

CNC Flat And Angle Processing Machine

1. APM Series CNC Angle Line

AIMACHINE



Applicable industry:

The machine is the special equipment used for angle steel marking, punching, and shearing mainly in the field of power and telecommunication industry.

Product feature:

1. Adopt CNC technology, servo motor in feeding, with high efficiency, stable work piece precision.
2. Key hydraulic, pneumatic and electric parts all imported.
3. Easy programming and can directly use the program data made by lofting software.
4. Computer with Chinese/English intemarking face, easy operation, and can display the drawing of workpiece.
5. All marking, punching and shearing in automatic completeness, all finished angles can be unloaded by pneumatic turnover device so as to lighten the working strength of workers with well advantages than other manufacturers.
6. Only need to input size of work piece, diameter of holes, stadia and quantity of work piece when edit program, or use CAD/CAM direct conversion.
7. The machining line installs supporting & pressing device to meet the requirements of processing angles with bigger bending.

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8. Marking unit adopts closed frame with good rigidity. Marking stadia can be set at will.
9. With avoided shearing functions, so as to process fixed-length angles.
10. With function of self-diagnosis for failures.

Technical Parameters

Model	APM1010	APM1412	APM2020	APMS2020
Angle size(mm)	L40×40×3	L40×40×3	L63×63×4	L63×63×4
Angle size(mm)	L100×100×10	L140×140×12	L200×200×20	L200×200×20
Max. punching (mm)	Φ26; Φ22×50;(Q235)			
Punching force(kn)	600	1030	1000	1100
Marking force(kn)	700	1030	1030	1030
Shearing force(kn)	1200	1200	1800	45000
Max. length of blank(m)	12	12	14	14
Max. length of finished(m)	10	10	10	10
Punching head	3(2 round+1 oval)			
Character group	4	4	4	4
Shearing mode	Single blade cutting		Double blade	Single blade cutting

2. BL Series CNC Drilling & Marking Line for Angles

AIMACHINE



Applicable industry:

The machine is the special equipment used for angle steel marking, drilling in the field of power and telecommunication.

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Product feature:

1. Adopt CNC technology, servo motor in feeding, with high efficiency, stable work piece precision.
2. Key hydraulic, pneumatic and electric parts all imported.
3. Easy programming and can directly use the program data made by lofting software.
4. Computer with Chinese/English interface, easy operation, and can display the drawing of work piece.
5. All marking and drilling in automatic completeness, all finished angles can be unloaded by pneumatic turnover device so as to lighten the working strength of workers with well advantages than other manufacturers.
6. Only need to input size of work piece, diameter of holes, stadia and quantity of work piece when edit program, or use CAD/CAM direct conversion.
7. The machining line installs supporting & pressing device to meet the requirements of processing angles with bigger bending.
8. With avoided shearing functions, so as to process fixed-length angles.
9. With self-diagnosis failures function.

Product Basic Parameter:

Model	CAD2532	CAD3635
Angle size(mm)	140×140×10~250×250×32	140x140x10~360x360x35
Max. length of raw material (m)	14	14
Max. length of finished angle (m)	14	14
Length of loading conveyors (m)	18	18
Length of unloading conveyors (m)	10.8	10.8
Marking force(kn)	1030	1030
Marking unit type	Close type	Close type
No. of character group	1	1
No. of character	15	15
Character size (mm)	14×10×19 or 20×12×19	14×10×19 or 20×12×19
Range of stadia (back mark)(mm)	50~220 stepless	50~220 stepless
No. of drill on each side	3	3
Max. drilling diameter (mm)	26	40

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Model	CAD2532	CAD3635
Taper of drilling spindle	BT40	BT40
Stroke of Spindle(mm)	140	140
Max. Spindle rotation speed(r/min)	6000	6000
Overall dimensions(m)	30×7.5×3	30×8.9×3
Total power (kW)	109.7	109.7
Machine weight (kg)	30000	31000

■ This processing line is composed of transverse conveyor, overturn conveyor, infeed conveyor, CNC infeed carriage, two sets of drilling units, one set of marking unit, automatic unload conveyor and corresponding hydraulic station, electric cooling system.

