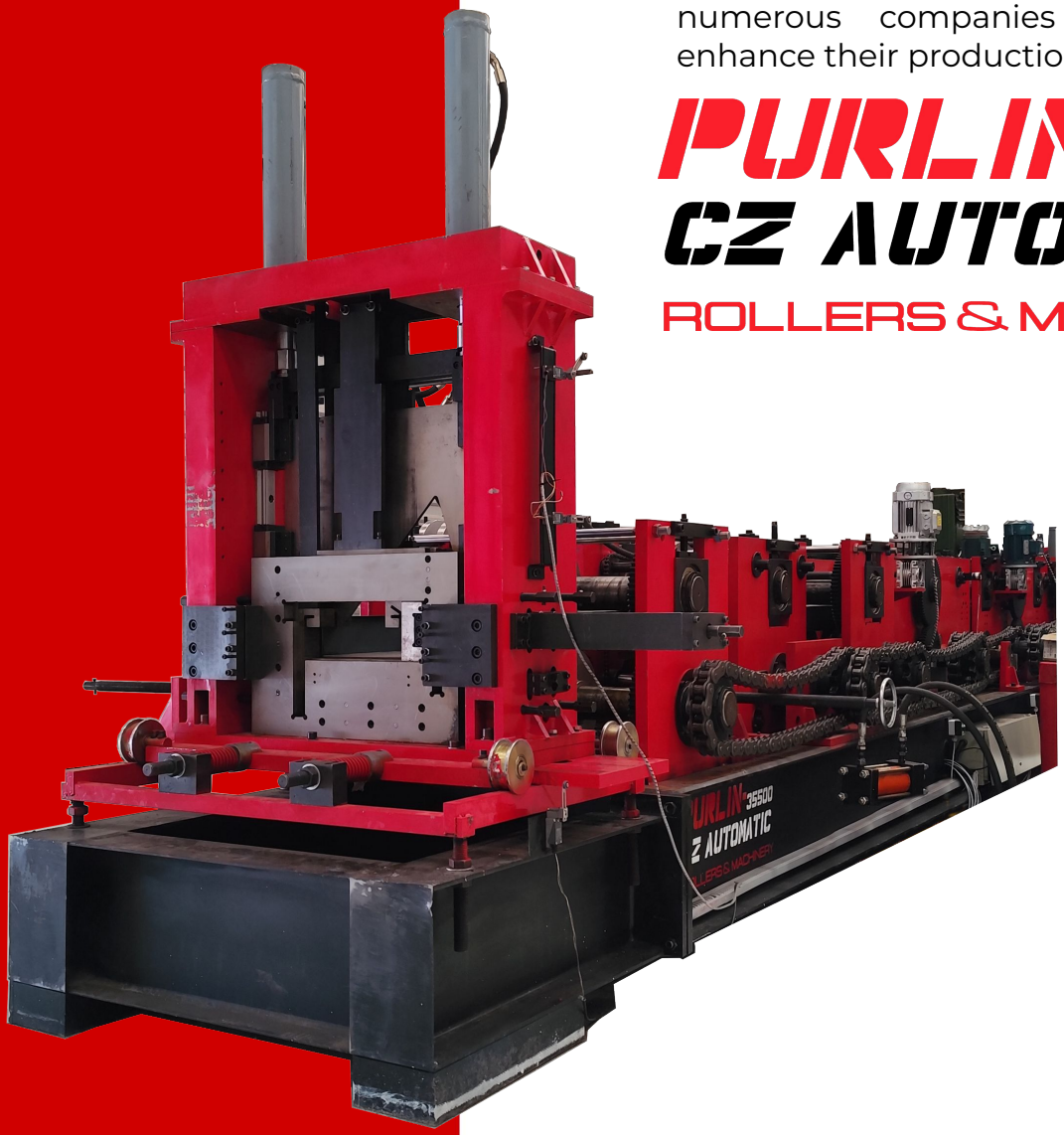
GSI

ROLLERS & MACHINERY

With over 15 years of experience in manufacturing rolling machines, GSI Rollers & Machinery stands out for its exceptional expertise in the industrial sector, both nationally and internationally. With a presence in more than 20 countries, we have helped numerous companies optimize and enhance their production processes.

