

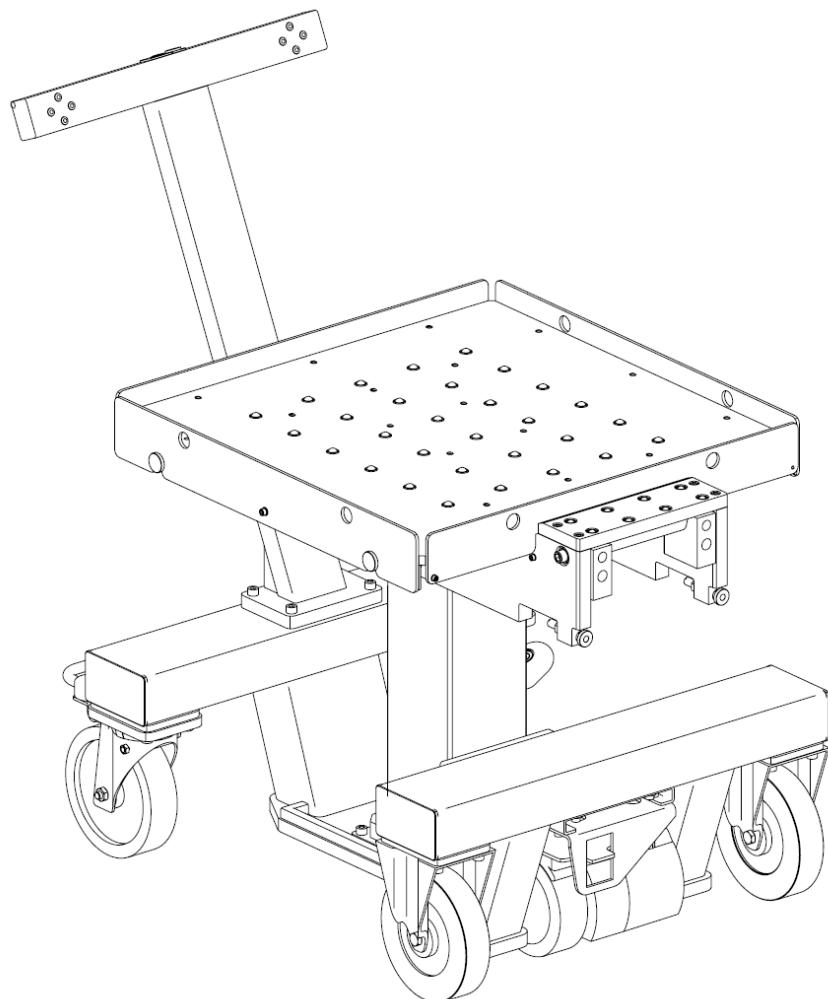
# Operating Manual

Including Declaration of Conformity

for **Die Changing Carts model**

series **RW 500 8.8913.xxx**

(related article numbers see the listing in the Declaration of Conformity)



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## 1 User information

The contents of the operating manual are intended for several groups of people. In particular, the chapters should be read, which are intended for the own group.

In this operating manual the following characters and symbols are used:

### Image numbering

**Position numbers** are assigned in the images. In the text, reference is made to these position numbers with bracketed terms.



### Note

The note contains important information on the topic.

### NOTE

#### Information text

### Safety instructions

The specified safety instructions in the operating manual must always be observed. All safety instructions are outlined in the list of residual risks.

#### *Danger of life / heavy health damages*

Stands for an imminent danger.

If it is not avoided, death or very severe injuries will result.

### ⚠ DANGER



Example

#### Heading

Consequences

Countermeasures

#### *Person damage*

Stands for a possibly dangerous situation.

If it is not avoided, death or very severe injuries will result.

### ⚠ WARNING



Example

#### Heading

Consequences

Countermeasures

#### *Easy injuries/property damage*

Stands for a possibly dangerous situation.

If it is not avoided, minor injuries or property damages can be the consequences.

### ⚠ CAUTION



Example

#### Heading

Consequences

Countermeasures

### Note on PPE

The notes given in the operating manual for the use of the **personal protective equipment** must be followed at all times. The PPE-notes are summarized in the list of residual risks.



