

**HORIBA**  
Automotive Test Systems

N E W

Automatic Driving System  
**ADS EVO**





## Automatic Driving System ADS EVO

Vehicle developers face increasing pressure to reduce development times, while vehicle complexity is increasing. The ADS EVO ensures accurate and repeatable global test cycles on chassis dynamometers.

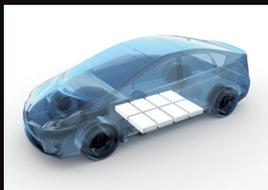
### Contributes to Vehicle Development Efficiency

The ADS EVO can be used in a wide variety of chassis and vehicle test cells to reduce human error and provides accurate testing results.

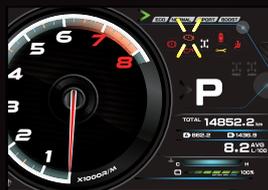
Emissions test



Electric vehicle development



System validation



Multi-functional for more than chassis test cells

Engine dynamometers

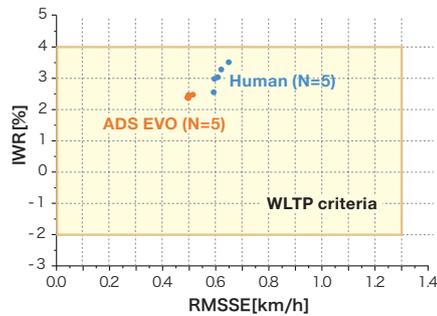


Powertrain dynamometers



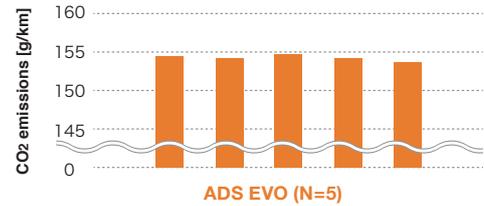
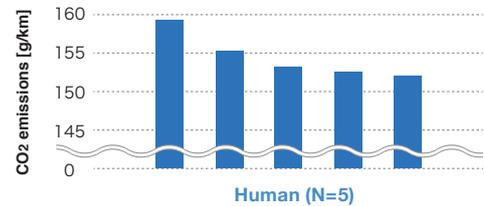
## Test Repeatability

The ADS EVO automates the driver in a chassis vehicle test cell and enables test repeatability.



Comparison data of drive quality metrics between ADS EVO and a human driver.

Drive Quality Metrics (SAE J2951)  
 WLTP was added to the drive quality metrics in 2019.  
 The aim was to standardize drivers for test repeatability.



Comparison data of CO2 emissions between ADS EVO and a human driver.

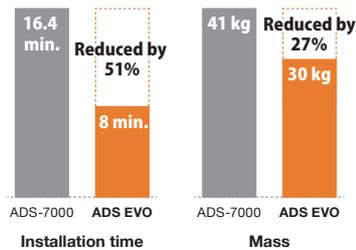
6-speed manual transmission and WLTP Hot Cycle

## Improved Efficiency and Installation

The ADS EVO reduces installation time and improves test start-up efficiency.

### Light Weight and Easy Installation

Compared to the previous model ADS-7000



### Easy to Handle

Ergonomic design



### Simplified Installation

ISOFIX\* significantly reduces installation time (patent pending)



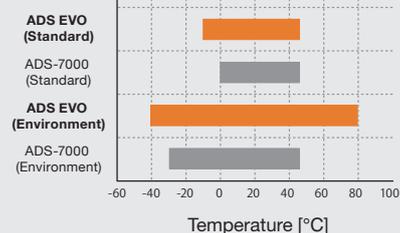
\* ISOFIX is the international standard for securing child safety seats in passenger cars.



Introducing the ADS EVO video, view the easy installation process and compact, efficient storage cart.

## Options

The ADS EVO is compatible with environment resistance specifications including high and low temperatures ranging from -40 - 80 °C.



In addition to the standard actuator for engine start, optional versatile actuators are also available.

For various vehicle investigations such as air conditioning ON / OFF during the test cycle (patent pending).

