

Roll Forming Machines

Masterwork Enterprise

Creativity

Happiness & Communication

Moving Customer's heart



IL KWANG is committed to provide total solutions for sandwich panel production lines, roll forming machines in the construction and automotive industries.



Roll Forming Machines

Roll Forming Machine for Roofing Sheet

Roll Forming Machine for Roof Tile

Roll Forming Machine for Deck Plate

Roll Forming Machine for Channel(Purlin)

Roll Forming Machine for Façade(Siding)


Roll Forming Machine for Standing Seam Roof

Roll Forming Machine for Side Member

Roll Forming Machine for FRAMECAD

A dramatic, high-contrast photograph of a welder working on a metal structure. The welder is wearing a dark, reflective helmet and yellow protective gloves. Bright blue and white sparks are flying from the welding point, creating a dynamic and industrial scene. The background is dark, emphasizing the intense light from the welding process.

Passion



Since its establishment in 1988, IL KWANG METAL FORMING CO., LTD. started developing various sandwich panel production lines (sandwich panel machines) with different isolating materials such as polyurethane, mineral wool and expandable polystyrene (EPS). IL KWANG has been successfully developing and integrating its technology of roll forming equipment and insulation materials into sandwich panel production lines which was a keystone of becoming the leading manufacturer in both domestic and overseas market.

Nowadays, IL KWANG METAL FORMING CO., LTD. is the leading manufacturer of sandwich panel production equipment in the world market. with several business partnerships with other global companies such as FRAMECAD, CANNON, OMS GROUP, HENNECKE, and others, IL KWANG has managed to deliver its technology to over over the world as well as boost its brand awareness around the globe.

With its usual invariability, IL KWANG has always been focusing on differentiated technology to meet customer's needs and expectations.

Being the first company to develop sandwich panel production equipment with a variety of insulation materials, IL KWANG has succeeded in exporting business by providing reasonable and competitive rates, high durability and quality of products and excellent after-sales service

All sandwich panel production equipment presented in this catalogue is fully automatic, requires minimum control by operators and can continuously and efficiently produce sandwich panels of exquisite and diverse shapes. This equipment is designed and manufactured with such advantages as high durability, easy management, and Technology superior to the largest European competitors. Its relatively competitive price and outstanding quality has attracted many customers and has been exported to over 70 countries as well as domestic market.

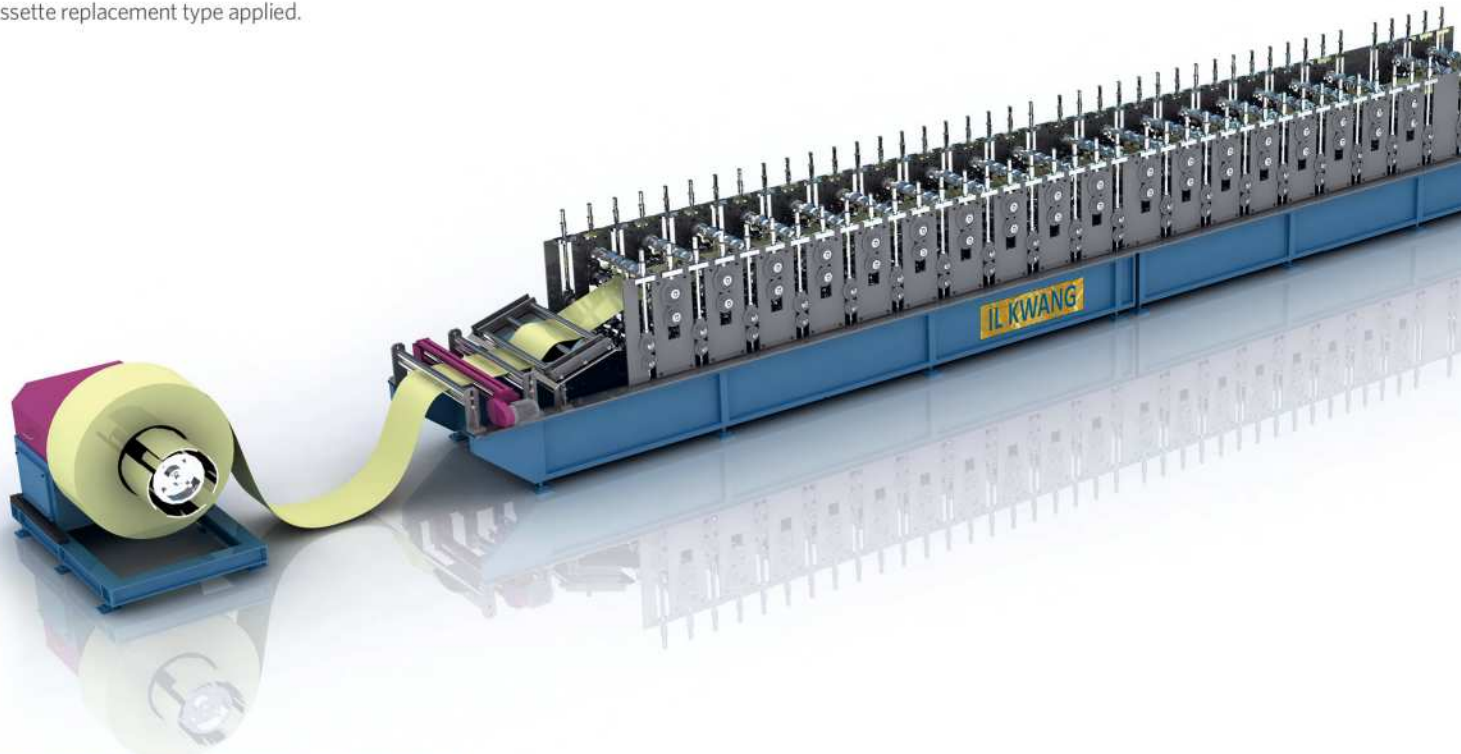


Roll Forming Machine for Roofing Sheet

Roll forming machine for roofing sheet

Our roll forming lines are designed to increase production efficiency by producing various profile shapes for architectural and automotive industry.

For roofing sheet roll forming machine there are the Double layer type, Rail moving type, and Cassette replacement type applied.



In a two-layer(Double layer type) system molding rollers are configured to produce two different products in a single-layer type of forming machine frame, increasing production efficiency and minimizing footprint of the equipment. The unit is suitable for a single sheet production and is also used for other production lines. The Rail moving type can produce a wider range of shapes compared to the double layer type. But it requires a large space and a little more expensive than the double layer type. It is automatically driven by a motor system.

This equipment is manufactured based on the world's top technology and experiences, so the Roofing Sheet Production Line has high durability and convenient management. It enables to manufacture the products of world's best grade with various exquisite wave forms to meet customers' requirements. In case of applying high speed rotary cutting system, products can be

manufactured at the high speed of 100m/min or even faster. Un-coiler that inputs and releases coil, Roll Forming machine that makes shape of coil, and Shearing Unit that cuts the fabricated roof sheet, Auto Stacking Unit that loads the completed roofing sheets after cutting properly, and discharges products after loading.



- 1 Roll forming machine for various roofing sheets
- 2 Cassette rafts
- 3 Driving clutch
- 4 Roll forming machine for various roofing sheets



The cassette type is designed to enable a forming machine to produce various profile shapes by simply just changing the cassette units. The cassette can be changed through the efficient and rapid one-touch clutch.

A combined structure of the cassette type with the rail moving type or the double layer type with the rail moving type can be designed to satisfy user's needs and help obtain competitive advantage providing various options of merging several roll forming machines in one line.