**Cross-reference.**

The cross-reference refers to other documents or references in this manual.

**Follow-up process**

The follow-up process runs automatically after manual entry.

**Manual activity**

Several manual activities are numbered according to their order.

1.

## 2 Provisions for the operator

The operator of the die changing cart is obliged to:

- admit to work only trained operators
- ensure in case of operator changes that the operating manual of the die changing cart is read and the safety instructions (in particular) are followed
- keep the operating manual constantly at the work station
- ensure that the maintenance instructions will be followed
- ensure that the required activities (e.g. maintenance) are only carried out by the designated groups
- train the corresponding group of persons, if necessary
- ensure that the die changing cart is used in accordance with its intended use
- ensure that the illumination corresponds to the applicable legal regulations
- make sure that the disposal of the die changing cart is effected only by authorized specialist companies

**NOTE**

**Unauthorized modifications or changes of the die changing cart are prohibited for safety reasons and will void the warranty.**



### 3 Product identification (name plate)

The name plate is located at the shown position.

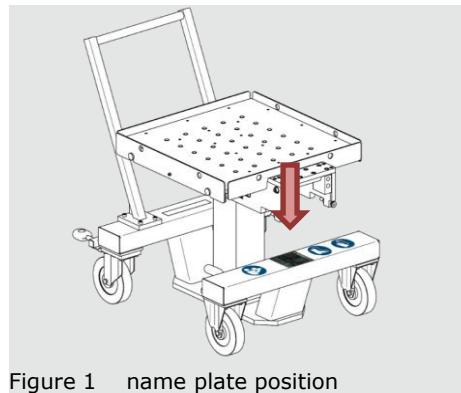


Figure 1 name plate position

### 4 Safety instructions

Special safety instructions are involved in this operating manual as a result of risk assessment.

→ Chapter "List of residual risks"; summary of the safety instructions

Furthermore, the relevant national occupational health and safety regulations, accident prevention regulations, directives and generally recognized rules of technology apply.

#### 4.1 List of residual risks

<b>NOTE</b>
<b>The following list is not exhaustive.</b>
<b>This list shall point out the significant risks in the summary.</b>
<b>The safety instructions in the operating manuals of the sub-components must also be observed.</b>
<b>DANGER</b>
<b>Hydraulic system</b> Severe injury from liquids under high pressure. Work on the hydraulic system may only be carried out by trained personnel. When working on the hydraulic system use eye protection.


**⚠ WARNING**

**Mandatory sign**

High risk of injury in case of disregard of the mandatory signs.

When using the die changing cart, the personal protective equipment must be used. This is:

- Hand protection
- Anti-static shoes

Before using the die changing cart, the operating manual must be carefully read and kept for future reference.

**⚠ WARNING**

**Improper use**

An improper use is not permitted and can cause death or serious personal injury, damage to the die changing cart, unpredictable risks and damages.

An improper use is not permitted, such as:

- exceeding the maximum admissible die weight
- exceeding the maximum admissible moving speed
- failure to observe the centre of gravity
- carrying not provided objects, tools and people
- the storage of tools on the die changing cart

**⚠ WARNING**

**Injury due to an uncontrolled movement**

Uncontrolled movement of the die changing cart (when the brake is released) is possible.

The brake of the die changing cart must always be applied, exception: movement of the die changing cart.

**⚠ WARNING**

**Risk of injury in the case of damage**

Damage to the die changing cart can cause serious injury.

When ascertaining a damage, it is prohibited to use the die changing cart.

**⚠ WARNING**

**Danger of injury due to a lifting or lowering movement**

Components of the product make a movement while they are in operation. This can cause injuries.

Do not reach into the stroke area during the lifting or lowering movement.

**⚠ WARNING**

**Danger of crushing**

To stay in the docking area can lead to crushing injury.

No person is allowed to stay in the docking area.



