STANDARD AND OPTIONAL EQUIPMENTS

Bucket

<table>
<thead>
<tr>
<th>Bucket capacity</th>
<th>Type of bucket</th>
<th>lil BSE</th>
<th>0.45</th>
<th>0.55</th>
<th>0.60</th>
<th>0.80</th>
<th>1.00</th>
<th>1.10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bucket width</td>
<td>with side cutters, mm</td>
<td>700</td>
<td>910</td>
<td>1,120</td>
<td>1,300</td>
<td>1,360</td>
<td>1,400</td>
<td></td>
</tr>
<tr>
<td>Number of bucket teeth</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shape of bucket</td>
<td>Standard boom</td>
<td>●● ●●</td>
<td>● ●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>Long arm (5.63m)</td>
<td>●● ●●</td>
<td>● ●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

General purpose (used with material weight 1,800kg/m³ or less)
Light work (used with material weight 1,600kg/m³ or less)
Loading only (used with material weight 1,100kg/m³ or less)
Unusable

Operating weight and Ground pressure figures, with 5.63m standard boom.
Loading weight for 2.93m standard arm and 800LC bucket.
Unusable

Contact for enquiry:

KATO WORKS CO., LTD.
Tel.: Head Office Tokyo(03)3458-1111
Overseas Marketing Department Tokyo(03)3458-1115
Fax.: Tokyo(03)3458-1163

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http://www.kato-works.co.jp

NOTE: Illustrations may include optional equipment. KATO products and specifications are subject to improvements and changes without notice. Mentioned figures are approximate.

Contact for enquiry:
Environment-friendly
- US EPA Tier 4 and EU Stage IV compliant engine
- New control valve reduces the fuel consumption

Operability
- Operation made easier with the newly fitted 7-inch wide Liquid Crystal Display
- Improvements made for faster cycle time due to the newly adopted hydraulic system

Maintainability
- Good access to service parts
- Safe features for maintenance

Safety
- New ROPS cabin for safer and comfortable operation
- New engine neutral start mechanism

Comfortable cabin
- New air conditioner
- Complete interior
- Operability is improved
- Pressurizing function

New APC
- Large size liquid crystal display
- Touch screen control
- Rear and side view monitor are available
Further advancements on eco-friendliness and operability

1 High performance and environment-friendly Isuzu engine

- Selective Catalytic Reduction (SCR) system
  The SCR system cuts the NOx (nitrogen oxides), PM (particulate matter) and NMHC (non-methane hydrocarbon). The emission control is compliant with Stage4 and Tier4.

- EGR (Exhaust Gas Recirculation) system
  The large capacity water-cooled EGR cooler suppresses the NOx.

- Significant Reduction of the released PM
  There is high precision combustion control resulting from the combination of the high pressure common rail fuel injection system and a multistage fuel injection.

2 Selective Catalytic Reduction (SCR) system

- The SCR system provides chemical reaction between Urea and NOx in emission. This reaction generates Nitrogen and Water which are friendly to the environment.

- The large capacity DEF (Diesel Exhaust Fluid) tank
  DEF replenishment is every 1 time per 2 times of fuel replenishment (subject to working condition). DEF tank is located inside of the tool box and easy to access.

3 Refurbished hydraulic system for improved operability

- New Control Valve
  Pressure loss reduction is contributory to low fuel consumption. The add-on valve is now mountable, hence smartly corresponding to the conventional optional equipment that require additional space for certain necessary valves. In addition, KATO has a traditionally fine cut and smoothly refined compatible feeling made by detailed tuning.

- New main pump
  Contributory to reduction in fuel consumption is the newly mounted efficient main pump. Moreover, a variety of optional equipment can now be accommodated for due to the PTO pump being mountable.

- High mileage
  Diameter of the boom and bucket cylinder hose have been increased. It reduces pressure loss and minimizes power loss.

- Lever operational ability lightened
  Light operational feeling is actualized due to reduced lever response. Operational fatigue has also been lessened.

- Environmental friendly/Operability
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Safer cabin with various features

The KATO original cabin is durable and of smart design. The cabin is compliant with ROPS safety standard (ISO 12117-2). It secures the safety and protection of the operator from roll-over over accident. The cabin is also compliant with ISO 10262 (Top guard level 1) and protect the operator from falling objects.

- **Window and rise up wiper**
  - The large size right window and the rise up wiper secure excellent view. The wiper is storable to the right pillar.

- **Polycarbonate door window**
  - Polycarbonate prevents the crack comes from scattering stone. Hard coating which has provided to surface secures high resistance to yellowing or scratch.

- **Safety lock lever**
  - The new electronic control lock mechanism enhances safety and prevents miss operation. It locks the hydraulic circuit in case the console is jumped up. The engine start operation is active only when the lever is applied to lock position.

- **Handrail and step**
  - To prevent falling accident, the handrail has been provided to the upper structure. The large size anti-slip step enables operator to access the upper structure safer.

- **Other safe features**
  - Rear view camera
  - Side view camera (option)
  - Emergency engine stop switch
  - Retractable side mirror
  - Seat belt
  - Fire wall
  - Fan guard
  - LED working light (option)
  - Fire extinguisher (option)

Best comfort and high efficiency

- **Heat &cold insulation box**
  - It prevents dust by enhancing the airtightness.

- **Pressurized cabin**
  - Air volume is increased by 26%.
  - Filter is paper type

- **New operation lever**
  - Operation switches are arranged to up and bottom. Round shape grip is easy to handle.

- **Rear stowage space**
  - It is capable of storing 6 drink bottles (500mL).

- **New foot rest arrangement**
  - The foot rest has been relocated to optimum position. Replacement of the floor mat has become easier.

