

115ZV-2

WHEEL LOADER

Direct-injection, turbocharged 345kW(463hp) engine

Operating weight 48ton, Bucket capacity 6.0-6.8m³

Strong and robust main structures

Tough and proven hydraulic components

Productive and dependable performance



Performance that new

Wheel loaders that deliver premium power...



Backed by more than 50 years of innovative experience...

Durability and reliability you can count on...



ver quits...



As the oldest on-going manufacturer of rubber tire wheel loaders in the world , KCM specializes in the design and manufacture of articulated wheel loaders.

You get a machine with a 50-year heritage of successful innovations.

The power and productivity that a KCM wheel loader brings to the job is a result of that experience.

KCM loaders are designed with durability to provide years of reliable service.

Backed by a distributor network of heavy equipment experts and dedicated support staff in the KCM parts and service organization, your investment in a KCM loader is an excellent choice that will pay dividends for years to come.

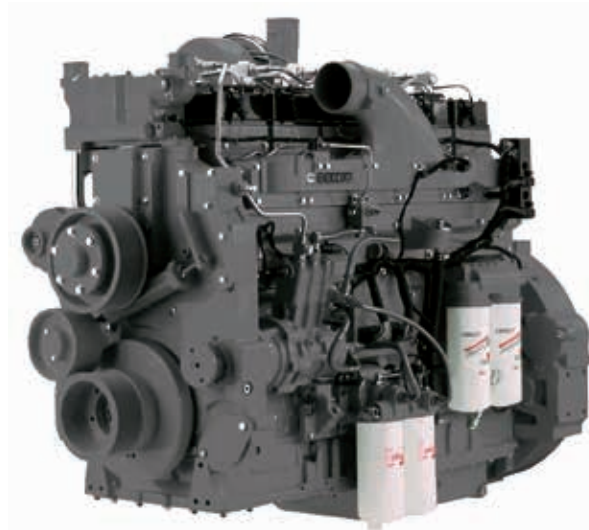
POWER AND PERFORMANCE PROVIDE UNMATCHED PRODUCTIVITY



COMPUTER CONTROLLED ENGINE

The Engine Control Module (ECM) allows the engine performance to be modified to fit the application requirements. It also provides a wide range of operating data and fault codes to assist in diagnostic and troubleshooting. Cummins provides diagnostic tools to allow technicians to quickly recover engine information for fast, accurate analysis.

Euro Stage IIIA and EPA Tier III emission standards are met by using proven technologies that keep the overall design simple and less costly to maintain.



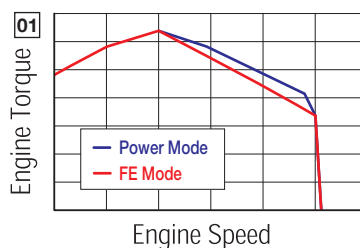
Use KCM recommended fuel to prevent engine from damage. Consult your local KCM distributor about KCM recommended fuel.

IMPROVED PERFORMANCE OF RIMPULL FORCE AND ACCELERATION

The powertrain has been designed for more efficient operation in a wide variety of applications. Improved torque characteristics and efficient match between the engine and torque converter provide outstanding performance.

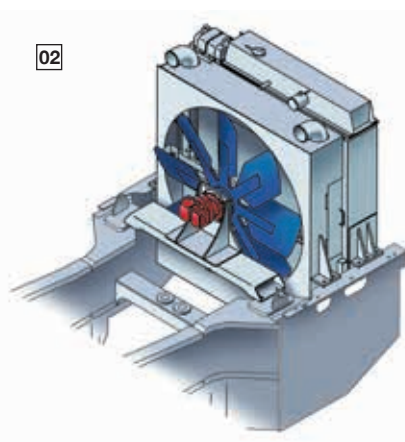
POWER/FUEL EFFICIENT MODE SELECTION ⁰¹

The engine mode switch allows the operator to select either the power mode for maximum power in extreme applications or the fuel efficient mode, for most applications, which provides better fuel economy.



ADVANCED HYDRAULIC COOLING FAN CONTROL FEATURES ⁰²

The hydraulically driven cooling fan's speed is controlled by the cooling system temperatures which reduces fan noise and improves fuel efficiency.



