

POWER STRAIGHTENERS

COE PRESS EQUIPMENT CORPORATION

**350
SERIES**



The 350 Series of power straighteners is designed to provide the speed, torque, and straightening capability required for medium material gauge stamping applications. This series of power straighteners is typically matched with the ServoMaster Series 3 and 4 servo roll feeds and 6,000# to 40,000# capacity coil reels. Precision ground side plates and tie-bars, seven (7) straightening rolls, independent adjustment of the upper straightening rolls, and a rugged AC variable speed drive are a few of the features that make this series of straighteners an excellent value in the market. From the

CPPS-350-12, to the CPPS-350-54, material widths from 1" to 54" can be processed. With 3.5" diameter straightening rolls, material thickness from .010" to .310" can be processed depending on the material width and speed requirements. The 350 Series of power straighteners is backed by our comprehensive "3-2-1" Warranty. Three year limited coverage on all major components manufactured by Coe Press Equipment; two year limited coverage on all mechanical components originally installed by Coe Press Equipment; and one year full coverage on the system complete.

Note: Machine is shown with optional Hand Crank Edge Guides.

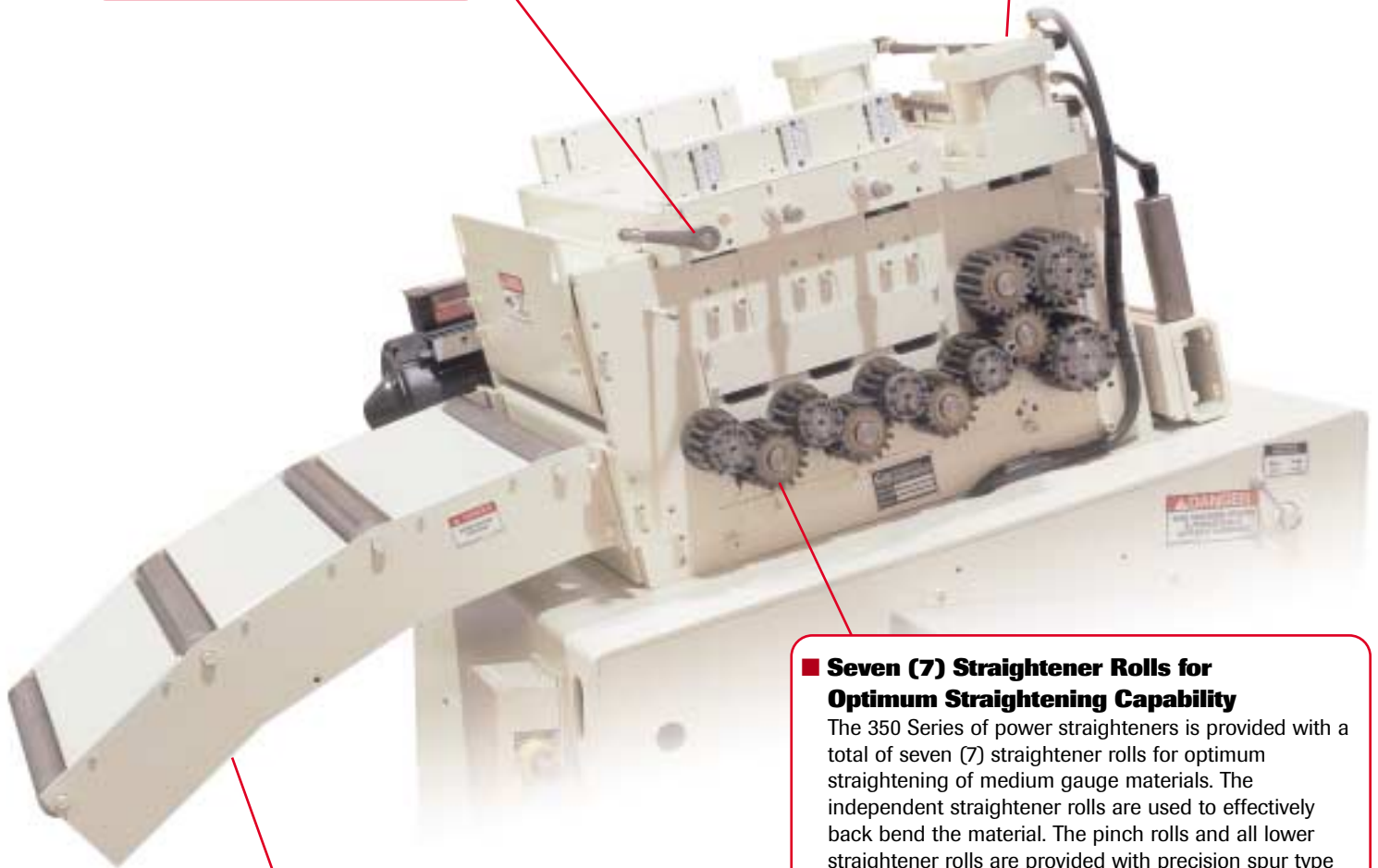


■ Independent Adjustment of Upper Straightener Rolls

Each upper straightener roll can be independently positioned to a desired depth to give the operator precise adjustment capabilities. This feature allows the operator to set up the straightener to effectively back-bend the material to an acceptable level of flatness. Both coil set and cross bow conditions can be effectively removed from the material.