<b>⚠ WARNING</b>	
<b>Pay attention to die weight</b>  Exceeding the die weight can result in serious injuries to the operator, damages to the die or the die changing cart. Maximum admissible die weight must not be exceeded.	
<b>⚠ WARNING</b>	
<b>Danger of crushing</b>  During die guidance, crushing may occur at the side bars. The die must be guided so that a crushing at the side bars is avoided.	
<b>⚠ CAUTION</b>	
<b>Risk of tipping when transporting the die changing cart</b>  In case of unfavourable positioning on the forklift truck, the die changing cart can tip over and cause damage to property. Pay attention to the centre of gravity and make sure that the die changing cart rests completely on the forks. The movement of the die changing cart with a forklift or similar is only allowed without load (without die)!	
<b>⚠ CAUTION</b>	
<b>Risk of accident</b>  Risk of accident by persons and objects in the path of the cart. No persons or objects may be located in the path of the cart.	
<b>⚠ VORSICHT</b>	
<b>Risk of tripping</b>  By contact with components of the die change cart, e.g. the parking brake or the rollers, there is a risk of tripping. Position the die change cart that no one can trip over it.	
<b>⚠ CAUTION</b>	
<b>Injury due to an uncontrolled movement</b>  Swerving of the die changing cart with one-handed movement is possible. This can result in property damage and personal injury. The die changing cart is to be moved with both hands.	
<b>⚠ CAUTION</b>	
<b>Risk of tipping</b>  By shifting the centre of gravity, property damage and personal injury may occur. Move the die changing cart only when the ball table is in the lower position; exception: docking	


**⚠ CAUTION**

**Increased risk of hand injury**

Sharp edges can cause cuts.



Make sure to wear hand protection during the die change.

**⚠ CAUTION**

**Tipping over and falling**

Not centred loads can lead to tipping over of the die changing cart and thus to injuries and property damages.

Loads on the ball table must always be centrically positioned, considering the centre of gravity.

## 4.2 Safety layout

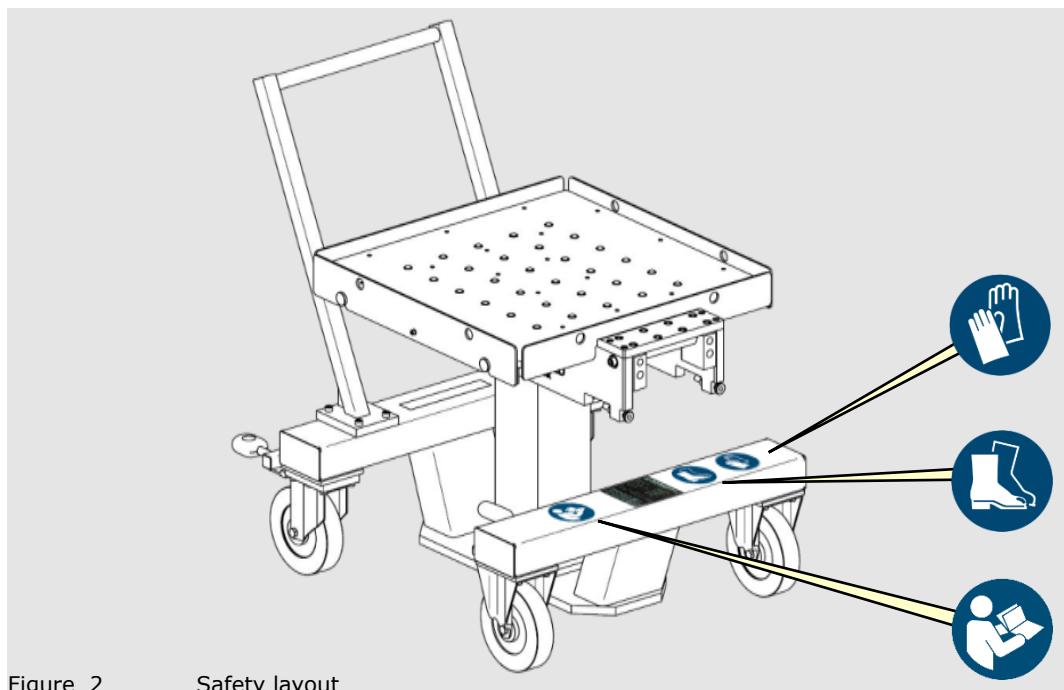


Figure 2 Safety layout

**⚠ WARNING**

**Mandatory sign**

High risk of injury in case of disregard of the mandatory signs.