Roll forming machines

Roll forming machines manufactured by IL KWANG are widely used for architectural and automotive steel sheet forming. Forming process is performed by different types of carbon materials (S45C, SCM415, SCM440) and consists of forming rollers, powerful driving system, and reliable hydraulic system.

Utilizing various kinds of steel coil, our machines are able to continuously produce a variety of shapes and patterns of profile structure that is extensively used in exterior building, carcass construction, automobile frames and exterior structures.



1 Roll forming machine for deck plate

2 Roll forming machine for
Corrugated roofing sheet

Un-Coiler

This is a device used to supply steel coil into the line.
To load coil onto the uncoiler more safely and easily a coil car is used.



Entry part

- 1 2 Mandrel type with coil car
- 3 Entry guide unit and front shearing unit
- 4 Coil feeding to pinch roll

The device stably supplies steel coil fed from Un-coiler to pinch roll & Roll forming machine, inputting it to the equipment and leveling precisely.

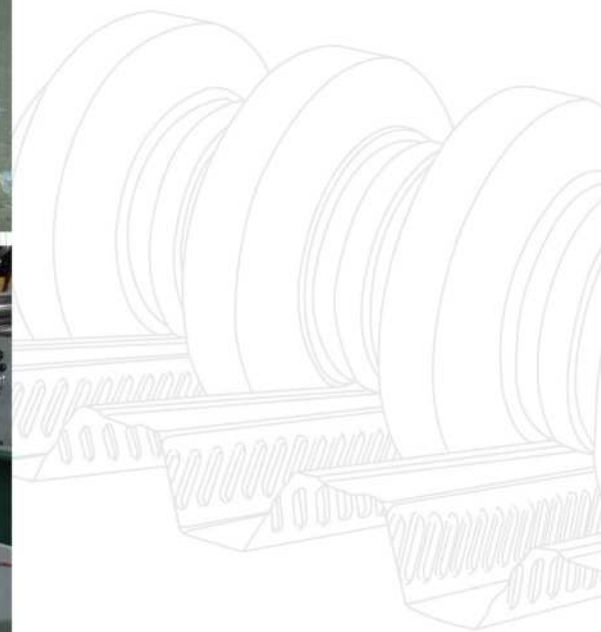


Roll forming system

It is a device that continuously gives shape to roof sheet as steel coil fed from Un-coiler is engaged between the upper and lower sections of a metal rollers.

Usually it makes the beautiful and delicate shape of variety wall and roof type panel.

It designed in cassette type and rail way wheel type to easily change to make different shapes.



1 2 Roll forming machine for various roofing sheets

Shearing unit

It precisely cuts and discharges the completed roof panel products. By required speed, GO & STOP shear, Fly type shear, Rotary type shear can be applied. The Rotary type shear, in particular, can be manufactured with the high speed of 100m/min or even faster.



1 Flying shearing unit

2 Rotary shearing unit

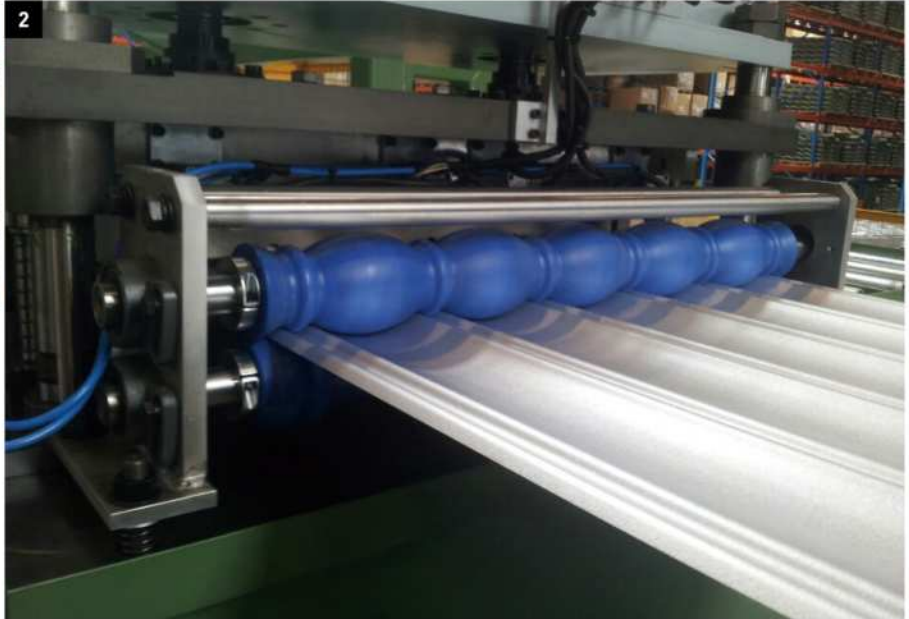


Roll Forming Machine for Roof Tile



Fully automatic roll forming machine for roof tile

The roof tile roll forming machine is a world-class production equipment that is designed to efficiently produce all kinds of profile shapes and waveforms of roofing sheets.



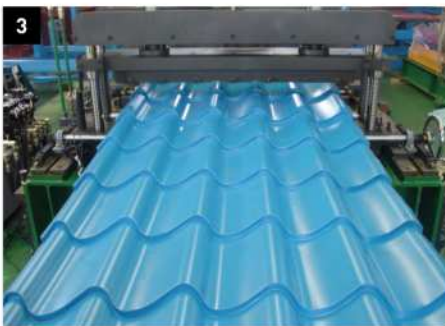
Roll forming machine

This unit can utilize the Cassette type or the Double layer type to produce all kinds of beautiful shapes through the multi stage rolls.

Shearing & Drawing & Stacking units

- 1 2 Roll forming machine for roof tile
- 3 4 Drawing and Cutting unit
- 5 Stacking unit for roof tiles

The drawing unit applies steps with constant depth to products forming of which has been completed. Scratching does not occur on products at drawing as rigidly finished blade material is used. The shearing unit is used to cut fabricated roof sheet, cutting precisely the wave form derived from the Roll Forming machine to required length. Various ways can be applied, depending on the required output.



Roll Forming Machine for Deck Plate

Coil entry system

This device is used to supply steel coil (0.8-1.6mm) into the line and gradually feed it during production. The coil car is used for loading coil more safely and easily.



Roll forming machine for deck plate is manufactured based on the world's top technology and experience, and is equipped with parts of high durability and convenient maintenance.

Deck plate panels produced on this line

are made of the steel coils (0.8 ~ 1.6mm Thickness) and efficient for the strength reinforcement. Roll forming machine for deck plate consists of Un-coiler that inputs and releases coil, Pinch Roll Unit that exquisitely inputs coil, Roll Forming machine that forms the required shape and embossing through multi-stage forming roll, Shearing Unit that cuts fabricated deck plate panel, and Auto Stacking Unit that loads completely cut deck plate panels.



1 2 Embossing forming machine



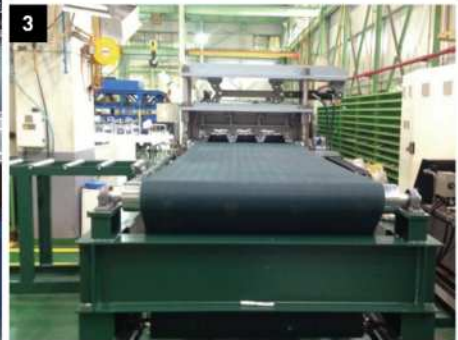
Roll Forming machine

This device provides aesthetic and unique profile shapes through the multi stage forming and microwave forming rolls. In case if the Cassette type or the Double layer type are applied, more diverse shapes can be formed on one single line. All rolls undergo heat treatment and chrome plating process to prevent abrasion and deformation. Roll bearings are reinforced and durability of the equipment is maximized in order to distribute the load generated on the surface of the roller shafts.

