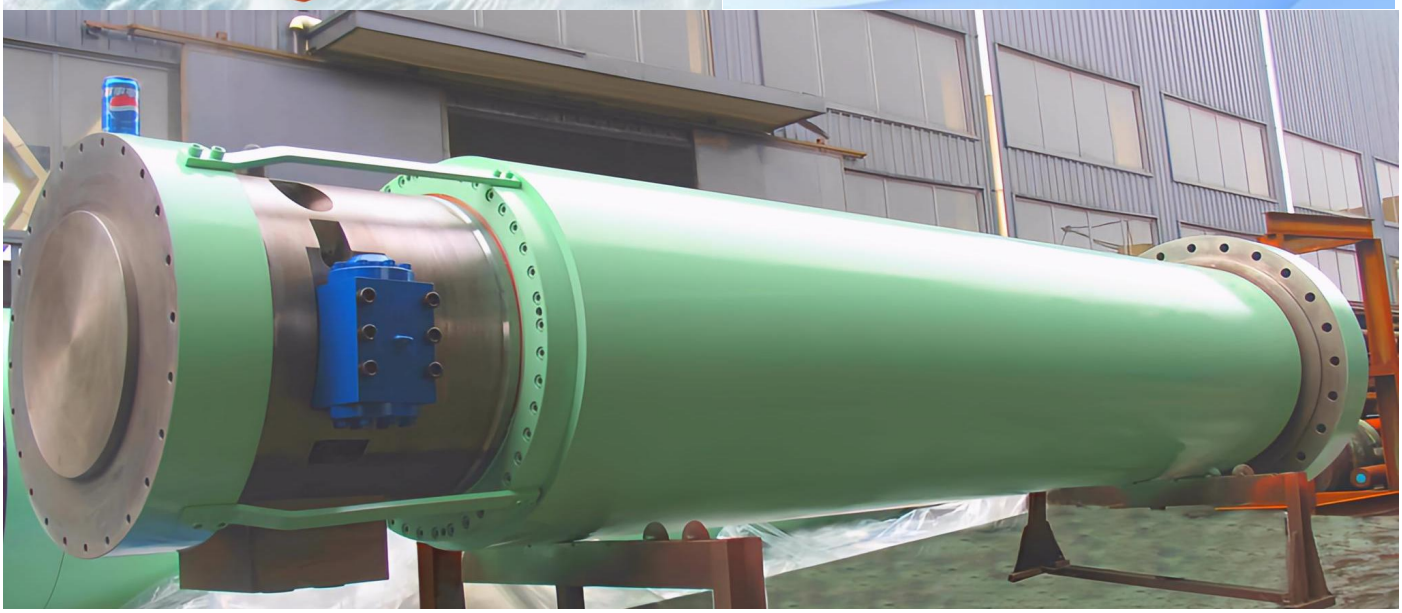
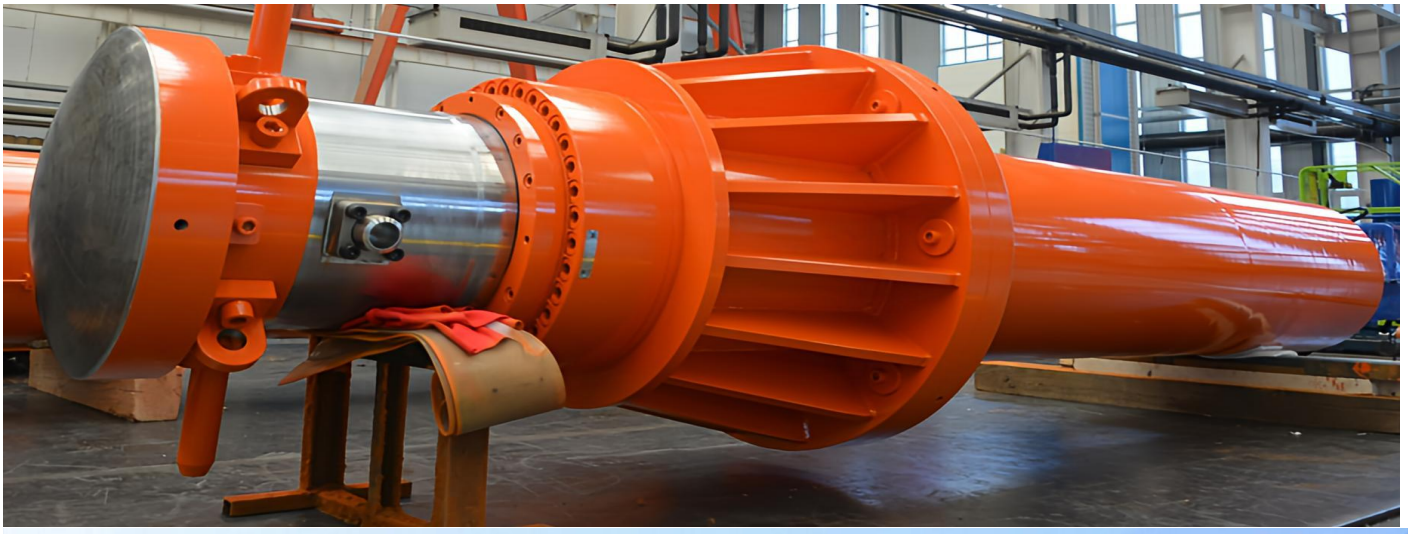
RH Furnace Hydraulic Cylinders photo









