<table>
<thead>
<tr>
<th>Conventional Press Feed Lines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cradle, Straghtener, Feeder Lines</td>
</tr>
<tr>
<td>Blanking and Cut-to-Length Lines</td>
</tr>
<tr>
<td>Oscillating Shear Dies and Presses</td>
</tr>
<tr>
<td>Washers and Oilers</td>
</tr>
<tr>
<td>Electronic Roll Feeds</td>
</tr>
<tr>
<td>Straighteners</td>
</tr>
<tr>
<td>Uncoilers</td>
</tr>
<tr>
<td>Accessory Equipment</td>
</tr>
</tbody>
</table>
Company History

The Sesco Products Group is a fully integrated division of Coe Press Equipment Corporation. The history of the company extends back to the founding of Sesco, Inc by Alfred F. Lehmann in 1938 as one of the cornerstone companies of the coil processing industry. Sesco’s original focus was in the area of process engineering services, and their efforts supported the Metalworking and Metalforming Industry during WWII. In 1952, process engineering services grew into the manufacture of machine tools, special machines, and metal coil conversion systems.

Through decades of growth in technology and market share, Sesco became known for their high quality and advanced coil conversion systems. Five primary markets developed. These included Automotive, Agriculture, Appliance, Service Center, and Independent Supplier Stampers. Many of Sesco’s customers have maintained their long standing relationship with the company due to the product quality and its ability to meet demanding requirements.

Products range from individual pieces of coil handling and feeding machinery, to fully integrated and automated coil processing systems. Sesco has developed machine technology in many “niche” markets and applications, and maintains a world wide installed base of over 1000 systems.

In 1999, Coe Press Equipment acquired specific assets of Sesco, Inc, and relocated the company to their location in Sterling Heights, MI. This acquisition combined the proven designs and technology of Sesco, Inc with the fully integrated design and manufacturing operations of Coe Press Equipment. Through the years substantial synergies have been realized as the Sesco Products Group has become integrated into the overall engineering, machining, and assembly operations. The Company has maintained Sesco’s high-quality and heavy-duty designs, while continuing development of their metal conversion systems and unique “niche” solutions.
Conventional Press Feed Lines are custom designed to suit each application. They are available up to 84" wide with coil weights up to 80,000# and line speeds up to 300 FPM. Lateral traversing uncoilers position the coil on the centerline of the system. Automatic centering of the coil is provided by a combination of laser sensors and encoders for repeatable coil placement on the mandrel. Stationary coil lifts can be provided with rotating vee-nests for easy loading of coils.

A wide range of material types can be processed through Conventional Press Feed Lines. Standard Peeler Systems are designed with Lower Hold-up Arms and motorized endwheels to facilitate strip threading and rewinding. Coil cars are designed with a low center of gravity and a precision rack and pinion lift guiding system. Coil storage racks can be provided to optimize coil staging.
The latest control technology is utilized when designing Sesco Conventional Press Feed Lines. This line is designed to process Class “A” materials with all rolls and surfaces provided with chrome and urethane non-marking surface finishes. It provides fully automatic coil threading and tailout functions through the PLC based machine controls and multiple operator touchscreen interfaces. All motorized axis’ are programmed and set-up by the Job Recipe matrix for efficient coil processing operations.

Sesco twin uncoilers can be designed for coil weights up to 80,000#. They are combined with traversing coil load cars and stationary nests to optimize loading of large capacity coils. Spiral blended machining of the mandrel segments prevents damage to coil I.D.’s of light gauge coils. Flexible Peeler Systems can be designed for both “top and bottom” payoff operation for increased flexibility. This line shows the integration of an inline coil-end welder to provide continuous strip feeding for a high-volume progressive die operation.
Feeding heavy gauge coil into a press with less than 15 feet of overall floorspace presents many challenges. With Sesco’s CSF Lines you can feed your presses when your plant layout leaves you with congested areas or you can significantly reduce your floorspace needs. CSF Lines are available up to 84” wide with coil capacities up to 80,000#. Additionally, material thicknesses up to .500” can be processed by the combination feeder-straightener for blanking and progressive die operations.

Sesco’s CSF Lines can be designed with a variety of coil staging and loading options. This line shows a cranesaver type magazine coil exchanger complete with rapid load/unload assist devices. This feature enables coils to be partially run and returned to the lateral traversing coil storage magazine. A shift of coils can be staged in the magazine for continuous operations without waiting for a crane. CSF Lines are provided with loading ramps and combination peeler / debender devices for safe and efficient coil threading.
The compact combination CSF Line is inherently simple to load, thread, and operate. This machine utilizes a bottom payoff system that utilizes the weight, curvature, and kinetic energy of the coil’s outer wrap to enhance the processing of heavy gauge materials. This system features an inline coil storage rack and a traveling coil loading ramp. Production efficiency is further enhanced with the integration of a coil-end welder to minimize the need for threading leading edges through the stamping dies.

