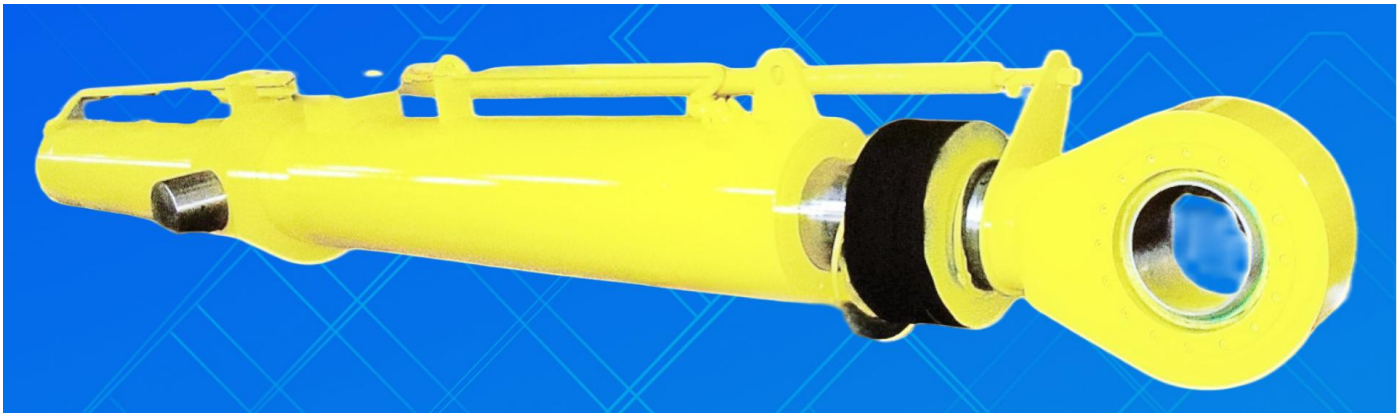
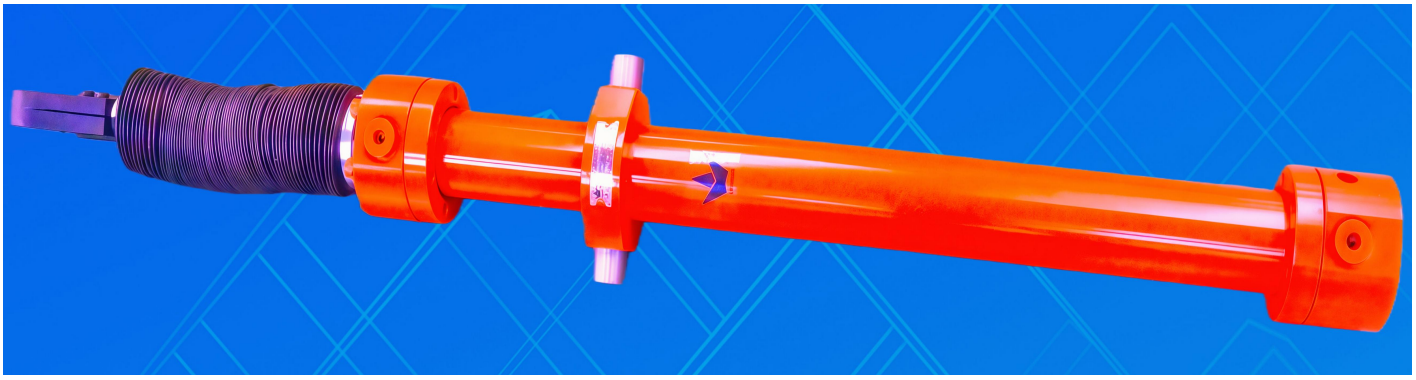
LD Converter Hydraulic Cylinder Photo



Tilting Cylinder of LD Converter



LD Converter Fume Hood Lifting High-Temperature Hydraulic Cylinder

LD Converter Fume Hood Lifting High-Temperature Hydraulic Cylinder

4-Cylinder Synchronous Lifting Hydraulic Cylinders for LD Converter Skirt Hood

LD Converter Hydraulic Cylinders

The LD (Linz-Donawitz) converter is a key steelmaking facility used to refine molten iron from the blast furnace into high-quality steel through decarburization, dephosphorization, and desulfurization.

