ALL TIME

MECHANICAL & ELECTRICAL EQUIPMENT CO., LTD.

Complete Solution for Storage Tank Welding

Automatic welding systems for specific industries and applications

Over a thousand All Time Automatic Welding Systems have been delivered around the world

- Algeria
- Angola
- Australia
- Bahrain
- Brazil
- Bulgaria
- Canada
- Colombia
- China
- Chile
- Curacao
- Egypt
- Estonia
- Hungary
- Indonesia
- Iraq
- Israel
- Japan
- Korea
- Kuwait
- Lithuania
- Malaysia
- Mexico
- Morocco
- Mozambique
- Myanmar
- Nambia
- Netherland
- New Zealand
- Oman
- Parkistan
- Philippine
- Poland
- Portugal
- Pureto Rico
- Russia
- Saudi Arabia
- Singapore
- Slovakia
- Spain
- South Africa
- Sudan
- Taiwan
- Thailand
- Tunisia
- UAE
- United States
- United Kingdom
- Vietnam
- Yemen

Mission Statement

We aim to grow a successful business by providing reliable, high productivity and cost effective automatic solutions for various welding applications.

Goal

Our goal is to be recognized by our customers as a responsible partner whom they can trust whenever they need a practical automatic welding solution to improve their productivity or meet specific requirements.

The Company

Through the consistent pursuit of ideas and dedication, we have steadily grown as an established automatic welding equipment manufacturers in different industries.

ALL TIME was founded in 2002 with a facility currently located in Shanghai, China. The company is solely owned by Hong Kong **All Fit Engineering Ltd.**, which has been distributing and servicing automatic welding equipment since 1990.

The core business of All Time is to manufacture engineered components, assemblies and fully integrated systems for specific welding requirements. The All Time engineering team possesses extensive skills and expertise in applying automatic welding in various fields, such as:

- Site storage tank erections
- Pipe spools fabrications
- Heat exchanger header fabrications
- Thin wall tanks & cylinders productions
- Precision tubing
- Rolls & plates surfacing
- Pole productions
- Pulley fabrications
- Structural pipe mills

We cooperate with some of the world's finest manufacturers and combine the technical advantages to offer powerful welding solutions to customers.

All Time is an **ISO9001 certified company** that runs **SAP**, selected models of our equipment are being certified for **CE compliance**.

In the tradeoff between highly automated processes able to deliver productivity plus superior quality and the cost-effective practicality of traditional methods, we strike the balance with simple automatic solutions that allow maximum flexibility.


SAW-multi wire (1G)


EGW (3G)


SAW (2G)


PAW (1G)


TIG (1G)

ALL TIME Concept

Ever since the foundation of **All Time** we have kept searching for simple and cost effective ways to automate various applications. Our objective is to save valuable production time and improve quality without making the job complicated.

We feel the best answer is to utilize our experience with various welding processes and positioning equipment to develop welding systems with a **modular design concept** that can be configured to suit different needs.

We can provide high-capacity, top-quality welding solutions in **MIG/MAG and Tandem MIG, single, Tandem and Tri-Arc SAW, plasma and TIG processes with hot or cold wire**.

Integration of **All Time Weld Control system** and devices such as **electromechanical or laser line based optical seam tracking** ensures high welding quality by continuously adopt to the variations of the task.

Besides our own efforts in research & development, we also incorporate the technology of others into our equipment to enhance its performance.


ARM processor control


PLC based control


Laser Seam Tracking

Product Index

SITE STORAGE TANK WELDING

- Girth Welder
- Vertical Welder
- Base Plate Welder
- Hydraulic Tank Jacking System
- Accessories

All TIME are welding automation specialists and we have considerable experience in the design, manufacture and supply of automatic tank welding systems worldwide. We design and manufacture specialist automatic welding solutions for all types of tank construction projects including cryogenic (LNG etc.), conventional bulk storage and industrial process tanks in all construction materials. We have been designing and manufacturing our specialist tank construction equipment for over twenty years and have successfully installed our systems on our client's sites in over fifty two countries.

All TIME's complete range of bulk storage tank automatic welding and erection equipment has been developed in conjunction with our in house engineering team, partners and our clients. We are proud of our ability to provide high quality custom engineering for every application. Our equipment will assist you at every stage of your tank construction or repair project providing maximum safety, productivity and quality. We welcome clients, both existing and prospective at all times at our facility to test and appraise our equipment and to discuss their specific project requirements.

SITE STORAGE TANK WELDING – HORIZONTAL WELDING

GIRTH WELDER

The girth welder is an automatic welding machine that typically straddles the tank plate and is used to complete a tank circumferential weld joint. It is used in single or double-sided configuration. In the single sided configuration one operator is required and welding on one side of the joint occurs. In the double-sided configuration two operators are required and welding occurs simultaneously on both sides of the weld joint.

Use of girth welders will offer increases of productivity of by up to 10 times as opposed to manual completion and with the additional benefit of improved weld quality.

