

**YILSA®**

YILDIZ ENDÜSTRİYEL ARAŞTIRMA MERKEZİ

MACHINE CATALOGUE

CODE: KK-RP

Rotary Punch Punching

Patented Rotary Punch Continuous Sheet Punching Unit



With punch drums rotating at the same speed as the sheet, it punches coil sheet at 24 m/min without ever stopping it. Unlike eccentric presses, production is impact-free and burr-free.

24 m/min

PUNCHING SPEED

0.7 – 2.0 mm

SHEET THICKNESS

22 kW AC

MOTOR POWER

Rotary Punch

TECHNOLOGY



01 Overview

Replacing conventional press lines, the Patented Rotary Punch Punching Unit punches coil sheet without ever stopping it, making cable tray production 4–6 times faster.

- ✓ Patented Rotary Punch technology that runs continuously without stopping the sheet
- ✓ 4–6 times higher production speed than conventional punching presses
- ✓ Energy consumption of 0.16–0.25 kWh per metre, saving up to 80%
- ✓ No servo feeder needed; controlled by PLC and HMI

02 Technical Overview

Patented Rotary Punch Continuous Sheet Perforation Technology

Rotary Punch Perforation Without Stop-and-Go

On conventional lines with an **eccentric press of about 400 tonnes**, the sheet has to stop at every punching step. In the Rotary Punch system the punch drums rotate at the same speed as the coil sheet and punch at a **non-stop 24 m/min; 11,520 metres** of sheet are processed in an 8-hour shift.

Eliminating the stop-and-go motion removes impact loads and cuts energy consumption to **0.16–0.25 kWh** per metre (0.8–1.2 kWh/m on press lines).

Punching Speed: 24 m/min | Efficiency: 4–6 Times Faster

Burr-Free Hole Geometry

The Rotary Punch punches make **7×18 mm oval (R3.5) holes** at 50 mm horizontal and 25 mm vertical spacing in pre-galvanised and black St37 sheet from **0.7 mm to 2.0 mm**.

Punches and dies are made of **1.2379 (D2) tool steel** at 60 HRC; hole edges come out clean and burr-free.

Sheet Thickness: 0.7 – 2.0 mm | Dies: 1.2379 (D2), 60 HRC

22 kW AC Drive and Compact Frame

The unit is driven by a **22 kW AC motor and speed drive** and needs no separate servo feeder. The line is controlled by a **PLC and HMI**.

The Rotary Punch, the straightener feeder and the guillotine shear sit on a common frame measuring about **2 × 2.5 × 1.5 m** and weighing about **3.2 tonnes**.

Drive: 22 kW AC + Speed Drive | Control: PLC + HMI



03 Technical Specifications

Punching Capacity

Operating Speed	24 m/min (~1,400 m per hour)
Sheet Thickness Range	0.7 – 2.0 mm
Strip Width	500 – 1000 mm (depending on model)
Hole Geometry	7 × 18 mm oval (R3.5), 50 × 25 mm spacing

Power & Control

Main Drive Motor	22 kW AC Motor + Speed Drive
Energy Consumption	0.16 – 0.25 kWh/m
Control	PLC + HMI

Dies & Frame

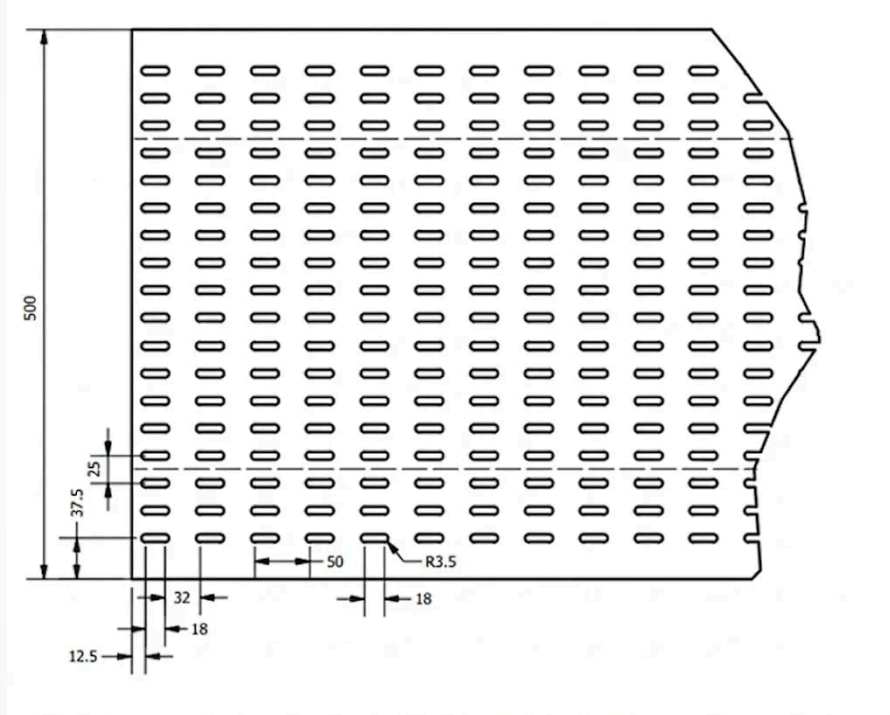
Die Material	1.2379 (D2) Tool Steel, 60 HRC
Common Frame (Punching + Straightening + Guillotine)	~2 × 2.5 × 1.5 m, ~3,200 kg