Sesco’s coil loading and threading of heavy gauge material is unsurpassed as being the fastest, safest, and most reliable in the industry. Coils can be loaded from overhead by a crane or hilo without obstruction, or by various types of coil staging equipment. When specified with single or multiple coil storage racks these systems provide the fastest coil-to-coil change times in the industry. Our close tolerance gearbox and cluster gear arrangement provide effective torque transfer from the drive motor to the roll surfaces.
Sesco Blanking Lines are custom designed to meet the highest output and duty requirements. Class “A” and non-marking systems are available for Automotive Applications. In this line a high-speed Oscillating Shear Press and dual station drop stacker are combined to produce trapezoid shaped blanks at linespeeds up to 230 FPM. The press is provided with a multiple station quick die change and clamping system. The dual station stacker is designed with entrance and exit cranesaver chain conveyors for staging empty pallets and storing complete stacks.

Sesco Cut-to-Length Lines process appearance quality materials for the Appliance Industry. Pre-painted and scratch-free materials are routinely unwound, straightened, and cut-to-length by these high-efficiency systems. This line features an integrated precision leveler, a high-speed mechanical squaring shear, and a unique stacker with an automatic sheet inspection station. These features combine to enhance the consistency and quality of the panels produced on this line.
Spacesaving combination lines can be provided with various equipment to suit each customer's needs. This line is an example of a heavy-duty feeder-straightener designed with a hydraulic production shear and drop stacker to provide a fully integrated Cut-to-Length system. Material thicknesses up to .375" can be processed with this type of system. This line features a 76" wide x 60,000# coil reel designed to work in a "modulating" tension mode, a hands-free threading system, a precision feeder-straightener, and a heavy-duty production shear. The drop stacker is designed with a toggle-link mechanism to support the blank during the feed index and then deposit the blank after the shear cycle. Powered roller conveyors are used to move the completed stacks away from stacking station. Blanks up to 76" wide x 270" long can be processed on this type of system.

Coil handling options such as traveling coil cars, stationary lifts, or combination coil upenders are available on Sesco Cut-to-Length Lines. Close centered straighteners or precision levelers are integrated depending on flatness requirements. Unique air-stackers or drop stackers are capable of stacking pre-painted and non-marking materials without blemishes. Sheet lengths can range up to 160" and longer. Various stack handling solutions are available including chain-type cranesavers or traveling stack tables.
The Oscillating Shear Press combines the capability of conventional shears with modern servo technology for the production of trapezoid and parallel shaped blanks. The machine type can be customized to suit each application. For standard production jobs the hydraulic toggle shear press is used to obtain stroke rates up to 35 SPM. These machines feature straightside press construction with heavy-duty base, side columns, crown, and ram. A unique hydraulic toggle cylinder is used to drive the ram. A multi-turn precision ball screw and polymer nut is used to drive the pivoting shear base +/- 30 degrees.

For high production applications a mechanical Shear Press is capable of stroke rates up to 70 SPM. This machine also features straightside press construction. An AC variable speed motor drives the flywheel to maintain necessary tonnage delivery. Precision gearing is used to drive an eccentric shaft type of press drive. The ram is guided by multiple point gibbing and connected by a 2-point connecting arm system. The shear base is driven by a close tolerance rack and pinion gear system to assure accurate positioning at high speeds. Auxiliary equipment such as pivoting entrance support, variable speed magnetic exit conveyors, and automatic die clamping systems are available.
Oscillating Shear Dies and Presses

The Oscillating Shear Die turns your conventional blanking press into a high production trapezoid and parallel shape blanker. This unique tool is provided on a self-contained die set for easy locating and clamping to the bolster plate. The center pivoting mechanism is driven by a close tolerance rack and pinion geartrain. The pivoting plate floats on a unique air-bearing system to reduce friction and optimize speed. In addition, these dies are provided with a hydraulic shock dampening system that reduces bounce of the upper die and allows production rates up to 70 SPM. The upper and lower die shoes are cast and machined to precision tolerances. The shear blades are hardened and have multiple cutting edges for indexing between sharpenings. Other features of these dies include a pivoting entrance conveyor, self-centering edge guides, a shifting magnetic exit conveyor, and quick-disconnect power cables.
Sesco blank and strip washers use a combination of 3M non-woven synthetic rolls and scrubbing brushes to provide the optimum cleaning process. Rolls are machined to a pre-determined crowned roll profile and are synchronously driven. An electronic roll pressure feature assures accurate film thickness for each material processed. A unique feature of Sesco washers is the upper head lift mechanism. A jack screw lift system is utilized to lift the upper bank of rolls for cleaning or maintenance. All rolls are mounted in bearing blocks for easy roll removal. Rolls are driven by an AC Vector variable speed drive through a precision machined transmission box.