ALL TIME Girth Welders Features

- Fully integrated with Lincoln Electric **submerged arc welding systems** as standard (other welding systems on client's request)
- **Twin SEW Euro drive system** for reliable and steady weld travel
- **ABB Inverter** control for accurate speed adjustment
- Fully adjustable weld head / flux belt assembly
- Precision machined slides ensure correct weld placement
- Laser pointer to ensure correct tracking of the weld head in the circumferential seam
- Powerful, reliable and efficient blower type vacuum flux recovery system
- Flux heater option to keep flux away from moisture
- Sequence control in "Auto mode" to allow one button startup
- Integrated control with cooling for reliable operation in high temperature environment
- Ergonomically positioned for the operator

ALL TIME AUTOMTIC GIRTH WELDERS GUIDE

Model	Machine Frame	Bottom-Up Tank Welding	Top-Down Tank Welding	Double Shell Tank Welding	Inclined Shell Welding	Operator Carrying	Travel Mechanism	Tank Diameter Capacity	Shell Width Capacity	Machine Radial Clearance	Machine Weight (NET)	Drive	Welding Process
AGWI/U	1 Sided	YES	YES	NO	NO	YES	On Shell / On Rail	Min. 4.8 m	1.8 – 3.2 M	1.1 m	1,000 kg	Twin AC Motors	SAW
AGWII/U	2 Sided	YES	YES	NO	NO	YES	On Shell / On Rail	Min. 4.8 m	1.8 – 3.2 M	1.1 m	1,800 kg	Twin AC Motors	SAW
AGWI/LNG	1 Sided	YES	NO	YES	NO	YES	On Shell	Min. 4.8 m	2.0 – 4.0 M	700 – 900 mm *Adjustable	950 kg	Twin AC Motors	SAW
AGWII/ LNG	2 Sided	YES	NO	NO	NO	YES	On Shell	Min. 4.8 m	2.0 – 4.0 M	700 – 900 mm *Adjustable	1,750 kg	Twin AC Motors	SAW
AGWI/Mini	1 Sided	YES	NO	NO	NO	YES	On Shell	Min. 3.6 m	1.8 – 3.0 M	1.1 m	700 kg	Single AC Motor	SAW / FCAW
AGWII/ Mini	2 Sided	YES	NO	NO	NO	YES	On Shell	Min. 3.6 m	1.8 – 3.0 M	1.1 m	400 kg	Single AC Motor	SAW / FCAW
AGWI/ Mini-2	1 Sided	YES	NO	NO	NO	NO	On Shell	Min. 3 m	1.5 – 3 M	600 mm	750 kg	Twin AC Motors	SAW / FCAW
AGWII/ Mini-2	2 Sided	YES	NO	NO	NO	NO	On Shell	Min. 3 m	1.5 – 3 M	600 mm	400 kg	Twin AC Motors	SAW / FCAW
AGWI/P	1 Sided	YES	YES	YES	NO	NO	On Rail Above joint	Min. 3 m	Min. 800 mm	600 mm	400 kg	Single AC Motor	SAW / FCAW
AGWI/P2	1 Sided	YES	YES	YES	YES	NO	On Rail Above joint	Min. 3 m	Min. 800 mm	600 mm	300 kg	Twin AC Motors	SAW / FCAW
AGWI/PL	1 Sided	YES	YES	YES	NO	NO	On Rail *Below joint	Min. 3 m		600 mm	250 kg	Single AC Motor	SAW / FCAW

Weld Head & Flux Belt Assembly

Dual Motor Drive System

Integrated Control

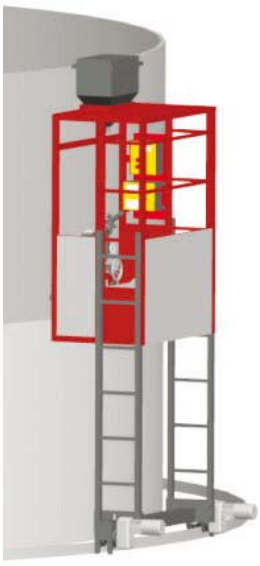
SITE STORAGE TANK WELDING - HORIZONTAL WELDING

Universal Automatic Girth Welders

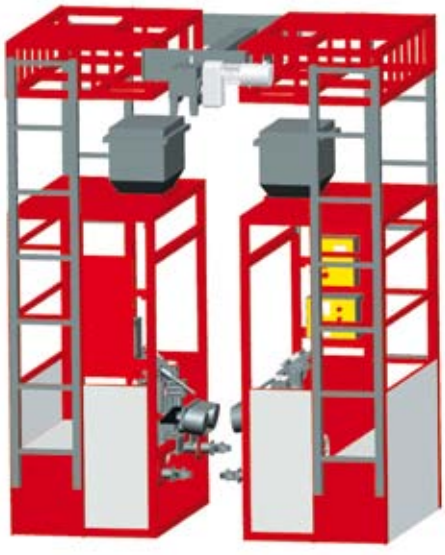
MODEL **AGWI/U, AGWII/U**

- The most versatile and widely used All Time girth welders for erecting different tanks
- Modular design frame structure enables girth welder to weld traditional bottom up erected tanks and top down erected tanks
- Can be configured for single sided or double sided welding
- Ergonomically designed for maximum operation comfort that yields higher productivity

