

Contents

1. Electric Pallet Truck Alligator .....	2
2. Documentation System .....	5
3. File:Betriebsanweisung Batteriewechsel.pdf .....	9
4. IT documentation .....	10
5. Impulse response .....	11

# Electric Pallet Truck Alligator

Tour 3   Documentation System < IT documentation

next: Mathematical formula

A **pallet truck** is an industrial truck with or without electric drive. It can be used to transport transport pallets, lattice boxes and corresponding conveying aids on level surfaces. Another colloquially used name is> **ant**.

Contents

1 Description .....	3
2 Safety regulations .....	3
3 Instruction .....	3
4 Operating instructions .....	3
5 References .....	4

## Description

A pallet truck has two metal tines (fork) that can be pushed under the pallet. In front of the tines there are small, downwardly extendable load rollers, on the other side there are one or two steerable rollers. With the load and castors, the lifting tines can be adjusted parallel to the ground in height with a hydraulic lifting cylinder and a linkage. This way, the pallet can be raised for shipping. The handle is used for moving and steering, and in non-powered devices as a lever for a hydraulic pump, which feeds the lifting cylinder. On the handle or near the steering axle is the operating option for the hydraulic valve (lifting / driving / lowering). Electric pallet trucks follow the operator by means of further switching handles.



Electric pallet truck "Ant"

## Safety regulations

- In Germany, an annual [UVV](#) test (according to the guidelines of the employers' liability insurance association) is mandatory for an electric pallet truck.
- A certificate of competence (driving license) for driving electric pallet trucks is not required if the pallet truck is controlled by a traveling driver, also called a pedestrian. In this case, according to the German Employers' Liability Insurance Ordinance § 7 (2) BGV D27, instruction of the driver in the handling of the lift truck is sufficient. The assignment of the driver does not have to be in writing in this case.<sup>[1]</sup>



ISO7010 W014 Symbol

[File:Betriebsanweisung Batteriewechsel.pdf](#)

## Instruction

- Instructions must always be given when a **new employee comes to a work area** and they are, therefore, also mandatory for apprentices, trainees, temporary staff or leasing staff. The instruction should alert the employee to possible hazards, communicate the correct handling of the equipment and the loads to be transported and teach him necessary precautions for his own safety and the safety of others. The instructions may be delegated by the employer, usually to the company supervisor. The supervisor can observe the employee after instructions have been given and intervene if necessary. Traffic routes, signage, charging stations or other relevant business units must be taught as part of the operational training. Each instruction must be documented in writing and signed by the instructed person.

## Operating instructions

- [In German only: BA Wechseln und Anschließen von Batterien von Staplern](#)

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## References

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1. [↑ Unfallverhütungsvorschrift Flurförderzeuge in der Fassung vom 1. Januar 1997](#)

Tour 3 [Documentation System](#) < [IT documentation](#)

next: [Mathematical formula](#)

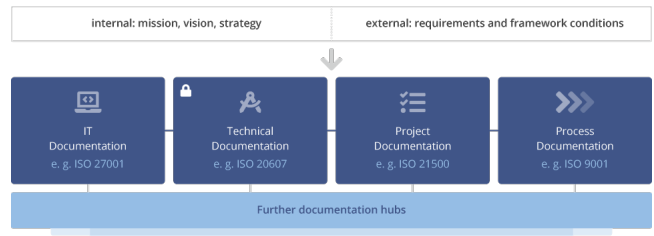
## Documentation System

Tour 3 [Documentation System](#)

next: [Customer documentation](#)

A **documentation system** supports the company in archiving documents. These systems are of outstanding importance for the company to be able to reproduce processes, decisions and agreements.

Documentation systems are used in project documentation, [technical documentation](#) or IT documentation. In order for them to fulfill their purpose, it is necessary to be able to use them to quickly collect, categorize and retrieve information.



## Documentation in a wiki

Wikis were developed to centrally collect and organize the knowledge of different experts. They are therefore ideal documentation systems and have long since become the standard documentation system, not least in IT.

