

**YILSA®**

YILDIZ ENDÜSTRİYEL ARAŞTIRMA MERKEZİ

MACHINE CATALOGUE

CODE: RL

Uncoiler

Mechanical and Hydraulic Uncoiler Machine for Coil Sheet



YILSA uncoilers (decoilers) are built in capacities from 300 kg to 10 tonnes, with a choice of coil widths and inner/outer diameters; in mechanical and hydraulic versions they feed any sheet coil into the production line in a controlled way.

300 – 10,000 kg

COIL WEIGHT

200 – 1200 mm

COIL WIDTH

Up to 40 m/min

UNCOILING SPEED

**Mechanical /
Hydraulic**

MANDREL



01 Overview

YILSA uncoilers are feeding units that uncoil sheet safely into the production line in step with the line speed. Mechanical and hydraulic models are built in a range of widths, inner/outer diameters and weight capacities for different projects and production lines.

- ✓ Mechanical and hydraulic uncoilers in various capacities up to 10 tonnes
- ✓ Automatic matching to line speed with a laser-sensor loop control system
- ✓ Fast, safe coil clamping with an internally expanding mechanical or hydraulic mandrel
- ✓ Controlled uncoiling with upper and lower hold-down arms
- ✓ Balanced, safe uncoiling with a braked drum
- ✓ Easy, fast coil loading with an optional hydraulic coil car

02 Technical Overview

Mechanical and Hydraulic Uncoiling Systems

A Wide Capacity Range from 300 kg to 10 Tonnes

Uncoilers are built for coil weights **from 300 kg to 10,000 kg**. Depending on the model, coil width can be **200 mm to 1200 mm**, coil inner diameter **300 – 600 mm** and outer diameter **up to 1400 mm**.

Capacity, width and diameter are chosen to suit the line's sheet size and production pace; there is a model for every need, from light lines to heavy-tonnage cable tray and profile lines.

Capacity: 300 – 10,000 kg | Width: 200 – 1200 mm | Inner Diameter: 300 – 600 mm

Mechanical and Hydraulic Mandrel, Hold-Down Arms and Braked Drum

The coil is clamped with an internally expanding **mechanical or hydraulic mandrel**; the arm opening/closing system is also mechanical or hydraulic depending on the model.

Upper and lower hold-down arms stop the coil from loosening and springing open once its strapping is cut; **braked drum rotation** ensures balanced, safe uncoiling.

Mandrel: Mechanical / Hydraulic | Hold-Down: Upper + Lower Arm | Drum: Braked

Line Synchronisation with Laser-Sensor Loop Control

AC geared motors of **0.25 – 5 kW** uncoil at speeds **up to 40 m/min**; speed-controlled and pneumatic hold-down drive options are available.

The **laser-sensor loop control system** monitors the sheet sag between the uncoiler and the next unit and automatically matches the uncoiling speed to the line.

Speed: up to 40 m/min | Motor: 0.25 – 5 kW | Loop: Laser Sensor



Hydraulic Coil Car Option

Offered as an option for capacities of 4,500 kg and above, the **hydraulic coil car** places the coil safely onto the mandrel and shortens coil change times.

Loading: Optional Hydraulic Car

03 Technical Specifications

Coil Dimensions

Max. Coil Weight	300 – 10,000 kg
Max. Coil Width	200 – 1200 mm
Coil Inner Diameter	300 – 600 mm
Max. Coil Outer Diameter	1000 – 1400 mm

Drive & Performance

Max. Uncoiling Speed	40 m/min
Motor Power	0.25 – 5 kW
Drive Type	AC geared motor / speed-controlled / pneumatic hold-down
Power Supply	380 V / 220 V

Mechanical Equipment

Mandrel Expansion System	Mechanical / Hydraulic
Coil Clamping System	Internally expanding
Arm Opening/Closing System	Mechanical / Hydraulic
Hold-Down Arms	Upper and lower hold-down arm
Loop Control	Laser sensor
Drum Rotation	Braked
Coil Loading Car	Optional (4,500 kg and above)



04 Configurations by Line

Uncoilers are built for the coil weight, strip width and speed of the line they feed. Two standard configurations used in YILSA lines:

