



*Colt Automation*



# PRESS FEEDING & COIL HANDLING EQUIPMENT

[WWW.COLTAUTO.COM](http://WWW.COLTAUTO.COM)



# CONVENTIONAL FEED LINES

## FEATURES



COIL WIDTH: 6" - 84"



COIL WEIGHT:  
1,000 lbs - 70,000 lbs



MATERIALS: Cold Rolled, AHSS,  
Multi-Phase. Aluminum, Stainless  
& more



Multiple roll configurations,  
speeds & gauges



Fast Coil Changeovers, efficient,  
robust, long lasting w/ optional  
controls and automated features

## FLEXIBLE TO YOUR NEEDS

COLT Conventional Feed Lines offer maximum flexibility and performance with intuitive, latest release controls, top quality brands providing the finest press feeding equipment and technology. Hands-free threading, maximizing efficiency without compromising performance or safety.

Coil changeover times as low as 4 minutes. All functions can be fully automated and recipe driven. Conventional Feed Lines can process all material types.

Counter-balanced Entry and Exit Pinch Rolls allows Pinch Rolls to be near weightless for thin material processing.

Aviation quality gears with hardened teeth.

Colt Feed Lines are ideal for high speed stamping applications: Prog, Heavy & Fine Blanking, and cut-to-length.





# SPACE SAVER FEED LINES

## FULL FEED LINE PERFORMANCE IN AS LITTLE AS 20FT

Colt first introduced Space Savers in the 1980's and the evolution has continued. Colt Space Savers offer the flexibility and big performance of a conventional Feed Line, but with a smaller footprint.

## THINNER COIL MATERIAL >0.100"

Advanced and synchronized controls allow thinner material to feed directly into the Feeder/Straightener. The Torque Drive Uncoiler assists to payoff the material while still maintaining tension.

## THICKER COIL MATERIAL <0.100"

Thicker material is processed into a Pinch Roll and a back loop assembly. Tension is maintained and synchronized to the throughput speed of the Feeder / Straightener.

## FEEDER / STRAIGHTENER

Equipped with an extendable Peeler Blade and De-kinker, featuring aviation grade Straightener, Pinch Rolls and gears. Multiple back-up roll options for AHSS. Piloting to press speeds. Tail-out mode. Best-in-class performance.

## ADVANCED CONTROLS

Latest release, open platform using industry leading controls - Siemens, Allen Bradley, Omron, Beckhoff. Advanced programming PLC & HMI's, providing fully automated & recipe options.

## DUAL MODE TORQUE DRIVE UNCOILER TECHNOLOGY (AN INDUSTRY FIRST)

- Automated Pneumatic Coil Retaining Arms
- Hold Down Arm with Powered End Wheel
- Coil Tail Control Mode
- Coil Car with Powered Nest Rolls
- Counter-Balanced Entry & Exit Pinch Rolls
- Hands-Free Threading



USE UP TO **50%** LESS SPACE



# CRADLE FEED LINES

## FEATURES

- ➔ Ideal for Heavy Blanking or thick gauge Stamping
- ➔ Counter-balanced Entry & Exit Pinch Rolls
- ➔ Coil Staging for maximum productivity
- ➔ Servo & Hydraulic Piloting
- ➔ Self-Centering & adjustable Side Plates
- ➔ Available with multiple roll configurations
- ➔ Laser Loop Control to synchronize line speed
- ➔ Aviation quality Gears with hardened teeth
- ➔ Reduced Foot Print





# UNCOILERS / REELS / WINDERS



COIL  
WEIGHT

Up to  
2,000 lbs

## LIGHT-DUTY

Single or Double, Linkage Expansion,  
High-speed capability



COIL  
WEIGHT

2,000 to  
10,000 lbs

## MEDIUM-DUTY

Single or Double, Manual or Hydraulic  
Expansion, High-Speed capability



COIL  
WEIGHT

10,000 to  
30,000 lbs

## HEAVY-DUTY

Single or Double, Traveling or Stationary,  
Dovetail Wedge, Tension Control managed by  
O.D. Pressure Adjust Brake or Power Drive.  
Offered with 3 or 4 leaf Mandrels with tail  
deflectors.