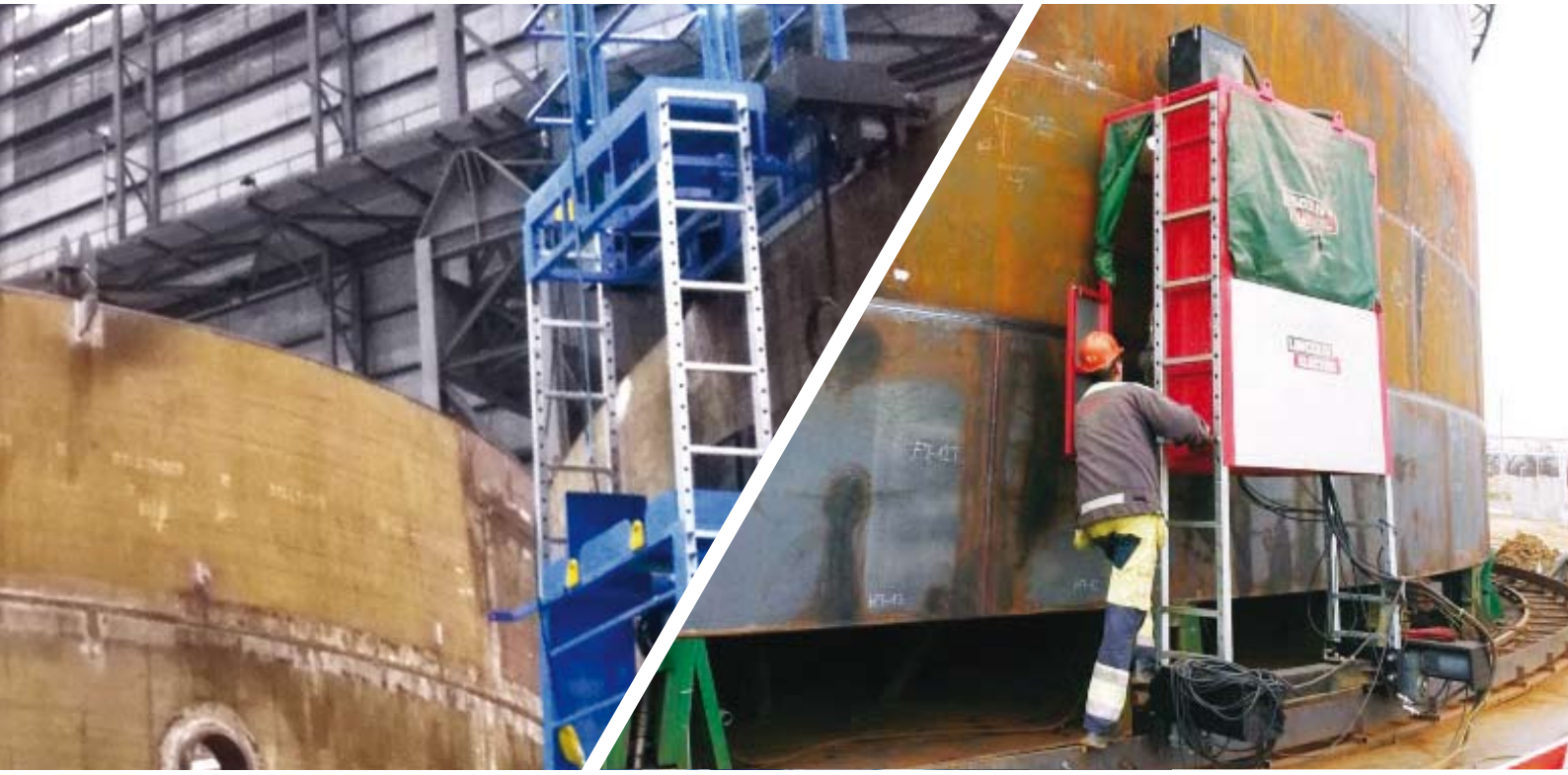
AGWI/U configured for bottom up tank SAW



AGWI/U configured for top down tank SAW on rail



2 x AGWI/U configured as 1 x AGWII/U for DOUBLE SIDED bottom up tank SAW



Automatic Girth Welders for Dual Shells Cryogenic Tanks

MODEL AGWI/LNG, AGWII/LNG

- For low temperature storage tank and bulk storage tank construction
- Suitable for double walled tanks with narrow inner / outer shell spacing
- Can accommodate different plate / block widths (Based on client requirement, AGW LNG can be custom engineered to accommodate up to 8.4m wide shell plates / blocks)
- Adjustable frame depth allows girth welders to travel over pre-welded stiffeners on shell
- Removable handrails on top platform provides versatility on top shell operation
- Real time monitoring and logging of weld data via Arclink when used in conjunction with the Lincoln Powerwave ACDC System

