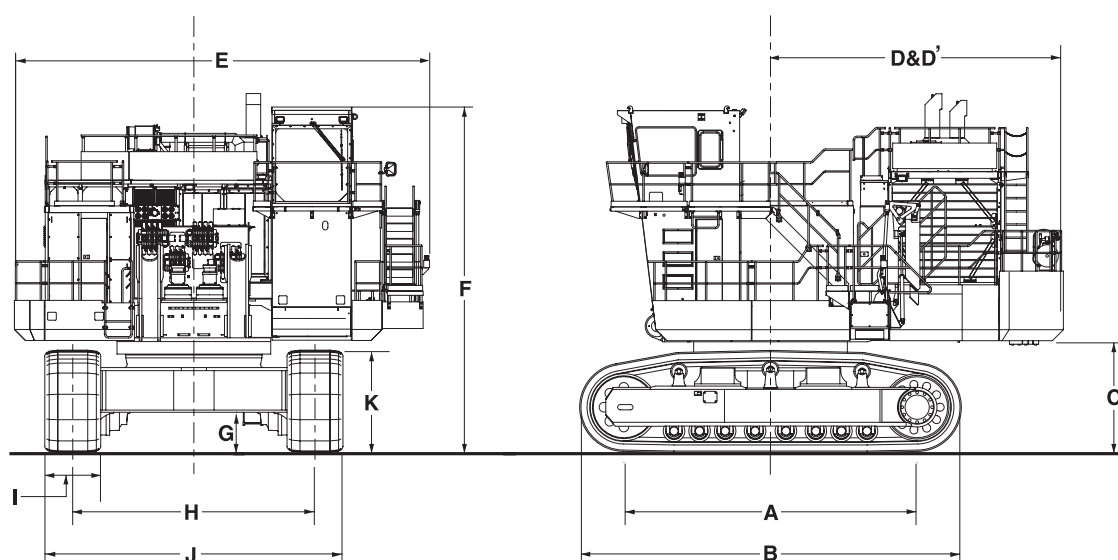


EX3600

Specifications



A	Distance between tumblers	6 660 mm
B	Undercarriage length	8 700 mm
C	Counterweight clearance	2 440 mm
D	Rear-end swing radius	6 780 mm
D'	Rear-end length	6 650 mm
E	Overall width of upperstructure	9 420 mm
F	Overall height of cab	7 830 mm
G	Minimum ground clearance	905 mm
H	Track gauge	5 500 mm
I	Track shoe width	1 270 mm
J	Undercarriage width	6 770 mm
K	Track height	2 305 mm

HYDRAULIC EXCAVATOR

■ **Engine Gross Power** : 1 450 kW (1 944 HP)

■ **Operating Weight** : EX3600-6

Loading Shovel : 361 000 kg

Backhoe: 359 000 kg

■ **Loading Shovel Bucket** : PCSA Heaped : 21.0 m³
23.0 m³

■ **Backhoe Bucket** : PCSA Heaped : 22.0 m³
CECE Heaped : 19.2 m³

SPECIFICATIONS

EX3600-6

ENGINE

Model	Cummins QSKTA60-CE
Type	Water-cooled, 4-cycle, 16-cylinder, turbo-charged and after-cooled, direct injection chamber-type diesel engine
Rated power	
DIN 6271, net1	1 450 kW (1 968 PS) at 1 800 min ⁻¹ (rpm)
SAE J1349, net	1 450 kW (1 944 HP) at 1 800 min ⁻¹ (rpm)
SAE J1995, gross	1 450 kW (1 944 HP) at 1 800 min ⁻¹ (rpm)
Maximum torque	8 346 N·m at 1 500 min ⁻¹ (rpm)
Piston displacement	60.0 L
Bore and stroke	159 mm x 190 mm
Starting system	24 V electric motor
Batteries	4 x 12 V , 4 x 220 AH
Cold starting	Ether aided

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.
- OHS (Optimum Hydraulic System)
8 main pumps and 4 valves system enable both independent and combined operations of all functions.
- FPS (Fuel-saving Pump System)
FPS minimizes energy loss with superior performance in fine control.
- Auto-idling system for saving fuel and reducing noise
- Hydraulic drive cooling-fan system for oil cooler and radiator.
- Forced-lubrication and forced-cooling pump drive system

Main pumps	8 variable-displacement, axial piston pumps for front attachment, travel and swing
Pressure setting	29.4 MPa (300 kgf/cm ²)
Max.oil flow	8 x 500 L/min
Pilot pump	1 gear pump
Pressure setting	4.4 MPa (45 kgf/cm ²)
Max.oil flow	110 L/min

Relief Valve Settings

Implement circuit	29.4 MPa (300kgf/cm ²)
Swing circuit	29.4 MPa (300kgf/cm ²)
Travel circuit	29.4 MPa (300kgf/cm ²)
Pilot circuit	4.4 MPa (45kgf/cm ²)

Hydraulic Cylinders

High-strength piston rods and tubes. Cylinder cushion mechanisms are provided for boom, arm, bucket and dump cylinders. Bucket cylinder of loading shovel is provided with prptector.

Cylinder Dimensions

Loading shovel

	Quan.	Bore	Rod diameter
Boom	2	360 mm	260 mm
Arm	1	300 mm	220 mm
Bucket	2	280 mm	200 mm
Dump	2	225 mm	130 mm
Level	1	360 mm	260 mm

Backhoe

	Quan.	Bore	Rod diameter
Boom	2	360 mm	260 mm
Arm	2	300 mm	220 mm
Bucket	2	250 mm	180 mm

Hydraulic Filters

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

	Qty.	
Full flow filter	5	10 mm
High pressure strainer (In main & swing pump delivery line)	8	80 meshes
Drain filter (For all plunger type pumps & motors)	1	10 mm
By-pass filter (In oil cooler by-pass line)	1	5 mm
Pilot filter	1	10 mm

These filters are centralized in arrangement for facilitating maintenance.