COIL  
WEIGHT

30,000 lbs  
and over

## EXTRA HEAVY-DUTY

Single or Double, Traveling or Stationary,  
Dovetail Wedge, Tension Control managed by  
O.D. Pressure Adjust Brake or Power Drive.  
Offered with 3 or 4 leaf Mandrels with tail  
deflectors.

### COMBINATIONS:

Traveling  
Uncoiler  
with Fixed  
Coil Car

Double  
Mandrel  
Uncoilers

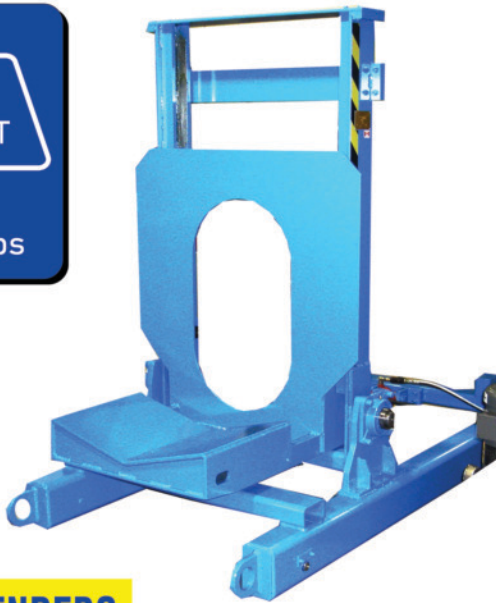
Twin  
Mandrels

Cradles

Traveling  
Coil Car  
with Fixed  
Uncoiler



# COIL CARS & COIL STAGING



## COIL UPENDERS

- ➔ Traveling or fixed
- ➔ Change coil position from horizontal to vertical



## SCISSOR LIFT COIL CARS

- ➔ Increased lift
- ➔ Optional 360° rotating table for limited space loading



## TRAVELING OR STATIONARY COIL CARS

- ➔ Heavy-Duty Construction
- ➔ Hydraulically operated with Cam followers for smooth binding-free raise/lower
- ➔ Removable or swing-out safety bars for narrow coils

## BENEFITS OF COIL STAGING

- + Reduced demand on an overhead Crane or Forklift
- + Reduced Coil Damage
- + Increased productivity and faster Coil changeover times
- + Flexibility to re-band and remove or reload partial coils
- + Safe and stable for full width and narrow coils



# COIL THREADING

## PEELER / THREADERS

- ➔ Hold Down Arm with powered wheel for hands-free threading
- ➔ Deflector and De-kinker directs material into Pinch Rolls
- ➔ Extendable Peeler blade picks up the leading coil edge



## THREADING TABLES

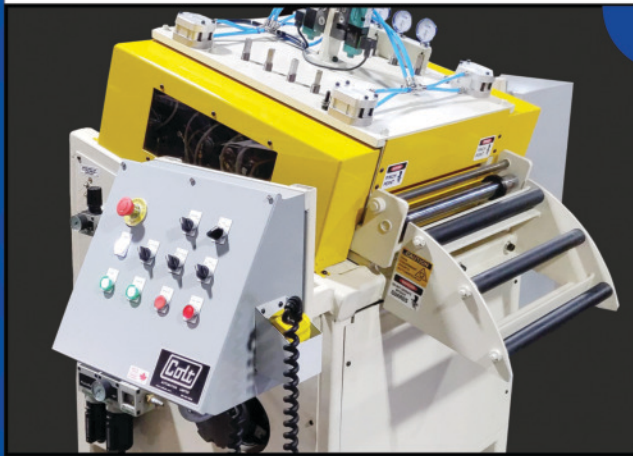
- ➔ Integrated into the line to direct material from the Straightener into the Feeder
- ➔ Threading Table options include: Scissor, Pivot, Flip Up & Bombay style
- ➔ Flow rail or solid surface construction for resistance-free material guiding