PURLIN-14000 CZ AUTOMATIC

ROLLERS & MACHINERY



IN ATTENTION TO: _____

DATE _____

www.gsirollers.com

GENERAL DESCRIPTION

- **Main Motor:** 22 kW
- **Hydraulic Motor:** 7.5 kW
- **Rolling Thickness Capacity:** 18-10 gauge
- **Forming Speed:** 18-30 m/min
- **Voltage Range:** Must be requested in writing according to customer specifications.
  - GSI standard voltages in Mexico: 440/220 V, 60 Hz AC
  - For other countries, the machine will be manufactured according to the customer's requested standards, which must be specified in writing.
- **Rollers Diameter:** 80 mm
- **Number of Forming Towers:** 9 towers + auxiliary stations + Z-forming stations , totaling 18 stations
- **Total Weight:** 12 tons
- **Dimensions (W/L/H):** 10 m × 1.5 m × 1.6 m
- **Roller Material:** CR15/D2
- **Roller Hardness:** 55-60 RHC
- **Traction Bars:** Made of rectified 4140 steel
- **Initial Guide:**
  - Made of commercial 1045 steel
  - Manual adjustment with fastening bolts for position setting
- **Hydraulic Unit:**
  - Works with 52 Gallons of Mobil ISO 68 oil
  - No cooling system
  - Parker brand (or equivalent) solenoid valves
  - Regulating valve and relief valve
- **Cutting Dies:**
  - 4140 treated steel
  - D2 steel for cutting blades
  - 1018 steel for structure
  - CR12 steel for slides
  - 2500 PSI hydraulic cylinder
- **Final Cutting System:**
  - Blades and adjustable mold with a single screw for different profile models
- **Optional Features:**
  - 3 & 4 roller strip leveler
  - Initial strip cutting system
  - Motors and programming for C and Z profile size adjustments via touchscreen
  - Perforation die for screw holes

GENERAL DESCRIPTION

C&Z Purlin Roll Forming Description

A C&Z purlin roll forming machine is a piece of industrial equipment used in the manufacturing of C and Z-shaped purlins. Purlins are horizontal structural members used in the construction of buildings to support the roof or walls.

Here's a brief explanation of what C and Z purlins are:

C Purlin: C-shaped purlins are typically used to support roof panels. They have a horizontal shape resembling the letter "C" when viewed from the side. C purlins are often used in steel frame construction and provide structural support for roofing materials.

Z Purlin: Z-shaped purlins are typically used for wall panels and provide lateral support. They have a shape resembling the letter "Z" when viewed from the side. Z purlins are commonly used in industrial and commercial building construction.

A C&Z purlin roll forming machine is designed to produce these purlin profiles from coils of steel or other suitable materials. The machine operates by passing the raw material through a series of rollers that gradually shape it into the desired C or Z profile.

The roll forming process involves several steps, including cutting, punching holes, and forming the final shape. The machine can be customized to produce purlins of various sizes and specifications to meet the specific requirements of a construction project.

GENERAL DESCRIPTION

Some key features of a C&Z purlin roll forming machine may include:

Decoiler: This component holds the raw material coil and feeds it into the roll forming machine.
Roll Forming Stations: Multiple sets of rollers gradually shape the material into the C or Z profile.
Cutting System: The machine may include a cutting mechanism to trim the purlins to the desired length.
Control system: It has a computerized control system to precisely control the production process, allowing the dimensions of the profiles to be customized.

C&Z purlin roll forming machines are essential equipment in the construction industry, as they can efficiently produce structural components for a wide range of buildings.

Their flexibility in producing different sizes and shapes of purlins makes them versatile and valuable tools for steel frame construction projects.

C&Z Purlin Profiles

C&Z purlin profiles are structural components used in the construction of buildings, particularly in steel-framed structures. These profiles have distinctive shapes and serve different purposes in building construction.

GENERAL DESCRIPTION

Some key features of a C&Z Polyline Roller include:

C Purlin:
Shape: C purlins have a horizontal shape resembling the letter "C" when viewed from the side.
Usage: C purlins are primarily used to provide structural support for roof panels in steel-framed buildings. They are installed horizontally and support the weight of the roof covering and any additional loads.

