



MECON

COIL Handling & Processing Equipment



COIL LOADING RAMP
20,000 LBS X 42"

COIL CRADLE
20,000 X 42"

STRAIGHTENER FEEDER
WITH PILOT RELEASE
6ST42-EP



Mecon is a leading manufacturer of coil processing and handling equipment, brake press tooling and special purpose machines. From our beginning in 1962, Mecon has provided rugged designs, quality workmanship, quality materials and reliable products.

Our designers, welders, machinists millwrights, assemblers and inspectors, work together to create the best combination of function, price, quality and service.

- In house engineering and design with licensed professional engineers
- Fully equipped factory
- Large assembly and testing area

We take pride in offering the finest in equipment and workmanship.

FRONT COVER
 NO Marks Allowed Cut to Length Line
 Coil car, Uncoiler with Overarm, NO MARK threading table, Straightener with Shear, Pick and drop with NO MARK stacking system, Adjustable stacking table.

COIL WEIGHT - 50
 COIL WIDTH - 48"
 L - 50 ksi ys st4
 THICKNESS - .03"
 THICKNESS - .180"

EED - 10 to 20 spr
 NGTHS - 36" max
 RECTION - R-L

E HT - 66" +/- 6
 QUNT DETAILS - to

- MECON BEIGE

Index:

COIL LINE ARRANGEMENTS	2
THE MATERIAL	3
TYPES OF SYSTEMS	4
REEL SYSTEMS-SINGLE -DUAL	5
CRADLE UNCOILER	6
CRADLE STRAIGHTENER	8
POWERED STRAIGHTENERS	9
STRAIGHTENERS FOR HIGH STRENGTH STEEL	10
THREADING SYSTEMS - OPTIONS	11
ROLL FEEDS AND FEEDER-STRAIGHTENERS	12
SIDE SHIFTING FEEDERS	15
COIL HANDLING SYSTEMS	16
SOLVING PROBLEMS	18
OTHER PRODUCTS AND SERVICES	20
OPTIONS	22
INHOUSE MANUFACTURING	25
LOOPS AND PITS	27
MATERIAL PROPERTIES	24



COIL LINE ARRANGEMENTS

SUGGESTED SYSTEM ARRANGEMENTS

Mecon Industries Limited manufactures a variety of coil processing systems.

Many factors should be considered when determining the optimum arrangement.

- Budget
- Coil Weight
- Plant space available
- Crane capacity
- Lift truck capacity
- Mark sensitivity
- Material thickness
- Material width
- Material strength
- Coil handling: loading and unloading partial coils, or run full coils to end
- Coil inside diameter
- Coil outside diameter
- Production required: feed length, speed, feed angle, feed time
- Duty Cycle: hours per day / days per year
- Process type: progressive stamping, blanking, blank and transfer, cut to length, pre-punch, etc.

<p>LINE 1</p> <ul style="list-style-type: none"> • BACK TENSION UNCOILER • POWERED STRAIGHTENER • PRESS-MOUNTED SERVO ROLL FEED 	
<p>LINE 2</p> <ul style="list-style-type: none"> • MOTORIZED UNCOILER • POWERED STRAIGHTENER • SERVO ROLL FEEDER 	
<p>LINE 3</p> <ul style="list-style-type: none"> • POWERED TRAVEL & LIFT COIL CAR • BACK TENSION UNCOILER (WITH JOG MOTOR) • THREADING STAND • POWERED STRAIGHTENER • SERVO ROLL FEEDER 	
<p>LINE 4</p> <ul style="list-style-type: none"> • MOTORIZED UNCOILER • HOLD-DOWN ARM • SERVO FEEDER-STRAIGHTENER 	
<p>LINE 5</p> <ul style="list-style-type: none"> • MOTORIZED UNCOILER • UNDER PADDLE LOOP CONTROL • SERVO FEEDER-STRAIGHTENER 	
<p>LINE 6</p> <ul style="list-style-type: none"> • POWERED TRAVEL & LIFT COIL CAR WITH IDLE ROLLS • MOTORIZED UNCOILER WITH LOOP CONTROL • OVERARM WITH COIL GUARD • SERVO FEEDER-STRAIGHTENER (WITH THREADING OPTION) 	
<p>LINE 7</p> <ul style="list-style-type: none"> • POWERED TRAVEL & LIFT COIL CAR WITH IDLE ROLLS • BACK TENSION UNCOILER (WITH JOG MOTOR & SIDE SHIFT) • POLL-OFF PINCH STAND WITH OVER-ARM • COIL GUARD • FEEDER-STRAIGHTENER (WITH THREADING OPTION) 	
<p>LINE 8</p> <ul style="list-style-type: none"> • COIL CRADLE • COIL THREADING AND PREBENDER • SERVO FEEDER STRAIGHTENER 	
<p>LINE 9</p> <ul style="list-style-type: none"> • COIL STORAGE RAMP • COIL CRADLE STRAIGHTENER • SERVO ROLL FEEDER 	
<p>LINE 10</p> <ul style="list-style-type: none"> • COIL CRADLE STRAIGHTENER (WITH THREADING OPTION) • FLOOR-MOUNTED SERVO ROLL FEED 	
<p>LINE 11</p> <ul style="list-style-type: none"> • SERVO DRIVEN COIL-CRADLE-STRAIGHTENER-FEEDER • HEAVY DUTY DEKINKER AND COIL THREADER • WITH COIL STAGING RAMP • SIDE SHIFT BASE 	

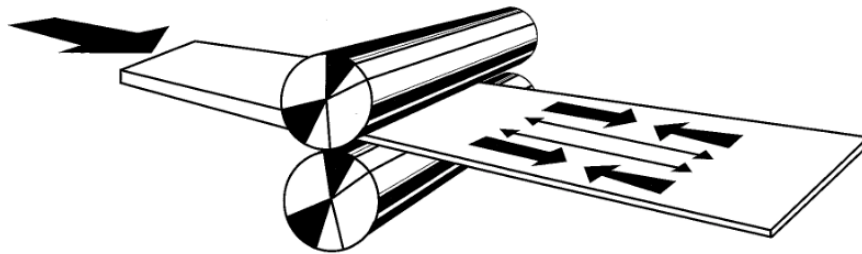


The Material

It helps to understand the nature of the input material and how it got that way. Most strip or coiled material begins its final processing phase as a slab. The slab was reduced to the final gauge by rolling, then wound into a large coil. It has grown greatly in length and nominally in width. High internal stresses in the material are often created during the rolling process.

The internal stresses often vary from the outer wraps to the inner wraps and from the center to the edges. The strip is unwound, slit to width and rewound. Center slit material often yields the best material, edge cuts often yield the worst. When the internal stresses are not balanced, the slit material will have camber. The greater the stress imbalance, the worse the camber. In some instances, additional processing will be necessary to balance the internal stresses and eliminate camber. Poor material is a leading cause of difficulty in tracking the strip through the entire system. Camber problems will consume your profits!

To avoid many coil-handling problems, insist on quality material, reject that which does not meet your standards, and use the proper uncoiling system.



Productivity

Selecting the proper options for your system will provide big paybacks in productivity gains.

- Eliminate waiting time for overhead cranes or lift trucks by installing coil cars and coil storage ramps. Coils can be staged when convenient and are ready when the system needs them
- Reduce handling time and increase safety with coil clamping arms and threading equipment
- Use dual spindle uncoilers when feeding high demand systems like rolling mills or systems using partial coils
- Use variable speed loop controls to smooth the uncoiling - straightening process, maintain proper loop geometry, and deliver more consistent material to the feeder
- Use a side shift base on the uncoiler to allow easy coil alignment and adapting for camber during processing
- Purchase the best material possible to ensure good quality, consistent parts



TYPES OF UNCOILERS

CONTROL CABINET

customer power supply
1074v 3 ph 60 Hz 75 amp

WHICH UNCOILING METHOD IS BEST? REEL OR CRADLE

Both types of uncoiler have advantages and limitations. In general, a *reel* works best with thin to **medium-thick material**, the cradle works well with thicker materials.

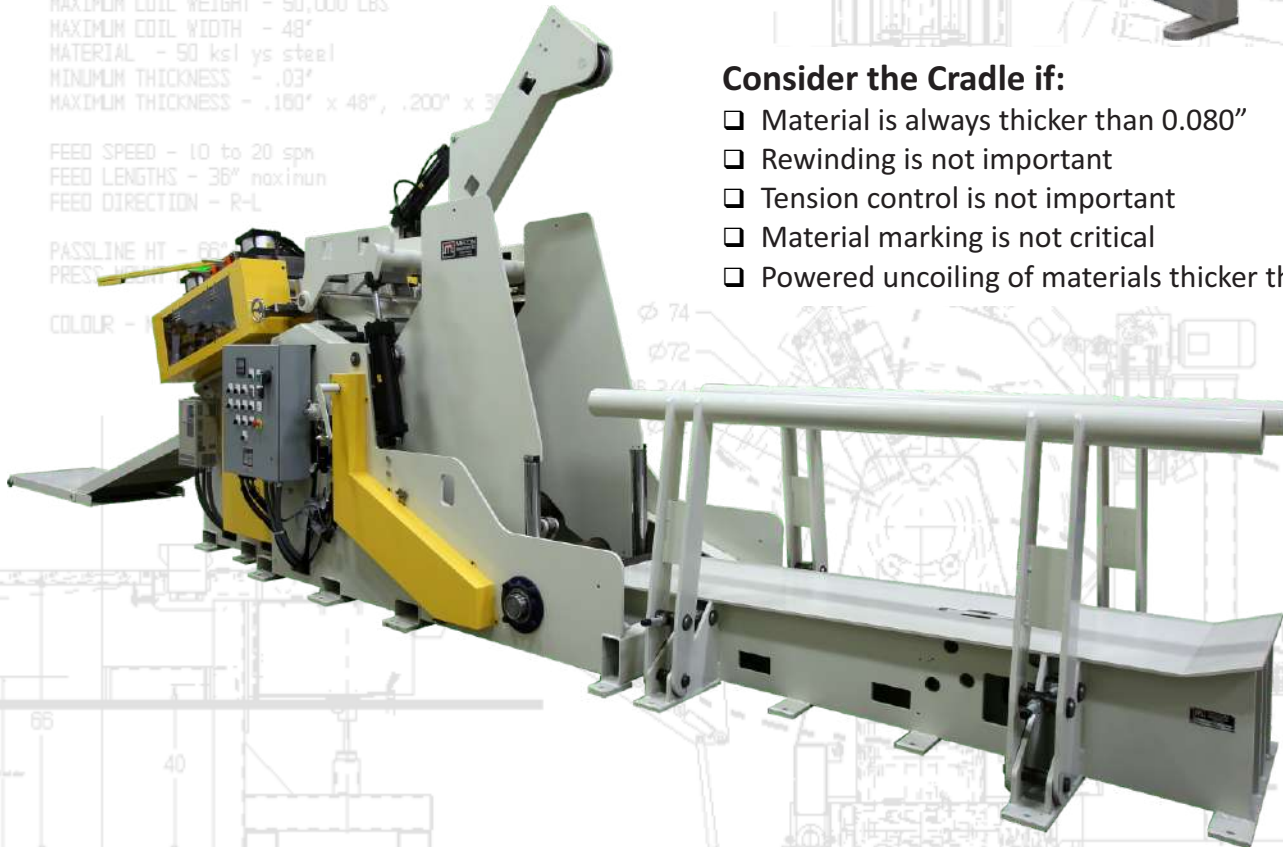
Consider the Reel if:

