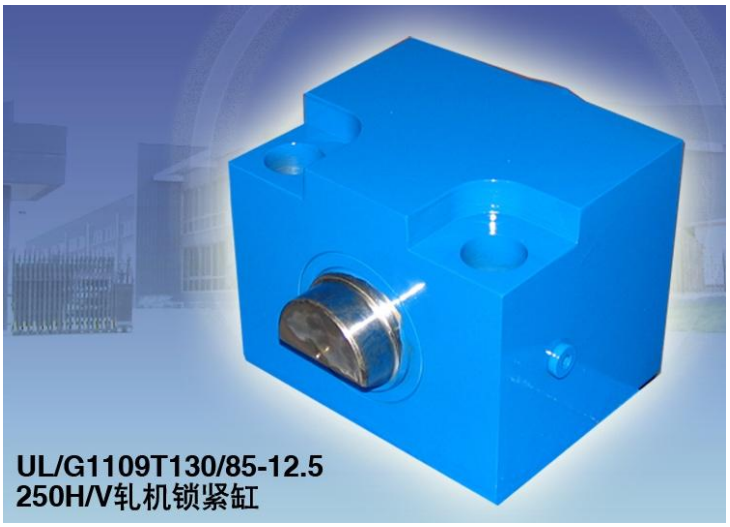
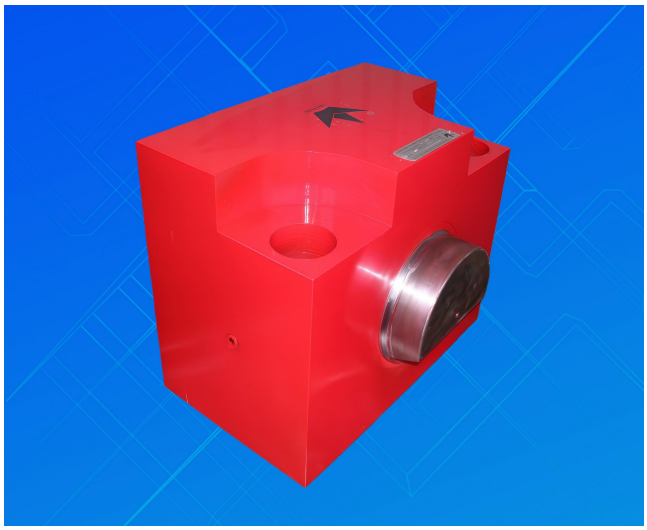
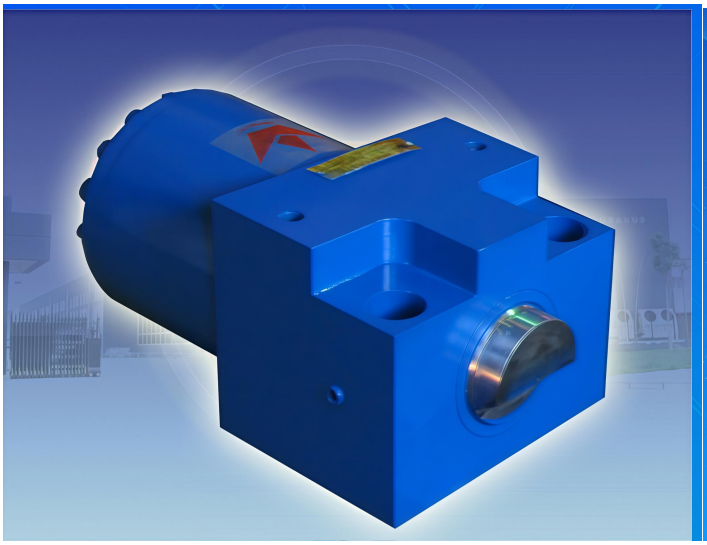