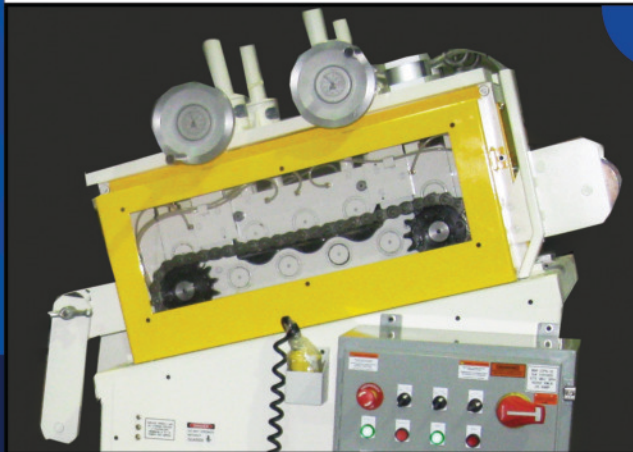




## LIGHT-DUTY MODEL #CPSL / CPSLA

For straightening lighter gauge mild steel, aluminum and stainless

- ➔ 2 ½" (63mm) Straightener & Pinch Rolls
- ➔ 2 ¾" (70mm) Roll Spacing
- ➔ Aviation Grade Rolls (RC 60/64)
- ➔ Alligator Head (optional)



## MEDIUM-DUTY MODEL #CPS2

For straightening a variety of steels, aluminum and stainless

- ➔ 3 ½" (89mm) Straightener & Pinch Rolls
- ➔ Aviation Grade Rolls (RC 60/64)
- ➔ Back-up Roll options
- ➔ Heavy-Duty Construction
- ➔ Alligator Head (optional)



Example of an "Alligator Head"

## HEAVY-DUTY MODEL #CPSH3 / CPSH7

For straightening a variety of mild steel, aluminum, stainless & AHSS

- ➔ 5" (127mm) Pinch Rolls
- ➔ 4" (100mm) Straightener Rolls
- ➔ Aviation Grade Rolls (RC 60/64)
- ➔ Back-up Roll options
- ➔ Counter-Balanced Pinch Rolls

Series 1, 2, or 3



## EXTRA HEAVY-DUTY MODEL #CPSEHIJ

For straightening a variety of mild steel, aluminum, stainless & High Mpa AHSS

- ➔ 6" (152mm) Pinch Rolls
- ➔ 5" (127mm) Straightener Rolls
- ➔ Aviation Grade Rolls (RC 60/64)
- ➔ Back-up Roll options
- ➔ Counter-Balanced Pinch Rolls
- ➔ Wider Gear Faces



# COLT SERVO ROLL FEEDERS



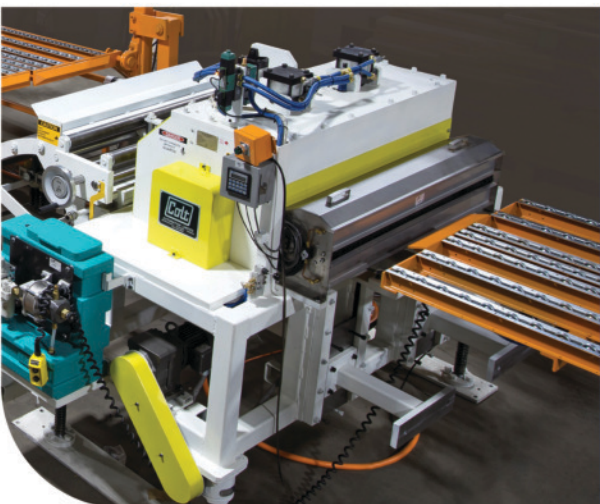
## MODEL #CERF-25 | LIGHT-DUTY

- ➔ Precision Roll Feeders
- ➔ 2½" (63mm) Rolls
- ➔ 2 or 4 Roll designs
- ➔ Available in 6" - 36" widths
- ➔ Bosch Rexroth Open Architecture Drive
- ➔ Custom Programming available