- *Collaboration without prior knowledge:* With the visual editor, images can be quickly integrated into an article using "drag & drop".
- *Office documents:* Documents in other formats (Office, PDF etc.) can be attached to an article just as quickly.
- *Creation of structured data:* The documentation can be enriched with structured data (attributes) that can be processed inside and outside the system. (Semantic MediaWiki)
- *Page versioning:* The traceability and reproducibility of all changes in the documentation enable the management of legally required information and, if necessary, safeguard against liability.

Example pages

Customer documentation

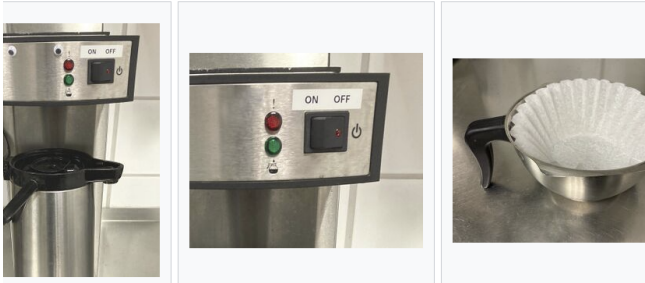
	Contact since	2017	Status
ner	Account Manager	Doe, John	Technical Contact

Company/Development System (Contract Type: Subscription)  
Company/Documentation (Contract Type: Subscription)  
Company/Production System (Contract Type: Subscription)

Step-by-step instructions

coffee

er without immediately brewing coffee. Flooding can occur if the tank is filled again afterwards!



IT documentation

rowser's JavaScript console, enter `person` into it, and press `Enter / Return`. You should get a r  
lines:

```
t]
```

you've just created your first object. Job done! But this is an empty object, so we can't really do  
JavaScript object in our file to look like this:

```
{  
  'Smith',  
  
  le',  
  ['music', 'skiing'],  
  on() {  
    s.name[0] + ' ' + this.name[1] +  
    this.age + ' years old. He likes ' +
```

Operating instructions

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driver in the handling of the lift truck is sufficient. The assignment of the driver does not have to be in writing in this



Mathematical formula

response is going to be the derivative of this:

$$\frac{di_{o\mu}}{dt} = 0 + \frac{1}{2}e^{-t}(\cos t + \sin t) - \frac{1}{2}e^{-t}(-\sin t + \cos t)$$

$$e^{-t}(\cos t + \sin t + \sin t - \cos t) = e^{-t} \sin t: I_s = 1 + \cos t$$

$$\int_0^t i_{o\delta}(t - \tau) I_s(\tau) d\tau + C_1$$

$$\int_0^t e^{-(t-\tau)} \sin(t - \tau)(1 + \cos \tau) d\tau + C_1$$

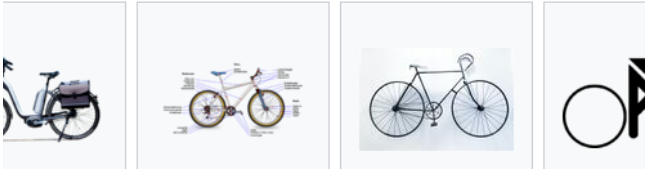
$$\frac{\cos t}{5} + \frac{2 \sin t}{5} - \frac{7e^{-t} \cos t}{10} - \frac{11e^{-t} \sin t}{10} + \frac{1}{2} + C_1$$

Categorized product images

Accessories (2 F)  
Bikes (4 F)

Open category "Bike"

Showing 8 files are in this category, out of 8 total.



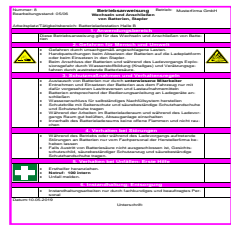
Tour 3 Documentation System

next: [Customer documentation](#)



File:Betriebsanweisung Batteriewechsel.pdf

- [File](#)
- [File history](#)
- [File usage](#)



Betriebsanweisung\_Batteriewechsel.pdf (file size: 45 KB, MIME type: application/pdf)

File history

Click on a date/time to view the file as it appeared at that time.