■ There is one set of drilling unit on each side. Every drilling unit can be installed with three drills of different dimensions. The drilling unit can realize the CNC movement holistically for change of drilling stadia, therefore to ensure the accuracy of holes.

■ Rotation speeds of all spindles are stepless adjustment realized by transducer, and feeding speeds are also stepless adjustment realized by speed regulating valves. Transform of the rapid feeding, work feeding, and rapid withdrawing of spindles all are finished automatically.

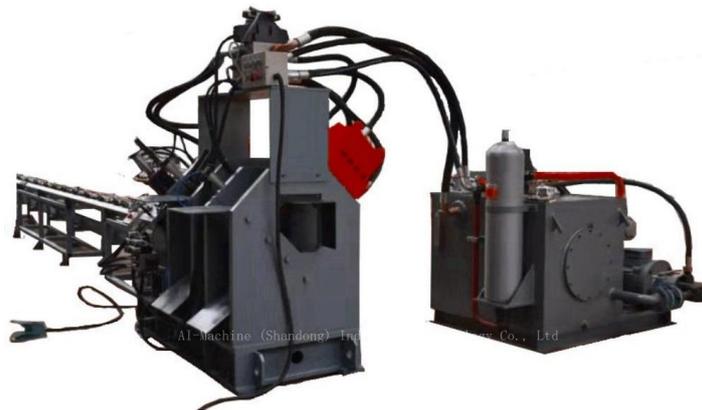
■ One marking unit in the drilling line. Marking stadia can be preset conveniently.

■ Marking, clamping of the workpiece and infeed of the drilling are driven by the hydraulic system. Main components are imported. Circulate cooling system is applied so as to prolong the life of drills.

■ The control system consists of the host computer, CNC system, servo motor, PLC, external monitoring switch, etc. Just input the dimension of the workpiece, the processing program will be generated automatically. Besides, the program can be saved, selected, displayed and communicated as per the workpiece No.

3. BP Series CNC Flat Steel Production Line

AIMACHINE



Applicable industry:

This production line is suitable for punching shearing, typing on flat steel, and punching for channel steel, so it can be called combined line for flat steel and channel steel.

It's professional equipment used widely for punching, marking, and shearing for flat steel in electrical iron accessories industry.

Product feature:

1. Adopt servo motor feeding system with high efficiency and steady high precision.
2. The key parts of electrical, hydraulic and pneumatic are international famous brand to assure the high and steady quality.
3. Simple programme, easy operation, the user only need to input the parts size, hole diameter, stadia, parts number. or can transform form CAD/CAM.
4. Fully automatic process of marking ,punching and shearing.
5. Have the self-diagnostic function.

Product Basic Parameter

Model	BP1410D	BP1410E
Band Steel size(mm)	40-140	
Channel Steel size(mm)	#8;#10;#12;#14	
Max.Thickness(mm)	10	

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Model	BP1410D	BP1410E
Max.length of blank(m)	6(Customized)	
Max.punching thi.(mm) dia.*	Φ26; 22*50	Φ26; 28*50
Punching force(KN)	800	
Shearing force(KN)	800	
Qty.of punch surface	1	
Qty.of punch	3	
Lines of punch	Any	
Typing force(KN)	700	
Group number of character box	4	
Min shearing length(mm)	≥130	
Shear Mode	Single cut; or arch cut	
Hydraulic cooling way	Water cooling	
Speed of feeding car (m/min)	0-90	
Punching frequency(min-1)	45-50	
Dimension(m)	≈22x4x2	
Total power(KW)	≈30	

4. PP Series CNC Hydraulic Punching (Drilling) & Marking Machine for Plates

AIMACHINE



Applicable industry:

Used for punch and mark of joint plate in the field of iron tower. It is also used to punch and mark of metal plate of other trade.

