

**SK210D**

**Metal Dismantling Machines**

■ **Major accessories**

◎ for standard, ○ for optional and, — for not applicable

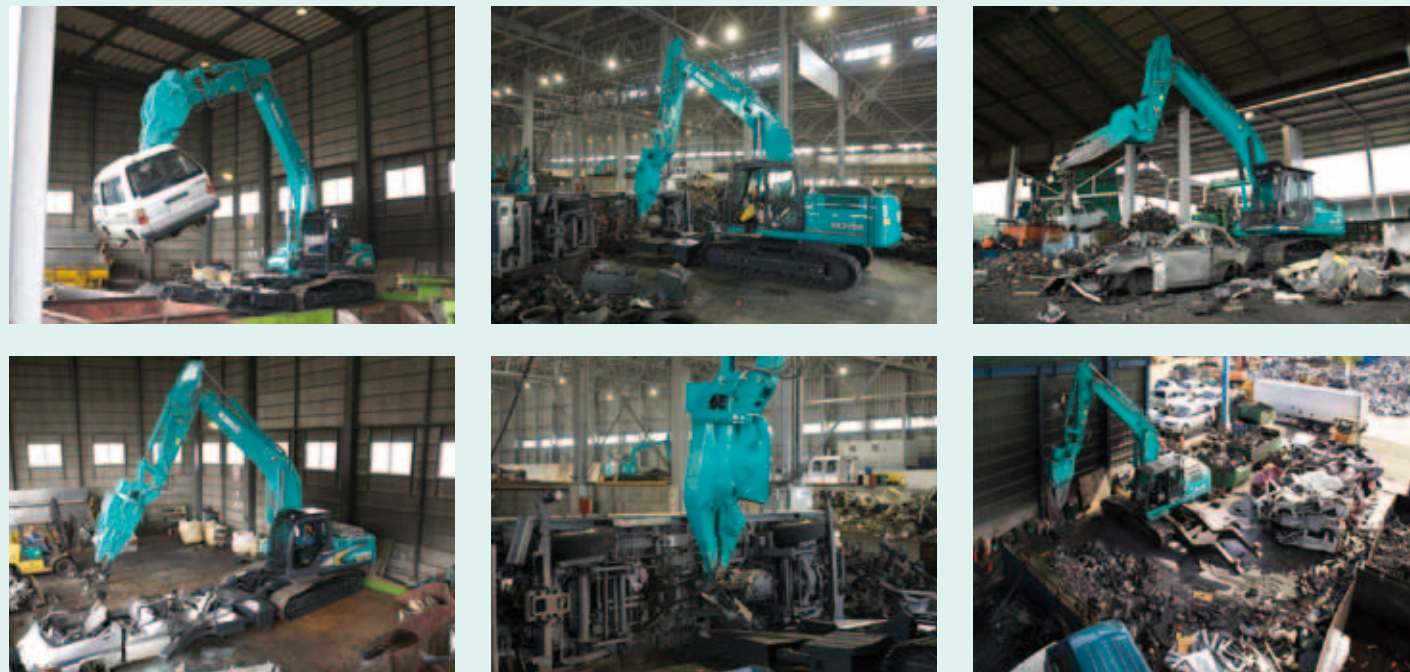
Model name	SK210D	
Specifications	Multi-dismantling machine	Car-dismantling machine
● Cab frame		
Basic frame		◎
● Cab		
With shatterproof film (2 sides) + Top guard		◎
With shatterproof film (mesh, 2 sides) + Top guard		○
● Boom		
HD boom		◎
● Boom piping		
Boom safety + Rotating nibbler		◎
● Arm		
HD arm		◎
● Arm piping		
Arm safety + Rotating nibbler		◎
● Shoe		
600 mm flat shoes		○
600 mm (even height) shoes		◎
● Counterweight		
Additional weight		◎
● Lower attachment		
Clamp arm		◎
Open/close type clamp arm	◎	—
● Seat		
Suspension seat with arm rests		◎
Air suspension seat with arm rests		○
● Option		
Travel alarm		○
Handrail extension		○
Tools		○
Grease gun		○