Uranus Hydraulic provides two main types of hydraulic cylinders for LD converters, ensuring stable performance under extreme temperature, dust, and heavy-load conditions.

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1) LD Converter Tilting High-Temperature Hydraulic Cylinder

This cylinder drives the entire converter body to rotate 360° around its trunnion, enabling:

- Tilting the mouth for charging scrap and hot metal
- Vertical positioning for oxygen blowing
- Controlled tilting for tapping molten steel

- Inverted tilting for slag discharge

Performance Requirements:

- **Massive Thrust:**
  The total weight of the converter with molten steel and slag exceeds 1,000 tons, requiring enormous torque output.
- **Smooth and Precise Control:**
  The tilting speed must be extremely slow and uniform during tapping, demanding high-precision hydraulic control.
- **High Reliability:**
  The system must operate reliably under high temperature, heavy load, dust, and severe contamination.

Over the past 30 years, Uranus Hydraulic has supplied hundreds of converter tilting cylinders worldwide, maintaining **zero quality incidents** with long-term stable performance and outstanding customer satisfaction.

2) LD Converter Fume Hood Lifting High-Temperature Hydraulic Cylinder

The fume hood is essential for capturing fumes and dust during steelmaking, and its lifting system demands exceptional precision and reliability.

Performance Requirements:

- **High Reliability:**
  Failure can halt the entire converter operation; cylinders must function stably in extreme environments.
- **Excellent Synchronization:**
  Large hoods are driven by 2–4 cylinders, which must maintain precise synchronization to prevent jamming or misalignment.
- **Accurate Positioning:**
  Multiple preset positions (“working”, “standby”, “maintenance”) require precise stop control for effective dust removal.
- **Strong Thrust and Stability:**
  The hood’s large mass and deformation risk demand sufficient push-pull force and stable operation.

Uranus cylinders feature a **self-developed synchronized flow divider system** for perfect multi-cylinder coordination. Each cylinder is equipped with a **cooling water jacket** and **stainless-steel telescopic protective cover**, ensuring reliable long-term operation in high-temperature, dusty environments.

Their performance and service life significantly surpass similar products, making them the **preferred choice** of leading steel enterprises.

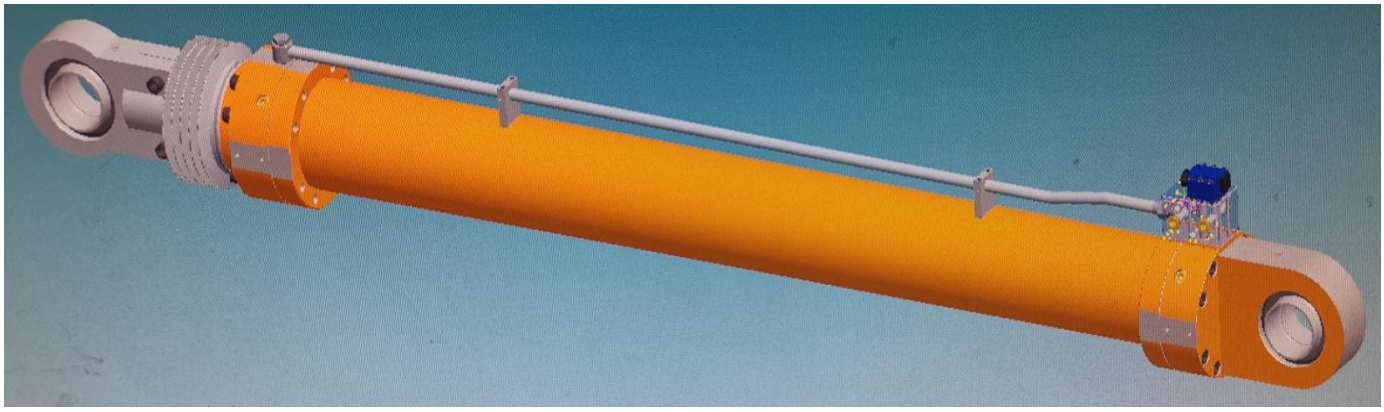
Application Examples

1. Tilting High-Temperature Hydraulic Cylinder UYR2305R320/220-3630

Bore: Ø320 mm Rod: Ø220 mm Stroke: 3630 mm Adjustable Cushion in Rodless Chamber (Stroke: 80 mm)