All Time girth welder operating between inner & outer shells of LNG tanks

AGWII-LNG with Lincoln Power wave ACDC Welding System

AGWII-LNG with engine welder trailer

SITE STORAGE TANK WELDING - HORIZONTAL WELDING

Light Weight Automatic Girth Welders

MODEL **AGWI/Mini, AGWII/Mini, AGWI/Mini-2, AGWII/Mini-2**

- For low capacity thin wall storage tank construction
- Light weight frame structure design
- Available with single or double sided welding, operator carrying or non-operator carrying versions

AGWI-Mini

AGWI-Mini-II

Horizontal MIG welding option for AGWI-Mini-II

Automatic Girth Welders on Shell Mounted Rails

MODEL **AGWI/P, AGWI/P2, AGWI/PL**

- Compact girth welder that runs on rails installed on shells for flexibility
- Eliminates limitation on plate width as for the conventional girth welders
- Suitable for general heavy wall horizontal welding for tanks (repairs and construction), vertical cylindrical structures (piles, offshore jackets, chimneys etc.) and vertical panels
- Economical but sufficiently robust for heavy duty welding operation
- Specific models welding on inclined surface (eg. tank roof, inclined piles, sphere tanks) and travels below the weld joint

AGWI/P for tower welding

AGWI/P2 operating on inclined pile structure

AGWI/P for jack up tank welding

SITE STORAGE TANK WELDING - HORIZONTAL WELDING

Custom Made Automatic Girth Welders & Options

All Time girth welder with expandable base for welding the cone segment of a blast furnace

All Time girth welder with elevated weld head assembly to weld multiple stiffeners on the same vertical structure

Optional ALL TIME AGW Features

Buff Equipment for joint cleaning prior welding

Flux tank heater with control to eliminate moisture on flux

Twin Wire kit for high speed Horizontal SAW

Automatic carbon arc gouger for code quality root welds

Mobile engine welder trailer (MPS)

Back side cage ladder

SITE STORAGE TANK WELDING – HORIZONTAL PLASMA ARC GOUGING & GRINDING

Full Cabin Operator Carrying Automatic Plasma Arc Gouger (APG)

- To back gouge welds on stainless steel and nickel steel storage tanks to minimize excessive grinidng
- Incorporates **plasma arc gouging system** components (Power Source, automatic gouging torch, ALC, gas console)
- **Motorized Full cabin** effectively house operators and gouging gears and provides accurate automatic travel along horizontal joint
- LNG models for double walled tanks with narrow inner / outer shell spacing

Full Cabin Operator Carrying Automatic Belt Grinder (ABG)

- To grind off weld buildup on horizontal joint for a flush finish on shell wall
- Incorporates **heavy duty belt grinding unit**
- **Motorized Full cabin** effectively house operators and grinding unit and provides accurate automatic travel along horizontal joint
- LNG models for double walled tanks with narrow inner / outer shell spacing

SITE STORAGE TANK WELDING - BASE PLATE WELDING

Automatic Welding Tractor

MODEL **LT-7**

- Original Lincoln Electric self-propelled mechanized wire feeder designed for high deposition, high productivity welding in the down hand position. Compact design and size also make it suitable for applications where space is restricted
- Comes with All-Time magnetic attachment that allows application of the LT7 on both internal and external tank floor to shell welds.
- Complete with steel container and main switch for site safety
- Flux recovery options are available

