



**SIMPLEX ROBOTICS PVT LTD**



RISHABH- Fork type Automated Guided Vehicles (AGVs) are autonomous mobile robots used to transport materials from loading to unloading stations. It is a highly flexible, intelligent and versatile material handling vehicle

# Automated Guided Vehicle

## Need of the Hour:

- ❖ To reduce the operating cost
- ❖ Intelligent process flow control
- ❖ Safety at multiple levels
- ❖ Reduce dependency on labour
- ❖ High level accuracy
- ❖ Faster execution of work-reliable 24/7 operation

## Features of AGV

- Highly Flexible, intelligent & versatile
- Highly Reliable
- Cost effective
- Accurate & fast working
- Low operating cost
- Lower product damage
- Reliable safety system
- Can be used in hazardous conditions
- Low maintenance
- Easy operation using touch panel
- Programming using software PLC
- Repetitiveness

## Relevance :

- In the Warehouse :- Storage of raw material / finished product / WIP
- At the Production Lines:- delivery of raw material to production line / Transport of WIP to / from production line.
- In the Packing area:- Transportation of finished goods from the palletizers to the stretch wrappers / Delivery of empty pallets to the palletizers, Pallet handling

# TECHNICAL SPECIFICATION

## RISHABH 15

- ❖ Load carrying capacity – 1500 kg
- ❖ Speed upto 1.2m/ sec
- ❖ Lifting Height upto 6 metres
- ❖ Virtual Wireless Navigation used in which one does not require to put magnetic lines on the floor nor costly infrastructure investment
- ❖ Smart vehicle routing and traffic control system
- ❖ 802.11 wireless communication
- ❖ Manual and Automatic battery change availability
- ❖ Obstacle detection and prevention safety system
- ❖ AC Traction and steer motors requires less maintenance
- ❖ AC Hydraulic motor for lifting requires less maintenance

### Highlights

• Repetitive transports with long distances	• Multi shift and 24/7 operation
• Complex production flows	• Used for delivery of raw materials to the production lines
• Transport of WIP to / from the production lines	• Trailer loading / unloading