## MODEL #CERF-40 | MEDIUM-DUTY

- ➔ Precise Roll Feeders
- ➔ 4" (102mm) Rolls
- ➔ 2 or 4 Roll designs
- ➔ Available in 12" - 72" widths
- ➔ Bosch Rexroth Open Architecture Drive
- ➔ Custom Control Features
- ➔ Heavy-Duty Construction



## MODEL #CERF-60 | HEAVY-DUTY

- ➔ Precise Roll Feeders
- ➔ 6" (152mm) Rolls
- ➔ 2 or 4 Roll designs
- ➔ Available in 12" - 84" widths
- ➔ Bosch Rexroth Open Architecture Drive
- ➔ Custom Control Features
- ➔ Extra Heavy-Duty Construction



# COLT SERVO ROLL FEEDERS

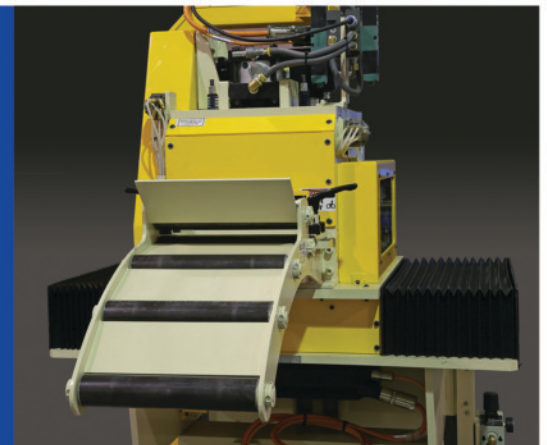
## MODEL #CERF-80 | EXTRA HEAVY-DUTY

- ➔ Precise Roll Feeders
- ➔ 8" (202mm) Rolls
- ➔ 2 or 4 Roll designs
- ➔ Available in 24"- 84" widths
- ➔ Bosch Rexroth Open Architecture Drive
- ➔ Custom Control Features
- ➔ Extra Heavy-Duty Construction



## COLT ZIG-ZAG FEEDERS

- ➔ Two Axis Zig-Zag
- ➔ Optimization and Nesting
- ➔ Round and Non-Round
- ➔ Custom Control Features
- ➔ Built-in Simulator and performance monitoring



## FEEDER/STRAIGHTENER COMBINATIONS

All Colt Feeders can be engineered as Feeder/Straightener combinations or Feeders with a pull through Straightener, depending on your processing application.

- ➔ Light, Medium, Heavy, and Extra Heavy-Duty
- ➔ High Speed Servo or Electro Pneumatic Piloting
- ➔ Bank or Individual Adjustment of Upper Straightener Rolls
- ➔ High speed applications
- ➔ Servo Driven Feeder/Straightener
- ➔ All options available including Alligator Head (for Roll Cleaning)



