



无锡安博尔机械有限公司

WUXI ANBER MACHINE CO., LTD.

Security Door Production Line

防盗门生产线



Eight-column 3000T
Hydraulic Press Machine
3000吨八柱式六缸单动门面压花机



Security Door Frame
Roll Forming Machine
防盗门门框成型机



Security Door
Powder Coating Line
防盗门喷涂线



Steel Sheet
Embossing Machine
金属板压花机



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Process flow / 金属防盗门工艺流程

1 Metal Cutting / 选材



2 Hydraulic Pressing / 压花



3 Plate Cutting / 剪板



4 Punching / 冲孔



5 Bending / 折弯



6 Drilling / 钻孔



7 Welding / 焊接



8 Polishing / 抛光



9 Parkersing heating / 加热



10 Painting / 喷涂



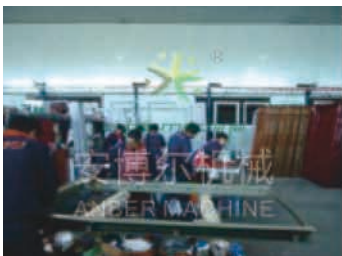
11 Cleaning / 清洗



12 Door frame molding / 门框成型



13 Parts assembling / 部分组装



14 Film covering / 最后组装



15 Packing / 打包



Eight-column 3000T Hydraulic Press Machine / 3000吨八柱式六缸单动门面压花机



描述

门面压花机由主机和控制两大部分组成。主机部分由机身、主缸、顶出缸及充液阀等组成，控制部分由动力机构、限程装置、液压远控制装置及电气操纵箱等组成。机身采用三横梁，八柱结构形式。三横梁采用优质钢板焊接，焊接后作时效处理，以消除焊接应力。缸体为35锻件，油缸柱塞为冷硬铸铁，表面硬度HRC45以上。八立柱材质为45，调质至HBS255-275，表面镀硬铬后硬度达HRC55以上。导套为QT450-10球铁。

整套系统采用插装阀，结构简单，动作可靠无泄露，满足高压大流量，系统散热性好，最大限度减小无功损耗。

Description

Structure of the machine is three-beams and eight-column. The three beams are welded by good steel plate with aging treatment to eliminate the welding stress. Material of the main cylinder is 35 forging material, cylinder plunger is chilled cast iron, hardness is above HRC45. Material of eight column is 45# steel, HBS255-275, more than HRC55. The whole system uses cartridge valve with the features of simple structure and no leakage of action. The system has good radiation capability to meet high pressure and big flow conditions, and can reduce the reactive power loss at high limit.

技术参数

公称力：30000KN
回程力：435KN
滑块行程：500mm
液压系统最大工作压力：25MPa
滑块下平面距工作面最大距离：600mm
滑块行程速度
a. 快速下行：100-120mm/s
b. 慢速下行：7-12mm/s
c. 回程速度：100-120mm/s
工作台面积：2500 X 1500mm
总功率：30KW+30KW=60KW
柱塞缸直径：ZSG500 X500 X 6
立柱直径：265mm X 4只/195mm X 4只

Technical parameters

Normal force: 30000KN
Return force: 435KN
Stroke of slide: 500mm
Max. pressure of main cylinder: 25Mpa
Max. opening degree: 600mm
Stroke speed of slide
a. Descent: 100-120mm/s
b. Working pressing: 7-12mm/s
c. Return: 100-120mm/s
Dimension of working table:
1500X2500 mm
Main motor power: 30KW X 2 = 60KW
Plunger type cylinder: ZSG500 X500 X 6
Column: 265mm X 4pcs, 195mm X 4pcs

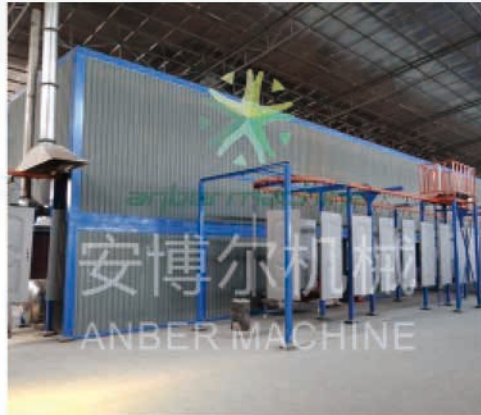


成品

Finished products



Security Door Powder Coating Line / 防盗门喷涂线



技术参数

- 工件最大外形尺寸：
L×W×H=1200×200×2200(mm)
- 喷粉房内空尺寸：
L×B×H=8000×1500×3300(mm)
- 最大工件重量：100kg
- 输送方式：悬挂链自动输送
- 内部照明：500Lx
- 环保要求：国家二级排放标准
- 除尘：粉尘排放小于100mg/m³
- 噪音（操作区）：<85db(A)
- 设备装机总功率：37.5kw