1 2 3

Roll forming machine for deck plate





Shearing Unit

This device is used to cut deck plate panel, cutting precisely the wave form derived from the Roll Forming machine to the required length. Various ways can be applied, depending on the required output.

1 2 3 Flying shearing unit with belt conveyor

4 5 Auto stacker



Auto Stacking Unit

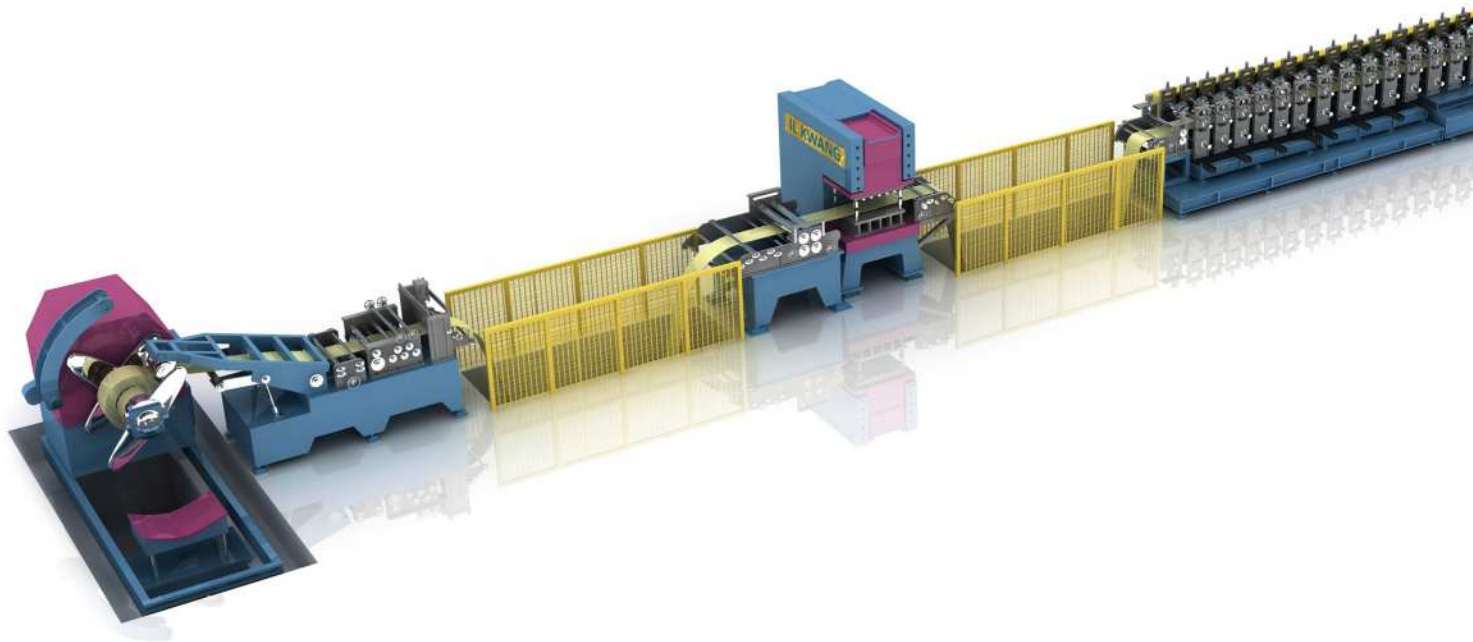
Auto Stacking Unit is a device that loads the completed deck plate panels after cutting properly, and it can discharge products in various ways after loading.



Roll Forming Machine for Channel(Purlin)

Un-Coiler

Un-coiler is a device that inputs steel coil to feed it stably to the equipment. Using Coil Car makes it easy to load and change Coil and the mandrel shaft expands and contacts by a hydraulic system.



This Roll forming machine for channel(purlin) is manufactured based on the world's top technology and experiences, has high durability and convenient management. It exquisitely forms diverse wave shapes

to meet customers' requirements, and continuously and conveniently produces world's top purlin products of C. Z., Omega (Rack), Sigma profile as well as guardrails for road. Roll forming machine for channel(purlin) consists of Un-coiler that inputs and releases coil, Pinch Roll & Leveling System that exquisitely inputs coil, N.C Feeder & Punching Unit that punches and notches the input coil precisely, Roll Forming machine that makes shape through Multi-stage Forming Roll, and Shearing Unit that cuts fabricated C & Z profile.





Pinch Roll & Leveling System

The device stably supplies steel coil fed from Un-coiler to Punching System, inputting it to the equipment and leveling precisely. There are a coil opener and leveling unit installed to control elasticity and loosening of coil and to ensure its flatness. It also has a front shearing unit operated by a hydraulic system to replace coil and change product.

1 2 Coil feeding system : Pinch roll, Leveller, NC feeder



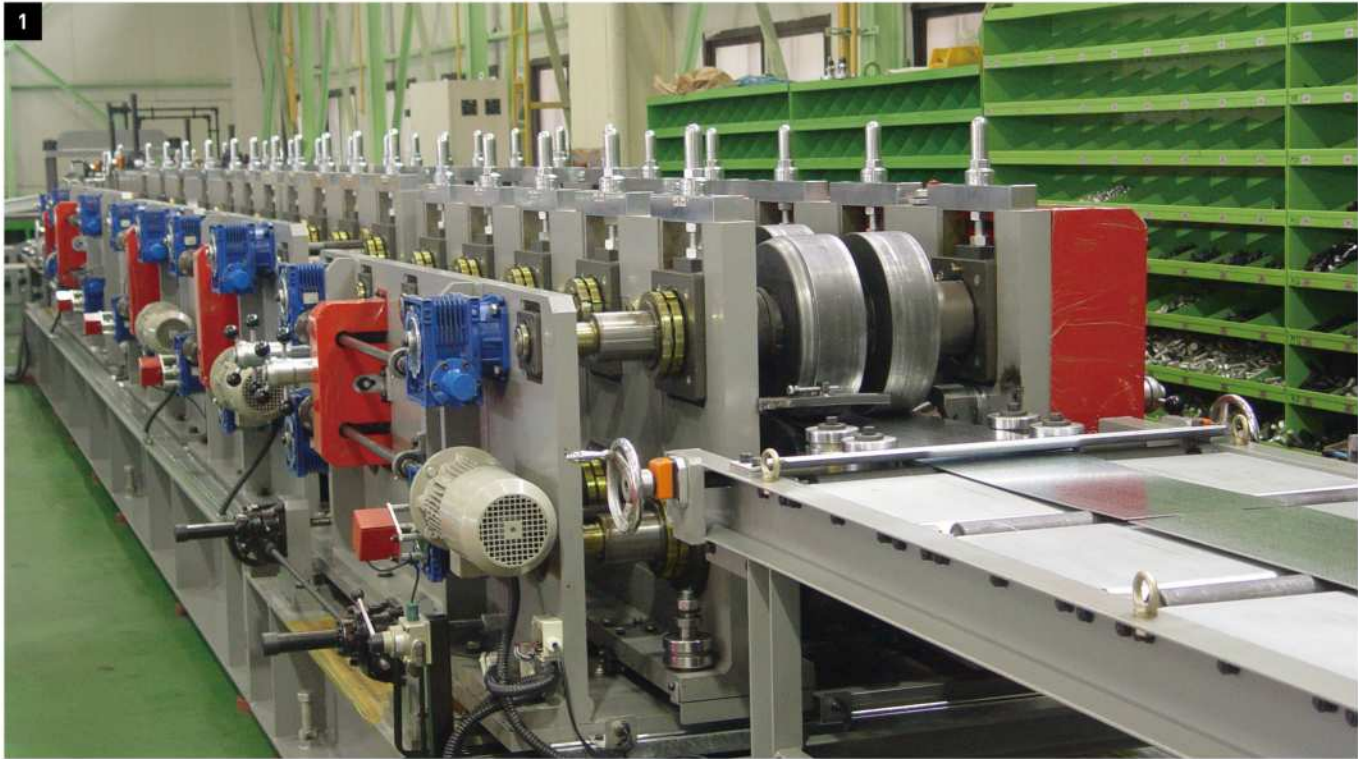


N.C.Feeder & Punching Unit

- 1 Mechanical punching system by
- 2 Mechanical punching system by punching presses