■ **Dedicated accessories**

- One way call
- Cab with two lights
- Reinforced upper main body undercover
- Lower main body undercover
- Insect repellent net for the air conditioning condenser
- Dust-proof cap
- Cab interference prevention system
- Cab guard with space for boots
- Cab climbing step
- Lower step
- Boom cylinder guard
- Arm rock guard
- Reinforced arm cylinder
- Reinforced bucket cylinder

■ **Standard accessories**

- Additional right camera + Additional monitor
- Rear view camera
- Boom with two lights
- Emergency boom lowering device
- Hydraulic oil filter clog detection
- Battery shutoff function
- Urea aqueous tank
- Radio
- AUX, USB, Bluetooth
- K250 key
- 12 V power source
- 4-inch arm rests
- 2-inch seat belt



Note: This catalog may contain attachments and optional equipment that are not available in your area. And it may contain photographs of machines with specifications that differ from those of machines sold in your areas. Please consult your nearest KOBELCO distributor for those items you require. Due to our policy of continuous product improvements all designs and specifications are subject to change without advance notice. Copyright by **KOBELCO CONSTRUCTION MACHINERY CO., LTD.** No part of this catalog may be reproduced in any manner without notice.

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# The latest Japanese technology of metal dismantling machines!

## A choice of 2 specifications for KOBELCO's metal dismantling machines to provide smooth dismantling and precise separation

Since launching the first car-dismantling machines in Japan in 1979, KOBELCO has continued to develop metal dismantling machines to meet the needs of the times, contributing to the growth of the metal recycling industry in Japan. The number of KOBELCO's metal dismantling machines delivered to customers has now reached over 1100. These machines are being used to dismantle and recycle various metal scrap ranging from end-of-life vehicles to railway cars, motorcycles, used consumer electric apparatus, and household equipment. A KOBELCO machine will provide substantial benefits to the customer.

Our machines achieve not only significant increases in efficiency, reduced man power, and improved safety and comfort, but can now also handle the precise operations required for recycling highly valued rare earth metals. KOBELCO now presents the latest model with improved performance and functions, accompanied by the upgraded environmental performance and body structure strength of the base machine. With the pursuit of safer, tougher, and faster operations, the SK210D metal dismantling machine lends a new dimension to the dismantling of end-of-life metal products.

Compatible with dismantling a variety of metal products

### Multi-dismantling machine

Equipped with uniquely designed open/close type clamp arms that can lock the opening according to the size of objects.

Besides dismantling end-of-life vehicles, the machine can break down and separate engines and other metal products.



Specialized machine for dismantling end-of-life vehicles

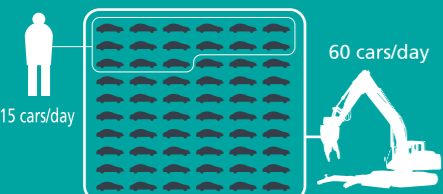
### Car-dismantling machine

Equipped with tough clamp arms (non-open/close type) capable of firmly grabbing and holding down a car body.

The machine efficiently breaks down cars to take out parts, and cut off and rip off components for efficient separation.

## Up and running in many areas for dismantling cars and other metal wastes

- Dismantles passenger automobiles about 4 times faster than manual dismantling.



Note: Shows the numbers of processed cars a day (estimated by KOBELCO).

- One operator can do all.
- Protects the operator from spin-off debris.
- Eliminates the danger of catching fire caused by flame cutting.
- The self-propelled machine knows no limit in work areas.



- Works well on trucks, buses, motorcycles, railway cars and others.
- Can dismantle engines at a processing efficiency approximately 10 times higher.
- Able to dismantle industrial products other than cars to separate raw materials.
- Recoverable raw materials: Iron, aluminum, copper, platinum, vanadium and others.