■ Air Cylinder Raise and Lower of Upper Pinch Rolls

The upper entrance and exit pinch rolls are easily raised and lowered by air cylinders and corresponding hand valves. This feature reduces the time required to initially thread the leading edge of a new coil. The upper rolls are mounted in a precision slide block assembly. Independent flow controls and pressure regulators are provided as standard to assure the smooth raise and lower of the upper rolls. This combination of features assures optimum gripping force as the material type, finish, and thickness varies.



■ Four (4) Roll Catenary Section Assures Proper Material Support

This unit supports the material by positioning four (4) rollers in a gradual arc to and from the slack loop area. These rollers are 2.25" diameter with lifetime lubricated and sealed bearings. The catenary support section prevents coil set from being re-induced in the material by assuring correct support as the stock is advanced to and from the slack loop area.

■ Seven (7) Straightener Rolls for Optimum Straightening Capability

The 350 Series of power straighteners is provided with a total of seven (7) straightener rolls for optimum straightening of medium gauge materials. The independent straightener rolls are used to effectively back bend the material. The pinch rolls and all lower straightener rolls are provided with precision spur type drive gears. This feature assures the most precise method for driving the rolls and provides long-term strength, durability, and accuracy. The entrance pinch rolls and all lower straightener rolls are gear driven by a precision cluster gear arrangement that assures full gear engagement at all material thicknesses.

Note: Machine is shown without standard guarding and covers to illustrate machine features and benefits.



■ Matte Chrome Coated Upper and Lower Entrance Pinch Rolls

The entrance pinch rolls are hardened, precision ground, and given a short blast chrome finish to increase gripping capabilities. The electronic chroming process is utilized to impregnate the roll surfaces with a #3 matte chrome finish. This process eliminates material slippage, provides the correct surface finish for pull-off applications, decreases wear, and increases durability.

■ Entrance Side Pinch Rolls

This series of power straighteners is provided as standard with both entrance side and exit side pinch rolls. These precision ground and hardened rolls are the primary means of gripping and pulling the material from the coil or slack loop. The upper pinch rolls are mounted in a precision slide block assembly to assure optimum downward force on the material, and smooth opening and closing of the rolls.



■ Fully Funnelled Stock Path for Material Threading and Operator Safety

Coe Press Equipment servo roll feeds and straighteners are provided with a fully funnelled stock path for the most effective means of initial strip threading and the highest level of operator safety. The entrance and exit funnels assure that the material strip is guided directly through the servo feed or straightener rolls and also provide a barrier from an operator directly accessing the pinch point of the machine.

■ Direct Mount Drive System for Efficient Torque Transfer

The drive motor and reducer are directly mounted to the lower pinch roll. This arrangement provides efficient transfer of torque from the drive system to the straightener rolls. It also provides the benefits of improved access and maintainability vs. conventional chain drive systems. Fewer components are required as the chain, sprockets, and the idler assembly is eliminated.

Note: Machine is shown without standard guarding and covers to illustrate machine features and benefits.



Power Straightener Standard Equipment

■ **7.5 Horsepower AC Variable Speed Drive**

This rugged and reliable drive package has been designed by Coe Press Equipment to meet the demands of the coil straightening application. The AC drive package offers exceptional torque output through its full speed range. From a standing start through full line speed, this drive package delivers the horsepower and torque required to effectively straighten the toughest materials.

■ **Slide and Clamp Edge Guides for Accurate Material Alignment**

Manually adjusted vertical guide rolls assure accurate material alignment at the entrance of the straightener. Quick release handles are provided as standard for quick set-up and simple adjustment. This feature guides the material on the center of the straightener. The vertical guide rolls are 1.375" diameter and are hardened for maximum durability.

■ **Upper Straightener Roll Height Scales and Pointers**

This series of power straighteners is provided as standard with height scales and pointers for positioning the upper straightener rolls to effectively back bend the coil stock and remove coil set. The operator can quickly establish the position of the upper straightener rolls via the handcrank or motorized positioner and view the amount of roll penetration into the material on the scales.

