

# HYDRAULIC CNC TURRET PUNCH T30

## T30

数控转塔冲床

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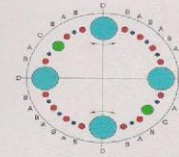
液压站  
Hydraulic unit



自动旋转工位  
Self-rotation station



FANUC 0ip数控系统  
CNC Controlling system



模具分布图  
Tooling layout



气动浮动夹钳  
Pneumatic floating clamp



交流伺服电机  
AC servo motor

| 工位类别<br>Station types | 30 工位<br>30 station | 尺寸范围<br>Dimension range |
|-----------------------|---------------------|-------------------------|
| A                     | 10                  | Ø3 ~ Ø12.7mm            |
| B                     | 14                  | Ø12.7 ~ Ø31.75mm        |
| C                     | 2                   | Ø31.75 ~ Ø50.8mm        |
| D                     | 4                   | Ø50.8 ~ Ø88.9mm         |

## TECHNICAL PARAMETER:

### HYDRAULIC CNC TURRET PUNCH T30

|                                   |                                  |
|-----------------------------------|----------------------------------|
| Nominal force                     | : 300 KN                         |
| Work piece size                   | : 1500×4000 mm                   |
| Max work piece weight             | : 156 Kg                         |
| Max work piece thickness          | : 6.35 mm                        |
| Max punch diameter                | : Φ88.9 mm                       |
| Number of stations                | : 30                             |
| Working accuracy                  | : ±0.10 mm                       |
| Max. Hit Speed                    | : 600 HPM                        |
| Work piece travelling speed       | : 106 m/min                      |
| Turret speed                      | : 30 r/min                       |
| Frame construction                | : Straight – side Frame          |
| Throat depth                      | : 1275 mm                        |
| Number of control axis            | : 4 axes (X, Y, T, C , Z)        |
| Max rotary station punch diameter | : Φ88.9 mm                       |
| Repeatability                     | : 0.02 mm                        |
| Lubrication device                | : Available                      |
| Number of clamp                   | : 2                              |
| Clamp type                        | : Pneumatic type                 |
| Heat treatment of the frame       | : Annealing                      |
| Tool type                         | : Long Guide Sleeve type (AMADA) |
| Turret construction               | : Thick turret                   |
| Power capacity                    | : 25 KW                          |
| Air pressure                      | : 0.55 Mpa                       |
| Machine dimension (L*W*H)         | : 5650*4200*2010 mm              |
| <b>Brand New</b>                  | <b>: China</b>                   |

## MACHINE FEATURES

- 1) Advance and reliable Hydraulic drive system can select stroke automatically corresponding to different thickness of metal sheet and is convenient to realize special process of Louver, blanking, etc. The Punch is equipped with auto Hydraulic overload protection device, and guarantees consistent pressing force for quality products.
- 2) The punch is of FANUC OIP CONTROL System.
- 3) Index stations are of worm wheel structure with max. Punching diameter of  $\Phi 88.9$ .
- 4) Dual Turret is of long insert structure ensuring coaxiality of the punch and dei, which gives long life to the tool and turret.
- 5) Imported pneumatic and hydraulic components guarantee reliability of the machine.
- 6) Imported ball screws with long travel and linear guide ways ensure transmission precision.
- 7) The worktable with hard brush and steel ball reduces noise and shock of the machine and protect surface of the work piece
- 8) The machine is straight-side frame, which is annealed for eliminating inner stress.
- 9) The clamps with auto protection function, in the protective zone, only excise movement without punching action for continuous operation.
- 10) Centralized lubrication devise provides lubricant oil to the desired points to reduce friction of pairing elements for long machine life.
- 11) Tool station layout consists of A, B, C, D, which is convenient for the customer and save the tool cost.
- 12) Common requirement is for site foundation preparation and machine installation is simple.

## MAIN IMPORTED COMPONENTS LIST

| NO | DESCRIPTION  | SPECIFICATION | QUANTITY | MANUFACTURER        |
|----|--------------|---------------|----------|---------------------|
| 1  | CNC CONTROL  | FANUC OI PC   | 1 SET    | JAPANESE FANUC      |
| 2  | SERVO MOTOR  |               | 1 SET    | JAPANESE FANUC      |
| 3  | H+L CARD     | HS3           | 1        | GERMAN<br>HYDRAULIC |
| 4  | POWER SWITCH | VCF-3         | 1        | SCHNEIDER           |

