



№: LB.TD.TA-EN.XL2-6DW<V1>

Servo Turret Hydraulic Tailstock Lathe

# TECHNICAL AGREEMENT

*XL2-6DW*

2024.12.30



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## 1.Product Introduction



*Figure 1: Appearance Display (Pictures for Reference Only)*

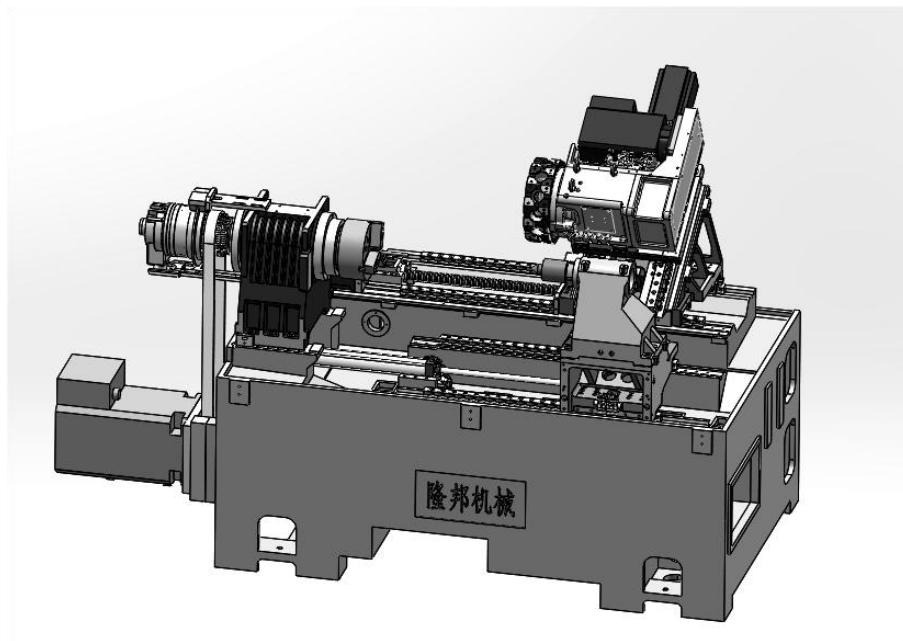


*Figure 2: Mechanical Structure Display*



## 2. Working Conditions

- (1) Power supply: AC380V  $\pm$  10%, 50HZ  $\pm$  1HZ three-phase AC.
- (2) Operating temperature: 5°C - 40°C.
- (3) Optimal environmental temperature: 15°C - 25°C.
- (4) Relative humidity: 40 - 75%.

## 3. Precision Standard

| Precision                                          | GB Standard            | Company Standard                                                                                                        |
|----------------------------------------------------|------------------------|-------------------------------------------------------------------------------------------------------------------------|
| The Level of Machining Accuracy                    | IT6                    | IT6                                                                                                                     |
| Machining Roundness Accuracy                       | 0.003mm / $\Phi$ 70mm  | 0.003mm / $\Phi$ 70mm                                                                                                   |
| Machining Straightness Accuracy                    | 0.010mm / 150mm        | 0.010mm / 150mm                                                                                                         |
| Machining Flatness Accuracy                        | 0.008mm / $\Phi$ 100mm | 0.006mm / $\Phi$ 100mm                                                                                                  |
| Machining Roughness Accuracy                       | Ra1.6 $\mu$ m          | Ra0.4 $\mu$ m<br>Parameter Reference: Material: Al;<br>Spindle Speed: 2200RPM; Feed Rate:<br>0.06mm/rev; Tool: PCD R0.2 |
| Spindle End Face Runout                            | 0.01mm                 | 0.003mm                                                                                                                 |
| Spindle Radial Runout                              | 0.008mm                | 0.003mm                                                                                                                 |
| Axial Positioning Accuracy                         | X-axis0.016mm          | X-axis0.008mm                                                                                                           |
|                                                    | Z-axis0.020mm          | Z-axis0.008mm                                                                                                           |
| Axial Repeatability Positioning Accuracy           | X-axis0.007mm          | X-axis0.004mm                                                                                                           |
|                                                    | Z-axis0.008mm          | Z-axis0.004mm                                                                                                           |
| Turret Indexing Repeatability Positioning Accuracy | Y-Z Direction0.01mm    | Y-Z Direction0.006mm                                                                                                    |
|                                                    | Z-X Direction0.01mm    | Z-X Direction0.006mm                                                                                                    |