- Material is sometimes thinner than 0.080"
- Rewinding full or partial coils
- Precise tension control is necessary
- Material marking is critical
- Straightener is pulling the material off the coil
- Powered uncoiling of materials thinner than 0.150"



Consider the Cradle if:

- Material is always thicker than 0.080"
- Rewinding is not important
- Tension control is not important
- Material marking is not critical
- Powered uncoiling of materials thicker than 0.150"



TYPES OF UNCOILERS



REELS - SINGLE and DUAL SPINDLE UNCOILER

CONTROL CABINET
customer power supply
575v 3 ph 60 hz 75 amp
compressed air 100 psi

REELS - Single and Dual Spindle

The reel is used in most uncoiling, recoiling applications. It can be fitted with a variety of drive and braking systems, combined with coil cars, pinch rolls, power straighteners, overarms, rolling mills or configured as a stand alone machine.

Reels are the best choice for thin, prefinished and other mark sensitive materials.

They support the coil on the inside diameter and thus avoid stock deformation problems.

Advantages

- Suited to wide ranges of material
- Give precise control of the material
- Can unwind or rewind
- Available as single or dual spindle
- Quick coil change times using dual spindle versions
- Available with various drive and brake systems
- Prevents damage to soft, prefinished, and mark sensitive materials



COIL WEIGHT - 50,000 LBS
COIL WIDTH - 48"
M - 50 ksi ys steel
THICKNESS - .03"
THICKNESS - .160"
FEED - 10 to 20 spm
LENGTHS - 36" maximum
DIRECTION - R-L



REELS - SINGLE and DUAL SPINDLE UNCOILER



REEL and CRADLE UNCOILERS

REEL UNCOILER OPTIONS

- Light to heavy duty braking systems
- Hydraulic or mechanical mandrel expansion
- Outboard spindle supports for heavy, wide coils with, small inside diameters
- Traveling or fixed position
- Coil clamping arms with idle or driven wheels
- Combination with coil car, or coil elevator
- Quick release coil keepers
- Laser loop controls

MODELS

- D - Dual spindle
- B - Overrun brake
- BT - Back tension brake
- BTJ - Back tension brake with jog motor for threading
- M - Motorized
- CR -Cradle style uncoiler

Coil Width	REEL SERIES CAPACITY (LBS.)											
	1,500	2,500	4,000	6,000	10,000	15,000	20,000	25,000	30,000	40,000	50,000	60,000
16"	STD	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪	▪
18"	O	STD	STD	▪	▪	▪	▪	▪	▪	▪	▪	▪
24"	O	O	O	STD	STD	▪	▪	▪	▪	▪	▪	▪
30"	N	O	O	O	O	STD	▪	▪	▪	▪	▪	▪
36"	N	N	N	O	O	O	STD	STD	STD	STD	▪	▪
48"	N	N	N	O	O	O	O	O	O	O	STD	STD
60"	N	N	N	N	N	D	D	D	D	O	O	O
72"	N	N	N	N	N	D	D	D	D	D	D	D

MAXIMUM COIL WEIGHT - 50,000 LBS
 MAXIMUM COIL WIDTH - 48"
 MATERIAL - 50 ksi ys steel
 MINIMUM THICKNESS - .03"
 MAXIMUM THICKNESS - .160" x 48", .200" x 36"

N = not available, O = optional, D=derate to next lower weight

CRADLE UNCOILER

Easy, fast loading of coils is the single most important benefit offered by cradle-type uncoilers.



- Rugged heavy duty steel construction
- Self centering coil keeper plates
- Lifting points for crane
- Forklift truck lifting tubes
- Motor driven cradle rolls
- All rolls hardened to 55RC
- All lubrication points marked and easily accessible
- Capacities from 0.060" to 0.375" mild steel, 12" to 72" (larger sizes call for quote)
- Standard payout speed of 0 to 80 fpm. Rewind of unused material may be difficult
- Not recommended for use with thin, prefinished, or mark sensitive materials



CRADLE-STRAIGHTENERS

The combined cradle-straightener offers easy handling of medium to thick materials, great use of space, and a simple design. Combining the straightening and uncoiling function in one machine simplifies the control and the drive system, reduces the number of components and is less costly than a combination reel and power straightener. The material flows from the coil, through the straightener and into the loop, The straightener is inclined downward to shorten the loop distance and improve material flow.

PROS:

- Simple control and drive system
- Confinement of coil helps control of thick materials
- Easy and safe coil loading

CONS:

- Rewinding of unused material may be difficult
- Not recommended for use with thin, prefinished, or mark sensitive materials

Features of Mecon Cradle-Straighteners:

- Rugged heavy duty steel construction
- Self centering coil keeper plates
- Lifting points for crane
- Forklift truck lifting tubes
- Driven cradle and straightener rolls
- All rolls hardened to 55 RC
- All lubrication points marked and easily accessible
- Capacities from .060" to .375" mild steel. 12" to 72"
- Standard payout speed of 0 to 80 fpm
- Digital indicators show straightener roll position
- Standard straightener head with entry and exit pinch rolls, and 7 straightening rolls
- Other sizes available to suite application

CRADLE-STRAIGHTENERS





CRADLE-STRAIGHTENERS

CONTROL CABINET

customer power sup
575v 3 ph 60 hz 75
compressed air 100



Wilkins & Mitchell 48
1000T
Press

SAFETY FENCE

SLIDING DOOR WITH
SAFETY SWITCH

118 5
MAX I

OPTIONS:

- Combine with coil staging ramp
- Laser loop control
- Automatic lubrication systems
- Coil clamping and threading
- End pivot threading tables
- Drive Upgrades
- Straightener Upgrades
- 60" or 72" maximum coil outside diameter

MAXIMUM
MAXIMUM
MATERIAL
MINIMUM T
MAXIMUM T
FEED SPEE
FEED LENG
FEED DIAM

PASSLINE HT = 66" +/- 6

PRESS HO

COLOUR

Machine	Coil Wt. lbs.	Strn. Model	Min. Thickness	MACHINE and MATERIAL WIDTH							
				12"	18"	24"	30"	36"	48"	60"	72"
60CCS	6,000	3str	0.060	0.150	0.135	0.125	0.100				
100CCS	10,000	4str	0.060	0.250	0.250	0.250	0.225	0.200	0.175	0.150	
200CCS	20,000	4str	0.080	0.250	0.250	0.250	0.225	0.200	0.175	0.150	
300CCS	30,000	5str	0.090	0.375	0.375	0.375	0.350	0.320	0.260	0.210	0.180
400CCS	40,000	5str	0.090	0.375	0.375	0.375	0.350	0.320	0.260	0.210	0.180

**Max thickness in steel, Yield Strength less than 30,000 psi

Use maximum material thickness for guidance only. Provide Mecon with application data. Actual capacity is dependent on process requirements (speed, range of materials, material hardness, system response time, etc Upgraded drives, straightener support rolls and other features are available.



POWERED STRAIGHTENERS

Power straighteners are selected on the basis of the material to be processed, The thickness, width, material type, hardness, and other factors.

For most materials and flatness requirements, use straightener with five to seven rolls. For some materials, and high flatness requirements, more rolls may be necessary.

Features of Mecon Cradle-Straighteners:

- Smooth operation. no sudden stops and starts
- Automatically match process demand
- Rugged heavy duty steel construction.
- Driven pinch and lower straightener rolls
- All rolls hardened to 55 RC
- Standard payout speed of 0 to 80 fpm
- Entry side guide rolls
- Entry and exit support rollers
- Capacities in mild steel from .010" to .450", 12" to 72" wide
- All lubrication points marked and easily accessible
- Digital indicators show straightener roll position
- Standard straightener head with entry and exit pinch rolls, and 7 straightening rolls
- Lifting points for crane
- Forklift truck lifting tubes



Options:

- Entry and exit threading systems
- Laser loop control
- Automatic lubrication systems
- Drive upgrades
- Straightener support rolls
- 9, 11, or more straightener rolls
- Power roll adjustment
- Inclined or horizontal material flow

Machine	Roll Diameter	MACHINE and MATERIAL WIDTH								
		Thickness**	12"	18"	24"	30"	36"	48"	60"	72"
2str	2.000"	Call for capacity								
3str	3.000"	0.010	0.150	0.137	0.125	0.110	0.090			
4str	4.000"	0.020	0.250	0.250	0.250	0.225	0.200	0.175	0.150	0.135
5str	5.000"	0.035	0.375	0.375	0.375	0.330	0.290	0.250	0.210	0.180
6str	6.000"	0.050	0.450	0.430	0.415	0.400	0.375	0.340	0.290	0.250

Use maximum material thickness, for guidance only. Provide Mecon with application data. Actual capacity is dependent on process requirements (speed, range of materials, material hardness, system response time. Etc.). Upgraded drives, straightener support rolls and other features are available.



