

AUTOMATED GUIDED VEHICLES

An automated guided vehicle (AGV) or an automatic guided robot is a portable robot that follows or uses radio waves, vision cameras, magnets or navigational lasers along marked long lines or wires on the floor. They are used in industrial applications most often for transporting heavy materials, such as a factory or warehouse, to a large industrial building. During the late 20th century, application of the automatic guided vehicle expanded.



WIRED

A wire is placed in a 1 inch deep slot in the floor. This slot is split in the path to be taken by the AGV. transmits a radio signal detected by a sensor n the base of the AGV. This data is used to control the steering system as the AGV follows the wire.

GUIDE TAPE

A guide tape AGV functions the same as a wired AGV, the only difference is instead of a wire the AGV follows tape. As such, if the path needs to change, it can easily be moved. Originally, colored tape is less expensive; however, it does not have the ability to be inserted into high traffic areas where the tape can become dusty. The floor also can be mounted with a flexible magnetic bar, but it is operated in the same way as magnetic band and is therefore still powerless or passive.

VISION GUIDED

Vision-Guided AGVs can be installed without any changes to the environment or infrastructure. They operate using cameras to record features along the route, allowing the AGV to replay the route using the recorded features to navigate.