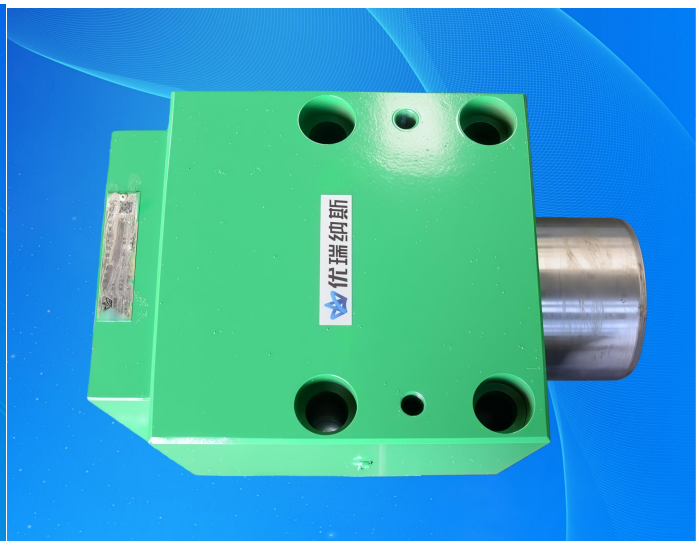
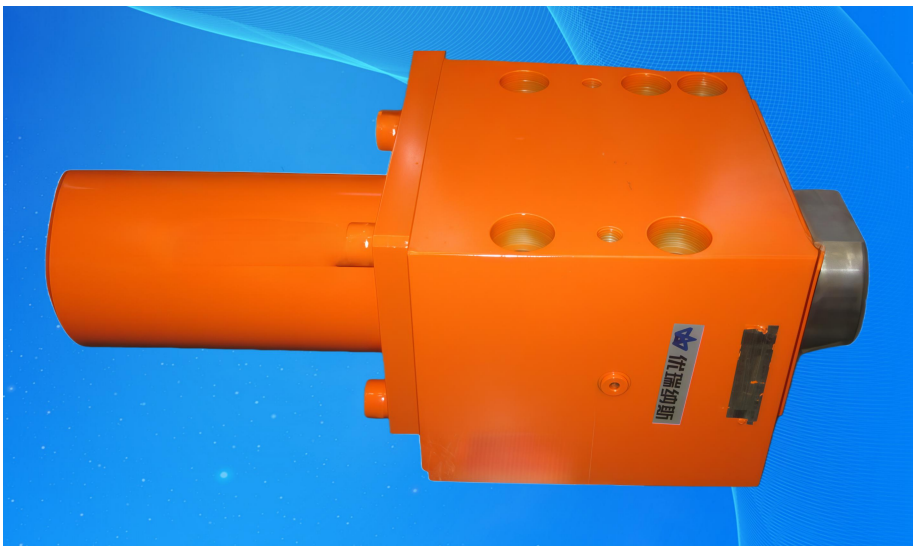
Clamping cylinder picture