Z Purlin:
Shape: Z purlins have a shape resembling the letter "Z" when viewed from the side, with flanges at the top and bottom connected by a vertical web.
Usage: Z purlins are typically used for supporting wall panels in steel-framed buildings. They are installed vertically and provide lateral support to the walls. Z purlins are also used in some roof applications where additional load-bearing capacity is required.
Key Characteristics of C&Z Purlin Profiles:

Material: C&Z purlins are commonly made from steel

Customization: These profiles come in various sizes to accommodate different building designs and load requirements.

Length: They are typically available in standard lengths or can be custom-cut to fit the specific dimensions of a construction project.

GENERAL DESCRIPTION

Hole Punching: Purlin profiles often have holes punched at regular intervals along their length. These holes are used for fastening the purlins to the structural framework of the building.

The choice between C and Z purlins depends on the specific structural requirements of the building and the intended application. C purlins are primarily used for roof support, while Z purlins are used for wall support. The decision may also be influenced by factors such as the design load, building codes, and architectural considerations.

Both C and Z purlin profiles are crucial components in modern steel-framed construction. They provide structural stability and support for various types of roof and wall cladding materials, making them essential for the construction of warehouses, industrial buildings, commercial structures, and more.

SPECIFICATIONS

PURLING	
PROFILE	5” to 12”
MOTOR	32 HP
FORMING TOWERS	21 - 22
ROLLING SPEED	15.24 a 18.29 m / min
WEIGHT	12 tons
HEIGHT	1.6 m
LENGTH	18.29 m
WIDTH	3.66 m
VOLTAGE	480 V, three-phase
ROLLHOLDER	5 Tons
APPLICATIONS	Construction
COIL WIDTH	Variable
MATERIAL THINCKNESS	Variable
CUTTING TYPE	Hydraulic shear
CONTROL SYSTEM	Automatic

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TECHNICAL DATA

EQUIPMENT	MOD. C/Z 14000 AT.
PIECE COUNT PROGRAMMING SCREEN	√
CUTTING DISTANCE PROGRAMMING	√
FAULT ALERTS	√
CUTTING DISTANCE ADJUSTMENT SCREEN	√
MANUAL MOVEMENT SCREEN	√
AUTOMATIC PURLIN MEASUREMENT PROGRAMMING (LARGE)	√
AUTOMATIC ROLLER ADJUSTMENT TABLE MOVEMENT (WIDTH/WAIST)	√
MANUAL CRANK MOVEMENT FOR ROLLER MEASUREMENT ADJUSTMENTS	
NO MANUAL MOVEMENT, MEASUREMENT ADJUSTMENT VIA SPACERS	
75MM Ø ROLLER BAR	
100MM Ø ROLLER BAR	√
125MM Ø ROLLER BAR	
PLATE SUPPORT	√
REINFORCED CAST IRON SUPPORT	
AUTOMATIC PUNCHING MACHINE (POST-FORMING)	√
AUTOMATIC PUNCHING MACHINE (PRE-FORMING)	
SHEAR WITH QUICK MEASUREMENT CHANGES AND LATERAL ADJUSTERS	√
SHEAR WITH BLADE CHANGE FOR MEASUREMENT ADJUSTMENTS	
SMOOTH SHEET CUTTER	
INITIAL COIL STRAIGHTENER	√
90 FT/MIN SPEED	
70 FT/MIN SPEED	√
18 MT/MIN SPEED	
20 KW MAIN MOTOR	√
30 KW MAIN MOTOR & REDUCER GEARBOX	
40000 KG WEIGHT	
9500 KG WEIGHT	√
8200 KG WEIGHT	
7500 KG WEIGHT	
C/Z/EAVE STRUT 4”- 12”	
C/Z 4”-10” PROFILE	√
C/Z 4”-12” PROFILE	
C/Z 4”-14" PROFILE	
MAX GAUGE 10	
MAX GAUGE 12	
MAX GAUGE14	√