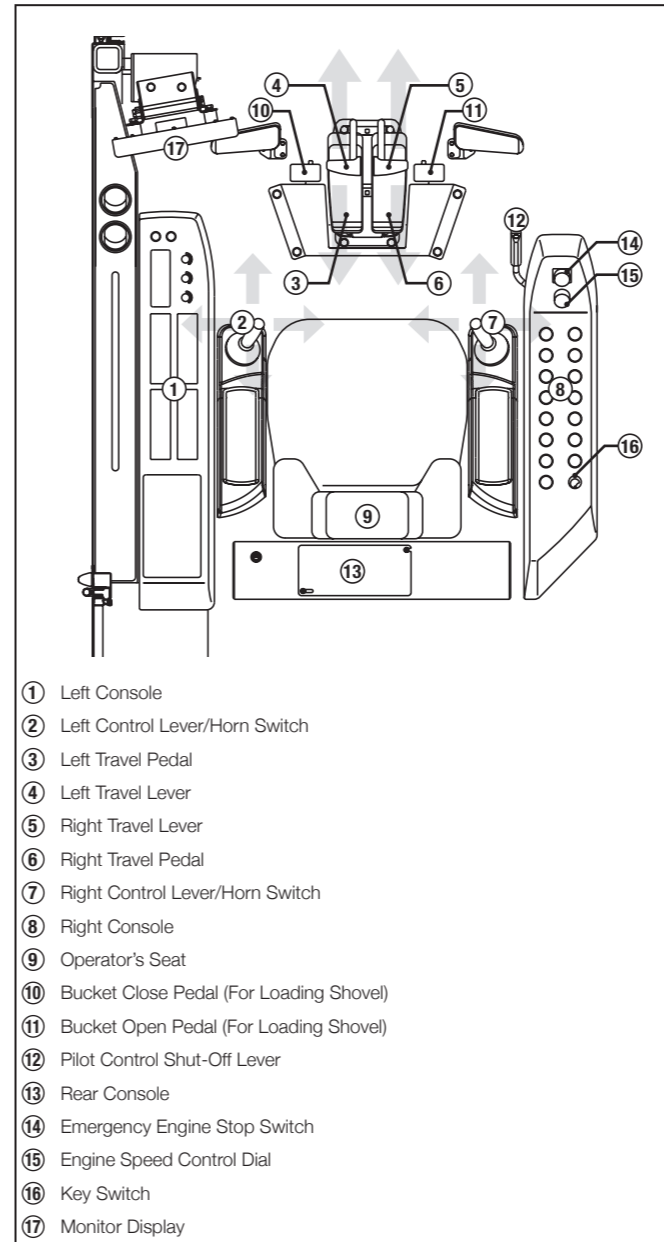
CONTROLS

2 Implement Levers

Electric joystick control levers. right lever is for boom and bucket control, left lever for swing and arm control. 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.



- ① Left Console
- ② Left Control Lever/Horn Switch
- ③ Left Travel Pedal
- ④ Left Travel Lever
- ⑤ Right Travel Lever
- ⑥ Right Travel Pedal
- ⑦ Right Control Lever/Horn Switch
- ⑧ Right Console
- ⑨ Operator's Seat
- ⑩ Bucket Close Pedal (For Loading Shovel)
- ⑪ Bucket Open Pedal (For Loading Shovel)
- ⑫ Pilot Control Shut-Off Lever
- ⑬ Rear Console
- ⑭ Emergency Engine Stop Switch
- ⑮ Engine Speed Control Dial
- ⑯ Key Switch
- ⑰ Monitor Display

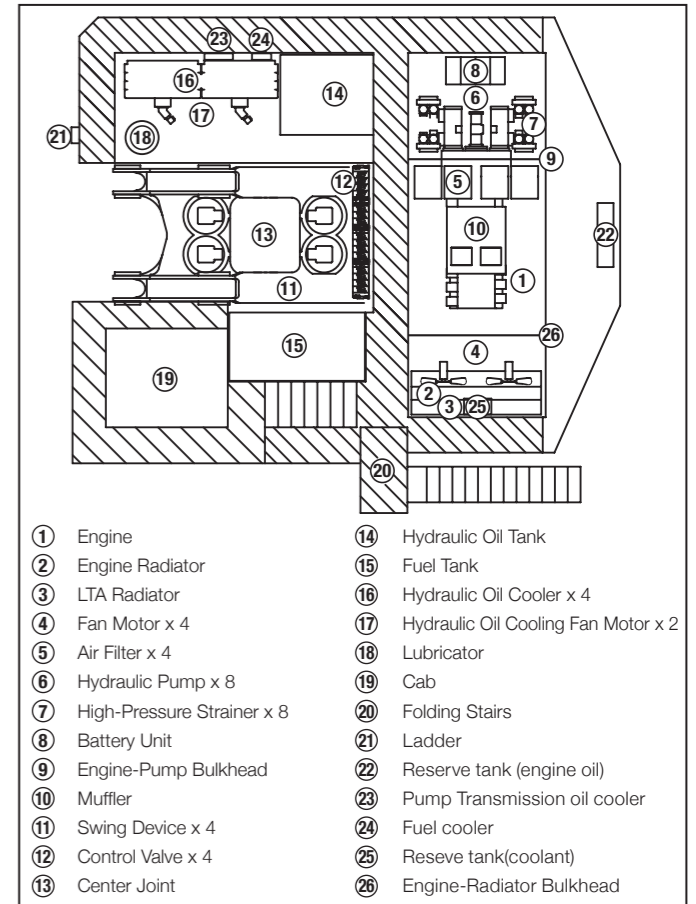
UPPERSTRUCTURE

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. Sidewalks provides easy access to engines, hydraulic and electrical components. ISO-met stairs and handrails. Sidewalks and stairs are provided with skid-resistant plates.



- ① Engine
- ② Engine Radiator
- ③ LTA Radiator
- ④ Fan Motor x 4
- ⑤ Air Filter x 4
- ⑥ Hydraulic Pump x 8
- ⑦ High-Pressure Strainer x 8
- ⑧ Battery Unit
- ⑨ Engine-Pump Bulkhead
- ⑩ Muffler
- ⑪ Swing Device x 4
- ⑫ Control Valve x 4
- ⑬ Center Joint
- ⑭ Hydraulic Oil Tank
- ⑮ Fuel Tank
- ⑯ Hydraulic Oil Cooler x 4
- ⑰ Hydraulic Oil Cooling Fan Motor x 2
- ⑱ Lubricator
- ⑲ Cab
- ⑳ Folding Stairs
- ㉑ Ladder
- ㉒ Reserve tank (engine oil)
- ㉓ Pump Transmission oil cooler
- ㉔ Fuel cooler
- ㉕ Reseve tank(coolant)
- ㉖ Engine-Radiator Bulkhead

Swing Device

4 high-torque, axial-piston motors with two-stage planetary gear bathed in oil. Swing circle with dirt seals is a heavy-duty, triple-row, cylindrical roller bearing. Induction-hardened internal swing circle gear and pinion immersed in lubricant. Parking brake of spring-set/hydraulic-released disc type. This parking brake is manually releasable.

Swing speed 3.2 min⁻¹ (rpm)

Operator's Cab

The sturdy cab, with the top guard conforming to OPG Level II (ISO), helps protect the operator from falling objects. Independent, pressurized, 1 800 mm wide, 2 150 mm high, roomy 7.5 m³ cab with tinted-glass windows features all-round visibility. Air-suspension type, fully adjustable reclining seat with armrests; movable with or without front & swing control levers by slide. Instrument and control panel are built in cab wall is in easy range of the operator. 3 airconditioner system.

Noise level 76 dB(A) in the cab; on max. engine speed under no-load

Eye level height 6 760 mm

SPECIFICATIONS

UNDERCARRIAGE

Tracks

Shovel-type undercarriage. Dual-flanged-type bolt linkage for side frame and X-form center 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 drive tumblers with floating seals. Specially heat-treated connection pins. Hydraulic track adjuster provided with N₂ gas accumulator and relief valve. Track adjuster provided with protection device against abnormal tension. Travel motion alarm device.

Shovel-type Undercarriage

Triple grouser shoes of induction-hardened cast steel.
Shoe width 1 270 mm

Numbers of Rollers and Shoes on Each Side

Upper rollers 3
Lower rollers 8
Track shoes 38

Travel Device

Each track driven by high-torque, axial piston motors, allowing counter rotation of tracks. 2-stage planetary gear plus spur gears reduction device. Dual-support-type traction device. Parking brake of spring-set/hydraulic-released disc type. This parking brake is manually releasable.

Travel speeds High : 0 to 2.2 km/h
Low : 0 to 1.7 km/h

Maximum traction force 1 760 kN (179 500 kgf)
Gradeability 60 % (30 degree) max.

