

n Specifications

Model	ENTL040[S]-3	ENTL045[S]-3	ENTL061S-3	ENTL080S-3	ENTL099S-3	ENCL040[S]-3	ENCL045[S]-3	ENCL061[S]-3	ENCL068[S]-3	
Name	Scissors lifter wheel-type aerial work platform					Scissors lifter crawler-type aerial work platform				
• Work platform										
Max. height above ground	mm	4,000	4,500	6,100	8,000	9,900	4,000	4,500	6,100	6,800
Min. height above ground	mm	890		995	1,200	1,320	900		1,050	
Internal dimensions	Total length (when extended)	mm 1,200 [1,200 (1,750)]		1,610 (2,540)	2,200 (3,200)	2,215 (3,215)	1,200 [1,200 (1,750)]		1,800 [1,800 (2,800)]	
	Total width	mm 645		645	725	1,175	645		885	
	Total height	mm 950		950	950	950	950		950	
Expansion platform slide length	mm	- [550]		930	1,000	1,000	- [550]		- [1,000]	
Max. load	kg	250 [220]	230 [200]	250	250	320	250 [220]	230 [200]	250	
Max. load when platform is extended	kg	- [115]		125	125	125	- [115]	- [115]	- [125]	
• Scissors lift										
Model		4-stage X-type pantographs with one end fixed				5-stage X-type pantographs with one end fixed	4-stage X-type pantographs with one end fixed			
Lifting speed (up / down)	sec	19 / 22	21 / 27 [22 / 26]	26 / 27	30 / 36	43 / 57	19 / 22	21 / 27 [22 / 26]	29 / 32 [30 / 30]	31 / 36 [31 / 34]
• Travel motor										
Drive type		DC motor								
Travel speed (max. / min.)	km/h	0 - 3.0		0 - 4.0 / 0 - 2.2	0 - 3.2 / 0 - 2.5	0 - 3.5 / 0 - 2.5	0 - 2.0		0 - 2.0	
Gradeability	deg	8.0		12			14		15	
Min. turning radius	mm	1,350		1,520	1,960	2,200	turning on the spot		turning on the spot	
• Power supply										
Input power supply	V	Single-phase AC100								
Battery voltage	V	DC24								
Battery capacity (5 hour rate)	Ah	100			200		100		200	
Battery		EB100 × 2		EB100 × 4		EB100 × 2		EB100 × 4		
• Vehicle specifications										
Total length × Total width × Total height	mm	1,340 × 750 × 1,840	1,390 × 750 × 1,840	1,750 × 760 × 1,945	2,300 × 810 × 2,150	2,300 × 1,300 × 2,270	1,340 × 780 × 1,850	1,390 × 780 × 1,850	1,955 × 990 × 1,995	
Machine weight	kg	610 [660]	710 [750]	1,230	2,280	2,300	630 [680]	650 [730]	1,310 [1,410]	1,410 [1,580]

* Numbers in [] in the ENTL040/045 and ENCL Series indicate the sliding expansion deck specifications.

n Safety devices

- Sudden drop prevention device
- Overload restriction device
- Lever guard
- Travel and lifting warning device
- Emergency stop device (Emergency stop button)
- Foot pedals
- Unit inclination angle restriction devices (travel restriction, lifting restriction)
- Emergency lowering device
- Pothole protector (ENTL Series)

⚠ Important information about safety

- Only trained and authorized personnel shall be permitted to operate this machine.
- Follow the instructions in the manual and use the machine safely.
- This machine shall be operated and maintained under local laws and regulations.
- In order to prevent failures and accidents, be sure to perform daily inspections and regular inspections.
- This machine is intended for indoor use only. Do not use it outdoor.

- This catalog is current as of November 2017. Be aware that the specifications, appearance, and other details may be changed without notice.
- For reasons related to printing, the paint colors seen here may differ from the actual products.

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Aerial work platform

ENTL/ENCL Series

AIRMAN®

Scissors Lifter Aerial Work Platform

ENTL/ENCL Series

Work platform max. lift height 4.0 m | 4.5 m | 6.1 m | 6.8 m | 8.0 m | 9.9 m



HOKUETSU INDUSTRIES CO., LTD.