Blank and strip guiding is provided across the entire washer to prevent jamming and provide ease of threading. The washers are fully enclosed to contain wash solution. Dual recovery tanks and a re-circulating pump and filter system maintain wash solution. Available options include: powered lateral roll-out, off-line blank conveyors, mist collection systems, automatic filter change, and wash solution heaters.
Sesco Spray Coaters utilize an airless spray system to apply drawing compounds and rust prevention solutions. They can be integrated into coil feeding lines, blank destackers, and blank washers. The housing of the Sprayer is made from heavy-duty weldments and steel plates. Hinged doors are provided for maintenance and changing of the spray nozzles. The nozzles are typically arranged so that each provides an 8” wide spray pattern at 100 psi. Each nozzle is individually controlled by a solenoid valve and the spray pattern is controlled by a PLC. Various widths on the top and bottom of the blank or strip can be programmed.

The Sprayers are completely enclosed with necessary funneling and brushes to contain overspray and mist. In addition, an optional mist collection unit and galvanized duct system can be provided to prevent mist from evaporating into the plant environment. The pump and filtration system are integrally built into the machine base. Available options include: powered lateral roll-out, off-line blank conveyors, mist collection systems, quick-change spray nozzles, and wash solution heaters.
Sesco Electronic Roll Feeds are available in a variety of configurations to meet the most demanding press feeding, blanking, and cut-to-length applications. These machines are capable of feeding coil strip stock up to 84” wide and .750” in thickness. Standard features include AC servo drive and motor, matte chrome traction roll finishes, multiple point edge guides, full radius catenary sections, press mounts, cabinet mounts, and manual or powered passline height adjustment.
Regardless of size, Sesco Electronic Roll Feeds are designed with four-high “back-up rolls” to maintain maximum rigidity and precision of the feeds rolls. Problems caused by roll deflection such as coil tracking, edge waves, drive gear wear, and high journal pressure are eliminated with this design. Sesco also utilizes an enclosed oil bath and precision ratio gearing to provide power transmission from the servo motor to the roll surfaces. Hardened and ground cluster gearing positively drive both the upper and lower feed rolls ensuring full engagement of all gearing regardless of the material thickness being processed.
Sesco power straighteners are simple to adjust and assure predictable flatness results without extensive operator training. Large mechanically amplified straightener roll depth dial gauges are easy to read and allow precise settings. These machines are easy to load and thread because the entry pinch rolls are designed to open as much as 2" to capture leading coil edges with irregular shape and excessive coil set. Sesco straighteners have a unique bearing design that assures the slowest rate of rotation and optimizes the roll journal strength. These characteristics minimize radial loading and maximize the life expectancy of bearings, journals, and rolls.
Straighteners are designed for the most effective Reliability and Maintainability (R&M). The ability to remove and interchange all lower rolls without dis-assembling the straightener head minimizes machine downtime. These rolls are mounted in individual bearing inserts and retainers for removal from the side of the machine. Upper rolls are conveniently removable from the upper bank mechanism, and the pinch rolls are removed from slots in the straightener sideplates. Both the upper and lower pinch rolls are backed up to maintain rigidity across the roll face and performing “pull-off” operations of extreme coil weights. Both the upper and lower straightener rolls are backed up to prevent deflection while straightening heavy gauge and high strength steels.

Optional Direct Drivetrain of Both Upper and Lower Rolls

Substantial Four-High Anti-Deflection Back-up Arrangement

Upper Straightener Roll Bank with Back-up Arrangement
Sesco twin expanding mandrel type uncoilders accommodate the largest and heaviest coils available to the industry. Long uninterrupted production runs from these coils save material and enhance your systems uptime productivity, thereby reducing your costs.

Sesco features “spiral blended radius” expander arms that substantially eliminate objectionable “imprinting coil breaks” on the inner diameter wraps that can result from conventionally designed mandrel expander arms. Uncoilers are available with a variety of options such as stationary coil lifts, traveling coil cars, and traveling upenders. Special features can include rotating vee-nests and coil storage racks.
You can choose the right Sesco uncoiler, coil handling, storage and loading arrangements to suit your job. These uncoilers demonstrate a conventional traveling coil car, a C-shaped traversing coil car, and a stationary coil lift elevator.

