The width changing from 150-400mm will be controlled by motors on the two sides of the frame. The lip on the edge is optional, there is no need of any changes on the machine; only have to use different width material.
The width range of the frame will be 150-400mm on the bottom, but limited to the punching mould, the customer needs to provide us some certain sizes for us making the punching dies (the customer can add more sizes in the future, we only have to add the pins. As for the punching dies, if customer need to change sizes, it will be width in the bottom, so we design the punch two time in the middle, the customer wants to punch the small size, so move the punch pins in the middle, punch the bigger sizes, move the punch pins to the sides, it can be automatic or manual. In this process, the customer don’t need to remove the whole set punch mould, it will save time. But the sizes will be limited to some certain sizes, give it to us before we manufacture it (customer can add new sizes in the future, only have to make the new punch pins).

As for the hydraulic cutting part, our innovation design for the cutter. This is no need to change the blade while changing the sizes of the door frame.

The width adjustment will be drive by motors on the side, controlled by plc system, measure by encoder. So there is no need manually press the button on the side of the frame.

There will be total 5 sets of punch dies.
Components:

- Manual de-coiler
- Hydraulic de-coiler
- Material leveling machine
- Servo feeding system
The user can use this motor to change the width of the profile without changing the rollers.

Hydraulic cutting system (this is our newest design; the customer can use this blade to cut all the sizes in the sizes we design without changing.)
Control Box

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<table>
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<tbody>
<tr>
<td>Frequency changer</td>
<td>Panasonic</td>
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<td>Encoder</td>
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<td>Other electrical</td>
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**Main composition of the Machine**

The machinery line consists of manual de-coiler, material leveling, servo feeding machine, hydraulic punching stations, main roll forming machine, hydraulic punching system, run out table, control cabinet with PLC.

**Technical Parameters**

1. Matching material: GI or MS
2. Material thickness range: 1.5-2.0mm
3. Main motor power: 15KW motor with reducer
4. Forming speed: 4-8m/min (include punching and cutting time)
5. Hydraulic station power: 15 KW High speed hydraulic system, it will provide high pressure to accelerate the punch speed the main hydraulic cutting system hydraulic punching system share with the same hydraulic system.
6. Quantity of stands: about 24 stands (it’s used to be 20 stands, in order to make the lips, we have to extend 4 stands)
7. Shaft Material and diameter: Ø 75mm, material is 40Cr
8. Material Of The Stations: Support side plate
9. Tolerance: 3m+1.5mm
10. Way Of Drive: 1.5 inch single chain
11. Controlling system: PLC
12. Total weight: about 16 Tons
13. Voltage: 380V/ 3phase/ 50 Hz
14. Size of the machine: L*W*H 12m*2m*1.6m  
   Line : L*W*H 30m*2m*1.6m
15. Material of forming rollers: G c r 15
16. Material of cutter blade: Cr 12 mould steel with quenched treatment 58-62°C
17. Servo motor power: 4.4KW (Brand: Yaskawa)
18. The gear will be SKF brand.
**Cutting and the control cabinet**

**Cutting:**
1. Cutting motion: The main machine automatically stops and then cutting. After the cutting, the main machine will automatically start.
2. Material of blade: CR12 with heat treatment
3. Length measuring: Automatic length measuring
4. Tolerance of length: +/- 1.5mm

**Control Box: Brand Panasonic**
1. Voltage, Frequency, Phase: 380 V, 50 Hz, 3Phase (this can depend on customer request)
2. Automatic length measurement:
3. Automatic quantity measurement
4. Computer used to control length & quantity. Machine will automatically cut to length and stop when required quantity is achieved
5. Length inaccuracy can be amended easily
6. Control panel: Button-type switch and touch screen
7. Unit of length: millimeter (switched on the control panel)

**Working Flow**

De-coiling — material leveling — servo feeding — hydraulic punching — roll forming — hydraulic cutting system — Finish

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**Packing List details**

- Manual/hydraulic de-coiler: x1 set
- Material leveling machine: x1 set
- Servo feeding machine: x1 set
- Hydraulic punching station: x5 sets
- Main roll forming machine: x1 set
- PLC Control cabinet: x1 set
- Servo control cabinet: x1 set
- Run-out table: x2 sets
- Punching mould: x5 sets
- Cutting mould: x1 sets
- Tools and components: x1 set