

# HVAC VENTILATION

## AUTO DUCT PRODUCTION LINE 3

DUCT MANUFACTURING - DUCTWORK MACHINE - GI STEEL DUCT MAKING FORMING



## AUTO DUCT LINE 3 HVAC AIR DUCT FORMING MACHINE

- ✓ Type AML-III Rectangular Duct Production Line is a piece of the very important equipment in duct production and is mainly used for blanking of air duct flat plates for HVAC duct manufacturers. Meanwhile, It can cut sheet metal for TDF flange work, and also can fold “□” shape for angle flange duct making. The functions mainly include leveling, beading, notching, cutting, and folding.

## PERFORMANCE FEATURES OF DUCT PRODUCTION LINE 3

- ✓ Auto Duct Line 3 HVAC air duct forming machine auto duct line 3 machine is also named AML-III Rectangular Duct production line. HVAC air duct forming machine auto duct line 3 machine includes a coiler, leveling, and beading unit, “V” and “square” notching unit, cutting unit, folding unit composition. The standard configuration the “V” and “square” notching unit make for TDF flange duct, they’re into the “square” notching unit also can produce TDC flange. The folding unit can connect with the Pittsburgh to match the right angle, also can fold sheet metal into a “square” or “L” type. Greatly improve the utilization of the plate, reduce labor intensity and reduce labor.

The machine electrical control part adopts full servo control, the control system has a closed-loop feedback system for improving the accuracy and stability were obvious. Duct production line 3 can drive blanking for the duct. Meantime, It’s very suitable for diversified production like TDF/angle steel/inserted flange forming, the angle steel flange, and inserted flange can be bent into square-shaped pipe automatically.

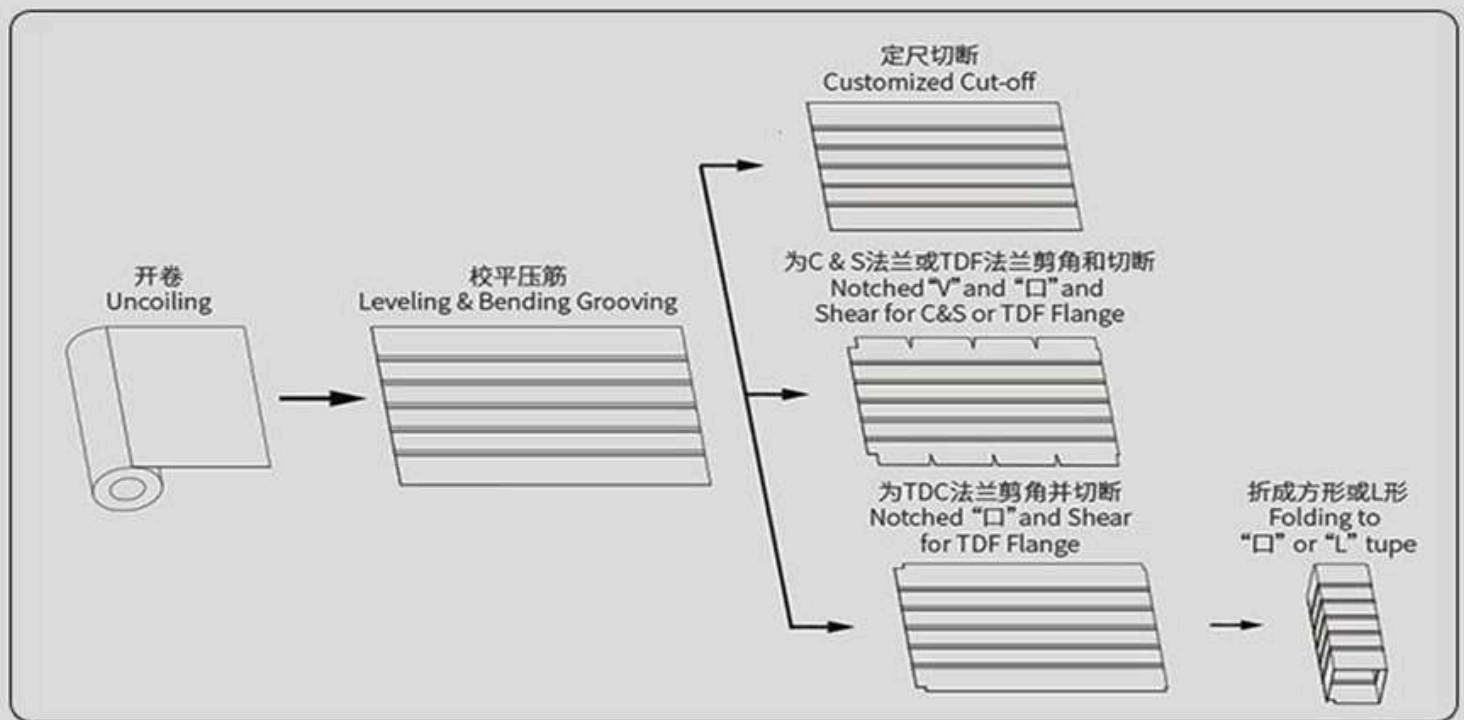
Besides, We can also provide customers 2 material racks (4 material coils) in accordance with different requirements (optional).