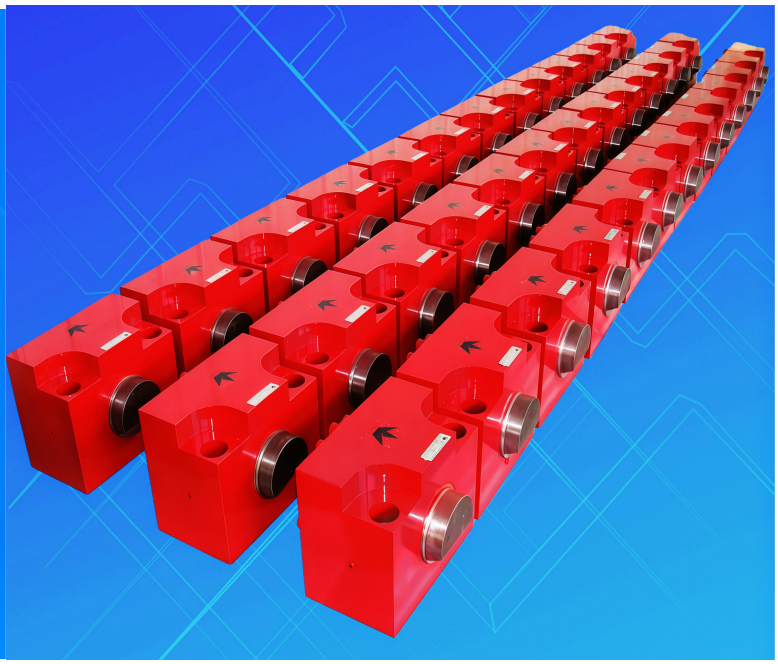


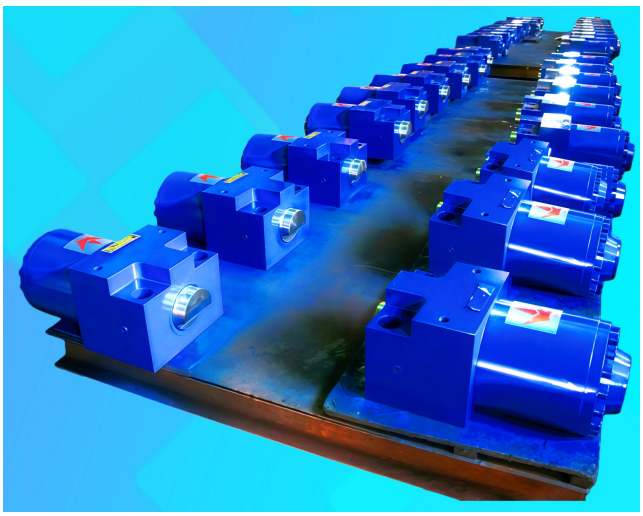


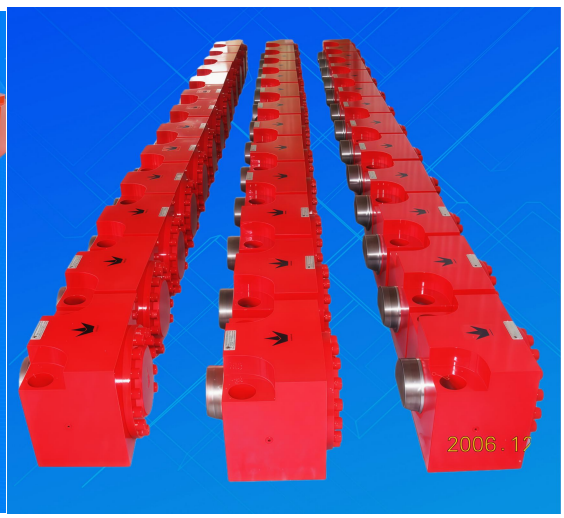








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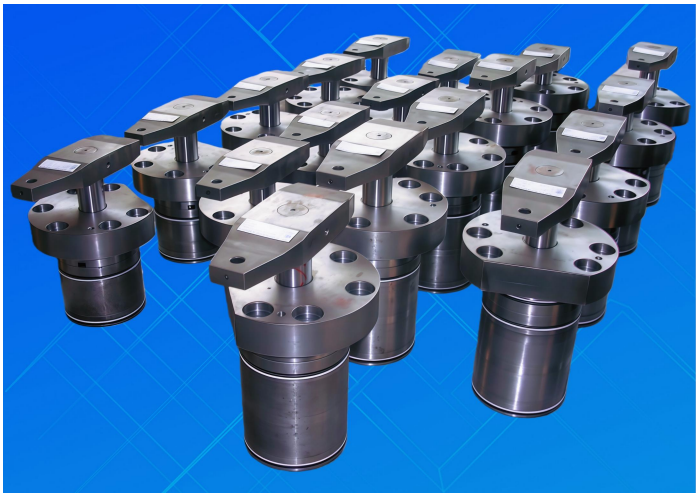
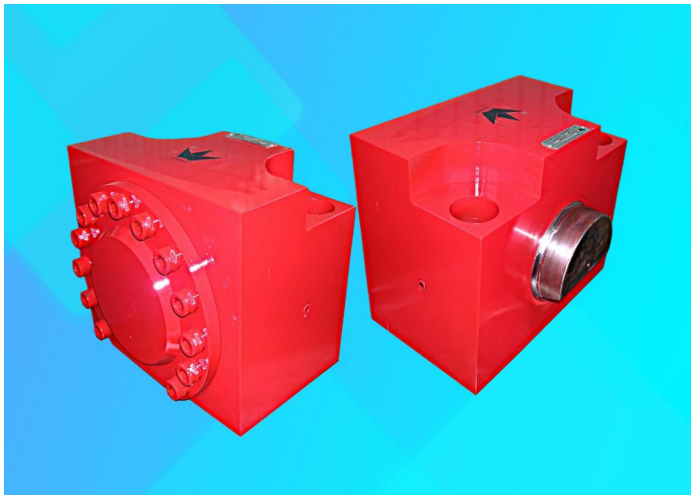