When using the die changing cart, the personal protective equipment must be used. This is:

- Hand protection
- Anti-static shoes



Before using the die changing cart, the operating manual must be carefully read and kept for future reference.



## 5 Intended use

The die changing cart is used to safely transport dies on a flat surface to the assembly and disassembly site.

Die temperature: 10°C to 40°C

Moving speed: maximum 2 km/h (=walking speed)

Admissible maximum die weight: 500kg

### **WARNING**

#### **Improper use**

An improper use is not permitted and can cause death or serious personal injury, damage to the die changing cart, unpredictable risks and damages.



An improper use is not permitted, such as:

- exceeding the maximum admissible die weight
- exceeding the maximum admissible moving speed
- failure to observe the centre of gravity
- carrying not provided objects, tools and people
- the storage of tools on the die changing cart

### **NOTE**

**With risky driving behaviour, there is an increased risk of accidents.**

**Always move the die changing cart considerate and defensive.**

**Take curves at a reduced speed and with particular care.**

### **NOTE**

**The die changing cart has no driving brake!**

**Therefore the driving speed is always to be chosen so that the cart can be stopped at any time by physical strength.**

### **NOTE**

**Recommendation to prevent tipping of the die and the cart:**

**max. distance of the centre of mass of the die above the contact area  
 = smallest edge length of the contact area.**

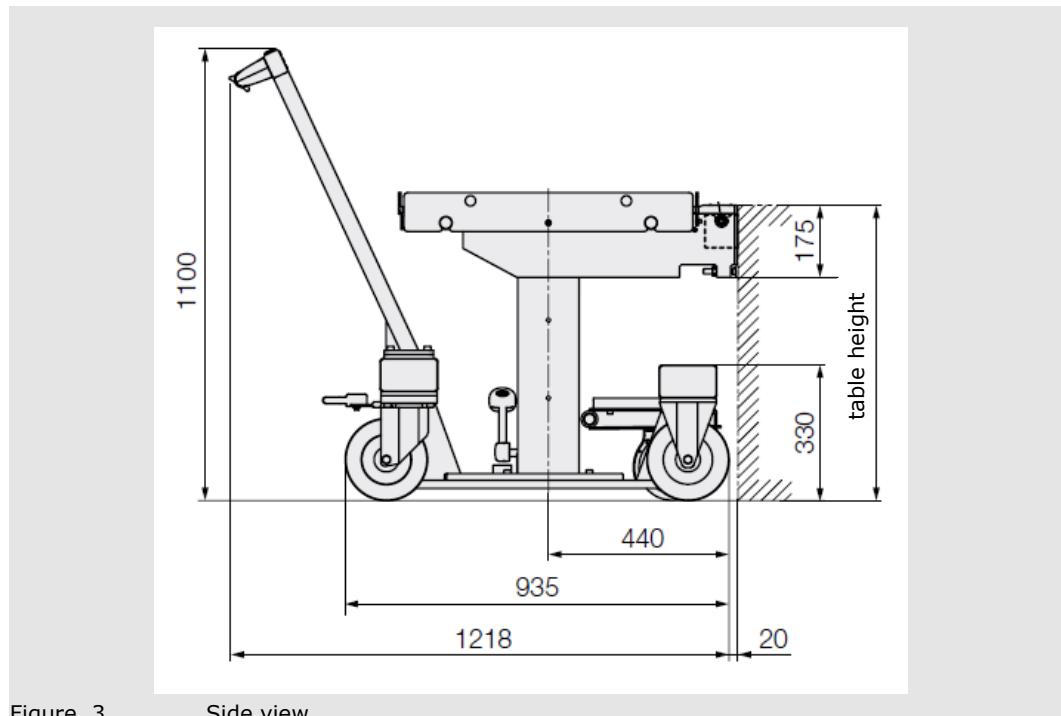
**Position the center of mass centered over the ball table.**

