

Automated, reliable and efficient for performing routine tasks

Optimised transport routes

Utilisation of existing routes

Short payback period

Manual or fully automated operation



EZS 350a

Automated Guided Vehicle System, Electric Tow Tractor (5,000 kg)

The EZS 350a is an Automated Guided Vehicle based on our standard series truck. It combines proven mechanical engineering with precision navigation technology and an extensive safety system. This ensures the highest possible level of reliability and safety. The EZS 350a can be used in mixed operations mode with manual trucks and pedestrians. Regardless of whether you integrate it in existing factory structures or use it in a new building, the EZS 350a is the perfect choice when it comes to raising the efficiency of your processes.

The EZS 350a uses laser navigation so no floor work is required. Reflectors are attached to suitable objects along the travel route such as racking, columns and walls, natural landmarks can also be used.

Using the EZS 350a will improve your work processes. The automated handling of standardised transport processes, e.g.

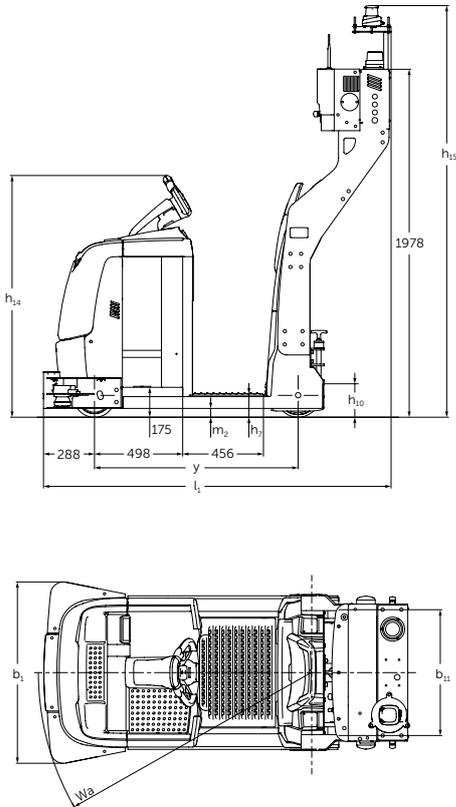
for production supply, relieves strain on the employees with respect to additional transport tasks and gives them the opportunity to concentrate on their main tasks.

Our AGV system can easily be integrated into the existing IT and software landscape. Our award-winning Jungheinrich Logistics Interface facilitates a smooth connection to a host system, such as the Jungheinrich WMS or other available WMS/ERP systems. However, you can also use your AGV system as a stand-alone system, i.e. as an autonomous system without a host connection.

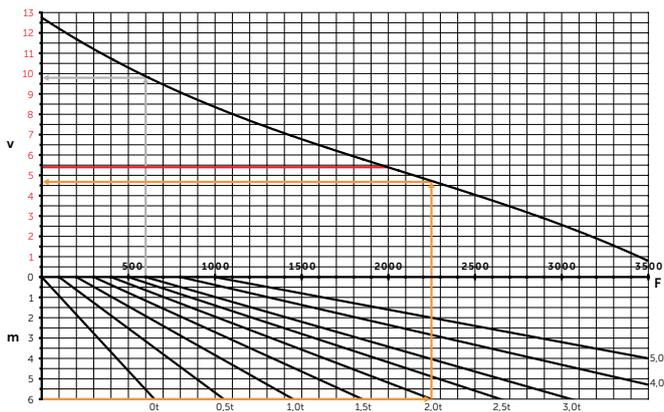
The modular system structure creates the best conditions for representing individual customer processes as well as reacting flexibly and quickly to process changes. This creates a solid basis for efficient use, according to your requirements.



EZS 350a



Pulling ability



v= speed [km/h], m=incline [%], F=drawbar pull [N]

Speed in automatic mode

Maximum speed in automatic mode, 5.4 km/h (red line in diagram). Optional raised travel speed with additional sensor.

Reading examples:

1. The EZS 350a operates with a 3 t load on the level. To do this it requires a drawbar pull of 600 N and can achieve an approximate speed of 9.9 km/h.
2. The EZS 350a is able to drive up a 6% gradient with a 2 t load. To do this it requires a drawbar pull of 2230 N and can achieve an approximate speed of 4.8 km/h.

Note:

Continuous operation not possible for the EZS 350a above 1000 N.

For inclines greater than 4% it is recommended that braked trailers be used.