The punching unit and N.C. feeder are used to perform punching and notching patterns of various exquisite and functional structures on the input coil required for C & Z purlin profiles. In order to maximize the variety of available patterns needed for mass production the automatic numeric control system of high precision punching has been developed and utilized.





Roll Forming machine

The multi-stage forming and microwave forming rolls provide an aesthetic shape to the input coil, and if Cassette type or Double layer type are applied, more diverse profile shapes like U-bar and Track can be produced on a single line. In addition, an automatic width and height adjusting system is used to produce profiles of a variety of sizes.

- 1 2 3 Roll forming machine
for channel(purlin)
4 Straightening unit





1 Notched "C" channel(purlin) profile

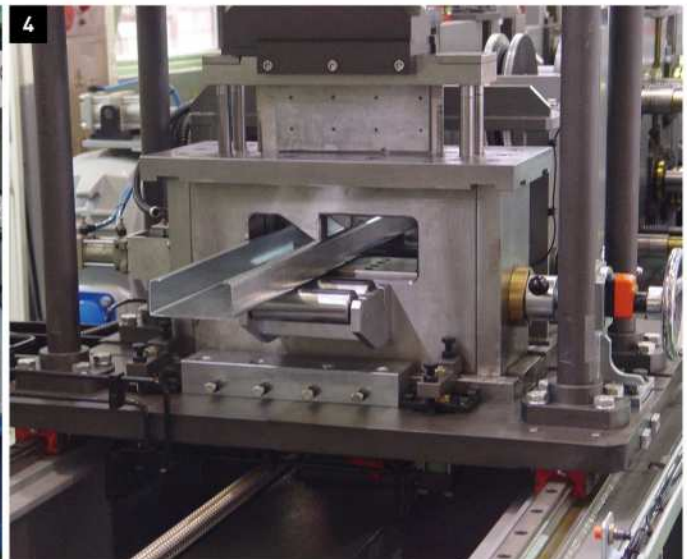
2 Auto stacking unit

3 Shearing mold changeable

4 Flying shearing system for channel(purlin)

Shearing Unit & Auto stacker

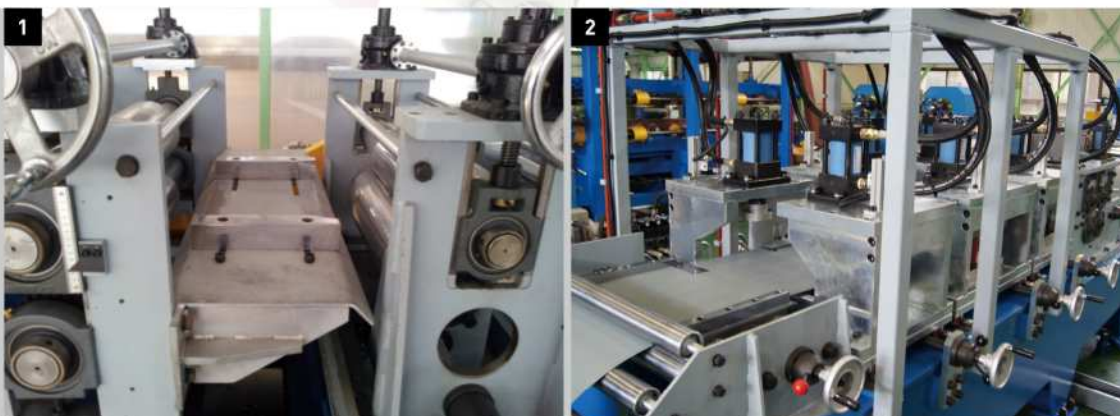
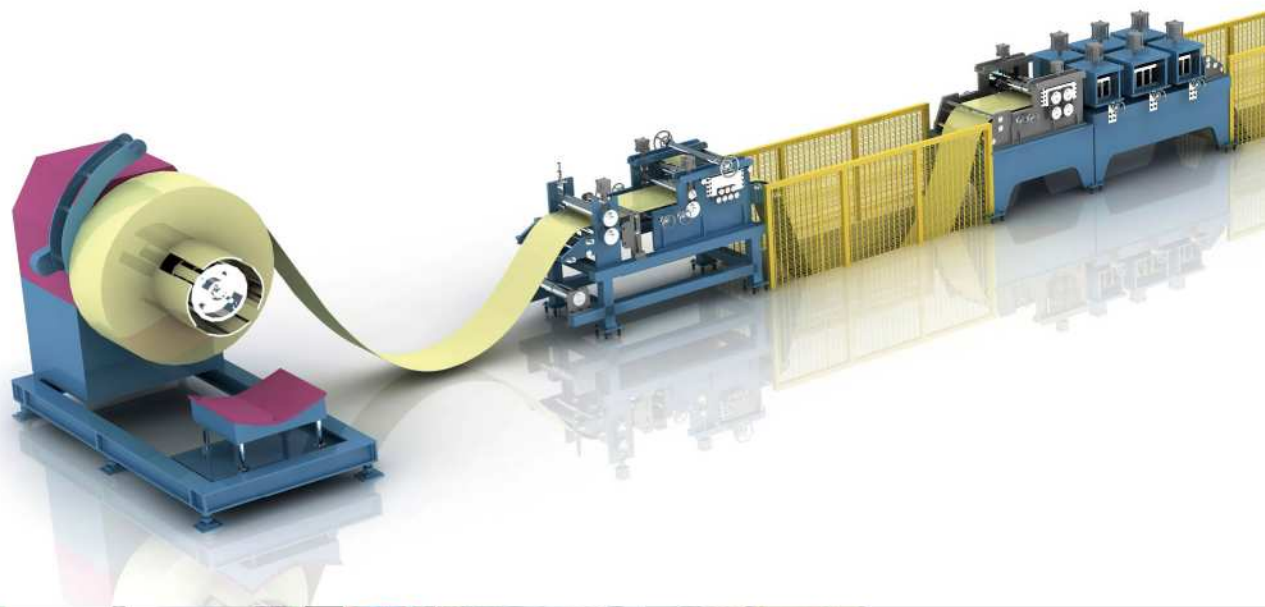
It precisely cuts and discharges products. Various ways can be applied, depending on the required output such as GO & STOP, Shear Manufacturing and Fly-type Shear Manufacturing.