STRAIGHTENERS FOR HIGH STRENGTH STEELS

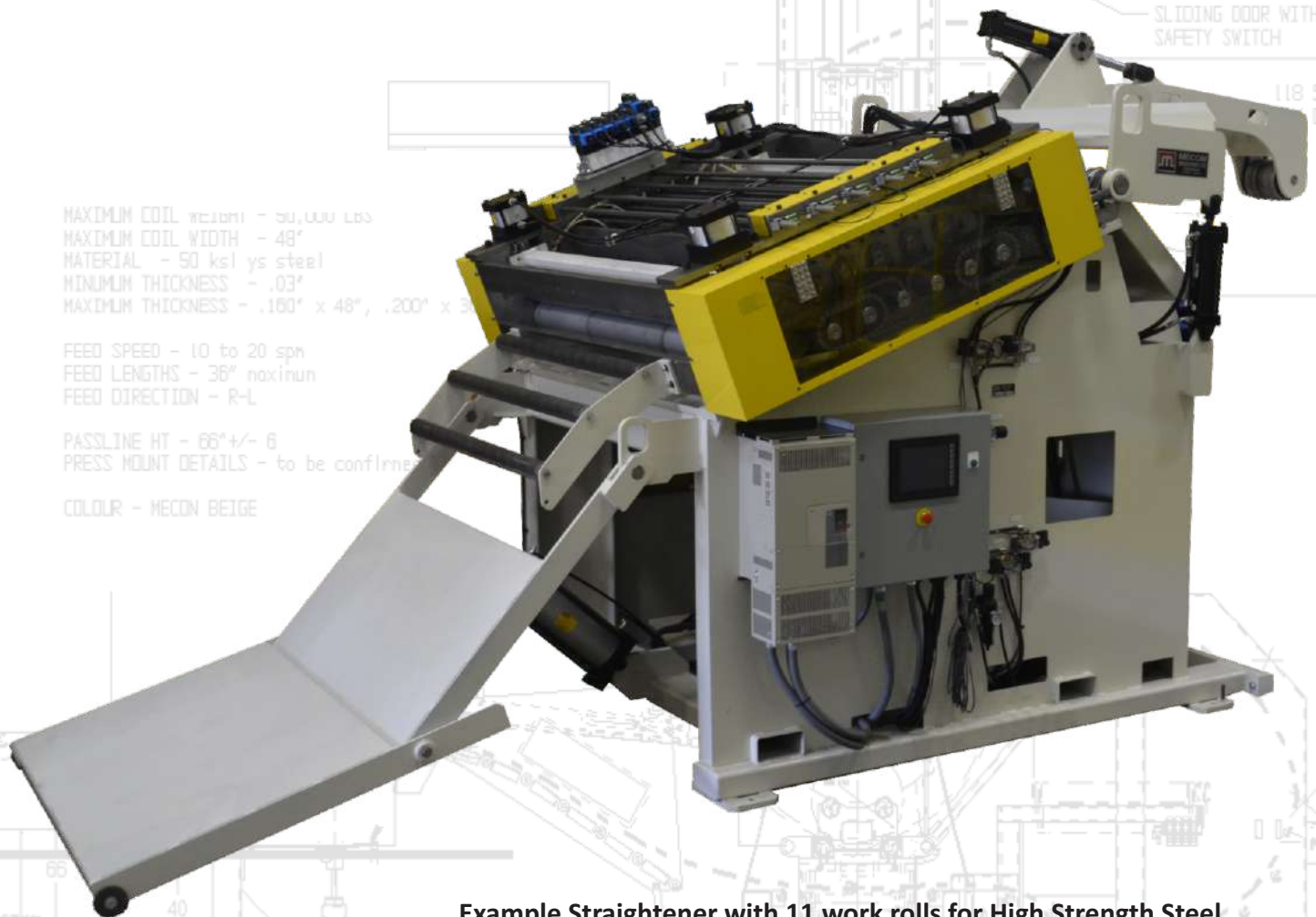
New Rules New Tools

Stronger thinner materials are becoming more common. The stronger materials frequently may have more complex stress conditions such as: crossbow, twist, wrinkle edge and pocketing. The standard coil feed systems are designed to remove "coilset" that is curvature in the material from being wound into a coil. The presence of crossbow indicates that stresses also exist in the across the width direction. In order to remove these issues, the straightener must be constructed to allow deeper work roll settings.

Solutions may involve:

- More work rolls
- Variable Geometry
- Closer roll centers
- Support rolls

**Consult Mecon Engineering for the best configuration for your material
416-751-1901**



Example Straightener with 11 work rolls for High Strength Steel



THREADING SYSTEMS-OPTIONS

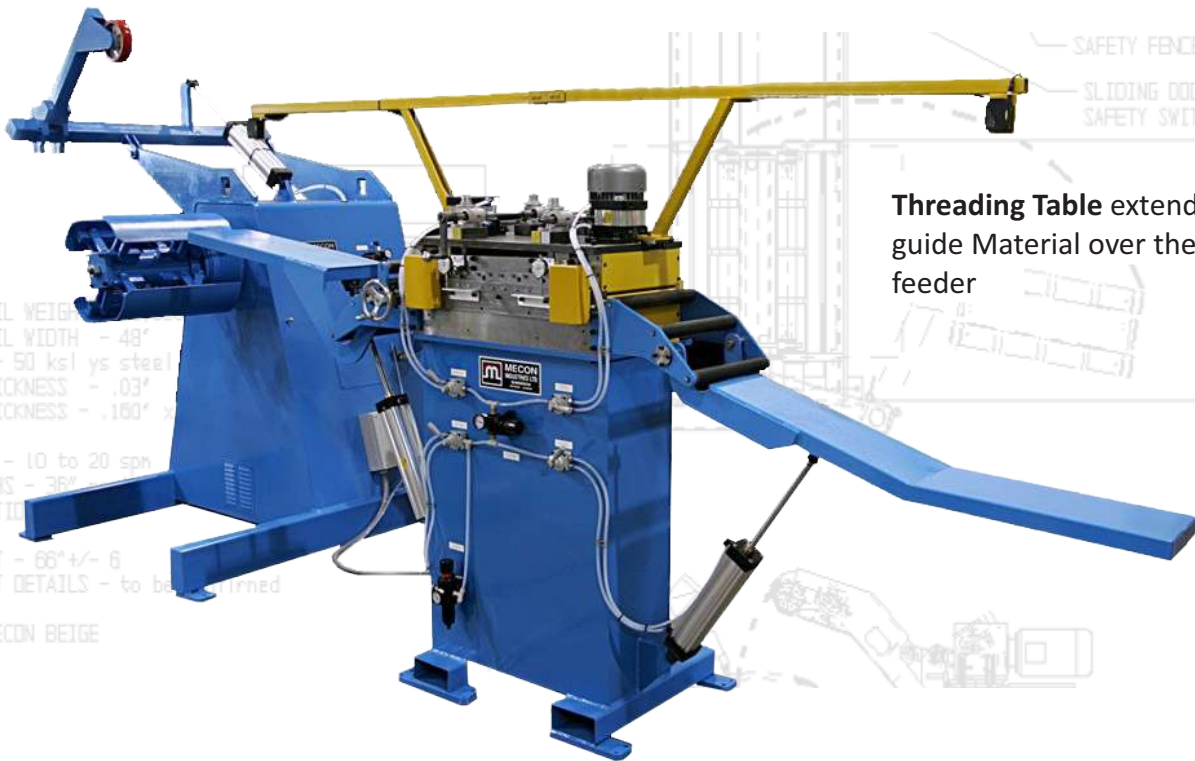
Mecon offers a variety of systems to make threading safer, easier and quicker. Coil overarms clamp the coil to prevent "clock springing" when the retaining bands are cut. Peelers extend out to the coil to direct the start of the material toward the straightener. Deflectors guide the material into the straightener pinch rolls.

Prebenders flatten the leading edge of thicker materials to allow better flow into the straightener.

Exit threading tables pivot up to span the space between the straightener and the feeder and direct the material into the feeder.

Standard Arrangements:

- Medium duty system includes straightener mounted overarm, peeler and deflector.
- Heavy duty system includes straightener mounted overarm with power driven wheel, peeler, deflector, and prebender.
- Consult Mecon when selecting a threading system.



Threading Table extended to guide Material over the pit to feeder

THREADING SYSTEMS-OPTIONS

OPTIONS: COIL ELEVATORS, CARS AND STORAGE RAMPS

Allows the material handler to load the next coil as the current coil is in process. The new coil is held in position and as soon as the current coil runs out, the new coil is ready for loading.

Available in width capacities matching the uncoiler from 2,500 lbs to 60,000 lbs



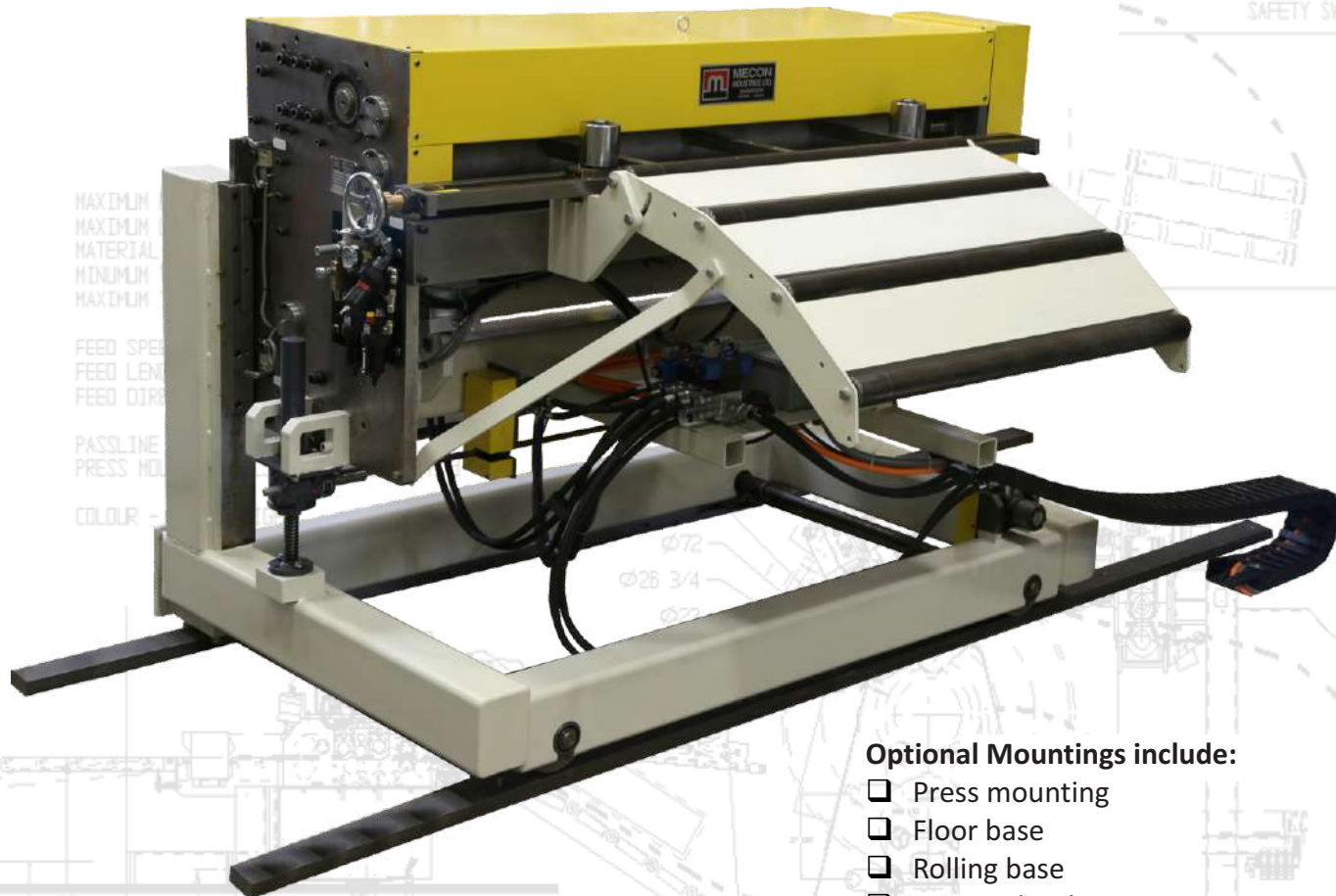
ROLL FEEDS and FEEDER-STRAIGHTENERS

ROLL FEEDS and FEEDER-STRAIGHTENERS

Mecon feeders use Servo motors and controls, precision drive systems, and heavy-duty Components to provide quick, accurate indexing of material. They are designed to pull from an Accumulation loop (not directly off the coil), and accurately position the material each feed cycle.