Technical data in line with VDI 2198

| | | | | |
|------------------|-------|--|-----------------------------------|--------------------------|
| Identification | 1.1 | Manufacturer (abbreviation) | | Jungheinrich |
| | 1.2 | Model | | EZS 350a |
| | 1.3 | Drive | | Electric |
| | 1.4 | Manual, pedestrian, stand-on, seated, order picker operation | | AGV |
| | 1.5 | Load capacity/rated load | Q t | 5 |
| | 1.7 | Rated drawbar pull | F N | 1,000 |
| Weights | 1.9 | Wheelbase | y mm | 1,149 |
| | 2.1 | Net weight | kg | 1,333 |
| Wheels / frame | 2.3 | Axle loading, unladen front/rear | kg | 594 / 739 |
| | 3.1 | Tyres | | Vu |
| | 3.2 | Tyre size, front | mm | ø230 x 77 |
| | 3.3 | Tyre size, rear | mm | ø250 x 80 |
| | 3.5 | Wheels, number front/rear (x = driven wheels) | | 1x/2 |
| Basic dimensions | 3.7 | Tread width, rear | b ₁₁ mm | 680 |
| | 4.2.1 | Total height | h ₁₅ mm | 2,273 |
| | 4.8.1 | Standing height | h ₇ mm | 125 |
| | 4.9 | Height of tiller in drive position min. / max. | h ₁₄ mm | 1,374 |
| | 4.12 | Coupling height | h ₁₀ mm | 158 ²⁾ |
| | 4.19 | Overall length | l ₁ mm | 1,962 ⁵⁾ |
| | 4.21 | Overall width | b ₁ /b ₂ mm | 980 |
| Performance data | 4.32 | Ground clearance, centre of wheelbase | m ₂ mm | 50 |
| | 4.35 | Turning radius | W _a mm | 1,466 |
| | 5.1 | Travel speed, laden/unladen | km/h | 8 / 12.5 ¹⁾⁴⁾ |
| | 5.5 | Drawbar pull, laden/unladen | N | 1,000 ³⁾ |
| | 5.6 | Max. drawbar pull, laden/unladen | N | 3,700 |
| | 5.10 | Service brake | | regenerative |
| Electrics | 5.11 | Parking brake | | Automatic parking brake |
| | 6.1 | Drive motor, output S2 60 min. | kW | 2.8 |
| | 6.3 | Battery as per DIN 43531/35/36 A, B, C, no | | no |
| | 6.4 | Battery voltage/nominal capacity K5 | V/Ah | 24 / 620 |
| | 6.5 | Battery weight | kg | 460 |
| Misc. | 8.1 | Type of drive control | | AC speedCONTROL |
| | 8.4 | Sound pressure level at operator's ear as per EN 12053 | dB (A) | 66 |

¹⁾ in manual operation

²⁾ Other coupling heights available

³⁾ Rated drawbar pull

⁴⁾ See diagram

⁵⁾ without option S3000, without coupling

Benefit from the advantages



jetPILOT steering wheel



Different couplings available (optional)



Additional personal protection scanner for higher travel speeds (optional)



Floor Spot (optional)

Established standard truck used as basis

The basis of the EZS 350a is the EZS 350XL electric tow tractor. The EZS 350a comprises this tried and tested standard truck combined with an extensive safety system as well as automation components. This means that, in addition to reliability and efficiency, the EZS 350a also offers other benefits of the standard truck:

- 24-V 3-phase AC drive motor
- No carbon brushes: Maintenance-free drive motor
- Robust design
- Compact design
- jetPILOT steering wheel

High level of flexibility

Despite the automation features, the EZS 350a can also function fully as a manual

truck. Surface transport can therefore be reliably carried out by the EZS 350a, while distribution of the goods can also be undertaken by an employee. The optional comfort terminal enables employees to determine the next destination of the EZS 350a and simply enter it with just one click at the truck.

Everything at a glance – with the AGV control panel

The visualisation on the AGV control panel displays all the information relating to the EZS 350a. This provides a rapid overview of the current status of transport tasks. Prioritised orders can also be entered and processed in the corresponding order.

Integration into existing systems

Our Jungheinrich AGV system can easily be integrated into the existing IT and software landscape. The existing WLAN structure is used for communication with the EZS 350a.

If an existing host system, such as the Jungheinrich WMS or another WMS/ERP system is to be used, the AGV system can be connected to this system via the Jungheinrich Logistics Interface.

Precise navigation

The high degree of precision allows for pinpoint accuracy in the positioning of trucks and loads at defined stations. Different navigation types can be used for the EZS 350a, as with the other AGV models. These are designed and specified according to project and can also be used as hybrid navigation.

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The German production facilities in Norderstedt, Moosburg and Landsberg are certified. **ISO 9001**
ISO 14001

Jungheinrich fork lift trucks meet European safety requirements.



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