04 Model Options

Rotary Punch punching unit — standard models

Feature	500 mm model	1000 mm model
Punching (strip) width	50 – 500 mm	800 – 1000 mm
Sheet thickness	1.0 – 1.5 mm	1.5 – 2.0 mm
Sample tray dimensions	50×50 ... 500×50 mm (height up to 100 mm)	100×75 ... 600×100 mm
Punching speed	24 m/min	24 m/min
Main motor	22 kW AC + speed drive	22 kW AC + speed drive
Raw material	St37 galvanised or black sheet	St37 galvanised or black sheet

500 mm and 1000 mm are the standard configurations; the hole pattern, tray dimensions and number of stations are adapted to the customer's product drawing.



Sample hole pattern drawing (500 mm strip, 7 × 18 mm oval holes)

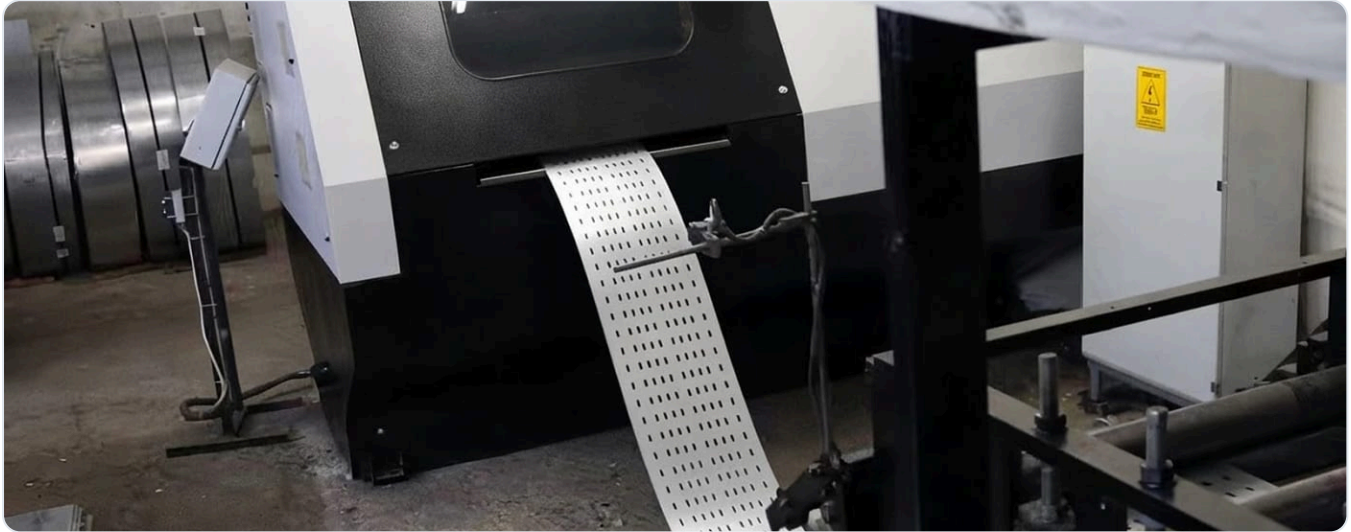
05 Comparison with a Press Line

Rotary Punch vs. conventional press line

Criterion	Rotary Punch	Press line
Line speed	24 m/min (~1,400 m per hour)	4.8 – 7.5 m/min
Energy consumption	0.16 – 0.25 kWh/m	0.8 – 1.2 kWh/m
Sheet movement	Flows without stopping	Stops at every stroke
8-hour shift	11,520 m of punched sheet	—

Common frame: punching + straightening + guillotine

The Rotary Punch unit, straightener feeder and guillotine shear work together at full capacity on one common frame (about $2 \times 2.5 \times 1.5$ m, ~3,200 kg) and are run automatically or manually from a central PLC + HMI panel.