**For unfavourable die dimensions, adaptors can be used to locate the die.**



## 6 Technical data

### 6.1 Dimensions and weight



Version	1	2	3
Table height H min. [mm]	540	620 (640*)	720 (740*)
Table height H max. [mm]	680	880 (860*)	1080 (1060*)
Usable stroke [mm]	140	240	340
Total stroke [mm]	200	300	400
Ball table version 1 Length [mm] x width [mm]	720 x 450		
Ball table version 2 Length [mm] x width [mm]	720 x 720		

\*) Values in brackets valid for old versions (2) 889130016/19 and (3) 889130017/20

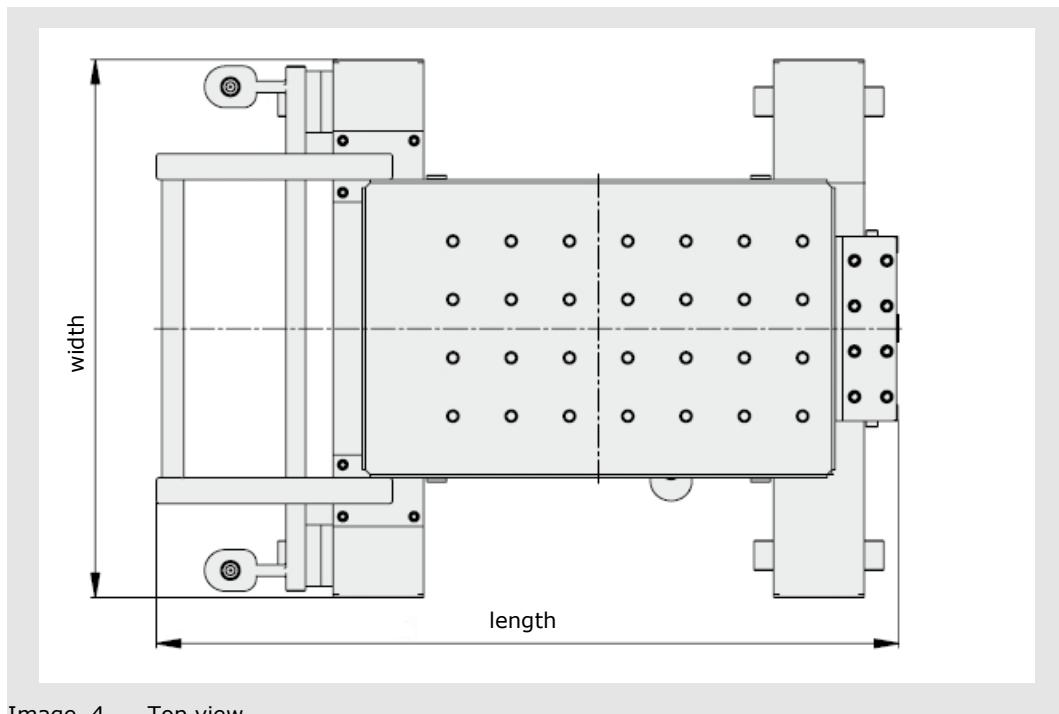

**Total dimensions**


Image 4 Top view

Length [mm]	1218 (1145*)
Ball table version 1, width [mm]	750 (650*)
Ball table version 2, width [mm]	750 (830*)
Height [mm]	1100

\*) Values in brackets valid for old versions 889130015 to 20

Weight [kg] (depending on the version)	155 – 195
---	-----------

**6.2 Auxiliary drive (optional)**

Running performance at full load / average load [km]	2 / 5
Displacement speed forward / backward [km/h]	2 / 1
Charging time (approx. 90%) depending on battery charger [h]	1,5 to 3
Battery	24 V DC, Ni-MH, 140 Wh (6 Ah)
Protection type	IP66



### 6.3 Noise emissions

Noise [dB(A)]	≤ 70
---------------	------

### 6.4 Installation

Max. operating temperature [°C]	10 up to 40
Requirements for the installation site	<ul style="list-style-type: none"> <li>- dry interiors</li> <li>- flat</li> <li>- well-swept</li> <li>- sufficiently load-bearing</li> </ul>
Admissible inclination angle of the path/installation surface	3°

### 6.5 Operating supplies

Lifting module	Hydraulic oil HLP 32
Auxiliary drive	Ni-MH Battery

#### **DANGER**



#### **Hydraulic system**

Severe injury from liquids under high pressure.  
 Work on the hydraulic system may only be carried out by trained personnel.  
 When working on the hydraulic system use eye protection.