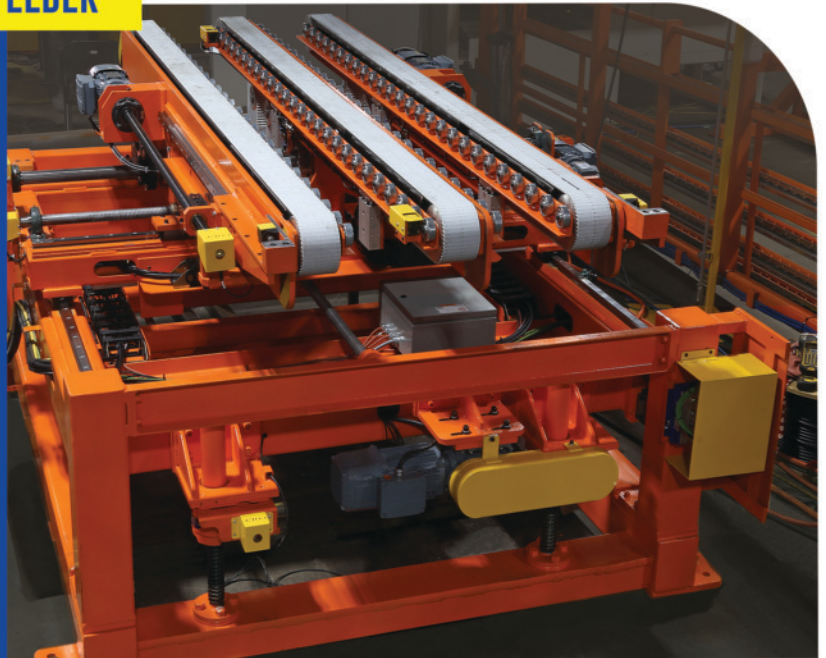
# COIL TAIL CONTROL TECHNOLOGIES

Having the ability to process the entire Coil without manual intervention and material scrap can mean your Press uptime and efficiencies are increased, therefore costs in both labour and material are decreased. COLT recognized this requirement and has been manufacturing Coil Tail options from simple material strip supports at the exit of a Servo Feeder, to more advanced Servo Controlled Micro Feeders. All backed by Colt's 3-2-1 warranty.

## ELECTROMAGNETIC CONVEYOR MICRO FEEDER

Suited for high-speed production presses. The Micro Feeder is equipped with up to 3 lanes/electromagnetic belts which are synchronized to the throughput speed of the Servo Feeder.

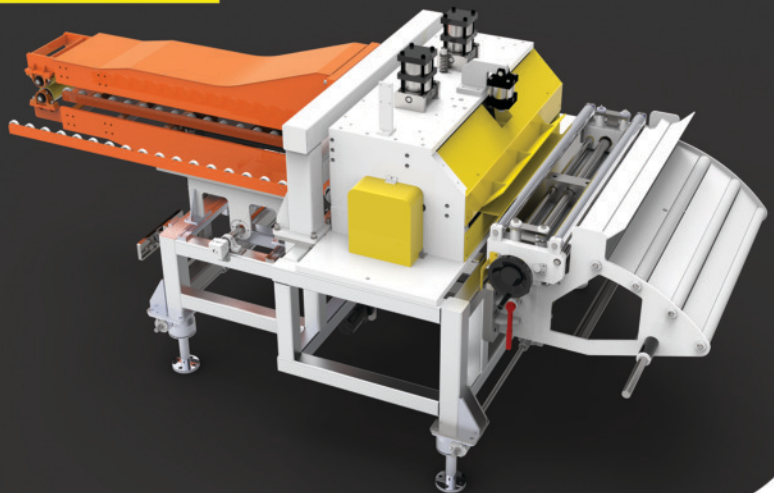
The Micro Feeder is provided with lane width adjustment, passline height adjustment and telescopes from the Feeder towards the Die to support coil material or receive blanks for processing.



## COLT HEAVY-DUTY SERVO PINCH ROLL TAIL FEEDER

The Pinch Roll style Tail Feeder is made with a low resistance upper & lower flow rail assembly with servo-controlled pinch rolls.

When the material sensor in the Feeder detects no material, the Pinch Roll Tail Feeder continues to process the coil until fully consumed.