Fast, Flexible, Operation

- The controls are located on a console or pedestal for convenient entry of job settings. Set up time is reduced to seconds, just enter the values using the keypad.
- Very accurate roll positioning can be achieved with Mecon servo driven roll feeds. (The drives provide precise control of position, speed, acceleration, and deceleration.)
- Diagnostic display of operating status and faults
- Feed before press or press before feed modes
- Both feed rolls are driven using a constant mesh 4 gear train, gears are hardened 4140 steel
- Hardened vertical side guide rolls align the strip to the tooling
- Entry ramp rolls support material to ensure smooth flow from loop into feeder



Optional Mountings include:

- Press mounting
- Floor base
- Rolling base
- Powered jack
- Self centering guide rolls, Etc.



ROLL FEEDS and FEEDER-STRAIGHTENER

Series 'F'

- Standalone Feeder
- Suited to wide range of materials and process speeds
- Highest output speeds
- Full pilot release of pinch rolls
- Dual air pressure pinch system allows gentle touch on sensitive materials to firm grip for difficult materials
- Feed rolls are hardened, precision ground, surface treated and chrome coated for a hard, high friction surface giving excellent grip and long life
- Rolls are supported by precision, permanently sealed and lubricated ball bearings

Machine	Roll Diameter	MACHINE and MATERIAL WIDTH							
		12"	18"	24"	30"	36"	48"	60"	72"
250f	2.500"	0.125	0.090	0.080					
250f-hd	2.500"	0.140	0.125	0.110	0.090	0.070			
325f	3.250"	0.150	0.140	0.125	0.110	0.090			
325f-hd	3.250"	0.180	0.160	0.140	0.125	0.100	0.070		
400f	4.000"	0.225	0.205	0.185	0.160	0.135	0.100		
400f-hd	4.000"	0.250	0.250	0.225	0.205	0.185	0.160	0.135	
400f-hdg	4.000"	0.300	0.280	0.250	0.225	0.205	0.185	0.160	0.135
500f	5.000"	0.340	0.300	0.280	0.250	0.225	0.205	0.185	0.160
600f	6.000"	0.500	0.420	0.375	0.340	0.300	0.280	0.250	0.220
800f	8.000"	Call for capacity							

Max. Thickness at full width

Series 'F-S'

- 'F' series feeder with a 5 or 7 roll pull-thru straightener
- Suited to materials needing limited correction
- Lower capacity and performance than series 'FS'
- P225str pull-thru straightener for thin materials



Max, thickness in steel, Yield Strength less than 30,000 psi. Use maximum material thickness for guidance. Provide Mecon engineering with application data. Actual capacity is dependent on process requirements (spm, feed length, range of materials)

Machine	MACHINE and MATERIAL WIDTH										
	P225STR					P3STR					
	12"	18"	24"	30"	36"	12"	18"	24"	30"	36"	48"
250f-hd-s	0.060	0.050	0.040								
325f-s	0.080	0.070	0.060	0.050							
325f-hd-s	0.100	0.090	0.080	0.070	0.050						
400f-s	0.130	0.100	0.090	0.080	0.060	0.150	0.135	0.125	0.100	0.800	
400f-hd-s	0.140	0.120	0.100	0.090	0.070	0.150	0.135	0.125	0.100	0.800	
400f-hdg-s	0.160	0.130	0.110	0.100	0.080	0.180	0.160	0.130	0.110	0.100	0.070
500-s	Call for capacity										



SERVO ROLL FEEDS and FEEDER-STRAIGHTENER

Series 'FS' and 'FSP'

- Combined feeder and straightener
- Straightener rolls and entry pinch rolls are driven
- 6 roll straightener with support rolls ***
- Higher capacity than 'F-S'
- Better flatness than 'F-S'

***straightener support rolls on all machines except:
 325fs series
 400fs12
 400fs18
 400fs24



Example 600FSP48 with Servo Pilot Release

Series 'FSP'

- 'FS' feeder-straightener with full pilot release of straightener
- Same thru-put as FS series
- Pilot release improves feeding performance and reduces die problems
- Optional servo driven pilot release

Mild steel-yield strength less than 30,000 psi											
Machine	Roll Diameter		min. thick.	MACHINE and MATERIAL WIDTH							
	Feed	Strnr		12"	18"	24"	30"	36"	48"	60"	72"
325fs	3.250	2.889"	0.015	0.150	0.135	0.125	0.100	0.090			
400fs	4.000	3.000"	0.015	0.200	0.185	0.170	0.165	0.150	0.120		
400fs-hd	4.000	3.000"	0.015	0.250	0.235	0.220	0.205	0.180	0.150	0.120	
500fs	5.000	4.000"	0.020	0.295	0.280	0.265	0.250	0.235	0.205	0.165	0.125
500fs-hd	5.000	4.000"	0.020	0.310	0.295	0.280	0.265	0.250	0.235	0.190	0.150
600fs	6.000	5.000"	0.035	0.350	0.335	0.320	0.300	0.280	0.260	0.230	0.200
600fs-hd	6.000	5.000"	0.035	0.375	0.375	0.375	0.375	0.335	0.290	0.250	0.210

** <http://mecon.com/uncoiler-straightener-capacity-charts-including-high-strength-steel/>



SIDE SHIFTING FEEDERS

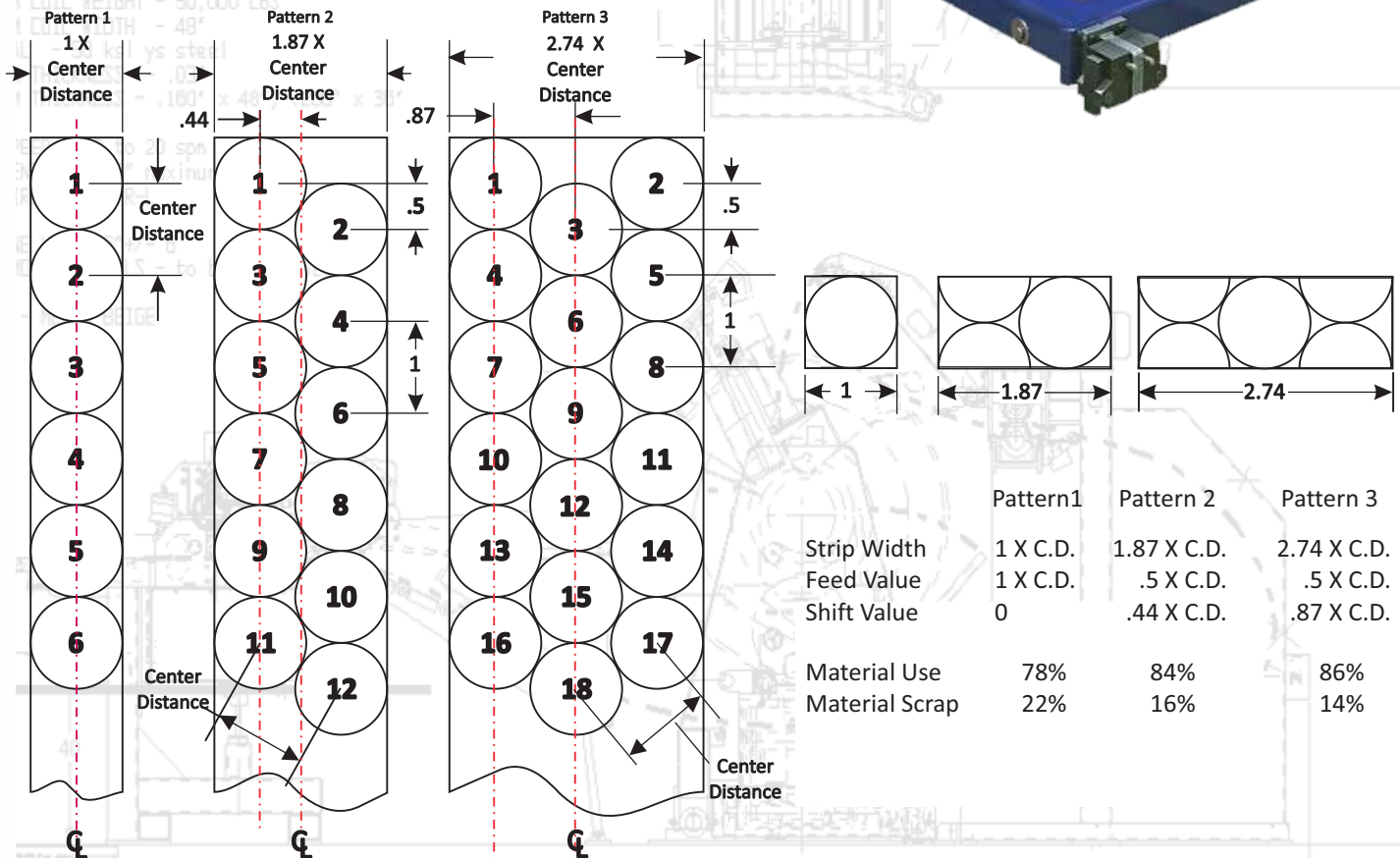
Side Shifting Feeders

Mecon offers roll feeds with servo driven shift base to allow optimum use of material.

The standard control has 3 pre-programmed patterns. Shift and Feed distance are simply keyed in at the operator's console. Select the pattern, press start and the machine is ready to run.



SIDE SHIFTING FEEDERS





COIL HANDLING SYSTEMS

CONTROL CABINET

customer power supply
575v 3 ph 60 hz 75 amp
compressed air 100 psi

(S) (PS)

Coil car, Side shift uncoiler, Peeler-Deflector, Straightener, Threading table, Floor mount Feeder.



