

SPECIFICATIONS

EX1200-6

ENGINE

Model	Cummins QSX23-C
Type	Water-cooled, 4-cylinder, 6-cylinder in-line, turbo-charged direct injection chamber-type diesel engine.
Emission Certification	U.S.EPA Tier2
Rated power	
SAE J1995, gross	567 kW (760 HP) at 1 800 min ⁻¹ (rpm)
Net	552 kW (740 HP) at 1 800 min ⁻¹ (rpm)
Maximum torque	3 468 Nm (254 kgf·m) at 1 350 min ⁻¹ (rpm)
Piston displacement	23,15 L
Bore and stroke	170 mm x 170 mm
Starting system	24 V electric motor
Batteries	2 x 12 V, 2 x 220 AH

HYDRAULIC SYSTEM

Hitachi's ETS (Electronic Total control System) can achieve maximum job efficiency by reducing fuel consumption and noise levels, while maximizing productivity through the optimization of engine-pump functions with excellent controllability increasing operator comfort.

- E-P Control (Computer-aided Engine-Pump Control system)
- Main pumps regulated by electric engine speed sensing control system. Optimum operation mode selectable among 3 power modes depending on type of job.
- OHS (Optimum Hydraulic System) assures fully independent and combined operations.
- FFS (Fuel-saving Pump System)
- Auto-idling system
- High-pressure 2-speed travel system for high traction force and travel speed.
- Forced-cooling pump drive system
- TIG (Tungsten Inert Gas) welding pipings

Main pumps	3 variable-displacement, swash plate type axial piston pumps
Max.oil flow	3 X 520 L/min
Pilot pump	Gear pump
Max.oil flow	56.0 L/min
Relief Valve Settings	
Boom/arm/bucket circuit	31.9 MPa (325 kgf/cm ²)
Swing circuit	34.3 MPa (350 kgf/cm ²)
Travel circuit	27.4 MPa (280 kgf/cm ²)
Pilot circuit	3.9 MPa (40 kgf/cm ²)

Hydraulic Cylinders

High-strength piston rods and tubes adopted. Cylinder cushion mechanisms are provided for boom, arm, bucket and dump cylinders.

Cylinder Dimensions Loading shovel

Quan.	Bore	Rod diameter
2	230 mm	160 mm
1	215 mm	150 mm
2	200 mm	150 mm
2	140 mm	85 mm
1	230 mm	160 mm

Backhoe

Boom	Quan.	Bore	Rod diameter
Arm	2	230 mm	160 mm
Bucket (for 3.6 m arm)	1	260 mm	180 mm
Bucket (for 3.4 m BE-arm)	1	230 mm	160 mm
	1	240 mm	170 mm

Hydraulic Filters

All hydraulic circuits have high-quality hydraulic filters for protection against of contamination and longer life of hydraulic components.

	Qty.	
Full flow filter	2	30 µm
Drain filter	1	10 µm
(For all plunger type pumps & motors)		
Suction filter	2	177 µm
Pilot filter	1	10 µm
Line filter (Delivery filter)	3	95 µm

These filters are centralized in arrangement for facilitating maintenance.

CONTROLS

2 Implement Levers

Remote-controlled joystick hydraulic servo system. Right lever is for boom and bucket control, left lever for swing and arm control. For loading shovel, 2 pedals provided for opening/closing the bottom dump bucket.

2 Travel Levers with Pedals

Remote-controlled hydraulic servo system. Independent drive at each track allows counter rotation of tracks.

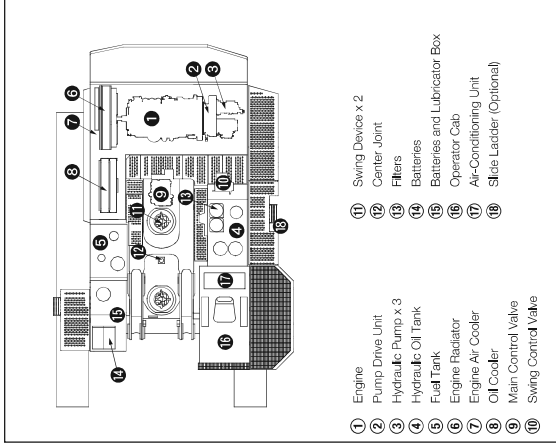
UPPERSTRUCTURE

Revolving Frame

A deep, full-reinforced box section. Heavy-gauge steel plates used for ruggedness.