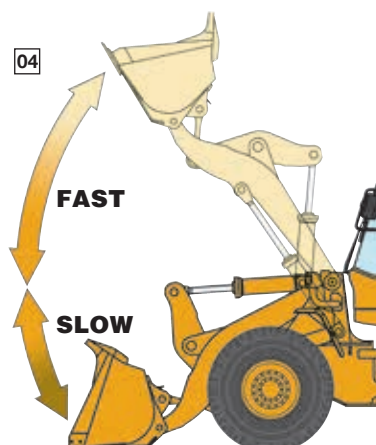
Z-LINK AND CENTER PIN ARTICULATION

As a pioneer of Z-linkage, KCM loaders provide outstanding breakout force from a simple, reliable linkage. KCM center pin design is rugged and durable, providing thousands of hours of trouble free operation.



LOAD SENSING HYDRAULIC SYSTEM FOR STEERING LINE

An energy efficient design of the hydraulic system provides for steering flow to supplement the main circuit once steering demand is met. This allows for full utilization of the pump capacity for efficient operation in all conditions.



IDLE MANAGEMENT SYSTEM

The idle management system allows for lower idle speed when idling for extended periods to conserve fuel. It also increases idle speed and reduces fan speed when the engine is cold to reduce warm up time, for better productivity.

LOCK UP TORQUE CONVERTER (OPT)

An optional lock-up clutch in the torque converter provides direct drive efficiency in the top speed ranges. This significantly improves fuel economy in long haul, load and carry applications and improves performance in hill climbing applications.

ACTIVE TRACTION CONTROL

Traction Control reduces wheel slippage by automatically dropping engine speed when conditions indicate wheel spin.

OUTBOARD WET DISC BRAKE ⁰³

Sealed wet disc brakes provide high capacity braking and protection from contamination. The dual brake system separates the front and rear axles for added safety.



ELS (Efficient Loading System) ⁰⁴

Increases rimpull power and slows bucket movement when digging while demanding less fuel.

Increases productivity and fuel efficiency.

Switch on instrument control panel allows operator to activate from cab.

DURABLE AND DEPENDABLE

LIFT ARMS/BUCKETS 01

With the strongest lift arms and linkage in the industry, KCM loaders perform well in a wide variety of applications.

High breakout force and excellent bucket rollback mean bigger loads and better load retention.

Buckets are designed for easy loading and are equipped with bolt-on cutting edges for easy changing.

The bucket leveler and boom kickout are standard.



SEALED BUCKET HINGE PINS 02

The special seal in the bucket hinge pin provides excellent sealing and grease retention which extends pin life.



INCREASED GREASING INTERVALS FOR UNIVERSAL JOINTS 03

Sealed universal joints only require greasing every 12000 hours. This reduces maintenance costs significantly and provides greater durability.



WET DISC PARKING BRAKE

The high capacity, wet disc parking brake supplies ample braking force to meet all brake capacity regulations.

RIDE CONTROL FEATURE (OPT) 05

Ride control offers a smooth ride to improve load retention and increase travel speeds.

BUFFER RINGS IN HYDRAULIC CYLINDERS

The hydraulic cylinders utilize a buffer ring to improve sealing capability to reduce leakage.

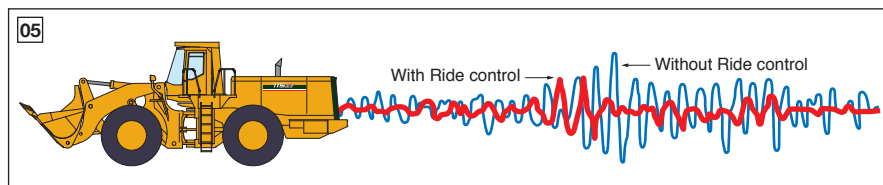
FULL BOX FRAME CHASSIS 04

Full box section frame is the strongest in the industry and resists twisting loads better than plate frames.

KCM MADE HYDRAULIC VALVES

As a leading manufacturer of precision hydraulic components, KCM offers high quality control valves for precise operation.

Pilot assisted controls offer fingertip operation.



