GRADALL

Industrial Maintenance

High performance machines for metal mill maintenance
Metal mill maintenance is dirty, hot, rugged work in extreme environments. It demands a durable machine that can handle challenging conditions and get the job done efficiently. Gradall industrial maintenance machines are engineered and manufactured with this environment in mind. The machines’ boom range, swing and 360-degree rotational movement allow for precise control in confined or crowded work areas.

Gradall industrial maintenance machines have the strength and power to withstand the vigorous pounding and vibration found in the metal, steel, and aluminum mill industries. Gradall’s unique hydraulically integrated load-sensing system automatically adjusts for any job, big or small, without the need to select working modes. From ground level to boom end, Gradall’s industrial maintenance machines are built and tested for tough, efficient work.

Gradall’s innovative boom design provides exceptional reach and movement. With continuous 360-degree boom tilt, these machines can work in hard-to-reach places, telescoping into position with minimal overhead clearance. Attachments—hammers, rippers, buckets and drills—can be precisely directed to the job at hand, whether skulking and cleaning hot metal ladles, removing bricks, cleaning distribution channels, or placing tap holes. Heavy-duty boom rollers reinforce optimum strength for the exceptionally rugged boom, and the boom tilt motor is at the rear of the cradle protecting it from damage.

**ALUMINUM SMELTING**

- Handle pot cleaning and furnace teardowns
- Reach through the mouth of a furnace for dross removal and cleaning
**WHEELED UNDERCARRIAGES**

**EXTRA MOBILITY TO HANDLE MANY JOBS IN BUSY METAL MILLS**

- Heat-resistant foam-filled or solid tires
- Easy maneuverability
- Heat-resistant shields protect tires
- Can be hoisted using single-point yoke
- Work in any direction without outriggers
- Up to 18 mph travel speed

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**XL 3310 V**
- 42,294 lb (19,184 kg)
- 28' 2" (8.6 m) reach
- 19' 2" (5.6 m) dig depth

**XL 4310 V**
- 46,580 lb (21,128 kg)
- 31' 3" (9.5 m) reach
- 22' 1" (6.7 m) dig depth

**XL 5310 V**
- 55,926 lb (25,368 kg)
- 34' 9" (10.6 m) reach
- 25' 5" (7.7 m) dig depth

**XL 7310 V**
- 77,500 lb (35,153 kg)
- 47' 10" (14.6 m) reach
- 6' 2" (1.9 m) max dig depth

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**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Model</th>
<th>Engine Std.</th>
<th>HP @ RPM</th>
<th>Max. Radius at Groundline</th>
<th>Max. Work Height, Boom Below Grade</th>
<th>Boom Telescope</th>
<th>Boom Tilt</th>
<th>Tool Pivot Angle</th>
<th>Rated Boom Force</th>
<th>Operating Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL 3310 V</td>
<td>Volvo TAD551 VE, Tier III*</td>
<td>172/2000</td>
<td>28' 2&quot; (8.6)</td>
<td>14' 11&quot; (4.5)</td>
<td>11' 0&quot; (3.4)</td>
<td>360°*</td>
<td>165°</td>
<td>22,075 lb (98,2kN)</td>
<td>42,294 lb (19,184 kg)</td>
</tr>
<tr>
<td>XL 4310 V</td>
<td>Volvo TAD551 VE, Tier III*</td>
<td>173/2200</td>
<td>31' 3&quot; (9.5)</td>
<td>14' 11&quot; (4.5)</td>
<td>12' 6&quot; (3.8)</td>
<td>360°*</td>
<td>165°</td>
<td>22,075 lb (98,2kN)</td>
<td>46,580 lb (21,128 kg)</td>
</tr>
<tr>
<td>XL 5310 V</td>
<td>Volvo TAD551 VE, Tier III*</td>
<td>173/2200</td>
<td>34' 9&quot; (10.6)</td>
<td>14' 0&quot; (4.3)</td>
<td>14' 0&quot; (4.3)</td>
<td>360°*</td>
<td>165°</td>
<td>24,841 lb (111kN)</td>
<td>55,926 lb (25,368 kg)</td>
</tr>
<tr>
<td>XL 7310 V</td>
<td>Volvo TAD551 VE, Tier III*</td>
<td>173/2200</td>
<td>47' 10&quot; (14.6)</td>
<td>13' 6&quot; (4.1)</td>
<td>13' 6&quot; (4.1)</td>
<td>360°*</td>
<td>165°</td>
<td>27,700 lb (123,2kN)</td>
<td>77,500 lb (35,153 kg)</td>
</tr>
</tbody>
</table>