Roll Forming Machine for Façade(Siding)

N.C. Feeder & Punching Unit

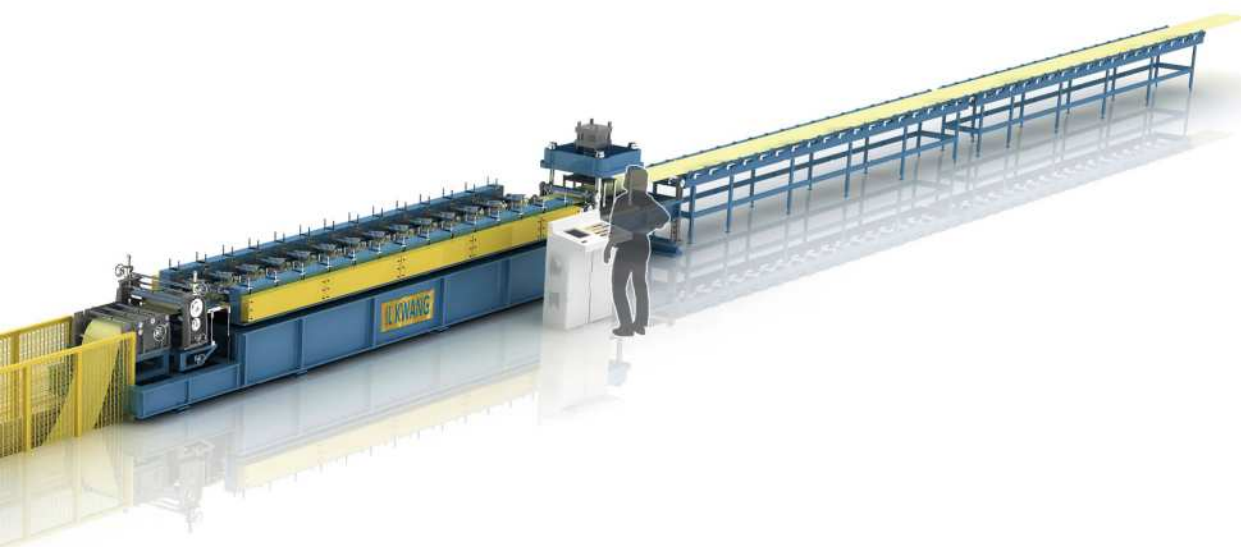
The punching unit and N.C. feeder are used to perform punching and notching patterns of various exquisite and functional structures on the input coil required for siding profiles.



Roll forming machine for Façade(siding) is manufactured based on the world's top technology and experiences, and has high durability and convenient management. The Façade(siding) panels produced by this

equipment have a variety of shapes and forms for elegant exterior.

Roll forming machine for Façade(siding) consists of Un-coiler that inputs and releases coil, Pinch Roll & Leveling System that exquisitely inputs coil, N.C Feeder & Punching Unit that punches and notches the input coil precisely, Roll Forming machine that makes shape through Multi-stage Forming Roll, and Shearing Unit that cuts the produced Façade panels.



- 1 Middle forming and guide unit
- 2 N.C. Feeder & Punching Unit



Shearing unit

This device precisely cuts and bends products. Various cutting and bending ways can be applied according to the required output. The function of simultaneous 90° bending of both ends is utilized to help producing Façade panels more effectively.

Coil entry & punching system

The device stably supplies steel coil fed from Un-coiler to Punching System, inputting it to the equipment and leveling precisely.



- 1 Punching & Notching units
- 2 Roll forming machine for Façade (siding)
- 3 Pinch roll & Leveling system
- 4 Middle forming rollers for microwave





Roll forming & Shearing units

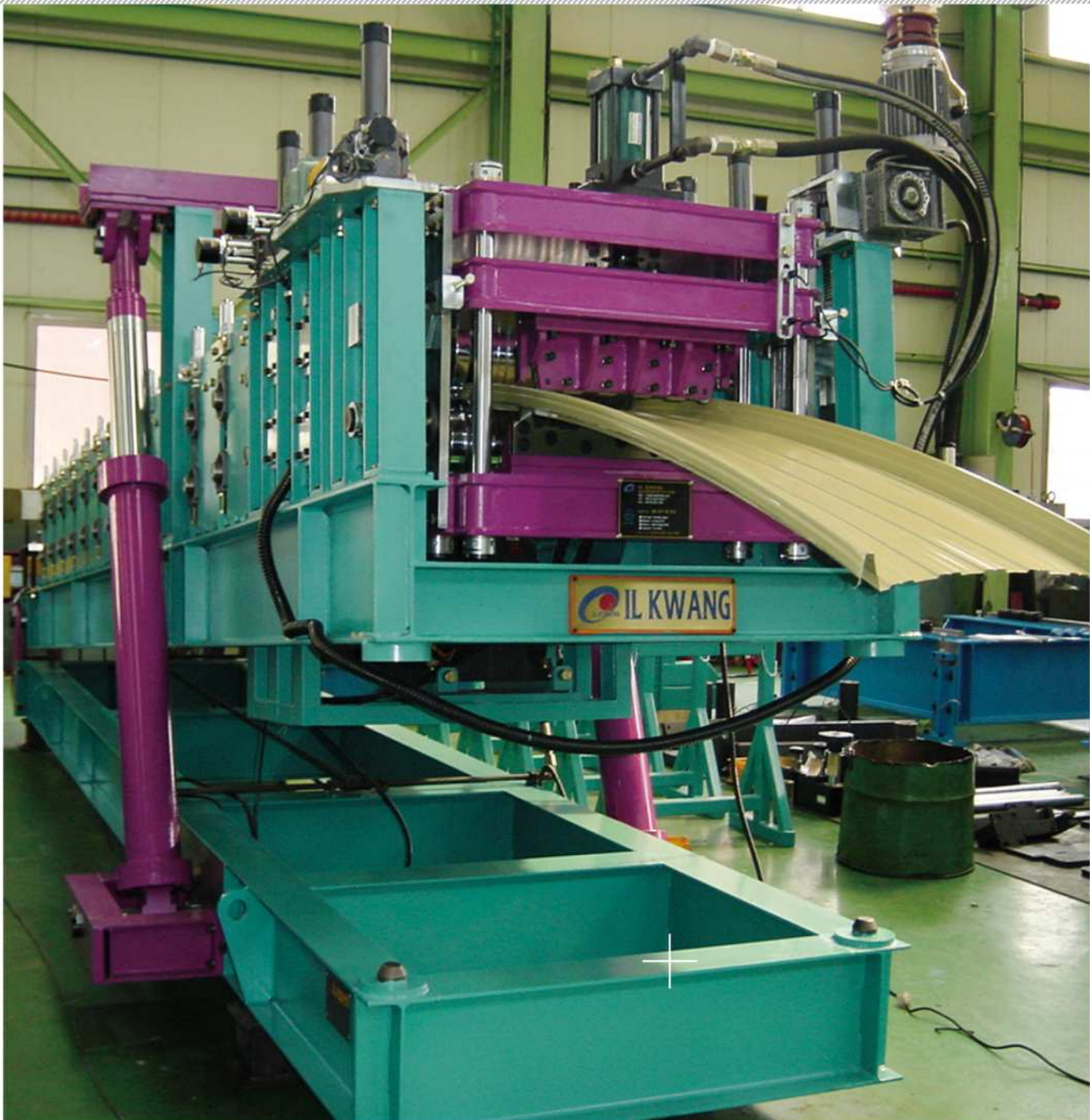
The multi-stage forming and microwave forming rolls provide an aesthetic shape to the input coil.