## Flow of metal product dismantling (Example: Car dismantling)

### 1. Incoming

Brings in an end-of-life vehicle (ELV)

### 2. Pre-processing

Processes airbags, takes out fluorocarbon gas and drains various fluids (fuel, oil and coolant)

### 3. Salvaging parts

Recovers tires, wheels, doors, seats, hoods and batteries.

### 4. Dismantling the car body

Recovers engines, transmissions, differential gears, suspensions, exhaust pipes, motors, radiators and harnesses.



### 5. Dismantling the engine

Recovers generators, starter motors, compressors, harnesses and others and removes cylinder heads.

### 6. Shipping

After pressing loose small articles into lumps, recycled parts are shipped to steel mills and shredder firms.

## Structure of the metal dismantling machine

### Piping for the rotating nibbler

Hydraulic piping that is adapted for the auto-rotating type metal dismantling nibbler.

### Reinforced attachments

Both the HD boom and HD arm have a structure with sufficient strength designed specially to withstand the shocks and impacts associated particularly with the dismantling processes.

### Front attachments

The SK210D comes standard with a multi-dismantling nibbler. This nibbler has an ideal design for press crushing and cutting objects as well as for sorting and removing resources. A nibbler dedicated to dismantling cars is also available.

### Reinforced cylinder

Both the bucket cylinder and arm cylinder are reinforced to withstand high loads.

### Cab for the metal dismantling machine

All basic cabs are equipped with a grid type front guard and roof top guard as a standard to ensure safety.

### Boom cylinder guard

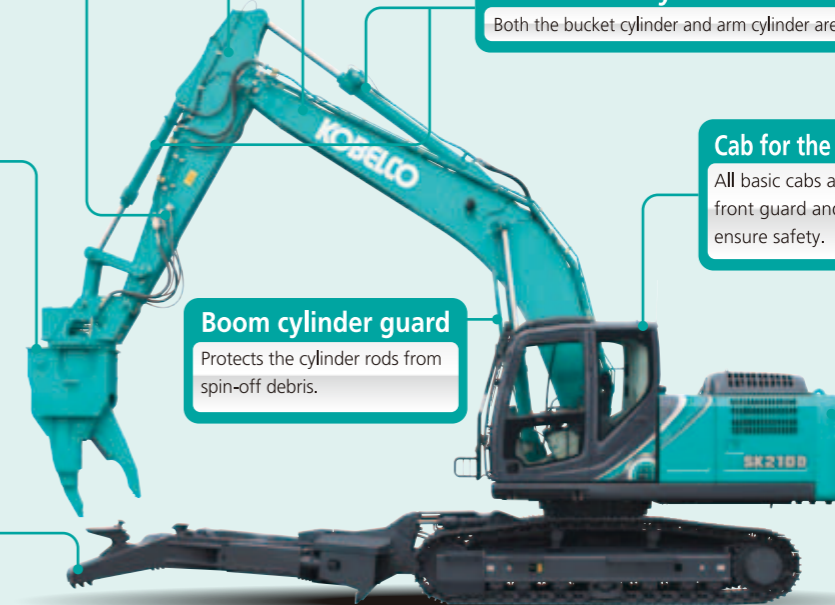
Protects the cylinder rods from spin-off debris.

### Clamp arm

The clamp arms hold down and pinch an object to hold it in place. The multi-dismantling machine has right/left opening/closing clamp arms while the car-dismantling machine has non-open/close type clamp arms.

### Counterweight

The added weight balances the machine and prevents it from rocking back and forth.



