

Garage Door Chassis Production Line



Performance
 Line speed : 4 components / 1.5min
 Max component length : 5 metres
 Coil - 3000kg x 0.7mm Galv. Mild Steel /Plastisol

FC3000.300 SINGLE SIDED DECOILER
 With manula mandrel expansion, scaled mandrel segments to assist in coil positioning, Pneumatic tension and safety brake.

FMS52.300 MOTORISED STRAIGHTENER
 With integral infeed pinch rolls, 3 over 4 straightening rolls and ingoing self centring guides.

ULTRASONIC LOOP CONTROL
 With loop side guides.



RF100-300 SERVO ROLLFEED
 Servo rollfeed unit for feeding punch station with accurate lengths for punching operations carried out periodically along components.

HYDRAULIC PUNCH SYSTEM
 A 6 Station power frames system utilising Amada Thick Turret punch Tooling.
 Each frame has a separate control valve and cylinder.
 A special shape end crop is incorporated.
 Scrap chutes remove slugs from the punch station into suitable receptacles.



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SPECIAL END CROP

A specially developed end crop was produced on the leading & trailing end of each blank.

Forming this blank with the Rollformer then produces a 45 degree mitre on the 2 ends of the profile. This then negates the need for Post Production mitre saws being used in the process. This is both cleaner & easier with no Burr from sawing.

CROSS TRANSFER CONVEYORS

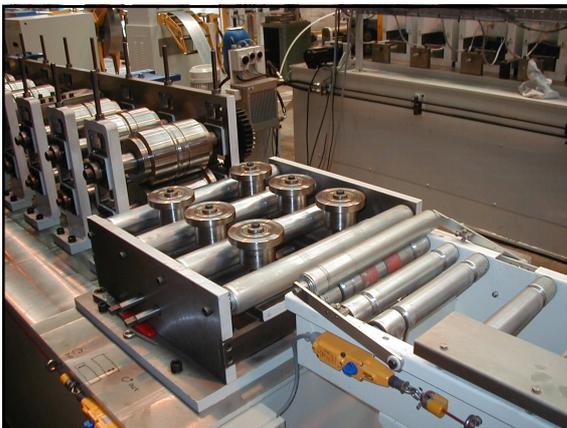
A Cross transfer & Return Conveyor system was used due to a length restraint in the Facility where the machine was to be installed.



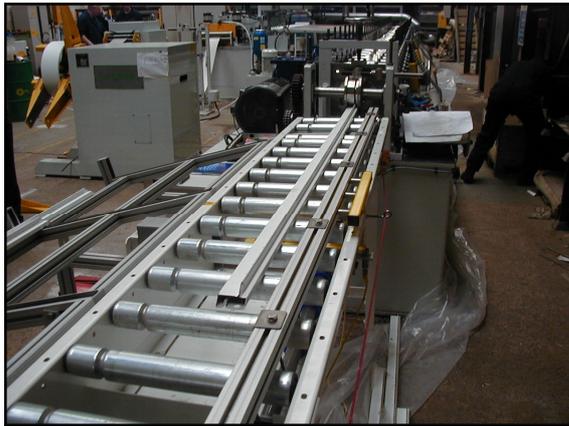
F1(40)-32- VARIABLE SPEED ROLLFORMER

A 32 pass rollformer with 40mm diameter shafts. Variable speed drive, with drive transmitted to the forming heads via four worm reduction gearboxes. The top rolls are all adjustable and are individually set for the required rolling pressure.

An entry guide assembly is mounted prior to the rollforming head section. This guides notched strip coming from the conveyor and ensures it is presented correctly to the forming passes.



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EXIT CONVEYOR WITH SIDE EJECT

The roller conveyor is positioned after the rollformer and will consist of an integral take away roll assembly to ensure that the cut component is separated.

All components then travel to the end of the conveyor and then side ejected into a collection point towards the unloader.

The Four finished blanks are then transferred into the corner piece inset cell to produce a frame.



LINE CONTROLS

The line control system accepts an information packet presented to it by the customers SCADA software system, to produce the required components. This takes place via an Ethernet drop link.

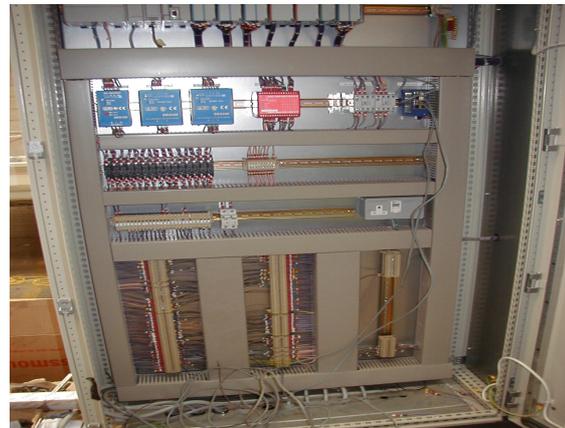
This means the machine has NO OPERATOR.

All that is required is for coil to be loaded on the de-coiler & threaded into the punching rig.

The Software system will Fully Automatically set the punching and length characteristics for the size & type of garage door it has been called to produce.

This machine resides within the customers production line & communicates with all existing equipment to perform it's functions.

Electrical Controls for the machine are housed in appropriate panel enclosures at the rear of the line, with the main control desk situated at the front of the line.



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FINISHED PRODUCT

The production line produces a complicated rolled shape from a pre-cut blank with amazing accuracy. The fit on the corner pieces being critical to the function of the finished door.

All this with no mitre saws due to a specially developed end crop tool.

Panels from the Duplex Rollformer in data sheet RF29 are then clipped into the frame and spot welded into position to produce a finished garage door.

