

# C350-102 Roller Forming machine

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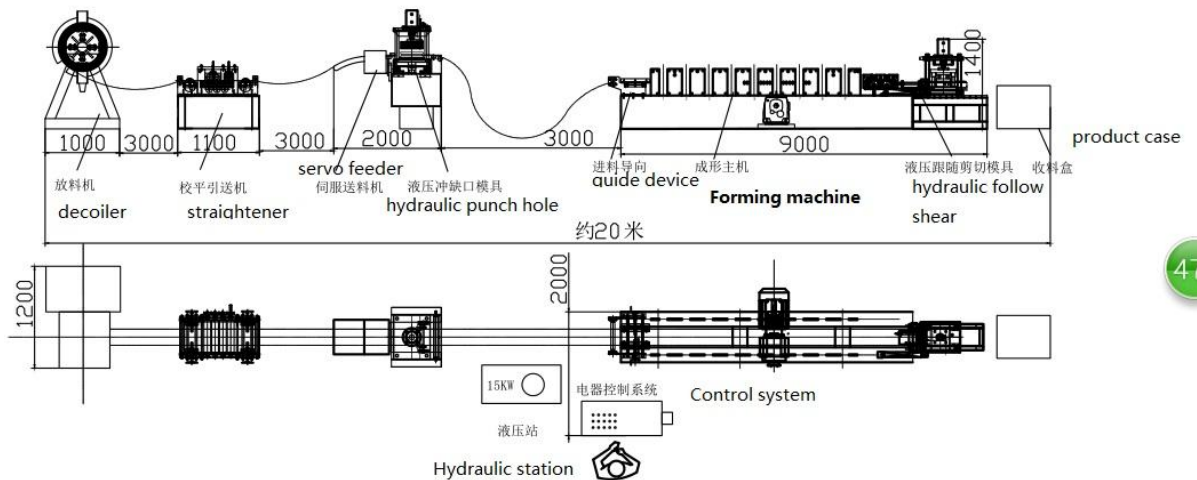
## 一、technical parameters

No.	ITEM		PARAMETER	REMARK
1	MATERIAL	Type	Cold-rolled strip steel, galvanized sheet	
		T. (mm)	1.0-3.0 mm	
		Yield Strength (Mpa)	G450-550mpa	
2	Forming speed (m/min)		10-14 m/min	
3	Forming main power (KW)		18.5KW	FYR
4	Hydraulic power (KW)		11KW	FYR
5	Total Power		29.5 KW	FYR
6	Voltage		AC380V, 50Hz, 3P	

## 二、process

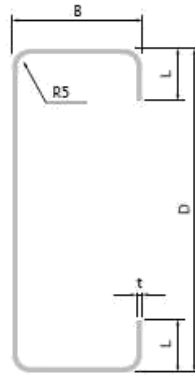
5T Simple Uncoiler → Straightening-servo feeder/hydraulic punching hole device → Guide device → roll forming machine → hydraulic shear device (including knife) → finished product rack

Below layout just for reference, exactly as per above description.



## 三、Plate drawing as below:

Drawing:



Standard C-Section

Section Size	MATERIAL PROPERTIES (MPa)			DIMENSIONS					
	Yield Stress $f_y$	Ult. Tensile Strength $f_u$	t mm	D mm	Z Section		C Section	L mm	Mass kg/m
					E mm	F mm	B mm		
100-10	550	550	1.0	102	53	49	51	12.5	1.77
100-12	500	520	1.2	102	53	49	51	12.5	2.10
100-15	450	480	1.5	102	53	49	51	13.5	2.61
100-19	450	480	1.9	102	53	49	51	14.5	3.29
100-24	450	480	2.4	102	53	48	51	15.0	4.13
150-10	550	550	1.0	152	65	61	64	14.5	2.40
150-12	500	520	1.2	152	65	61	64	15.0	2.86
150-15	450	480	1.5	152	65	61	64	16.0	3.58
150-19	450	480	1.9	152	65	61	64	17.0	4.50
150-24	450	480	2.4	152	66	61	64	18.5	5.66
200-12	500	520	1.2	203	79	74	76	15.0	3.59
200-15	450	480	1.5	203	79	74	76	16.0	4.49
200-19	450	480	1.9	203	79	74	76	19.0	5.72
200-24	450	480	2.4	203	79	74	76	21.0	7.20
250-15	450	480	1.5	254	79	74	76	18.0	5.15
250-19	450	480	1.9	254	79	74	76	19.0	6.49
250-24	450	480	2.4	254	79	74	76	20.5	8.16
300-24	450	480	2.4	300	100	93	96	28.0	10.07
300-30	450	480	3.0	300	100	93	96	31.5	12.67
350-24	450	480	2.4	350	129	121	125	29.0	12.19
350-30	450	480	3.0	350	129	121	125	30.0	15.18

