



1 EX8000-6 backhoe mining-use ultra-large hydraulic excavator

## 1 EX8000-6 Backhoe Hydraulic Excavator

As demand for resources continues to increase, mining-use dump trucks are expected to increase in size in efforts to reduce operating costs. To meet this need for larger dump trucks, there is a growing need for the EX8000-6 hydraulic excavator (operating weight: 837 t) with large-capacity bucket. Until now, the EX8000 line of hydraulic excavators featured only front-loading attachment, but an 800-t class backhoe front attachment has been added due to anticipated use in Australia and Republic of Indonesia.

The main features are as follows.

- (1) Uses a 43-m<sup>3</sup> large-capacity bucket for efficient loading into large-scale dump trucks with a loading mass of 300 t or more.
  - (2) Features a system that senses the front attachment position and automatically softens the impact at the hydraulic cylinder stroke end while providing a reliable welded construction to enhance the reliability of structures.
  - (3) Uses a hydraulic system that makes use of the own weight of the front attachment and recycles the energy to reduce fuel consumption.
  - (4) Incorporates a monitoring system that detects the status of the body to reduce downtime and increase the operation rate.
- (Hitachi Construction Machinery Co., Ltd.)

## 2 EX1900-6 Electric-hydraulic Excavator

As fuel prices continue to change, mines are increasingly creating electrical infrastructures that operate rope shovels equipped with electric motors. To meet this market demand, Hitachi has continued to introduce various electric-hydraulic excavators. These hydraulic excavators retrofitted with electric motors have an operating mass ranging from 260 to 800 t. Hitachi has completed a new series, starting with the 190-t class EX1900-6 electric-hydraulic excavator.

The power system electrical machinery of this product is comprised of a three-core cable that receives external power supply, a slip ring that enables the cable connected to the under carriage rotate with the upper swing body, a cubicle that is positioned on the upper swing body and controls starting and stopping of the electric motor, and a high-voltage, three-phase induction motor. This electric motor drives the hydraulic pump in place of the engine and supplies hydraulic pressure to the hydraulic cylinder and the swing and traction motors via the control valve.

The main features are as follows.

- (1) Equipped with a monitor display that indicates the status of the electric motor, power source, and machinery and a realtime fault diagnostic function to reduce downtime.
  - (2) Eliminates the use of engine lubricating oil and filters, thereby lowering maintenance costs and the load on the environment.
- (Hitachi Construction Machinery Co., Ltd.)



2 EX1900-6 electric-hydraulic excavator



3 ZX65USB-5A mini hydraulic excavator

### 3 ZX65USB-5A Mini Hydraulic Excavator European Model

The ZX65USB-5A is the next evolution of excavator whose operating mass is 6 t and is built for the European market. It follows the series of compact hydraulic excavators released in Japan in August 2012, ZX30U-5A, ZX35U-5A, ZX40U-5A, and ZX50U-5A, whose operating mass ranging from 3 to 5 t.

The main features are as follows.

- (1) Enables switching between economical mode (conserves fuel) and power mode (increases power) for more economical operations.
- (2) Uses a 3.6-inch multi-liquid-crystal-display (LCD) monitor and floor steps for easy entry and exiting, and offers a wide operator station for greater comfort.
- (3) Easy to maintain due to improved covers for the radiator, tank, engine, and other parts, and divided floor mats for easy cleaning
- (4) Improved safety due to the use of a roll-over protective structure (ROPS)

In addition to these features, Hitachi focused on a variety of attachments that are both durable and reliable to handle diverse usage requirements in various regions in Europe. This model even meets European Union (EU) Stage III A emission regulations.

The ZX65USB-5A has high expectations in the European market as construction machinery that fuses comfort and operability with environmental considerations.  
(Hitachi Construction Machinery Co., Ltd.)

### 4 ZW180-5B Wheel Loader Complies with Standards of Non-road Special Motor Vehicle Act of 2011

The ZW180-5B wheel loader, which meets the latest emission regulations in Europe, North America, and Japan and fuses environmental considerations with operating performance, is now available in Japan.

This product is equipped with an engine control system that determines the work status using various sensors installed in the vehicle and reduces fuel consumption. In terms of actual operations, there is an approximate 10% reduction in fuel consumption over conventional models. This wheel loader features the same basic cab design as the comfortable European model with quality interior panels and greater noise reduction for higher product marketability.

The other features are as follows.

- (1) Choose from normal mode for modest and efficient acceleration or P mode for quicker acceleration and greater excavation power.
- (2) A ride control system and lift arm smooth stop to reduce operator fatigue.
- (3) Cooling fan with automatic reverse operation function.
- (4) Exhaust gas post processing equipment without a particulate matter filter to reduce maintenance costs.
- (5) Comes with an eco-mark indicator to promote fuel-efficient operation.  
(Hitachi Construction Machinery Co., Ltd.)



4 ZW180-5B wheel loader



5 ZX200-5B hydraulic excavator

## 5 ZX200-5B Hydraulic Excavator Complies with Standards of Non-road Special Motor Vehicle Act of 2011

With growing concerns to reduce carbon dioxide (CO<sub>2</sub>) emissions to ease global warming and new environmental restrictions, such as the Non-road Special Motor Vehicle Act of 2011, which regulates vehicle emissions, the construction machinery sector is looking for technology that conserves energy and provides clean emissions.

The ZX200-5B uses the new energy-saving three-pump/three-valve hydraulic system to realize an approximate 17% reduction in fuel consumption over conventional models (ZX200-3) but with the same workload. In addition, it reduces emissions by trapping particulate matter from the engine in the muffler filter and by burning efficiently with a proprietary exhaust gas temperature control. The variable turbocharger and high-volume cooled exhaust gas recirculation (EGR) system also help to reduce nitrogen oxide (NO<sub>x</sub>) emissions.

In terms of operator safety equipment, the model comes with a head cab that conforms to the Industrial Safety and Health Act for objects dropped from above and an International Organization for Standardization (ISO) standard ROPS cab to protect the operator in the event the hydraulic excavator rolls over. It is also equipped with a rear view monitor to confirm the safety behind the vehicle.

(Hitachi Construction Machinery Co., Ltd.)

## 6 Vibratory Roller Series

Hitachi's new line of vibratory rollers (ZC35C-3, ZC35T-3, ZC50C-3, ZC50T-3) are designed for mid-scale paving work and have the same safety features of existing models but with enhanced

reliability and durability.

These models conform to the Non-road Special Motor Vehicle Act of 2006 for emissions regulations as well as the standards for ultra-low noise construction machinery set forth by the Ministry of Land, Infrastructure, Transport and Tourism, Japan. These rollers are designed to lessen the load on the environment by using a recyclable aluminum radiator and lead-free wiring. The main harness uses wiring with excellent bending resilience for enhanced durability. The combined roller, featuring a steel wheel in front and tires in the rear, uses a wheel-motor drive system that directly drives the left and right tires with two hydraulic motors. In addition, an optional hydraulic differential lock can be added to eliminate problems caused by one wheel slipping when depressing the pedal and easier extrication from soft ground. A key pad lock system and electronic key lock system are two options available for the anti-theft device.

(Hitachi Construction Machinery Co., Ltd.)



6 ZC50C-3 vibratory roller