主要设备

环保水帘喷台：
喷漆房是对工件进行油漆喷涂的操作场所，是油漆喷涂的重要设备装置，它的结构设计是否合理，将不同程度地影响到工件的喷涂质量及油漆的回收效果和对周围环境的污染以及操作工人的身体健康，影响用户的经济效益和社会效益

喷粉房：

主要由室体系统、照明系统、排风系统、回收系统、电控系统等五个部分组成。

烘道：

固化炉结构形式为暗桥式U型炉；由桥式炉、热交换器、热循环风机、热循环风管道、废气排放管、机架等几部分组成；

燃煤热风炉：

加热炉体、加热炉内胆、烟回程散热系统、热循环风机、排烟系统、炉控系统、炉门、排烟管等组成

输送系统：

通过驱动装置带动悬挂在一定高度的输送链条进行匀速运动，在运动的过程中，完成上件、喷漆、固化、下件等以及其他各项工作

电控系统：

主回路设有多重保护：过电流、过负载、短路、缺相等保护。控制柜中装有换气扇，可及时排出控制柜中电器元件散发出来的热量。电器元件的布线采用室外线槽布线并采取与墙壁隔离走线。

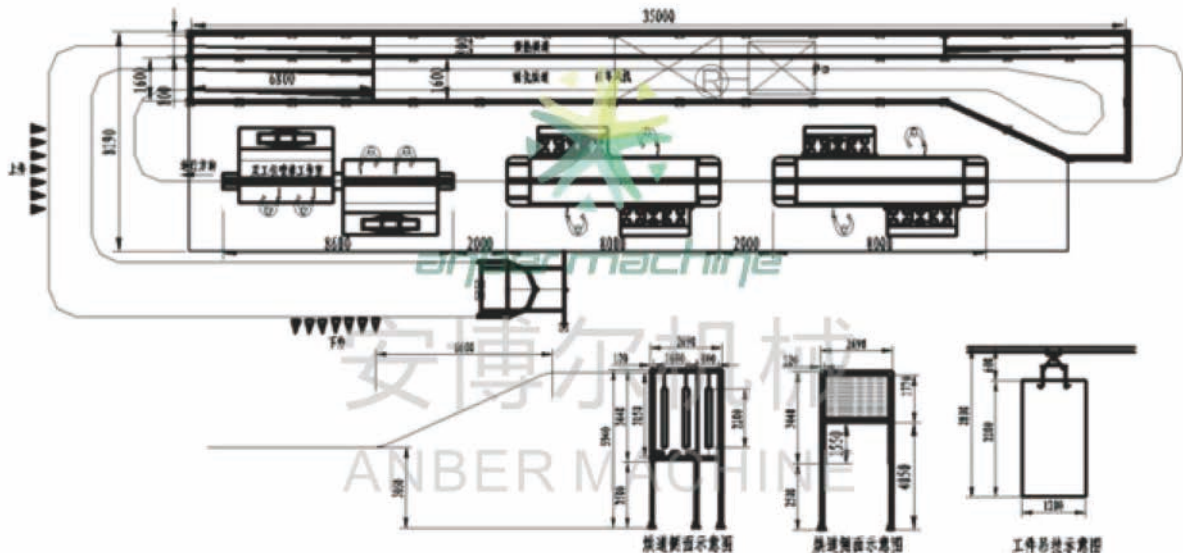
Technical parameters

- Name of workpiece: Iron plate for security door
- Max hanging size on each hanger:
L1500mm×W100mm×H2300mm
- Loading capacity on hanging hook: ≤70kg
- Suggested interval between 2 hangers: 500mm
- Conveying speed: 1.5m/min (Adjustable control)
- Output: 35-45pcs per hour
- Spraying method: 4 auto spray guns (match on 2 reciprocators) & 2 manual spray guns
- Heating source: natural gas (Other choices are available: electricity, oil or coal)
- Pretreatment system:
Vertical shower type