SMART & SAFETY

Turning “what if” into reality

What if maintenance could be easier than it is now?

What if operation could be safer and more reliable than it is now?

After considering these “what if” questions, we saw beyond the “now” of aerial work platforms and developed the “Smart & Safety” concept.

New charging system × Monitor panel × Aerial work platform



Scissors lifter wheel-type or crawler-type aerial work platform

ENTL / ENCL SERIES

The ENTL Series was designed for excellent work efficiency and also for easier operation and maintenance.

The ENCL Series makes possible effortless spin turns and pivot turns.

This makes them ideal for equipment and interior work, maintenance work, and other work without a fixed scaffolding.

Model lineup

Work platform height above ground	4.0 m	4.5 m	6.1 m	6.8 m	8.0 m	9.9 m
Wheel mounted type	ENTL040 ENTL040S	ENTL045 ENTL045S	ENTL061S	-	ENTL080S	ENTL099S
Crawler mounted type	ENCL040 ENCL040S	ENCL045 ENCL045S	ENCL061 ENCL061S	ENCL068 ENCL068S	-	-

* “S” in the ENTL040/045 and ENCL Series indicates sliding expansion platform specifications.

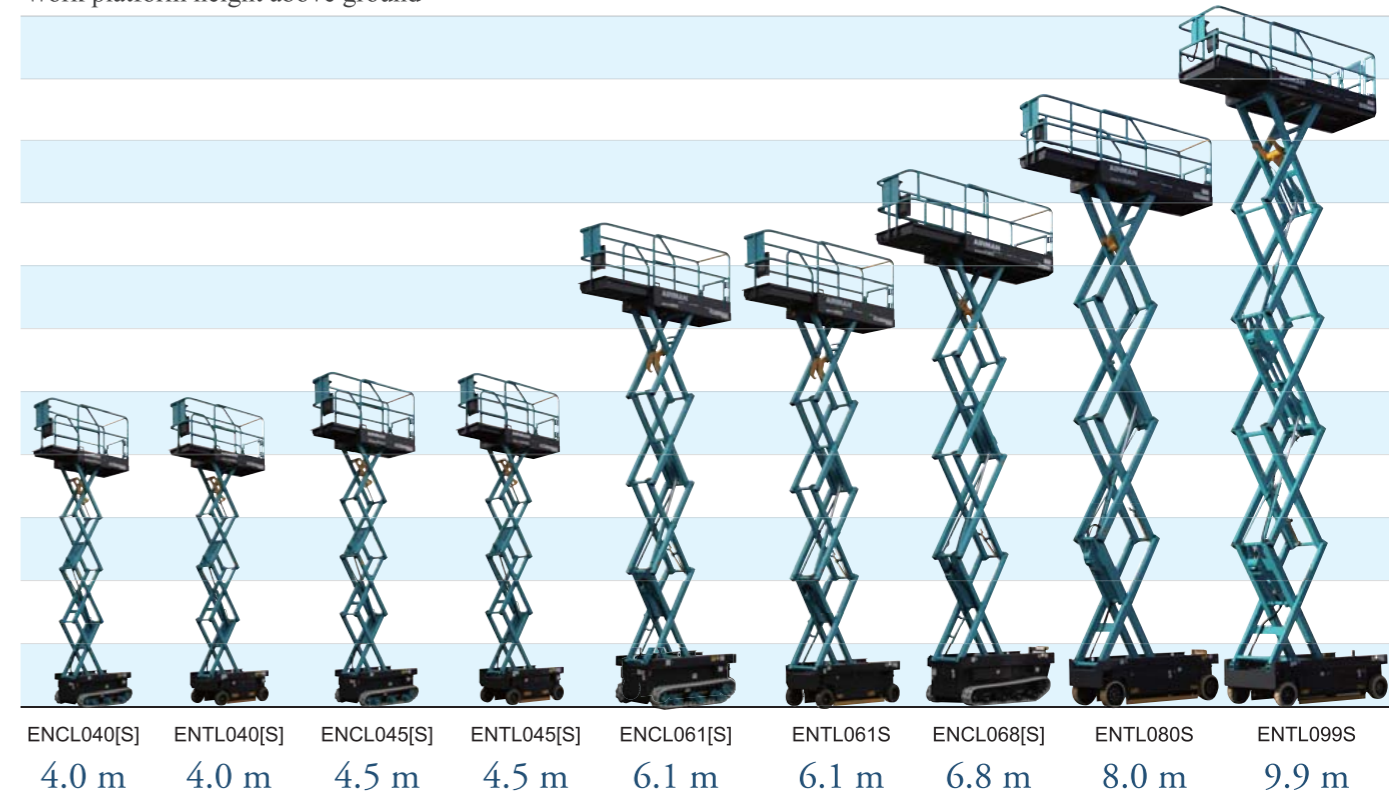


“Smart” = Sophisticated, intelligent “Safety” = Security

Aerial work platforms that are a step ahead

deliver “Smart” and “Safety” to our customers.

Work platform height above ground



3 SMARTS

“Battery fluid replenishment work is very difficult.” “We want to reduce battery maintenance costs.”

“I want to know the status of the machine and battery.” “I want to identify the malfunctioning part easily.”

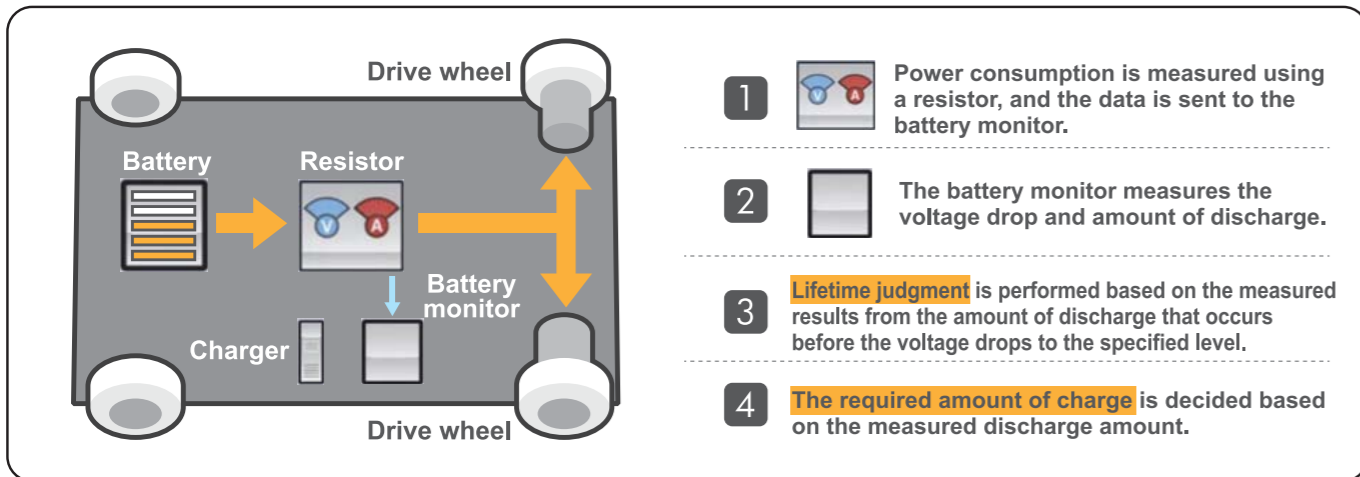
The 3 “Smarts” were developed in order to satisfy these kinds of requests.

