Sheet Metal Working Machinery

Snap Lock Rollformer, Tile Sheet Rollformers, Roofing and Cladding Profile Rollformers, Cut-to-length and Slitting Machinery & Additional Equipment

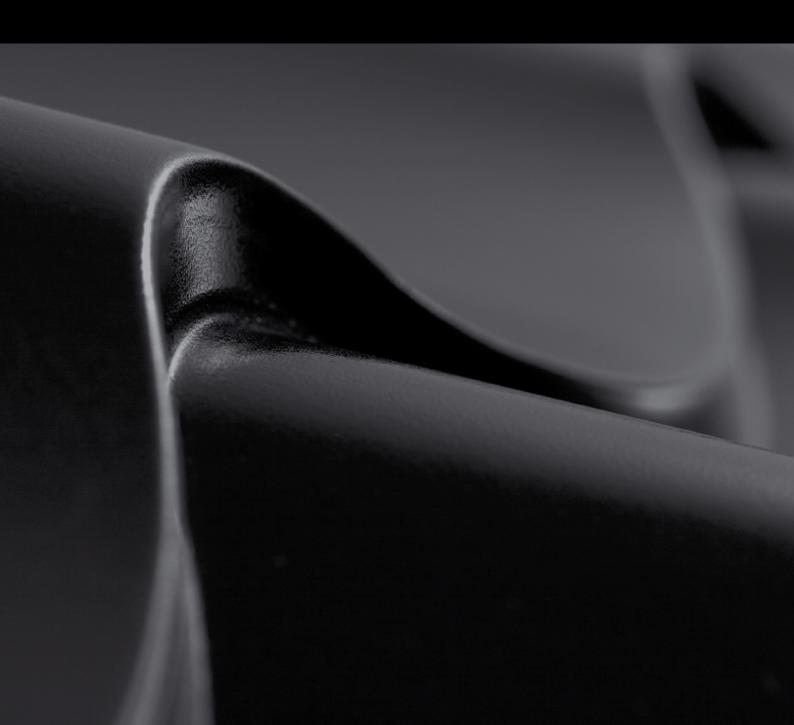


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Introduction

Profilikeskus Ltd. has been in business over twenty five years and distributes its products worldwide. We offer wide range of expertise and knowledge in both machine and factory design, and in our own roll-forming mill we can test and develop new methods for our customers' benefit.

Our customer lies at the heart of our philosophy. We are committed to making equipment that makes your business more productive. Our sales and design team takes the time to get a clear picture of your exact needs. Whether it's a single piece of equipment or a totally new state of the art manufacturing system, we help you clearly set your equipment objectives, and then develop systems to meet these objectives.

Your production requirements, unique manufacturing situation and approach to business are all key ingredients in the design of your equipment. We begin with clearly defined plans based on your needs. The tooling and equipment we produce for you is how we keep our promise.

We understand that your customer expects you to meet their deadlines with quality products that are on time, that fit right, and that deliver the strength and durability to stand the test of time. We also understand that your business is in a highly competitive environment. The metal construction components you manufacture must do all of this, with quality and efficiency, and at a price your customers can afford.

Starting with our highly trained and experienced sales team, everyone at Profilikeskus is committed to your needs. This partnership focuses on you and your goals through open lines of communication and service, which is fundamental to our promise.

On-time delivery, increased productivity in your manufacturing process and 100% after-sales commitment - these are not just goals for us - this is the way we do business.