Product feature:

- 1.The machine-frame is made by C-type plate welding, with good rigidity and big handling space. The machine sets three die-stations (among them, one is the marking die-station), automatic switching die-stations. Clamping system can adapt to different work piece, with zero baffles as datum mark, and work piece supported by rolling-ball working table. Axis X & Y action should be controlled by servo motor and ball-screw driving, and double-axis CNC system controls the position of punching, so as to make the whole machining process automatically; operator may input the sizes of work piece to computer for repeated calling program in the future.
2. Adopt CNC technology, servo motor in feeding, with high efficiency, stable work piece precision.
3. Important functional components adopt modular assembly, easy to repair it.
4. Carry out punching, marking and drilling on the one plate.
5. Drilling unit has the functions including rapid falling, slow work-feeding and quick feeding back to improve working efficiency.

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6. Easy programming, may input the diameter of holes, position and the quantity of work piece to computer, and also may use the program generated by lofting software, or adopt direct conversion CAD/CAM.

7. With function of self-diagnosis for failures.

8. Lighten the working strength of workers.

Product Basic Parameter

Model	PP1580	PP2560	PP3350
Max size of work piece L×W(mm)	1500×800	2500*600	3300*500
Max. diameter of punching (mm)	Φ26	Φ30	
Plate thickness of punching (mm)	5~25	5-30	
Punching force (KN)	1000	1400	
Marking force (KN)	800	1000	1200
Min. distance between hole and plate edge (mm)	25/30		
Dimensions of characters (mm)	14×10×19 By customers' request		
Quantity of character	10~18		
Die-stations	3		
Precision	Accordance with GB2694		
Programming mode	Input by keyboard, RS232 interface, floppy disk and USB interface		

5. CQC Angle Heel Milling Machine

AIMACHINE



Applicable Industry:

The machine used for angle bank milling, mainly in the field of angle steel tower industry, electric power fittings, structure storage facilities, and steel structure construction industries etc.

Product Feature:

1. By installing special cutter of a few cutting blade , high speed milling and high efficiency, surface roughness is good, one time molding process.
2. According to request it can do a single-stage and continuous cutting.
3. Operation of this machine is simple, reduced operational requirements of workers.
4. Machine with high degree automation, can achieve a continuous, intermittent feeding, effectively improve work efficiency; process one size L180 × 180 × 18 length 800mm angle, for about 2-3 minutes, one worker can operate two machine together.
5. Simple operation, flexible adjustment and stable operation.
6. Multi -purpose machine, can complete continuous feed and cutting length.
7. With touch-screen operator interface.

Product Basic Parameter:

Model	CQC200	CQC250
Total power	10KW	12KW
Single-spindle power	4KW	5.5KW
Power supply	380V,50Hz	380V,50Hz
Air supply	0.6MPa~0.7MPa	0.6MPa~0.8MPa
Cutting Speed	150~400rpm	0~400rpm

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Diameter of cutting plate	100mm	200mm
Feeding speed	100~450mm	0~450mm/min
Rotation of spindle	450rpm	360rpm
Quantity axis	2	2
Quantity feeding motor	2	2
Adjustment motor of cutting amount	1(Servo or stepper motor)	1(Servo or stepper motor)
Quantity pressure cylinder	4	4
Angle processing size	L50~L200	L63~L250
Length of angle	280mm~+∞ (Processing length unlimited)	330mm~+∞ (Processing length unlimited)
Operation mode(Data input)	Touch screen (with compensation function)	

6. CNC Angle inner root milling Machine

AIMACHINE



Applicable Industry:

The machine used for milling angle root mainly in the field of angle steel tower industry, electric power fittings, structure storage facilities, and steel structure construction industries etc.