Clamping cylinder

Clamping hydraulic cylinder is a hydraulic actuator used to provide clamping force to fix or clamp workpieces or components. When it works, it pushes the piston and piston rod to move through the pressure of hydraulic oil, thereby achieving clamping action.

The clamping hydraulic cylinder has high clamping force, smooth action, fast response speed, and can achieve automatic control; It can also achieve long-term stable clamping and other advantages, and is widely used in fields such as mechanical processing, mold manufacturing, and automated production lines.

There are various structures and clamping forms of clamping cylinders, and the following are commonly used clamping cylinders:

1. Disc spring clamping hydraulic release: Use the disc spring thrust to push out or pull back the piston rod to achieve clamping function, compress the disc spring with hydraulic pressure, and release the clamping force. Used for long-term clamping and quick release of clamping force.
2. Hydraulic clamping, hydraulic release; Used for quick clamping and releasing conditions
3. The spiral rod is clamped back and forth,The piston rod rotates one angle when extended and returns to its initial angle when retracted. When used for clamping and releasing, the working condition where the angle of the pressure head needs to be changed.
4. Combination form of spiral swing cylinder and reciprocating cylinder. A composite clamping cylinder composed of a spiral swing cylinder and a reciprocating cylinder, the piston rod can achieve three working states: non rotating expansion and contraction, rotating expansion and contraction, and rotating non expansion and contraction.

Example of clamping cylinder

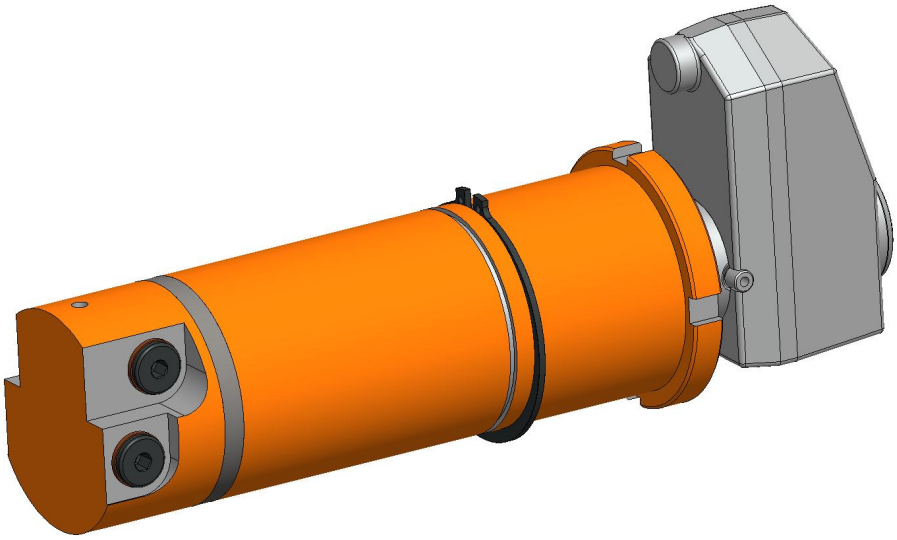
1. Locking angle hydraulic cylinder for hood type furnace platform:

