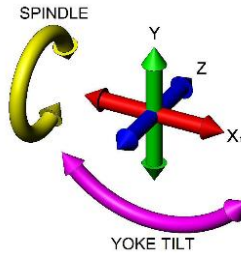
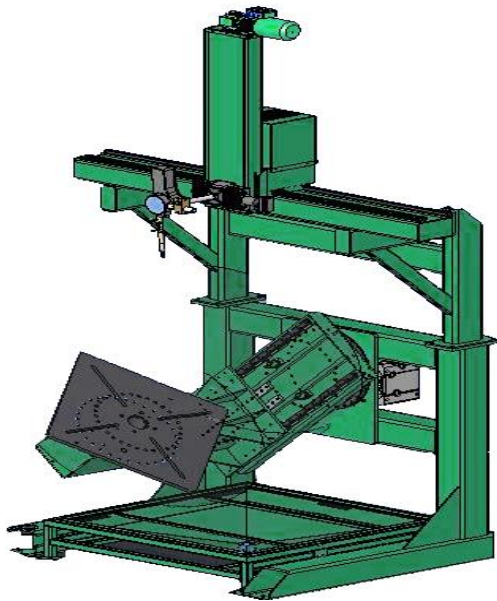


Technical Data Sheet

Stationary Welding Automation

WA Machines SF500 - Heavy Duty



DESCRIPTION

Automatic machine with component rotation via the spindle arm and yoke and manipulation in linear axis X, Y and Z including wirefeed system. Component is supported and attached on the face plate of the Headstock. Fully automated via the integrated control system and motor drives.

FEATURES

Welding of individual components up to 500kg

Import facility for component geometries

Combines up to 5 axis movement, Importing facility for complex geometries, Constant surface speed, Bore-to-bore software, fully programmable, program storage and retrieval

Adaptable for various welding processes

INDUSTRIES

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

SPECIFICATION

Component weight
Component length
Component diameter (max)

Single Station

500kg
1000mm
500mm

TRAVEL

Motorised X¹ Axis
Motorised Y Axis
Motorised component rotation (Spindle)
Motorised Yoke
Manual Z-Axis

Single Station

1mm - 1000mm
1mm - 1000mm
0.03 - 4.0 r.p.m.
1° to ±110°
1mm - 150mm

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:

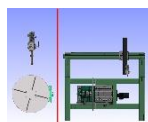
Master, X Axis, Yaxis, Spindle, Yoke and wirefeed control modules.

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 (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 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

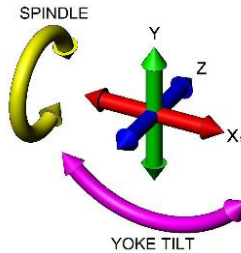
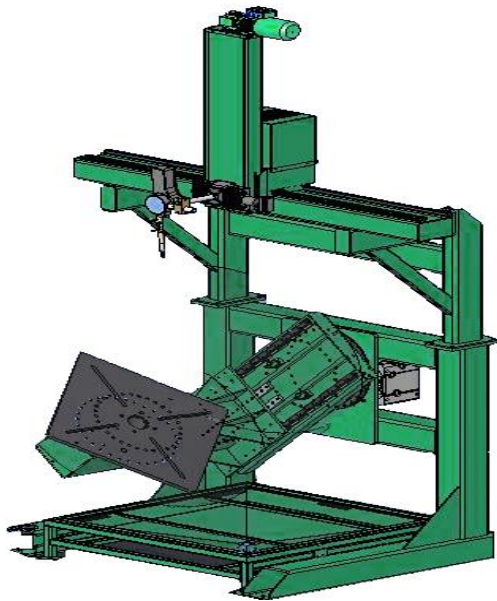
For monitoring QA records:

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.

Technical Data Sheet

Stationary Welding Automation

WA Machines SF1000 - Heavy Duty



DESCRIPTION

Automatic machine with component rotation via the spindle arm and yoke and manipulation in linear axis X, Y and Z including wirefeed system. Component is supported and attached on the face plate of the Headstock. Fully automated via the integrated control system and motor drives.

FEATURES

Welding of individual components up to 1000kg

Import facility for component geometries

Combines up to 5 axis movement, Importing facility for complex geometries, Constant surface speed, Bore-to-bore software, fully programmable, program storage and retrieval

Adaptable for various welding processes

INDUSTRIES

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

SPECIFICATION

Component weight
Component length
Component diameter (max)

Single Station

1000kg
1000mm
800mm

TRAVEL

Motorised X¹ Axis
Motorised Y Axis
Motorised component rotation (Spindle)
Motorised Yoke
Manual Z-Axis

Single Station

1mm - 1000mm
1mm - 1000mm
0.03 - 4.0 r.p.m.
1° to ±110°
1mm - 150mm

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:

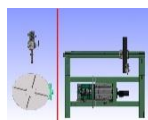
Master, X Axis, Yaxis, Spindle, Yoke and wirefeed control modules.

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 (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 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

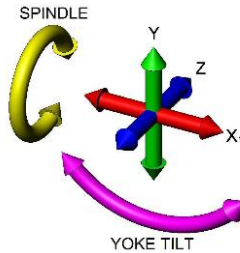
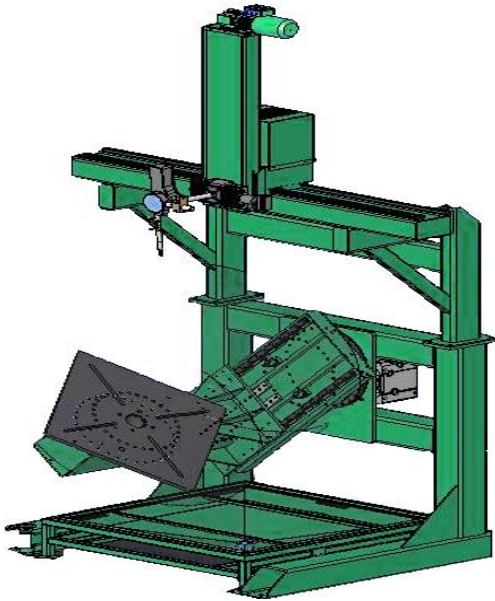
For monitoring QA records:

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.

Technical Data Sheet

Stationary Welding Automation

WA Machines SF1500 - Heavy Duty



DESCRIPTION

Automatic machine with component rotation via the spindle arm and yoke and manipulation in linear axis X, Y and Z including wirefeed system. Component is supported and attached on the face plate of the Headstock. Fully automated via the integrated control system and motor drives.

FEATURES

Welding of individual components up to 1500kg

Import facility for component geometries

Combines up to 5 axis movement, Importing facility for complex geometries, Constant surface speed, Bore-to-bore software, fully programmable, program storage and retrieval

Adaptable for various welding processes

INDUSTRIES

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

SPECIFICATION

Component weight
Component length
Component diameter (max)

Single Station

1500kg
1000mm
1200mm

TRAVEL

Motorised X¹ Axis
Motorised Y Axis
Motorised component rotation (Spindle)
Motorised Yoke
Manual Z-Axis

Single Station

1mm - 1500mm
1mm - 1000mm
0.03 - 4.0 r.p.m.
1° to ±110°
1mm - 150mm

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:

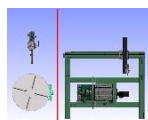
Master, X Axis, Yaxis, Spindle, Yoke and wirefeed control modules.

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 (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 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.