Working Pressure: 14 MPa Test Pressure: 21 MPa

Working Medium: Water-Glycol Feature: Bellows-type flame-retardant dust cover



2. Hot Metal Ladle Tilting Servo Hydraulic Cylinder TURZT13Z300/280-3875W

Bore: Ø300 mm Rod: Ø280 mm Stroke: 3875 mm

Working Pressure: 13 MPa Test Pressure: 25 MPa

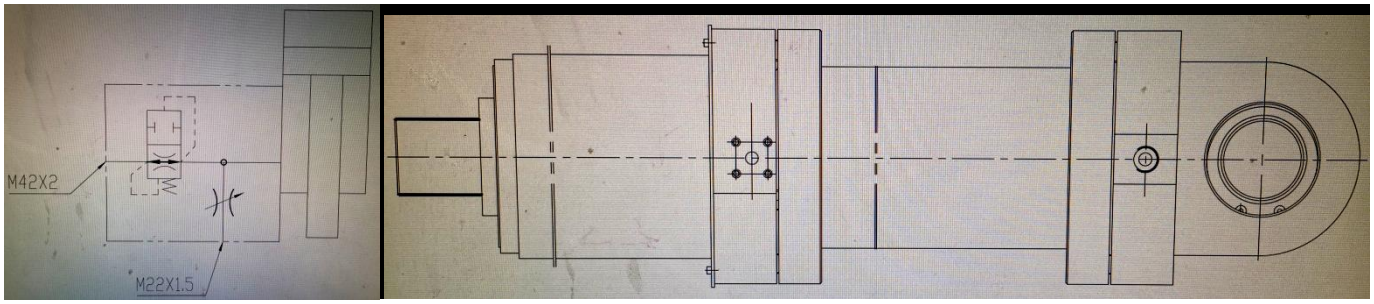
Working Medium: Water-Glycol Feature: Built-in displacement sensor for high-precision servo control

3. Hot Metal Ladle Tilting High-Temperature Hydraulic Cylinder UYR0712R320/220-2500LT+FC+FZ

Bore: Ø320 mm Rod: Ø220 mm Stroke: 2500 mm Cushion: Dual-chamber cushion, 80 mm each side

Working Pressure: 25 MPa Test Pressure: 37.5 MPa

、Working Medium: Water-Glycol Feature: Piston rod equipped with stainless-steel telescopic dust cover

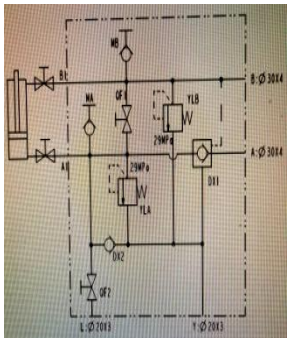


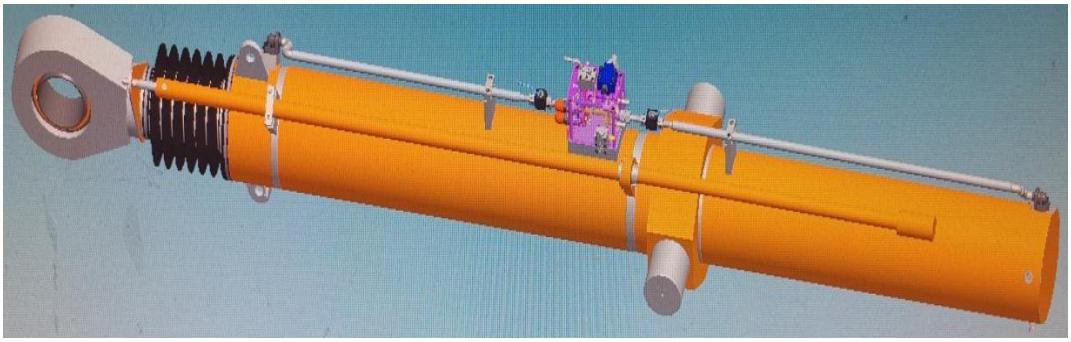
4. Tilting High-Temperature Hydraulic Cylinder UGR2310Z320/220-3300THA+FK(1)