## 4. Technical Specifications

| #  | Parameter                                           | Unit                                                                     | XL2-6DW<br>Servo Turret Hydraulic Tailstock<br>Lathe                                                |
|----|-----------------------------------------------------|--------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| 1  | Max. Turning Diameter                               | mm                                                                       | Φ420                                                                                                |
| 2  | Max. Machining Length                               | mm                                                                       | 500                                                                                                 |
| 3  | Max. Swing Diameter                                 | mm                                                                       | Φ560                                                                                                |
| 4  | Bar Feeding Diameter                                | mm                                                                       | <Φ46                                                                                                |
| 5  | Spindle Bore                                        | mm                                                                       | Φ56                                                                                                 |
| 6  | Max. Spindle Speed                                  | RPM                                                                      | 4000                                                                                                |
| 7  | X-axis Travel                                       | mm                                                                       | 240                                                                                                 |
| 8  | Z-axis Travel                                       | mm                                                                       | 450                                                                                                 |
| 9  | Tailstock Travel                                    | mm                                                                       | 500                                                                                                 |
| 10 | Rapid Feedrate                                      | m / min                                                                  | 22                                                                                                  |
| 11 | Max. Driven Tool Speed                              | RPM                                                                      | 4000                                                                                                |
| 12 | Voltage (3phase)                                    | V                                                                        | 380±10%                                                                                             |
| 13 | Frequency                                           | Hz                                                                       | 50                                                                                                  |
| 14 | Power                                               | kW                                                                       | 18                                                                                                  |
| 15 | Weight                                              | kg                                                                       | 3700                                                                                                |
| 16 | Size (Length × Width × Height)                      | mm                                                                       | 2550×1750×1850<br>(Excluding Chip Conveyor)                                                         |
| #  | Configuration                                       |                                                                          |                                                                                                     |
| 1  | CNC                                                 |                                                                          | <input type="checkbox"/> SYNTEC<br>22TA                                                             |
|    | Spindle Rated Power / Torque of the Servo Motor     |                                                                          | <input type="checkbox"/> 7.5kW / 49Nm (Standard)<br><input type="checkbox"/> 11kW / 72Nm (Optional) |
|    | X-axis Rated Power / Torque of the Servo Motor      |                                                                          | 1.3kW / 8.3Nm                                                                                       |
|    | Z-axis Rated Power / Torque of the Servo Motor      |                                                                          | 1.3kW / 8.3Nm                                                                                       |
|    | Driven Tool Rated Power / Torque of the Servo Motor |                                                                          | 3.1kW / 15Nm                                                                                        |
| 2  | \                                                   | Brand                                                                    | Type / Spec                                                                                         |
|    | Spindle                                             | <input type="checkbox"/> LBIE Belt Spindle (OEM by<br>HAOZHI) (Standard) | A2-5                                                                                                |