WEIGHTS AND GROUND PRESSURE

Loading Shovel

Equipped with 21.0 m³ (PCSA heaped) bottom dump bucket

Shoe	Shoe Width	Operating weight	Ground pressure
Triple grousers	1 270 mm	361 000 kg	189 kPa (1.93 kgf/cm ²)

Backhoe

Equipped with 9.6 m BE-boom, 4.5 m BE-arm and 22.0 m³ (PCSA heaped) bucket

Shoe type	Shoe Width	Operating weight	Ground pressure
Triple grousers	1 270 mm	359 000 kg	188 kPa (1.92 kgf/cm ²)

SERVICE REFILL CAPACITIES

	liters
Fuel tank	7 450
Engine coolant	614
Engine oil	Engine oil pan 261
	Reserve tank 284
Pump transmission device	52
Swing device	4 x 75
Travel device	2 x 220
Hydraulic system	4 000
Hydraulic oil tank	1 900

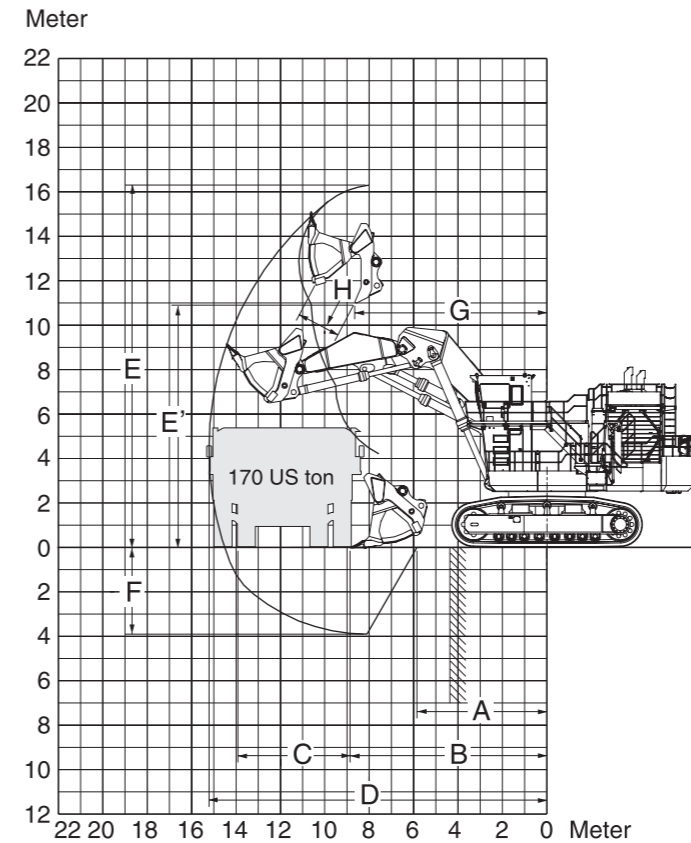
LOADING SHOVEL ATTACHMENTS

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

Bucket (PCSA heaped 2:1 angle of repose)

Capacity	Width	No. of teeth	Weight	Type	Material density
21.0 m ³	4 160 mm	6	26 900 kg	◎	1 800 kg/m ³
23.0 m ³	4 160 mm	6	27 300 kg	◎	1 600 kg/m ³

WORKING RANGES



Unit: mm

Bucket Capacity (PCSA 2:1)	21.0 m ³
A Min. digging distance	5 850
B Min. level crowding distance	8 870
C Level crowding distance	5 050
D Max. digging reach	15 220
E Max. cutting height	16 300
E' Max. dumping height	10 990
F Max. digging depth	3 910
G Working radius at max. dumping height	8 650
H Max. bucket opening width	1 950
Arm crowding force (SAE)	1 200 kN (122 000 kgf)
Breakout force (SAE)	1 130 kN (115 000 kgf)

SPECIFICATIONS

BACKHOE ATTACHMENTS

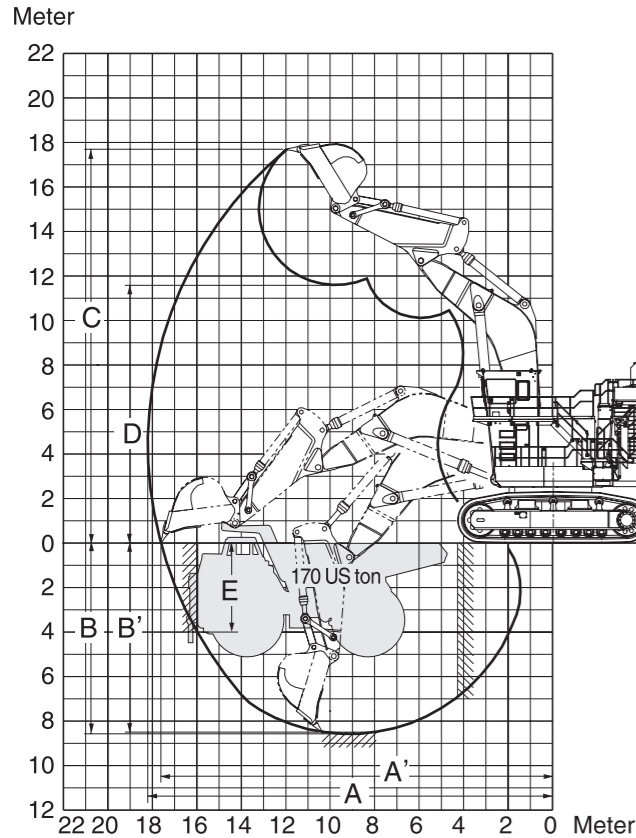
Boom and arm are of all-welded, low-stress, full-box section design.
Bucket of all-welded, high-strength steel structure.

Bucket

Capacity		Width		No. of teeth	Weight	Type	Materials density
PCSA heaped	CECE heaped	Without side cutters	With side cutters				
22.0 m ³	19.2 m ³	3 790 mm	-	6	18 400 kg	⊙	1 800 kg/m ³

⊙ : General purpose bucket

WORKING RANGES



Unit: mm

BE-boom length		9.6 m
BE-arm length		4.5 m
Bucket Capacity (PSCA 1:1)		22.0 m ³
A Max. digging reach		18 190
A' Max. digging reach (on ground)		17 600
B Max. digging depth		8 580
B' Max. digging depth (8' level)		8 490
C Max. cutting height		17 690
D Max. dumping height		11 590
E Max. vertical wall		4 060
Bucket digging force	ISO	1 050 kN (107 000 kgf)
	SAE: PCSA	932 kN (95 000 kgf)
Arm crowd force	ISO	951 kN (97 000 kgf)
	SAE: PCSA	922 kN (94 000 kgf)

EQUIPMENT

STANDARD EQUIPMENT

Standard equipment may vary by country, so please consult your Hitachi dealer for details.

ENGINE

- 140 A alternator
- Heavy-duty type air cleaner with dust ejector
- Cartridge-type engine oil filter
- Cartridge-type engine oil bypass filter
- Cartridge-type fuel filter
- Fan guard
- Isolation-mounted engine
- Auto-idle system
- Emergency engine stop system
- Hydraulic drive cooling-fan system

HYDRAULIC SYSTEM

- E-P control system
- OHS (Optimum Hydraulic System)
- FPS (Fuel-saving Pump System)
- Hydraulic drive cooling-fan system
- Forced-lubrication and forced cooling pump drive system
- Control valve with main relief valve
- Suction filter
- Full-flow filter
- Bypass filter
- Pilot filter
- Drain filter
- High-pressure strainer

CAB

The sturdy cab, with the top guard conforming to OPG Level II (ISO), helps protect the operator from falling objects. Fluid-filled elastic mounts. Laminated glass windshield. Reinforced/tinted (bronze color) glass side and rear windows. Parallel-link-type intermittent windshield wiper. Front windshield washer. Adjustable reclining seat with air suspension. Footrest. Air horn with electric compressor. Auto-tuning AM-FM radio with digital clock. Seat belt. Storage spaces. Floor mat. Air conditioner with defroster. Rearview mirror. Evacuation hammer. Emergency escape device. Trainer's seat. Pilot control shut-off lever.

