

High Efficiency Electroslag Welding Machine

Utilizing Non-consumable Nozzle

This welding machine (Simplified Electroslag Non-consumable Elevating Tip) is a simplified electroslag welding machine with a non-consumable nozzle and a nozzle elevating mechanism. Welding performance and operation efficiency are greatly improved in butt welding of comparatively thin and short T joints by the combined use of a fine diameter solid wire.

APPLICATION

Vertical welding of diaphragms and connection joints of steel frames, bridges and longitudinals of ships.

FEATURES

1. High-efficiency, water supply type electro-slag welding machine with non-consumable nozzle.
2. The weaving equipment can weld 19-65mm thick plates.
3. Non-consumable nozzle rises automatically as welding progresses, thereby enabled unmonitored welding after start.

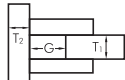
MODEL

Number of Electrodes	Machine Weight	Recommended Power Source
1	17kg approx.	600A (DC)

RECOMMENDED WELDING MATERIALS

Base metal	Wire	Flux
Mild steel and 490, 590MPa high tensile strength steel	YM-55S (1.6 φ) YM-55HF (1.6 φ) YM-60E (1.6 φ)	YF-15I

TYPICAL WELDING CONDITIONS

Groove Geometry	Plate Thick- ness, mm		Gap (G) mm	Current A	Voltage V	Wire Feed Speed m/min	Welding Speed mm/min
	T ₁	T ₂					
	20	20	25	380	46	8.5	34
	50	60	25	380	52	8.5	14
	60	100	25	380	54	8.5	12~14

Standard Specifications *Upgraded function

Nozzle elevating drive unit

Input voltage	AC100V±10% 50/60Hz
Drive system	Friction drive by rubber rollers
Drive speed	0 to 300mm/min
Angle Adjustment	±3°

*Notched rollers control nozzle slippage.

*Increased strength of the angle adjustment part stabilizes the welding aiming position.

*A speed control motor stabilizes the raising speed.

Nozzle position adjustment range

Vertical direction	200mm
Left/right direction	150mm
Front/back direction	65mm
Turning angle	200°

Weaving unit

Weaving type	Round trip simple vibration
Amplitude width	5 to 60mm
Weaving cycle	0 to 8times/min(at max. amplitude)
Stop position	Both ends of the amplitude width
Stopping time	0 to 10sec(1sec pitch)

*A speed control motor stabilizes the weaving speed.

*The next setting time is shortened by the center return function.

Non-consumable nozzle

Coolant type	Water cooled
Rated current	500A
Use ratio	100%
Application wire diameter	φ1.6mm
Nozzle diameter	φ14mm
Nozzle length	1,000 to 1,600mm(welding length+350mm)

*Deflection is reduced by increased strength.

*Analog control has been improved to digital control.

*Defect detector and automatic stop function.