RH Furnace Hydraulic Cylinders

The RH (Ruhrstahl-Heraeus) furnace is a key vacuum circulation refining unit in modern steelmaking, designed for deep purification of molten steel.

By efficiently removing hydrogen, nitrogen, and micro-inclusions, it provides a pure foundation for high-grade steels used in **automotive outer panels, precision electrical steel, and deep-drawing sheet metals** — essential materials for **new energy vehicles, smart grid components, and precision appliances.**

With over 30 years of experience in metallurgical equipment, **Uranus Hydraulic** has supplied complete sets of RH furnace hydraulic systems to steel producers worldwide, including **vacuum vessel lifting cylinders, ladle car lifting cylinders, lance lifting cylinders, and vacuum valve cylinders.**

This section focuses on the first two core types — the **vacuum vessel lifting cylinder** and the **ladle car lifting cylinder**, analyzing their technical features and industrial value.

1) Vacuum Vessel Lifting Cylinder

Serving as the *spatial control hub* of the RH furnace, this cylinder drives the multi-meter-high vacuum chamber with precise lifting and lowering.

When in standby position, the cylinder raises the chamber smoothly to provide workspace for loading, sampling, or inspection.

Once the ladle containing molten steel is correctly positioned beneath, the cylinder lowers the chamber steadily, allowing the snorkel tubes to gently immerse into the molten bath — the starting point of the steel circulation and degassing process.

Key Features:

- High load-bearing capacity and stability ensure safe, smooth movement of large vacuum chambers.
- Equipped with proportional servo control for precise positioning.
- Excellent resistance to impact, contamination, and high temperatures.

2) Ladle Car Lifting Cylinder

As the *vertical driving core* of molten steel transportation, the ladle car lifting cylinder controls the vertical movement of ladles weighing **tens to hundreds of tons.**

Working in high-precision synchronization with the vacuum vessel lifting cylinder, it positions the ladle so that the snorkel tube enters the molten steel with **millimeter-level accuracy**, achieving precise degassing depth and meeting strict process requirements.

Key Features:

- Delivers massive thrust and smooth operation for heavy-duty, high-frequency use.
- Precision synchronization control ensures coordinated motion with the vacuum vessel system.
- Built with high-strength alloy materials to withstand heat, dust, and vibration.