■ **Potentiometer Control Variable Speed Loop Arm**

This device provides the feedback signal required for Coe Press Equipment motorized reels and power straighteners to operate with variable speed payoff. The potentiometer box is mounted to the machine and provides a variable low voltage signal to the drive system. The loop control arm or "dancer arm" is positioned on the slack loop and provides feedback to the potentiometer box as the depth of the loop changes.

■ **Electrical Safety Disconnect**

All Coe Press Equipment power straighteners are provided with a fused and lockable safety disconnect switch. This feature allows power to be disconnected and locked out during service or maintenance.

■ **230/460 Volt AC Single Phase**

Supply voltage for this machine is 230/460 volt AC three phase as standard.

■ **Remote Jog Pendant for Material Threading**

The remote jog pendant is attached to the machine by a flexible coil cord. This feature allows the operator to jog the machine forward or reverse while assisting the leading edge through the loop area. The flexible coil cord allows the operator to maintain full visual contact with the leading edge of the material during initial threading of the coil.

Power Straightener Optional Equipment

■ **10 Horsepower AC Variable Speed Drive**

This rugged and reliable drive package has been designed by Coe Press Equipment to meet the demands of the coil straightening application. The AC drive package offers exceptional torque output through its full speed range. From a standing start through full line speed, this drive package delivers the horsepower and torque required to effectively straighten the toughest materials.

■ **Hand Crank Entrance Edge Guides**

Accurate material alignment to the press and tooling is provided by this feature which is normally located at the entrance side of the servo roll feed or power straightener. These vertical material guides are manually adjusted by crank handles located on the side of the servo roll feed or power straightener for operator convenience. These units come with a self-centering feature and hardened vertical guide rolls for lifetime durability.

■ **Reel to Straightener Tie In Brackets**

These brackets are used to keep the coil reel aligned and square to the power straightener. The heavy duty fabricated and machined brackets are located at the base of both machines. Initial machine set-up is simplified because the reel mandrel is precision squared to the straightener entrance pinch rolls at the Coe Press Equipment factory. This assures machine squareness and effective material flow through the straightener.

■ **Ultra Sonic Variable Speed Loop Control with 3 Position Selector Switch**

This state of the art system provides the feedback signal required for Coe Press Equipment motorized reels and power straighteners to operate with variable speed payoff. The fabricated support stand is located at the halfway point or low point of the loop area. The precision ultra sonic sensor provides an infinitely variable low voltage signal back to the drive system based on changes in the depth of the loop. This device provides the variable speed feedback required for the non-contact payoff of pre-finished materials.



Power Straightener Optional Equipment

■ Dual Axis Peeler Table for Material Threading

This feature is provided to assist the operator in threading the material into the power straightener. The dual axis peeler table is raised to support the coil strip as it is peeled from the coil OD. The peeler table has an air operated peeler blade to reach the leading edge of the coil. The peeler blade has 20" of travel to suit the requirements of various coil diameters. This feature is often combined with a reel mounted hold down arm with motorized end-wheel to provide hands-free threading of the coil.



■ Trabon Automatic Lubrication System

This eliminates the requirement for the operator or service technician to perform routine lubrication of the machine. All lubrication points on the machine are piped to centralized metering and sending blocks through the Trabon sending unit. These blocks meter the amount of grease supplied to each point. The factory will set the proper intervals for time between grease delivery and duration of delivery. The Trabon sending unit is supplied with a grease reservoir and low level indicator light.

■ Peeler Table with Integral Material Debender

This feature is designed to provide hands-free threading of the coil strip when combined with a reel mounted hold down arm with motorized end wheel. The dual axis peeler table is raised to support the coil strip as it is peeled from the coil OD. The peeler table has an air operated peeler

blade to reach the leading edge of the coil. The peeler blade has 20" of travel to suit the requirements of various coil diameters. The integral material debender is used as a positive threading device for the leading edge of the coil. It consists of a debender roll mounted to a pivoting yoke assembly. An upper stationary roll is used to impart a slight upcurl to the strip. By removing the coil set downcurl from the strip and using the debender roll as a steering device, the strip can be directly threaded into the pinch rolls of the straightener.



■ Non-Marking Chrome Roller Package

This feature is provided for processing marking sensitive materials such as aluminum or pre-painted steel. Other materials such as galvanized steel or hot rolled steel can benefit from this package due to the tendency of these materials to be "picked up" by standard finish rollers. Each straightening roller is coated with hard chrome that is polished to a smooth finish. The entrance pinch rolls are coated with a #5 satin chrome finish to provide optimum pull-off capacity and prevent marking of the material.

