRO 3 (For shipbuilding)

It reduces time, cost and labor because the collecting and recharge work of abrasive is automatically done in the condition of that it has vacuum device and recycler.

B-VAC Pro 3

HEIGHT	331cm
WIDTH	155cm
LENGTH	246cm
WEIGHT	2,948Kg
PRESSURE	7~8.6Bar(125Psi)

SPONGE-JET Blasting

5. Types and characteristics of equipment II Various Sponge Media by targeted use

① SILVER SPONGE MEDIA

Aluminum Oxide (Mohs hardness 9) was combined as abrasive, durability and recycling capability are excellent.



Silver Sponge Media Type	Illuminance (Profile)	Abrasive Agent (Grit Size)
Silver 16 Sponge Media	+/-100Micron (+/-4Mil)	16-Grit Aluminum Oxide
Silver 30 Sponge Media	+/-75Micron (+/-3Mil)	30-Grit Aluminum Oxide
Silver 30DG Sponge Media	+/-75Micron (+/-3Mil)	30-Grit Aluminum Oxide
Silver 80 Sponge Media	+/-50Micron (+/-2Mil)	80-Grit Aluminum Oxide
Silver 120 Sponge Media	+/-25Micron (+/-1Mil)	120-Grit Aluminum Oxide
Silver 220 Sponge Media	< 25 Micron (<1Mil)	220-Grit Aluminum Oxide
Silver Aero-Alox 320 Sponge Media	< 12 Micron (<.5Mil)	320-Grit Aluminum Oxide
Silver Aero-Alox 320 Sponge Media	< 12 Micron (<.5Mil)	320-Grit Aluminum Oxide
Silver 500 Sponge Media	< 6 Micron (<.25Mil)	500-Grit Aluminum Oxide

② RED SPONGE MEDIA

Steel Grit was combined as abrasive, it is very good to use fragile coating, thick coating, very heavily tarnished points.



Red Sponge Media Type	Illuminance (Profile)	Abrasive Agent (Grit Size)
Red G-40 Sponge Media	100 + Micron (4+Mil)	G-40 Steel Grit

③ WHITE SPONGE MEDIA

It is very good to use on the delicate surfaces which does not require illuminance or require minimum illuminance. Particularly it is used for restoration and cleaning of historical buildings.



White Sponge Media Type	Illuminance (Profile)	Clean Agent
White SPOCC Sponge Media	< 6 micron (<.25Mil)	Spherical Precipitate Of Calcium Carbonate
White Plastic Sponge Media	None	30/40 Mesh, Type Plastic Urea
White Glass Bead Sponge Media	< 6 micron (<.25Mil)	60/80 Mesh, Glass Bead
White Melamine Sponge Media	< 6 micron (<.25Mil)	40/60 Mesh, Type Melamine

④ GREEN SPONGE MEDIA

It is used to remove grease, oil, in heavily equipped and also used to eliminate black dirt in concrete/metal fabric.



Green Sponge Media Type	Illuminance (Profile)	Clean Agent
Green Sponge Media	< 6 Micron (<.25Mil)	Very Mild

LIGHTWEL Cutting Machine Business

MANUFACTURE

We are developing and manufacturing the cutting machine of high-quality, high power and long-life durability to provide customer with CNC cutting machine with suitable structure and capability in the industry which needs specialized cutting.

INSTALLATION

We are coping with customer's needs and changes in circumstance by managing the whole batch processing from rail construction, cable installation (hanger type, veyor type) up to power connection and test run of products

OVERHAUL (Repair)

Quick normalization of machines is our number one priority by having smooth communication with product manufacturer and precise diagnosis with A/S fully responsible team, as production activities are limited due to mechanical alarm system or breakdown of machine by malfunction.

Retrofit (upgrade)

We provide customer with the optimum of products and expected changes for required unit or the whole unit in case of that the equipment is needed to be substituted due to the decline of its capability or when its benefit does not reach on production demand as time goes by. (Full upgrade replacement of CNC controller)



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