1 Roll forming machine for Façade(siding)

2 3 Shearing unit

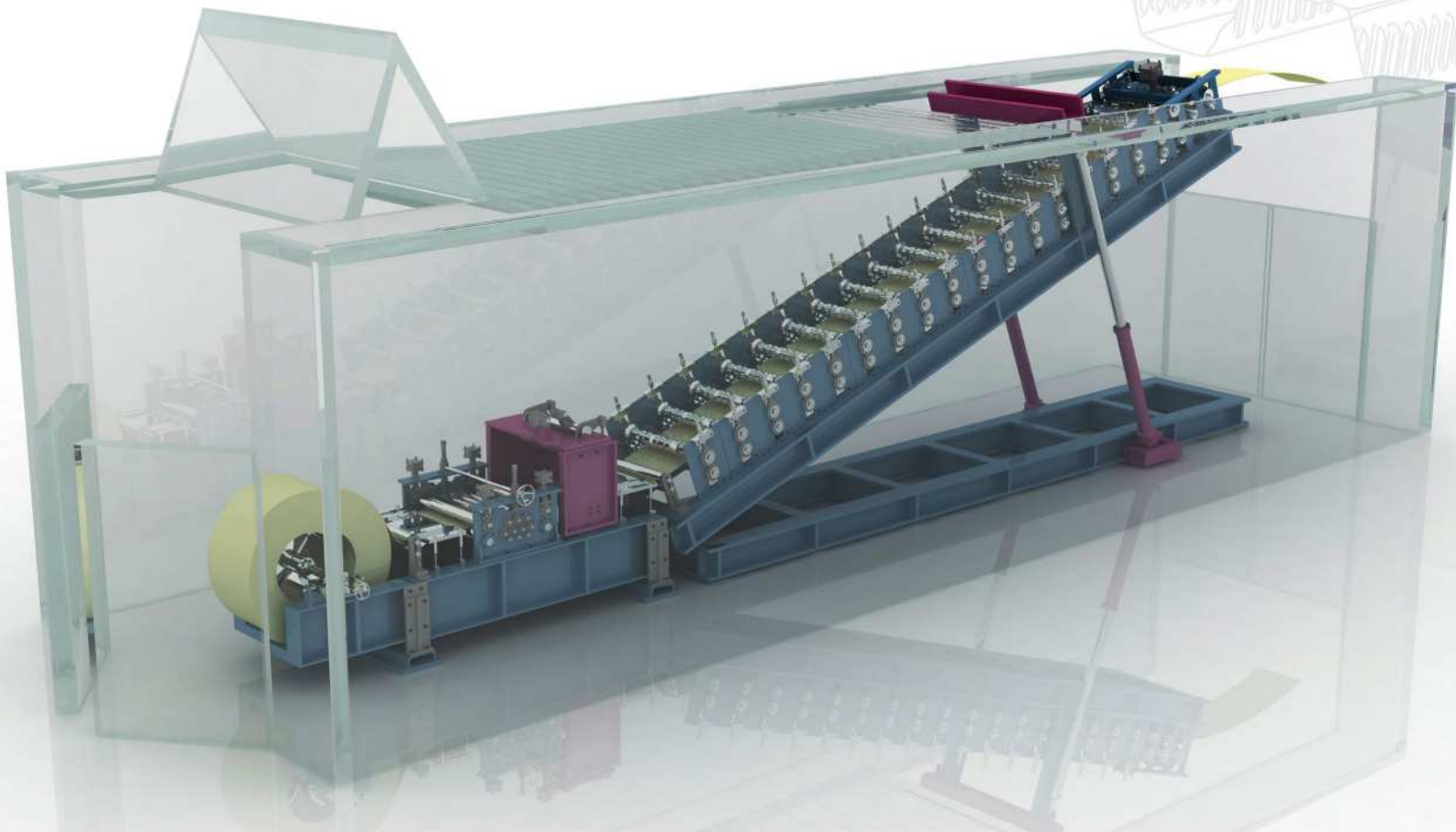


Roll Forming Machine for Standing Seam Roof



Roll forming machine for standing seam roof

This Roll forming machine for standing seam roof is manufactured based on the world's top technology and experiences, and has high durability and convenient management.



This equipment is able to produce roofing products of plate and arch profile types and the angle and length of arch can be easily adjusted. Fabricated products are rigid, their surface is intact and they are easy to install. If the equipment is mounted in a 40ft container, products can be manufactured at construction sites.

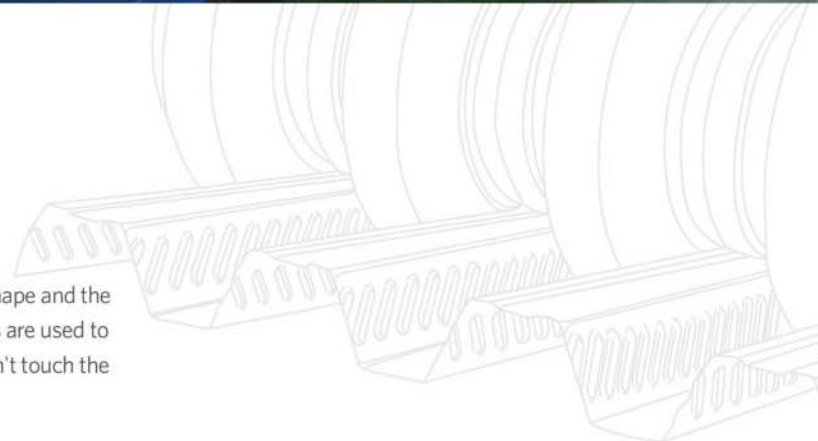
Roll forming machine for standing seam roof consists of Un-coiler that inputs and releases coil, Roll Forming machine that forms shape through multi-stage forming roll, and Shearing Unit that cuts and bends the fabricated roof panels.



Roll forming machine for standing seam roof

Roll forming machine

The multi-stage forming and microwave forming rolls provide an aesthetic shape and the last 3 rolls form the input coil to the arch shape. Two large hydraulic cylinders are used to adjust the position of discharging the finished products so arched panels won't touch the ground.



Portable system

Transportation costs can be minimized as manufacturing of products can take place right at a construction site if the equipment is mounted in a 40ft container.



Portable system

Roll Forming Machine for Side Member

The equipment is manufactured based on the world's top technology and experiences, and Roll forming machine for Side member is equipped with high durability and convenient management. It forms U Bar and G. V. Side Member of 6 ~ 12mm thickness for commercial vehicles and the equipment has been installed at Hyundai Motor Company in Korea, China and Asia Motor Group (AMW) abroad. Recently, the molding method is applied and recognized as the most suitable for auto parts production equipment after the pressing method. Our Roll forming machine for Side member is based on 25 years of continuous technical development of production and assembly of automotive products. The thickness and width adjustment system enables production of a complete set of all required products and is automatically controlled. The forming rollers have been designed based on the structure calculation program considering a sufficient rigidity of side member profiles. This machine is developed to apply profile forming at the same time as secondary processing such as punching or bending. Roll forming machine for Side member consists of Un-coiler that inputs and releases coil, Pinch Roll & Leveling System that exquisitely inputs coil, Roll Forming machine that makes shapes through Multi-stage Roll Forming machine, and Shearing Unit that cuts the fabricated products.