MONITOR SYSTEMS

- Meters:
 - Hourmeter. Fuel gauge. Hydraulic oil temperature gauge. Engine coolant temperature gauge. Tachometer. Engine oil pressure gauge. Engine oil temperature gauge.
 - Battery voltage gauge. Ambient temperature.
- Pilot lamps (Green):
 - Prelub. Auto-Idle. Travel Mode.

- Warning lamps (Red):
 - Allternator. Engine stop. Coolant overheat. Hydraulic oil level. Auto-Lubrication. Fast-filling. Tension. Electric lever. Emergency engine stop. Top valve. Engine over run. Coolant level. Engine oil pressure. Pump transmission oil level indicator.

- Warning lamp (Yellow):
 - Exhaust temperature. Fuel temperature. Engine warning. Hydraulic oil overheat. Stairway position. Electrical equipment box. Pump contamination. Air cleaner restriction.

- Alarm buzzers:
 - Overheat. Engine coolant pressure. Engine coolant level. Fuel temperature. Engine oil pressure. Engine oil temperature. Air intake manifold temperature. Crank case pressure. Pump transmission oil level. Hydraulic oil level. Stop valve close. Fast-fill system panel position (option) Ladder position. Electric lever fault.

DATA LOGGING SYSTEM

- DLU (Data-logging unit) continuously records performance of the engine and the hydraulic system. The record can be downloaded by PC and PDA.

LIGHTS

- 9 working lights. 2 entrance lights. 7 maintenance lights. 2 cab lights.

UPPERSTRUCTURE

- Lockable machine covers
- 40 200 kg counterweight
- Hydraulic drive grease gun with hose reel
- Folding stairs with wide steps
- Swing parking brake

UNDERCARRIAGE

- Travel parking brake
- Travel motion alarm device
- Hydraulic track adjuster with N₂ gasaccumulator and relief valve
- 1 270 mm triple grouser shoes

MISCELLANEOUS

- Standard tool kit
- Stairs and handrails (Meeting ISO)
- Recirculation air filter for air conditioner
- Ventilation air filter for air conditioner
- 12 V power terminal board
- Stop valve for transport and reassembly
- Auto-lubrication system (Lincoln) for front-attachment pins, swing bearing, and center joint

OPTIONAL EQUIPMENT

Optional equipment may vary by country, so please consult your Hitachi dealer for details.

- Wiggins couplers
- High brightness working lights.
- Back and right side color monitor camera.

- Satellite data transmitting system.
- Travel motor guard.
- Travel device guard.
- Electric oil pump to draw hydraulic oil from suction and return pipe lines.