For the auto duct line 3 machine, it’s very easy to operate because it usually does leveling, beading, notching shearing folding five steps. But the machine is also suitable for upgrading to auto duct line 4 in the future. And it will be more saving cost, improving efficiency and saving labor.

- ✓ 1. Aluminum alloy suspension arm makes the machine easy to operate.
- 2. The built-in control cabinet reduces wiring as a whole structure and makes it easy to move.
- 3. The imported configuration is very stable and comfortable to use. Cnc air duct production line is a duct making line with the highest automation and highest efficiency in rectangular air duct production line machines. This machine help customers to finish all needed process from cutting sheet metal to forming the whole duct under the control of auto CNC system. Automatic CNC control system greatly improves the precision of products.



## WORK SCHEMATIC DIAGRAM



## PRODUCT INTRODUCTION

### 1. Equipment use

The third line of duct production can meet the needs of duct sheet material cutting, and is also suitable for the diversified production of TDF common plate flanges, angle steel flanges and plug-in flanges. Angle steel flanges and plug-in flanges can be automatically folded into square tubes. It is controlled by a fully computerized closed-loop feedback control system with high production accuracy and operational stability. The production line occupies a small area, is easy to combine, is convenient for on-site construction, and can be upgraded to a super four-line.

Performance description

1. Cutting materials to a fixed length, can be used directly with CNC plasma cutting machines

2.1 C/S bone cutting angle, can cut "L", "U", "口" shaped various cutting angles, used with "C bone and S strip

2.2 TDF common plate flange various connection methods positioning cutting angle, can be used with TDF common plate flange machine, folding machine

2.3 Cutting angle can be used with angle iron flange or zigzag flange, can fold "L" and "口" shaped air ducts, used with the seam machine to complete the whole set of air ducts.

3. Can complete TDC cutting angle and strip flange bending, such as "口" shaped air duct. Used with Dongyang bone interface machine and strip flange to complete the whole set of air ducts

### 2. Equipment functional structure

◆ Automatic unwinding and loading rack (including two material trays)