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PRODUCTION SHEET

	PERALTE	PATIN	CEJA	THICKNESS
TIPÒ	**D**	**B**	**D**	**T**
4 X 1 3/4	101	40	13-25MM	3.42
4 X 1 3/4	101	40	13-25MM	2.66
4 X 1 3/4	101	40	13-25MM	1.9
4 X 2	101	50	13-25MM	3.42
4 X 2	101	50	13-25MM	2.66
4 X 2	101	50	13-25MM	1.9
5 X 2	127	50	13-25MM	3.42
5 X 2	127	50	13-25MM	2.66
5 X 2	127	50	13-25MM	1.9
6 X 2	152	50	13-25MM	3.42
6 X 2	152	50	13-25MM	2.66
6 X 2	152	50	13-25MM	1.9
8 X 2 3/4	203	69	13-25MM	3.42
8 X 2 3/4	203	69	13-25MM	2.66
8 X 2 3/4	203	69	13-25MM	1.9
10 X 2 3/4	254	69	13-25MM	3.42
10 X 2 3/4	254	69	13-25MM	2.66
12 X 3	304	69	13-25MM	3.42
12 X 3	304	69	13-25MM	2.66
12 X3.5	304	88.9	13-25MM	3.42
12 X3.5	304	88.9	13-25MM	2.66
12 X4	304	100	13-25MM	3.42
12X4	304	100	13-25MM	2.66

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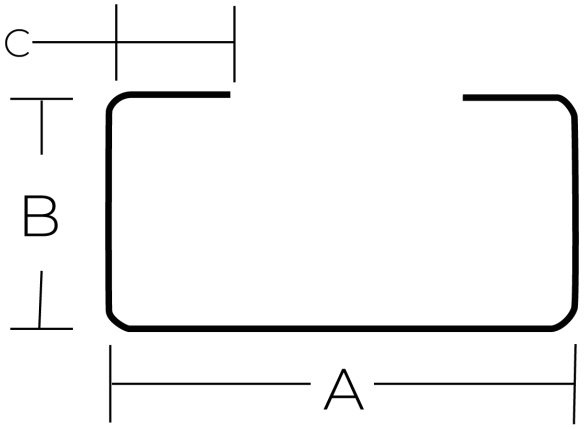
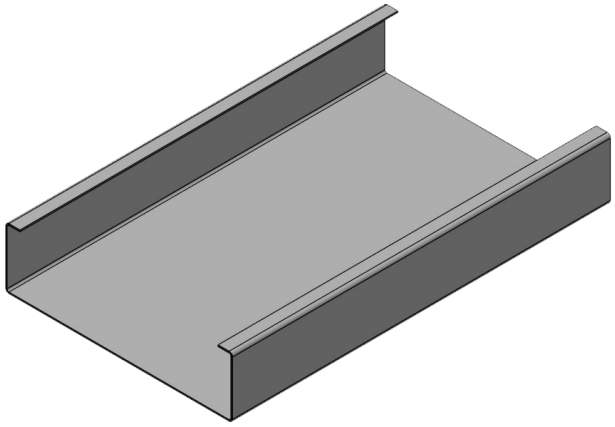
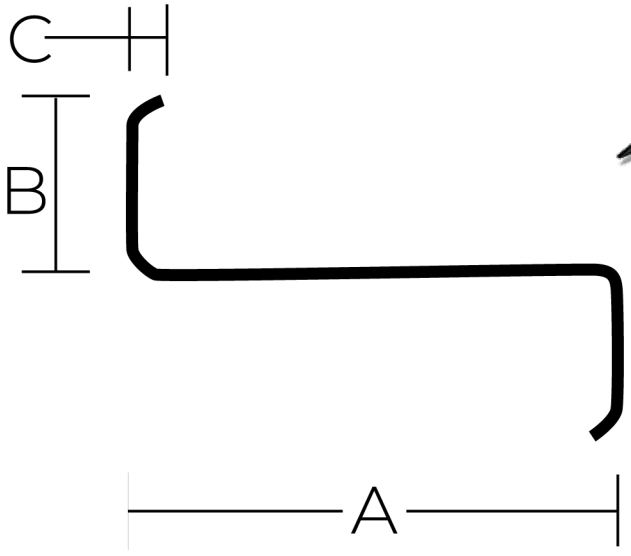
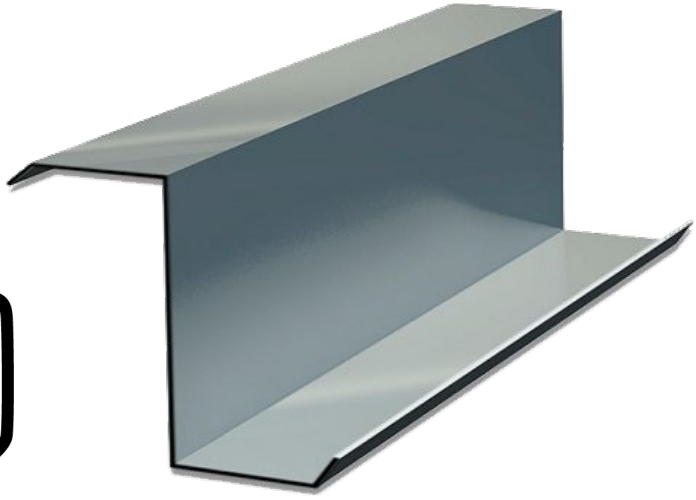
C PURLIN





