

HYDRAULIC CNC PUNCHING MACHINE (VT-300)

Technical Part

Technique Specification

Description	Unit	VT-300
Punch Force	KN	300
Max. Processing Size	mm	1250*2500 (with one reposition)
Processing Thickness	mm	0.6-6.35
Max. Punch Diameter	mm	∅ 88.9
No. of Station	no.	32
Hole Accuracy	no.	±0.10
Max. Punch Hit	hpm	600
Max. Sheet Moving Speed	m/min	85
Turret Speed	rpm	30
Controlling Axis	no.	4
No. of Station	no.	2
CNC System		FANUC 0i-PC
Max. Punch Diameter	mm	∅ 88.9
Oil Pressure	mpa	0.55
Floating Clamp	no.	2
Outline Diameter	mm	5020*2680*2340
Main Motor Power	kW	11
Frame		O type

Components List

(I)Hydraulic Part		
1.Hydraulic System		H+L
2.Pipe		Manuli
(II)Traversing Part	Note: the following is THK Model	
1.Linear Guideway	HSR35A2SSC1+2360L	THK or INA
	HSR35A2SSC1+2060L	
2.Ballscrew	BLK3232-7.2ZZ+1930LC7T	THK or NSK
	BLK3232-7.2ZZ+1735LC7T	
3.Ballscrew Bearing Support	25TAC62BDFC10PN7A	NSK
(III)Pneumatic Part	Note: the following is SMC model	
1.Three joints	AC30A-03D	SMC or FESTO
2.Conflux Board	SS5Y5-41-03-C8	SMC or FESTO
3.Pipe Tie-in	KQH08-01S	SMC or FESTO
	KQT08-03S	SMC or FESTO
	KQ608-03S	SMC or FESTO
	KQT08-00	SMC or FESTO
	KQU08-00	SMC or FESTO
	KQP-08	SMC or FESTO
	KQH08-02S	SMC or FESTO
	KQL08-02S	SMC or FESTO
	KQL12-02S	SMC or FESTO
	KQL10-00	SMC or FESTO
	KQL10-02S	SMC or FESTO
	KQH10-02S	SMC or FESTO
	4.Plug	PLUG1/4
PLUG1/8		SMC or FESTO
5.Flow Limitor	AS2201F-01-08S	SMC or FESTO
	AS2201F-02-08S	SMC or FESTO

6. Electromagnetic Valve	SY5240-5D	SMC or FESTO
	SY5140-5D	SMC or FESTO
	SY5120-5D-01	SMC or FESTO
7. Muffler	AN203-02	SMC or FESTO
	AN103-01	SMC or FESTO
8. Knee Joint	KJ12DM12X1.25	SMC or FESTO
9. Magnetic Switch	D-A73L	SMC or FESTO
10. Rack	SX5000-16-1A	SMC or FESTO
11. Pressure Detector	GP46-10-01L5	SMC or FESTO
12. Cylinder	CDQ2B40-40D	SMC or FESTO
	CDQ2B50-30D	SMC or FESTO
	CDQ2A50-50D	SMC or FESTO
	CP95SDB40-80-Z73L	SMC or FESTO
	CP95SDB40-125-Z73L	SMC or FESTO
(IV) Electric Part		
1. CNC System	0i-PC	FANUC
2. Colorful Display	10.4"	FANUC
3. Power Module		FANUC
4. Driving Module		FANUC
5. Servo Motor		FANUC
6. Breaker		Schneider
7. Contactor		Schneider
(V) Others	Paints	Holland



Main Characteristics

(I).Adopts Germany H+L hydraulic system with proportionate servo valve, full loop control, wonderful dynamic and static state reaction. High distinguish, no middle position dead zone, strong capacity for anti-vibration.

1.Adjustable speed and stroke

a. The punch stroke can be selected according to the thickness of the sheet automatically, improving the work efficiency.

b. The punch speed is adjustable during each point of each single station, the machine can realize the high speed swift during empty run and low speed during real punch, in this way, the punch quality can be improved effectively, and there is really no noise during punch.

c. Precise control of PUP can make the process of special workpiece quite conveniently.

2.Automatic

3. The invariable punch force during the whole procedures makes the punch quality to a high level and ensures the process stability.