Tank base plate OD fillet welding

Tank base plate ID fillet welding

Flux recovery unit options for LT7

Magnetic roller assembly

SITE STORAGE TANK WELDING – VERTICAL WELDING

Vertical Welder

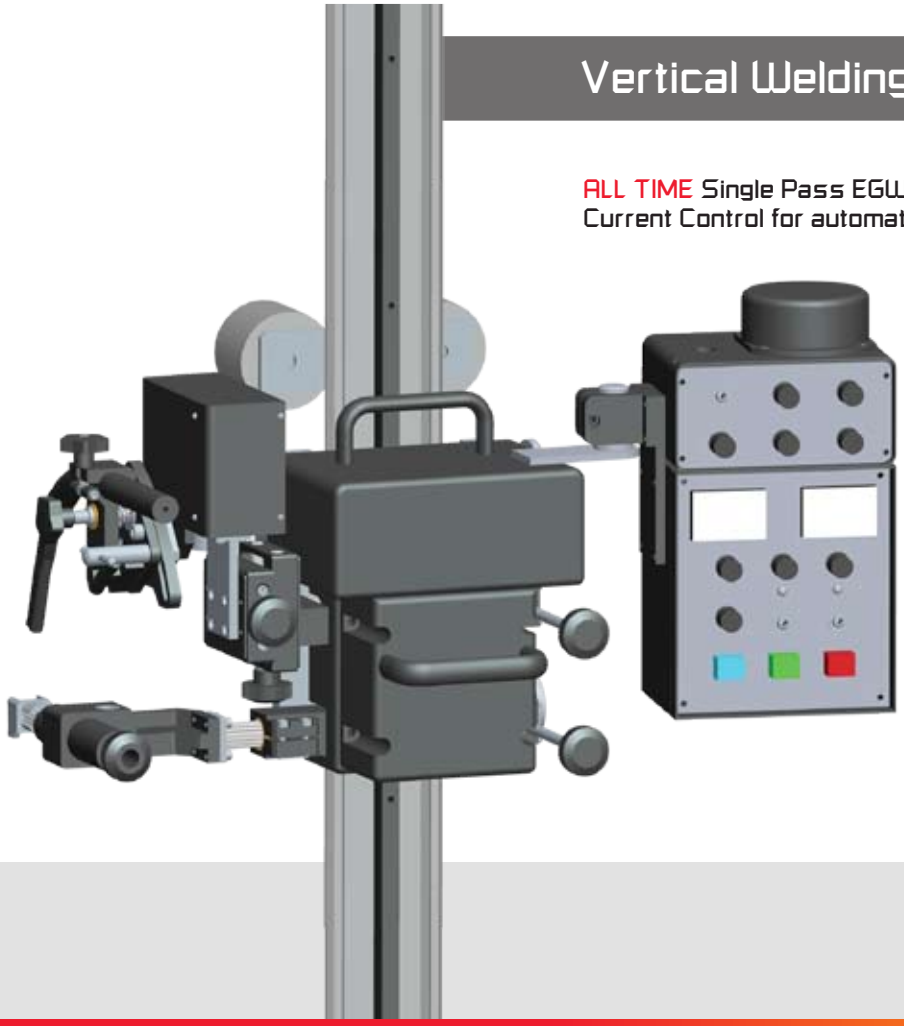
The EGW Single Pass Vertical Welder is a high productivity automatic vertical welding machine which uses real time closed-loop monitoring of the welding arc to accurately locate, control and adjust the welding head in the weld joint via arc current feedback and automatic carriage travel. This is used to complete single pass welds in material from 9 to 36mm thick but can also be used to complete thicker plate welds of up to 70mm when welding on both sides of the joint. This machine is used for vertical plate welding in the storage tank and many other applications.

ALL TIME Vertical Welders Features

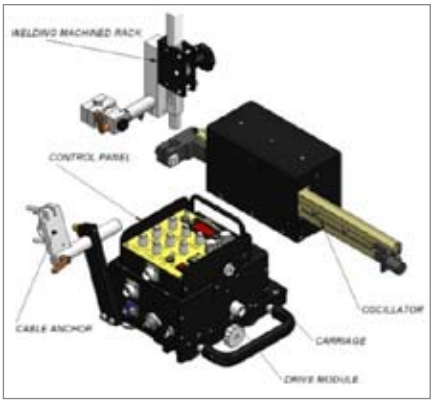
- Adopts EGW (Electro Gas Welding) process for high speed carbon steel vertical welding with FCAW (Flux Cored Arc Welding) Process option for alloy steel vertical welding
- Lightweight travel carriage, self-propelled, weatherproof, fully contained operators cabin which allows safe access to the weld joint and easy set up and install
- Lightweight Aluminum track, quick mount electro magnets , easy assembly and disassembly
- Real time monitoring of arc and automatic control of weld pool level, welding gun position and automatic adjustment of electrical stick out
- Sequence control in "Auto mode" to allow one button startup
- Onboard- self-contained continuous water cooling system
- Fully integrated with Lincoln Electric welding systems as standard (other welding systems on client's request)
- SEW drive system for reliable and steady travel

SITE STORAGE TANK WELDING – VERTICAL WELDING

Vertical Welding Carriages



ALL TIME Single Pass EGW Carriage with Arc Current Control for automatic stick-out adjustment



