

Fire Hose box application and production

Fire Box Application

<https://www.superdamc.com/>

Fire-fighting boxes should be placed in public shared spaces such as corridors or halls. Generally, they should be in the wall of the above space. They should not be decorated. It requires eye-catching markings (write "fire hydrant") and must not be in it. Set obstacles in front to avoid affecting the opening of the fire hydrant door.

In here, I troduce some of fire boxes.

1, Emergency Plans Box (Cabinet)



2, Fire hose box & Fire hydrant box & Fire extinguisher box



3, Fire hose cabinet

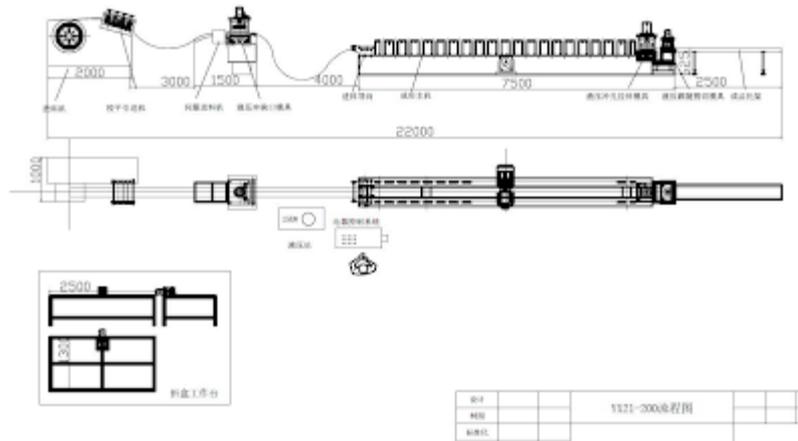


How to producing fire box & fire hose box & emergency plans cabinet

Superda fire box production line series for design for differet galvanized steel or stainless steel bend enclosure box. Such as fire fighting hose box, fire house box, fire safety equipment box, fire box, valve cabient etc. Roll forming machine applies to enclosure forming and bending process. Roll forming line belt to be processed is manually placed on the discharge rack, and straightening. feeder and

hydraulic pre-punching hole and punches the notch, guide device send punched strip to the forming machine system to form the workpiece. After entering the bending part at a line speed of 0-13 m under the friction damping of the forming roller and the pressure roller The product is folded and cut off as required, and then manually packed and transported away.

Fire hose box production line production process layout



Fire box roll forming machine technical parameters
 1, key original accessories detail serial number
 brand
 encoder Omron

human machine interface 7"

programmable controller (PLC) Mitsubishi

low voltage circuit breaker Chint

Rail Taiwan silver

servo system Mitsubishi

2, loading specifications

a. Applicable materials, cold rolled coil, galvanized coil

b. Material quality: domestic GB standard

c. Tensile strength: $\delta_b \leq 780\text{Mpa}$ (Max.)
d. Yield strength: $\delta_s \leq 510\text{Mpa}$ (Max.)

e. Material thickness: 0.4-1.5mm

f. Material width: 150-500mm (Max.)

g. Coil inner diameter: $\Phi 360\text{mm}-\Phi 510\text{mm}$. Outer diameter: $\Phi 1250$ (Max.)

h. Coil weight: 5 t(Max.)

3, Roll Forming System parameters

a, number of forming station, 16 sets of roller forming

b, spindle specification: $\text{Ø}48\text{mm}$ 45# steel material

quenching and tempering treatment

c, Roller material: GCr15 steel heat treatment

d, integral arch: finished by 25mm steel plate, the hole pitch error is less than 0.1mm, the thickness of the bottom plate: 20mm

Roller station (roll forming system) before painting



4, forming capacity

a. The outer diameter of the coil: $\Phi 1250\text{mm}$ (Max.)

b. Material forming thickness: 0.4-1.5mm

c. Product width 100mm-400mm adjustable

5. Speed parameter of fire box roll forming machine

a. Line speed 0-13m/min

b. Acceleration time <30 seconds

6. Forming accuracy

- a. Shear length tolerance: $\leq \pm 0.3\text{mm/m}$
- b. Width tolerance: $\leq \pm 0.3\text{mm}$
- c. Sickle bending: $\leq 2\text{mm/m}$
- d. Burr: $\leq 0.1\text{mm}$ (new cutting edge cuts carbon steel plate in reasonable clearance)
- e. Height tolerance: $\leq \pm 0.3\text{mm}$

Above tolerance with flat edgeless one-stage steel coil As a prerequisite.