1 Side members

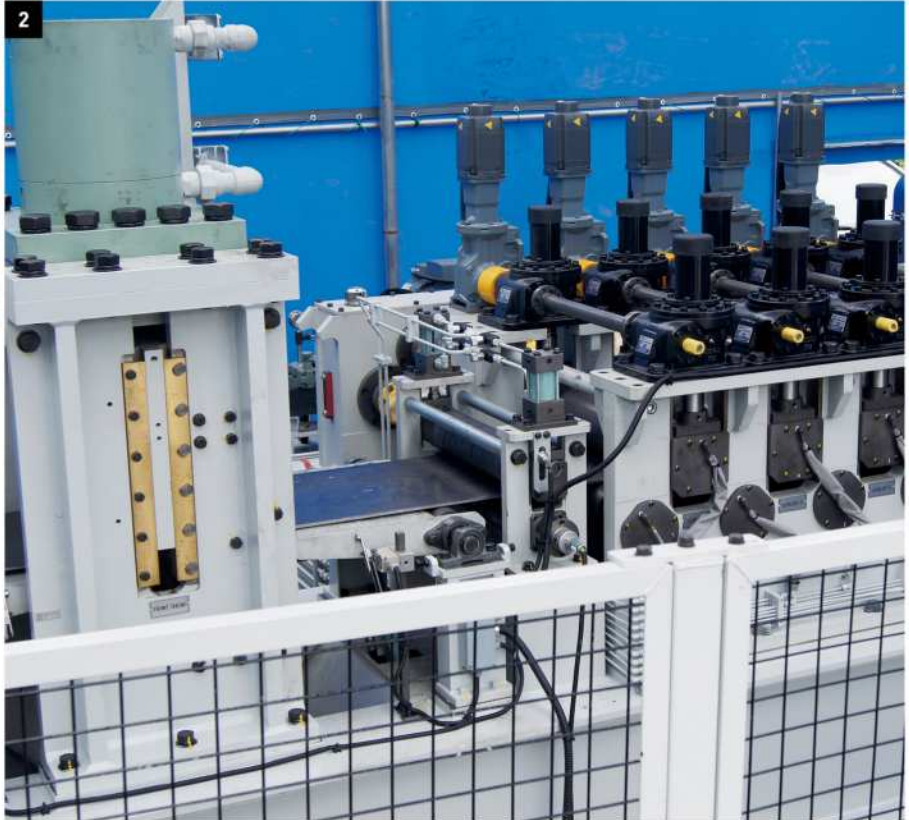
2 Side member for commercial vehicle





Pinch Roll & Leveling System

The device stably supplies steel coil fed from Un-coiler to Punching System, inputting it to the equipment and leveling precisely. There are a coil opener and leveling unit installed to control elasticity and loosening of coil and to ensure its flatness. It also has a front shearing unit operated by a hydraulic system to replace coil and change product.



Un-Coiler

1 2 Pinch Roll & Leveling System

3 4 Un-coiler & Coil opener

Un-coiler is a device that inputs steel coil of 6mm - 12mm thickness to feed it stably to the equipment. Using the Coil Car makes it easy to load and change coil, and the mandrel shafts operated by a hydraulic system expand and contact with the coil.





Shearing Unit

It precisely cuts and discharges products. Various ways can be applied, depending on the required output such as GO & STOP, Shear Manufacturing and Fly-type Shear Manufacturing

Roll Forming machine for side members

The multi-stage forming and microwave forming rolls provide an aesthetic shape to the input coil. In addition, an automatic width and height adjusting system is used to produce profiles of a variety of sizes.

1 2 Shearing Unit

3 4 Roll Forming machine for side members



Roll Forming Machine for Automobile Exterior

This equipment is manufactured based on years of research and development, has high durability and convenient management. It produces high quality exterior steel plates for automotive vehicles. The forming machine with its high precision forming technology can produce profiles to satisfy any consumer's demand. Roll forming machine for Automobile Exterior consists of Un-coiler that inputs and releases coil, Pinch Roll & Leveling System that exquisitely inputs coil, Roll Forming machine that makes shapes through Multi-stage Roll Forming machine, and Shearing Unit that cuts the fabricated products.

Un-Coiler

Un-coiler is a device that inputs steel coil to feed it stably to the equipment. Using the Coil Car makes it easy to load and change coil, and the mandrel shafts operated by a hydraulic system expand and contact with the coil.



1 Un-coiler

2 Coil feeding system : Un-coiler, leveller, NC feeder, Punching unit



Roll forming machine

It is a device that cuts automobile exterior steel plate, cutting precisely the wave form derived from Multi Stage Roll Forming machine

- 1 Punching & Forming machine
- 2 3 Roll forming machine
- 4 6 Shearing unit
- 5 Using profile for Bus assembly

Shearing unit

It precisely cuts the completed automobile exterior steel plate and discharges them. Various ways can be applied, depending on the required output such as GO & STOP, Shear Manufacturing and Fly-type Shear Manufacturing.



Roll Forming Machine for FRAMECAD®



1 Roll forming machine (Twin track)

2 Un-coilers

3 Roll forming machine (single track: portable system)

The "Frame CAD" series roll forming machinery is an automatic equipment that can entirely produce such materials as steel house purlin, wall frame which are essential for a lightweight steel structure, as well as truss that is necessary for the roof and floor construction through the cold roll forming process.

TF(Truss and Frame) roll forming machinery is the best equipment for automatic production of the roof and floor truss because it efficiently combines

Utilizing the Frame CAD Detailer and the Frame CAD ProDesign engineering software solutions. Every single manufactured profile is accurately molded, punched, and cut, all holes for bolt fixing are precisely where they are supposed to be which makes it able to construct a building by one touch handling.

The equipment is programmed with a system that completes the building blueprints using the self-developed Frame CAD program solution. The completed blueprints being in comparability with the module installed in this machine enable a fully automatic production system. All structural calculations related to the construction of a building are automatically calculated by the program, and production process takes place sequentially according to the calculation data input by an operator.

Roll Forming Machine for FRAMECAD®



- Planning & Design
- Structure calculation
- Data input



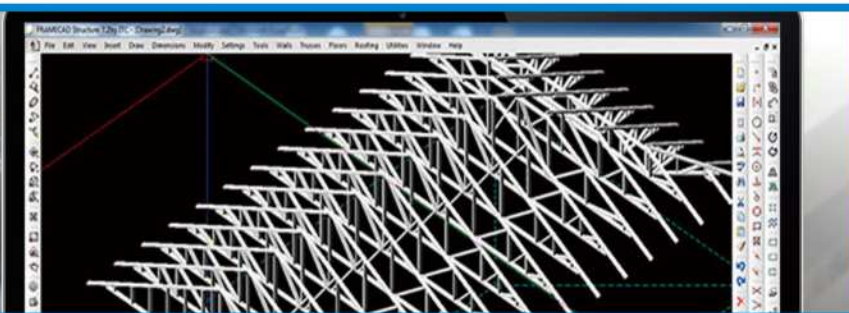
- Production
- Sub assemblies



- Assemblies
(Connection, Fastening, Roofing)



- Construction



Profiles



Single panels

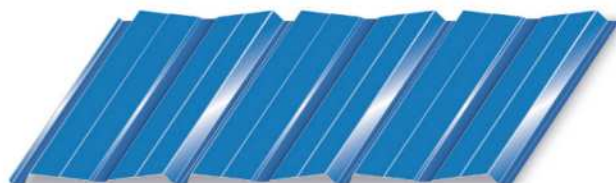
Coil Width	1145mm
Coil Thickness	0.5mm
Finished Width	1037mm
Pitch	333mm
Depth	32mm