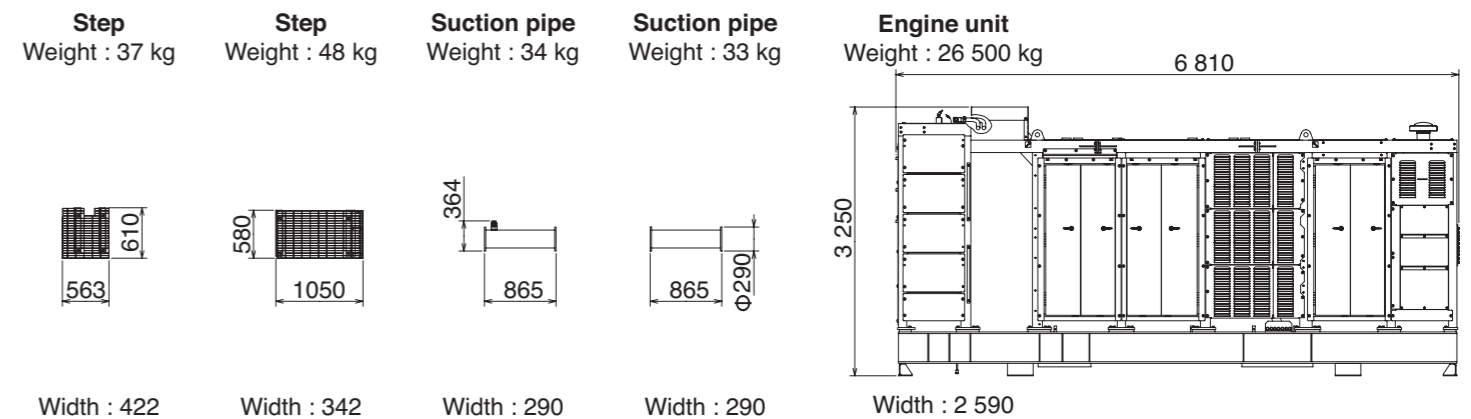
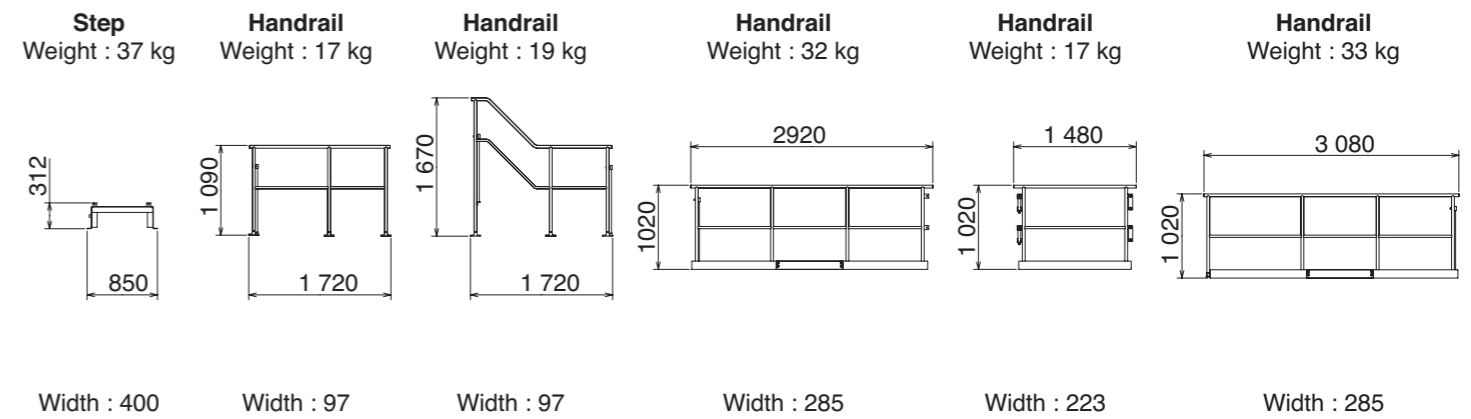
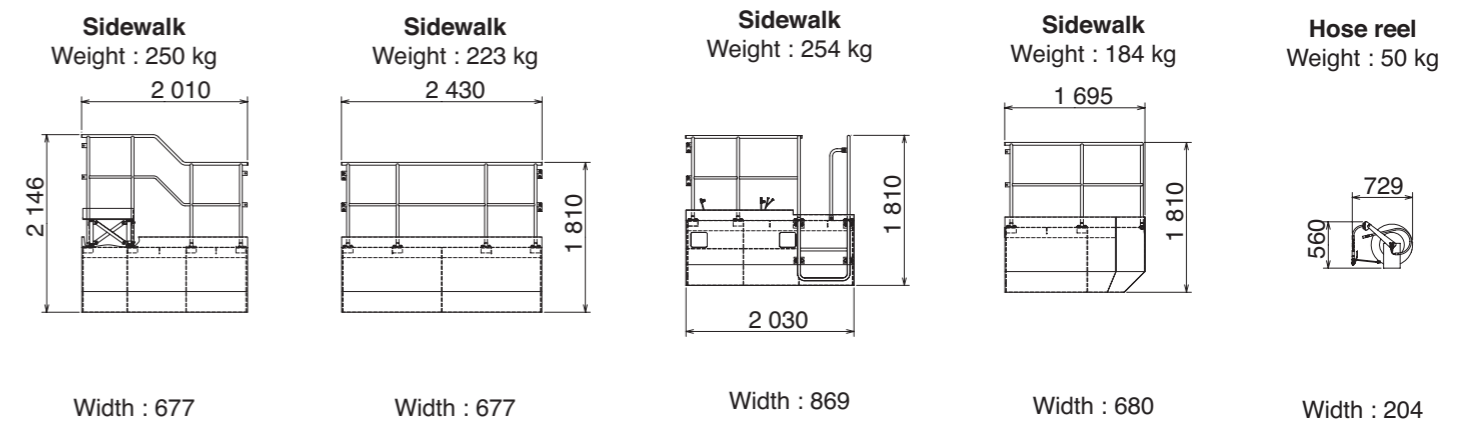
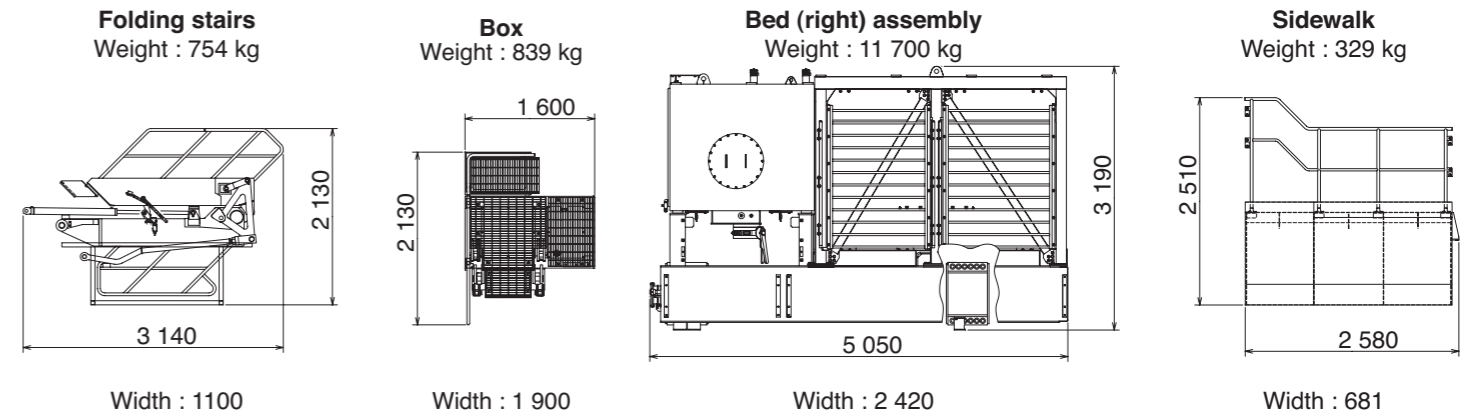
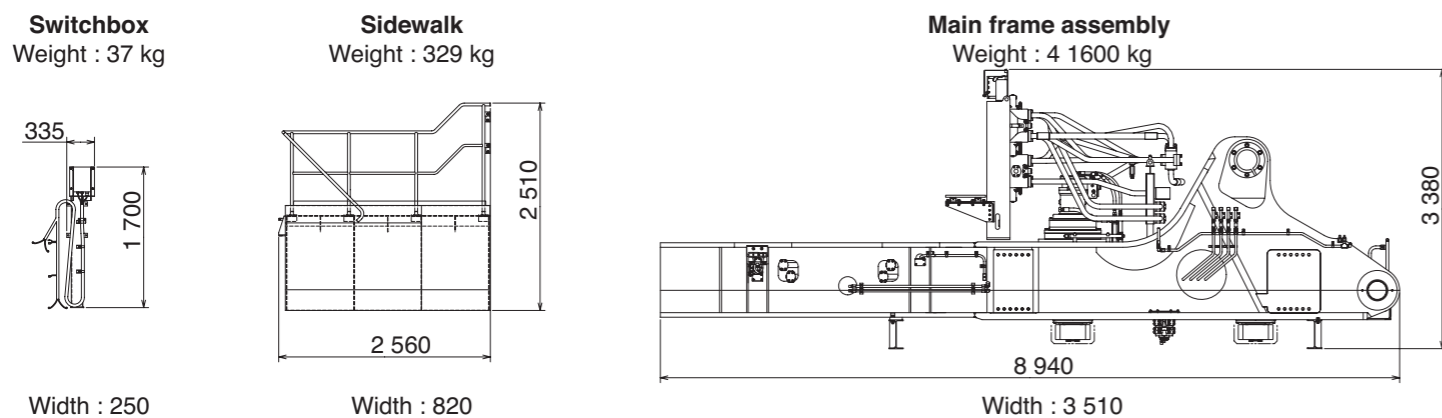
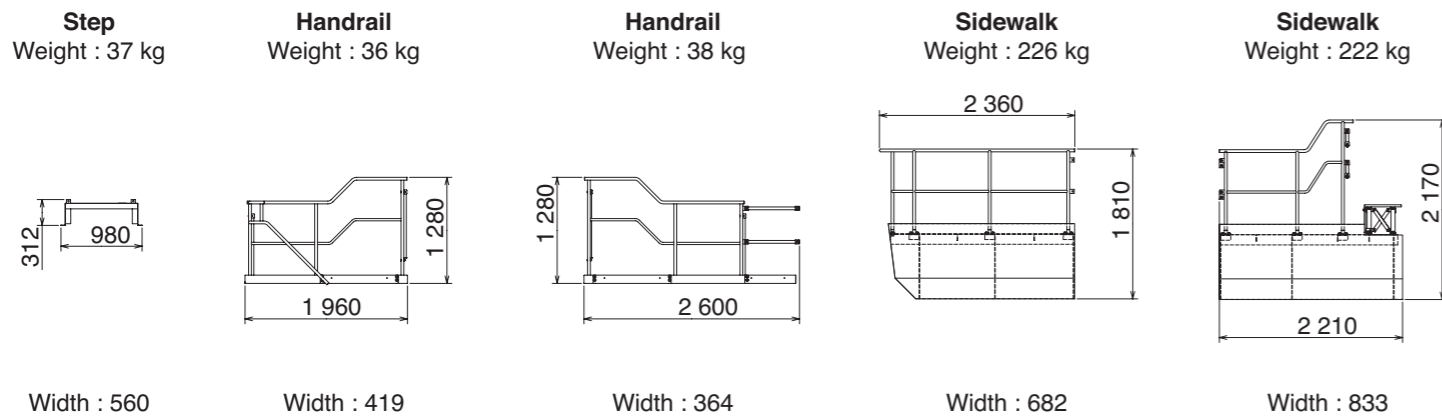
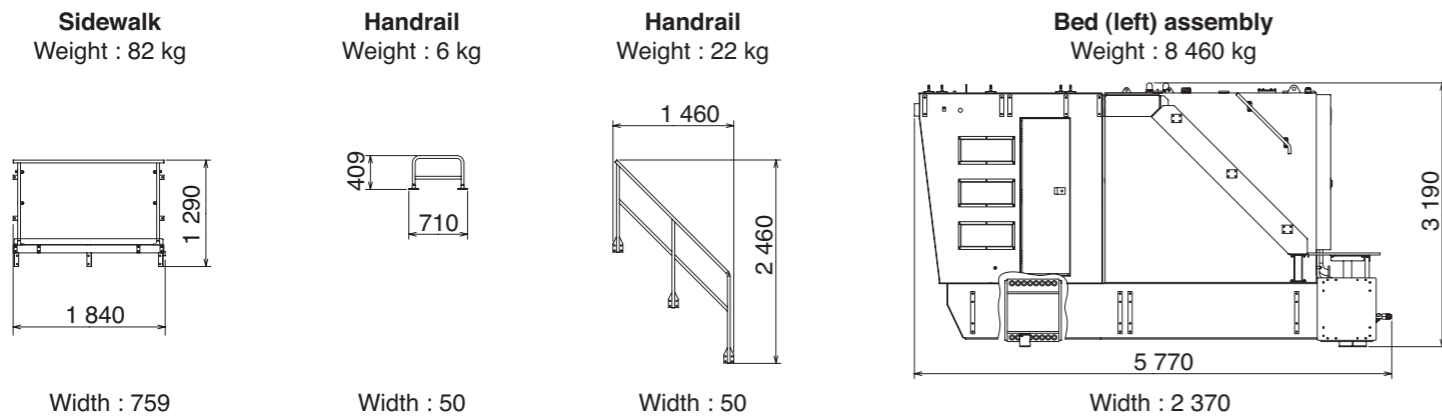
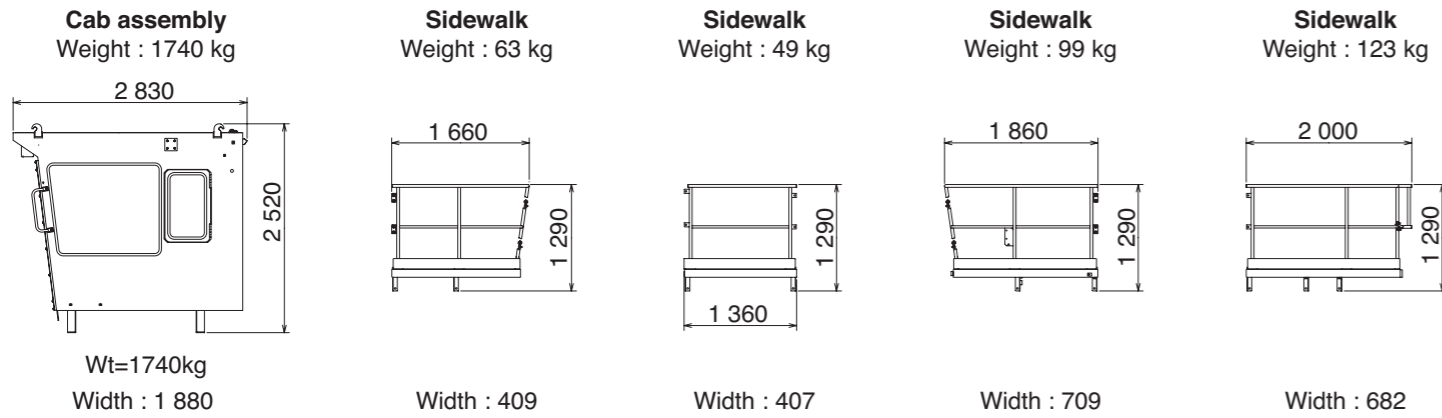
TRANSPORTATION