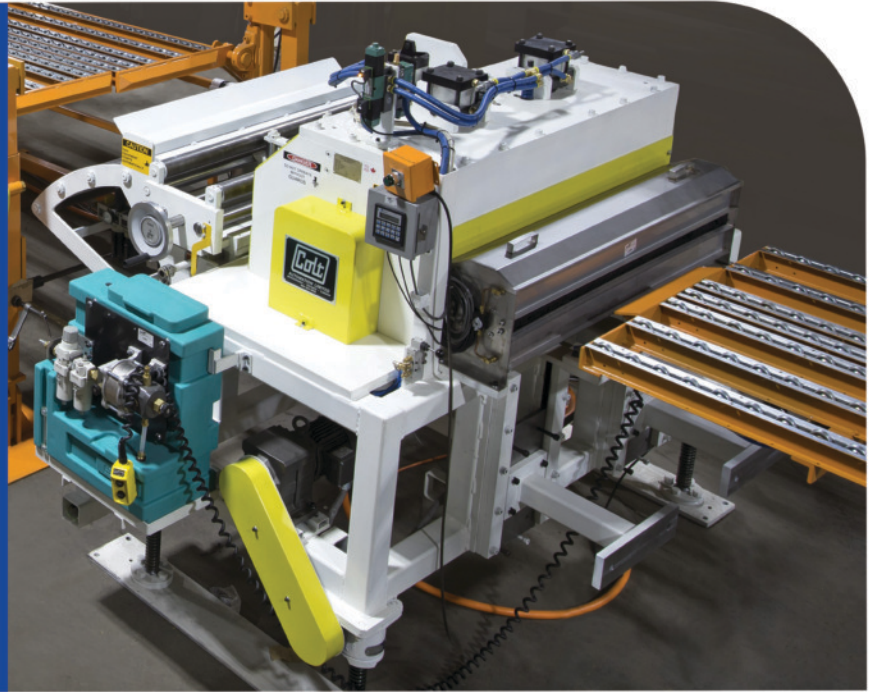




# COLT MATERIAL STRIP SUPPORT

## COLT MATERIAL STRIP SUPPORT

Colt material strip supports are available in a number of different configurations, designed to support coil material exiting the Feeder towards the Die.



## COLT SHEARS

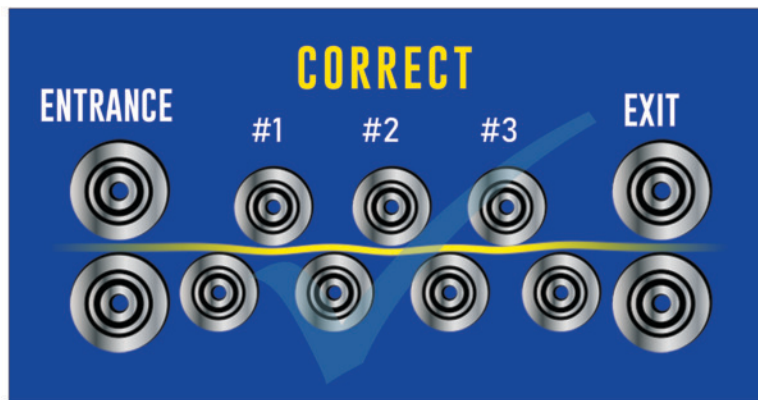
Colt manufactures a variety of Shears, including: Squaring or Chop Shears and Production Shears suitable for all material widths, thicknesses and strengths.

Multiple configurations are available depending on your environment.





# OPERATION OF A STRAIGHTENER

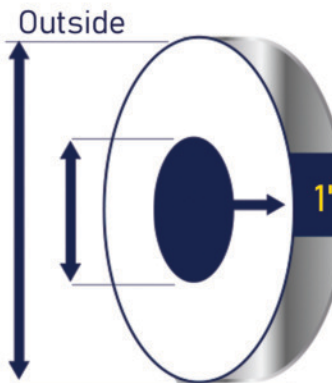


The Straghtener is designed to remove coil set. The general rule for steel strips is that the exit setting should be set to strip thickness, and the entry setting should be somewhat deeper. "Approximately 30%-50% of material thickness". Starting with these initial adjustments, make finer adjustments until the product is flat as it emerges from the machine. If the strip has an upward curvature, then the exit setting must be decreased, or vice versa.

