### ENGINE

- **Model**: Isuzu AR-4HK1X Turbocharged w/cooled intercooler/ SCR System
- **Emissions Certification**: Tier 4 Final
- **Fuel**: Requires ultra low-sulfur fuel B5 biodiesel tolerant
- **Type**: Water-cooled, 4 cycle diesel, 4 cylinder inline, High pressure common rail (electric system), Turbocharger w/ air cooled intercooler, SCR system
- **Cylinders**: 4-cylinder in-line
- **Displacement**: 317 in³ (5.2 L)
- **Bore/Stroke**: 4.53 x 4.92 in (115 x 125 mm)
- **Fuel injection**: Direct injection – electronic
- **Fuel filter**: Replaceable, full flow spin-on cartridge
- **Air filter**: Dry type element w/ warning restriction indicator
- **Oil filter**: Replaceable, full flow spin-on cartridge
- **Engine gradeability**:
  - Side-to-side: 35°
  - Fore and aft: 35°
- **Net horsepower – SAE J1349 @ 1800 RPM**: 160 hp (119.3 kW)
- **Net Max. Torque – SAE J1349 @ 1600 RPM**: 458 lb·ft (621 N·m)
- **Cooling operating range**: 109° to -13° F (43° to -25° C)
- **Fuel**
  - Requires low-ash oil CJ-4

### OPERATOR ENVIRONMENT

- **Air-conditioner output**: 13,492 BTU/hr
- **Heater output**: 12,892 BTU/hr
- **Sound level inside cab – ISO6395**: 70 dBA
- **Electrical outlet**: 12 Volt
- **Cab interior light**: 10 watt
- **Rear view camera**: Standard
- **Seat**: Air-suspension

### ATTACHMENT

- **Boom**: 18 ft 8 in (5 700 mm)
- **Arm options**: 9 ft 8 in (2.94 m)
- **Bucket digging force**: 31,800 lbf (142 kN)
  - w/ Auto Power Boost: 34,600 lbf (154 kN)
- **Drawbar pull**: 45,000 lbf (200 kN)
- **Gradeability**: 70% - 35 degree slope

### OPERATING WEIGHT

- **Net weight**: 56,900 lb (25 800 kg)
  - w/ shoes: 2 ft 7 in (800 mm)
  - w/ boom: 18 ft 8 in (5 700 mm)
  - w/ arm: 9 ft 8 in (2 940 mm)
  - w/ bucket: 1,435 lb (651 kg)
  - w/ counterweight: 16,400 lb (7 430 kg)

### HYDRAULIC CYLINDERS

- **Boom cylinders**: Two (2)
  - Cylinder bore: 4.7 in (120 mm)
  - Cylinder rod diameter: 3.3 in (85 mm)
  - Cylinder stroke: 53.9 in (1 370 mm)
- **Arm cylinder**: One (1)
  - Cylinder bore: 5.5 in (140 mm)
  - Cylinder rod diameter: 3.9 in (100 mm)
  - Cylinder stroke: 57.5 in (1 460 mm)
- **Bucket cylinder**: One (1)
  - Cylinder bore: 4.7 in (120 mm)
  - Cylinder rod diameter: 3.3 in (85 mm)
  - Cylinder stroke: 39.8 in (1 010 mm)

### SERVICE CAPACITIES

- **Fuel tank**: 85 gal (320 L)
- **Hydraulic system**: 67 gal (252 L)
- **Hydraulic tank**: 30 gal (114 L)
- **Engine oil w/ filter**: 6 gal (23.1 L)
- **Swing drive**: 5.3 qt (5 L)
- **Final drive – each side**: 5.3 qt (5 L)
- **Cooling system**: 8.4 gal (31.9 L)