- Easily assembled owing to local assembling system requiring no welding.
- Overall width of below 3 500 mm during transportation

Unit: mm

UPPERSTRUCTURE

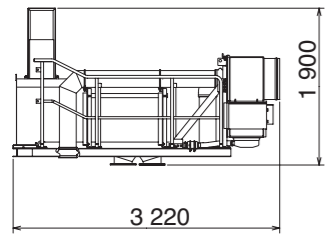
Unit: mm



TRANSPORTATION

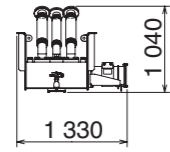
Unit: mm

Air cleaner and muffler
Weight : 1 310 kg



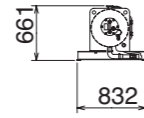
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Suction manifold
Weight : 422 kg



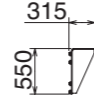
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Reserve tank (coolant)
Weight : 118 kg



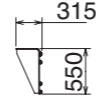
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Bracket
Weight : 13 kg



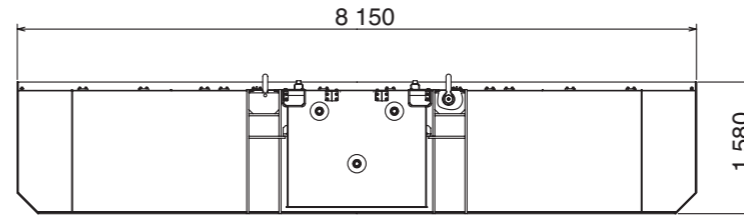
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Bracket
Weight : 13 kg



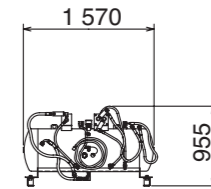
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Counterweight
Weight : 40200 kg



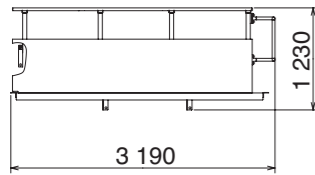
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Reserve tank (engine oil)
Weight : 155 kg



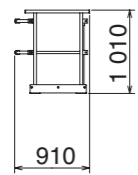
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Sidewalk
Weight : 176 kg



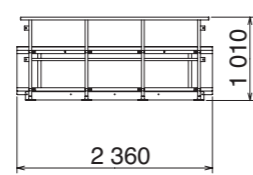
Width : 866

Handrail
Weight : 15 kg



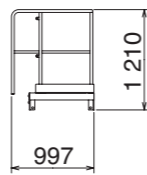
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Handrail
Weight : 60 kg



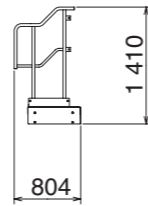
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Sidewalk
Weight : 71 kg



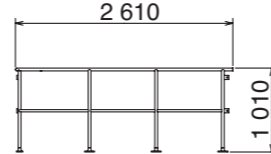
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Sidewalk
Weight : 54 kg



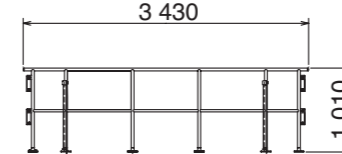
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Handrail
Weight : 23 kg



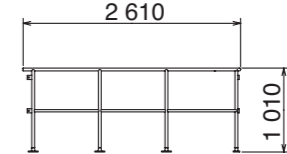
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Handrail
Weight : 39 kg



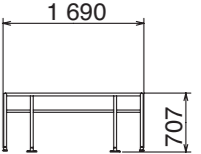
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Handrail
Weight : 23 kg



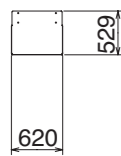
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Handrail
Weight : 16 kg



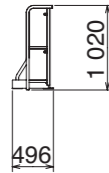
Width : 316

Cover
Weight : 10 kg



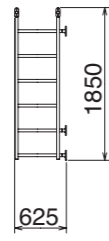
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Handrail
Weight : 16 kg



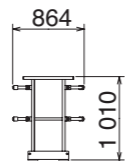
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Handrail
Weight : 20 kg



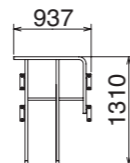
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Handrail
Weight : 15 kg