Wilkins & Mitchell 48" 1000T Press

R WITH CH
118 5/8
MAX CAR

MAXIMUM COIL WEIGHT - 50,000 LBS
MAXIMUM COIL WIDTH - 48"
MATERIAL - 50 ksi ys steel
MINIMUM THICKNESS -
MAXIMUM THICKNESS -

FEED SPEED - 10 to
FEED LENGTHS - 36'
FEED DIRECTION -

PASSLINE HT -
PRESS MOUNT -

COLOUR - MELN



Combination Cradle-Straightener-Feeder model 200csfx42
Coil staging ramp, Cradle, Threading system, Feeder-Straightener with Servo pilot release, Worm screw jack lift systems

COIL HANDLING SYSTEMS



COIL HANDLING SYSTEMS

Main features are:

- Single operator
- Easy to load
- High capacity - high performance
- Compact - save floor space
- With Coil Roller keepers

SPACE SAVER

The choice when plant space is limited, Requires far less overall floor area than conventional systems.



↑ COIL WEIGHT - 50,000 LB
 ↑ COIL WIDTH - 48"
 ↑ T - 50 ksi ys steel
 ↑ THICKNESS - .03"
 ↑ THICKNESS - .160" x 48", .200" x 36"

↑ SPEED - 10 to 20 spm
 ↑ LENGTHS - 36" maximum
 ↑ DIRECTION - R-L

↑ CLEAR HT - 66" +/- 6"
 ↑ MOUNT DETAILS - to be confirmed

↑ - MECON PERI



Complete Press Feed System:

Coil Car, Motorized Uncoiler with Over arm, Laser loop control, Threading system, Floor mount Servo Feeder-Straightener, Control console, Safety fencing

COIL HANDLING SYSTEMS



SOLVING PROBLEMS

Mecon Industries is equipped to help solve your challenging production problems. Our objective is to design and build equipment which maximizes productivity, ensures operator safety, and improves return on investment. Reduced downtime for coil change overs may make the difference between profit and loss. Fast loading, easy operation make for a streamlined, safe and profitable operation.



**No space for side loading
No space for traditional loop
Top loading, space saver
solution**

MAXIMUM COIL WEIGHT - 50,000 LBS
MAXIMUM COIL WIDTH - 48"
MATERIAL - 50 ksi ys steel
MINIMUM THICKNESS - .03"
MAXIMUM THICKNESS - .160" x 48", .200" x 36"

FEED SPEED - 10 to 20 spm
FEED LENGTHS - 30' minimum
FEED DIRECTION - Right

PASSLINE HT -
PRESS MOUNT DE

COLOUR - MECON



Cradle with Coil staging ramp for HSLA material 90KSI at 72" WIDE, .190" thick. 6STR72, 9 roll straightener with exit table.

SOLVING PROBLEMS



SOLVING PROBLEMS

SOLVING PROBLEMS

CONTROL CABINET

customer power supply
575v 3 ph 60 hz 75 amp
compressed air 100 psi



SAFETY FENCE

99 1/2

237

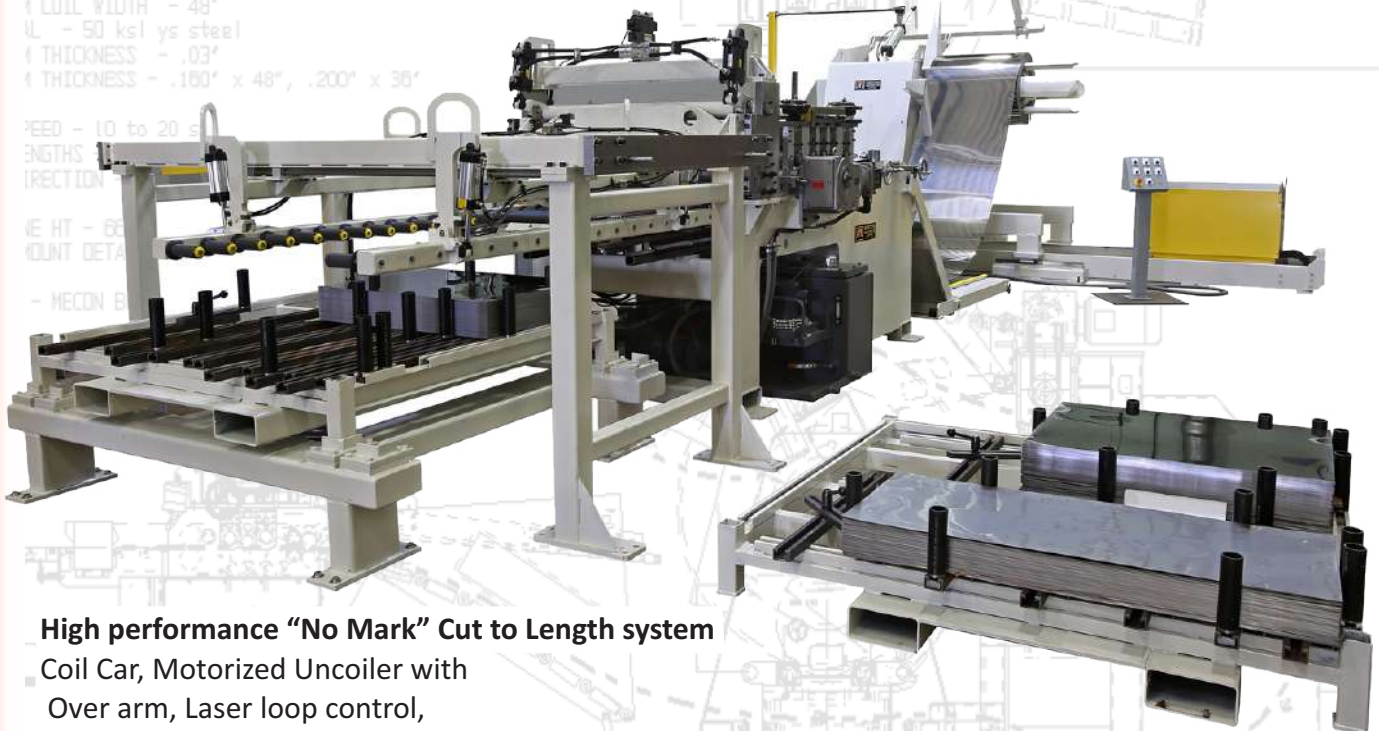
Servo Feeder-Straightener with Servo Pilot release for HSLA
4 adjustable over 4 roll geometry with backup rolls to minimize roll deflection
Servo Pilot release for low maintenance

COIL WEIGHT - 50,000 LBS
COIL WIDTH - 48"
M - 50 ksi ys steel
THICKNESS - .03"
THICKNESS - .160" x 48", .200" x 36"

SPEED - 10 to 20 s
LENGTHS
DIRECTION

IE HT - 60
OUNT DET

- MECON B

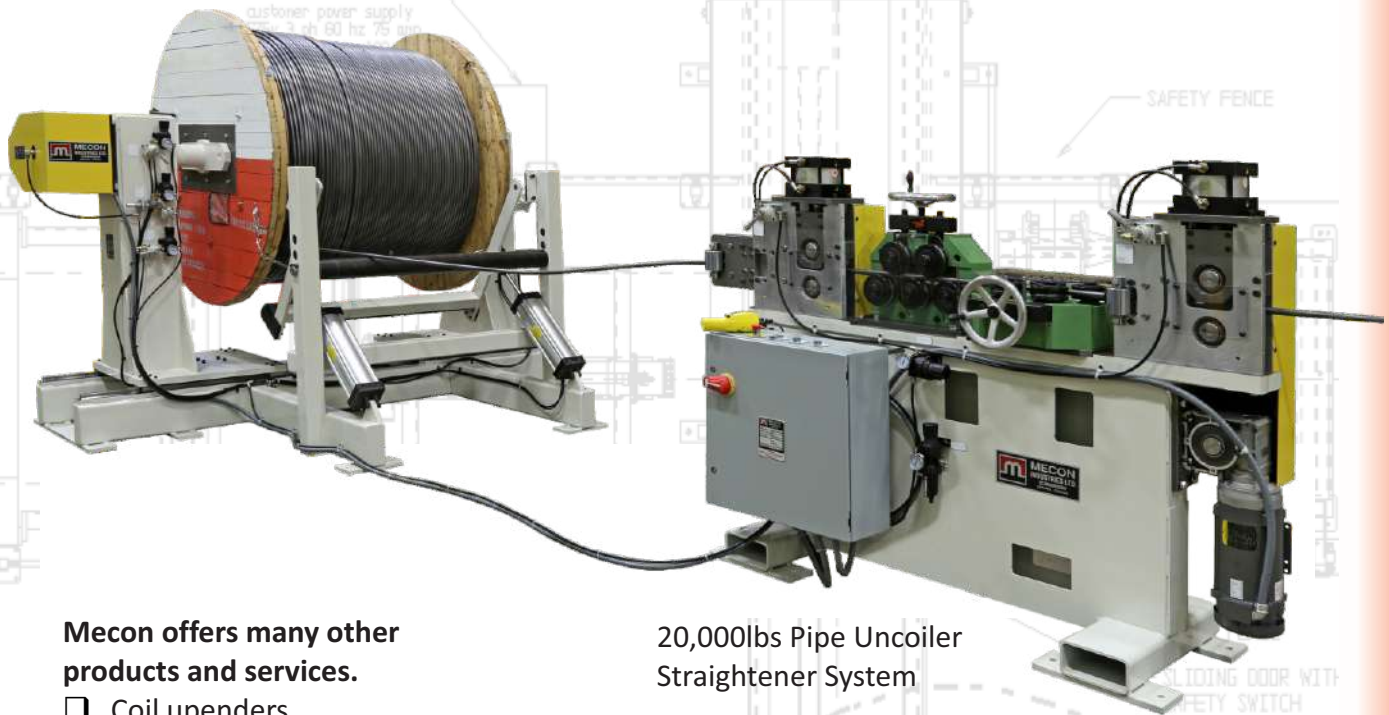


High performance "No Mark" Cut to Length system

Coil Car, Motorized Uncoiler with Over arm, Laser loop control, Threading system, Floor mount Servo Feeder-Straightener, Shear with no mark glide and drop stacking system