New charging system

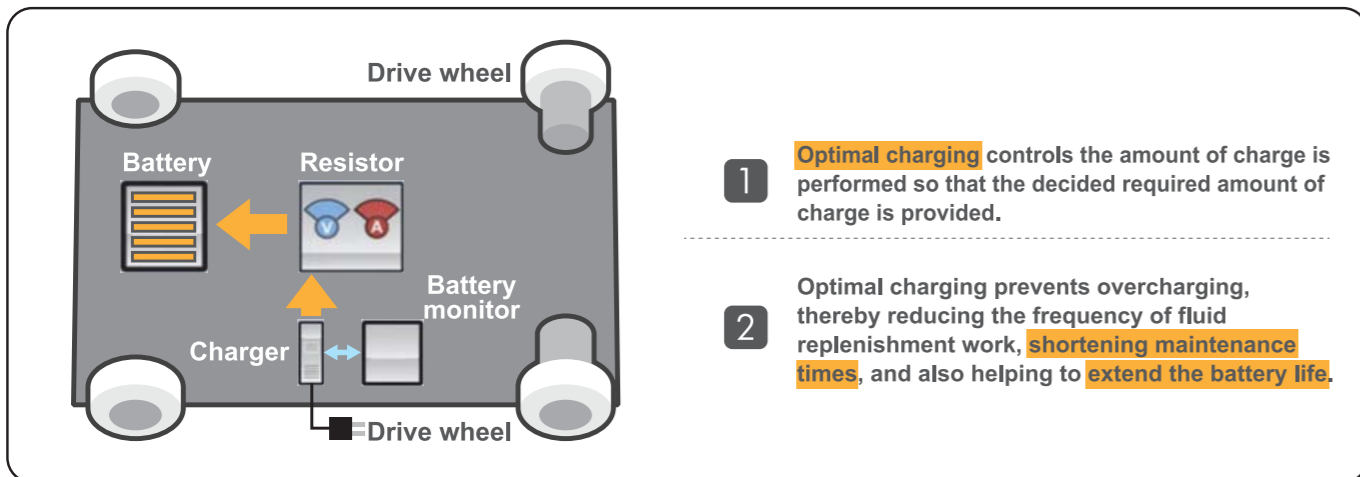
SMART CHARGE SYSTEM

The originally developed charger, resistor, and battery monitor are used to monitor the amounts of battery charge and discharge for optimal charging. This achieves a longer battery lifetime, reduces the frequency of fluid replenishment work, and shortens maintenance times. The new charger can be used with AC 100V and 200V power supplies.

When operating



When charging



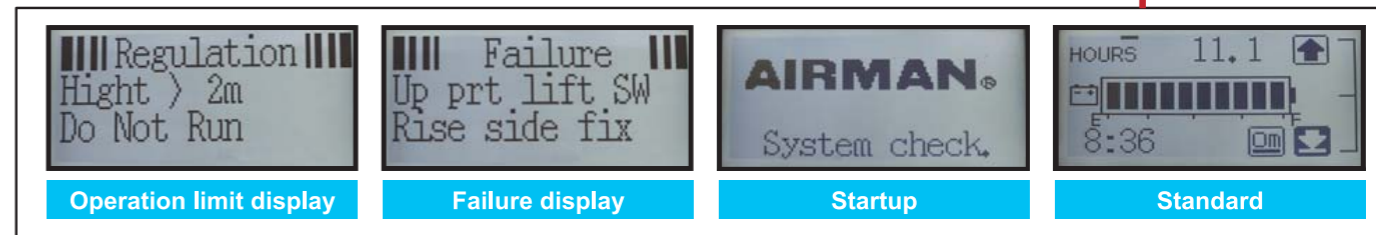
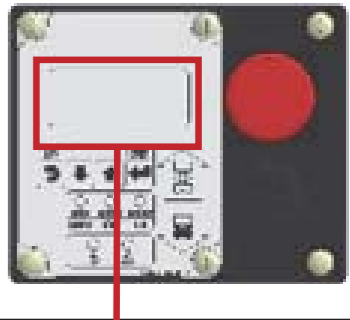
Monitor panel

SMART MONITOR PANEL

The new-model aerial work platforms are equipped with a new monitor panel.

- Startup screen
- Operation limit display screen
- Standard screen
- Failure display screen

This panel displays information including the above. Operation limit displays and failure displays are prioritized for display whenever one occurs.