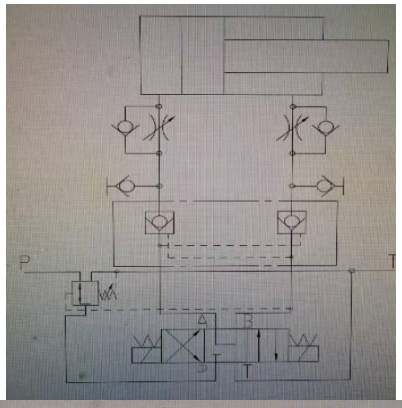
Product Application Examples

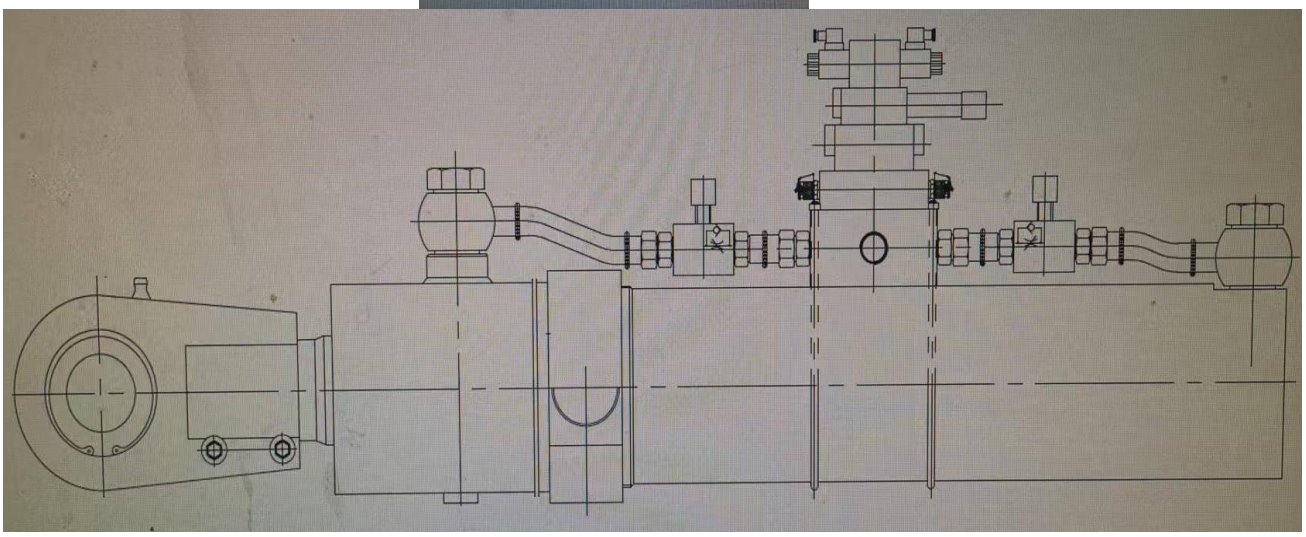
1. RH Vacuum Valve Hydraulic Cylinder UG0812Z80/56-550+FK