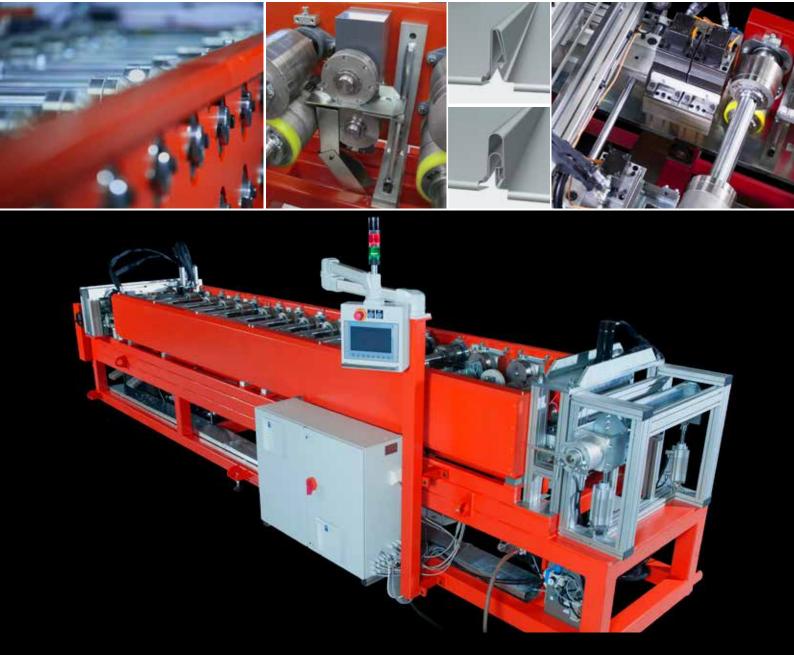
Snap Lock Rollformer

This robust machine allows fast change in different strip widths and surface patters. Our industrial snaplock roll-former has integrated punching and eaves-bending units. All functions are automized to the level that is suitable for customers' needs. Machine is easy to use and maintain. Build-in internet connection for remote access makes the service fast and reliable. Our automation has readiness to connect the machine customer's own factory ERP. Order handling and production follow-up is easy and real time.

- Automatic width adjustment.
- Integrated Punching unit for underlapping and overlapping edges.
- Stop-and-go or flying Eaves bending unit.
- Rotary piercing unit for screw fixing.
- Flat and pattern profile
- Several snap lock and surface pattern designs.

Material requirements for steel

Steel thickness0.6 mmWidth of stripadjustableCoatingspre-coatedQuality\$280-320GD+Z



Tile Sheet Rollformers

Our tile sheet roll forming line meets the production demands of today's heavy industry.

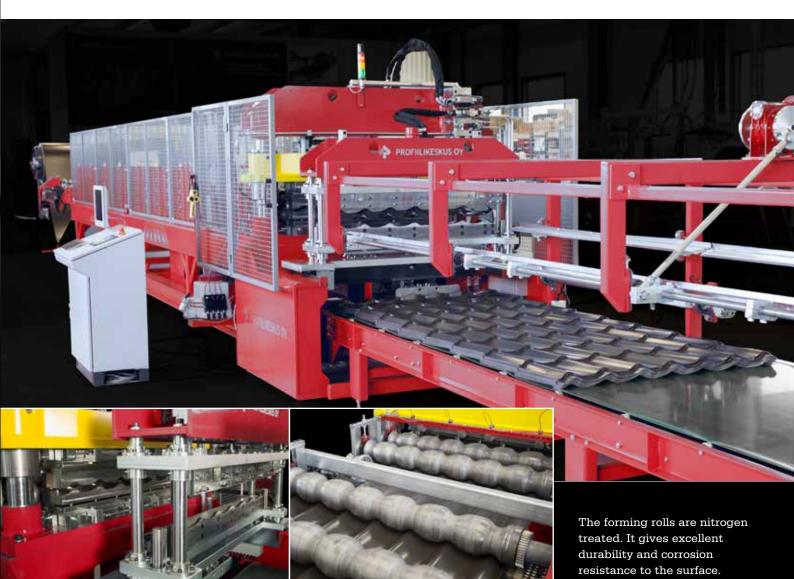
The roll former is driven by a powerful servo motor. The press and post cutter are operated by an 15 kW hydraulic unit. With an efficient production speed of 12 m per minute, the production output of 15 tons per shift can be reached easily.

An advanced Programmable Logic Controller (PLC) unit is provided with an LCD-monitor and the necessary electrical components for manual and automatic line operation. The control unit controls the operations of the roll forming machine, press, cutter and stacker.

Our advanced software enables to modify the distance between pressings and the length of the eaves section. Up to 10 different lengths and 1000 pieces can be programmed for each production lot as a standard. With the latest pressing tool construction it is possible to change the press height from control panel automatically.

These features make our Tile Sheet Line highly efficient and user friendly. The process is fully automated and can easily be operated by one man.

Tile Sheet Production Line



- Line includes: rollforming section, press, post-cutter, pre-cutter, automatic stacker, decoiler
- All our machines use the minimum of factory floor space
- Production speed 12 metres per minute (sheet length 6000 mm), max. output 15 tonnes per shift
- Chain-driven shaftpairs with servo motor
- Hydraulic unit 15 kW for the press and post-cutter
- Under lapping side of the sheet has both water channel and capillary groove
- The height of the tile step and the distance for the first pressing at the eaves can also be adjusted
- Remote service access over internet

Material Requirements

Thickness

0.5 mm

Width of strip

1250 mm or for customized width

For coated steel

Steel quality

S250GD+Z - S320GD+Z

Examples of profiles

Height of profile Step height Total profile height Covering width 30 mm 15 mm 45 mm 1100 mm

30 mm 1100 mm

Height of profile Step height Total profile height Covering width 25 mm 24 mm from 49 mm 1100 mm