#### **NOTE**

**Pay attention to safety data sheet for operating fluids.**

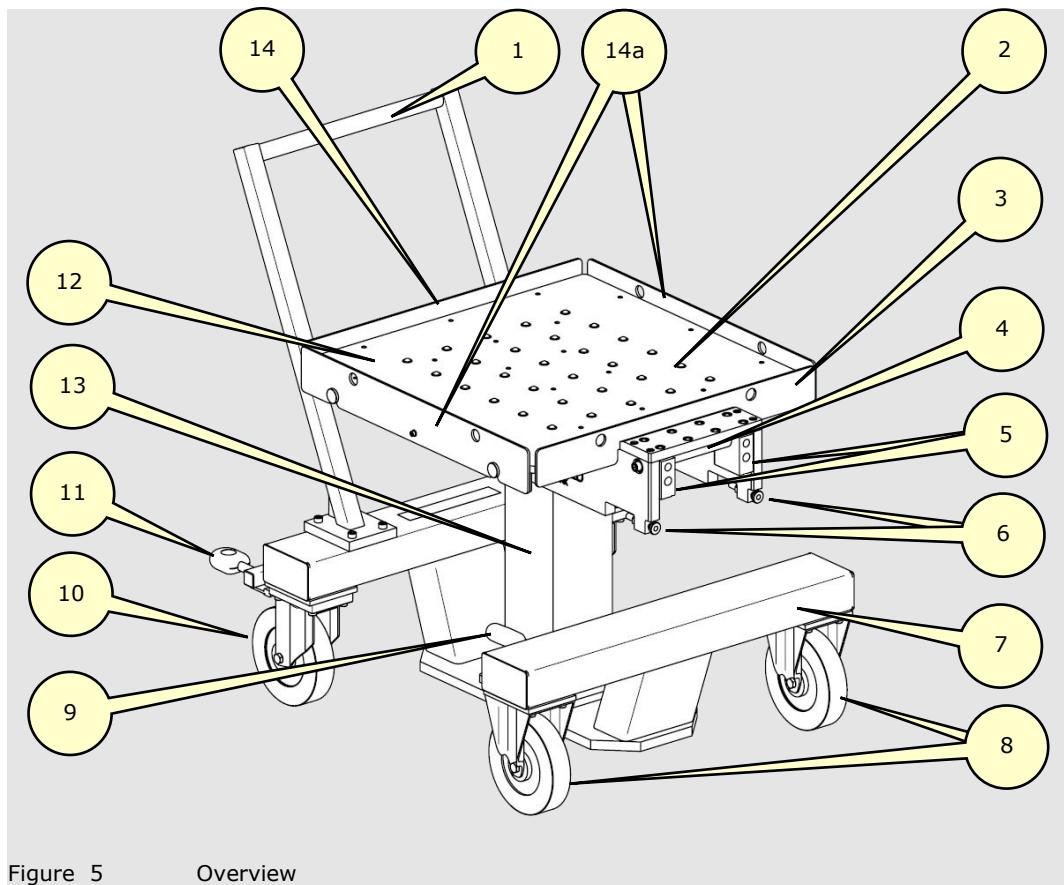
#### **NOTE**

**Use other operating fluids only after consultation with the manufacturer.**



## 7 Description

### 7.1 Total overview



Nº	Description	Nº	Description
1	Push handle	8	Fixed rollers (2 off)
2	Extendible load ball	9	Foot pedal
3	Locking plate "docking rod" (plug-in)	10	Steering rollers (2 off)
4	Docking rod	11	Brake
5	Docking hooks	12	Ball table
6	Adjusting screws	13	Lifting module
7	Cart frame	14	Locking plates "operating side" (firmly mounted) as fall protection
		14a	Side bars (plug in) as fall protection, fixed with screw for transport lock