### OTHER SPECIFICATIONS

- **Swing speed**: 0 – 11.5 RPM
- **Swing torque**: 47,204 lb·ft (64 000 N·m)
- **Swing brake**: Mechanical disc
- **Swing speed**: 14 ft 8 in (4 470 mm)
- **Track gauge**: 7 ft 9 in (2 390 mm)
- **Carrier rollers**: 2
- **Track rollers**: 8
- **Shoe width – std.**: 2 ft 7 in (800 mm)
- **Link pitch**: 7 in (190 mm)
- **Track**: Grease lubricated/strutted
- **Swing Mode selections**: SP: Speed Priority, H: Heavy Duty, A: Automatic
- **Swing motor**: Fixed displacement axial piston
- **Swing final drive**: Planetary gear reduction
- **Travel motor**: Two-speed independent travel/axial piston

### ELECTRICAL

- **Voltage**: 24 Volts
- **Alternator rating**: 50 amp
- **Batteries**: 2 x 12 Volt
  - Battery reserve capacity: 92 Ah/5 hours
- **Work lights – 4**: 24 Volt/70 watt
  - 1 boom, 1 upper, 2 cab
  - 1 Operator cab: 10 watt

### DRIVETRAIN

- **Travel control**: Dual stage relief/ counter balance design
- **Brakes**: Mechanical disc
- **Service brakes**: SAHR disc – each motor
- **Two speed travel**:
  - Max. high speed: 3.1 mph (5.0 km/h)
  - Max. low speed: 2.0 mph (3.2 km/h)
- **Automatic downshift**:
  - Drawbar pull: 45,000 lbf (200 kN)
- **Gradeability**: 70% - 35 degree slope

### GROUND PRESSURE

- **@ Standard operating weight**: 5.8 psi (0.4 bar)
  - w/ 31.5 in (800 mm) triple semi-grouser shoes
### DIMENSIONS

<table>
<thead>
<tr>
<th></th>
<th>7 ft 10 in (2.40 m) Arm</th>
<th>9 ft 8 in (2.94 m) Arm</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Overall height - with attachment</td>
<td>10 ft 5 in (3 180 mm)</td>
<td>10 ft 0 in (2 980 mm)</td>
</tr>
<tr>
<td>B. Cab height</td>
<td>10 ft 0 in (3 040 mm)</td>
<td>10 ft 0 in (3 040 mm)</td>
</tr>
<tr>
<td>C. Overall length - with attachment</td>
<td>29 ft 3 in (8 920 mm)</td>
<td>29 ft 0 in (8 830 mm)</td>
</tr>
<tr>
<td>D. Overall length - without attachment</td>
<td>14 ft 8 in (4 470 mm)</td>
<td>14 ft 8 in (4 470 mm)</td>
</tr>
<tr>
<td>E. Width of upper structure</td>
<td>9 ft 10 in (2 990 mm)</td>
<td>9 ft 10 in (2 990 mm)</td>
</tr>
<tr>
<td>F. Track overall length</td>
<td>14 ft 8 in (4 470 mm)</td>
<td>14 ft 8 in (4 470 mm)</td>
</tr>
<tr>
<td>G. Track overall width - with 23.6 in (600 mm) shoes</td>
<td>10 ft 4 in (2 990 mm)</td>
<td>10 ft 4 in (2 990 mm)</td>
</tr>
<tr>
<td></td>
<td>10 ft 6 in (3 190 mm)</td>
<td>10 ft 6 in (3 190 mm)</td>
</tr>
<tr>
<td>H. Track shoe width</td>
<td>2 ft 7 in (800 mm)</td>
<td>2 ft 7 in (800 mm)</td>
</tr>
<tr>
<td>I. Center to center-idler to sprocket</td>
<td>12 ft 0 (3 660 mm)</td>
<td>12 ft 0 (3 660 mm)</td>
</tr>
<tr>
<td>J. Upper structure ground clearance</td>
<td>3 ft 4 in (1 020 mm)</td>
<td>3 ft 4 in (1 020 mm)</td>
</tr>
<tr>
<td>K. Minimum ground clearance</td>
<td>1 ft 5 in (440 mm)</td>
<td>1 ft 5 in (440 mm)</td>
</tr>
<tr>
<td>L. Rear tail swing radius</td>
<td>6 ft 4 in (1 790 mm)</td>
<td>6 ft 4 in (1 790 mm)</td>
</tr>
<tr>
<td>Operating weight</td>
<td>59,600 lb (25 800 kg)</td>
<td>59,600 lb (25 800 kg)</td>
</tr>
<tr>
<td>Ground pressure - with 9 ft 8 in (2.94 m) arm, 800 mm grouser</td>
<td>5.8 psi (0.4 bar)</td>
<td>5.8 psi (0.4 bar)</td>
</tr>
</tbody>
</table>
### PERFORMANCE SPECS