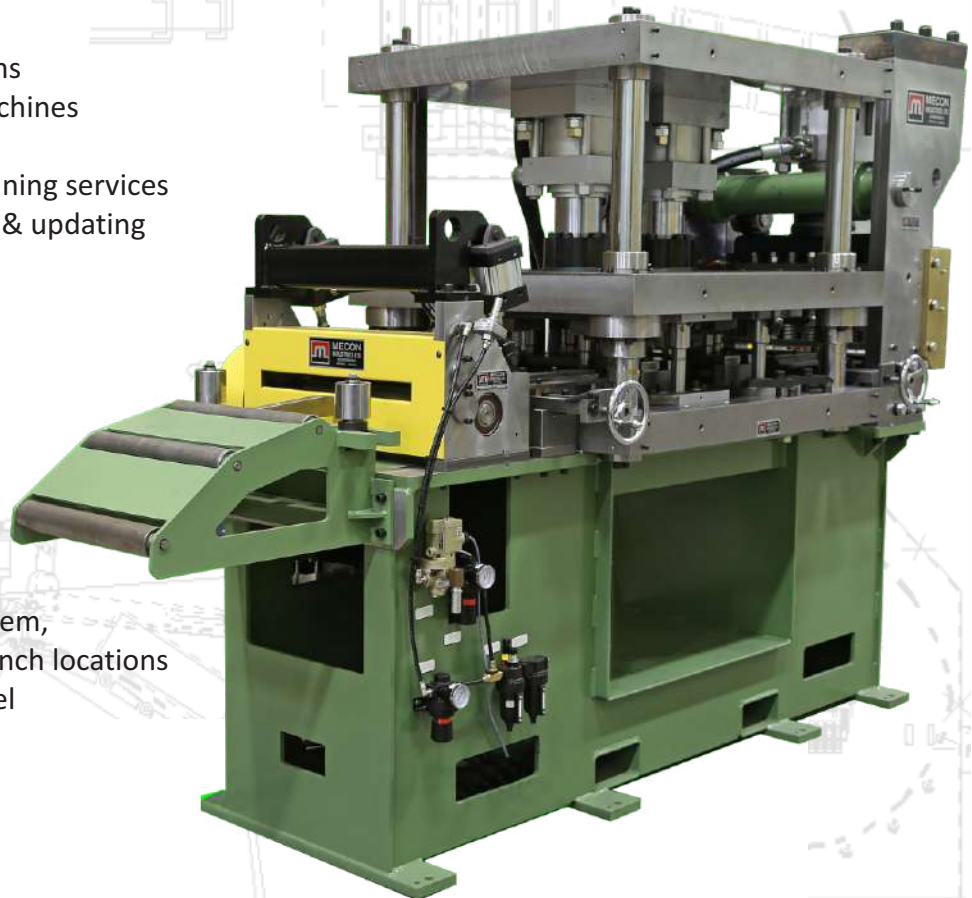
OTHER PRODUCTS



20,000lbs Pipe Uncoiler Straightener System

Mecon offers many other products and services.

- Coil openers
- Tube Handling systems
- Crop shears
- Punching Systems
- Edge conditioners
- Cut to length systems
- Special purpose machines
- Brake press tooling
- Fabrication & machining services
- Machine rebuilding & updating



400F18HDG Feeder system, 75 Ton press with 12 Punch locations Shear for .25" HSLA Steel

OTHER PRODUCTS



OTHER PRODUCTS

CONTROL CABINET

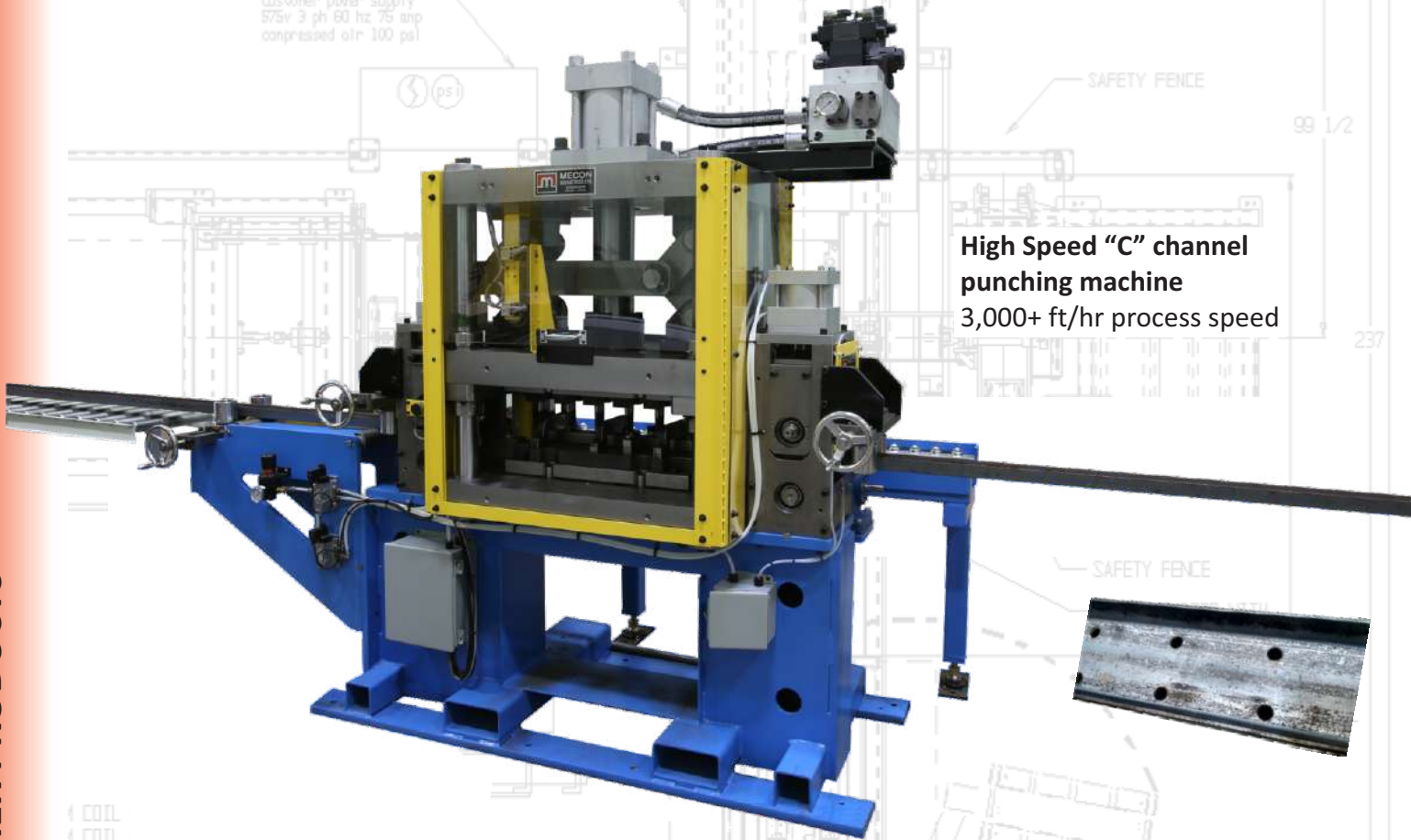
customer power supply
575v 3 ph 60 hz 75 amp
compressed air 100 psi

SAFETY FENCE

98 1/2

**High Speed "C" channel
punching machine**
3,000+ ft/hr process speed

237



SAFETY FENCE



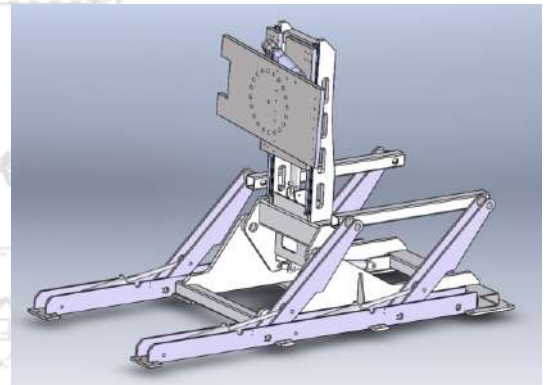
OTHER PRODUCTS

↑ COIL
↑ COIL
↑ THICK
↑ THICK

SPEED - 10 to 20 spm
LENGTHS - 36" max
DIRECTION - R-L

WHEEL HT - 66" +/-
MOUNT DETAILS

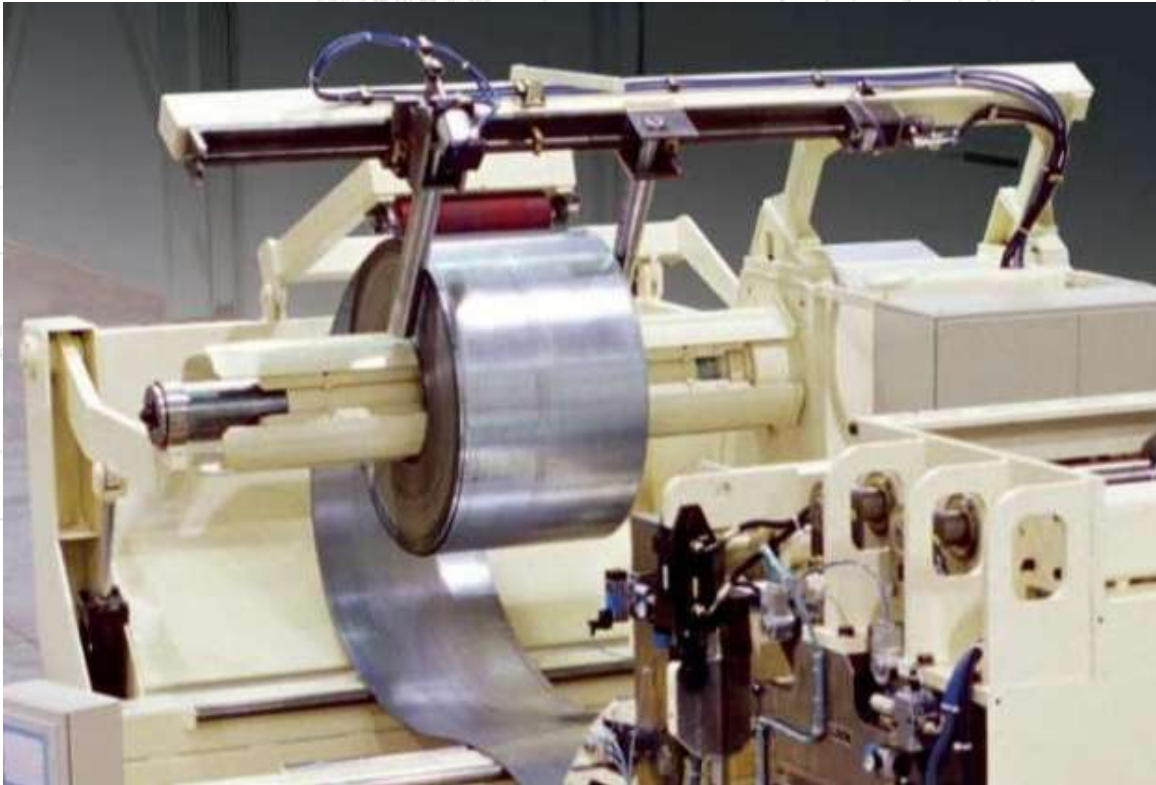
- MECON BEIGE



**Heavy, Bulky, Irregular Object
Manipulators**
Multi degree of motion
Load, Lift, Tilt, Rotate and Move



OPTIONS



COIL ROLLER KEEPERS

Roller Keepers are used to align the coil to process centerline, coil is always centered. Prevents coil telescoping during unwinding. Fast coil changes with no manual coil keeper removal and re-install. Reduces press down time and is safer for operator's. Will save 4-10 minutes per coil change.