|    |                |               |   |                |
|----|----------------|---------------|---|----------------|
| 5  | USP            | 6EP1436-3BA00 | 1 | GERMAN SIEMENS |
| 6  | EMERGENCY STOP | XB2BS542C     | 1 | SCHNEIDER      |
| 7  | FLAT BUTTON    | XB2BA31C      | 4 | SCHNEIDER      |
| 8  | FLAT BUTTON    | XB2BA11C      | 2 | SCHNEIDER      |
| 9  | SELECT SWITCH  | XB2BG21C      | 1 | SCHNEIDER      |
| 10 | SELECT SWITCH  | XB2BD33C      | 1 | SCHNEIDER      |

|    |                        |                                                    |     |                               |
|----|------------------------|----------------------------------------------------|-----|-------------------------------|
| 11 | PROXIMITY SWITCH       | BI2-EG08-AP6X                                      | 1   | TURCK                         |
| 12 | PROXIMITY SWITCH       | BI2-M12-RP6X                                       | 2   | TURCK                         |
| 13 | FEELER                 | ZB2BE102C                                          | 1   | FOR EMERGENCY STOP, SCHNEIDER |
| 14 | 16-CORE SHIELDED CABLE | 16×0.25                                            | 30M | GERMANY                       |
| 15 | HYDRAULIC SYSTEM       | HKL/30T                                            | 1   | GERMAN H+L                    |
| 16 | HYDRAULIC CONNECTOR    | A16-RS                                             | 1   | GERMAN EMB                    |
|    |                        | A12-RS                                             | 1   | GERMAN EMB                    |
|    |                        | A8-RL/WD                                           | 2   | GERMAN EMB                    |
| 17 | BALLSCREW              | R40-25B1-PFDW-15881750-0.012                       | 1   | HIWIN                         |
|    |                        | R40-25B1-PFDW-15881750-0.012                       | 1   | HIWIN                         |
| 18 | LINEAR GUIDEWAY        | HGW25CA2R2260ZAP I                                 | 2   | HIWIN                         |
| 19 | COUPLING               | ROTEX GS 24/28<br>98SHAGS 2.0- Φ19×30<br>2.0Φ20×30 | 1   | GERMAN KTR                    |
|    |                        | ROTEX GS 14<br>98SHAGS1.0- Φ10×11<br>2.0Φ14×11     | 2   | GERMAN KTR                    |
|    |                        | ROTEX GS 14<br>98SHAGS1.0- Φ14×11<br>1.0Φ14×11     | 2   | GERMAN KTR                    |
|    |                        | ROTEX GS 14<br>98SHAGS1.0- Φ14×11<br>1.0Φ14×11     | 4   | GERMAN KTR                    |

|    |                            |                                                  |    |              |
|----|----------------------------|--------------------------------------------------|----|--------------|
|    |                            | ROTEX GS28/38<br>98SHAGS2.5-<br>Φ38×35/2.5Φ35×35 | 1  | GERMAN KTR   |
| 20 | BEARING(BALLSCREW)         | 7205B/DB                                         | 8  | JAPANESE NSK |
| 21 | BEARING (TURRET)           | 33220、 33117                                     | 4  | FRENCH TIM   |
| 22 | BEARING (INDEX<br>STATION) | 71902C                                           | 16 | JAPANESE NSK |
| 23 | OIL SEAL                   | 10×17×3                                          | 4  | SOG          |
| 24 |                            | 15×21×3                                          | 4  | SOG          |
|    |                            | 20×26×4                                          | 4  | SOG          |
|    |                            | 30×40×4                                          | 11 | SOG          |
|    |                            | 35×45×4                                          | 9  | SOG          |
|    |                            | 38×48×4                                          | 2  | SOG          |

|    |                       |                    |   |              |
|----|-----------------------|--------------------|---|--------------|
| 25 | PNEUMATIC CYLINDER    | KCDQ2B80 -30D-A93L | 2 | KOREAN ARK   |
|    |                       | KMDBF50-50-A54K    | 2 | KOREAN ARK   |
|    |                       | CDQ2KB32-30D-73L   | 2 | JAPANESE SMC |
|    |                       | KCDQ2B25-40DM-A73K | 2 | KOREAN ARK   |
| 26 | RESTRICTOR            | AS1201F-M5-06      | 4 | JAPANESE SMC |
|    |                       | AS3201F-02-06S     | 2 | JAPANESE SMC |
|    |                       | AS2201F-03-06S     | 2 | JAPANESE SMC |
| 27 | CONNECTOR             | PC0602             | 2 | KOREAN SANG  |
|    |                       | PC06M5             | 2 | KOREAN SANG  |
|    |                       | PC1002             | 1 | KOREAN SANG  |
|    |                       | PL1003             | 2 | KOREAN SANG  |
|    |                       | PUT06              | 7 | KOREAN SANG  |
|    |                       | KQL06-03S          | 2 | JAPANESE SMC |
| 28 | FLOATING<br>CONNECTOR | JB80-16-200        | 2 | JAPANESE SMC |
| 29 | TRI-PIECE             | AC30A-03D          | 1 | JAPANESE SMC |
| 30 | AIR PRESSURE METER    | GP46-10 -01L5      | 1 | JAPANESE SMC |
| 31 | BUS BOARD             | SS5Y5 -41-05-C6    | 1 | JAPANESE SMC |
| 32 | SOLENOID VALVE        | SY5140 -5D         | 5 | JAPANESE SMC |
| 33 | SILENCER              | AN203-02           | 4 | JAPANESE SMC |

