APS ADD ON: AUTOMATED GUIDED VEHICLE | INDUSTRY AND HIGHER EDUCATION

AUTOMATED GUIDED VEHICLE (AGV)

Utilising the diversity of the APS

The APS Add On: Automated Guided Vehicle extends the Agile Production Simulation (APS) with an additional Automated Guided Vehicle (AGV). This is responsible for intralogistics within APS and enables agile and flexible processes. The additional AGV significantly increases the possibilities of intralogistics. Parallelisation and prioritisation in the production workflow can be planned, tested and experienced. At the same time, the complexity of logistics processes increases.

The Automated Guided Vehicle uses ultrasonic sensors, line sensors, push buttons and a phototransistor to orientate itself within the Agile Production Simulation. The Mecanum Omniwheels enable multidirectional driving and therefore space-saving and effective transport of workpieces within the Agile Production Simulation. The AGV receives its driving commands from the central control unit of the Agile Production Simulation in the industry standard VDA 5050. The AGV uses a fischertechnik 8.4V 1800mAh battery pack as its power supply. When the battery reaches a defined low level, the AGV automatically moves to the integrated charging station. The additional AGV can only be operated in conjunction with the Agile Production Simulation.

FACTS

Optimum expansion of the intralogistics in the Agile Production Simulation

For learning further driving commands in the industry standard VDA 5050

The APS Add On: Driverless Transport System unlocks additional learning content in the Digital Learning Platform

ATTENTION: Can only be used in combination with the Agile Production Simulation

MQTT

python

Communication Standard VDA 5050

Automated Guided Vehicle (AGV)
Facts

Specifications

- 1x TXT 4.0 Controller
- 1x Charging electronics
- 4x Encoder motor
- 4x Mecanum Omniwheels
- 1x USB-Camera
- 2x Push button
- 2x Ultrasonic sensor
- 1x Infrared track sensor
- 1x Phototransistor
- Power supply 9V

Software

- The programmes in Python are already loaded onto the controller of the AGV. The MQTT protocol is also used for communication.
- All source codes are also freely available on GitHub.

Item No.	571908
EAN	4048962516692
Model dim. (WxHxD)	245x175x135 mm
Model weight (g)	1430

About fischertechnik
Simulation models for industry and universities

The production of tomorrow is the subject of research, industry and academia. It describes the transformation to agility, customer orientation, artificial intelligence and Industry 4.0. This creates a multitude of challenges that are influenced by technological developments, social changes and global trends. Overcoming these challenges requires a holistic and proactive approach from companies that invest in innovation and employee training in order to successfully shape the production of tomorrow and be globally competitive

Our approach is to understand on a small scale before implementing on a large scale. With fischertechnik simulation models, you prepare yourself for the future. They create sustainable learning experiences in vocational training and studies, overcome the hurdles of seemingly complex transformations and conduct research into future topics.

fischertechnik simulation models offer the opportunity to realistically represent complex, technical production systems and are the perfect basis for sustainable learning experiences in a safe and action-oriented environment. Further information at www.fischertechnik.de/en/industry-and-universities.

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