Z PURLIN





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PRODUCTION PROCESS OVERVIEW

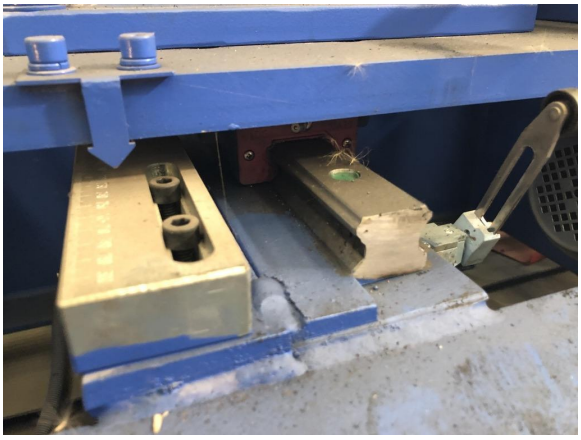
The manufacturing line begins with a coil holder, which optimally stores the raw material, in this case, a 10-gauge steel strip.

The purlin rolling process starts with shaping the profile to the user's specified dimensions. The strip must be leveled before entering the forming mill, where it is then shaped into either a C or Z profile.

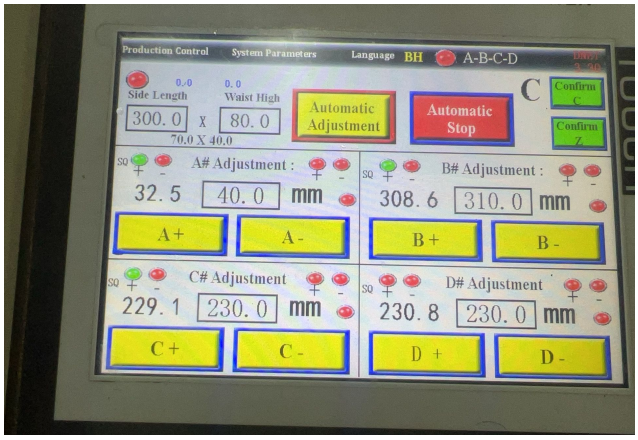
Additionally, the profile can include pre-punched holes manufactured directly at the plant. The final product is cut to the user's desired length, with a tolerance variation of only ±1 mm.