|    |             |         |   |              |
|----|-------------|---------|---|--------------|
| 34 | MULTI-CLAMP | TM      | 6 | JAPANESE SMC |
|    |             | TM      | 1 | JAPANESE SMC |
| 35 | PLUG        | KQ2P-06 | 1 | 日本 SMC       |

## FAUNC OiP CONTROL SYSTEM 1) SYSTEM CONFIGURATION

- A) Step punch function, graphic function, applicable program and data of CNC memory and definition 0.1μm.
- B) Simple international G code for operation.
- C) Standard RS232 interface with the PC.
- D) Advanced AC servo system and servo motor modular design for easy maintenance.
- E) Outstanding MMC dialogue function between the machine and operator.
- F) Color TFT 10.4" display.
- G) Programming on line and background programming.
- H) Distance diagnosis function.

## 2) SYSTEM FUNCTIONS

- A) Linear axis: X-axis, Y-axis; Rotary axis: T-axis, C-axis.
- B) Self-diagnosis function.
- C) International G code programming.
- D) Soft limit protection function and repositioning function.
- E) Pitch compensation function and reverse gap compensation function.
- F) Different operation modes such as Auto, Manual, Semi-auto, etc.
- G) Clamp protection function.
- H) Parameter programming function and subroutine recall function.
- I) Quick positioning function.
- J) Various M function and other supporting function.
- K) Absolute, incremental programming; conditional and non-conditional skip function.
- L) Warning indication for overload, overflowing, over-travel and various mechanical and electronic faults.
- M) The control system is special for CNC turret punch.

## SUPPLY RANGE

- 1) One set of CNC turret punch (include 30 pair of standard Chinese tools).
- 2) Accessories with the machine:

|   |                       |           |           |
|---|-----------------------|-----------|-----------|
| 1 | Foundation iron block | : 240x240 | : 6       |
| 2 | Adjusting bolts       | : M42×2   | : 6 pairs |

|   |            |           |     |
|---|------------|-----------|-----|
| 3 | Foot pedal | : YDTF-11 | : 1 |
|---|------------|-----------|-----|

### 3) Tools for machine installation and maintenance

|   |                        |          |         |
|---|------------------------|----------|---------|
| 1 | Philips screwdriver    |          | : 1     |
| 2 | In-line screwdriver    |          | : 1     |
| 4 | Socket hexagon spanner | : 1.5-14 | : 1 SET |
| 5 | Open spanner           | : 5.5-24 | : 1 SET |
| 6 | Adjustable wrench      | : 12"    | : 1     |

### 4) Documents with the machine

|   |                                     |         |                                                            |
|---|-------------------------------------|---------|------------------------------------------------------------|
| 1 | Packing list                        | : 1     |                                                            |
| 2 | Quality certificate                 | : 1     |                                                            |
| 3 | Instruction manual (mechanical)     | : 1     |                                                            |
| 4 | Instruction manual (electronically) | : 1     |                                                            |
| 5 | Foundation drawing                  | : 1 set | : Deliver to the user upon the contract takes into effect. |
| 6 | Electrical diagram                  | : 1 set |                                                            |
| 7 | System documents                    | : 1 set |                                                            |
| 8 | Parameters Disk                     | : 1     |                                                            |
| 9 | Auto Programming Software           | : 1     |                                                            |

### 5) 32- STATION LAYOUT

| Station type | Dimension range            | Stations for each type |
|--------------|----------------------------|------------------------|
| A            | : $\phi 3 - \phi 12.7$     | : 14                   |
| B            | : $\phi 12.7 - \phi 31.75$ | : 10                   |
| C            | : $\phi 31.75 - \phi 50.8$ | : 2                    |
| D            | : $\phi 50.8 - \phi 88.9$  | : 4                    |

**Note:** Above-mentioned 30- station standard tools are of square, rectangle, round and oval shapes. Additional payment is for special tools.

6) Environment Conditions for the Machine

- A) Power: 380V  $\pm$  10%, 50HZ
- B) Temperature: 5 - 40°C (for machine operation)
- C) Relative Humidity: 20 – 80%RH
- D) Keep machine away from a strong shock source and electromagnetic source.
- E) Free from harmful and corrosive gas and dust.