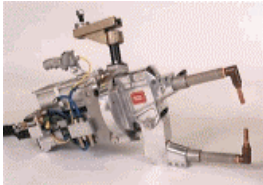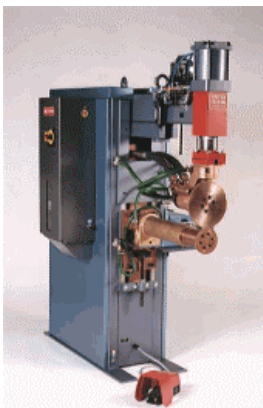## typical applications

Unipak replacement

manual stations

multiwelders

seam welders

WS500 welding control
data sheet

Reliability from simplicity

The WS500 is a compact, robust unit providing basic control for resistance welding. The membrane front panel has a water-resistant finish and incorporates four push buttons and an LCD for simple programming and monitoring. Connections are via a plug-in connector block and four studs are provided for mounting. Alternatively, the WS500 can be supplied in a wide range of housings incorporating circuit breaker and thyristor units.

features	benefits
single/repeat/half-cycle/roll-spot/seam modes	versatile
dual heat weld + pulsation	can be used for coated materials
integral programmer	always available
50/60 Hz operation	international
up to 8 user-defined programs	store settings for different material and thicknesses
retract control	suitable for most types of gun operation
counter with optional lock-out	can be used for electrode maintenance
24 V dc supply	simple installation
cross-interlock	safety and load-sharing

options

ELR/1 earth-leakage relay • 2-hand start unit

8-position remote program select unit #90-80-06-02

3PA/2 3-phase adapter

dual gun adapter (does not include retract function)

configurations

W6, Monopak, Unipak housings

WS500 welding control
data sheet

welding parameters x 8

mode	single/repeat
heat1	0..99%
heat2	0..99%
presqueeze	0..99 cycles
squeeze	0..99 cycles
weld1	0..99 cycles
cool1	0..99 cycles
weld2	0..99 cycles
cool2	0..99 cycles
pulses	1..9
hold	0..99 cycles
balance	0..60% (seam mode only)
off	0..99 cycles

counter (configuration types 3,5,6,7 and 10 only)

actual count	0..9999
end count	0..9999
at end of count	stop/continue

configuration

type		programs
- 00 spot/repeat	simple spot welding with no other functions	8
- 01 spot/repeat with cross-interlock	spot welding with an output that can be used to prevent other machines from welding	4
- 02 spot/repeat with retract	spot welding with an input and output for controlling the gun position	4
- 03 spot/repeat with counter	spot welding with an output that activates when the count is reached	4
- 04 spot/repeat with cross-interlock and retract	a combination of types 01 and 02	2
- 05 spot/repeat with counter and retract	a combination of types 02 and 03	2
- 06 spot/repeat with counter and cross-interlock	a combination of types 01 and 03	2
- 07 spot/repeat with counter, cross-interlock and retract	a combination of types 01, 02 and 03	1
- 08 half cycle	spot welding using only one half-cycle weld duration	8
- 09 half cycle with cross interlock	a combination of types 08 and 01	4
- 10 half cycle with counter	a combination of types 08 and 03	4
- 11 roll-spot	spot welding with an output to operate motor-driven welding wheels during the OFF time between sequences	8
- 12 seam	uses seam wheels, a motor drive and continuous or modulated current to provide a seam weld	8

configuration (continued)

retract	none, simple, high-lift +/-
frequency	50/60 Hz
interlock	on/off
heat range	high/low
cross-interlock	external/ring

environmental

temperature	
- operating	0° to +50°C
- storage	-25° to +70°C
humidity	
- operating	up to 80% (relative)
- storage	10% to 90%

dimensions

height	160 mm
width	122 mm
depth	35 mm + 15 mm for connector
weight	0.62 kg

power requirements

voltage	24 V dc
sync. frequency	50/60 Hz
current	< 500 mA (all outputs off)

i/o ratings

inputs	< 10 mA @ 24 V dc
outputs	< 500 mA @ 24 V dc
SCR drive	5 kHz; 1:10 mark/space; first pulse 24 V; subsequent pulses > 15 V