|    |                                  |                                                                                                                                                          |                                                                                                                                           |                                           |     |
|----|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-----|
|    |                                  | <div><input type="checkbox"/> Guangzhou HAOZHI Motor Spindle (Optional)</div> <div><input type="checkbox"/> Taiwan KENTURN Belt Spindle (Optional)</div> |                                                                                                                                           |                                           |     |
| 3  | X-axis                           | Linear Guide Rail                                                                                                                                        | HIWIN / Rexroth                                                                                                                           | 35 Roller Guide                           |     |
|    |                                  | Lead Screw                                                                                                                                               | PMI / NSK                                                                                                                                 | 32                                        |     |
|    |                                  | Bearing                                                                                                                                                  | NSK                                                                                                                                       | 20TAC                                     |     |
|    | Z-axis                           | Linear Guide Rail                                                                                                                                        | HIWIN / Rexroth                                                                                                                           | 35 Roller Guide                           |     |
|    |                                  | Lead Screw                                                                                                                                               | PMI / NSK                                                                                                                                 | 32                                        |     |
|    |                                  | Bearing                                                                                                                                                  | NSK                                                                                                                                       | 20TAC                                     |     |
| 4  | Tool Carrier Form                | Turret                                                                                                                                                   | Brand                                                                                                                                     | Western Power                             |     |
|    |                                  |                                                                                                                                                          | Driving Type                                                                                                                              | Servo Motor                               |     |
|    |                                  |                                                                                                                                                          | Locking Type                                                                                                                              | Hydraulic Locking                         |     |
|    |                                  |                                                                                                                                                          | Model / Station                                                                                                                           | BMT45-12                                  |     |
| 5  | Tailstock Form                   |                                                                                                                                                          | Hydraulic Tailstock                                                                                                                       |                                           |     |
| 6  | Lubrication Form                 |                                                                                                                                                          | Oil Lubrication                                                                                                                           |                                           |     |
| 7  | Hydraulic System                 |                                                                                                                                                          | Standard                                                                                                                                  |                                           |     |
| 8  | Fixture                          |                                                                                                                                                          | <div><input type="checkbox"/> 46 Type Collect Chuck (Standard)</div> <div><input type="checkbox"/> 6inch Hydraulic Chuck (Optional)</div> |                                           |     |
| 9  | Coolant Pump Power               |                                                                                                                                                          | <div><input type="checkbox"/> 5Bar (Standard)</div> <div><input type="checkbox"/> 50Bar (Optional)</div>                                  |                                           |     |
| 10 | Main Electrical Components Brand |                                                                                                                                                          | Schneider                                                                                                                                 |                                           |     |
| 11 | Electronic Door Lock             |                                                                                                                                                          | Standard                                                                                                                                  |                                           |     |
| 12 | Fixed Tool Holder                |                                                                                                                                                          | Type                                                                                                                                      | Spec                                      | Qty |
|    |                                  |                                                                                                                                                          | Bore Tool Holder                                                                                                                          | Φ32                                       | 3   |
|    |                                  |                                                                                                                                                          | Radial Square Tool Holder                                                                                                                 | 25×25                                     | 3   |
|    |                                  |                                                                                                                                                          | Axial Square Tool Holder                                                                                                                  | 25×25                                     | 1   |
|    |                                  |                                                                                                                                                          | <div><input type="checkbox"/> Optional</div>                                                                                              | 7 Included for Any Type (Extra Available) |     |
| 13 | Static Tool Holder               |                                                                                                                                                          | Spec                                                                                                                                      | Qty                                       |     |
|    |                                  |                                                                                                                                                          | 0°                                                                                                                                        | 1pcs                                      |     |
|    |                                  |                                                                                                                                                          | 90° Unidirection                                                                                                                          | 1pcs                                      |     |

|    |                                 |                                                        |            |
|----|---------------------------------|--------------------------------------------------------|------------|
|    |                                 | <input type="checkbox"/> Optional                      |            |
| 14 | Other Accessories               | <b>Item</b>                                            | <b>Qty</b> |
|    |                                 | Chuck Draw Tube                                        | 1pcs       |
|    |                                 | Foot Switch                                            | 1set       |
|    |                                 | Water Tank                                             | 1set       |
|    |                                 | Installation Tool                                      | 1set       |
|    |                                 | Machine Foot                                           | 4pcs       |
| 15 | System Operation Manual         | E-manual                                               |            |
| 16 | Machine Tool Instruction Manual | E-manual                                               |            |
| 17 | Optional                        | <input type="checkbox"/> Chip Conveyor                 |            |
|    |                                 | <input type="checkbox"/> Renishaw Tool Setter          |            |
|    |                                 | <input type="checkbox"/> Automatic Catcher             |            |
|    |                                 | <input type="checkbox"/> Oil Mist Collector            |            |
|    |                                 | <input type="checkbox"/> Automatic Door                |            |
|    |                                 | <input type="checkbox"/> Collision Avoidance System    |            |
|    |                                 | <input type="checkbox"/> Machine IoT Remote Monitoring |            |

## **5.Safety Precautions**

- (1) Always follow the manufacturer's guidelines and instructions for safe operation.
- (2) Ensure proper training and qualification of personnel operating the machine tool.
- (3) Use appropriate personal protective equipment (PPE) as required.
- (4) Regularly inspect and maintain the machine tool to ensure its optimal functioning.
- (5) Keep the work area clean and organized to prevent accidents or injuries.

This technical description provides an overview of the key features, capabilities, specifications, and safety precautions associated with the Machine Tool. It serves as a useful reference for understanding the machine's functionality and characteristics in technical documentation.