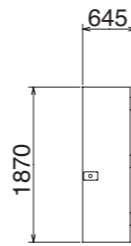
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Handrail
Weight : 16 kg



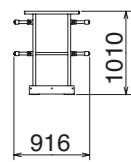
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Door
Weight : 36 kg



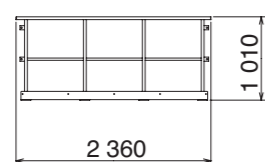
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Handrail
Weight : 15 kg



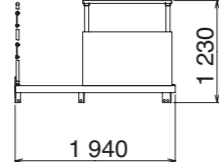
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Handrail
Weight : 30 kg



Width : 55

Sidewalk
Weight : 107 kg



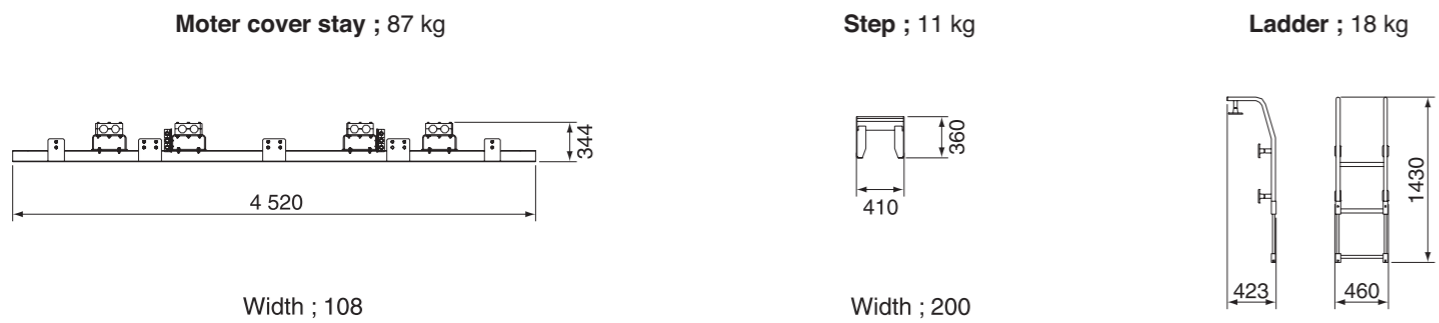
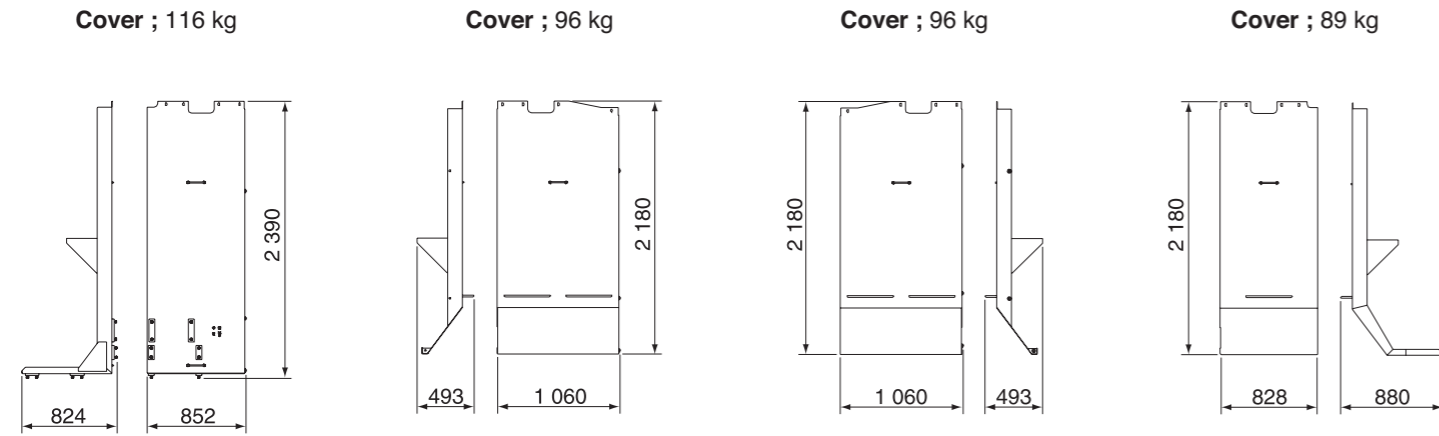
Width : 646