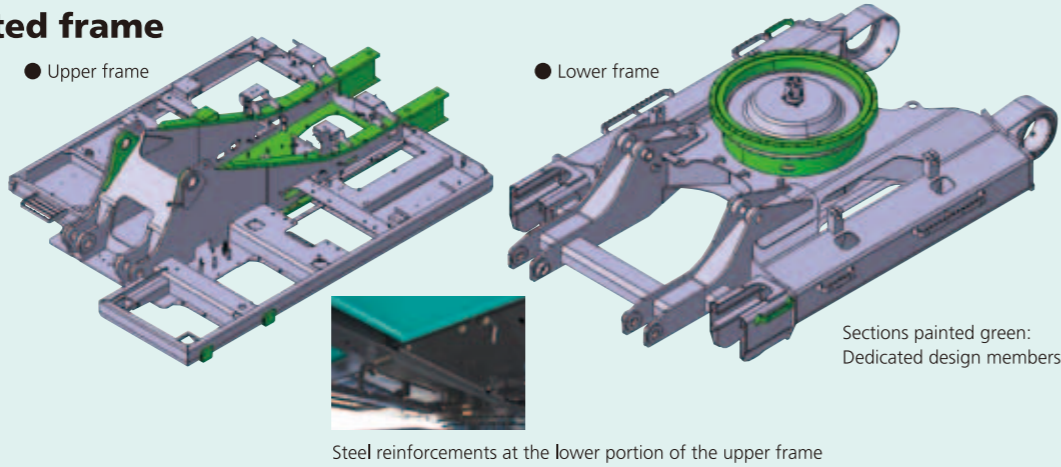


## Durability and reliability

# Excellent structural strength that can carry out high-load tasks effortlessly

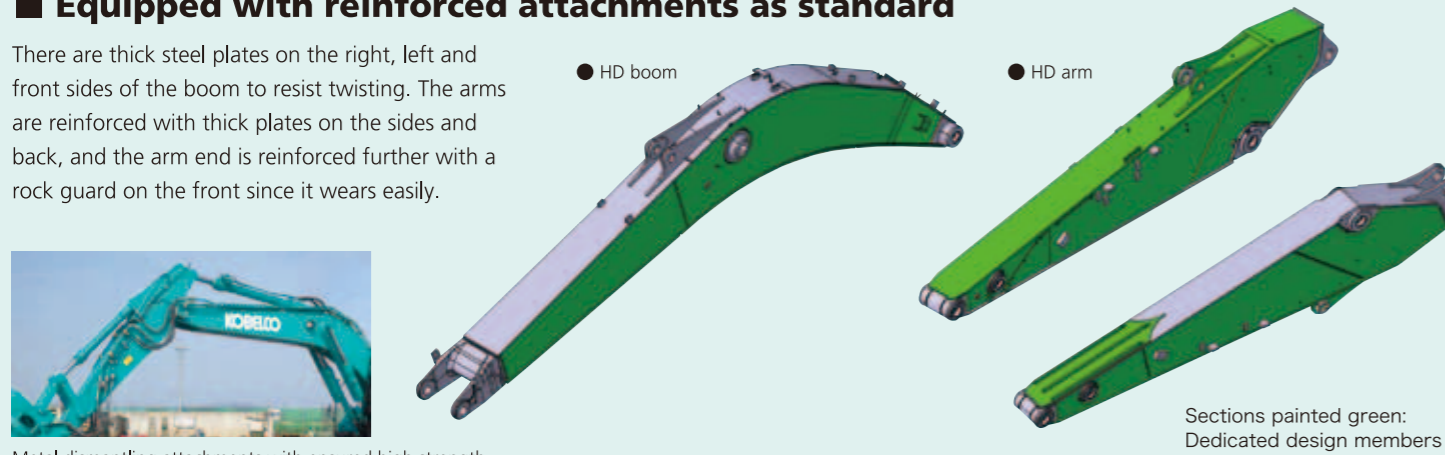
### Developed dedicated frame

The bottom section of the upper frame is reinforced with steel to handle the additional counterweight as well as the high reaction force generated when tearing off metal parts. The lower frame has a uniquely designed swing mechanism circular section to ensure the operating range of the clamp arms while maintaining the required strength.



### Equipped with reinforced attachments as standard

There are thick steel plates on the right, left and front sides of the boom to resist twisting. The arms are reinforced with thick plates on the sides and back, and the arm end is reinforced further with a rock guard on the front since it wears easily.



Metal dismantling attachments with ensured high strength

### Long life design with reinforced parts in each section



#### Boom cylinder guard

Protects the cylinder rods from spin-off debris and unintended crashes.