EASY ACCESS SIMPLIFIES SERVICING



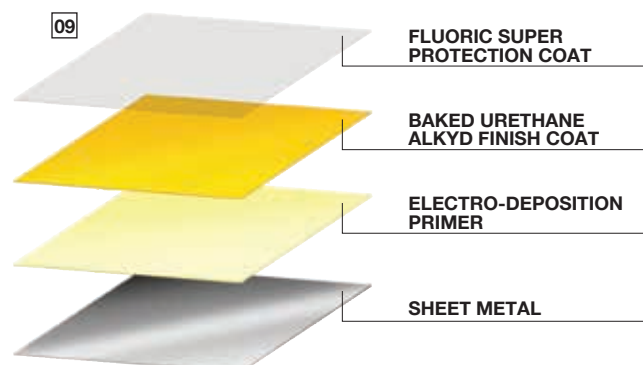
EASY ACCESS SIMPLIFIES SERVICING

Maintenance is enhanced with the engine access panels that can be opened wide for better access.

Filters are conveniently located for easy change and the grease fittings are grouped to reduce maintenance time and insure proper lubrication.

HIGH QUALITY FINISH PAINT FOR SHEET METAL PARTS ⁰⁹

KCM's sophisticated painting process utilizes ED (Electro-deposition) primer, a baked Urethane Alkyd finish coat as well as a fluoric super protection coat for a durable and attractive finish.



HALOGEN HEAD LAMPS ⁰⁶

Front and rear working lights are bright, halogen lamps for improved safety and visibility.

LED REAR LAMPS (OPT) ⁰⁷

Long life, LED lamps are available as an option for the rear tail lights.

These lights are very bright and durable.



DT CONNECTORS ⁰⁸

Sealed Deutsch DT electrical connectors are used throughout the system to reduce corrosion and provide a positive connection.



C THE COMFORT ZONE



CAB

Excellent visibility in all directions is enhanced with both inside and outside mirrors.

The front windshield is flat glass mounted in rubber gaskets that make windshield replacement fast and easy.

Viscous mounting of the cab reduces vibration and noise.

ROPS AND FOPS CAPABILITY ⁰¹

The operator's canopy is fully certified to meet all ROPS (Rollover Protective Structure) and FOPS (Falling Object Protective Structure) regulations.

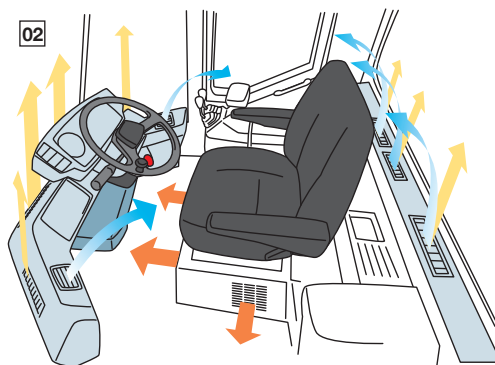


FULLY AUTOMATIC HEATER AND AIR CONDITIONER ⁰²

The thermostatically controlled air conditioner/heater provides automatic adjustment to keep the operator comfortable in any environment.

The high capacity vents provide adequate airflow for efficient defrosting and an even temperature distribution.

By pressurizing the cab, the climate control system keeps dust out of the cab.



MULTI ADJUSTABLE FUNCTION OPERATOR'S SEAT ⁰³

The fully adjustable suspension seat offers excellent comfort to reduce operator fatigue and increase productivity.

The optional air suspension seat provides higher capacity and overall comfort and reliability.





TILT AND TELESCOPIC STEERING

The tilt and telescopic steering column adjusts to fit a variety of operator needs and offers greater comfort and efficiency.

ADJUSTABLE DECLUTCH PRESET SWITCH [06]

The adjustable declutch system allows the operator to select the location of the left brake pedal where the declutch engages. This allows the operator to adjust for varying operating conditions easily.



IMPROVED KICKOUT FEATURE [06]

Dual boom kickout can be set by the operator from inside the cab.

A high kickout can be set for loading trucks or hoppers while a low kickout can be set to return the boom to the proper height for digging.

SHIFT HOLD SWITCH (OPT) [06]

The shift hold switch allows the operator to hold the transmission in the current range with a convenient button located on the hydraulic control lever when the transmission is in the automatic mode.

K-LEVER (OPT) [07]

K-LEVER joystick steering reduces operator fatigue and increases productivity.

Transmission speed selection is done with buttons on the K-Lever and direction changes are handled with the convenient trigger switch.



SINGLE SHIFT CHANGE LEVER

Single, twist grip transmission shift lever is conveniently mounted on the steering column.