- **Drink holder**
  - Soft material is used for the drink holder. Various arrangements are available.

- **Other cabin features**
  - Seat suspension with large size shock absorber
  - Luggage space
  - Helmet hook
  - AM/FM radio with 2 speakers
  - USB port (option)
  - 12V electric port (option)
  - Ash tray (option)
  - Sun visor (option)
  - Rain visor (option)
  - Transparent roof hatch (option)

- **Other features**
  - One-touch opening and closing front window
  - LED room lamp
  - Sun shade (option)
  - Switch
  - Sun visor (option)
  - Transparent roof hatch (option)
New APC for smart operation

**Visibility**
- Large and high resolution display
  The display is 7 inch size and IPS liquid crystal display provides high quality image.

**Safety**
- Rear view camera for standard feature
  Operator is able to confirm rear and side view through dual view display (side view camera is an option).
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**Operability**
- Touch screen control is available for all operation.

### Mode selection
Pull-down menu enables operator to confirm all mode on the display at once.

### Alarm message
The display indicates various alarms. It also indicates the DEF aqueous fluid replenishing timing.

### Air conditioner
The air conditioner operation is available on the display.

### Various information
Operator is able to set up to display various information such as maintenance information.

High performance and superior maintenance

**LED light (option)**
The LED lights have been provided to the cab, right-front and the boom.

**Greasing port for slewing motor**
The greasing port is locating which is easy to access.

**Cab maintenance space**
It is able to replace the filter for the air conditioner and replenish the washer fluid from the cab maintenance space located outside of the cab.

**Equipment layout**
Electrical components are centralized in the cab rear.

**Battery disconnect switch**
It is capable to shut down the battery completely in non-operation state. The maintenance of electronic devices becomes safer.

**Fuel main filter**
Adopts a cartridge-type filter and is located in the right-rear position which is easy to access.

**Cooling system**
The expansion tank (pressurized reserve tank) is located on top of radiator, with improved air venting to the engine and cool ability.

**Large capacity tool box**
The large size tool box that is capable to store such as tool set, 10L DEF aqueous fluid container.

**Mounting seat for additional piping**
Boom and arm additional piping seat is now available as a standard feature. Hence making possible the mounting of additional piping without the burden of welding.

**DEF refilling port (DEF tank)**
It is fixed in an easily accessible location making refilling of the DEF easier to carry out.
Technical Specifications

ENGINE
Model: BD220-7
Type: 4-cyl., water-cooled, direct injection with turbocharged
Number of cylinders: 4
Bore & Stroke: 115 mm x 135 mm
Total displacement: 5,189 cc
Rated output: 126.4kW/2,000min (ISO 14396)
Displacement: 126.4kW/2,000min (ISO 14396)
Max. torque: 4.078Nm x 1,493rpm (ISO 14396)
646Nm x 1,493rpm (ISO 9249)
Compression ratio: 18.1:1
Cooling system: Pressurized coolant circulated by coolant pump with the thermostat and expansion tank
Lubrication system: Pressurized lube oil circulated by lube oil pump
Starter: Electric, 24V, 55kW
Generator: Alternator, 24V-55kA
Air cleaner: Double element Dry type filter

HYDRAULIC SYSTEM
Pumps: Double variable piston pump and gear pump
Max. discharge flow: 34.4L/min
Max. discharge pressure: 360 kPa
Filter system: Full flow filter with replaceable element, a pilot flow filter and suction filter
Control valves: 5-4 section multiple control valves (with one free service circuit)
Foil pump: Torque converter type foil pump with forced ventilation
Max. speed: 14.2m/min

SWING SYSTEM
Drive: Axial piston motor with shockless valve and relief valve
Brake: A hydraulic brake that locks automatically when the swing control lever is in the neutral position and a mechanical brake which is applied when the safety lock is put in, and brake lockout
Lubrication: Complete oil and grease lubrication system
Max. swing speed: 16.2m/min

TRAVEL SYSTEM
Drive: Independent axial piston motor with relief for each side
Brake: Independent single parking brake for each side, applied automatically when the travel levers are in the neutral position
Track shoes: 42 each side
Track adjustment: Grease cylinder with road toggles
Pressure relief valves: Primary and secondary on each circuit

TRAVEL RANGE
Right hand lever: Controls the boom & bucket
Left hand lever: Controls the right arm & swing/stractor

CABIN CONTROLS
Type: All-weather sound suppressed, cab mounted on 4 point vibration mounting, Right hand lever: Controls the boom & bucket
Left hand lever: Controls the right arm & swing

AIR CONDITIONER
Air conditioner gas contains fluorinated greenhouse gases.

LIFT POINT RADIUS
A(m) at MAXIMUM

HD820-7
Lift point radius

HD820LC-7
Lift point radius

AIR CONDITIONER
Air conditioner gas contains fluorinated greenhouse gases.

Global warming potential (GWP) 1430
Gas suitable for 1.43ton 2 equivalent

American Standards for working machine

Dimensions
HD820-7

HD820LC-7

Working Ranges
Standard backhoe

Lifting Capacities
HD820-7

HD820LC-7

NOTE: 1. Lifting capacities are based on ISO18691.
2. Lifting capacities shown do not exceed 85% of machine hydraulic capacity or 70% of minimum lifting height.
3. Capacities marked with an asterisk (*) are derived by hydraulic capacities.
4. Lifting capacities are based on machines standing on firm, well supported surface, with no load allowances for such conditions as soft or uneven ground.
5. Lifting capacities shown may exclude added weights that may affect lifting capacities.
6. The operator should be fully acquainted with the instruction manual before operating the machine.