#### Reinforced arm cylinder

Use of a dedicated cylinder with reinforced components such as the head cap.



#### Arm rock guard

The front of the arm end is reinforced with a plate to improve the strength.



#### Reinforced bucket cylinder

Use of a dedicated cylinder with reinforced components such as the head cap.



#### Bucket angle sensor cover

The cover protects the bucket angle sensor installed on the idler link. A cable guard also protects the electrical cables from being cut off.



#### Upper main body undercover

The 6 mm thick reinforced cover protects the inner devices.



#### Lower undercover

The lower car body structure is fitted underneath with a 9 mm thick reinforced cover.



#### Dust-proof fuel tank cap

The fuel cap is lined with rubber so that dust does not easily contaminate the fuel tank.

## Safety

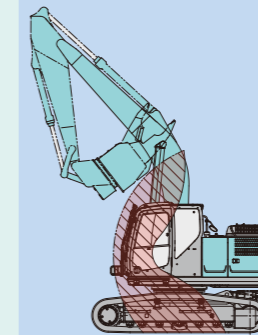
# Thoroughly implements the safety functions required for metal dismantling processes

### A cab collision prevention device is installed as a standard

The upgraded cab collision prevention device prevents the cab from colliding with the front attachment, ensuring operator safety. Dismantling work often involves operations near the foot of the machine. This device makes it easier to dismantle objects safely by reducing the collision warning range to the required minimum while increasing the practical work area.



The area marked up with " " is the collision prevention area.

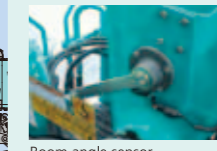


#### System operation

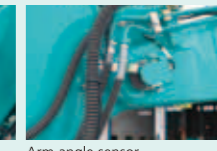
An alarm sounds when a part of the front attachment moves closer to the cab than the limit. The machine stops gradually before the front attachment collides with the cab.

#### System structure

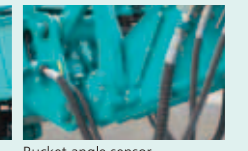
The system calculates the boom angle, arm angle, idler link motion angle to come up with the position and direction of the front attachment to control its motion. (Previous system: Calculates the boom angle and the arm angle to locate the arm top position)



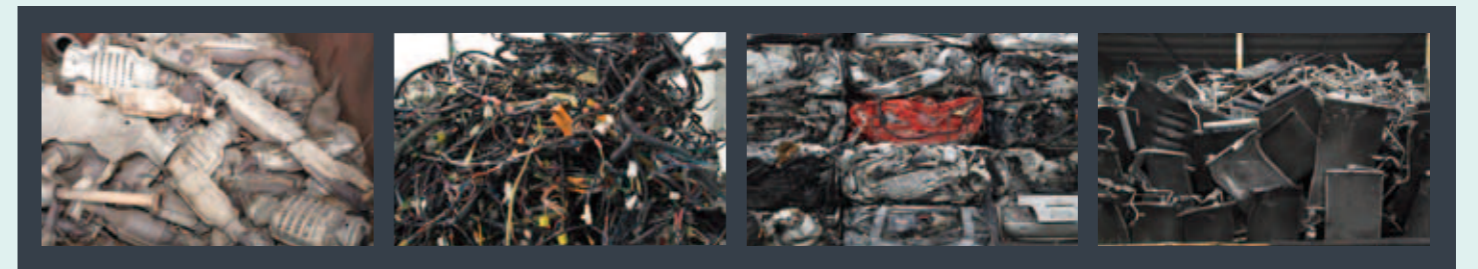
Boom angle sensor



Arm angle sensor



Bucket angle sensor



### Various accessories that embody KOBELCO's consideration for safety



#### Cab front guard

The windshield and the lower window are provided with a vertical grid guard of radial design so as not to block the operator's field of view. The quick open/close design makes cleaning easy.



#### Glazing with shatterproof film

The windshield and right window are provided with shatterproof film that prevents loose glass chips from scattering even if it is smashed.