Technical parameters:

Cylinder diameter: 70 Rod diameter: 45 Stroke: 65 Rotation angle: 90 ° right rotation

Rated pressure: 15MPa, test pressure: 22.5MPa

The piston rod shrinks while rotating, extending from fully extended to fully retracted, and the clamping foot rotates 90 °. Retract to any position to achieve hydraulic clamping, with a built-in hydraulic control one-way valve to maintain clamping force; When the piston rod extends, the clamping force is released and the clamping foot rotates in the opposite direction.



2. rotary clamping cylinder (a composite clamping cylinder composed of a reciprocating cylinder and a spiral swing cylinder):

Technical parameters:

2.1. Reciprocating cylinder: Cylinder diameter: 125 Rod diameter: 70 Stroke: 265

Rated pressure: 14MPa, test pressure: 18MPa

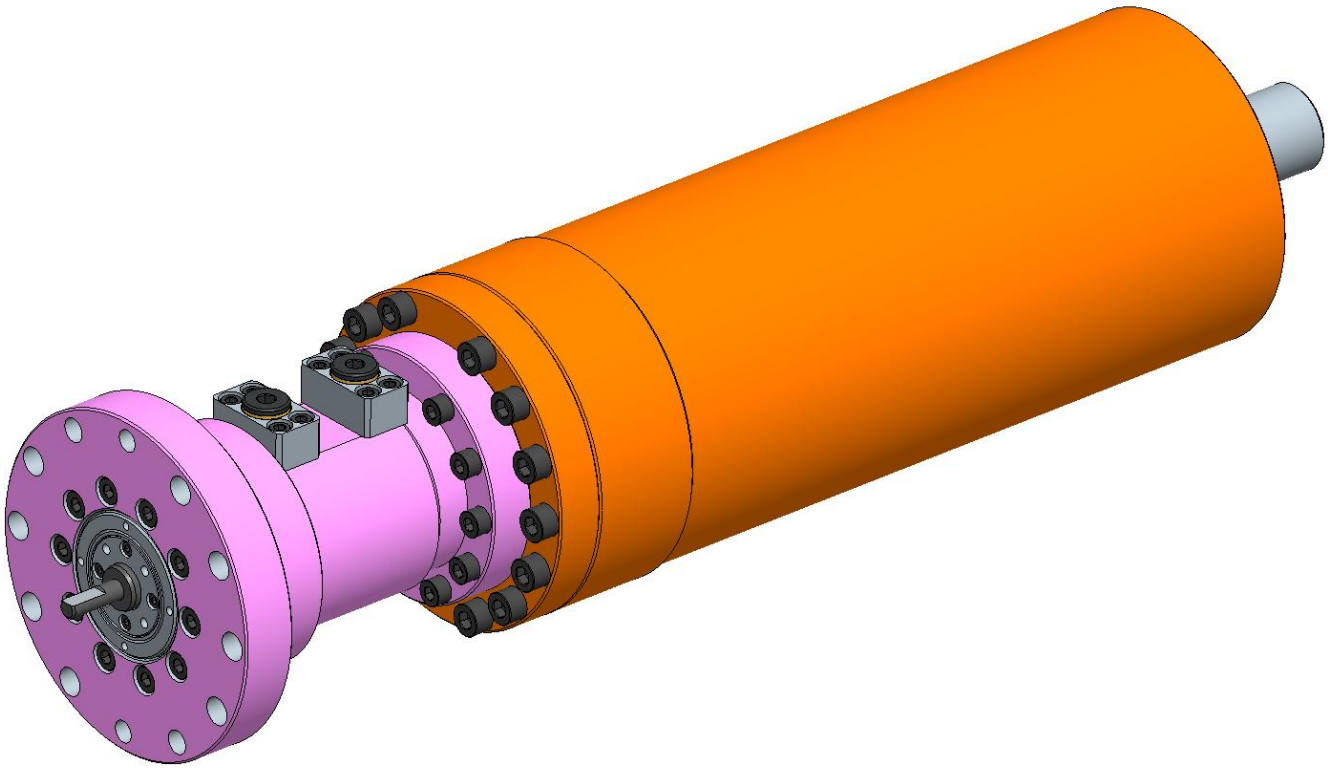
2.2. Spiral swing cylinder: cylinder diameter: 63, angle: 60 ° , adjustable angle: ± 5 °