MODM [04]

The MODM, Machine Operation Diagnostic Module, offers information to make the operation, maintenance and troubleshooting more efficient. With this information operators, maintenance and technical personnel can quickly determine key operating data.



RADIO (OPT) AND UTILITY BOXES

Operators appreciate the convenience of the radio, glove box, cup holder and climate controlled storage box.

ADDITIONAL DIRECTIONAL SWITCH (OPT) [05]

The directional switch located near the hydraulic control levers allows the operator to easily make directional shifts without removing his left hand from the steering wheel.



DOWNSHIFT BUTTON [05]

The downshift button located on the boom control lever provides for quick, convenient downshifting from 2nd gear to 1st gear.

115ZV-2 OPERATING SPECIFICATIONS

Engine

Make & model	CUMMINS "QSK19" diesel engine
Type	4-cycle, water-cooled, direct injection, with turbocharger and air cooled intercooler
Rated power	Gross 377 kW(506 hp)/1,800 rpm Net 345 kW(463 hp)/1,800 rpm
Maximum torque	Gross 2,755 N·m(281 kgf·m)/1,300 rpm
Number of cylinders (bore X stroke)	6 159 mm X 159 mm
Total displacement	18.87 lit
Cooling type	Hydraulic drive pusher type fan Pressurized radiator
Fuel injection pump	Cummins Modular Common Rail System
Governor	All-speed electrical type
Air cleaner	Dry type(Double element)
Generator	AC 24V 1.8 kW(75 ampere)
Starter motor	DC 24V 8.3 kW(11.1 hp)
Batteries	DC 12V 176 Ah X 2

Transmission & Torque converter

Transmission make & type	KCM, Full power shift		
Torque converter make & type	KCM 3-element, one-stage, one-phase		
Traveling speed	Forward	Reverse	
	1st	7.4 km/h	8.2 km/h
	2nd	13.5 km/h	14.8 km/h
	3rd	21.6 km/h	23.6 km/h
	4th	36.0 km/h	—
Note	With 35/65(L4)		

Axles & Final Drives

Type	4-wheel drive
Axle make & type	KCM Full-floating type
Differential gear	Spiral bevel gear, single stage reduction conventional type
Final reduction gear	Outboard mounted, Internal planetary gear
Rear axle oscillation angle	± 13°
Tire(standard)	35/65(L4)

Weight change

Option item		Operating weight(kg)	Tipping load(kg)			Overall width(mm) (outside tire)	Overall height(mm)	Overall length(mm)
			Straight	at 37°	Full turn			
Tires	29.5R29(L5)	-1120	-780	-660	-650	-120	-40	+30
	35/65R33(L4)	±0	±0	±0	±0	±0	±0	±0
	35/65R33(L5)	+550	+380	+310	+310	±0	±0	±0
	29.5-29-28PR(L4)	-1590	-1100	-930	-920	-120	-40	+30
	29.5-29-28PR(L5)	-1120	-780	-660	-650	-120	-20	+10
	35/65-33-24PR(L4)	±0	±0	±0	±0	±0	±0	±0
	35/65-33-24PR(L5)	+680	+490	+410	+410	±0	+25	-35
Counter weight		+650	+1560	+1330	+1310	—	—	—
Removal ROPS canopy		-950	-910	-770	-750	—	-150	—
Belly guard		+140	+200	+170	+170	—	—	—

Brake system

Service brake	4-wheel wet-disc Controlled by fully hydraulic system Dual circuits
Parking brake	Spring applied oil pressure released type located on front driveline

Steering system

Type	Articulated frame steering, hydraulic power steering unit, pilot operated type
Steering valve	Orbitrol and spool type
Full articulation angle	40° to each side

Loading system

Type	Front end loading, Z bar linkage system	
Hydraulic cycle time	Lifting(at full load)	8.4 sec
	Lowering(empty)	5.0 sec
	Dumping	1.7 sec
	Total cycle time	15.1 sec






Hydraulic system

Oil pump	Steering oil pump	Gear type, 418 lit/min 6.9 MPa(70 kg/cm ²) @ 1,800 rpm
	Main oil pump	Gear type, 231 lit/min, 6.9 MPa(70 kg/cm ²) @ 1,800 rpm
	Pilot oil pump	Gear type, 164 lit/min, 6.9 MPa(70 kg/cm ²) @ 1,800 rpm
	Lift cylinder type	Double acting piston
Tilt cylinder	number,bore x stroke	2 X 225 mm bore X 1,132 mm stroke
	type	Double acting piston
Steering cylinder	number,bore x stroke	2 X 190 mm bore X 767 mm stroke
	type	Double acting piston
Relief set pressure	Control valve	20.6 MPa(210 kg/cm ²)
	Steering valve	20.6 MPa(210 kg/cm ²)