25 mm 220 mm

Height of profile Step height Total profile height Covering width 18 mm 10 mm 28 mm 1130 mm

18.3 mm

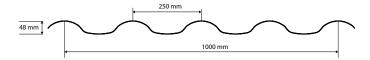
Height of profile Step height Total profile height Covering width 25 mm from 14 to 25 mm from 39 to 50 mm 1100 mm

25 mm 1100 mm

Height of profile Step height Total profile height Covering width 36 mm 16 to 20 mm 52 to 56 mm 1065 mm

36 mm 1 1065 mm

Height of profile Step height Total profile height Covering width 48 mm 26 mm 74 mm 1000 mm



Pressing tool is made from tool steel 100MnCrW4. The tool movement is controlled by hydraulic cylinders, with a working pressure of 160 bar.

Post-cutter blades are made of hardened tool steel and are 16 mm thick. Blades can be sharpened several times and therefore they have a long life span. The rollformer, press and cutter can be steered from the control unit either in manual or automatic drive. The cutter is a guillotine type cutter and is operated by hydraulic motor. The press and cutter are stationary.

Automatic stacker 6 m and motorized roller line with side movement 8 m are standard equipment of the line. Pneumatically operated stacking arm finalizes a good stack.

Roofing and Cladding Profile Rollformers

We supply and manufacture Roofing and Cladding Profile Rollformers, including Trapeze Rollformers, Double-deck Rollformers and Slate Profile Rollformers for small to large-scale production volumes. The main differences are in the machine construction and production speed.

Light machinery

The frame in our economic trapeze rollformer is solid and the shafts are attached directly to the frame. This enables you to rollform raw materials to thicknesses of between 0.45 - 0.6 mm. Production speed varies from 15 to 20 metres per minute.

A user friendly control unit is provided with an LED-monitor and the necessary electrical components for manual and automatic line operation. This unit controls the operation of the rollforming machine and the cutter. Up to 8 different lengths and 999 pieces per length can be programmed.

Heavy-duty machinery

In our heavy-duty machinery the shafts are attached to adjustable stations, enabling you to rollform raw material up to a thickness of 1.25 mm. An efficient production speed of 40 metres per minute guarantees maximum output. When the rollformer is equipped with a pre-cutter there is no waste left over when changing the coil.

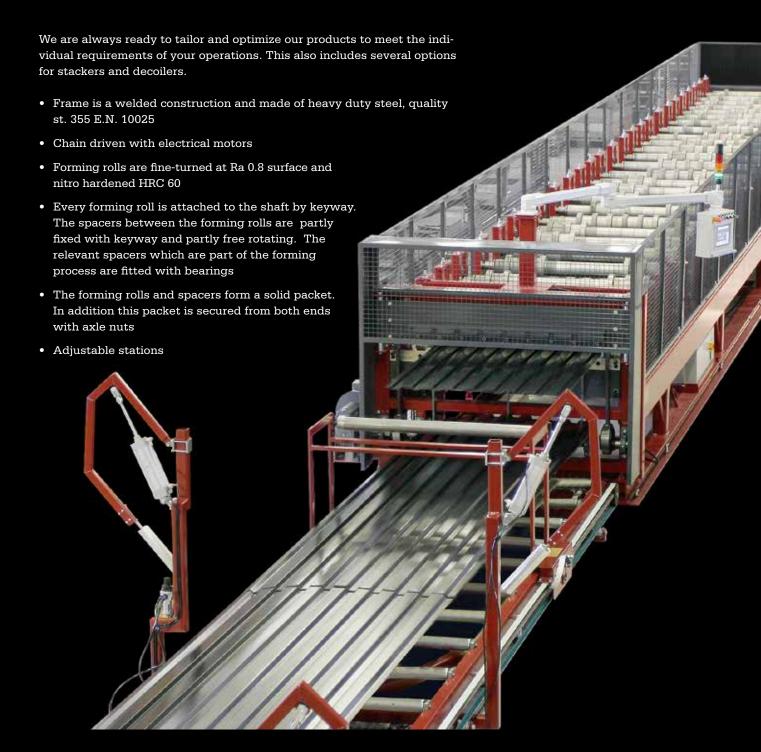
An advanced Programmable Logic Controller (PLC) control unit is provided with an LCD-monitor and the necessary electrical components for manual and automatic line operation. This unit controls the operation of the rollforming machine, cutter and stacker. Up to 10 different lengths and 1000 pieces can be programmed as a standard.

All of our machinery meets European CE - safety requirements. Parts used in our control units are universal and easily obtainable worldwide.