Product Feature:

1. According to request it can do a single-stage and continuous cutting.
2. Operation of this machine is simple, reduced operational requirements of workers.
3. Machine with high degree automation, can achieve a continuous, intermittent feeding, effectively improve work efficiency; process one size L180 × 180 × 18 length 800mm angle, for about 2-3 minutes, one worker can operate two machine together.
4. Simple operation, flexible adjustment and stable operation.

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5. Multi -purpose machine, can complete continuous feed and cutting length.

Specification:

Model	CGQ200	CGQ250
Total power	10KW	7KW
Single-spindle power	4KW	3KW
Power supply	380V,50Hz	380V,50Hz
Air supply	0.6MPa~0.7MPa	0.6MPa~0.8MPa
Cutting Speed	150~400rpm	0~400rpm
Diameter of cutting plate	100mm	120mm
Feeding speed	230~500mm/min	0~500mm/min
Rotation of spindle	450rpm	400rpm
Quantity axis	2	2
Quantity feeding motor	2	2
Quantity pressure cylinder	4	4
Angle processing size	L63~L200	L63~L200
Length of angle	300mm~+∞(Processing length unlimited)	350mm~+∞(Processing length unlimited)
Mode pressure	Have the function workpiece automatic positioning	
Overall dimensions	2250×1290×1900mm	2250×1290×1900mm

7. RHC Series Hydraulic Angle Notching Machine



Applicable industry: Used for cutting corner of angles.

Product feature:

The machine with opening C-type structure, its cutting mould is rectangular double-blade mode. Multi-directions rotational corner cutting mould can cut out different angle of angles only need to adjust rotation die-carrier so as not to rotate the angles, so corner cutting with little error only need small working area.

Product Basic Parameter:

Model	RHC140	RHC160	RHC200
Functions	Used for cutting corner of angles in steel tower industry		
Nominal pressure(kN)	800	1000	1600
Stroke of oil cylinder(mm)	50	50	50
Times of stroke (min-1)	20~25	20~25	20~25
Power of motor(kW)	15	15	22
Angle steel size(mm)	L40×40×3~ L140×140×12	L40×40×3~ L160×160×16	L40×40×3~ L200×200×20
Rotary angles	360° manual		
Dimensions of notching mould(mm)	650×650×500	700×700×500	830×700×600
Dimensions L×W×H(mm)	1270×1020×1800	1300×1020×1880	1370×1120×1900

8. DZ Series Hydraulic Marking Machine



Applicable industry:

Used for marking of angles and metal plates in the field of power and telecommunication.

Product feature:

1. The equipment possesses independent hydraulic power system and electric controlling system.
2. The hydraulic system uses the electromagnetic valve to reverse.

Product Basic Parameter:

Model	DZ160	DZ100	DZ80
Marking force(kN)	1600	1000	800
No. of character group (piece)	1	1	1
No. of character in each side(piece)	26	17	12
Character side (mm)	14×10×19 (By customers' request)		
Working stroke(mm)	20-25	20-25	20-25
Times of stroke(min ⁻¹)	25	25	25
Power of motor(kW)	15	15	15

9. Angle Flange Open close press GKH160-600



Applicable industry:

Used for angle opening & closing in the steel tower industry.

Product feature:

- 1、Hydraulic control, easy operation and high working efficiency.
- 2、Separate hydraulic and electric control system, with simple structure
- 3、Adopt V type press mold with high accuracy.

Product Basic Parameter:

Pressure of oil cylinder (KN)	1000
Angle steel size (mm)	L75*7~L160*14
Length of flange open and close (mm)	800
Degree of close and open	16° , 25° (by changing press mold)
Oil cylinder stroke (mm)	500

10. Three point type straightening machine



It can work on angle steel, size from L40*40*3-L200*200*20mm;
round steel, size within 100mm;
square steel, size within 100*100mm;
The max straightening force is 1000kn;

11. Roller type straightening machine JZ200



It can work on angle steel, size from L70*70*5 to L200*200*20mm;
The max straightening force is 4600kn;
Feeding speed (m/min) : 10-15
Roller quantity: 12nos
Diameter of roller: Φ 480 mm