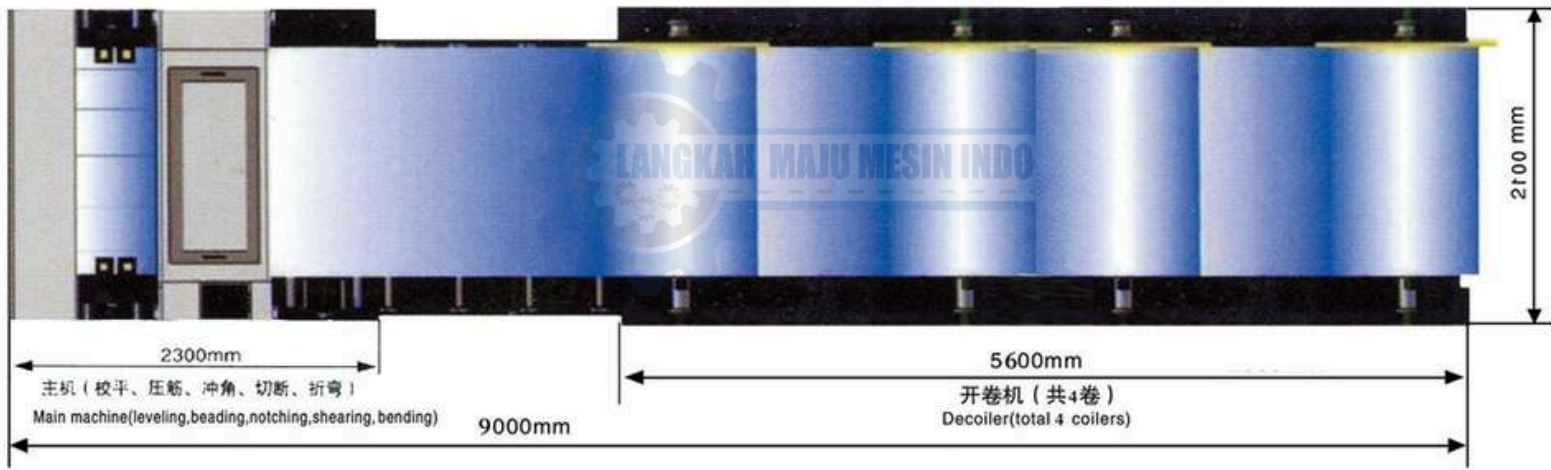
◆ One loading support rack

◆ One set of leveling and rib pressing device

◆ Four sets of hydraulic shearing machine molds

◆ Hydraulic shearing machine, hydraulic folding machine and hydraulic pressing machine

◆ Full CNC computer control system and production software



## TECHNICAL PARAMETERS

No	Name	Numerical Value	Unit	Remarks
1	Processing Coil Thickness Minimum-Maximum	0.5-2.0	mm	1.2 Stainless Steel
2	Applicable Roll Width	1500	mm	
3	Minimum Side Length of Former Duct	150	mm	
4	Total Equipment Power	8.5+3	KW	
5	Oil Pump Maximum Pressure	8	mpa	
6	Roll Load Bearing	7000	kg	
7	Maximum Outer Diameter of Coil	1300	mm	
8	Maximum Feed Speed	15	m/min	
9	Length Error	0.5	mm	
10	Diagonal Error	0.8	mm	
11	Production Line Average Shift Output	1000-2000	m <sup>2</sup>	
12	Production Line Extended Length	7	m	
13	Actual Floor Area	7 x 2.2	m	
14	Total Equipment Weight	4500	kg	
15	Overall Dimensions (L*W*H)	2500x2150x1300	mm	

No	Name	Manufacturer
1	Control System	Mitsubishi
2	Hydraulic System	Beijing Huade
3	Main Motor	Anhui Daye
4	Oil Pump	Nanjing Super
5	Cylinder	Germany Festo
6	Encoder	Japan Omron
7	Main Electrical Components	Schneider, Germany





✓ High Quality HVAC Duct Making Machine, Metal Duct Machine, Rectangular Auto Duct Line  
 Advantage of Products:

- The latest design can resolve the problems like getting struck, too many repairs form roll- shearing displacements lock machine.
- Mechanical arm clutching, locating and transferring platform
- Displacement lock machine
- Line 3 host+ Single rack



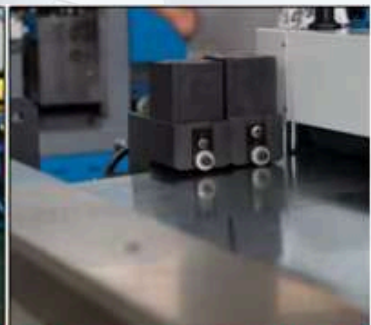
**Electric Decoilers**

The use of expansion and contraction type material rack, easy to unload, stable and reliable.



**Main Functions**

Feeding - cutting - leveling reinforcement  
 - Punch square, tip - cut - fold square



**Hydraulic Angle cutting device**

The integrated production mode ensure the stability of the machine, Processing efficiency, processing speed 1



**Control System**

Control system mainly use Mitsubishi PLC and driver, but Schneider PLC and driver is also optionally.



**Shearing device**

Cutting size numerical control system setting control, Automatic operation of the machine, easy to operate



**Electric System**

Schneider electrics, stable and reliable performance. main motor is WN or Sierr brand, Japanese Omron encode