Rollformer for Trapeze Profile

Profilikeskus Trapeze and Corrugated Profile Rollformers provide dependable production solutions for both low and high volume sheet metal manufacturing. All the structures and components, such as cutters and drives, utilize only the most practical and fully-tested solutions.

The operation of our trapeze and corrugated profile rollformers is fully automated and the machines can easily be operated by one person. Advanced software and an easy-to-use user interface allow for fast setting of the machines. Rollformer software also enables remote access for instant online customer support.



Material Requirements

Thickness

0.45 up to 1.25 mm

Width of strip

Customized

Coatings

Pre-coated and galvanized

Steel quality

S220GD+Z - S350GD+Z

Speed 40 metres/minute





Pre-cutter, electric

- For cutting the flat sheet automatically when changing the coil
- Control unit calculates the correct cutting point for the very last programmed sheet, stops the rollformer and cuts the flat sheet at the entry table before the first stations



All our rollforming machines use the minimum of factory floor space, as electric boxes are conveniently placed under the machine. Where space is limited, our double-deck rollformers provide the perfect solution for maximized capacity.



Advanced software and an easy-to-use screen interface allow for fast setting of Profilikeskus Trapeze Rollformers. By our Pro-C software, customer orders can be transferred from office computer directly into the Rollformer's interface. Several Rollformers can be connected into the Pro-C system.

Double-deck Rollformer

If factory space is limiting your company's prospects for growth, a Profilikeskus double-deck rollformer offers the best solution to get more out of your premises. Our double-deck rollformer allows you to manufacture two different profiles on one rollformer.

All the machine functions are controlled through an easy-touse screen interface. Rubbered draw-in rollers drive the sheet automatically into the rollforming section. Thanks to this, the upper-level-sheet-entry can also be conveniently done at normal working height



Material Requirements

Thickness

0.45 mm-0.9 mm

Width of strip

1250 mm or for customized width

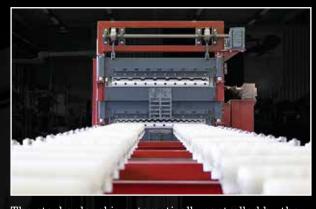
Coatings

Pre-coated and galvanized

Steel quality

S250GD+Z - S320GD+Z

The rollformer can be steered from the control unit either in manual or automatic drive. Steering and programming are made extremely user-friendly. The machine is controlled from a touchscreen and with switches in the control desk. Rollformer software also enables remote access for instant online customer support.



The stacker level is automatically controlled by the machine software. During sheet production, the stacker height is automatically lowered step by step along with the increasing number of completed sheets. As a result, not even the first profile sheets of a stack are ever likely to fall down from a high position, ensuring 100-percent damage-free end products.



The sheet entry table is hydraulically ascending and descending. The upper-level-sheet-entry can also be conveniently done at normal working height.



The construction of stations allows for easy maintenance access to all the parts of the machine.



The rollforming sections are driven by their own electric motors, which minimizes stress for the drives and axles.



Slate Roof and Wall Profile Rollformer

A Profilikeskus slate-effect roof and brick-effect wall profile rollformer is a completely new innovation. The rollformer combines the traditional beauty of a slate roof with all the benefits afforded by modern steel roofing. In addition to slate-effect roofing profile, the same machine can also produce

high quality brick-effect wall profiles. This unsurpassed versatility offers a safe opportunity for steel profile manufacturers to expand their business.

- The efficient rollformer has a fully machined frame including machined stations. This results in extraordinary measurement accuracy of profiles which further ensures the perfect waterproof of profile structures produced by the rollformer.
- All the machine controls are available in one spot through an easy-to-use interface screen
- Based on desired profile length, advanced software determines the right cutting point



Material Requirements

• Thickness 0.7 mm

Width of strip

- for slate roof profile: 416 ±1 mm
- for slate roof joint support pieces: 360 ±1 mm
- for wall cladding profiles: 241, 300, 366 and 416 ±1 mm

The strip widths are chosen in such a way that no waste strip is produced when using a full-width coil.

Coatings

Pre-coated sheet

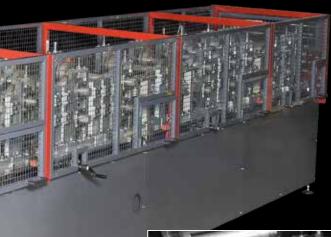
Steel quality

S220GD+Z - S320GD+Z









Thanks to the careful design of the profile shape, both the roof and wall profiles are quick and easy to install and they provide a hundred percent water proof structure. No professional third-party contractors or special tools are needed. The slate-effect roof profile can be directly installed on roof trusses, rafters or battens. Brick-effect wall profiles are installed without joint support pieces. For fast and high-quality installation, the wall is divided into convenient sections and a vertical metal trim is used in the joints.