	Date/Time	Dimensions	User	Comment
current	<a href="#">11:58, 3 December 2021</a>	(45 KB)	<a href="#">Horst Schreiber</a> ( <a href="#">talk</a>   <a href="#">contribs</a> )	

You cannot overwrite this file.

File usage

The following page uses this file:

- [Electric Pallet Truck Alligator](#)

## IT documentation

Tour 3 [Documentation System](#) < [Step-by-step instructions](#)

next: [Operating instructions](#)

BlueSpice is the knowledgebase for (almost) all IT documentation.

### The wiki as IT documentation tool

Ideal use cases	Possible, but not ideal use cases
<ul style="list-style-type: none"><li>• IT process management (e.g., IT emergency manual)</li><li>• Software documentation and references</li><li>• Online help, FAQ und How-to's</li><li>• Customer and installation documentation</li><li>• IT project documentation (z.B. rollout of new services)</li><li>• Compiling inventories</li></ul>	<ul style="list-style-type: none"><li>• Cable management</li><li>• IP address management (IPAM)</li></ul>

## Example pages

The following pages give you some ideas for using the wiki for IT documentation:

- Example of [Customer documentation](#) for [YourCompany](#)
- Graphical process description: [Relocation of IT Staff](#)
- Code editing: [Example Bash](#) or [JavaScript](#)

Tour 3 [Documentation System](#) < [Step-by-step instructions](#)

next: [Operating instructions](#)

## Impulse response

Tour 3 [Documentation System](#) < [Operating instructions](#)

next: [Categorized product images](#)

So far circuits have been driven by a DC source, an AC source and an exponential source. If we can find the current of a circuit generated by a Dirac delta function or impulse voltage source  $\delta$ , then the convolution integral can be used to find the current to any given voltage source!

### Example Impulse Response

The current is found by taking the derivative of the current found due to a DC voltage source! Say the goal is to find the  $\delta$  current of a series LR circuit ... so that in the future the convolution integral can be used to find the current given any arbitrary source.

Choose a DC source of 1 volt (the real  $V_s$  then can scale off this). The particular homogeneous solution (steady state) is 0. The homogeneous solution to the non-homogeneous equation has the form:

Assume the current initially in the inductor is zero. The initial voltage is going to be 1 and is going to be across the inductor (since no current is flowing):

$$v(t) = L \frac{di(t)}{dt}; v(0) = 1 = L * \left(-\frac{AR}{L}\right);$$

If the current in the inductor is initially zero, then:

Which implies that:

So the response to a DC voltage source turning on at  $t=0$  to one volt (called the unit response  $\mu$ ) is:

$$i_{\mu}(t) = \frac{1}{R} \left(1 - e^{-\frac{t}{\frac{L}{R}}}\right)$$

Taking the derivative of this, get the impulse ( $\delta$ ) current is:

Now the current due to any arbitrary  $V_s(t)$  can be found using the convolution integral:

Don't think  $i_{\delta}$  as current. It is really  $\frac{d \text{ current}}{dt} \frac{1 \text{ volt}}{1 \text{ volt}} \cdot V_s(\tau)$  turns into a multiplier.

### LRC Example

Find the time domain expression for  $i_o$  given that  $I_s = \cos(t + \pi/2)\mu(t)$  amp.

Earlier the step response for this problem was found:

The impulse response is going to be the derivative of this:

$$i_o(t) = \int_0^t i_{os}(t - \tau) I_s(\tau) d\tau + C_1$$

The Mupad code to solve the integral (substituting x for  $\tau$ ) is:

```
f := exp(-(t-x)) *sin(t-x) *(1 + cos(x));<br>S := int(f,x = 0..t)
```

## Finding the integration constant

This implies:

Tour 3 [Documentation System](#) < [Operating instructions](#)

next: [Categorized product images](#)