(II)The turret with bushing is process in pairs

The turret is processed by special device to ensure the coaxiality of the upper and lower turret and expand the service life of tooling; the bushed turret simplifies the turret structure to extend the service life; long tooling can be used to increase the guiding accuracy and expand the tooling service life (for thick sheet).

(III). Imported pneumatic, lubricating and electric components ensures the reliability of the whole machine.

(IV). Large lead guideway and ballscrew from Japan or Germany ensures high feeding precise.

(V). Hard brush and ball mixed worktable reduces the noise and vibration during running and also protects the sheet surface.

(VI).O-type welded frame has been vibrated for twice, the stress has been deleted completely.

(VII).Floating clamp with large clamping force ensures the stable feeding; integrated carriage ensures good rigidity and convenient movement of clamp.

(VIII). The system is featured with the function of automatic clamp protection to avoid the damage of tooling and clamp, ensuring the continuous running of the program.

(X). The auto-index adopts high accurate worm wheel and worm mechanism, ensuring high precise indexing. The max. tooling diameter can reach 88.9mm and the auto-index can be expanded to 4 nos.

(XI). Integrated beam structure to make the carriage and beam into one part, increasing the rigidity and brings the accurate positioning. The machine can run much more stably during high speed feeding and it puts an end to the deflection of X and Y axes.

(XII). Grease lubrication can send the lubrication grease to the relative lubricating point directly, reducing the friction of each working pairs and increasing the service life.

IV. Dispatch Documents, Spare Parts and Accessories

Dispatch Documents

No.	Description	Quantity	Remark
1	Packing List	1 no.	
2	Quality Certificate	1 no.	
3	Instruction	1 no.	
4	Programming Manual	1 no.	
5	Operation Manual	1 no.	
6	Tooling Drawing	1 Set	
7	Foundation Drawing	1 Set	
8	Electrical Principal	1 Set	
9	CNC System	1 Set	

Dispatch Spare Parts

No.	Description	Quantity
1	Clamp Board	2 nos.
2	Brush	20 nos.
3	Tube	10 m
4	Φ12 Tube Tie-in	1 no.
5	Spring	20 nos.



Dispatch Accessories

No.	Description	Gauge	Quantity
1	Double Spanner	5.5×7 22×24	1 Set
2	Movable Spanner	200	1 no.
3	Hex Socket Spanner	S1.5-S10	1 Set
4	Cross Screwdriver	100×6	1 no.
5	Screwdriver	100×6	1 no.
6	Grease Gun		1 no.

V. CNC System

FANUC CNC system is the specialized CNC system developed by Japan FANUC especially for the purpose of meet the features of this type of machine, improving the reliability of the machine to a large extent.

III System Characteristics

1. Graphic and punch function;
2. Convenient universal G code program for easy operation;
3. Universal RS232 standard port to communicate with computer conveniently;
4. Advanced full digital servo motor and servo system;
5. 10.4" LCD colorful display;
6. Pulse encoder semi-loop feedback;
7. EMS memory: 256K;
8. Field program, office program;
9. Chinese and English display;
10. Function of graphic simulation;
11. One large capacity PCMCIA card for the backup of system parameter, ladder drawing and processing program, and realize the online process of large capacity processing program;
12. Increment in the smallest unit, position detection and servo control to realize high speed and high accurate operation;
13. The operation button on the panel can be defined according to the real requirement;
14. Super high speed clutch data cables with little cable connection;



15. High integration, specialized software. Short time for start up, the data will not be lost if power is short of supply suddenly;
16. Storage of 400 pieces of program.

II. System Function:

1. Linear axes: X, Y axes, rotating axes: T, C axes, punch axis: Z axis;
2. Alarm for electric error such as over- stroke.
3. Function of self-diagnose.
4. Function of soft limit.
5. Universal G code for program;
6. Function of tooling compensation;
7. Function of screw distance compensation;
8. Function of reverse gap compensation;
9. Function of coordinates deflection;
10. Function of reposition;
11. Function of AUTO, MANUAL JOG mode;
12. Function of clamp protection;
13. Function of lock of inner register;
14. Function of parameter program;
15. Function of sub-program;
16. Function of swift positioning and punch lock;
18. Function of M code;
19. Absolute and increment program;
20. Conditioning, unconditioning jump.