The surface brick pattern can be altered by chancing the embossing roll. The roll has its own motor and hydraulics and it is automatically controlled and turned off when not needed.



The joint support pieces which are needed for the installation of slate roofing profiles are produced with this same machine. The appropriate tooling is changed to the hydraulically operated press. The cut-off function is synchronized to the same unit. Tool change is fast and straightforward. Thanks to the feature, no other special machines or accessories are needed to deliver state-of-the-art steel profile slate roof.

Ridge Cap Machine

An elegant half round ridge cap is needed to complete the finishing touch to the Tile sheet roof.

Our compact ridge cap rollformer is provided with necessary electrical components for manual and automatic running of the line. Preset the number of pressings in a piece into the parameters and all you need to enter in production mode is the piece amount.

Pneumatic spraying system

Width of strip

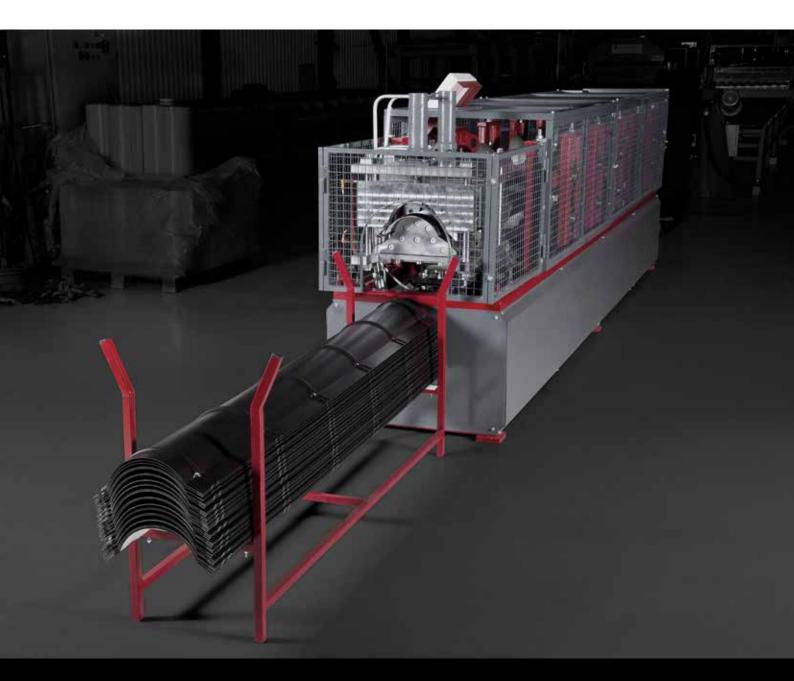
416 mm +3 mm / -10 mm

Thickness

0.5 mm

Pre-coated steel

Electrical drive and Hydraulic press and cutter



Cut-to-length and Slitting Machinery

Our reliable and cost-efficient Cut-to-length and Slitting machines are manufactured for material width of 1250 mm / thickness 1.25 mm and for a width of 1500 mm / thickness 2 mm. Both Cut-to-length and Slitting sections are combined in one machine.

Additional **Equipment**

We are dedicated to designing and manufacturing both individual equipment and complete systems to fulfil the most demanding production requirements.

By combining various additional equipment from our wide range, the whole production process can be made as efficient and automated as possible. A reliable and powerful Decoiler is an essential part of fluent operation. Our Decoilers are available in 1.5 to 15 ton coils to meet your exact requirements. From our large range of customized stackers you will easily find a solution that fits all the demands of your business and premises.

In addition, we manufacture and supply gutter and downspout machines as well as custom made rollformers for roofing accessories such as gable and straight cap flashing machines.

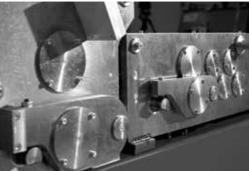
Please do not hesitate to ask about a rollformer to match your exact requirements.

We have the solution!

Cut-to-length and Slitting Unit 1250 mm / 1.25 mm

A specially designed stacker is available for our cut-to-length and slitting units. The stacker ensures efficient operation and damage-free sheet surfaces in all production conditions.







