**EMAG "STEELPRO" CUT-TO-LENGTH LINE**

Consisting of:

1 - Coil Car
1 - 20,000 lb. capacity uncoiler
1 - Basic "Steelpro" section consisting of slitter, straightener and flying shear
1 - Electronic and electrical equipment
1 - Hydraulic power unit
1 - Holddown roll and arm
2 - Emag scrap rewinders, hydraulically powered, to be located between uncoiler and basic unit, designed to wind edge trim at random. Maximum bundle OD is 24”, maximum bundle width is 12”, maximum rewind speed 250 fpm.

SPECIFICATIONS

| | |
|---|---|
| Material | Mild carbon steel, cold rolled galvanized, satin coat, stainless steel, aluminum |
| Yield | 40,000 psi |
| Thickness | .015" minimum<br>.104" maximum (.125" aluminum) |
| Uncoiler | 18" - 22" coil I.D.<br>26" - 64" coil O.D.<br>20,000 lb. max weight |
| Length of blanks | 6" minimum |
| Width of blanks | 4" minimum, 60" maximum |
| Line speed | 0 - 100 fpm |
| Air requirements | 8 cfm at 150 psi at 30 cuts per min.<br>15 cfm capacity compressor recommended |
| Electrical | 575/3/60 |

COIL CAR

The coil car is floor mounted type with hydraulic elevating and traversing type with "V" bed to carry individual coil. It receives coil from over-head cranes, conveys the coil and elevates it to the proper height for insertion onto uncoiler mandrel. The bed is raised and lowered by one hydraulic cylinder with 12" stroke x 6" bore, located in the center of the car. The frame is fitted with four hardened steel wheels and the car is traversed by hydraulic motor.

**EMAG "STEELPRO" CUT-TO-LENGTH LINE** -#2-

COIL CAR SPECIFICATIONS

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|---|---|
| Capacity | 20,000 lbs. max. |
| Max. diameter coil | 64” |
| Max. width of coil | 62” |
| Max. lift | 12” |
| Min. Height | 63” from finished floor to centre line of 64” OD coil |
| Lift speed | 5 FPM |
| Traverse speed | 40 FPM |
| Traverse drive | Hydraulic motor & chain drive to Wheel shaft |
| Oil requirements @ 1000 psi | Elevation: 7.35 USGPM<br>Traverse: 1.62 USGPM |

UNCOILER

The uncoiler comes with expanding mandrel, a hydrostatic drive and dynamic braking to operate threading and looping.
The mandrel is comprised of four segments. Expansion and collapse by hydraulically operated wedges.
Hydrostatic drive provides power rotation of the mandrel and coil. The drive consists of a hydraulic motor connected by heavy roller chain and sprocket to the main shaft - loop control arm to control pay-off. The coil holddown roll is a swing arm arrangement operated by a hydraulic cylinder and consists of one urethane coated roll mounted on the swing arm to assist when threading. All movements of the uncoiler are operated at the control console.

UNCOILER SPECIFICATIONS

| | |
|---|---|
| Capacity | 20,000 lbs. max. |
| Max. coil diameter | 64” |
| Max. coil width | 62” |
| Inside diameter | 18 – 22” |
| Height, floor to mandrel | 65” – centre line |
| Mandrel drive | 1,000 psi hydraulic motor,<br>23 cu. In/rev. displacement<br>3:1 chain drive ratio |
| Mandrel expansion | 1,000 psi hydraulic rotating Cylinder, 6” dia. Bore, 8” stroke |
| Mandrel expansion range | 17-1/2” to 22-1/2” |
| Holddown roll | 8-5/8” dia. X 12” face |

SLITTING/STRAIGHTENING/SHEAR SECTION

This unit is a compact, close coupled design. It consists of powered pinch rolls, slitter, straightener, and flying shear.

The powered entry pinch rolls pull the strip through the entry guides. The entry guides are single hand crank operated. Incoming material is slit to the desired width in the slitting section. Powered pinch rolls take the material into the straightener, then combination powered roll measuring roll feeds the material into the flying shear. The upper rolls are activated by pneumatic cylinders.

The straightener is a three over three-roll design, all lower rolls are fixed, the upper rolls are individually adjustable through screw jack arrangement.
All lower rolls are driven, except the measuring roll.

The slitter is designed with one drive side stationary upright and one operator side removable upright. The lower arbor is fixed, the upper arbor is adjustable through screw arrangement for vertical knife over-lap.

The flying shear is an air operated downcut shear designed to move with the material and cut to length on signal received from the electronic length controller. The design is of two-post type. The knives are 4-edge, 3" x 64" x 3/4" thick.
The top ram has two cut cylinders and two shock absorbers mounted.
The shear accelerator is rack and pinion design, actuated by an air clutch through a common gear drive section. Returned by air cylinder. Air equipment is mounted and piped to perform on 150 psi dry air supply.

SLITTING/STRAIGHTENING/SHEAR SECTION SPECIFICATIONS

| | |
|---|---|
| Materials | mild steel, cold rolled<br>Galvanized, satin coat,<br>Stainless steel, aluminum |
| Maximum yield | 40,000 psi |
| Maximum shear strength | 40,000 psi |
| Thickness: Steel | .015” to .104” |
| Aluminum | .015” to .125” |
| Width: (incoming coils) | 62” max. |
| Maximum line speed | 100 fpm |
| Passline height | 42” |

**EMAG "STEELPRO" CUT-TO-LENGTH LINE** -#4-

| | |
|---|---|
| Slitter capacity | 2 cuts in .104" steel or .125" Aluminum<br>4 cut in .075" steel |
| Flattener capacity | Sufficient power provided to remove coil set from material ranging in thickness from .025" to .125" at maximum line speed |
| Shear capacity | .104" maximum steel thickness<br>.125" maximum aluminum thickness<br>30 cuts/minute maximum<br>60" maximum width<br>64" blade length<br>3/8" per foot rake |
| Blank sizes | Width: 4" minimum<br>60" maximum<br>Length: 6" minimum<br>999" maximum |
| Blank tolerances | Width: +/- .010"<br>Length: 6" to 120" - +/- 1/64" |

SCRAP WINDER (2)

Hydraulically powered scrap winders which are positioned between the uncoiler and basic "Steelpro" unit, designed to wind edge trim at random.
Hydraulic power supplied by the central hydraulic power unit.

SCRAP WINDER SPECIFICATIONS

| | |
|---|---|
| Maximum bundle OD | 24" |
| Maximum bundle width | 12" |
| Maximum rewind speed | 250 fpm |
| Maximum capacity – 2 strands | .125" x 1/2" |

HYDRAULIC POWER UNIT

The hydraulic pumping system furnishes the hydraulic power for all the hydraulic cylinders in the line. The pump delivers 1,000 psi operating pressure, 10 gpm - 13 gallon capacity pump with scrap winders. The oil reservoir is approx. 40 gal capacity. The start-stop controls are in the main operator's console.

ELECTRICAL

Main drive DC motor rated at 25 HP for slitting/straightening Section.
Main drive AC motor rated at 10 HP for hydraulic power unit