

Steel Mill Solutions Through Technology

SWP-2000

ELECTRO-MAGNETIC CLAMPS

- Provide uniform clamping across entire strip
- Unique to Newcor

LOW INERTIA WELD HEAD

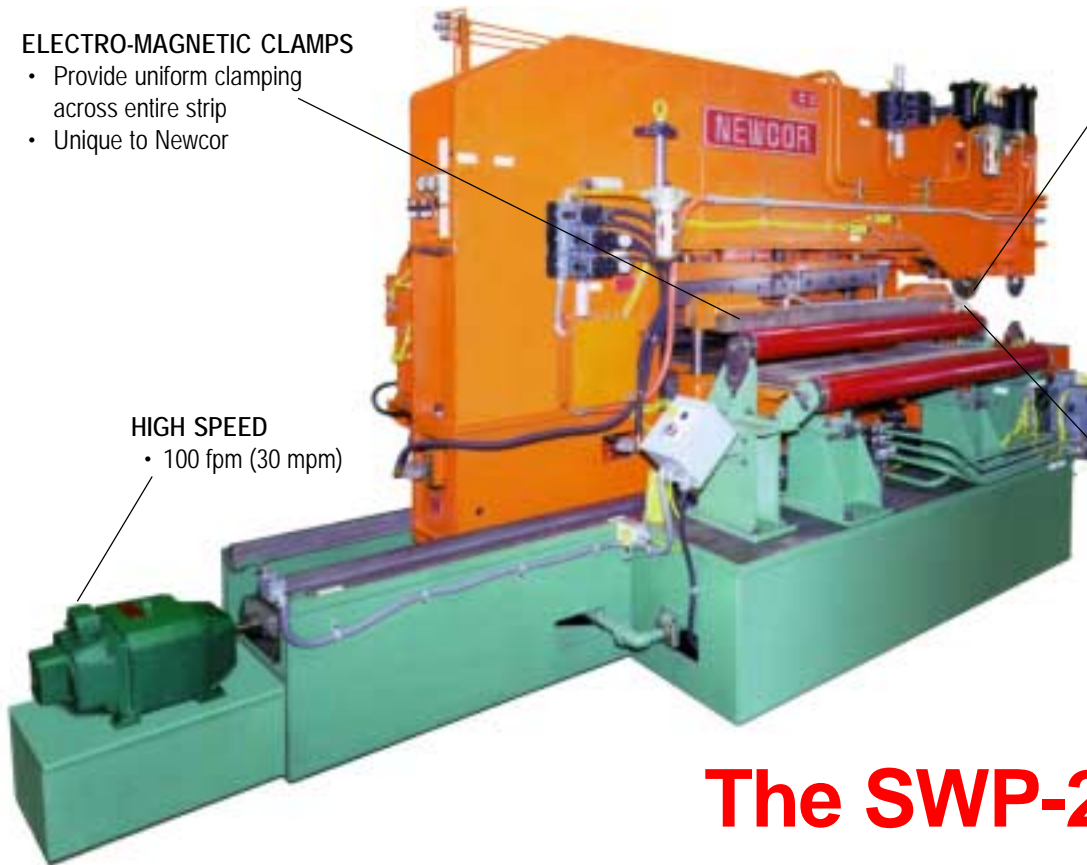
- Remote mount current-carrying bearing
- Light weight, spring-loaded
- Fast follow-up
- Provides high speed weld capacity

HIGH SPEED

- 100 fpm (30 mpm)

WELD ELECTRODE

- Automatic wear adjustment of lower electrode
- Upper and lower wheels
- Quick change



New Low Inertia Weld Head C-Frame Coil Joiner

Reliability

- Newcor's patented silver bearing weld heads are incorporated in the low inertia head to provide long life.
- Single-phase DC weld circuit with water cooling.
- Linear roller bearing, anti-friction ways with heavy duty ballscrew and drive.
- Robust design with heavy duty components.

Accessibility

- Quick-change weld wheels from operator side, rotate top to bottom for extended use.
- Automatic scrap removal, shear blades with four usable edges.
- Low silhouette design, no pit required or below-floor maintenance.

The SWP-2000

Speed

- 100 fpm (30 mpm) capability for welding and positioning.
- Overall weld cycle time improved as much as 50%.
- Low inertia head allows welding "on the fly".
- Low inertia head results from remote mounted current-carrying bearing.

Weld Quality

- Low inertia head provides fast follow-up with lightweight, spring-loaded weld electrode, resulting in improved weld integrity.
- Newcor's unique electro-magnetic clamping is retained, providing uniform clamping across the entire strip.
- Auto lower weld wheel wear adjustment via laser sensor.
- Planish force up to 20,000 pounds (9000 kg).
- Precision controlled weld lap with minimum weld build-up.