Rated pressure: 25MPa, test pressure: 31.5MPa, 25MPa pressure output torque: 660NM. This cylinder can achieve three action modes:

1) The piston rod only performs reciprocating telescopic motion

2) The piston rod only performs reciprocating rotational motion

3) The piston rod rotates while expanding and contracting



3.80KN T-bolt tensioner: spring tensioning, hydraulic loosening

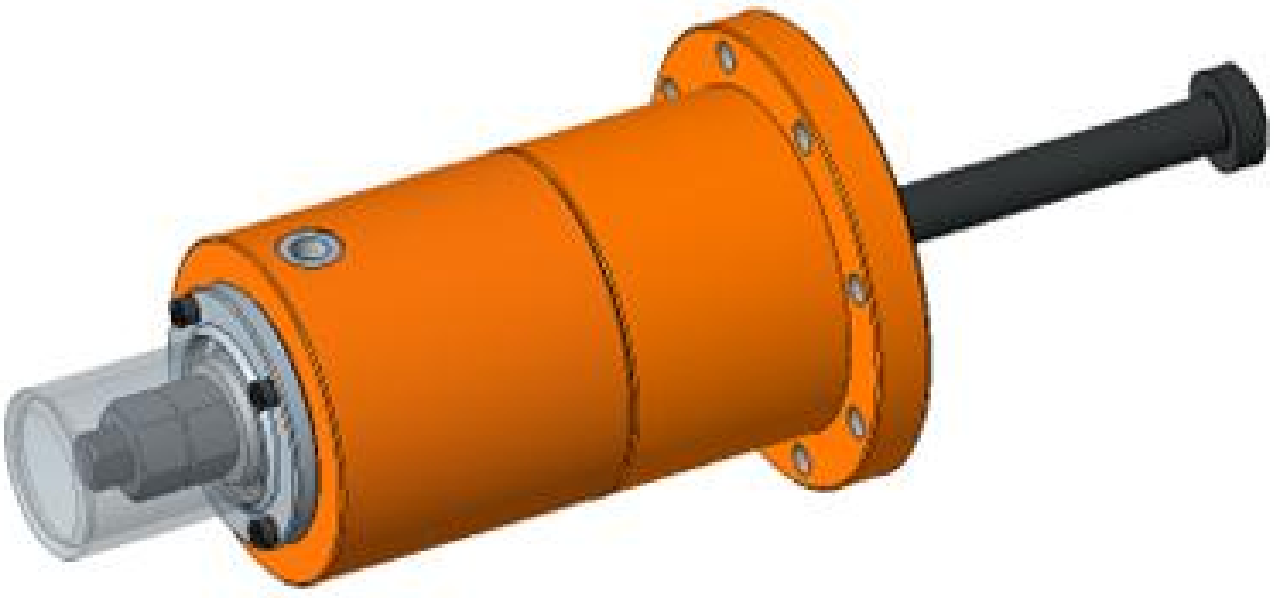
Technical parameters:

Cylinder diameter: 100 Rod diameter: 45 Stroke: 11 Rotation angle: 90 degrees to the right

Rated pressure: 28MPa, test pressure: 35MPa

The T-bolt passes through the hollow piston rod and is locked with a nut to tighten the disc spring group inside the cylinder and lock the equipment. Rated tension force 80KN, maximum tension force 90KN

Input hydraulic oil greater than 15MPa to eliminate tension and unlock.