Bugo Multi Passes FCAW Carriage

Vertical Welding Cabins

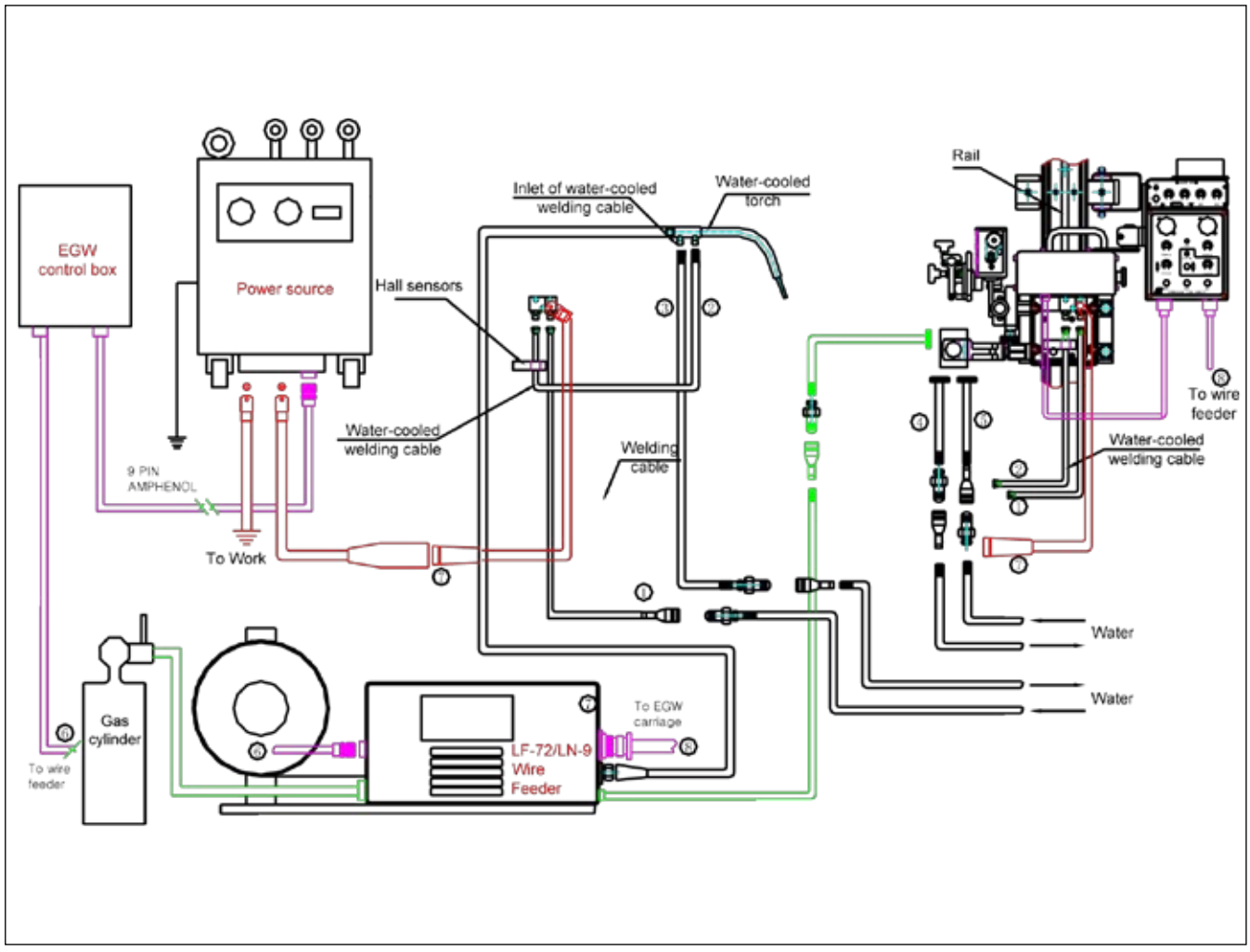
Single Sided Cabin for on shell travel

Double Sided Cabin for on shell travel

Single Sided Cabin for ground rail travel

ALL TIME AUTOMTIC VERTICAL WELDERS GUIDE

Model	Machine Frame	Bottom-Up Tank Welding	Top-Down Tank Welding	Double Shell Tank Welding	Inclined Shell Welding	Operator Carrying	Travel Mechanism	Tank Diameter Capacity	Shell Width Capacity	Machine Radial Clearance	Machine Weight (NET)	Drive	Welding Process
EGWII	2 Sided	YES	NO	NO	NO	YES	On Shell	Min. 4.8 m	1.8 – 3.2 M	1.1 m	2,000 kg	DC / AC motor	EGW / FCAW
EGWII/D	1 Sided	NO	YES	NO	NO	YES	On Rail	Min. 4.8 m	1.8 – 3.2 M	1.1 m	900 kg	DC /AC motor	EGW / FCAW
EGWI/U	1 Sided	YES	NO	YES	YES	YES	On Shell / On Rail	Min. 4.8 m	1.8 – 3.2 M	1.1 m	1,050 kg	DC / AC motor	EGW / FCAW
EGWI/P	1 Sided	YES	NO	YES	YES	NO	On Shell / On Rail	Min. 3 m	1.8 – 3.2 M	0.5 m	400 kg	DC motor / Manual	EGW / FCAW
AVWI	1 Sided	YES	NO	NO	NO	YES	On Shell	Min. 4.8 m	1.8 – 3.2 M	1 m	800 kg	DC / AC motor	SAW / FCAW
AVWII	2 Sided	YES	NO	NO	NO	NO	On Shell	Min. 4.8 m	1.8 – 3.2 M	1 m	1,500 kg	DC / AC motor	FCAW
AVWI-LNG	1 Sided	YES	NO	YES	YES	NO	On Shell	Min. 3.6 m	2 – 4 M	700 - 950 mm	1,500 kg	DC / AC motor	FCAW
AVWII-LNG	2 Sided	YES	NO	YES	NO	NO	On Shell	Min. 3 m	2 – 4 M	700 - 950 mm	2,800 kg	DC / AC motor	FCAW