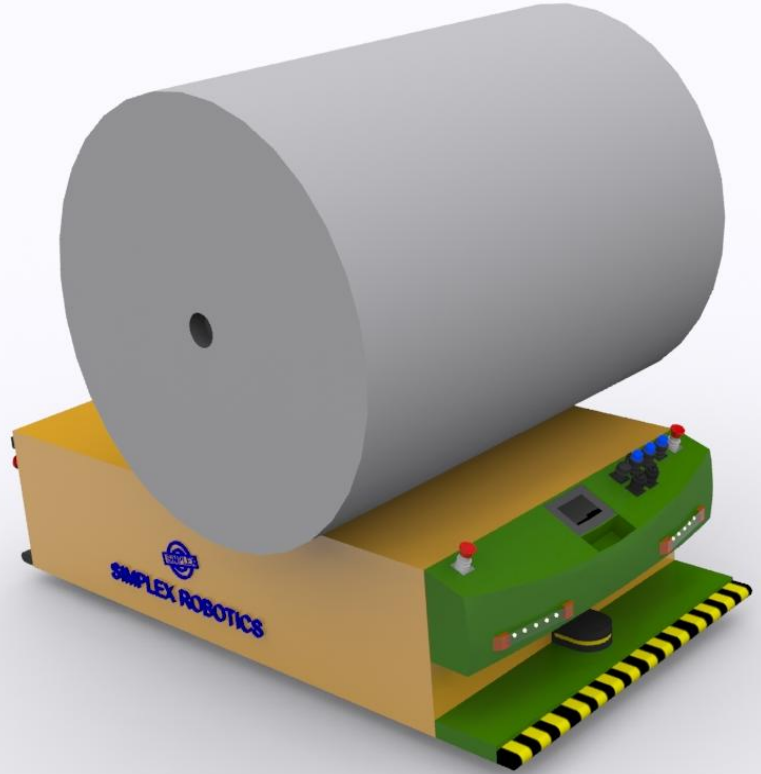




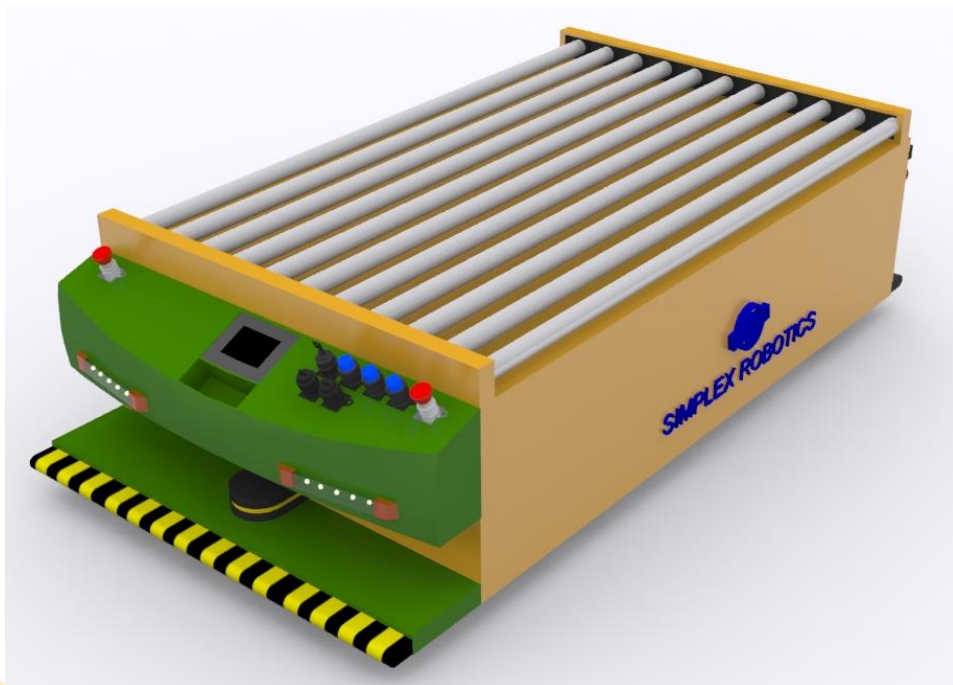
## **Automated Guided Cart**

This Automated Guided Cart can be used for towing, kiting, can be used as mobile conveyor systems or just to put load on.

The are involved in bulk movement of products in warehouses or manufacturing/assembly operations. They can maneuver easily in tight areas.



## Automated Guided Carts




## TECHNICAL SPECIFICATION HASTI 05

- ❖ Load carrying capacity – 500 kg
- ❖ Speed upto 1m/ sec
- ❖ Virtual Wireless Navigation used in which one does not require to put magnetic lines on the floor nor costly infrastructure investment
- ❖ Smart vehicle routing and traffic control system
- ❖ 802.11 wireless communication
- ❖ Manual and Automatic battery change availability
- ❖ Obstacle detection and prevention safety system
- ❖ AC traction and steer motors requires less maintenance

### Highlights

• Repetitive transports with long distances	• Multi shift and 24/7 operation
• Complex production flows	• Used for delivery of raw materials to the production lines
• Transport of WIP to / from the production lines	• Used for towing, kiting, can be used as mobile conveyor systems

# **BENEFITS OF AN AGV**

- ❖ **AGVs can help increase the efficiency and reduce the cost of a manufacturing plant or a warehouse**
  - ❖ **AGVs can be used to move raw materials to finished products irrespective of the dimensions, weight or quantity**
  - ❖ **Can carry dangerous objects whether it may be too hot or too cold**
  - ❖ **Working in extreme temperatures**
  - ❖ **Doubling of picking productivity**
  - ❖ **High flexibility**
  - ❖ **Ease of upgrading and optimising manual systems**
  - ❖ **Improved operator safety**
  - ❖ **Reduced product damage**
  - ❖ **Reduced truck and rack damage**
  - ❖ **Real time transport and picking management**
  - ❖ **Flexible to changing operational requirements**
  - ❖ **Applicable to new and existing sites**
- 



# Applications in various Industries

- ▶ Automotive–For transport of motor, axle, car body etc
- ▶ Food and Beverages–For transport of products like drinks, cereals, candy, snack foods, packaging material etc
- ▶ Chemicals– To carry hazardous chemicals.
- ▶ Furniture –For transport of home, office furniture products
- ▶ Discrete manufacturing items.
- ▶ Distribution and logistics Industries
- ▶ Hospitals– To carry materials like meals, linen, drugs, waste, beds etc
- ▶ Tissue–For moving tissue rolls, packaging boxes etc
- ▶ Paper and printing–Transport of raw materials such as paper, carton and boards
- ▶ Textiles –For moving different clothing materials like raw material to finished goods



**SIMPLEX ROBOTICS PVT LTD**

Simplex Robotics Pvt Ltd  
64, Industrial Estate,  
Bhilai-490026,  
Chattisgarh, India

Contact Name: Mihir Chheda  
Mob: +919920533258

Email: [info@simplexrobotics.com](mailto:info@simplexrobotics.com)  
[mihir.chheda@simplexrobotics.com](mailto:mihir.chheda@simplexrobotics.com)

Website: [www.simplexrobotics.com](http://www.simplexrobotics.com)