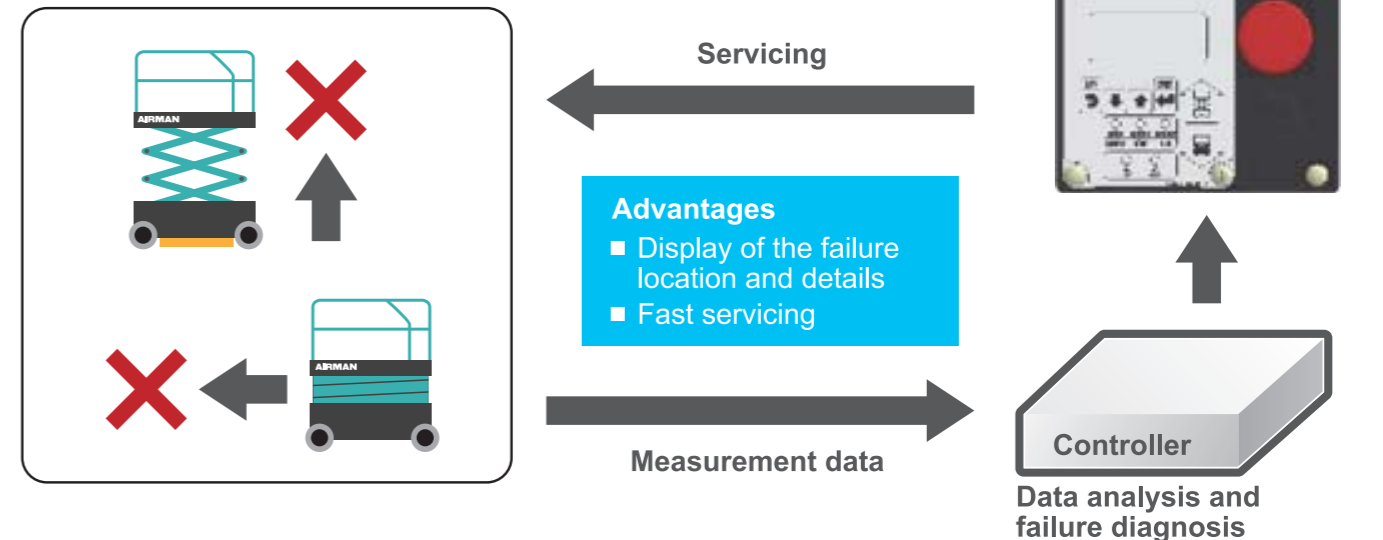


Failure diagnosis function

SMART MAINTENANCE SYSTEM

Electrical circuits for detecting irregularities are provided.

The controller analyzes the data measured by the various sensors in order to diagnose failures. When a failure is detected, the failure results are displayed on the monitor panel. The operator can check the diagnosis results and quickly perform troubleshooting and repair.



Convenience and maintenance

The ENTL Series was designed for excellent work efficiency and also for easier operation and maintenance.

The ENCL Series makes possible effortless spin turns and pivot turns.

This makes them ideal for equipment and interior work, maintenance work, and other work without a fixed scaffolding.

Center hoisting for easy loading Patented registered

The same kind of center hoisting hook as a compressor or generator is used, allowing the machine to easily be loaded onto a truck.

Can be loaded and unloaded with a 4-ton truck-mounted crane (2.9 ton hoist).



Waterproof structure

All operation panels and computer parts are covered with a plastic cover and the machine body is equipped with seal rubber at all parts, giving it a waterproof structure that allows it to be stored outdoors.

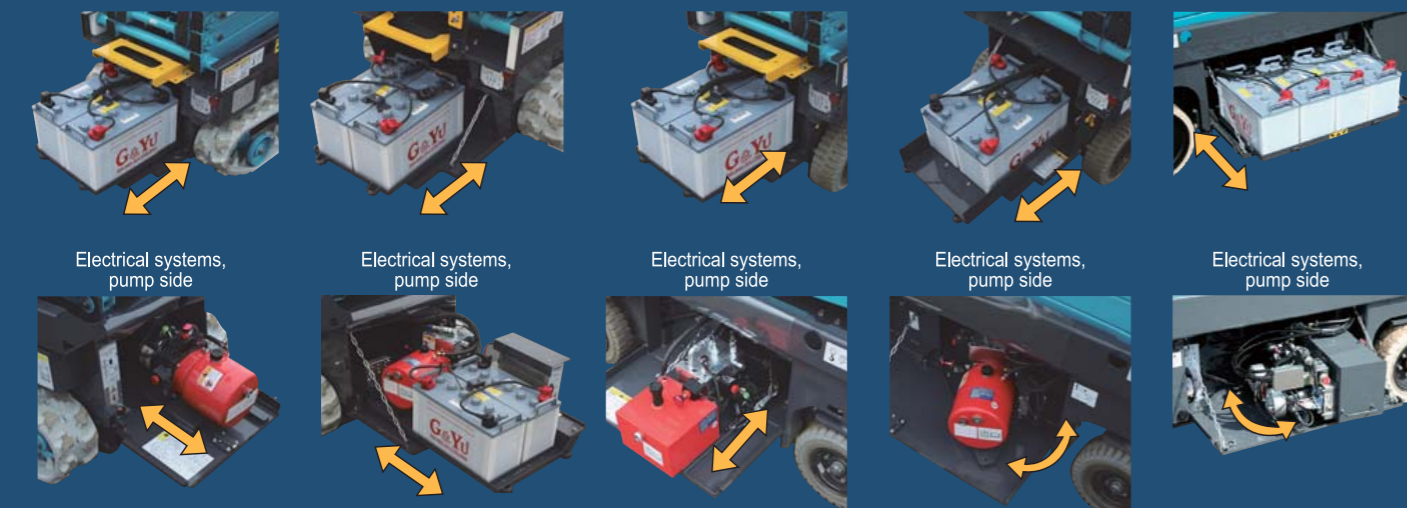
Harsh water spray tests are also performed to check the waterproof performance.