Bore: Ø80 mm Rod: Ø56 mm Stroke: 550 mm

Cushion Stroke: 30 mm Working Pressure: 20 MPa Test Pressure: 30 MPa

Working Medium: No.68 Hydraulic Oil



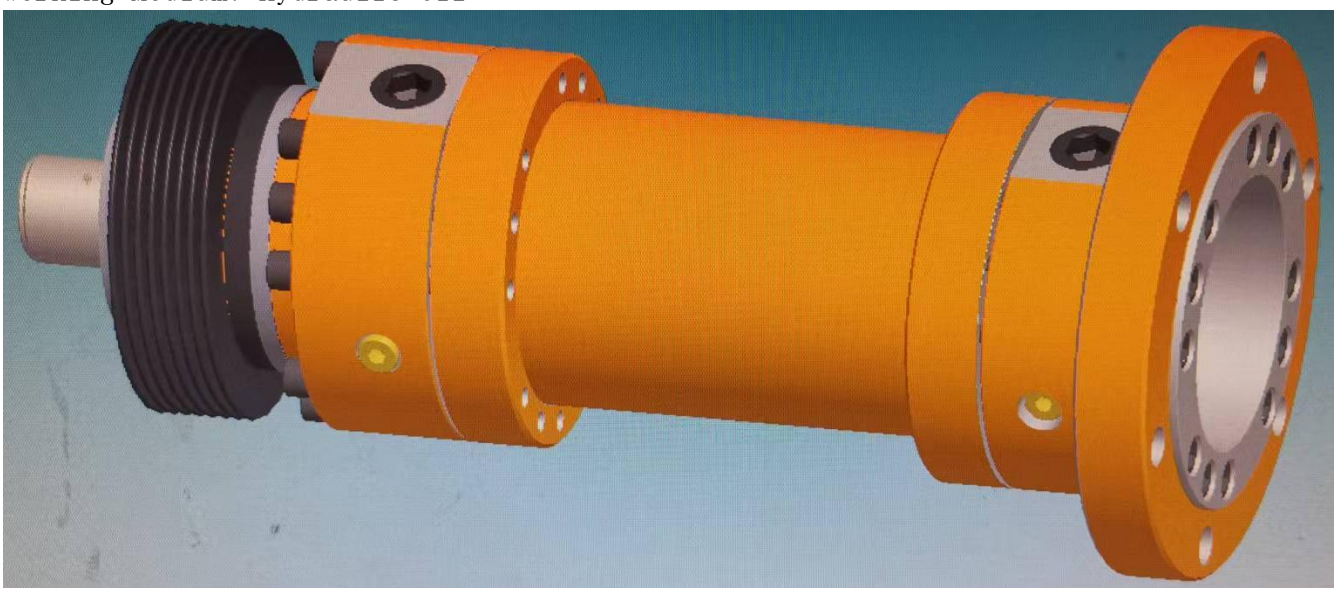


2. Top Lifting Cylinder for Vacuum Chamber UYR1408R125/90-180

Bore: Ø125 mm Rod: Ø90 mm Stroke: 180 mm

Cushion Stroke: 45 mm Working Pressure: 21 MPa Test Pressure: 31.5 MPa

Working Medium: Hydraulic Oil



3. Vacuum Chamber Lifting Cylinder UYR1905Z180/125-3200+ST

Bore: Ø180 mm Rod: Ø125 mm Stroke: 3200 mm

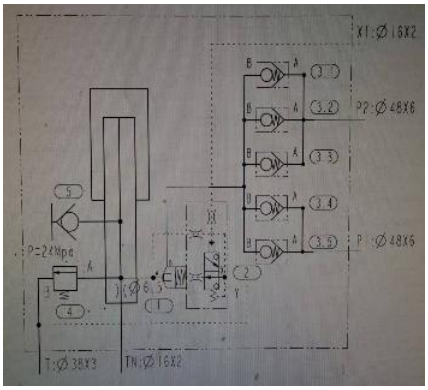
Cushion Stroke: 50 mm Working Pressure: 14 MPa Test Pressure: 25 MPa

Working Medium: Water-Glycol

4. RH Furnace Lifting Cylinder UGZH700/650-3100HA+FK

Bore: Ø700 mm Rod: Ø650 mm Stroke: 3100 mm

Working Pressure: 22 MPa Test Pressure: 33 MPaWorking Medium: No.46 Hydraulic Oil