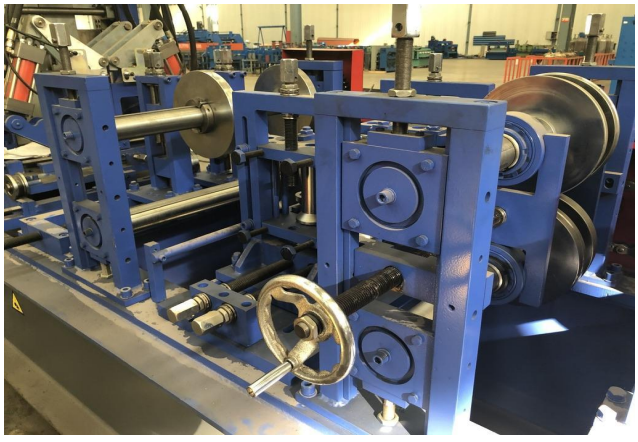
QUICK PROFILE CHANGE SYSTEM

QUICK MEASUREMENT SYSTEM



C-PROFILE CHANGE POWERED BY MOTORS & CONTROLLED BY PLC





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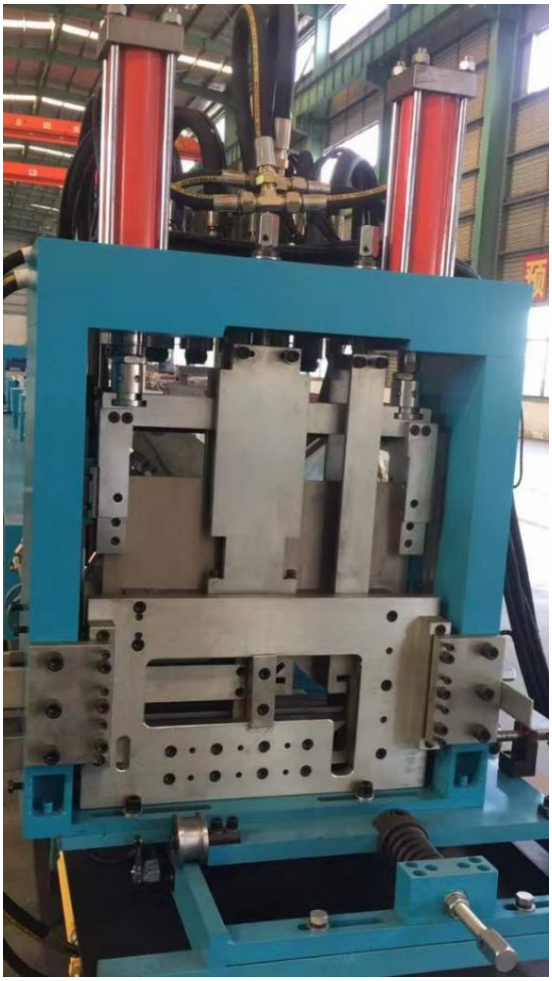
CUTTING SYSTEM

Cutting shear:
quipped with lateral adjustments for all sizes, eliminating the need to change blade molds

Independent punching units
featuring quick punch changes and the ability to install different shapes or sizes for punching.



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MEASUREMENT CONTROL SYSTEM

ELECTRICAL SYSTEM

- **Brand: Siemens**
    - Includes contactors, relays, push buttons, terminal blocks, grounding system, and wiring duct.
- **Control Screen:**
    - 7-inch cBrand: YOWIN
    - olor Touch Screen for centralized control of:

      a) Piece measurement

      b) Piece quantity

      c) Start/stop control of the main motor

      d) Hydraulic pump activation

      e) Manual operation of components:
        - Main mill motor
        - Cutting shear

      f) Alarm indicators for:
        - Motor overload
        - Sensor failures
        - Cycle start and completion, etc.

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DECOILER

AUTOMATIC STRIP DECOILER

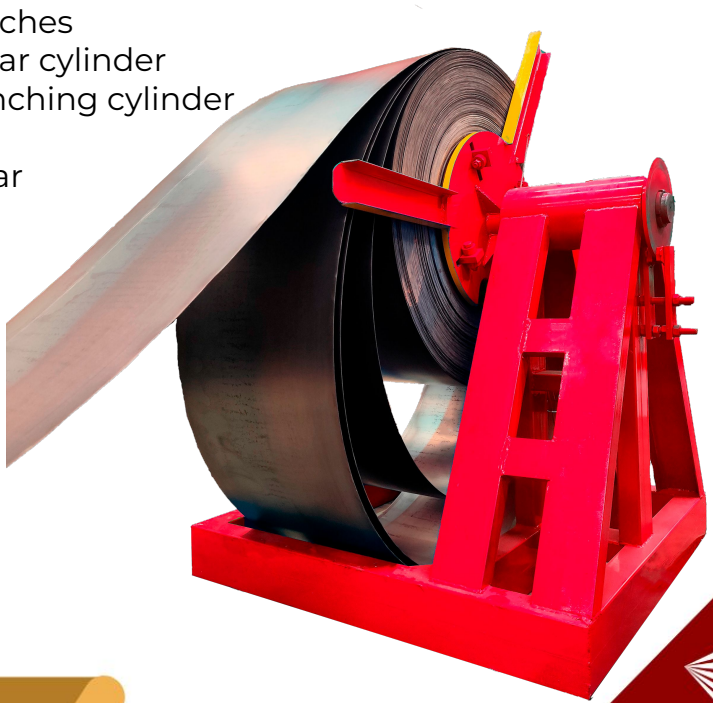
Operates automatically with its own drive motor.
Controlled by a variable speed drive to synchronize speeds between the sheet feeder and uncoiler.
Activated and stopped by an inductive sensor at its base, which detects the amount of fed sheet metal.