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**Wheeled Undercarriages**
- Extra mobility to handle many jobs in busy metal mills
- Heat-resistant foam-filled or solid tires
- Easy maneuverability
- Heat-resistant shields protect tires
- Can be hoisted using single-point yoke
- Work in any direction without outriggers
- Up to 18 mph travel speed

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**Ladle Maintenance**
- Clean the bottom and side walls in hot condition
- Debrick the wear lining, while not damaging the permanent lining
- Rake and remove slag from hot metal, with a minimum loss of metal
- Push out and remove plug at the base of ladle

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**BOF Maintenance**
- Effectively descull the converter lip
- Clean and replace tap holes
- Clean, debrick, repair and drill tap holes in converters

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**XL 3310 V**
- 42,294 lb (19,184 kg)
- 28' 2" (8.6 m) reach
- 19' 2" (5.6 m) dig depth

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**XL 4310 V**
- 46,580 lb (21,128 kg)
- 31' 3" (9.5 m) reach
- 22' 1" (6.7 m) dig depth

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**XL 5310 V**
- 55,926 lb (25,368 kg)
- 34' 9" (10.6 m) reach
- 25' 5" (7.7 m) dig depth

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**XL 7310 V**
- 77,500 lb (35,153 kg)
- 47' 10" (14.6 m) reach
- 6' 2" (1.9 m) max dig depth

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**WHEELED XL 3310 V XL 4310 V XL 5310 V XL 7310 V**
- Engine Std. Volvo TAD551 VE, Tier III*
- Metric units are meters (m) unless noted. *Optional TAD571 VE Tier 4F
### CRAWLER XL 3210 V
- Engine Std.: Volvo TAD551 VE, Tier III*
- Max. Radius at Groundline: 28' 4" (8.6 m)
- Boom Below Grade: 14' 2" (4.3 m)
- Boom Telescope: 11' 0" (3.4 m)
- Boom Tilt: 360°
- Tool Pivot Angle: 165°
- Rated Boom Force: 22,075 lb (98.2 kN)
- Operating Weight: 44,327 lb (20,106 kg)
- Swing Clearance: 7' 0" (2.1 m)
- Transport Length w/ Scaling Hook: 23' 11" (7.3 m)
- Transport Height: 10' 9" (3.3 m)
- Transport Width – Wide: 9' 0" (2.7 m)
- Transport Width – Narrow: 9' 0" (2.7 m)
- Travel Speed-MPH: 3.4 (5.5 kph)
- Track Length: 11' 9" (3.6 m)
- Pad Width – Narrow: 19.7" (500 mm)
- Pad Width – Wide: 23.6" (600 mm)
- Roof Window Guard: High Temperature Glass
- Ground Bearing Pressure – Narrow: 10.1 psi (69.6 kPa)
- Ground Bearing Pressure – Wide: 8.5 psi (58.6 kPa)

### XL 4210 V
- Engine Std.: Volvo TAD551 VE, Tier III*
- Max. Radius at Groundline: 31' 5" (9.6 m)
- Boom Below Grade: 14' 2" (4.3 m)
- Boom Telescope: 12' 8" (3.8 m)
- Boom Tilt: 360°
- Tool Pivot Angle: 165°
- Rated Boom Force: 22,075 lb (98.2 kN)
- Operating Weight: 48,862 lb (22,000 kg)
- Swing Clearance: 8' 0" (2.4 m)
- Transport Length w/ Scaling Hook: 25' 11" (7.9 m)
- Transport Height: 10' 9" (3.3 m)
- Transport Width – Wide: 10' 6" (3.2 m)
- Transport Width – Narrow: 9' 0" (2.7 m)
- Travel Speed-MPH: 3.4 (5.5 kph)
- Track Length: 13' 9" (4.2 m)
- Pad Width – Narrow: 23.6" (600 mm)
- Pad Width – Wide: 31.5" (800 mm)
- Roof Window Guard: High Temperature Glass
- Ground Bearing Pressure – Narrow: 7.7 psi (52.9 kPa)
- Ground Bearing Pressure – Wide: 5.8 psi (40.2 kPa)