<table>
<thead>
<tr>
<th></th>
<th>7 ft 10 in (2.40 m) Arm</th>
<th>9 ft 8 in (2.94 m) Arm</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Maximum dig radius</td>
<td>30 ft 9 in (9 370 mm)</td>
<td>32 ft 4 in (9 850 mm)</td>
</tr>
<tr>
<td>B. Dig radius at ground level</td>
<td>30 ft 1 in (9 180 mm)</td>
<td>31 ft 9 in (9 670 mm)</td>
</tr>
<tr>
<td>C. Maximum dig depth</td>
<td>20 ft 1 in (6 120 mm)</td>
<td>21 ft 10 in (6 650 mm)</td>
</tr>
<tr>
<td>D. Dig depth - 8 ft 0 in (2.44 m) level bottom</td>
<td>19 ft 5 in (5 910 mm)</td>
<td>21 ft 3 in (6 480 mm)</td>
</tr>
<tr>
<td>E. Dump height</td>
<td>25 ft 0 in (7 630 mm)</td>
<td>26 ft 2 in (7 970 mm)</td>
</tr>
<tr>
<td>F. Maximum reach height</td>
<td>34 ft 7 in (10 520 mm)</td>
<td>36 ft 1 in (10 860 mm)</td>
</tr>
<tr>
<td>G. Bucket rotation</td>
<td>177°</td>
<td>177°</td>
</tr>
<tr>
<td>H. Maximum vertical wall dig depth</td>
<td>18 ft 0 in (5 480 mm)</td>
<td>19 ft 5 in (5 920 mm)</td>
</tr>
<tr>
<td>I. Minimum swing radius</td>
<td>18 ft 0 in (5 480 mm)</td>
<td>19 ft 5 in (5 920 mm)</td>
</tr>
</tbody>
</table>

**Arm digging force:**
- Standard: 27,600 lbf (123 kN)  
  Power Boost: 30,000 lbf (133 kN)  
  23,100 lbf (123 kN)  
  Power Boost: 25,100 lbf (112 kN)

**Bucket digging force:**
- Standard: 31,800 lbf (142 kN)  
  Power boost: 34,600 lbf (154 kN)  
  31,800 lbf (142 kN)  
  Power boost: 34,600 lbf (154 kN)
NOTE: *Lift capacities marked with an asterisk (*) are limited by 87% hydraulic capacity and 75% tipping capacity.
### Lift Capacities