Deck Machinery

Maintenance accessibility is the major feature in the lay-out of deck machinery. Stowwalks provide easy access to engine, hydraulic and electrical components.



Swing Device

2 high-torque, axial-piston motors with planetary reduction gear bathed in oil. Swing circle is single-row, shear-type ball bearing with induction-hardened internal gear. Internal gear and pinion gear immersed in lubricant. Swing parking brake is spring-set, hydraulically released disc type.

Swing speed 5.2 min⁻¹ (rpm)

Operator's Cab

The sturdy cab, with OPG top guard Level III(ISO), helps protect the operator from falling objects. Independent, pressurized, 1 100 mm wide, 1 900 mm high, roomy 3,46 m³ cab with tinted-glass windows features all-round visibility. Springs-suspension-type, fully-adjustable reclining seat with armrests; movable with or without front and swing control levers by slide. Instruments and control panel are within easy reach of the operator. Powerful fresh air ventilation type air conditioner. Cool-and-hot box and rotatable blower buffers also serve as defrosters. Thus, rapid air-conditioning can be achieved for operator comfort. Fluid-filled elastic-mounting and sound-proofing structure to reduce noise level and vibration.

Noise level..... 75 dB(A) in the cab; on max. engine speed under no-load condition.

Eye level height Backhoe..... 3 650 mm
Loading Shovel 4 730 mm

UNDERCARRIAGE

Tracks

Tractor-type undercarriage. Bolt linkage for side frame assures durability. Heavy-duty track frame of all-welded, stress-relieved structure. Top-grade materials used for toughness. Lifetime-lubricated induction-hardened track rollers, idlers and sprockets with floating seals. Track shoes of rolled alloy with double grousers. Durable strut reinforced track links with track guards. Hydraulic (grease) track adjusters with shock absorbing recoil springs.

Tractor-type Undercarriage

Double grouser track shoes of induction-hardened rolled alloy. Shoe width 700 mm standard
900 mm optional for Backhoe attachment only

Numbers of Rollers and Shoes on Each Side

Upper rollers 3
Lower rollers 8
Track shoes 49

Travel Device

Each track driven by a high-torque, axial piston motor, through planetary reduction gears, allowing counter rotation of the tracks. Easily replaceable sprockets. Parking brake of spring-set, hydraulic-released disc type.

Travel speeds High : 0 to 3.5 km/h
Low : 0 to 2.4 km/h
Maximum traction force 707 kN (72 100 kgf)
Gradeability 70 % (35 degree) max.

WEIGHTS AND GROUND PRESSURE

Backhoe

EX1200-6: Equipped with 9.0 m boom, 3.6 m arm, and 5.2 m³ (SAE, PCSA heaped) bucket

Shoe type	Shoe width	Operating weight	Ground pressure
Double grousers	700 mm	111 000 kg	142 kPa (1.45 kgf/cm ²)
	900 mm	113 000 kg	112 kPa (1.14 kgf/cm ²)

EX1200-6 BE-front: Equipped with 7.55 m BE-boom, 3.4 m BE-arm, and 6.7 m³ (SAE, PCSA heaped) bucket

Shoe type	Shoe width	Operating weight	Ground pressure
Double grousers	700 mm	112 000 kg	143 kPa (1.46 kgf/cm ²)
	900 mm	114 000 kg	113 kPa (1.15 kgf/cm ²)

Loading Shovel

Equipped with 6.5 m³ (heaped) bottom dump bucket

Shoe type	Shoe width	Operating weight	Ground pressure
Double grousers	700 mm	114 000 kg	146 kPa (1.49 kgf/cm ²)

SERVICE REFILL CAPACITIES

Fuel tank	1 470 L
Engine coolant	139 L
Engine oil	70 L
Pump drive	15 L
Swing device (each side)	45 L
Travel final device (each side)	23 L
Hydraulic system	1 350 L
Hydraulic oil tank	610 L

SPECIFICATIONS

BACKHOE ATTACHMENTS

Boom and arm are all-welded, low-stress, full-box section design. Bucket or all-welded high-strength steel structure, size clearance adjust mechanism is provided on the bucket joint brackets.