Bore: Ø320 mm Rod: Ø220 mm Stroke: 3630 mm Cushion: Adjustable cushion in rodless chamber (80 mm)

Working Pressure: 25 MPa Test Pressure: 31.5 MPa

Working Medium: Hydraulic Oil Feature: Piston rod equipped with bellows-type flame-retardant dust cover



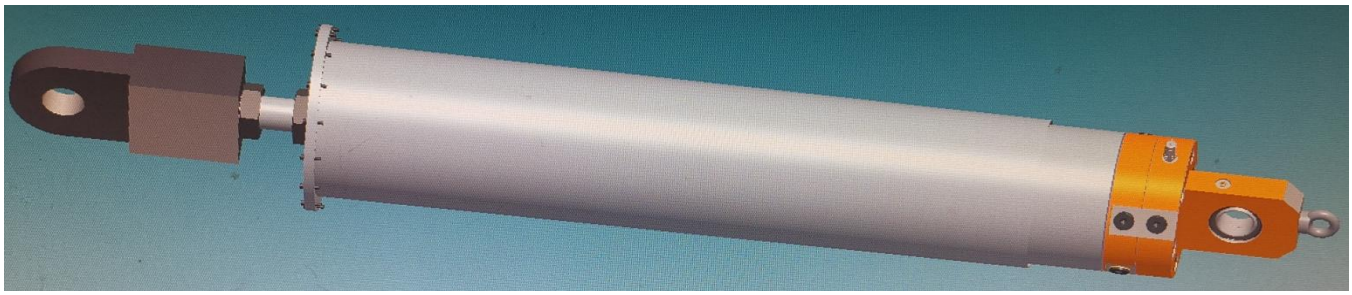


5. Skirt Hood Synchronous Lifting High-Temperature Hydraulic Cylinder UYR1308R125/70-640

Bore: Ø125 mm Rod: Ø70 mm Stroke: 640 mm

Working Pressure: 14 MPa Test Pressure: 21 MPa

Working Medium: Water-Glycol Feature: Cylinder body with water-cooling jacket; piston rod with heat- and dust-proof protective cover

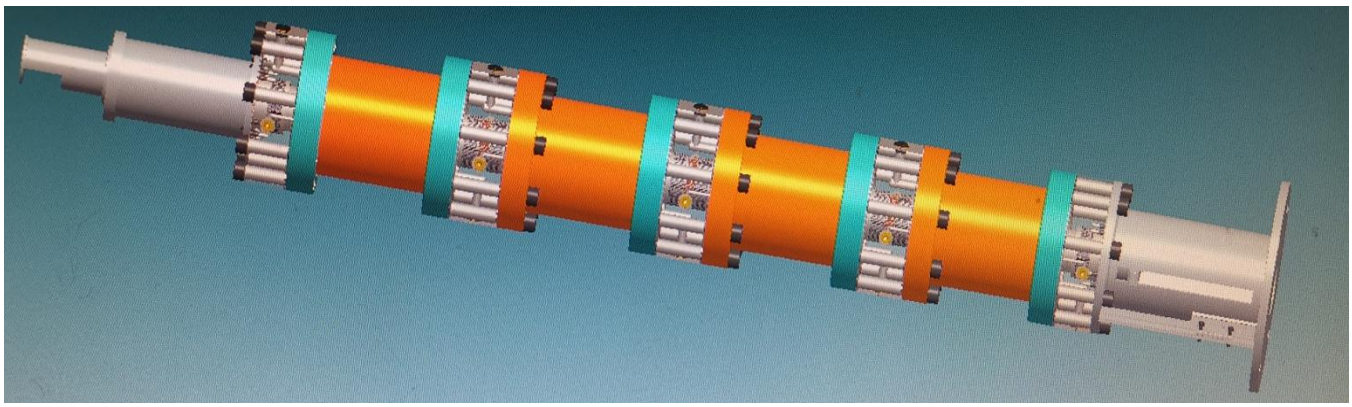


Synchronized Flow Divider Cylinder UF21L200/80-214X4

Bore: Ø400 mm Rod: Ø80 (90) mm Stroke: 214 mm

Working Pressure: 14 MPa Test Pressure: 21 MPa

Working Medium: Water-Glycol Feature: Supplies equal-volume hydraulic medium to four skirt hood lifting cylinders, ensuring precise synchronous lifting