<table>
<thead>
<tr>
<th>Load (Lift Point Height)</th>
<th>MINIMUM REACH</th>
<th>0 ft (0 m)</th>
<th>5 ft (1.5 m)</th>
<th>10 ft (3 m)</th>
<th>15 ft (4.5 m)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ø END SIDE</td>
<td>END SIDE</td>
<td>END SIDE</td>
<td>END SIDE</td>
<td>END SIDE</td>
</tr>
<tr>
<td>+30 ft (9 m)</td>
<td>14 ft 7 in (4.52 m)</td>
<td>4,400 lb* (2,000 kg)*</td>
<td>4,400 lb* (2,000 kg)*</td>
<td>4,400 lb* (2,000 kg)*</td>
<td>4,800 lb* (2,180 kg)*</td>
</tr>
<tr>
<td>+25 ft (7.5 m)</td>
<td>15 ft 10 in (4.80 m)</td>
<td>8,050 lb* (3,620 kg)*</td>
<td>8,850 lb* (4,020 kg)*</td>
<td>11,000 lb* (5,000 kg)*</td>
<td>12,400 lb* (5,630 kg)*</td>
</tr>
<tr>
<td>+20 ft (6 m)</td>
<td>15 ft 0 in (4.54 m)</td>
<td>9,650 lb* (4,350 kg)*</td>
<td>9,650 lb* (4,350 kg)*</td>
<td>11,000 lb* (5,000 kg)*</td>
<td>12,400 lb* (5,630 kg)*</td>
</tr>
<tr>
<td>+15 ft (4.5 m)</td>
<td>9 ft 7 in (2.9 m)</td>
<td>10,300 lb* (4,680 kg)*</td>
<td>10,300 lb* (4,680 kg)*</td>
<td>11,000 lb* (5,000 kg)*</td>
<td>12,400 lb* (5,630 kg)*</td>
</tr>
<tr>
<td>+10 ft (3 m)</td>
<td>7 ft 2 in (2.16 m)</td>
<td>19,050 lb* (8,620 kg)*</td>
<td>19,050 lb* (8,620 kg)*</td>
<td>20,780 lb* (9,410 kg)*</td>
<td>22,650 lb* (10,250 kg)*</td>
</tr>
<tr>
<td>+6 ft (1.5 m)</td>
<td>8 ft 1 in (2.46 m)</td>
<td>9,200 lb* (4,170 kg)*</td>
<td>9,200 lb* (4,170 kg)*</td>
<td>21,300 lb* (9,600 kg)*</td>
<td>23,500 lb* (10,680 kg)*</td>
</tr>
<tr>
<td>Groundline</td>
<td>5 ft 4 in (1.62 m)</td>
<td>8,350 lb* (3,790 kg)*</td>
<td>8,350 lb* (3,790 kg)*</td>
<td>19,650 lb* (8,840 kg)*</td>
<td>19,650 lb* (8,840 kg)*</td>
</tr>
<tr>
<td>-5 ft (-1.5 m)</td>
<td>1 ft 3 in (0.38 m)</td>
<td>11,850 lb* (5,390 kg)*</td>
<td>11,850 lb* (5,390 kg)*</td>
<td>16,450 lb* (7,430 kg)*</td>
<td>16,450 lb* (7,430 kg)*</td>
</tr>
<tr>
<td>-10 ft (-3 m)</td>
<td>1 ft 3 in (0.37 m)</td>
<td>18,200 lb* (8,290 kg)*</td>
<td>18,200 lb* (8,290 kg)*</td>
<td>22,650 lb* (10,250 kg)*</td>
<td>22,650 lb* (10,250 kg)*</td>
</tr>
<tr>
<td>-15 ft (-4.5 m)</td>
<td>3 ft 8 in (1.06 m)</td>
<td>29,200 lb* (13,260 kg)*</td>
<td>29,200 lb* (13,260 kg)*</td>
<td>32,700 lb* (14,850 kg)*</td>
<td>32,700 lb* (14,850 kg)*</td>
</tr>
</tbody>
</table>