## 7.2 Overview auxilary drive (optional)

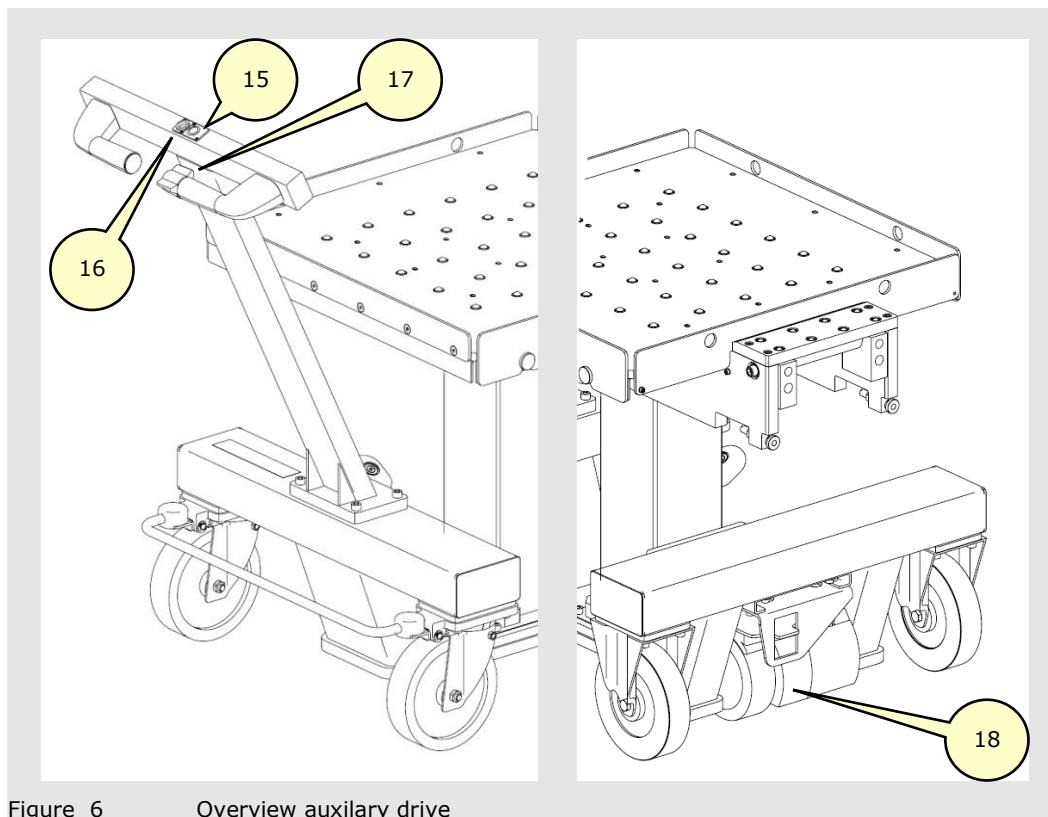


Figure 6 Overview auxilary drive

Nº	Description	Nº	Description
15	On / Off button incl. charge status indicator	17	Throttle, Forward / Backward
16	charge plug	18	Drive wheel incl. battery

## 7.3 Design and functional description

→ Position numbers; see general overview in chapter 7.1 and 7.2

The cart frame (7) of the die changing cart consists of a welded steel frame with push handle (1), two fixed rollers (8) and two steering rollers (10). Both steering rollers are equipped with a brake (11).

### Ball table (12)

The ball table (12) is located on the lifting module (13) and can be moved vertically by the pedal (9). The table is equipped with extendible load balls (2) which allow easy displacement of the die in the docked state. Using the adjusting screws (6), the table can be aligned horizontally.

The locking plates (3) and (14, 14a) are used for safe transportation of dies, the docking hooks (5) and the docking rod (4) for safe loading and unloading of dies.



While docked, the die is supported as on a console on the mounting surface of the docking hooks. This is shown in the functional diagram.