MAXIMUM THICKNESS - .160" x 48", .200" x 36"



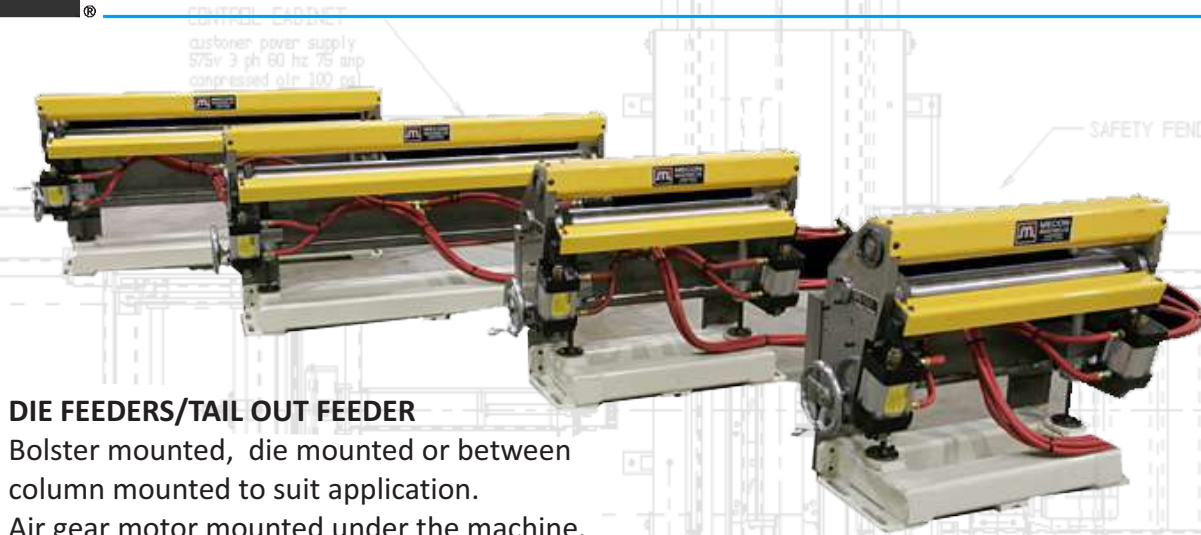
THREADING ASSISTANCE

Coil over arm with idle or power wheel, Peeler / coil breaker / deflector, for safe threading of steel into straightener. Over arm clamps onto the coil to contain the coil end when the straps are cut. Powered wheel drives the coil to thread the start of the coil to the input pinch rolls of the straightener. Peeler extends to contact the coil and guide the start of the coil. Coil breaker lifts to press the strip against a flattening block on over arm and thus de-kink the start of the strip. No operator material handling. Designed to suit process requirements.

OPTIONS



OPTIONS



DIE FEEDERS/TAIL OUT FEEDER

Bolster mounted, die mounted or between column mounted to suit application.

Air gear motor mounted under the machine.

Multi-gear drive to transfer power to the lower roll and allow roll pivot without disengaging the gear.

Pivoting action to open / close the lower rolls, lower roll drops to disengage material, lifts to pinch material for feeding.

Manually operated valves for jog fwd/rev, roll open/close.

Close to die, less scrap material, minimize length of wasted tail.



UPENDERS

Stationary: tilt 90 degrees, horizontal/vertical.

Travelling: Tilt, lift, and move forward/reverse.

Hydraulic power.



MULTI FUNCTION PENDANT for FEEDERS

Mode select: Setup- Manual- Automatic, Reset, Feeder Auto start, Feeder Auto stop, Jog Forward, Jog Reverse.

AUTOMATIC LUBRICATION SYSTEM

Distributed grease system to lubricate all the necessary bearings in the uncoiler and straightener.

Electric grease pump with reservoir, distribution system, and individual injectors for each grease point.



OPTIONS



OPTIONS



SHEARS



COIL CARS

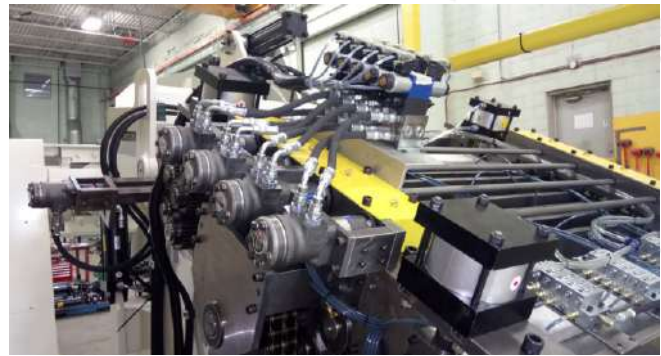
OVERARMS



END PIVOT THREADING TABLES



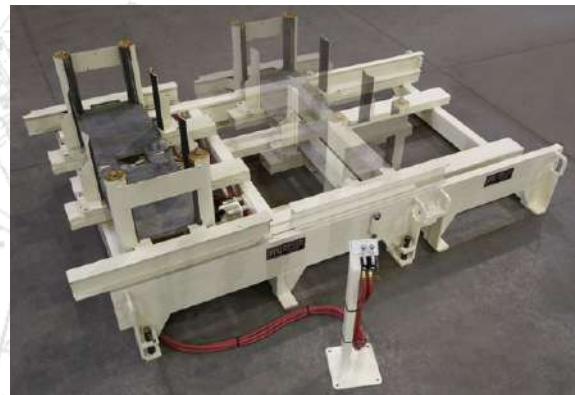
SAFETY FENCE
SLIDING DOOR WITH SAFETY SWITCH



POWERED ROLL ADJUST



MATERIAL GUIDANCE SYSTEMS



STACKING SYSTEMS

See all available options:
[Http://mecon.com/options/](http://mecon.com/options/)

OPTIONS



IN-HOUSE MANUFACTURING

Mecon has the facility, equipment and workforce capable of handling large or small projects. In-house design and manufacturing allows Mecon to maintain control of the production schedule and completion dates.

Mecon manufacturing combines fabricating, conventional and CNC machining, grinding and material handling up to 15 tons. All design, cutting, machining, and assembly is done to Mecon's exacting standards.

IN-HOUSE MANUFACTURING



In-house Fabrication: Weld Shop



In-house Assembly area



IN-HOUSE MANUFACTURING

Machine designs are constantly reviewed to incorporate the best methods and technology. Modern electrical control systems, variable speed and servo systems are integrated with rugged mechanical components to achieve long service life and high uptime.

Mecon's large assembly area allows setup and complete operational testing of the system. All machines are inspected and tested before being released to the customer.

With a fully equipped factory and successful experience in many fields we are able to offer solid designs, and economical hard working equipment. Mecon offers a variety of services and materials for your metal handling needs: Engineering, General Machining, Fabrication, Brake Press Tooling, Coil Processing Machines, and Custom Build/Rebuild Machinery.



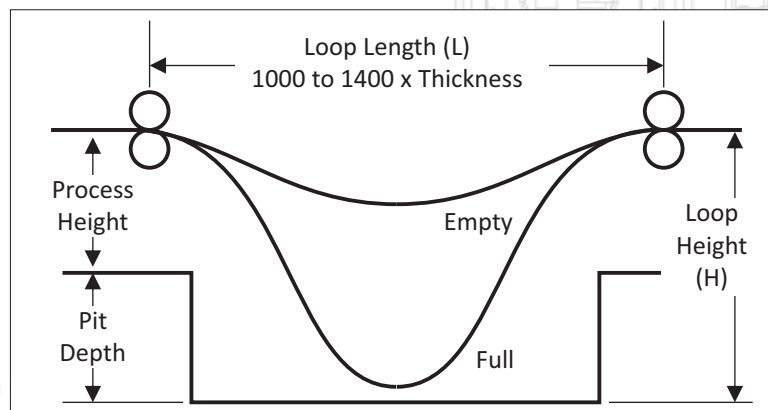
IN-HOUSE MANUFACTURING



ACCUMULATION LOOPS AND PITS

Most systems require an accumulation loop. The accumulation loop is used to allow the uncoiling process to payout at a nearly continuous rate while the feeding equipment stops and starts. Ideally the loop will accumulate at least 2 feed lengths of material. Thickness, material yield strength, and feed length are important factors to consider when determining loop geometry. The loop must store sufficient material to allow smooth operation. The material must not be curved smaller than the minimum bend radius to ensure that the proper loop shape is maintained and kinking does not occur.

- Ramamp rolls should support the material as it enters and exits the loop.
- The loop length should be 1000 to 1400 times the material thickness.



A pit is recommended if the required LOOP HEIGHT, is greater than the process height

Loop Height (H)	MAXIMUM FEED LENGTH (INCHES)							Max Feed Length	Accumulation	MINIMUM LOOP HEIGHT (INCHES)						
	130	117	106	96	88	81	75			80"	120"	95	104	112	120	127
135"	130	117	106	96	88	81	75	80"	120"	95	104	112	120	127	134	141
120"	111	99	89	80	73	66	61	70"	105"	86	95	103	110	117	124	130
105"	92	81	72	64	58	53	48	60"	90"	78	86	94	101	107	113	119
90"	74	64	56	50	44	40	36	50"	75"	69	77	84	90	96	102	107
75"	57	48	41	36	32	29	26	40"	60"	60	67	73	79	85	90	95
60"	40	33	28	24	21	19	17	30"	45"	50	57	62	68	72	77	81
45"	25	20	17	14	12	11	10	20"	30"	40	45	50	54	58	62	65
30"	12	9	8	6	6	5	4	10"	15"	27	31	34	38	40	43	46
	90"	120"	150"	180"	210"	240"	270"			90"	120"	150"	180"	210"	240"	270"
LENGTH OF LOOP (L)								LENGTH OF LOOP (L)								