- Two-points support-type boom cylinder pin linkage
- Double lip pin seals (in all portions) plus O-ring at arm top and link A
- Super-V bucket teeth

- Flexible pin at the arm top and link A for bucket linkage.

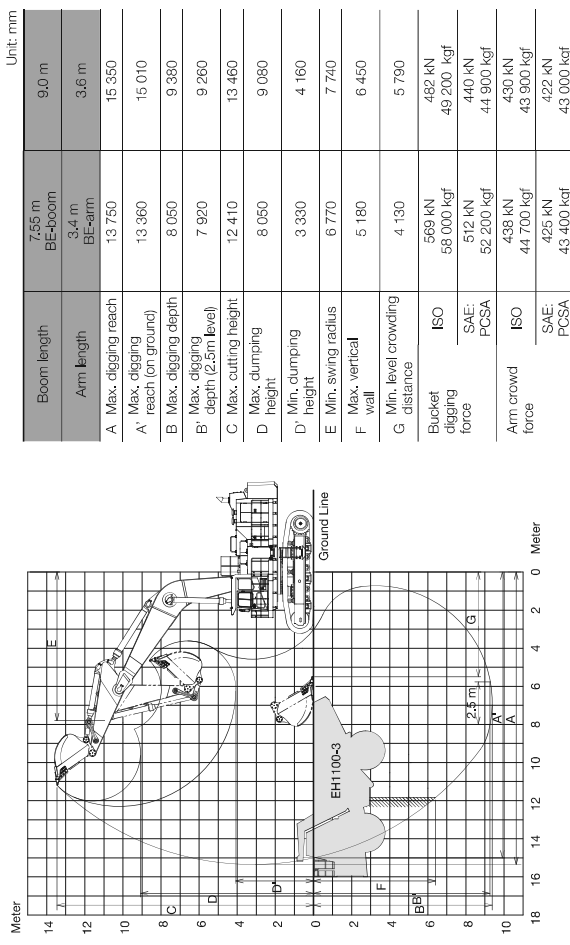
BE (Bulk Excavation) front

BE-front: The EX1200% BE-front, is designed and manufactured as a production-oriented machine. Its features include a short arm and boom, large-capacity bucket, large-digging force and superb digging / loading capability.

SAE	Capacity		Width		No. of teeth	Weight	Type	Materials density	
	CECE heaped	heaped	Without shroud	With shroud				BE-front	BE-boom
5.2 m ³	4.6 m ³	1 940 mm	2 120 mm	5	4 910 kg	⊙	—	—	1 800 kg/m ³ or less
5.2 m ³	4.6 m ³	1 900 mm	2 000 mm	5	5 930 kg	●	—	—	1 800 kg/m ³ or less
5.8 m ³	5.1 m ³	2 120 mm	2 220 mm	5	6 930 kg	●	—	—	1 800 kg/m ³ or less
6.7 m ³	5.9 m ³	2 300 mm	2 400 mm	5	6 650 kg	⊙	—	—	1 800 kg/m ³ or less

●: Rock bucket ⊙: General purpose bucket —: Not applicable

WORKING RANGES



LOADING SHOVEL ATTACHMENTS

Boom and arm are all-welded, low-stress, high-tensile strength steel full-box section design. Efficient, automatic level crowding achieved by one-lever control as the parallel link mechanism keeps the bucket digging angle constant, and level cylinder circuit maintains the bucket height constant (Auto-Leveling Crowd Mechanism).

- Dual-support-type boom/arm/bucket pin linkage
- Double lip pin seals plus O-ring at arm top

Bucket

Capacity (heaped)	Width	No. of teeth	Weight	Type	Materials density
5.9 m ³	2 510 mm	6	10 000 kg	●	1 800 kg/m ³ or less
6.5 m ³	2 700 mm	6	9 390 kg	⊙	1 800 kg/m ³ or less

●: Bottom dump type rock bucket

⊙: Bottom dump type general purpose bucket

WORKING RANGES