#### Cab top guard

The standard feature of the grid type cab ceiling guard protects the operator against objects falling on the cab roof.



#### Safety piping

Both the arm and boom have fall prevention valves as a standard to handle unexpected breaks in the hydraulic hoses.



#### Cab with two lights

Provides a brighter field of view from the front during indoor and nighttime operations.



#### Cab climbing step

The larger step makes it easy for the operator to climb into and out of the cab.



#### Lower step

An additional step is installed on the side of the crawler frame for the metal dismantling machine only.



#### One way call

The high sensitivity microphone facilitates hearing.



## Efficient dismantling achieved with KOBELCO's creativity and inspiration



### Layout of the cab

The levers, pedals, switches and gauges (multi-display) are laid out in easy to operate locations.



### 3-button grip

The lever grip enables opening, closing and rotating the nibbler to facilitate simultaneous operation.



### Switch for cancelling the cab collision prevention function

Pressing the switch enables operations such as grabbing objects even in the warning area.



### Suspension seat

The comfortable suspension seat is now a standard feature to lessen operator fatigue for long hours of work.



### Cab guard with space for boots

The operator puts his boots in the locker in a separate space so as not to mess up the cab floor.



### Additional weight

The additional weight ensures substantial stability, making it easier to grab and raise heavy objects such as end-of-life vehicles.



### Nail puller

Claw type pullers are provided to remove harnesses.



### Puller

Designed to bend long objects easily.



### Open/close type clamp arms (Multi-dismantling machine)

The clamp arms for the multi-dismantling machine not only hold down an object but also pinch-hold it.



### Clamp arms for holding down (Car-dismantling machine)

The dedicated clamp arms are a very strong, unitized structure that can firmly hold a scrap car.



### Bowl-shaped grip

The grip is able to not only pinch-hold dismantled objects but also swing them forwards and backwards.



### Teeth

The powerful clamping and pinching force enables dismantled objects to be cut off.



### Maintenance space

The upper space provides a comfortable platform for maintenance inside the engine hood.



### Multi-dismantling nibbler

Light weight, easy to control fine motions, and good for various types of work. Its pointed shape is suitable for precisely separating objects.



### Car-dismantling nibbler

Produces high gripping forces, cutting capacity and rotational torque to dismantle scrap cars with high productivity.

