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# Automated DIN Rail Cut and Punch Machine

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# Automated DIN Rail Cut and Punch Machine

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## What is DIN Rail?

A DIN rail is a metal rail mainly used for mounting electronics, such as circuit breakers.

There are three different types of DIN rails, top hat rail, C and G section rail. Our project only deals with top hat rails.

Customers can buy standard DIN Rail that has the same distance between punch holes or they can buy custom DIN Rail, which allows for the rail to be tailored exactly to their system's needs.

## Current Method

The operator slides the DIN Rail into the cutter/puncher and marks the distance for a punch or cut with an extendable ruler attached to the right side of the device.

The Rail would then be locked into place and the operator would either cut or punch the rail in two separate actions.



## Proposed Method

Automated system which utilizes a stepper motor, belt-driven linear actuator and a pneumatic operated cutter and puncher.

Allows for user to input stop distance increments for cut and punch locations.

Cut and Punch system is formatted for two different sizes of top hat DIN rail.

A User Interface will control the positions of the stepper motor and when the rail will be punched or cut.

## Results

**Time Savings:**  
The operator will not have to reload and remeasure the rail for every punch and cut instance.

**Less Waste:**  
The operator will input all of the distances into the UI, which will decrease the amount of user measurement errors.

**Safety:**  
Our system does not require the operator to have any body parts in close proximity to the cutting or punching devices during operation.

**Cost Efficient:**  
Our automated system will punch and cut more DIN Rail in the same amount of time compared to the current system.