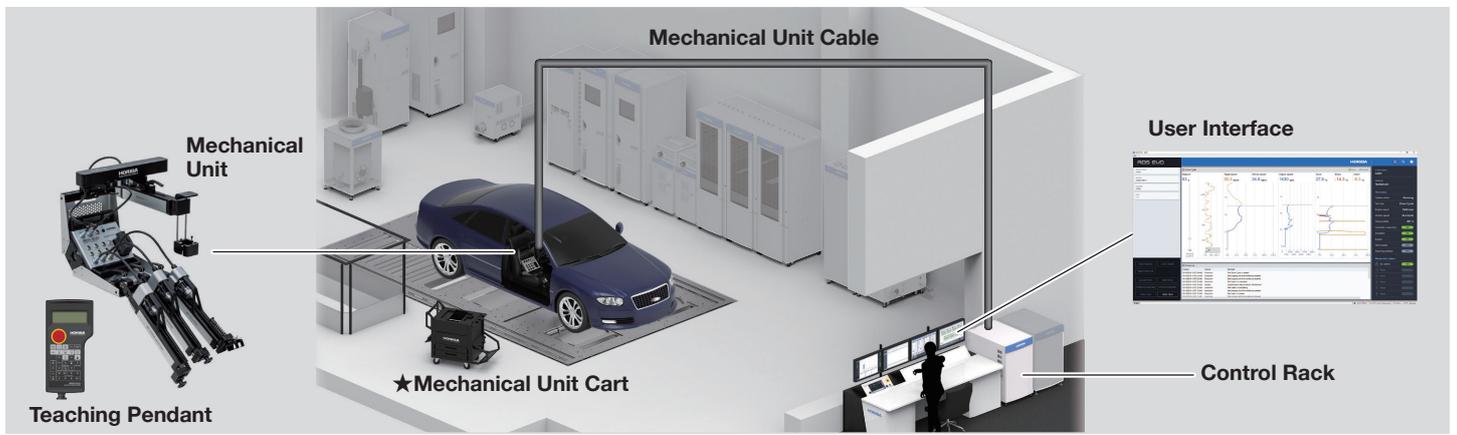


Self-contained mechanical unit cart

Intuitive design that informs installation procedures (patent pending)



Design is subject to change



## Basic Functions

<b>Driving Functions</b>	Standard drive traces (emissions, etc.) ★Performance test mode Auto/Manual adjust (pedal and shift) Learning mode Warm up mode Constant speed mode Manual mode
<b>Applicable Vehicles</b>	MT, AT, CVT, ★Hybrid/EV Floor shift, ★Instrument panel shift, ★Column shift For both left and right hand drive vehicles
<b>Other Functions</b>	Measurement function: Dynamometer speed, Engine speed External operation input: Drive start/stop External condition input: Dynamometer ready/error, Blower ON External operation output: Synchronization signal with data processing device ★HOST communication: AK compliant

★: Option

## Specifications

<b>Mechanical Unit</b>	
<b>Total Mass</b>	Standard Specification : 30 kg
<b>Unit Mass</b>	3 - 7 kg
<b>Operating Environment</b>	Standard Specification : -10 - 45°C 30 - 90% RH (no condensation) ★Environment Resistance Specification : -40 - 80°C 30 - 90% RH (no condensation)
<b>Actuators</b>	Accelerator: Stroke length 150 mm, Rated output 160 N, Maximum operating speed 0.61 m/s Brake: Stroke length 200 mm, Rated output 241 N, Maximum operating speed 0.61 m/s Clutch: Stroke length 200 mm, Rated output 322 N, Maximum operating speed 0.78 m/s Shift (X) : Stroke length 190 mm, Rated output 193 N, Maximum operating speed 0.77 m/s Shift (Y) : Stroke length 240 mm, Rated output 193 N, Maximum operating speed 0.77m/s Starter (PUSH) : Rated output 16 N ★Starter (TURN) : Rated output 0.97 N·m ★Up to 5ch push actuators can be added
<b>Control Rack</b>	
<b>Size</b>	578 (W) × 929 (D) × 1000 (H) mm
<b>Operating Environment</b>	5 - 40°C 20 - 80% RH (no condensation)
<b>Power supply</b>	Single phase: AC 200 - 240 V ± 10% (Max 250 V) 50/60 Hz 3.0 kVA or Single phase: AC 100 - 120 V ± 10% 50/60 Hz 3.0 kVA
<b>Others</b>	Teaching pendant: Used for learning shift positions and other various settings Mechanical unit cable: Connect mechanical unit and control rack



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