Sesco offers uncomplicated manual and powered expansion single-end and double-end uncoilers engineered and built to be of unsurpassed World Class Quality while being cost effective. Flexibility in your coil handling operations can be provided by features such as a 90° rotating coil lift and storage elevator for ease of loading in confined areas.
Sesco mechanical production shears are available in a variety of configurations. These high-output systems are installed throughout the automotive, appliance and service center markets. Sesco utilizes a constant torque variable speed drive system combined with an appropriately sized flywheel to maintain cutting force delivery. Actuation of the shear is by a fast reaction clutch-brake package. Shears can be designed with an overhung upper frame to eliminate any obstructions below the lower knife. This feature can eliminate the need for a runout conveyor and allows blanks to be neatly stacked directly below the lower knife.

Sesco hydraulic shears are available in a variety of configurations for use in various applications. Simple downcut hydraulic shears are utilized as crop shears and can be integrally mounted into peeler stations, power straighteners, and servo feed bases. These heavy-duty shears can also be designed as production shears for simple Cut-to-Length applications. For higher output and higher speed applications, Sesco offers a hydraulic toggle-cylinder arrangement for actuating the upper ram of the shear. The machine cycle rate is optimized as the unique toggle mechanism and link arm arrangement provides the "up and down" motion of the ram with each cycle of the cylinder. All Sesco shears are provided with hardened and ground cutting steels that are four-way indexable.
Sesco shear presses and 4-post presses can be outfitted with various die-change features to increase machine flexibility and efficiency. Die support tables are often combined with automatic die-clamping and rigid-chain transport systems to provide quick die-change capabilities. Multiple shear dies can be stored on a powered traversing table so that straight-cut, compound-cut, and chevron-cut dies can be efficiently loaded in the same shear press to produce “near net shaped” blanks.
Sesco offers a variety of stackers for integration into Blanking and Cut-to-Length lines. Integrated with a hydraulic production shear, this type of drop stacker can be designed to process heavy-gauge blanks up to 240" in length. It utilizes unique pivoting support rollers to fully support the blank during the feed cycle. Upon actuation of the shear, the fast-acting support rollers are pivoted open to allow the blank to be neatly placed on the top of the stack. Stack edge guides and end stops are provided to assure close edge tolerance as the stack is built. Hydraulic scissor lift tables and powered chain conveyors are used to maintain a constant stacking height and a separate section of powered chain conveyor provides a cranesaver feature. Depending on material flow and plant layout requirements, Sesco stackers can be configured with in-line, L-shaped, or T-shaped stack handling systems.

Sesco Cut-to-Length lines can be designed to process appearance-quality materials, with stacking equipment to suit many application requirements. This stacker utilizes an extended slider-bed belt conveyor as both a runout conveyor and an inspection station. The cut sheets are positively powered away from the shear blade towards the stacking station. The operator can perform “on-the-fly” inspection of the sheet and automatically divert it to a rejection station if required. Powered roller conveyor is utilized to move empty pallets into the stacking station and move complete stacks into position for removal by hilo or overhead crane. These types of simple, yet efficient Cut-to-Length lines have proven track records throughout the Appliance and Service Center markets.
Every Direct Press Feeding System is provided with a custom engineered conveyor system based on the application requirements. These systems utilize state-of-the-art servo drives and multiple-axis motion controls to provide fully synchronized indexing of blanks and/or coil strip. Solutions that produce trap-cut blanks or over-width blanks incorporate blank handling rotate units that properly orient the part prior to indexing into the exit station of the system. These units typically consist of an overhead vacuum cup frame and a servo-driven rotate mechanism. The part pick-up or exit station is typically provided with programmable passline height adjustment and independently positioned endstops. All machine parameters and axis positions are stored in the Job Recipe Matrix and automatically downloaded per each specific part number.

Sesco has developed industry unique solutions for Direct Press Feeding Technology. Whether it's a large-bed transfer press or lead-off press for a tandem line, the combination of traditional coil feeding equipment and blank feeding equipment can provide the most flexible and efficient entry system. The heart of any Direct Press Feeding Line is the Shear Press or Square Shear. These machines are designed to cut the coil strip into blanks to meet each part's requirement. The ability to produce "near net shape" blanks with oscillating shear presses or chevron dies allows end-users to maximize their material utilization. Traditional blank destacking carts and shuttles can also be integrated into these systems giving the die designer even greater alternatives for part processing. These alternatives include square-cut blanks, trap-cut blanks, developed-shape blanks, and continuous coil strip. Press operation modes can include 3-axis transfer, progressive die, and partial prog to transfer.