Outdoor storage OK

Easy maintenance

Sliding doors are used on the battery side for convenient access. This allows inspection and maintenance to be carried out easily. The battery is a highly universal EB100 battery.

- ENCL040/045
- ENCL061/068
- ENTL040/045
- ENTL061
- ENTL080/099



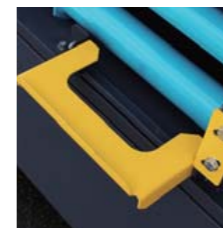
Double overload prevention devices

2 overload prevention devices are included - a relief valve and pressure sensor. This prevents raising when the unit is overloaded, protecting the machine and helping ensure a safe working environment.



Larger step

A new larger step for entry and exit is provided. This allows operators to safely ascend and descend to/from the work platform. 6 m and larger models utilize a folding structure that makes the total length more compact.



ENTL040/045 pothole protector

The pothole protector that is installed on our 6 m and higher models is also installed as standard on the ENTL040/045. This reduces the risk of overturning when one side falls into a hole while the platform is raised.



Easy turning on the spot (ENCL Series)

The ENCL Series features an undercarriage based on our sturdy mini backhoe design concept. It allows easy spin turns and pivot turns.



Sliding expansion platform

The work platform can be expanded by sliding it. This is convenient when working up close to something or when carrying long objects.

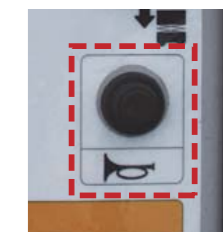
Maximum load on expansion part	
ENTL040/045, ENCL040/045	: 115kg
ENTL061/080/099, ENCL061/068	: 125 kg

Flashing lamp as an option

A flashing lamp can be installed as an option.

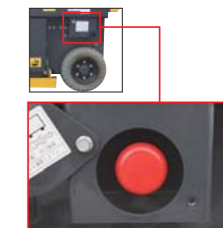
Warning horn switch

A warning horn switch is added to the upper operation box. This can be used to warn nearby persons and helps ensure the safety of the operator and the surrounding area.



Power shut-off switch is provided

A power shut-off switch is provided with all models. Pressing the power shut-off switch when performing maintenance yields the same effects as disconnecting the battery cable.



The crawler type can also be transported by forklift.

The crawler-type ENCL series includes holes for insertion of forklift prongs in the side. This allows it to be transported safely in the same way as the wheel-type ENTL Series.



Minimum turning radius (ENTL Series)

The ENTL Series features a large tire steering angle, with a "magical turn" function that reverses the rear drive tires left/right to achieve a Class 1 minimum turning radius.



A height display function for all models

All machines are equipped as standard with a height display function that can be checked from the upper operation panel.



Auto power OFF mechanism

All machines are equipped with an automatic power OFF function that switches to power saving mode after 2 hours if the user forgets to turn OFF the ignition switch. This helps prevent a dead battery caused by forgetting to turn OFF the switch.