## COIL WEIGHT REFERENCE CHART

OUTSIDE DIAMETER (INCHES)

INSIDE DIAMETER (INCHES)		12	14	16	18	20	22	24
32	195	185	170	155	140	120	100	
36	255	245	230	215	200	180	160	
40	325	310	300	285	265	250	230	
44	400	385	375	360	340	325	305	
48	480	470	455	440	425	405	385	
52	570	560	545	530	510	495	470	
56	665	655	640	625	610	590	570	
60	770	760	745	730	710	695	675	
72	1080	1070	1060	1050	1030	1010	990	

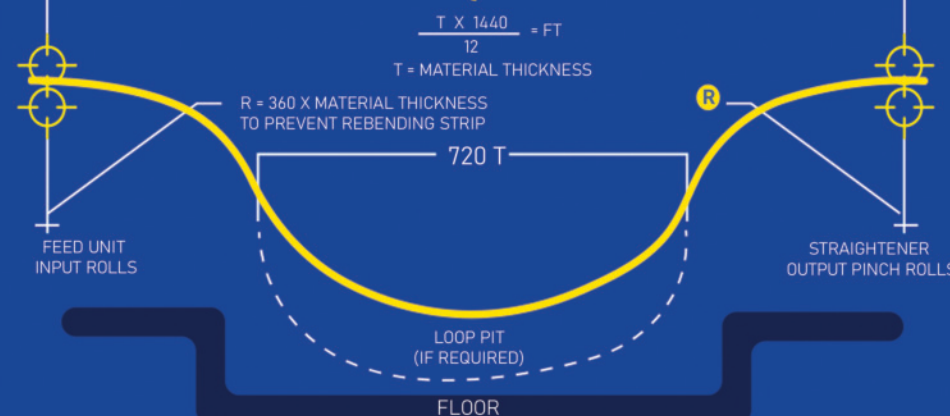


Based on 1 inch strip width -  
Steel Factor from Chart x Width  
of Coil = Total Coil Weight

### TO OBTAIN WEIGHT OF:

Aluminum	MULTIPLY TOTAL WEIGHT X 0.344
Brass	MULTIPLY TOTAL WEIGHT X 1.08
Copper	MULTIPLY TOTAL WEIGHT X 1.14
Stainless Steel	MULTIPLY TOTAL WEIGHT X 1.02

### MIN. SAFE DISTANCE REQ'D TO PREVENT COIL SET



### NOTE:

- The distance between rolls is to be figured by using the max material thickness.
- The radius for catenary is to be figured using the mean of material thickness.
- All based on Carbon steel at 60,000 P.S.I. max tensile stress.
- This is only approximate distance.
- Part progression is a very important factor. It is required to have material for 2 to 3 parts in loop (sometimes a material looping pit is required).

GAUGE	4	6	8	10	12	14	16	18	20	22	24	26
THICKNESS	.224	.194	.164	.135	.105	.075	.060	.048	.036	.030	.024	.017



# ABOUT COLT

Since 1965, COLT Automation has been designing, building, installing and servicing the finest, automated Coil Processing Equipment.

COLT has always kept an eye towards the future, staying ahead of the Coil Feeding industry by constantly innovating, improving our manufacturing process, and adopting leading edge technologies through our team of engineers.

Many of our customers recognize COLT as a production partner and a competitive advantage in an industry where every minute of downtime and lost production impacts the bottom line. Count on COLT to help you process stronger material (incl. AHSS) at faster speeds, in smaller spaces, and to reduce both downtime and coil changeover time.

COLT has customized and engineered machines to facilitate specialized companies including specific roll forming requirements, automotive part manufacturers, battery manufacturing companies, as well as on-site material handling for mining companies and others.

Our equipment is known for being built to "Robust & Rugged" standards with generous service factors calculated into our designs. Knowing our customers will be processing higher strength steels at ever increasing speeds, and continue to push our equipment to its limits (and in many cases beyond) - our controls are the most advanced, safe & flexible available while still being intuitive and simple to operate.

**COLT  
CONTINUES  
ITS LEGACY OF  
PRODUCING THE  
HIGHEST QUALITY  
FEED LINES**



**Colt Automation**

**COLT AUTOMATION LIMITED**

Leading the industry in Coil Processing Equipment & Technology

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