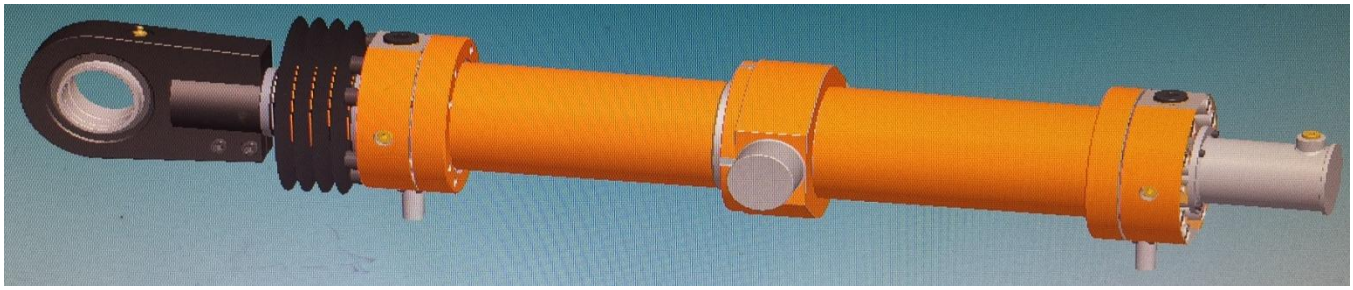


6. Fume Hood Lifting Hydraulic Cylinder UY2508Z125/90-700HA+JJKG

Bore: Ø125 mm Rod: Ø90 mm Stroke: 700 mm Cushion: Dual-chamber cushion, 45 mm each side

Working Pressure: 18 MPa Test Pressure: 27 MPa Working Medium: Hydraulic Oil

Feature: Piston rod equipped with bellows-type flame-retardant dust cover; built-in displacement sensor for precise positioning

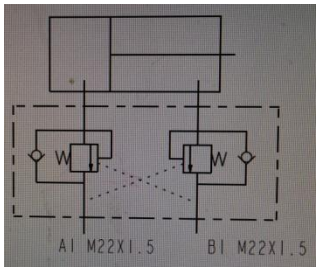


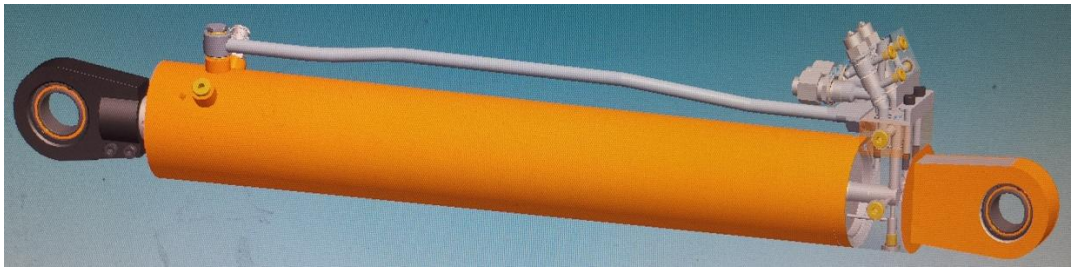
7. Suction Hood Hydraulic Cylinder UG1307R90/45-625

Bore: Ø125 mm Rod: Ø90 mm Stroke: 700 mm Cushion: Dual-chamber cushion, 45 mm each side

Working Pressure: 18 MPa Test Pressure: 27 MPa Working Medium: Hydraulic Oil

Feature: Piston rod equipped with bellows-type flame-retardant dust cover; built-in displacement sensor





8. Fume Hood Tilting Hydraulic Cylinder UYR2303Z200/110-960

Bore: Ø200 mm Rod: Ø110 mm Stroke: 960 mm Cushion: Dual-chamber cushion, 50 mm each side

Working Pressure: 15 MPa Test Pressure: 25 MPa Working Medium: Hydraulic Oil

Feature: Compact structure and quick response, ideal for high-temperature fume hood tilting operations