- Electrically operated 5 kW
- Shear for cut-to-length sheets and slitting unit with 5 blade pairs
- Max. strip width 1250 mm
- Strip thickness: steel 0.5–1.25 mm
 - Strip thickness 0.5–0.6 mm, slitting with max. 8 blade pairs
 - $\bullet\,$ Strip thickness 0.7–0.9 mm, slitting with max. 5 blade pairs
 - Strip thickness 1.0-1.25 mm, slitting with max. 3 blade pairs
- $\bullet~$ PLC control unit with programmable length / pieces
- Repeat accuracy of length feed: ±0.5 mm / meter
- $\bullet \;$ Straightening unit with 3 straightening rolls
- Steel quality S220GD+Z S350GD+Z
- Speed 25 m / min

Cut-to-length and Slitting Unit 1500 mm / 2.0 mm



- Max. strip width 1500 mm
- Strip thickness: steel 0.5 2.0 mm
 - Strip thickness 0.5 mm, slitting with max. 10 blade pairs
 - Strip thickness 2.0 mm, slitting with max. 3 blade pairs.
- Operated by servomotor 6.5 kW
- Guillotine cutter for the cut-to-length sheets and slitting unit with 5 slitting blade pairs
- Manual adjustment for slitting blades, with digital display, accuracy 0.1 mm
- Control unit for programming length and pieces.
 Maximum of twenty combinations of different length and pieces can be programmed for one production set
- Repeat accuracy of length feed: ±0.5 mm/meter
- Speed 25 m/min

- Straightening unit with 4 straightening rolls with 3 support rolls
- Electrically controlled straightener
- The pressure of the straightener releases automatically when the machine stops for cutting. The minimum release is 1/10 mm and can be adjusted from the control unit
- Urethane coated draw-in roller
- Cut-to-length shear slides on the rails by cam opening the slitting blade section.
- Steel quality S220GD+Z S350GD+Z
- Available options:
 - Additional slitting blades
 - Plastic film holder
 - Pneumatic sheet entry table

Equip the Cut-to-length and slitting machine with Automatic stacker for the cut-to-length sheets or with Felt brake and Recoiler for continuous slitting.

Re-coiler and Felt Brake

Re-coiler

- Electrically operated
- With own control switches
- Forward and reverse operation
- Hydraulic expansion of mandrel with wedge mechanism
- With turned expansion plates 4 pcs
- Strip guides
- Hydraulic sheet gripper
- Equipped with separating discs and coil car

Coil specification

Inner diameter

508 mm

Coil width

1250 mm, 1500 mm

Re-coiling capacity

5 to 10 tons

Felt Brake

- Strips go through the Felt Brake to the separating discs and re-coiler
- Tightens up the strips while recoiling
- Pneumatically operated
- Braking force is adjusted manually



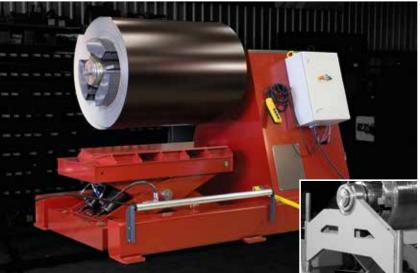






Decoilers 1.5 to 15 tons

Decoilers are available for 1.5 to 15 ton coils. All of our Decoilers have forward and reverse functions. When operating automatically the decoiling speed is self-regulating and follows the speed of the rollforming line. Decoilers can also be equipped with wheels and placed on tracks to serve several machines.



Electrically operated, 1.5 t

- Electrical wheeling
- Mechanical or pneumatic coil tightening
- With front support

Hydraulically operated, 3 to 15 t

- With own control switches
- Hydraulic or electric wheeling, forward and reverse operation
- Hydraulic expansion of mandrel with wedge mechanism

Decoiler 15 t is equipped with front support.

Coil Car

The use of a Coil Car reduces changeover time when removing and replacing the coil.

- Ascending and descending with two hydraulic cylinders
- Lateral movement with one hydraulic working cylinder
- Control switches located at de-coiler/re-coiler

Max. coil width 1500 mm

Coil weight

Available for 5 to 15 t coils



Table of Decoilers

Decoilers	Inner diameter (mm)	Max width of coil (mm)	Max weight of coil (kg)		Weight (kg)
Decoiler 15 t	490 – 610	1250, 1500	15000	2700 x 2200 x 1900	4000
Decoiler 12 t	490 – 610	1250, 1500	12000	2700 x 2200 x 1850	3600
Decoiler 10 t	490 – 610	1250, 1500	10000	2700 x 2200 x 1850	3300
Decoiler 7.5 t	490 – 610	1250	7500	2400 x 1500 x 1600	1900
Decoiler 5 t	490 – 610	1250	5000	2400 x 1500 x 1450	1900
Decoiler 3 t	490 - 610	625	3000	1700 x 1250 x 1420	1300
Decoiler 1.5 t	490 – 610	450	1500	1200 x 1200 x 1400	630

Decoiler measures with coil width 1250 mm



Customised Rollformers for Roofing and Cladding Profiles and Flashings

When the production volume of flashings is high, it is more productive and profitable to rollform the flashings instead of using a bending machine to manufacture them.