ACCUMULATION LOOPS AND PITS



MATERIAL PROPERTIES

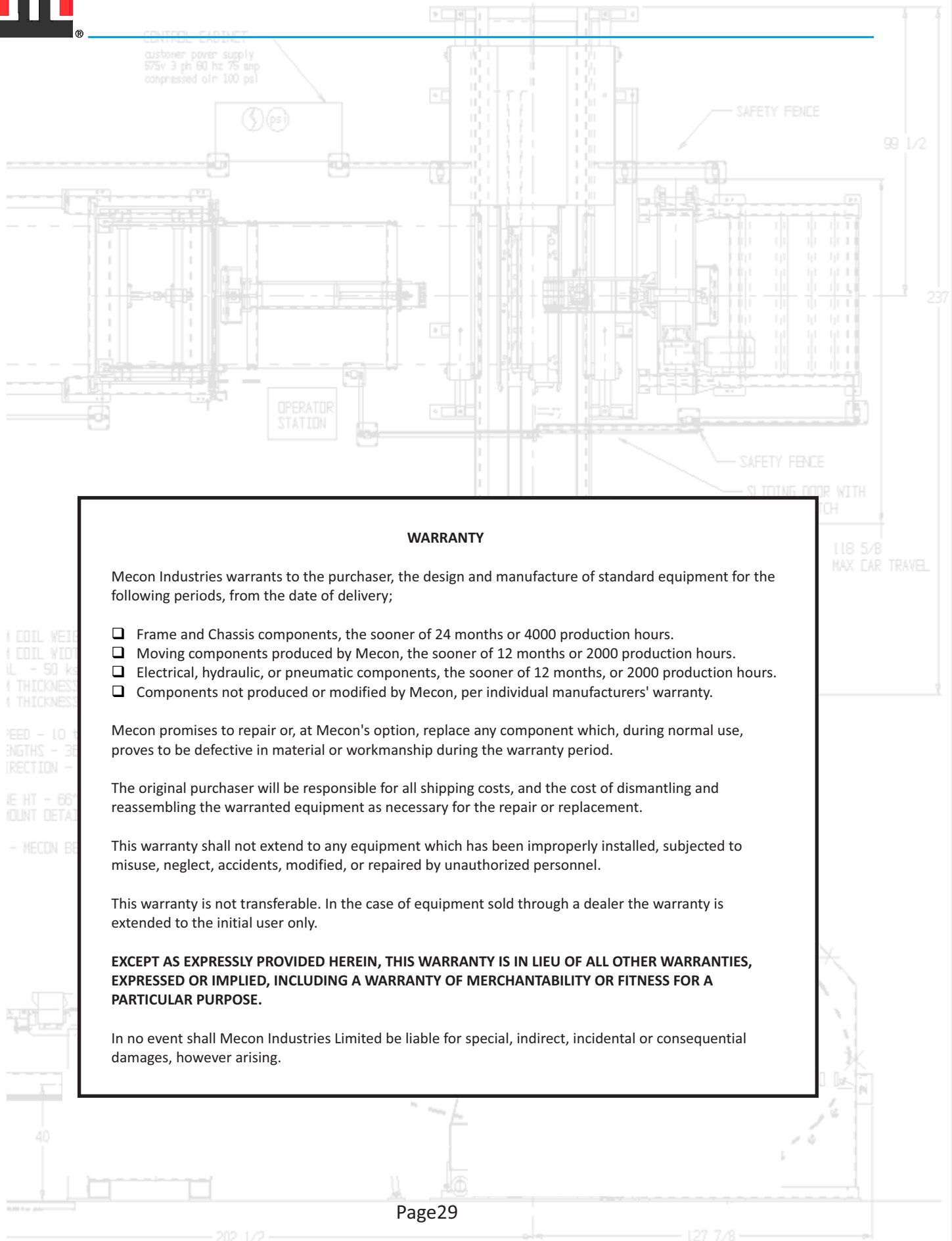
STEEL COIL WEIGHT CALCULATOR coil weight				
LBS / INCH				
Outside diameter of Coil	72"	1099	1067	1028
	66"	915	882	843
	60"	746	714	675
	54"	593	561	522
	48"	457	425	385
	42"	336	304	265
	36"	232	200	161
	30"	144	112	72
	24"	71	39	0
		16"	20"	24"
INSIDE DIAMETER OF COIL				

Steel Coil Weight Calculator

Material weight factors	
Aluminum	x 0.35
Brass	x 1.08
Copper	x 1.14
Stainless	x 1.00
multiply CHART VALUE by COIL WIDTH eg: 714 lbs/in x 10" wide coil = 7,140 lbs	

Typical Tensile Strengths Common Metals	Yield Strength		Ultimate Yield Strength		Density	
	PSI	Mpa	PSI	Mpa	lb/in ³	g/cm ³
Aluminium alloy 6061-T6	35K	241	44K	300	0.098	2.7
Aluminium alloy 2014-T6	60K	414	70K	483	0.101	2.8
Brass	29K	200	80K	550	0.315	9
Copper 99.9% Cu	10K	70	32K	220	0.322	8.92
Cupronickel 10% Ni, 1.6% Fe, 1% Mn, balance Cu	19K	130	51K	350	0.323	8.94
Steel, 1090 mild	36K	247	122K	841	0.274	7.58
Steel, 2800 Maraging steel	380K	2617	391K	2693	0.289	8
Steel, AerMet 340	313K	2160	352K	2430	0.284	7.86
Steel, AISI 4130, water quenched 855 °C	138K	951	161K	1110	0.284	7.85
Steel, API 5L X65	65K	448	77K	531	0.282	7.8
Steel, high strength alloy ASTM A514	100K	690	110K	760	0.282	7.8
Steel, stainless AISI 302 - cold-rolled	75K	520	125K	860	0.296	8.19
Steel, structural ASTM A36 steel	36K	250	58K-80K	400-550	0.282	7.8
Tungsten	136K	941	219K	1510	0.694	19.2

MATERIAL PROPERTIES



WARRANTY

Mecon Industries warrants to the purchaser, the design and manufacture of standard equipment for the following periods, from the date of delivery;

- Frame and Chassis components, the sooner of 24 months or 4000 production hours.
- Moving components produced by Mecon, the sooner of 12 months or 2000 production hours.
- Electrical, hydraulic, or pneumatic components, the sooner of 12 months, or 2000 production hours.
- Components not produced or modified by Mecon, per individual manufacturers' warranty.

Mecon promises to repair or, at Mecon's option, replace any component which, during normal use, proves to be defective in material or workmanship during the warranty period.

The original purchaser will be responsible for all shipping costs, and the cost of dismantling and reassembling the warranted equipment as necessary for the repair or replacement.

This warranty shall not extend to any equipment which has been improperly installed, subjected to misuse, neglect, accidents, modified, or repaired by unauthorized personnel.

This warranty is not transferable. In the case of equipment sold through a dealer the warranty is extended to the initial user only.

EXCEPT AS EXPRESSLY PROVIDED HEREIN, THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

In no event shall Mecon Industries Limited be liable for special, indirect, incidental or consequential damages, however arising.



Professional Engineers Ontario

"Authorized by the Association of
Professional Engineers of Ontario
to offer professional engineering services"

UNCOILERS

CRADLE STRAIGHTENERS

SERVO ROLL FEEDS

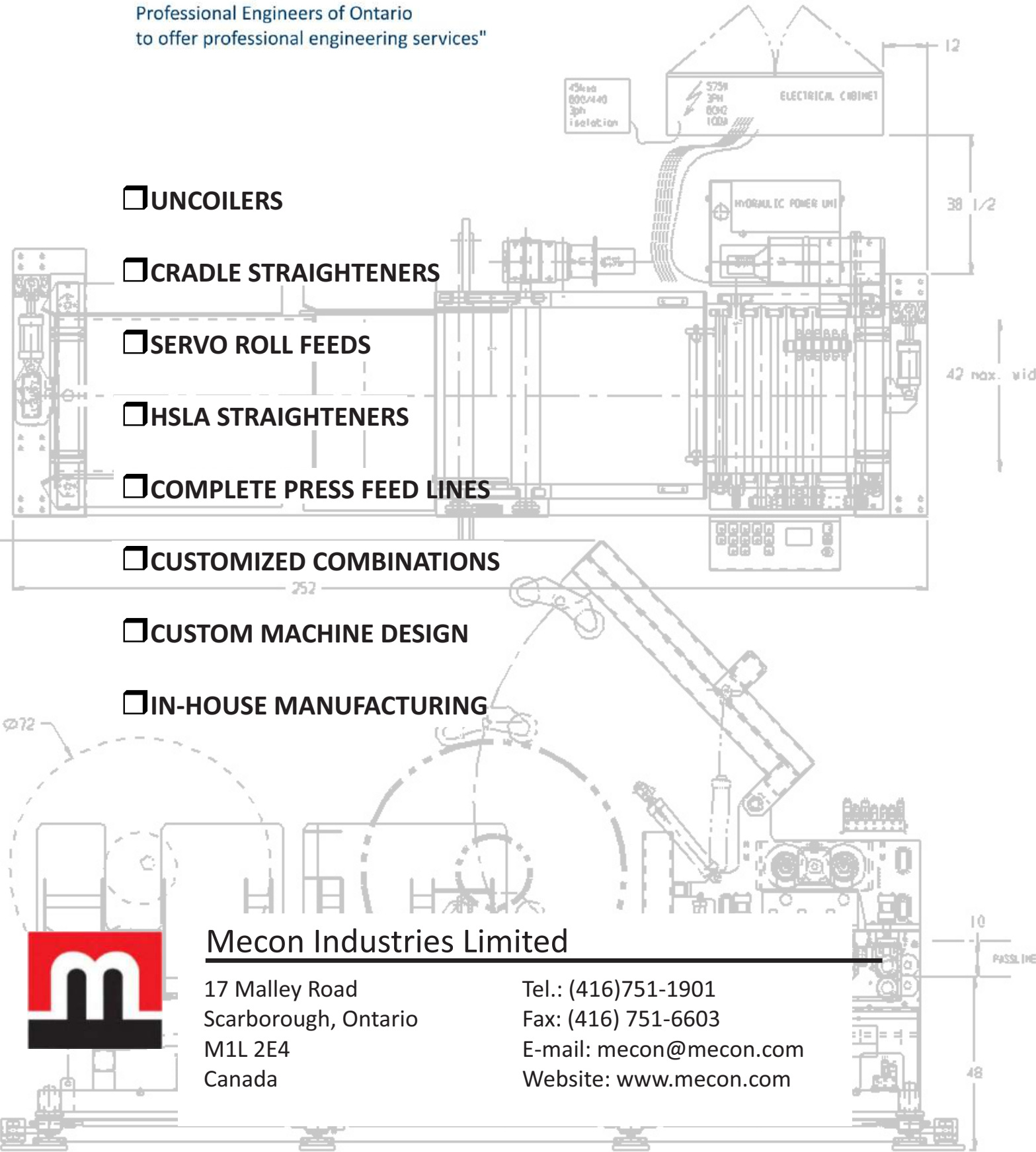
HSLA STRAIGHTENERS

COMPLETE PRESS FEED LINES

CUSTOMIZED COMBINATIONS

CUSTOM MACHINE DESIGN

IN-HOUSE MANUFACTURING



Mecon Industries Limited

17 Malley Road
Scarborough, Ontario
M1L 2E4
Canada

Tel.: (416)751-1901
Fax: (416) 751-6603
E-mail: mecon@mecon.com
Website: www.mecon.com

COIL LOADING RAMP
20,000 LBS X 42"

COIL CRADLE
20,000 X 42"

STRAIGHTENER FEEDER
WITH PILOT RELEASE