

November 29, 2024

Meidensha Corporation

## **Meidensha develops 3MS-S8 forklift-type automated guided vehicle (AGV), with the lowest floor height in the industry**

### **Product adopts to the needs for automation and manpower saving at logistic warehouses**

Meidensha Corporation (Meiden) has developed a 3MS-S8 forklift-type automated guided vehicle (AGV) with an ultra-low floor height to meet demand for automated goods transportation and labor savings in logistics warehouses. According to a study conducted by Meiden, this product features the lowest floor height in the industry at just 132mm. This is due to Meiden's unique design technology. The design alleviates concerns about the height of the basket trolleys and racks that the AGV will carry, reducing the need for additional investment such as purchasing new trolleys or remodeling existing ones before implementation. We have already received numerous inquiries and aim to sell 200 units annually.



3MS-S8 forklift-type AGV with ultralow-floor height



Examples of product usage

#### ■ Background of its development

With the rise of online shopping, the number of parcels handled by courier services is increasing within the logistics industry. Logistics warehouses have been constructed across the nation, but these facilities require significant manpower to

transport commercial goods. They also face the challenge of a growing number of labor accidents during operations, partly due to Japan's aging workforce.

In response to this social situation, Meiden, which has supplied AGVs to various manufacturing facilities, including those in the automotive industry, developed a new product with a floor height that is 50mm lower than conventional models, while increasing the maximum cargo weight it can carry from 350kg to 800kg. This newly developed AGV can significantly enhance operational flexibility, as it can navigate beneath trolleys and frames, such as basket trolleys and racks with legs, and lift them as needed.

■ Product features

1. Realizing both low floor height and high output

Despite its low vehicle height of 132mm, the maximum cargo weight it can carry has been dramatically increased from 350kg to 800kg.

2. High-precision stopping performance

With a stopping precision of  $\pm 10$ mm, the AGV can accurately position itself under the trolley it carries, ensuring stable lifting.

3. Control of multiple AGVs in operation and intersection traffic

The control panel allows for comprehensive management of AGVs navigating intersections in transport routes, facilitating the efficient operation of multiple units.

4. Automatic charging as a standard feature

The AGV is automatically charged while in standby mode with the designated charger. This feature eliminates the time and effort required for battery replacement, even in logistics centers and other facilities that operate around the clock. The product also includes a self-monitoring function for battery charge levels, enabling appropriate charging based on operational conditions.

Items	3NS-S8 (New Product)	3MS-3.5E (Conventional product)
Vehicle length (mm)	1,450	1,650
Vehicle width (mm)	510	380
Vehicle height (mm)	132	180
Vehicle weight (kg)	150	
Maximum cargo weight (kg)	800	350
Maximum speed (m/min)	60	
Minimum turning radius (mm)	700 (speed: 30m/min)	800 (speed: 30m/min)

\*The conventional product is also on sale.

Meiden is committed to enhancing operations at various facilities, including those in the logistics industry, by focusing on the development and provision of high-performance, high-quality AGV systems.