Punched cable tray sheet coming continuously out of the Rotary Punch unit

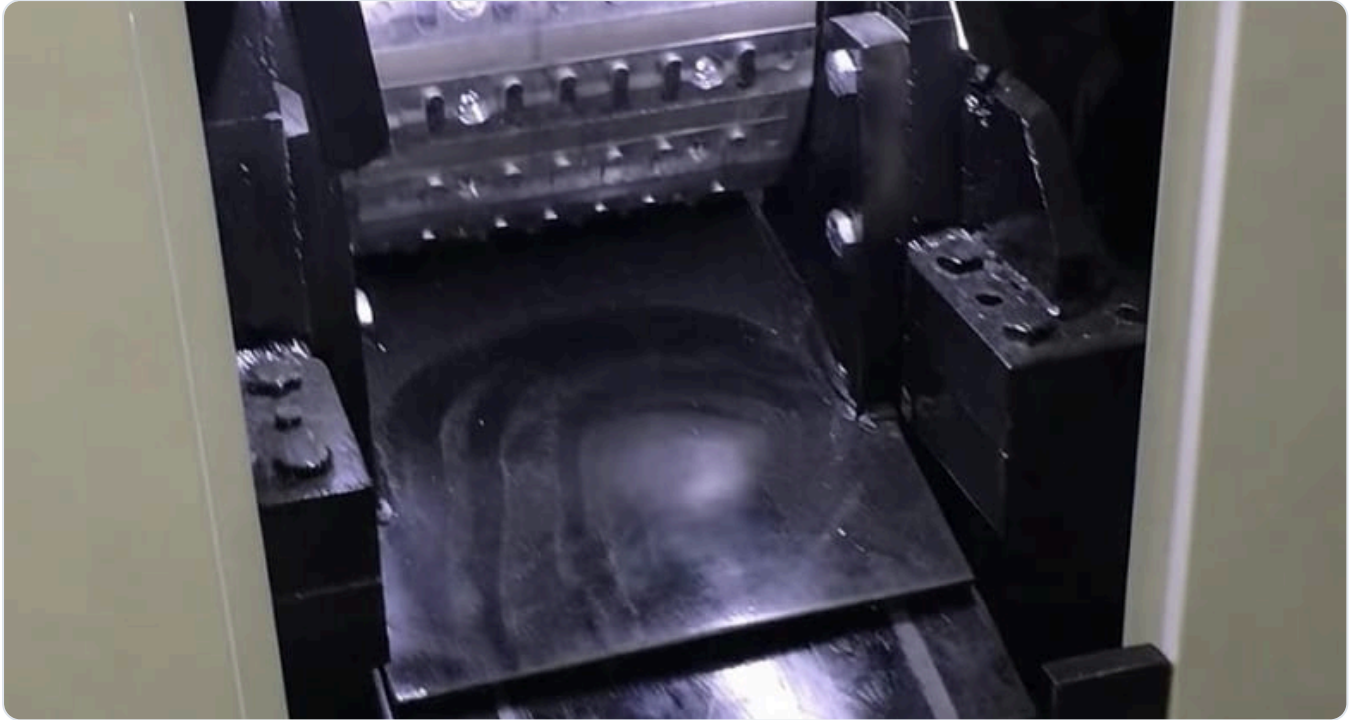
06 Images



Rotary Punch punching unit running in the workshop, with perforated sheet coming out and the straightening unit — real photo



Close-up of sheet with oval holes punched by Rotary Punch leaving the machine



Inside view of the Rotary Punch machine — rotating drum with punches

07 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.



08 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

The line is installed and commissioned at the buyer's plant by the YILSA team, followed by a total of 2 days of installation, operation and maintenance training for the staff. The installation area, pits, air and power connections and a forklift/crane are provided by the buyer.

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 the cable tray line is 8–10 months from order confirmation.

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

Yıldız Endüstriyel Araştırma Merkezi San. ve Tic. Ltd. Şti. · Catalogue no. YILSA-KAT-KK-RP · October 2026. Values are for standard configurations; machines can be adapted to your product and raw material.