

Technical Data Sheet

Stationary Welding Automation

WA Machines H-Frame



DESCRIPTION

The H-Frame machine can be used in many applications: flat welding, roller welding, spiral welding and welding with several welding heads simultaneously. Welding Alloys D3 control system is available on all of the H-Frame machines, which is designed for fast and easy weld setup of different components, while maintaining precise control over the complete welding process

FEATURES

Robust heavy duty construction

Multiple heads

Many adaptable configurations allowing welding of components on welding positioners, flat tables, rotary table, spindles and pipe rollers

Adaptable for various welding processes

INDUSTRIES

Cement, Steel, Coal, Mining, Marine, Oil and Gas, Recycling, Forging

SPECIFICATION

Component weight Upto 30,000kg
Component length Upto 10000mm
Component diameter (max) Upto 3000mm

TRAVEL

 Motorised X¹ 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:

ck and wirefood central modulo

Single Station









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 depostion rate of upto 16kg/hr/head

FAST OSCILLATOR (X² 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 $% \left(1\right) =\left(1\right) \left(1\right) \left$

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 dillution 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:

 $\label{lem:programmer-Allows} \mbox{ Programmer-Allows the saving and recovery of programs, the number of programs that can be}$

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.