### Maximum Reach

<table>
<thead>
<tr>
<th>Load (Lift Point Height)</th>
<th>20 ft (6 m)</th>
<th>25 ft (7.5 m)</th>
<th>30 ft (9 m)</th>
<th>60 ft END</th>
<th>60 ft END</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø END SIDE</td>
<td>END SIDE</td>
<td>END SIDE</td>
<td>END SIDE</td>
<td>Ø END SIDE</td>
<td></td>
</tr>
<tr>
<td>+30 ft (9 m)</td>
<td>19 ft 7 in (6.17 m)</td>
<td>5,750 lb* (2,590 kg)*</td>
<td>5,750 lb* (2,590 kg)*</td>
<td>5,750 lb* (2,590 kg)*</td>
<td></td>
</tr>
<tr>
<td>+25 ft (7.5 m)</td>
<td>25 ft 0 in (7.62 m)</td>
<td>5,000 lb* (2,270 kg)*</td>
<td>5,000 lb* (2,270 kg)*</td>
<td>5,000 lb* (2,270 kg)*</td>
<td></td>
</tr>
<tr>
<td>+20 ft (6 m)</td>
<td>28 ft 3 in (8.66 m)</td>
<td>4,750 lb* (2,150 kg)*</td>
<td>4,750 lb* (2,150 kg)*</td>
<td>4,750 lb* (2,150 kg)*</td>
<td></td>
</tr>
<tr>
<td>+15 ft (4.5 m)</td>
<td>30 ft 2 in (9.14 m)</td>
<td>4,700 lb* (2,130 kg)*</td>
<td>4,700 lb* (2,130 kg)*</td>
<td>4,700 lb* (2,130 kg)*</td>
<td></td>
</tr>
<tr>
<td>+10 ft (3 m)</td>
<td>31 ft 1 in (9.48 m)</td>
<td>4,850 lb* (2,210 kg)*</td>
<td>4,850 lb* (2,210 kg)*</td>
<td>4,850 lb* (2,210 kg)*</td>
<td></td>
</tr>
<tr>
<td>+5 ft (1.5 m)</td>
<td>31 ft 1 in (9.48 m)</td>
<td>4,850 lb* (2,210 kg)*</td>
<td>4,850 lb* (2,210 kg)*</td>
<td>4,850 lb* (2,210 kg)*</td>
<td></td>
</tr>
<tr>
<td>Groundline</td>
<td>16,450 lb* (7,430 kg)*</td>
<td>6,450 lb* (2,960 kg)*</td>
<td>6,450 lb* (2,960 kg)*</td>
<td>6,450 lb* (2,960 kg)*</td>
<td></td>
</tr>
<tr>
<td>-5 ft (-1.5 m)</td>
<td>28 ft 6 in (8.69 m)</td>
<td>6,700 lb* (3,010 kg)*</td>
<td>6,700 lb* (3,010 kg)*</td>
<td>6,700 lb* (3,010 kg)*</td>
<td></td>
</tr>
<tr>
<td>-10 ft (-3 m)</td>
<td>25 ft 8 in (7.82 m)</td>
<td>8,500 lb* (3,810 kg)*</td>
<td>8,500 lb* (3,810 kg)*</td>
<td>8,500 lb* (3,810 kg)*</td>
<td></td>
</tr>
<tr>
<td>-15 ft (-4.5 m)</td>
<td>21 ft 4 in (6.58 m)</td>
<td>11,000 lb* (5,000 kg)*</td>
<td>11,000 lb* (5,000 kg)*</td>
<td>11,000 lb* (5,000 kg)*</td>
<td></td>
</tr>
</tbody>
</table>

NOTE: Lift capacities marked with an asterisk (*) are limited by 87% hydraulic capacity and 75% tipping capacity.
STANDARD EQUIPMENT

OPERATOR ENVIRONMENT
See page 1

ENGINE
Isuzu four-cylinder turbo-charged diesel
Tier 4 Certified – Turbocharged, air cooled intercooler and SCR system
Electronic fuel injection
High pressure common rail system
Diesel Oxidation Catalyst – DOC
Neutral safety start
Auto-engine warm up
Glow-plug pre-heat
EPF – Engine Protection Feature
Dual-stage fuel filtration
Dual element air filter
Remote oil filter
Green plug oil drain
500-hour engine oil change interval
24-volt system
Requires CJ-4 engine oil
Requires ultra low-sulfur fuel