Standard configurations		
Feature	Cable tray line	Transfer press line
Coil weight	5,000 kg	2,000 kg
Max. coil / strip width	500 mm or 1000 mm	450 mm
Coil inner diameter	480 – 520 mm	385 – 510 mm
Max. coil outer diameter	1300 mm	1300 mm
Mandrel expansion	Hydraulic	Hydraulic
Coil hold-down	Pneumatic hold-down arm	—
Working speed	Max. 12 rpm	Max. 40 m/min
Line synchronisation	Closed-loop control with sensors	Loop control

Independent operation with a loop

Sheet collects in the loop left between the uncoiler and the next unit. A sensor stand monitors the amount of sheet in the loop and adjusts the uncoiler speed in a closed loop, so the punching or press unit runs at its own speed, independent of the uncoiler.

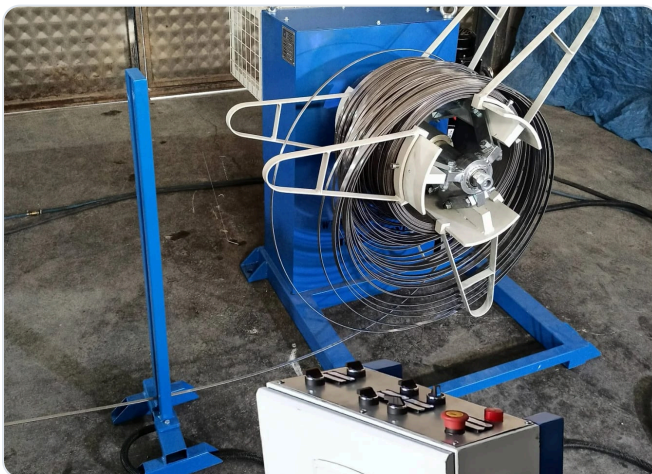
Drive options

- ✓ Manual uncoiler without power
- ✓ Hydraulic uncoiler with electric motor and hydraulic pump
- ✓ Manual uncoiler with electric motor
- ✓ Loading arm, control panel (speed setting, manual/automatic selection, emergency stop)