TECHNICAL SPECIFICATIONS

Capacity: 5.5 tons
Accepts strips up to: 60 cm
Mandrel opening: 27 inches
Outer coil diameter: 1.20 m
Input voltage: 220/440 V AC, 3-phase
Output voltage: 220/440 V AC, 3-phase
Helical gearbox reducer
Manual mandrel operation
Chassis and structure made of A36 steel
Floor anchoring base

SPARE PARTS SET:

Electrovalve for hydraulic manifold (pto 5)
Set of hydraulic hoses
Set of punching punches
Set of o-rings for shear cylinder
Set of o-rings for punching cylinder
Encoder
Set of blades for shear



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PRICE TABLE

QTY	ITEM	PRICE

GSI Rollers & Machinery
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WORLDWIDE SERVICE

LOCATIONS

EE.UU.
2550 Pacific Ave, Suite 700, Dallas, TX

MÉXICO
Cto. Japón #106 parque ind. San Fco. 20300 Ags, MX

TERMS & CONDITIONS

Delivery Terms

Delivery will be completed within 120 business days from the date of the initial deposit. Any changes to the original design, client-requested engineering modifications, or client observations during or after the manufacturing process will extend the agreed-upon delivery timeline. Any delays will be documented in writing and adjusted according to the new estimated time provided by our engineering and production departments.

Location

All equipment will be delivered from GSI's facility in Aguascalientes, Mexico. Transportation costs will be quoted separately based on the client's preferred freight service or transportation method.

Machine Shipment Preparation

The preparation time for machine shipment is 3-5 business days, depending on the required packaging for transport.

- International Shipping Packaging (if required): $3,000 USD
- National Shipping Packaging (if required): $1,000 USD

Testing & Calibration Materials

The client must provide all necessary materials required for testing and calibration. If the client is unable to provide these materials, they will be responsible for any associated costs. The testing period may be adjusted based on the client's feedback and satisfaction, which will reflect the usage of these materials.

Installation Responsibilities

The client is responsible for costs related to equipment installation, including unloading at the final location, as well as electrical, pneumatic, and hydraulic installations within the facility. If the client requires modifications related to installation, process improvements, or any other changes not covered in the quotation, they must submit a written request to GSI for evaluation and pricing. GSI personnel are not authorized to make changes outside the agreed terms.

Equipment Acceptance

The client must accept delivery of the equipment at GSI's facilities and sign an acceptance form before final shipment. Any quality or performance concerns must be addressed prior to shipment. Once the equipment is accepted, GSI will not be responsible for any subsequent claims regarding quality or performance.

Equipment Warranty

GSI provides a written warranty under our Warranty Policy, covering mechanical or electrical defects caused by manufacturing errors. The warranty includes:

- Mechanical Parts: 2-year warranty
- Electrical Parts: Warranty is subject to the manufacturer's terms

The warranty will be void if any modifications, repairs, or parts replacements are made by anyone other than GSI ROLLERS & MACHINERY or without written authorization. Improper handling of the equipment, as determined by GSI technicians, will also void the warranty.

The recalibration of rollers, shears, dies, and speed variator settings is not covered under the warranty, as these are considered normal adjustments based on material types and working conditions. Any required recalibration or adjustment post-delivery will be charged based on a technical service visit and prior quotation.

The client may perform repairs or adjustments only after obtaining written authorization from GSI, and a specialized technician must assist in the process. The client must retain the signed acceptance form for future reference.

Pricing & Payment Terms

Prices: All prices are exclusive of VAT (16%), which will be added to the total.

Payment Terms: 40% deposit at the time of order confirmation, 60% due before shipment.

Price Adjustments: Prices may vary based on changes to the equipment design, engineering modifications, or delays caused by the client. If the payment is delayed beyond the agreed terms, the price will be adjusted to reflect the final payment date. Promotional prices are only valid during their respective promotional period and require a signed quotation from GSI to be honored.

Bank charges related to currency exchanges, deposit fees, or additional administrative fees from financial institutions are the responsibility of the client and non-negotiable. Payments must be made in full to GSI's designated bank account to be considered valid.

Invoicing

Invoicing will reflect the payments received and their respective dates. GSI will issue receipts and invoices accordingly, which cannot be modified or reissued with different amounts or dates once generated.