Unit: mm

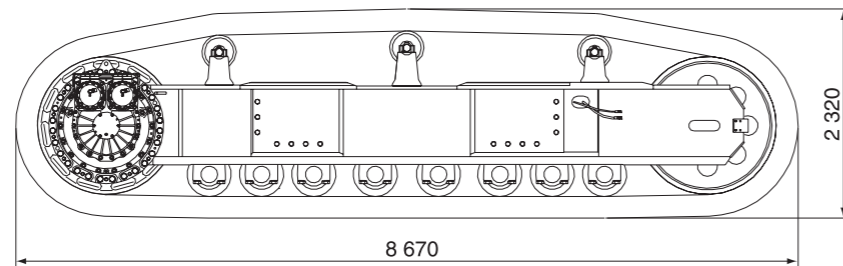
TRANSPORTATION

UNDERCARRIAGE

Unit: mm

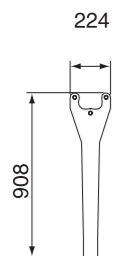


Track side frame assembly ; 46 900 kg x 2



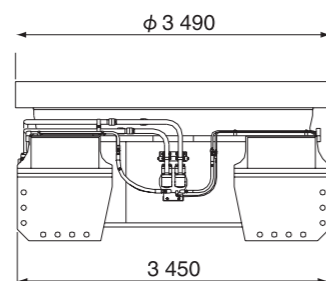
Width ; 2 430

Stopper ; 18 kg



Width ; 25

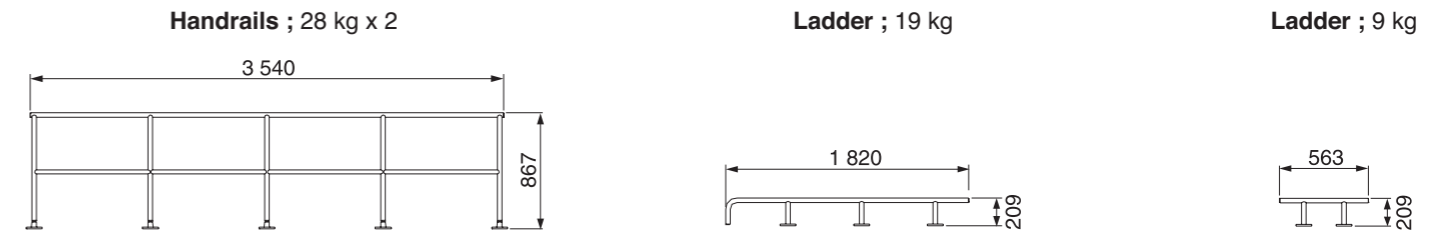
Track center frame assembly ; 31 500 kg



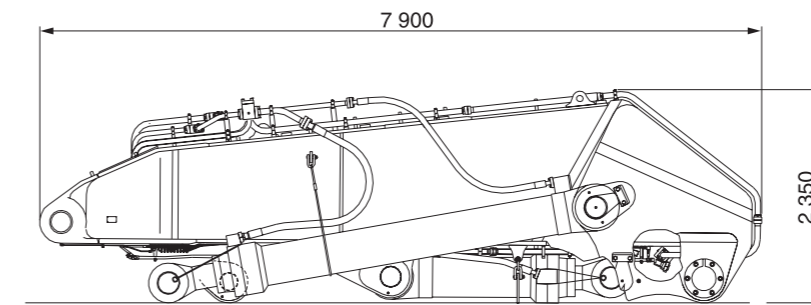
Width ; 5 530

LOADER ATTACHMENT

Unit: mm

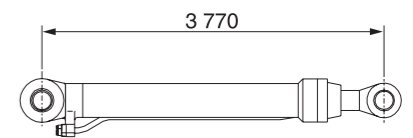


Boom assembly ; 35 800 kg

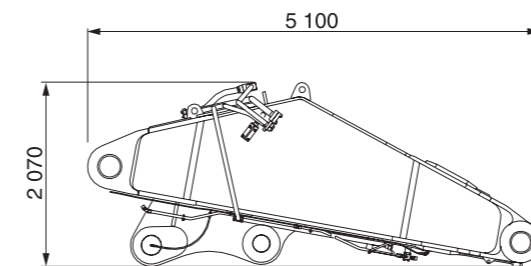


Width ; 2 570

Arm cylinder ; 2 720 kg

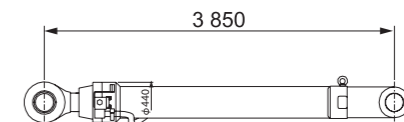


Arm assembly ; 13 200 kg

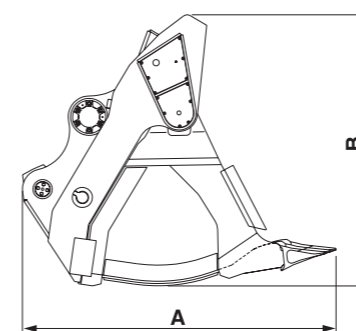


Width ; 2 900

Bucket cylinders ; 2 420 kg x 2



Bucket assembly with bucket points



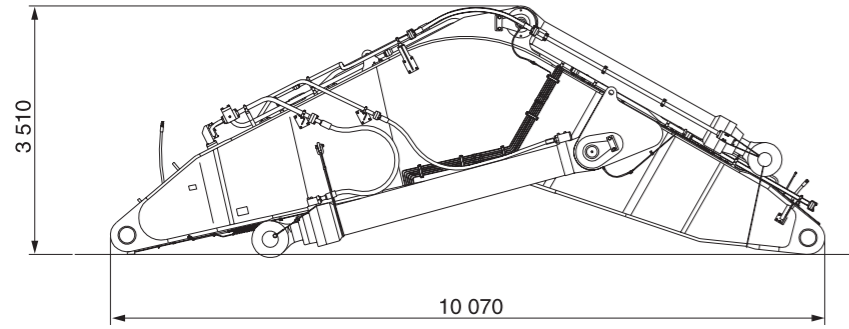
Capacity	A	B	Width	Weight
21.0 m ³	3 890 mm	3 570 mm	4 160 mm	26 900 kg
23.0 m ³	4 190 mm	3 600 mm	4 160 mm	27 300 kg

TRANSPORTATION

BACKHOE ATTACHMENT

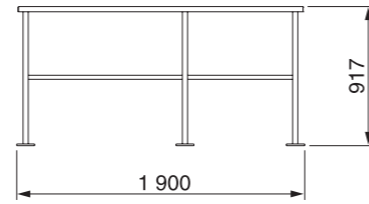
Unit: mm

Boom assembly ; 40 700 kg



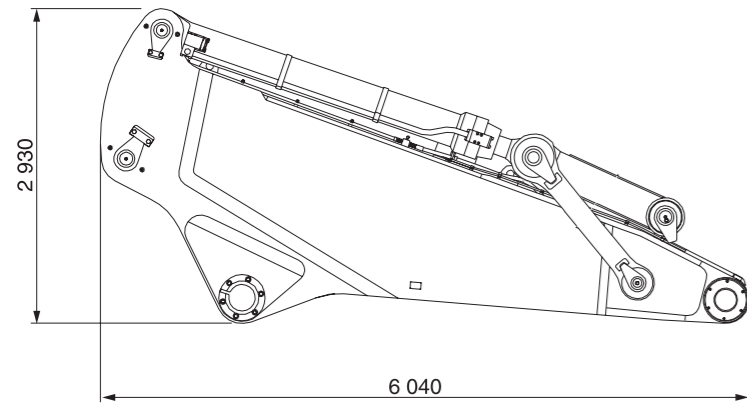
Width ; 2 540

Handrails ; 16 kg x 2



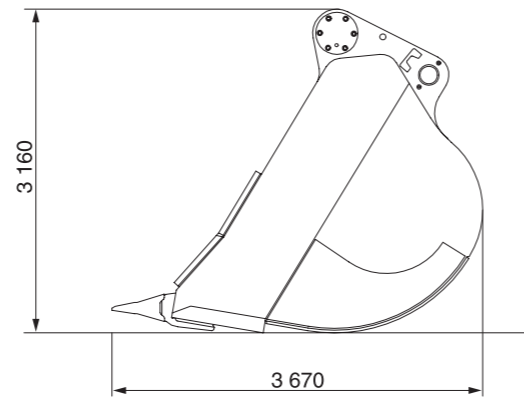
Width ; 50

Arm assembly ; 24 000 kg



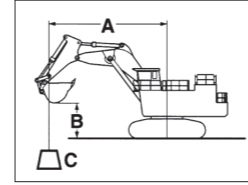
Width ; 2 110

**Bucket assembly ; 18 400 kg
Capacity ; 22.0 m³ (PCSA heaped)**



Width ; 3 790

LIFTING CAPACITIES



A: Load radius
B: Load point height
C: Lifting capacity

METRIC MEASURE

⊕ Rating over-side or 360 degrees ⊕ Rating over-front Unit: 1 000 kg

Conditions	Load point height	Load radius												At max. reach		
		8 m		10 m		12 m		14 m		15 m		16m		⊕	⊕	m
		⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕				
EX3600 _s Boom BE-boom 9.6 m Arm BE-arm 4.5 m Bucket PCSA 22.0 m ³ CECE 19.2 m ³	13 m					*29.5	*29.5							*15.4	*15.4	15.8
	12 m					*31.0	*31.0							*14.9	*14.9	16.3
	10 m					*29.8	*29.8	*28.0	*28.0					*14.4	*14.4	17.1
	8 m					*31.4	*31.4	*31.9	*31.9	*27.2	*27.2			*14.5	*14.5	17.6
	6 m			*44.4	*44.4	*39.5	*39.5	*36.5	*36.5	*32.8	*32.8			*15.0	*15.0	17.7
	4 m			*79.6	*79.6	*59.0	*59.0	*43.7	*44.3	37.7	*38.1	*26.5	*26.5	*16.1	*16.1	17.5
	2 m			76.6	80.8	55.6	*62.1	41.6	*48.9	36.1	*43.3	*27.6	*27.6	*17.8	*17.8	17.1
	0 (Ground)			73.9	76.5	53.4	*59.5	40.1	*46.0	35.1	*39.6			*18.5	*18.5	16.3
	-2 m	*62.8	*62.8	*66.9	*66.9	52.5	*52.6	*39.0	*39.0	*30.8	*30.8					
	-4 m	*58.1	*58.1	*51.5	*51.5	*40.0	*40.0	*23.8								
-5 m	*45.1	*45.1	*41.0	*41.0	*30.3	*30.3										

These specifications are subject to change without notice.
Illustrations and photos show the standard models, and may or may not include optional equipment, accessories, and all standard equipment with some differences in color and features.
Before use, read and understand the Operator's Manual for proper operation.