NEWCOR®

Bay City Division

**INNOVATIVE
MANUFACTURING
SYSTEMS**

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Specifications:

Capacity

- Strip widths up to 60 inches (1524 mm).
- Thickness range .008 inch (.20 mm) to .080 inch (2.00 mm).

Weld Joint Quality

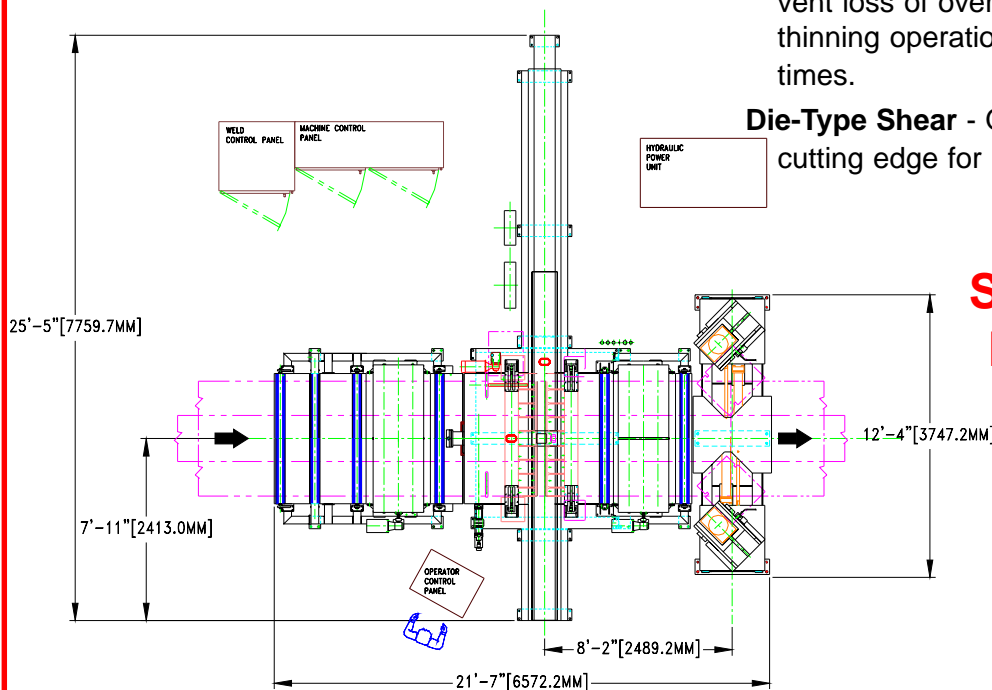
- Joint build up over parent material thickness after welding and planishing for carbon steel is 10% or .003 inch (.07 mm), whichever is greater.
- Tensile strength is 100% of parent metal.

Laser Edge Detection - Laser dege detection eliminates strip edge damage common in contact-type edge detectors, automatic entry clamp cross-shift aligns strip within .125 inch (3.0 mm).

Centerline Adjustment - Consistently accurate head and tail alignment through (1) entry loop roll to provide slack, (2) carriage width adjustments to center varying materials, (3) cross-slide entry clamp, (4) complete facilities for eliminating offset, dog-leg and camber.

Electro-Magnetic Clamping - Rigid positioning under 25-ton magnetic clamping force to provide uniform clamping across the entire strip to prevent loss of overlap, eliminating need for pre-weld thinning operations, with resultant shorter cycle times.

Die-Type Shear - Quick change with multiple cutting edge for maximum utility.



SWP-2000 C-Frame Floor Plan Layout

Optional Features

- Notchers
- Dual entry clamp assembly
- Dual hydraulic pumps
- Dual weld controls
- Diagnostics

Production Rate

- Overall cycle time from clamp down to clamp up, excluding strip feed up time, is 26 seconds for 60 inch (1524 mm) wide strip and up to .040 inch (1.0 mm) thick material.

Machine Design Features

Automatic Material Changeover - Preprogrammed weld parameters including weld speeds and pressures, planish pressures and weld schedules can be automatically downloaded from the process line control to the machine control.

Planishing - Tool steel or carbide tire wheels depending upon application.

No Strip Scratching - Tables faced with stainless steel or micarta and provided with urethane covered support rolls at appropriate spacing.

Automatic Wheel Conditioners - Extended weld wheel life, presents groove resistant surface to weld joint.

Hole Punch - Included in shear assembly to provide .500 inch (12.0 mm) holes 4 inches (100 mm) on the exit side of weld at the center of the strip for weld joint detection.

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