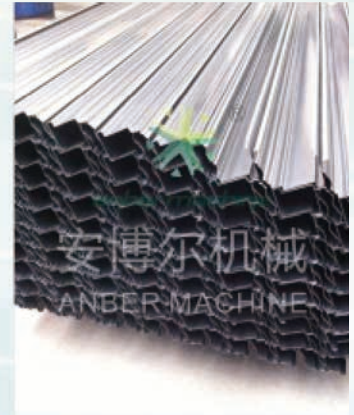
2. Pre-degreasing stage (50-65 Celsius for 1 min)
 3. Degreasing stage (50-65 Celsius for 2 mins)
 4. Rinsing stage (Room temperature for 1-2 mins)
 5. Surface conditioning stage (Room temperature for 1 min)
 6. Phosphating stage (35-45 Celsius for 3 mins)
 7. Rinsing stage (Room temperature for 1-2 mins)
 8. Drying off oven to remove surface moisture (100-120 Celsius for 10 mins)
 9. Powder application with spray guns
 10. Powder curing (180-200 Celsius for 20 mins)
 11. Finished product discharging
- If above parameters cannot meet with your strict coating need, please contact us for more detail. We can make some adjustments or even improvements to suit your actual production conditions.

Process flow for safety door powder coating line

1. Feed your security door on this automatic powder coating line



Security Door Frame Roll Forming Machine / 防盗门门框成型机



Technical parameters

Material specification

- Material type: cold rolled steel, galvanized steel
- Thickness: 0.8-1.2mm
- Max. Width: 350mm
- Yield strength: 195Mpa

3in1 Machine

- Coil ID: 508mm
- Coil OD: 1200mm
- Coil weight: 2 tons
- Max. Speed: 16m/min
- Feeding precision: ± 0.1 mm
- Expansion type: hydraulic

Punching machine

- Mold Material: Cr12Mov
- Mold Treatment: Heat treatment, HRC58~62.
- Control System: PLC control

Roll forming machine

- Motor power: 11kw;
- Motor quantity: 2 sets;
- Roller material: Gcr15 bearing steel
- Forming station: 18 stations

- Forming speed: 10-20m/min
- Shaft diameter: 75mm
- Shaft material: 40Cr
- Transmission type: worm gear box
- Dimension(L*W*H): 7.35*1.2*1.5m
- Weight: about 3.5T

Equipment List

- Hydraulic De-coiler with Breaking device is equipped for coil processing.
- Leveler
- Servo Roll Feeder
- Online Multi Station Hydraulic Punching Equipment
- Roll forming machine
- Back Punching Machine [for lock hole
- Hydraulic cut-off machine
- Run Out Table or automatic stacking device
- PLC and Touchable Screen are used for data processing and setting.

成型工艺

自动放料→导向→校平、送料→连续冲孔→成型→定尺、切断→收料

主要技术参数

自动放料机

内涨式，载重3T
驱动4kw变频电机
卷料内径： $\Phi 500\sim\Phi 520$ mm，
卷料外径： ≤ 1200
电器感应自动控制放料速度

导向机架

一对水平辊，二对对立向辊
具有可同向移动，导向移动功能

校平机

矫正滚轮：上4/下4，前后各一对夹送辊。
校平圈料范围：最大料宽350mm，最大料厚0.8-1.5mm
驱动力：2kw伺服电机

连续冲孔部分

机架：四柱式冲孔机架

冲模：冲模，冲模材质：

Cr12, 淬火热处理，硬度达到58-62°

成型主机

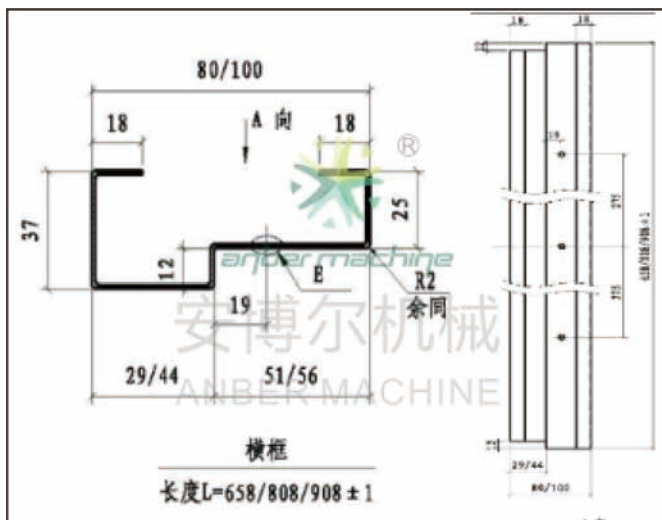
机架：机架为龙门式，侧拉式更换滚轮方式。
成型机架：18架
最大进料宽度 ≤ 350 ，轧制板材厚度： $0.8\leq t\leq 1.5$
轧辊轴直径： $\phi 60$ mm，材质40Cr，热处理：调质
滚轮材质：GCr15，整体淬火热处理，硬度HRC56-62°
电机功率：22kw变频电机，ZQ400型减速机
传动方式：每一机架配一件齿轮分配箱传动（除主动力位置外）