### XL 5210 V
- Engine Std.: Volvo TAD551 VE, Tier III*
- Max. Radius at Groundline: 34' 10" (10.6 m)
- Boom Below Grade: 14' 2" (4.3 m)
- Boom Telescope: 14' 0" (4.3 m)
- Boom Tilt: 360°
- Tool Pivot Angle: 165°
- Rated Boom Force: 24,941 lb (111 kN)
- Operating Weight: 59,162 lb (26,835 kg)
- Swing Clearance: 8' 6" (2.6 m)
- Transport Length w/ Scaling Hook: 28' 4" (8.6 m)
- Transport Height: 10' 9" (3.3 m)
- Transport Width – Wide: 14' 0" (4.3 m)
- Transport Width – Narrow: 9' 0" (2.7 m)
- Travel Speed-MPH: 3.4 (5.5 kph)
- Track Length: 13' 9" (4.2 m)
- Pad Width – Narrow: 23.6" (600 mm)
- Pad Width – Wide: 31.5" (800 mm)
- Roof Window Guard: High Temperature Glass
- Ground Bearing Pressure – Narrow: 9.3 psi (64.1 kPa)
- Ground Bearing Pressure – Wide: 7.1 psi (48.9 kPa)

### XL 7210 V
- Engine Std.: Volvo TAD551 VE, Tier III*
- Max. Radius at Groundline: 48' 1" (14.7 m)
- Boom Below Grade: 12' 10" (3.9 m)
- Boom Telescope: 13' 3" (4.0 m)
- Boom Tilt: 360°
- Tool Pivot Angle: 114°
- Rated Boom Force: 27,700 lb (123.2 kN)
- Operating Weight: 77,000 lb (34,927 kg)
- Swing Clearance: 10' 4" (3.1 m)
- Transport Length w/ Scaling Hook: 28' 4" (8.6 m)
- Transport Height: 13' 3" (4.0 m)
- Transport Width – Wide: 13' 3" (4.0 m)
- Transport Width – Narrow: N/A
- Travel Speed-MPH: 2.4 (3.9 kph)
- Track Length: 15' 4" (4.7 m)
- Pad Width – Narrow: N/A
- Pad Width – Wide: 31.5" (800 mm)
- Roof Window Guard: High Temperature Glass
- Ground Bearing Pressure – Narrow: 8.2 psi (56.5 kPa)
- Ground Bearing Pressure – Wide: 8.2 psi (56.5 kPa)

### Electric Furnace
- ELECTRIC FURNACES
  - » Clean and replace tap holes
  - » Debrick and remove refractory lining materials
  - » Rake and remove hot slag from pit below the furnace