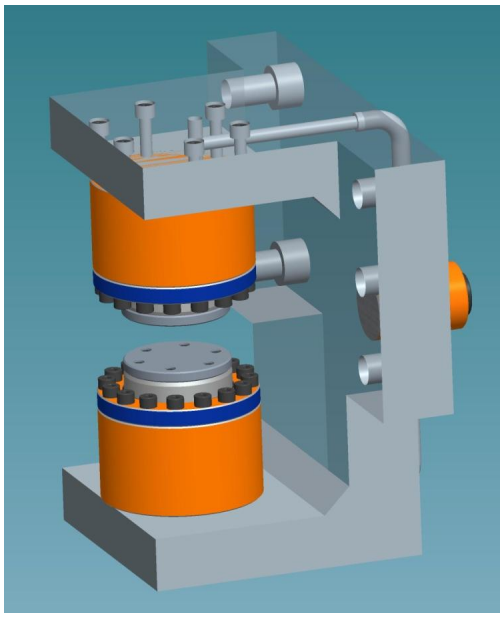
4. Auxiliary clamping device

Technical parameters:

Cylinder diameter: 90 Rod diameter: 80 Stroke: 10 Clamping force: 100KN

Rated pressure: 16MPa, test pressure: 24MPa

Two hydraulic cylinders enter the rodless chamber, push out the piston rod, and clamp the workpiece. The coil spring retracts the piston rod, allowing hydraulic oil to return to the tank and unlock. I



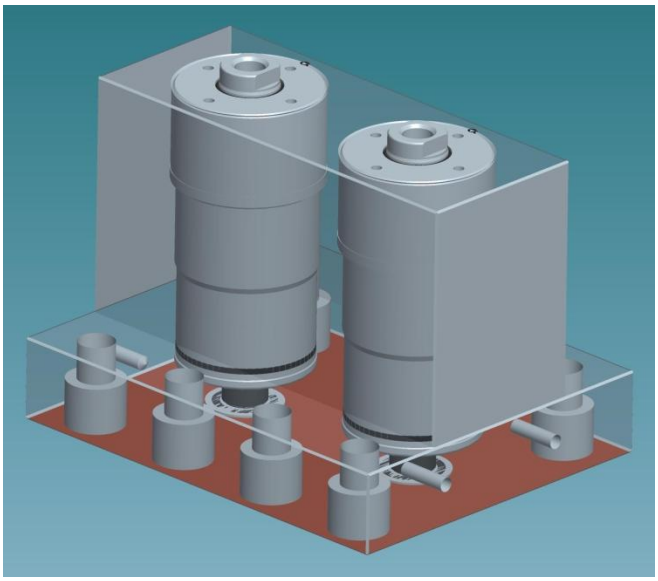
5. Auxiliary pressure roller lower support wheel lifting hydraulic cylinder

Technical parameters:

Cylinder diameter: 63 Rod diameter: 28 Stroke: 20 Clamping force: 10

Rated pressure: 16MPa, test pressure: 24MPa

Two hydraulic cylinders enter the rodless chamber, push out the piston rod, and lift the workpiece. The disc spring retracts the piston rod, and the hydraulic oil returns to the oil tank.



6. 650 rolling mill locking device

Technical parameters:

Cylinder diameter: 285 Rod diameter: 180 Stroke: 46

Rated locking force: 345KN Maximum locking force: 545KN

Rated pressure: 16MPa, test pressure: 16MPa

The rod chamber disc spring pushes the piston rod out to lock the workpiece, and the hydraulic cylinder enters the rodless chamber without oil. The piston rod retracts and unlocks.