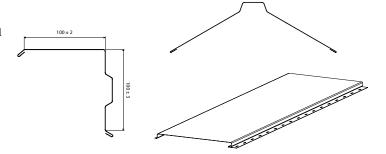
Our Gable and Straight cap flashing rollformers are electrically operated. Carefully designed forming rolls are fine-turned and furnaced, which produces a hard, smooth and easy-to-clean surface.

Depending on the profile, the post-cutter can either be electric or hydraulic. When the profile needs punching we equip the machine with the most modern punching technology and appropriate dies.

Our rollforming machines are easy to control, using either manual or automatic drive. After entering the length and number of pieces, just press the autodrive button and the rollformer does the rest.

In addition, we also design and manufacture machines for rollforming unique roofing and cladding profiles from narrow strip.

Our conveniently-sized decoilers for narrow strip completes the fully-automated process. Decoilers are available for strips of width 300 mm, 400 mm and 600 mm and for coil weights of either 700 kg, $1500 \, \mathrm{kg}$ or $2000 \, \mathrm{kg}$.





Cassette Rollformer for Industrial Flashing Production

Cassette structured rollformer enables to manufacture selection of flashings on one base frame. New profile can be easily added later on and when volumes increases and more capacity is needed, it is possible to double the production by investing on a new base frame only.

Excellent designed high precision frame structure makes it easy and fast to change the cassettes. Compact integration of machine's components: hydraulic unit, electrical cabinet and control panel, saves the needed factory space. Optimized energy consumption improves the cost-effectiveness and takes care about the environment.

- One operator can do it all with our user friendly control system (Omron)
- · No waste generated thanks to the pre-cutter
- Remote access for quick assistance
- Complies with the latest CE safety directives

Material requirements for steel







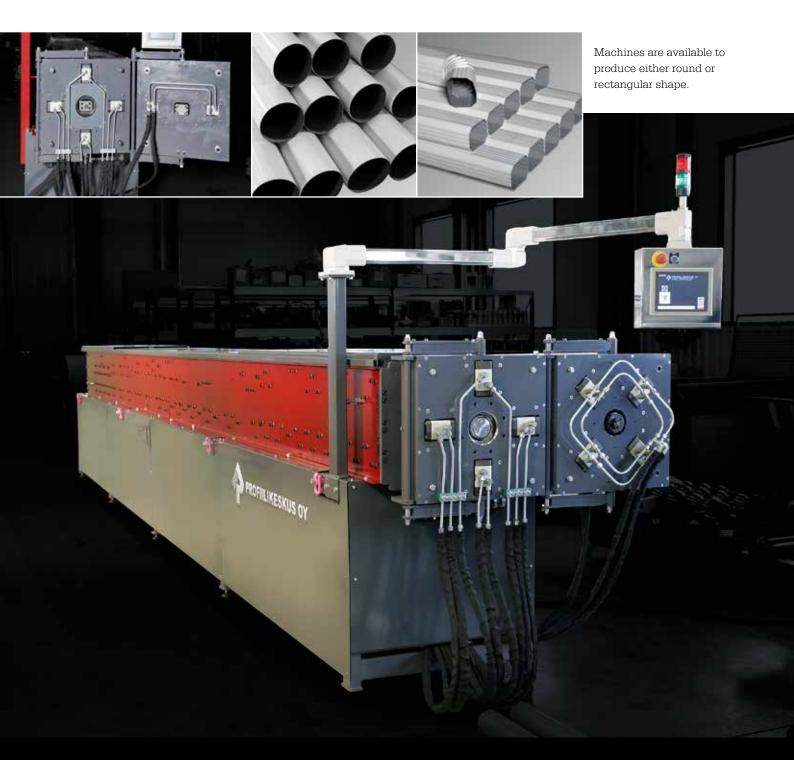
Downspout and Elbow Machine

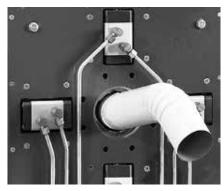
The inventive design combines downspout and elbow forming functions into one compact rollformer which allows efficient, automated downspout rollforming to anyone.

The rollformer offers high efficiency and extraordinary ease of use through sophisticated automation. Changing the elbow angle and downspout length parameters are accomplished through a user-friendly interface. New programs are easily installed to add to the versatility of this fine machine. Long

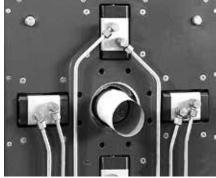
downspouts or short downspouts are effortlessly manufactured to your desired requirements. A synchronized crimping tool is mounted on the machine to provide that finished touch.