FUEL ECONOMY SYSTEMS
Engine Idle/Fuel Economy System:
- Auto-idle
- One-touch idle
- Idle shut-down
BEC – Boom Economy Control
AEC – Auto Economy Control
SWC – Swing Relief Control
SSC – Spool Stroke Control

HYDRAULICS
- Auto power boost
- Auto swing priority
- Auto travel speed change
- Selectable work modes
- ISO pattern controls
- Pre-set auxiliary pump settings
- Auxiliary valve
- Auxiliary pipe brackets
- Control pattern selector
- 5,000-hour hydraulic oil change interval
- 1,000-hour hydraulic filter change interval
- SAHR brake

UPPER STRUCTURE
Right and left side mirrors
Isolation mounted cab – fluid and spring
Common key vandal locks
Upper mounted work light – 70 watt
Swivel guard belly pan

UNDERCARRIAGE
31.5 in (800 mm) steel shoes, triple semi-grouser
Full overlap turntable bearing tub
Single track chain guides
Hydraulic track adjustment
X-pattern carbody

ATTACHMENTS
Boom – 18 ft 8 in (5.70 m)
Arm – 9 ft 8 in (2.94 m)
Heavy-duty bucket linkage
Boom mounted work light – 70 watt
Auxiliary pipe brackets
Centralized grease fittings
Attachment cushion valve
Arm and boom regeneration

TELEMATICS
CASE SiteWatch™ Telematics – includes hardware and a 3-yr Advanced data subscription
### Optional Equipment

**Operator Environment**
- FOPS cab top guard – Level 2
- Front grill guard – 2 x 2 screen mesh
- Front rock guard:
  - Vertical bars – two piece/OPG 1
  - Vertical bars – fixed/one piece/OPG 2
- Vandal guard
- Rain deflector
- Sun visor
- Side-view camera

**Hydraulics**
- Auxiliary hydraulics:
  - Single acting/joystick activated
  - Double acting/joystick activated
  - Multi-function/joystick activated
  - Secondary low-flow/joystick activated

**Undercarriage**
- 23.6 in (600 mm) rubber shoes
- 23.6 in (600 mm) steel shoes, triple semi-grouser
- 27.6 in (700 mm) steel shoes, triple semi-grouser

**Attachments**
- Arm – 7 ft 10 in (2.40 m)
- Coupler/Case multi-pin grabber
- Buckets:
  - Heavy-duty
  - Extreme-duty
- Load holding control
- Free swing – order kit through Service Parts
- Hose Burst Check Valve – HBCV

### Buckets

<table>
<thead>
<tr>
<th>Application</th>
<th>Width</th>
<th>SAE Heaped Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Purpose</td>
<td>24 in (0.61 m) to 48 in (1.22 m)</td>
<td>0.65 yd³ (0.50 m³) to 1.53 yd³ (1.17 m³)</td>
</tr>
<tr>
<td>Heavy-duty</td>
<td>24 in (0.61 m) to 48 in (1.22 m)</td>
<td>0.64 yd³ (0.49 m³) to 1.51 yd³ (1.15 m³)</td>
</tr>
<tr>
<td>Extreme-duty</td>
<td>24 in (0.61 m) to 42 in (1.07 m)</td>
<td>0.58 yd³ (0.44 m³) to 1.19 yd³ (0.91 m³)</td>
</tr>
<tr>
<td>Heavy-duty coupler</td>
<td>24 in (0.61 m) to 39 in (0.99 m)</td>
<td>0.55 yd³ (0.42 m³) to 1.03 yd³ (0.79 m³)</td>
</tr>
<tr>
<td>Ditching</td>
<td>60 in (1.52 m) to 66 in (1.68 m)</td>
<td>1.08 yd³ (0.83 m³) to 1.20 yd³ (0.92 m³)</td>
</tr>
</tbody>
</table>