+ IKS-RO-P333



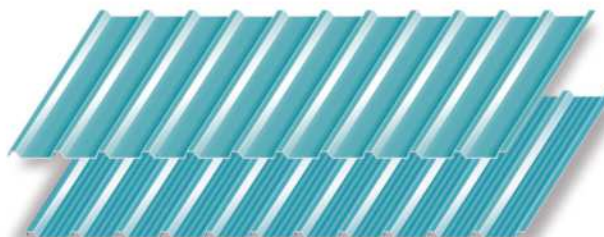
Coil Width	1145mm
Coil Thickness	0.5mm
Finished Width	1000mm
Pitch	333mm
Depth	26mm

+ IKS-RW-P333



Coil Width	1250mm
Coil Thickness	0.4 - 0.7mm
Finished Width	1078mm
Pitch	98mm
Depth	12.5mm

+ IKS-WA-MP98



Coil Width	1145mm
Coil Thickness	0.5 - 0.8mm
Finished Width	810mm
Pitch	162mm
Depth	40mm

+ IKS-DK-T40



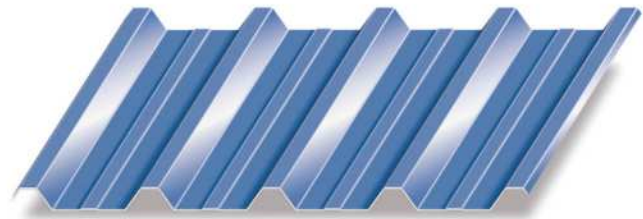
Profiles



Single panels

Coil Width	1219mm
Coil Thickness	0.4 - 0.7mm
Finished Width	1000mm
Pitch	250mm
Depth	45mm

+ IKS-V250



Coil Width	1250mm
Coil Thickness	0.4 - 0.7mm
Finished Width	1088mm
Pitch	272mm
Depth	30mm

+ IKS-V272



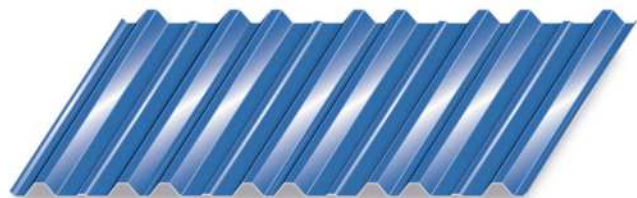
Coil Width	1219mm
Coil Thickness	0.4 - 0.7mm
Finished Width	1056mm
Pitch	264mm
Depth	24mm

+ IKS-RO-P264



Coil Width	1219mm
Coil Thickness	0.5mm
Finished Width	1000mm
Pitch	250mm
Depth	25mm

+ IKS-RO-D250

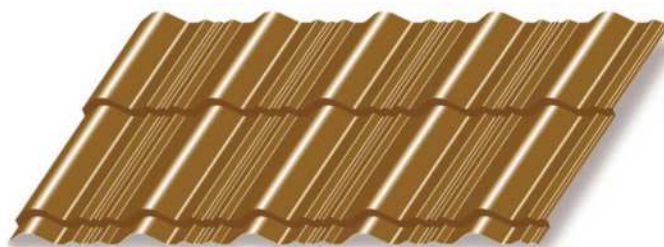




+ Single panels

Coil Width	1200mm
Coil Thickness	0.5mm
Finished Width	925mm
Pitch	185mm
Depth	27mm

+ IKS-TI185



Coil Width	1219mm
Coil Thickness	0.4 - 0.7mm
Finished Width	1002mm
Pitch	167mm
Depth	40mm

+ IKS-TI167



Coil Width	1219mm
Coil Thickness	0.4 - 0.7mm
Finished Width	1000mm
Pitch	200mm
Depth	33mm

+ IKS-TI1200



Profiles



Single panels

Coil Width	1219mm
Coil Thickness	0.6 - 1.2mm
Finished Width	900mm
Pitch	241mm
Depth	55mm

+ IKS-DK-T55



Coil Width	1500mm
Coil Thickness	0.6 - 1.2mm
Finished Width	1060mm
Pitch	265mm
Depth	82mm

+ IKS-HP-T82



Coil Width	1250mm
Coil Thickness	0.7 - 1.3mm
Finished Width	632mm
Pitch	158mm
Depth	55mm

+ IKS-HOP-T55





+ Single panels

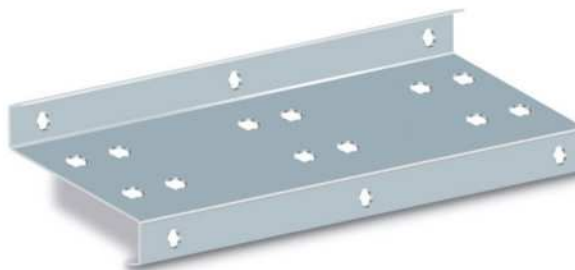
Coil Width	250 - 450mm
Product Width	120 - 300mm
Coil Thickness	1.2 - 3.2mm

+ IKPUR-C300



Coil Width	250 - 450mm
Product Width	120 - 300mm
Coil Thickness	1.2 - 3.2mm

+ IKSPUR-Z300



Coil Width	265 - 305mm
Product Width	80 - 130mm
Coil Thickness	1.6 - 2.5mm

+ IKSPUR-RACK



Profiles



Single panels

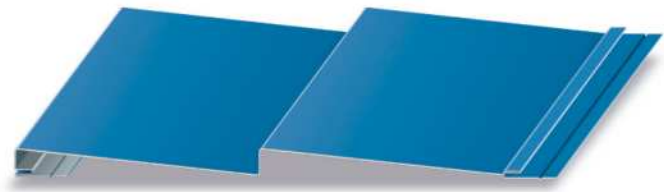
Coil Width	312.5mm, 412.5mm
Coil Thickness	0.75 - 1.0mm
Finished Width	200.300 mm

+ IKS-SD300



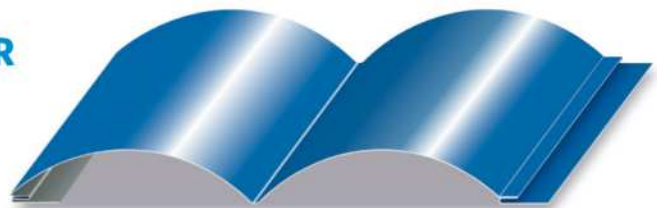
Coil Width	405mm
Coil Thickness	0.5mm
Finished Width	300mm
Pitch	150mm
Depth	9mm

+ IKS-WA-SD



Coil Width	405mm
Coil Thickness	0.5mm
Finished Width	300mm
Pitch	150mm
Depth	30mm

+ IKS-WA-TIMBER





+ Single panels

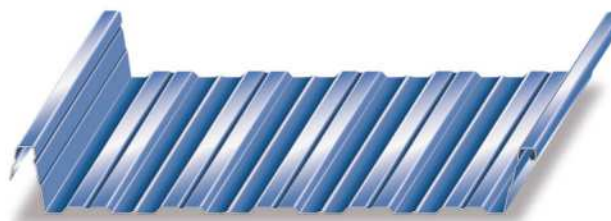
Coil Width	914mm
Coil Thickness	0.6 - 1.0mm
Finished Width	655mm
Pitch	655mm
Depth	166mm

+ IKS-W655



Coil Width	625mm
Coil Thickness	0.7 - 1.0mm
Finished Width	460mm
Pitch	460mm
Depth	55mm

+ IKS-SSR460



Coil Width	695mm
Coil Thickness	0.6 - 0.8mm
Finished Width	500mm
Pitch	250mm
Depth	51mm

+ IKS-SSR500



Coil Width	740mm
Coil Thickness	0.5 - 0.8mm
Finished Width	500mm
Pitch	250mm
Depth	47mm

+ IKS-CL500



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