The rollformer machine utilizes a servomotor for optimal performance and dependability. Technologically advanced automation, together with a consistent power supply allow for precise measurement and high efficiency.









New programs are easily added to the machine, creating product such as a downspout with an "S" curve in one single piece.

Specification

Automation

- Easy to use programming
 - the diagram of a product is shown on the screen
- Register for 100 standard products
- Programming is available in millimeters or inches

A synchronized crimping tool can be turned on or off as needed

Model of the pipe

Round or rectangular

Size of the pipe

87 mm, 100 mm, 120 mm, 75 x 100 mm, 3 x 4"

Material thickness

- Steel 0.50 0.57 mm
- Aluminium
- Copper 16 oz

Width of strip

292-416 mm

Speed

40 meters / minute or 400 elbows / hour

Drive with servomotor

7.5 kW, 3 x 400 V, 50 / 60Hz

Hydraulic cutting and crimping

5 kW / 125 bar

Machine dimensions

- Length 9000 to 11000 mm
- Width 900 mm
- Working height 1000 mm
- Weight average 6000 kg

Nitrocarburized rolls to inhibit corrosion



All components are thoroughly tested for reliability, utilizing high European standards.



Changing the elbow angle and pipe length requires no manual settings – the machine is controlled through an easy-to-use user interface.

Gutter Machines







Electrically operated

Model of the gutter Half-round or angular

Available in sizes 125 and 150 mm (5" and 6")

Material thickness

- Steel 0.50 0.57 mm
- Aluminium
- Copper 16 oz

Strip width: 298 - 381 mm

Speed: 16 meters / minute

Wrapping Machines

Profilikeskus Wrapping machine is designed and manufactured for easy wrapping of the stack with plastic film. Just lift the stack onto the conveyor and turn on the line.

Dimensions

Ø 800 mm, film 300 mm Ø 1300 mm, film 500 mm

Electrically operated

Double roll of stretch film

Soft Start-up

Stepless speed control

Ø 800 mm

Electrical conveyors 3.5 + 3.5 m

Maximum packet size 700/700 mm

Minimum wrapping length 1000 mm

Max load 250 kg/m

Ø 1300 mm

Electrical conveyors

6 + 8 m

Maximum packet size 1200/500 mm or 1000/700 mm

Minimum wrapping length 2000 mm

Max load 500 kg/m





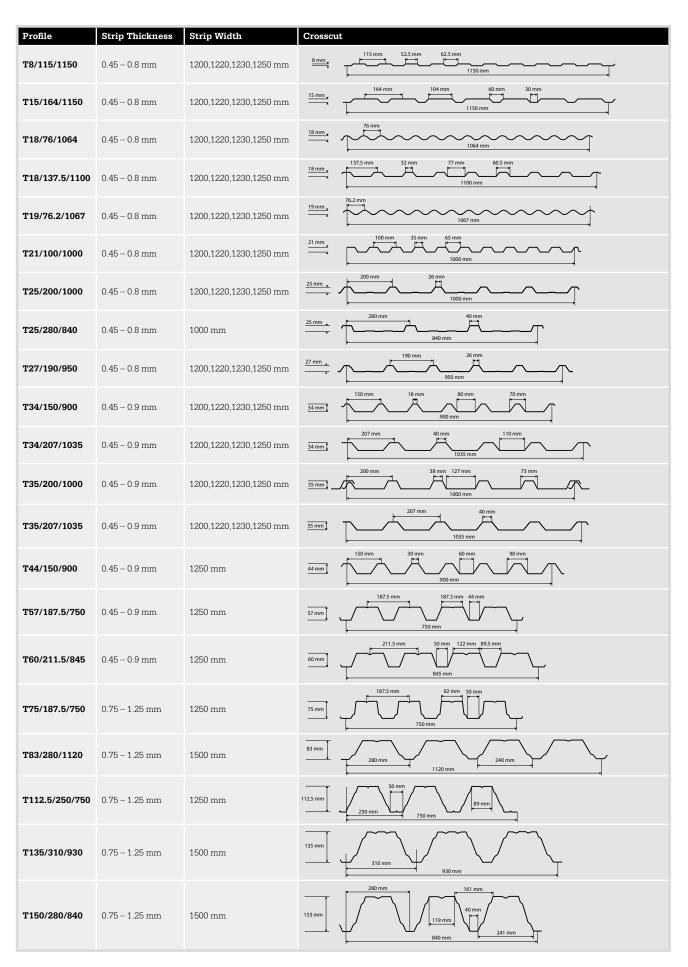
Fleece applicator

Upgrade your metal sheet production with an easy-to-integrate solution.

Our unique applicator is suitable for use of anti-condensation and sound-control materials.











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