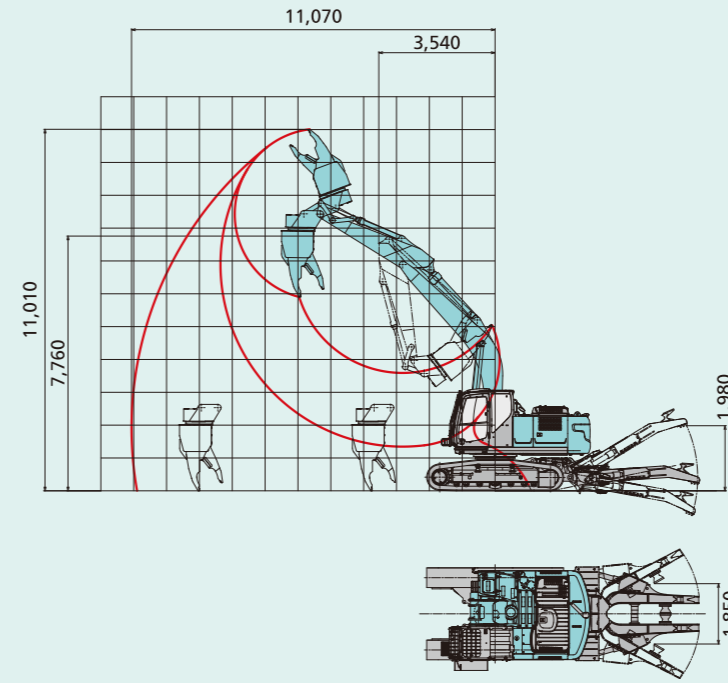
### Main specifications

		SK210D	
		SK210D-10	
Machine specification		Multi-dismantling machine	Car-dismantling machine
Operating weight	kg	30,000 (30,300)	27,100 (27,400)
Ground pressure	kPa	67 (68)	61 (62)
Swing speed	min <sup>-1</sup>	12.7	
Travel speed	km/h	1st gear: 3.6 / 2nd gear: 6.0	
Gradeability	% (deg.)	70 (35)	
Engine	Model	Hino J05EUM-KSSC	
	Rated output	kW/min <sup>-1</sup>	
		119 / 2,000	
Fuel tank capacity	L	320	
Urea aqueous tank capacity	L	83	
Set hydraulic pump pressure	Mpa	34.3	
Hydraulic oil tank	L	Total capacity: 300 (Tank capacity: 140)	Total capacity: 270 (Tank capacity: 140)
Dimensions	Overall length	mm	12,950 (12,970)
	Overall width	mm	2,800
	Overall height	mm	3,720 (3,680)
	Tail swing radius	mm	2,910

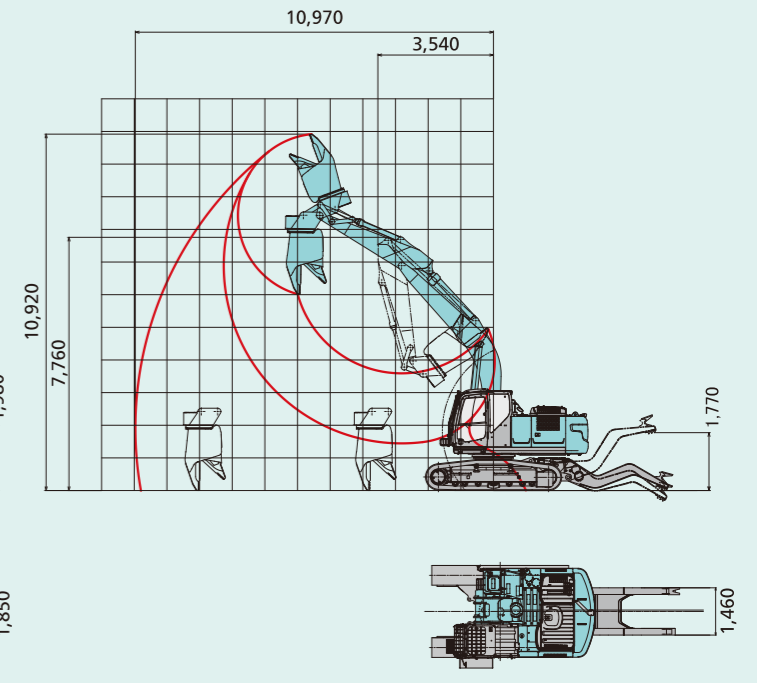
The figures above are for a machine equipped with the KVE720PR multi-dismantling nibbler. The figures in parentheses are for a machine equipped with the KV800PR car-dismantling nibbler. The table uses the SI International System of Units.

### Working range (Unit: mm)

#### Multi-dismantling machine (equipped with KVE720PR)



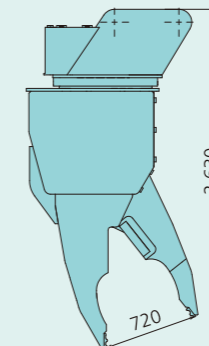
#### Car-dismantling machine (equipped with KVE800PR)



### Front attachment specifications

#### Multi-dismantling nibbler

Model	KVE720PR-2
Rotating mechanism	Hydraulic auto-rotation
Weight	kg
Maximum opening width	mm
Overall length	mm
Cutting force (cutter)	kN
Tooth clamping force	kN
Working hydraulic pressure	Mpa



#### Car-dismantling nibbler (optional)

Model	KV800PR
Rotating mechanism	Hydraulic auto-rotation
Weight	kg
Maximum opening width	mm
Overall length	mm
Cutting force (cutter)	kN
Tooth clamping force	kN
Working hydraulic pressure	Mpa