### Crawler Specifications

<table>
<thead>
<tr>
<th>SPECIFICATIONS</th>
<th>XL 3210 V</th>
<th>XL 4210 V</th>
<th>XL 5210 V</th>
<th>XL 7210 V</th>
</tr>
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<tr>
<td>Engine Std.</td>
<td>Volvo TAD551 VE, Tier III*</td>
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</tr>
<tr>
<td>HP @ RPM</td>
<td>172/2000</td>
<td>172/2000</td>
<td>173/2200</td>
<td>173/2200</td>
</tr>
<tr>
<td>Max. Radius at Groundline</td>
<td>20' 4&quot; (8.6 m)</td>
<td>31' 5&quot; (9.6 m)</td>
<td>34' 10&quot; (10.6 m)</td>
<td>48' 1&quot; (14.7 m)</td>
</tr>
<tr>
<td>Max. Work Height, Boom Below Grade</td>
<td>14' 2&quot; (4.3 m)</td>
<td>14' 2&quot; (4.3 m)</td>
<td>14' 2&quot; (4.3 m)</td>
<td>12' 10&quot; (3.9 m)</td>
</tr>
<tr>
<td>Boom Telescope</td>
<td>11' 0&quot; (3.4 m)</td>
<td>12' 8&quot; (3.8 m)</td>
<td>14' 0&quot; (4.3 m)</td>
<td>13' 3&quot; (4.0 m)</td>
</tr>
<tr>
<td>Boom Tilt</td>
<td>360°</td>
<td>360°</td>
<td>360°</td>
<td>360°</td>
</tr>
<tr>
<td>Tool Pivot Angle</td>
<td>165°</td>
<td>165°</td>
<td>165°</td>
<td>114°</td>
</tr>
<tr>
<td>Rated Boom Force</td>
<td>22,075 lb (98.2 kN)</td>
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<td>24,941 lb (111 kN)</td>
<td>27,700 lb (123.2 kN)</td>
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<td>Operating Weight</td>
<td>44,327 lb (20,106 kg)</td>
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<td>59,162 lb (26,835 kg)</td>
<td>77,000 lb (34,927 kg)</td>
</tr>
<tr>
<td>Swing Clearance</td>
<td>7' 0&quot; (2.1 m)</td>
<td>8' 0&quot; (2.4 m)</td>
<td>8' 6&quot; (2.6 m)</td>
<td>10' 0&quot; (3.0 m)</td>
</tr>
<tr>
<td>Transport Length w/ Scaling Hook</td>
<td>23' 11&quot; (7.3 m)</td>
<td>25' 11&quot; (7.9 m)</td>
<td>28' 4&quot; (8.6 m)</td>
<td>34' 10&quot; (10.6 m)</td>
</tr>
<tr>
<td>Transport Height</td>
<td>10' 9&quot; (3.3 m)</td>
<td>10' 9&quot; (3.3 m)</td>
<td>10' 9&quot; (3.3 m)</td>
<td>13' 3&quot; (4.0 m)</td>
</tr>
<tr>
<td>Transport Width – Wide</td>
<td>9' 0&quot; (2.7 m)</td>
<td>10' 6&quot; (3.2 m)</td>
<td>10' 6&quot; (3.2 m)</td>
<td>11' 1&quot; (3.4 m)</td>
</tr>
<tr>
<td>Transport Width – Narrow</td>
<td>9' 0&quot; (2.7 m)</td>
<td>9' 0&quot; (2.7 m)</td>
<td>9' 0&quot; (2.7 m)</td>
<td>N/A</td>
</tr>
<tr>
<td>Travel Speed-MPH</td>
<td>3.4 (5.5 kph)</td>
<td>3.4 (5.5 kph)</td>
<td>3.4 (5.5 kph)</td>
<td>2.4 (3.9 kph)</td>
</tr>
<tr>
<td>Track Length</td>
<td>11' 9&quot; (3.6 m)</td>
<td>13' 9&quot; (4.2 m)</td>
<td>13' 9&quot; (4.2 m)</td>
<td>15' 4&quot; (4.7 m)</td>
</tr>
<tr>
<td>Pad Width – Narrow</td>
<td>19.7&quot; (500 mm)</td>
<td>23.6&quot; (600 mm)</td>
<td>23.6&quot; (600 mm)</td>
<td>N/A</td>
</tr>
<tr>
<td>Pad Width – Wide</td>
<td>23.6&quot; (600 mm)</td>
<td>31.5&quot; (800 mm)</td>
<td>31.5&quot; (800 mm)</td>
<td>31.5&quot; (800 mm)</td>
</tr>
<tr>
<td>Ground Bearing Pressure – Narrow</td>
<td>10.1 psi (69.6 kPa)</td>
<td>7.7 psi (52.9 kPa)</td>
<td>9.3 psi (64.1 kPa)</td>
<td>N/A</td>
</tr>
<tr>
<td>Ground Bearing Pressure – Wide</td>
<td>8.5 psi (58.6 kPa)</td>
<td>5.8 psi (40.2 kPa)</td>
<td>7.1 psi (48.9 kPa)</td>
<td>8.2 psi (56.5 kPa)</td>
</tr>
</tbody>
</table>

* Metric units are meters (m) unless noted. * Optional TAD571 VE Tier 4F
**Options**

- 23.6" (600 mm) track pads, triple grouser or flat, for XL 4210 V and XL 5210 V
- 19.7" (500 mm) track pads, triple grouser or flat, for XL 3210 V
- Auxiliary hosing and piping for pneumatic or hydraulic hammers
- Single-point lifting yoke
- Extended reach boom
- Fire resistant hydraulic fluid
- Work lights
- Warning beacon
- Attachment adapter to accommodate standard XL Series ditching buckets
- Radio remote control with umbilical cord

**Attachments**

- Hydraulic Hammers
- Pneumatic Hammers
- Tap Hole Drill
- Double Tooth Steel Mill Ripper
- Single Tooth Steel Mill Rippers
- Core Drill
- Excavating Buckets: 28", 36" and 48"

It is Gradall policy to continually improve its products. Therefore, designs, materials and specifications are subject to change without notice and without incurring any liability on units sold. Units pictured are equipped without optional equipment. See applicable specifications and price lists for optional equipment.

**A Comfortable, Protective Working Environment**

Gradall XL Series V feature spacious cabs designed for operator comfort and safety, with plenty of windows for excellent visibility in all directions. Gradall, Deere or SAE boom control joysticks are built into the adjustable seat, enhancing operator efficiency, and convenient foot pedals allow the operator exacting control to position the carrier. For operator comfort, heaters, air conditioning and more are all standard.