Service refill

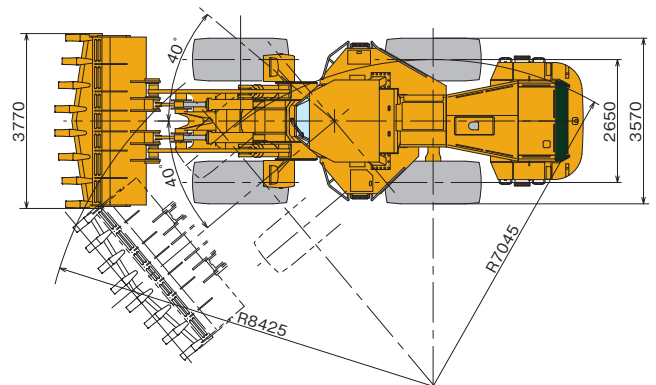
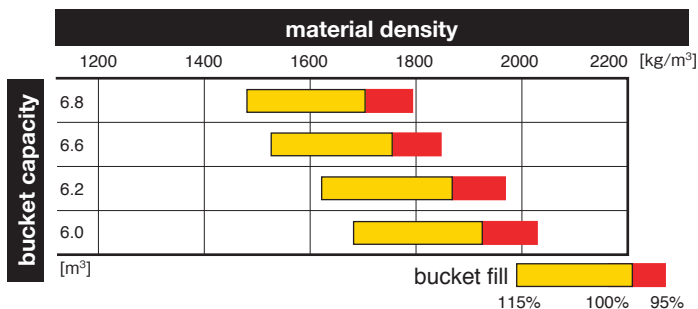
Fuel tank	660 lit
Engine lubricant(including oil pan)	61 lit
Engine cooling water	155 lit
T/M & T/C	90 lit
Axle front/rear	360 lit
Hydraulic oil tank	225 lit
Hydraulic system(including oil tank)	475 lit

Bucket

			Standard boom				
			Rock V-edge	Rock straight	General purpose(stock pile)		
			Teeth & Segments	Teeth & Segments	Teeth	Bolt-on edges	Bolt-on edges
			RVT	RST	GST	GSC	
							
Bucket capacity	heaped	m³	6.2	6.0	6.6	6.8	10.0
	struck	m³	5.5	5.3	5.7	5.9	8.9
Max. dumping clearance		mm	3,290	3,450	3,330	3,565	3,335
Max. dumping reach		mm	1,995	1,830	1,930	1,760	2,015
Max. hinge pin height		mm	5,040				
Digging depth (with bucket level)		mm	180	180	190	150	130
Breakout force		kN	377	449	401	376	311
Bucket tilt-back angle	at carry position	deg	50°				
Overall length		mm	11,350	11,120	11,300	11,010	11,335
Overall height	up to canopy top	mm	4,170				
	bucket full raise	mm	7,045	7,045	6,910	6,910	7,185
Overall width	outside tire	mm	3,570				
	outside bucket	mm	3,770	3,770	3,770	3,770	4,100
Tread		mm	2,650				
Wheel base		mm	4,150				
Min. turning radius (bucket carry position)	at outside bucket	mm	8,425	8,425	8,480	8,400	8,635
	at center of outside tire	mm	7,045				
Min. ground clearance		mm	545				
Full articulation angle		deg	40°				
Operating weight	with ROPS/FOPS & cab	kg	45,960	45,750	45,130	45,160	45,790
Static tipping load	straight	kg	29,530	29,920	30,310	30,130	29,010
	at 37°	kg	25,210	25,540	25,870	25,720	24,770
	full turn	kg	24,740	25,060	25,380	25,230	24,300

The weight and load figure includes 35/65(L4) tubeless tire, ROPS/FOPS canopy, cab, lubricant, coolant, full fuel tank and operator.