#### 四, Machines List

一) 5T simple uncoiler

1、 Type: Manual

2、 Parameter

1) Passive discharge

2) Coil weight: < 2T

3)Coil inner D. :  $\phi$  460mm-  $\phi$  520mm

4) Max. Width. 800mm



二) Straightening machine

2.1 Number of working roller:7pcs. Up 3pcs/Down 4pcs,

2.2 Leveling roll material: leveling roll quenched, chrome plated handle its rigidity, surface roughness and other mechanical properties greatly improved; its feed by a nip roller and leveling roller composition, pinch roller can be individually adjusted, leveling roller of the overall structure, before and after the establishment of two adjustment points, can form a certain angle, easy to improve the quality of leveling. Leveler feed end with a pair of flat guide rollers and two pairs of vertical guide rollers, guide rollers movable vertical movement and at the same time.

Photo just for reference



#### 四), Hydraulic hole punching system

4.1 Function: Hydraulic punch hole (Mould included)

4.2 Structure: set the length, automatic length measurement, automatic positioning reaches the set distance stop action , hydraulic cylinder driven punching die, stamping automatic shutdown.

4.3 Hydraulic system working pressure: 16MPa

4.4 Hydraulic station: 11.5KW ( Hydraulic punch hole/shear use same station)

#### 五) Guide device

#### 六) Main Forming machines

6.1 Forming Rack: 18 Pair, and add Rub-roll, To make sure the surface profile no scratches.

6.2 Side Panel: T.18mm ,A3 steel Heavy duty 。

6.3 Rolling speeding: **10-14m/min.**

6.4 Roller material: GCr15, overall quenching, hardness HRC56-62 °C.

6.5 Motor power: 18KW.

6.6 Main Roller :  $\varnothing$ 75mm, 45#.

6.7 Equipment base: 450H type using welded steel plate.

6.8 Transmission: chain drive.

6.9 Security: across the board with emergency stop buttons, easy to handle emergencies, to ensure that equipment and operator safety. And other gear in the chain and the staff could easily lead to injury transmission section covered with protective cover, to ensure the safety of workers.

Photo just for reference





七)、 Follow shear

7.1 Cut style:Hydraulic cut (No blanking), Manchine non-stop can cut product.

7.2 Knife material: Cr12, quenching hardness of up to HRC56-58 degrees.

八) 、 Product collect case

九) , Electrical control system

The entire line imported PLC control, LCD touch screen, man-machine interface. People interact with the PLC. Operator setting the program to run automatically (programmable control) and control process monitoring, production line operator control and modify the control parameters, and real-time monitoring the equipment status & parameters and fault indication. Workpiece length digital setting, adjustable length can be adjustable as well. Real-time monitoring of equipment operating status and fault indication.

Operation manual / automatic two styles. With manual and automatic switching function: In the manual mode, can be stand-alone operation, easy maintenance; In automatic mode, carry out full production run, in order to start; across the board with emergency stop buttons, easy to handle emergencies, to ensure that equipment and operating personnel Safety.

\*\* The main components of the brand:

**PLC control system: Siemens**

**Inverter: Siemens**

Encoder: Omron

**Touch screen: Siemens**

Some components are Schneider brand devices.

**Devices:**

No.	Machine name	QTY	REMARK
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1	5T×800 Simple uncoiler	1	No power
2	Straightening machine	1	
3	Hydraulic hole punch	1	With mould
4	Guide device	1	
5	Forming machine	1	
6	Follow Shear	1	
7	Collect rack case	1	
8	Control system	1	