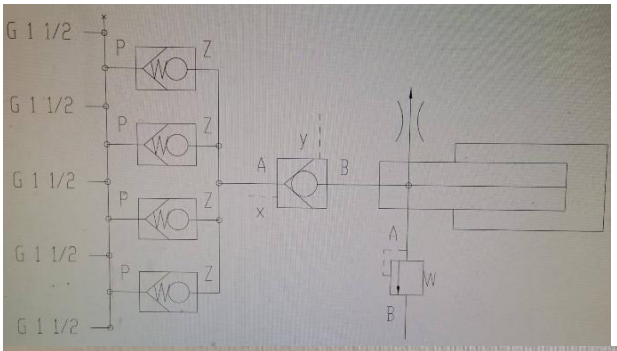


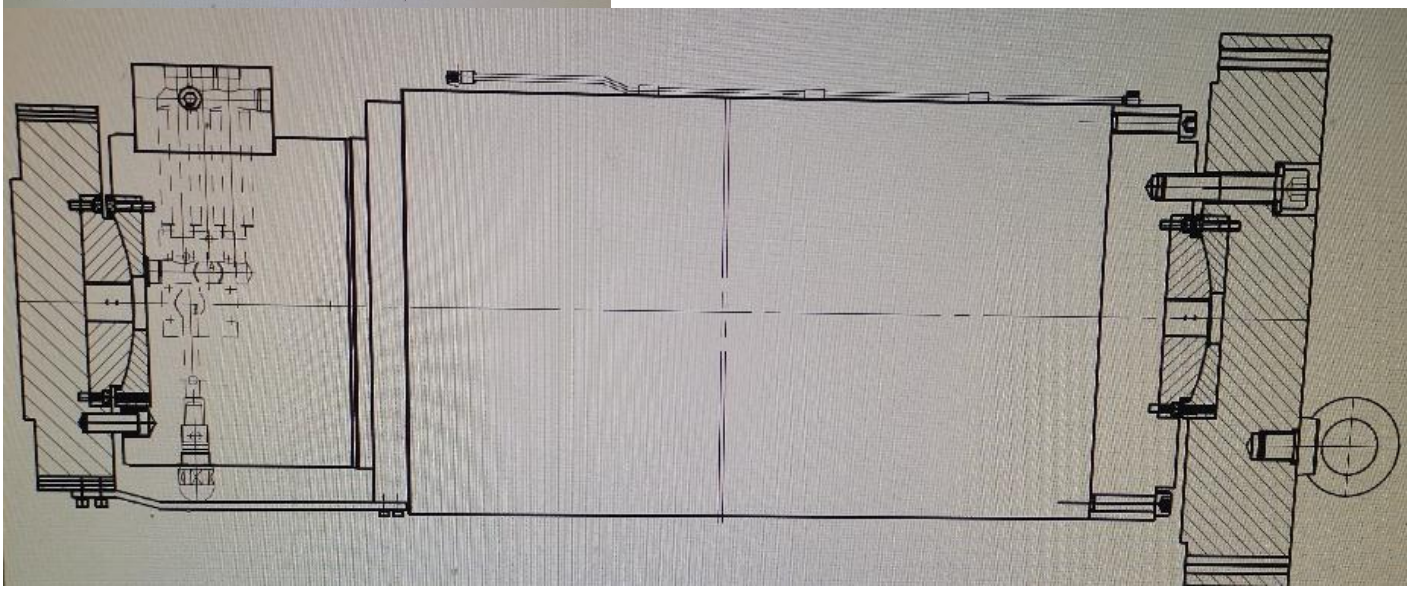
5. RH Refining Furnace Lifting Cylinder UZGH750/700-2650+FK

Bore: Ø750 mm Rod: Ø700 mm Stroke: 2650 mm

Working Pressure: 21 MPa Test Pressure: 27.5 MPa

Working Medium: Quintet 888-68 Fire-Resistant Fluid





6. RH Furnace Lifting Cylinder UGZH600/550-2700HA+FK

Bore: Ø600 mm Rod: Ø550 mm Stroke: 2700 mm

Working Pressure: 25 MPa Test Pressure: 18 MPa

Working Medium: Fatty

Ester