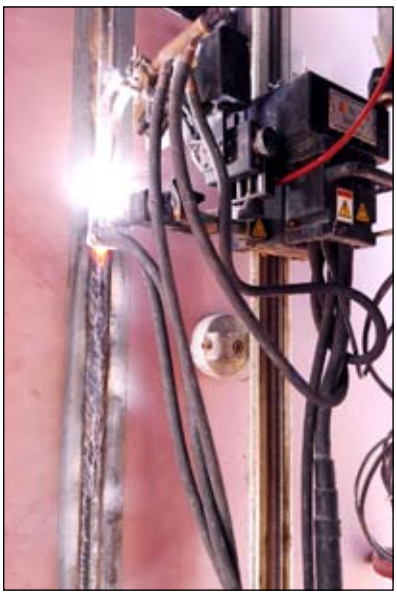


SITE STORAGE TANK WELDING - VERTICAL WELDING

Full Cabin Operator Carrying Single Pass Electrogas Vertical Welders

MODEL **EGWII, EGWI/D, EGWI/U**

- EGW carriage and control for high deposition automatic single pass vertical welding
- Full aluminum panel wind shielding cabin efficiently bring operators and welding gears to vertical joints and provide indoor conditions for high quality welding
- 3 different standard configurations for site erected Bottom Up and Top Down erected storage tanks or heavy wall cylindrical structures (eg. towers, blast furnace)
- Most complete and productive vertical welding solution for site jobs that require a lot of welding



Single pass welding in operation

EGWII rides on shell for conventional bottom up tank welding

EGWI/D travels on based mounted rail for top down tank erection

EGWI/P being adopted for mining application

EGW carriage to be used with standard gondola for ship panel vertical welding

Non Operator Carrying Single Pass Electro Gas Vertical Welders

MODEL / **EGWI/P**

- Compact non operator carrying vertical welder that runs on shells for max flexibility
- Eliminates limitation on plate width for conventional vertical welders
- Suitable for general heavy wall vertical welding for tanks (repairs and construction), vertical cylindrical structures (piles, offshore jackets, chimneys etc.) and vertical panels
- Economical but sufficiently robust for heavy duty welding operation
- Specific models welding on inclined surface (eg. tank roof, inclined piles)

SITE STORAGE TANK WELDING - VERTICAL WELDING

Full Cabin Operator Carrying Multi-Passes Automatic Vertical Welders (AVW)

MODEL **AVWI, AVWII, AVWI/LNG, AVWII/LNG**

- For low temperature storage tank and bulk storage tank construction
- Uses Standard BUGO welding carriage for mechanized FCAW
- Full aluminum panel wind shielding cabin efficiently bring operators and welding gears to vertical joints along tank shells and provide indoor conditions for high quality welding
- Cabin available in single or double sided
- LNG models for double walled tanks with narrow inner / outer shell spacing

Operator elevator inside cabin

BUGO Carriage with Oscillator for FCAW

Single Sided AVWI with back side cage

SITE STORAGE TANK WELDING - SERVICE CAGE

MODEL SPI, SPII

- For all manual tank construction operations where access is required to a work station at heights (Plate erection, Joint set up and preparation, Manual welding, Installation and removal of tank fittings and jewelry etc.)
- Built for last and safety with fully enclosed Galvanized & meshed steel frame structures, prevent loss of tools and associated hazards while working at heights
- Chain pulley allows a single operator to easily maneuver the unit into places manually along the tank circumference
- Swivel drive wheels for easy rolling on various tank diameters
- Unique design folds flat for shipping and storage.
- Customized to users' needs
- Can be used in Single or double-sided configuration

Meshed frame for safe operation on site

5 x full folded SPII fits in one 20' container

Adjustable for different shell widths via locking pin

Foldable for easy transportation

Manual chain drive

Foldable step frame for various work height

SITE STORAGE TANK WELDING - HYDRAULIC JACKING

Synchronous Lifting System

We've designed a hydraulic jacking system with the flexibility to lift storage tanks of different capacities and weights that are compatible to various manual or automatic welding methods adopted by tank contractors across the globe. We can handle the largest tank projects and we can do it safely with maximum saving of time.

Our jacks are mounted securely on the floor and using the massive cylinder as a beam, will support the structure even in higher wind loads.

Each All Time HLD jacking module has its own hydraulic pump and reservoir. They are linked to a central control that commands all aspects of the jacking operation.

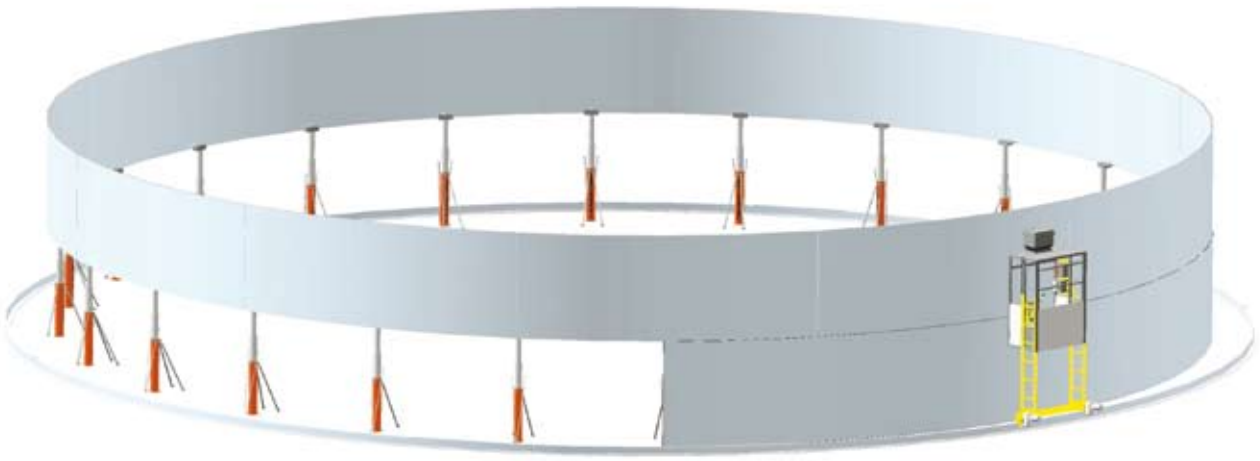
Each standard HLD jacking module with 2 cylinders can lift 50,000 kg, which allows fewer jacks to raise a tank, it is designed with a large clearance from the tank shell that gives the workers extra room to quickly insert plates.

