

# Technical Data Sheet

## Stationary Welding Automation

### WA Machines H-Frame



**DOWN**  
This machine can be used in many applications: flat welding, spiral welding and welding with several welding heads in parallel. Welding Alloys D3 control system is available on all of our machines, which is designed for fast and easy weld set-up and change-over, while maintaining precise control over the welding process.

Robust heavy-duty construction

Various configurations allowing welding of components on spindles, flat tables, rotary table, spindles and pipe rollers

Compatible with various welding processes

**APPLICATIONS**  
Coal, Mining, Marine, Oil and Gas, Recycling, Forging

Component diameter (max)

Upto 3000mm

#### TRAVEL

Motorised X <sup>1</sup> Axis	1mm - 5000mm
Motorised Y Axis	1mm - 2000mm
Motorised Z Axis	1mm - 10000mm

#### WIREFEED SPEEDS

0.5 - 10m/min, 1.0 - 20m/min - through a 4 wheel driven wire feed unit with integrated straightener

#### WIRE SIZES

1.0 mm, 1.2 mm, 1.6 mm, 2.0 mm, 2.4 mm, 2.8 mm, 3.2 mm, 4.0 mm

#### WELDING PROCESSES AVAILABLE FOR THIS MACHINE

FCAW-S, FCAW-G, GMAW, SAW, GTAW, PAW

#### CONTROL SYSTEM

D3 Touch

Incorporating:



Master, X Axis, Z Axis, Y Axis, Spindle, Yoke, Tiltback and wirefeed control modules.

Robust industrial PC running on Linux operating system and using state of the art communication systems to all peripherals

Programmer allowing the saving and recovery of programs, the number of programs that can be saved is only limited by the size of hard drive.

Auto diameter automatically maintains constant surface speed on varying component diameters

All parameters are adjustable during welding (Amps, Volts, WF Speed, Spindle, etc...).

## **ADDITIONAL OPTIONS**

### **POWER SOURCES**

WAP 1000-10-CC/CV	100% Duty Cycle	1000 Amps, 44 Volts DC	100 - 1250 Amps in CC mode	10 - 60 Volts in CV mode
WAP 650-10-CC/CV	100% Duty Cycle	650 Amps, 44 Volts DC	50 - 815 Amps in CC mode	10 - 65 Volts in CV mode
WAP 450-10-Pulsed	100% Duty Cycle	450 Amps, 38 Volts DC		
WAP 700-10-TIG	100% Duty Cycle	700 Amps, 38 Volts DC		

### **TWIN WIRE**

#### **For increased deposition rate:**

Via a twin wire feed unit and twin wire integrated torch - can be used with the FCAW-S, FCAW-G and SAW processes with a deposition rate of upto 16kg/hr/head

### **FAST OSCILLATOR (X<sup>2</sup> AXIS)**

#### **For higher productivity:**

Oscillator unit, 150mm travel, fitted on the end of the Y, max. speed 6.0m/min. DC motor with encoder feedback, including control module on the D3 *Touch* system.

### **MANUAL SUBMERGED ARC KIT**

#### **For Use with Submerged Arc wires:**

Flux hopper, 5 litre capacity, valves, hoses and flux shoe and fittings to attach to Y Axis.

### **FULL SUBMERGED ARC SYSTEM**

#### **For Use with Submerged Arc wires:**

Recirculating flux system, 30kg capacity, including hoppers, vacuum pump, filter bags, flux tray, hoses and fittings.

### **GAS SHIELDING SYSTEM**

#### **For use with the FCAW-G and GMAW process wires:**

Conversion to gas shielded welding including a gas shielded welding gun with a water cooled insulated shroud, 400A, 270 mm long

### **ARC VIEWING SCREEN**

#### **For environmental protection:**

To allow visual monitoring of the arc during welding of FCAW and GMAW process with connection to fume extraction system when installed

### **PENDANT**

#### **For quick set up:**

Pendant with toggle switches to drive X, Y, Spindle and Wirefeed axis for positioning of welding gun and component. Also containing Stop/Start function and emergency stop buttons.

### **HOT WIRE TIG SYSTEM**

#### **For increased productivity:**

Using the WAP 700-10-TIG as the main powersource and the WAP 170-10-HT to resistance heat the filler wire, the process can improve deposition rate, reduce weld pool dilution and provide a smoother bead profile

### **FUME EXTRACTION SYSTEMS**

#### **For environmental protection:**

Aluminium ducting with travelling inlet carriage, collecting fume from directly behind welding gun, can be connected to a filter box or fan to customers own fume extraction ducting

### **AUTOMATIC STICK-OUT ADJUSTER**

#### **For use on irregular component geometries:**

The ASA system is used to maintain and control the stick-out of wire from the welding tip to the work surface by controlling the movement of the appropriate axis ensuring that welding Amperage is maintained

### **PROGRAMMER**

#### **For greater automation and repeat work:**

Programmer – Allows the saving and recovery of programs, the number of programs that can be saved is only limited by the size of hard drive. NB. The number programs that can be saved on the machine would be in the thousands.

### **DATA LOGGER**

#### **For monitoring QA records:**

The datalogger can record any parameter on the system, all data is then stored. The operator can enter in specific information about the weld eg. roll type, serial number, Amps, Volts and travel speeds etc if necessary. All data can be retrieved by USB.