切断部分

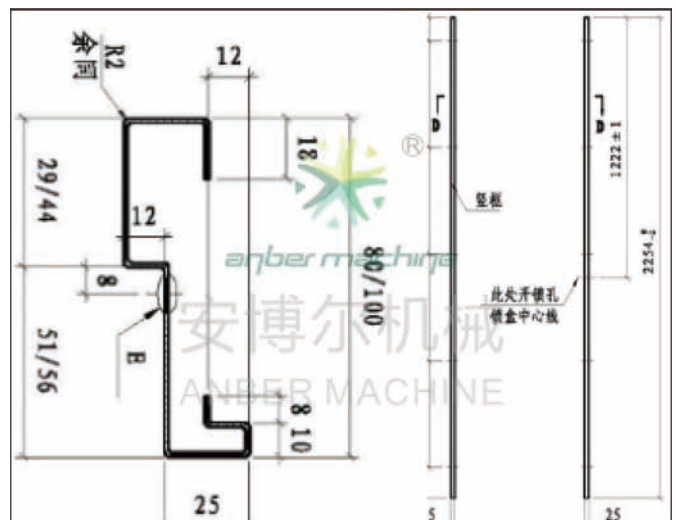
液压刀片切断
液压泵站：5.5kw
刀片材质：Cr12，淬火热处理。
3.7 电器控制
PLC控制，液晶显示屏操作，编码器定长。

Products layout

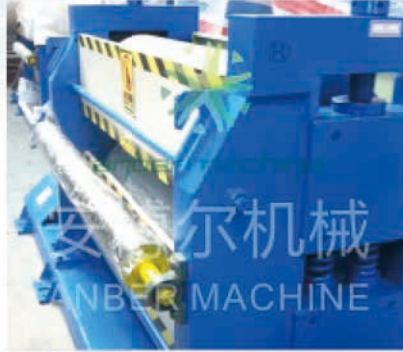
Cross Frame / 横框



Line Frame / 竖框



Steel Sheet Embossing Machine / 金属板压花机



技术参数

外形规格：3300×1200×1700mm
轧辊规格：Φ400×1400mm
轧辊花纹：柳叶纹或根据客户的要求
轧辊材质：42CrMo 合金钢实心锻件
轧辊硬度：热处理淬火HRC55-58
轧花形式：上下凹凸辊对压
压力调节：减速机加压
所压板材：2.5mm以下×1250mm钢板
传动方式：精密齿轮传动
电动功率：变频电机380V，11.0Kw，50Hz
轧机速度：0-20 米/分

Technical parameters

- Overall size: 3300×1200×1700mm
- Size of roller: Φ400×1400mm
- Mould: according to customer's demand
- Roller material: 42CrMo
- Hardness of roller: HRC55-58
- Roller type: up and down roller
- Adjust of pressure: reducer
- Material:
- thickness under 2.5mm, width 1250mm
- Driving type: gear driving
- Motor: 380V, 11KW, 50HZ
- Speed: 0-20m/min

Multi-layer Hot Glue Machine / 多层热压胶合机



技术参数

Size and quantity of Heating plate:
Up and down plate(mm): 40*1000*2200, 2 pcs
Middle plate(mm): 1000*2200, 9 pcs
Space:110mm(used for door thickness:70-90mm)
Effective stroke of oil cylinder: 730mm
Specification and quantity of cylinder: Φ 160mm×2 pcs
Design pressure: 30kg/cm²
Machine weight: 10T/12T
Overall size: 3.1mx1.35mx 2.9m
Temperature: 80°C
Time: 15-30 minute

Technical parameters

胶合机：10层
(上下板40mm x 1000mm x 2200mm，2块；中间板
1000x2200mm，9块)
主机外围尺寸：3100mm x 1350mm x 2900mm
主机重量：10T/12T
层间距：110mm/可选
油缸行程：730mm
油缸规格及数量：Φ 160mm×2只
工作压力：(6-10) T
液压系统工作压力：30kg/cm²
压板温度：80°C
压合时间：15-30分钟
导热介质：热水、蒸汽、导热油
易损件：密封圈