■ SIKO Digital Upper Straightener Roll Height Indicators

This feature is specified when high accuracy is a requirement in the positioning of the upper straightener rolls to effectively back bend the coil stock and remove coil set. The operator can quickly establish the depth of the upper straightener rolls, with the handcrank, or motorized positioner (optional), and view the amount of roll penetration on the LED indicators. This feature enables the operator to precisely adjust the individual upper straightener roll positions to within +/- .005".

■ Peeler / Threader / Hold Down with Motorized Endwheel:

This feature provides safe and hands-free threading of the strip in minutes by a single operator. The two-axis peeler table has an air operated telescoping peeler blade to reach the leading edge of the coil. The peeler blade has 20" of travel to suit the requirements of various coil diameters. A hydraulic operated hold down arm with a motorized endwheel allows the operator to cut the banding without the hazards of coil clockspring. The rotation of the endwheel is synchronized with the rotation of the mandrel allowing the operator to jog the material into the straightener without handling it. There is an independent hydraulic "de-kinker" mechanism mounted on the assembly to backbend and steer the leading edge of the coil.

■ Single Row Upper and Lower Straightener Backup Rollers

These heavy duty support rollers are located on the centerline of the straightener roll to effectively eliminate straightener roll deflection. This unit is precision machined and assembled to support the adjoining straightener roll. The backup roller assembly is provided on both the upper and lower straightener rolls for maximum rigidity. This allows a broader range of material thicknesses and widths to be processed through our wider straightener equipment.

■ Centralized Controls for Straightener and Reel

All operating functions of the power straightener and coil reel are integrated into a centralized pushbutton station to give the operator a single point of control. Control of the machine functions are by pushbutton and selector switch operators. Depending on the equipment configuration, functions such as the straightener pinch rolls, reel jog forward/reverse, mandrel expansion, and coil car functions are controlled from the centralized pushbutton station.



Machine Specifications

350 Series

MODEL	CPPS-350-12	350-18	350-24	350-30
Entrance Pinch Rolls	Yes	Yes	Yes	Yes
Pinch Roll Diameter	5.0"	5.0"	5.0"	5.0"
Pinch Roll Cylinder Bore	5.0"	5.0"	5.0"	5.0"
Number of Breaker Rolls	7	7	7	7
Breaker Roll Diameter	3.5"	3.5"	3.5"	3.5"
Min. Material Thickness	.020"	.020"	.020"	.020"
Max. Material Thickness	.310"	.310"	.310"	.310"
Maximum Material Width	12.0"	18.0"	24.0"	30.0"
Standard Speed	0-80 FPM	0-80 FPM	0-80 FPM	0-80 FPM
Standard Drive HP	7.5 HP	7.5 HP	7.5 HP	7.5 HP

Note: The material thickness capacity and speed ratings as listed for the 350 Series Straighteners are based on a standard 7.5 HP variable speed drive package and standard gear reduction. The maximum recommended coil weights that this straightener can "pull-off" with the standard 7.5 HP variable speed drive package is typically 6,000 and 8,000 pounds. Selection of optional drive packages will give this straightener the capacity to "pull-off" up to 30,000# coil weights. This rating is based on straightening mild steel. To obtain thickness capacity, line speeds, or pull-off capacity beyond the standard ratings of the 350 Series Straighteners, please consult the factory for a technical evaluation of the application requirements.

Machine Specifications

350 Series

MODEL	CPPS-350-36	350-42	350-48	350-54
Entrance Pinch Rolls	Yes	Yes	Yes	Yes
Pinch Roll Diameter	5.0"	5.0"	5.0"	5.0"
Pinch Roll Cylinder Bore	5.0"	5.0"	5.0"	5.0"
Number of Breaker Rolls	7	7	7	7
Breaker Roll Diameter	3.5"	3.5"	3.5"	3.5"
Min. Material Thickness	.020"	.020"	.020"	.020"
Max. Material Thickness	.310"	.310"	.310"	.310"
Maximum Material Width	36.0"	42.0"	48.0"	52.0"
Standard Speed	0-80 FPM	0-80 FPM	0-80 FPM	0-80 FPM
Standard Drive HP	7.5 HP	7.5 HP	7.5 HP	7.5 HP

Note: The material thickness capacity and speed ratings as listed for the 350 Series Straighteners are based on a standard 7.5 HP variable speed drive package and standard gear reduction. The maximum recommended coil weights that this straightener can "pull-off" with the standard 7.5 HP variable speed drive package is typically 6,000 and 8,000 pounds. Selection of optional drive packages will give this straightener the capacity to "pull-off" up to 30,000# coil weights. This rating is based on straightening mild steel. To obtain thickness capacity, line speeds, or pull-off capacity beyond the standard ratings of the 350 Series Straighteners, please consult the factory for a technical evaluation of the application requirements.