Bucket selection charts



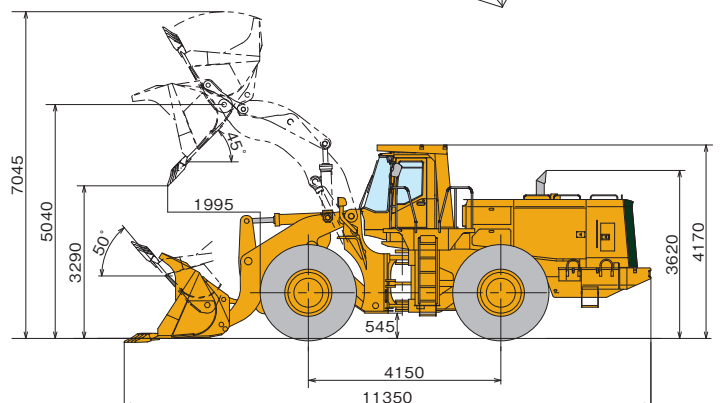
Remarks

This specification sheet may contain attachments and optional equipment which are not available in your area.

Please contact your local KCM distributor for those items which you require.

Materials and specifications are subject to change without notice and without obligation on the part of the manufacturer.

The specifications supplied, while believed to be completely reliable, are not to be taken as warranty for which we assume legal responsibility.



Equipped with RVT bucket, 35/65 (L4) tubeless tire, ROPS/FOPS canopy and cab.

STANDARD EQUIPMENT (Standard specifications may vary. Contact your KCM distributor for specifics.)

Boom/bucket control dual levers

Electrical

75 ampere generator

Back up alarm

Brake and tail lights

Electric starter

Halogen headlights with high and low beams (2 front)

Halogen working lights (4 front and 2 rear)

Turn signals with four-way flasher

Gauges and indicators

Air cleaner warning lamp

Auto shift indicator lamp

Battery charge lamp

Brake pressure warning lamp

Engine coolant temperature gauge and warning lamp

Engine oil pressure warning lamp

Fuel level gauge

High beam indicator lamp

Hour meter

Neutral indicator lamp

Parking brake indicator lamp

Tachometer

Torque convertor oil temperature gauge and warning lamp

Transmission control warning lamp

Transmission declutch lamp

Transmission status monitor

Working light indicator lamp

Operator environment

Adjustable operator seat with suspension

Ashtray

Boom/bucket control dual levers

Cigarette lighter

Cup holder

Down shift button

Electric dual horns

Floor mat

Front and rear wiper and washers

Full automatic air conditioner

Lockable doors with sliding windows by

regulator handles (left and right)

Machine Operation Diagnostic Module (MODM)

Rearview mirrors (interior and exterior)

ROPS/FOPS canopy

Seat belt

Soft cab

(left and right doors open, walk-through design)

Storage compartment

Sun visor

Tilt and telescopic steering wheel

Tinted safety glass (tempered)

Transmission declutch adjust switch

Power train

Active traction control

Air cleaner, double elements dry type

Cummins QSK19 diesel engine

Full hydraulic enclosed wet multi-disc brakes

Hydraulic engine radiator cooling fan

KCM auto shift transmission

KCM axles, conventional

differentials (front/rear)

KCM torque converter

Low maintenance drive shafts

Tires, 35/65 (L4) tubeless

Others

Adjustable kickout device

Auto ejective type pre-cleaner

Bucket leveler

Drawbar hitch with pin

Efficient loading system

Handrails

Ladders, left and right

Loading linkage, sealed Z-bar type dual

cylinders

Secondary brake

Wet disc parking brake

OPTIONAL ITEMS

Additional counter weight

Additional F-R directional switch

Additional working lights (2 rear)

Anti-corrosion specifications

Automatic reversible cooling fan

Belly guard (transmission, engine and radiator)

Emergency steering

Front and rear wide fenders

High lift boom arm

Hot slag handling package

Hydraulic circuit for quick coupler pins

Hydraulic three spool valve system

K-Lever steering (stick steering control)

LED rear lamps

Lock up torque converter

Log handling package

Mudflaps

Noise reduction kit (110dB(A))*

Pre-cleaner (bowl type)

Quick coupler

Radio

Ride control (speed sensitive automatic)

Several bucket and tire options are available

Shift hold switch

Short boom arm

Vandalism protection kit

Waste handling package

Wide fin spacing radiator

※Sound level for the machine is equipped with Noise reduction kit.

Airborne sound power level 110 dB(A)

Measurement is obtained in accordance with ISO6395.

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KCM Corporation

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