Uncoiler with hydraulic mandrel and control panel

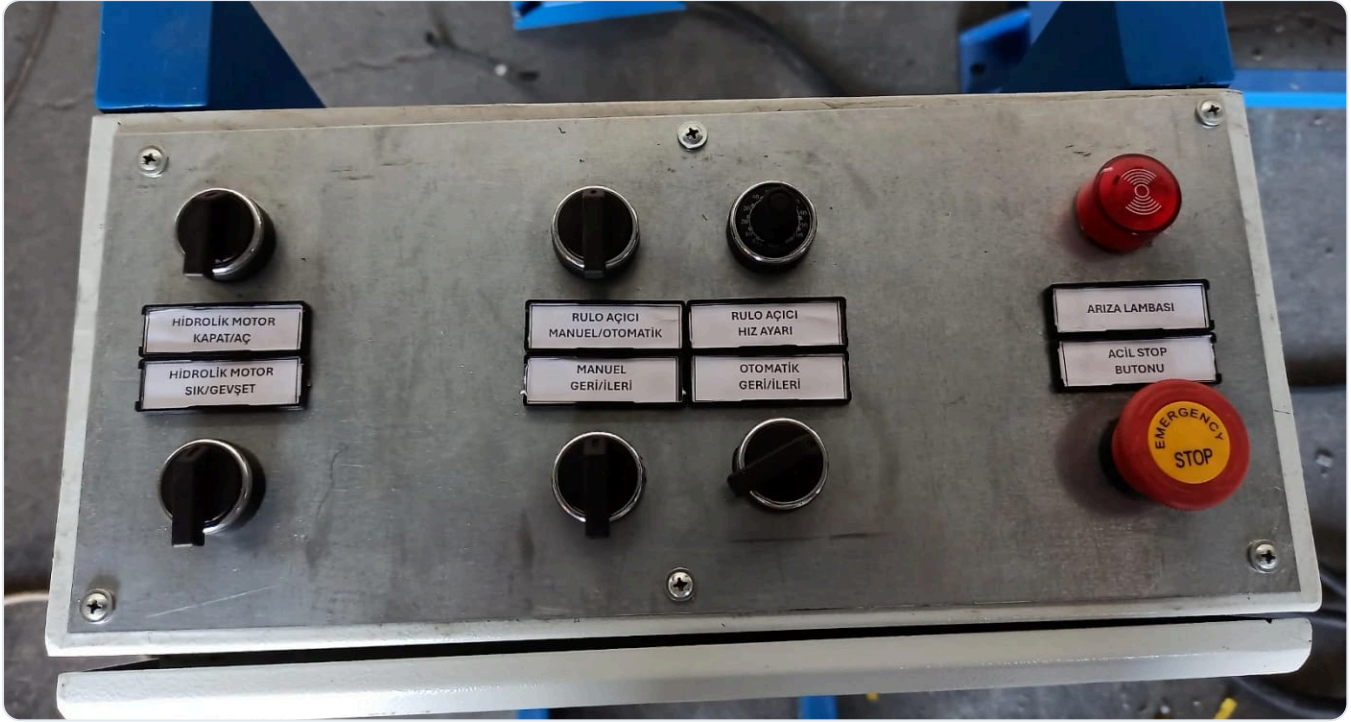
05 Images



Hydraulic uncoiler in the workshop — expanding mandrel arms and control panel, real photo



Uncoiler with hydraulic motor, loaded with a wire coil



Uncoiler control panel — hydraulic motor, manual/automatic selection, speed setting and emergency stop

06 In the Production Line

Cable Tray Production Line

www.yilsa.com.tr/en/cable-tray-production-line



01

Uncoiler



02

Rotary Punch Punching



03

Straightener Feeder



04

Roll Forming

The Cable Tray Production Line punches galvanised or black coil sheet without stopping it, straightens it, cuts it to length and roll-forms it into the final cable tray profile. Running 4–6 times faster than conventional press lines, it produces about 1,400 metres of perforated sheet per hour and can be run by a single operator.

This line uses the 5,000 kg model with sensor-controlled loop.



Transfer Press Line

www.yilsa.com.tr/en/transfer-press-line

01
Uncoiler



02
Straightener Feeder



03
Transfer Press

The Transfer Press Line is a monolithic system in which the uncoiler, straightening/feeding, punching, cutting and bending units are combined automatically on a single main frame. Parts are moved between stations by a 2-axis linear robot. Standard and heavy-duty wall bracket top parts in different lengths from 100 mm to 600 mm, and the tray hanger profiles used in threaded-rod ceiling systems, are produced from a single coil width and a single die set — just by changing the recipe on the screen. Any faults are signalled by warning lights.

This line uses the 2,000 kg model for coil widths up to 450 mm.

07 Service and Support

Acceptance test

Before delivery, the machine is tested at the YILSA plant under the buyer's supervision with test material supplied by the buyer; it is delivered once it produces the specified product.

Installation and training

Training takes 1 day at our plant in Denizli, with hands-on installation, operation and maintenance. Thanks to its compact, single-body (monolithic) design, the machine is easily installed and commissioned at the buyer's own plant.

Warranty

Mechanical parts carry a 1-year warranty, excluding misuse. Dies and blades are wear parts and are not covered by the warranty.

Spare dies and drawings

Heat-treatment and material certificates are supplied for the dies. Spare dies are made for a fee; die drawings are shared on request.

Technical support

Technical support is provided, with on-site service when needed. Travel and accommodation costs for on-site service are paid by the buyer.

Compliance and delivery

CE marked; designed in line with Machinery Directive 2006/42/EC, EN ISO 12100:2010 and EN 60204-1:2018; 100% made in Türkiye. Delivery time for uncoilers is 8–10 weeks, depending on capacity.

Raw material must meet the specifications given by YILSA. The values in this catalogue are for standard configurations; machines can be adapted to your product drawing and raw material.



Machine and line solutions built for your production

Since 1992 in Denizli, Türkiye, we have been designing and building Rotary Punch technology, cable tray systems, wheel weight lines and wire processing machines. Share your product drawing and raw material, and we will prepare a configuration and quotation for you.

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CE MARKED

100% MADE IN TÜRKİYE

PATENTED ROTARY PUNCH

PLC/HMI CONTROL

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