Surface quality: The surface of the finished product after processing does not add any processing defects.

7. Other parameters of the equipment

- a. Power supply: 380V/50HZ/3PH, can customized as per user country.
- b. Installed capacity: about 31Kwc.
- c. Forming speed: 0-13m/min.
- d. Shearing method: Servo front shear
- e. Drive motor: Unwinder motor 4KW.
leveling motor 2.2KW.

hydraulic punching cutting and hydraulic tensioning motor (two sets) 11KW+7.5KW. forming main engine 5.5KW.

servo motor 2KW

f. Floor area (approx.): length 24m × width 3m (host specification 7mX1.7m)

g Production line direction: from left to right (on the console facing the unit).

h. Equipment color: (customer selection)

i. Superda fire house box equipment design can meet 12 hours of continuous production

j. Operating environment

1: Power supply voltage: 380V ± 10% / three-phase four-wire, frequency: 50HZ Total power: about 31KW
2: Environment Temperature: 0-40 ° C, relative humidity: 60-95% RH.

Equipment fire box production line machine list

1. Power cutting machine and hydraulic tensioning device

2. Power leveling machine

3. Servo punching and cutting device
4. Conveying station
5. Forming machine
6. Hydraulic bending machine
7. Hydraulic system
8. Electrical equipment
9. Finished material feeding roller

5. Fire enclosure equipment structure and system configuration (process for production a enclosure)

Overview: The production line mainly consists of discharging machine, leveling machine, punching and cutting machine, conveying table, forming machine, hydraulic folding machine, finished material handling device, hydraulic system, The electrical control part and the safety protection part are composed.

1. Discharge machine (uncoiler): for unwinding material and provide the sheet to the forming part, and the 5 ton electric discharge machine is hydraulically tensioned.

2. Leveling machine: 9-roll precision leveling (upper 4 lower 5), 2.2KW electric feeding, used for straightening the material and eliminating material stress.

3. Servo feeder: 2KW servo system, precision feeder, punching device (mold) and cutting device. Uncoiler & leveling & feeder & punch and & PLC control cabinet



4. Roll forming machine system, The main machine base of this production line is welded with 100*100*3MM square steel, Shenzhen Superda

Machine Co., Ltd. design the side plate is made of 25mm steel plate, the support part is made of high quality Taiwan bearing, the feeding adopts roller type, the discharge is adjusted by twisting up and down, the main machine has good rigidity and the structure is stable.

B: Rolling die (rolling boring): 16 sets of roller forming, all using high quality Gr12 die steel, HRC up to 58~60o are processed by precision CNC machine tool, the precision is 6~7, the surface roughness is above 0.8, forming The size is accurate and the surface of the formed workpiece is free from scratches.

Superda fire house box roll forming machine line manufacturing equipment.



C: Transmission part: It is the conveying part of the forming power of the production line. Its power is transmitted from the main motor to the reduction gearbox, and then the gearbox is transmitted to the driving wheel through the gear. The driving wheel passes the excessive gear transmission, so that the upper and lower rolling turns synchronously.

3. Fixed length bending part: consists of fixed length device and bending mechanism. The fixed length device is fixed by the laser probe combined with the encoder. When the sheet material reaches the

length of the length, the bending product is controlled by the PLC.

4. Enclosure collet rack: This device is arranged at the back of the molding machine according to the length of the product.

5. Electronic control system: The whole production line adopts centralized control, the components adopt imported and domestically-made high-quality products, or are designated by customers, and the standard components are made of Taiwan brand.

Big fire box & fire safety equipment cabinet after forming machine bending.