In operation, the cylinders are attached to the wall, the control loads the jack manually, or automatously via the addition of a PLC unit, then lift the structure holding tolerance within 2mm.

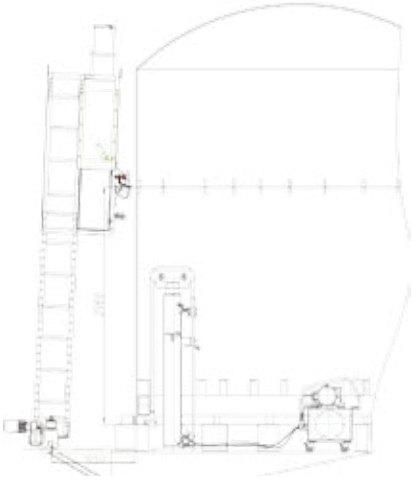
Heavy duty single stroke cylinder with lifting chain

Central control cabinet to control individual hydraulic power pack and cylinders

SITE STORAGE TANK WELDING - HYDRAULIC JACKING

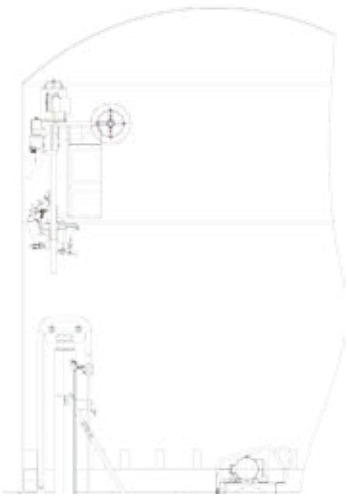


Model	HLD-25-2700 / HLD-25-3000 / HLD-25-3400
Effective lifting stroke	Max. 2700 mm / 3000 mm / 3400 mm
Lifting force per cylinder	Max. 250 kN
Lift pressure per cylinder	Max. 25 MPa
Lift speed	200 mm/min
Pump Flow rate	5 ml/r
Operating distance (hydraulic pump to cylinder)	< 5m
Operation temperature	-20 to 80°C *with correct selection of oil
Standard Hydraulic pump input voltage	380 VAC / 3 ph / 50 Hz
Weight of hydraulic cylinder	500 kg / 550 kg / 600 kg
Weight of hydraulic pump	80 kg
Total weight of standard jacking module	880 kg



Using in conjunction with AGWI/U for OD SAW

Cylinders fully retracted for AGWI/U ID SAW



Cylinders fully retracted for AGWI/P ID SAW

SITE STORAGE TANK WELDING – SERVICE SUPPORT

Our philosophy is to help you gain the maximum productivity from your investment in our equipment by building a strong partnership with you and by providing you with excellent customer support.

To achieve this we've established a team of experienced site technicians to travel domestically & overseas to provide on-site installation, commissioning and training. Backup instructions at our demonstration facility are also an option.

You may also consider accessing our expertise by contracting us as engineering consultants for the planning of individual installations or the development of specific components.

Partnership

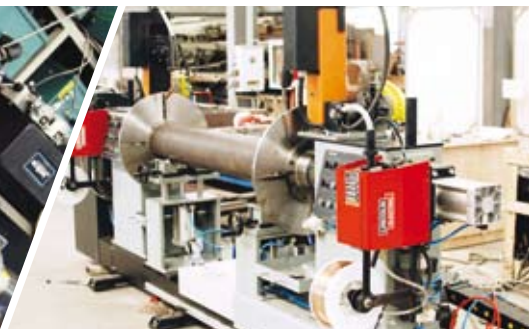
Factory training

Procedure development

Worldwide on-site

ALL TIME
MECHANICAL & ELECTRICAL EQUIPMENT CO., LTD.





Production Facility

Address: #475, Haidian Rd,
Fengcheng Economic Development Zone,
Fengxian Area, Shanghai, P.R.C.

Tel: +86-021-5752-0668
Fax: +86-021-5752-0568

E-mail: info@all-time.com.cn

Hong Kong International Sales Office

Tel: +852-2407-6414
Fax: +852-2408-9189

E-mail: info@allfitwelding.com (International Inquiry)