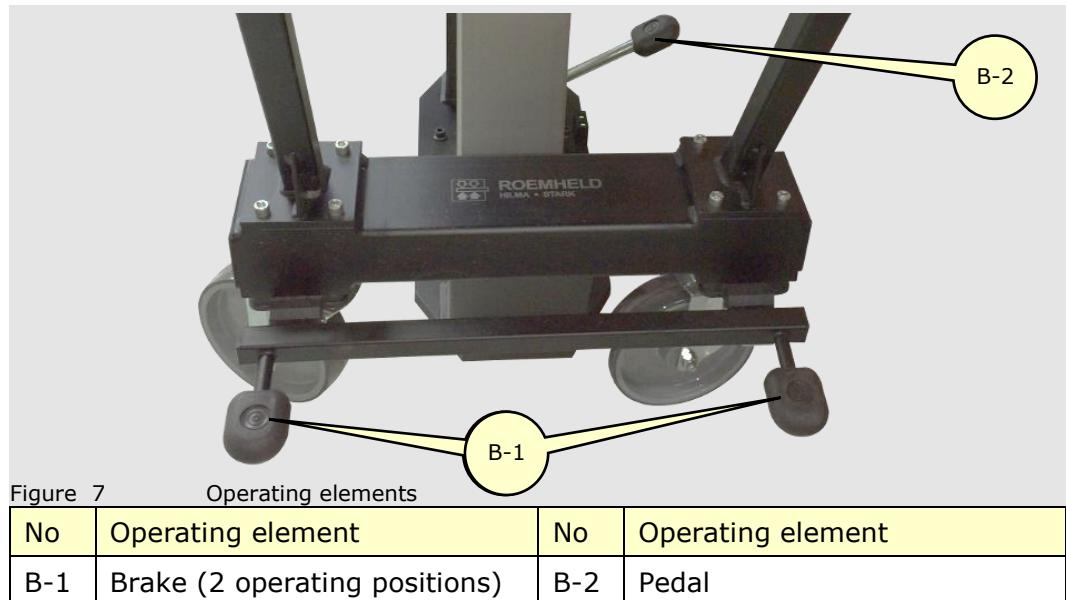
→ Functional diagram in the appendix

### Auxiliary drive (15-18, optional)

The drive motor with integrated battery (18) is fixed by a spring-loaded link to the cart frame (7) to ensure a sufficient contact pressure of the drive wheel to the substrate.

The control for forward and backward movement is made by the drive sensor (17) at the push handle (1). There is also an on/off button with integrated battery charge indicator (15) and charging socket (16) to connect the battery charger.

## 7.4 Operating elements



### 7.4.1 Operating elements auxiliary drive (optional)

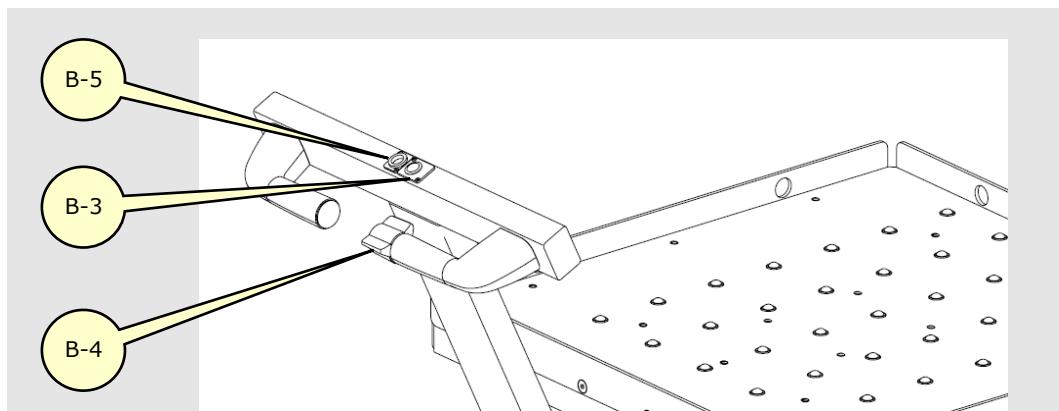


Figure 8 Übersicht Hilfsantrieb

No	Operating element	No	Operating element
B-3	On / Off button incl. charge status indicator	B-4	Throttle, Forward / Backward
B-5	charge plug		

## 8 Transport and installation

### 8.1 Attachment points

- (1\_T) up here
- (2\_T) caution fragile/  
fragile contents
- (3\_T) protect against moisture and  
humidity
- (4\_T) attach here
- (5\_T) forklift here
- (6\_T) centre of gravity here

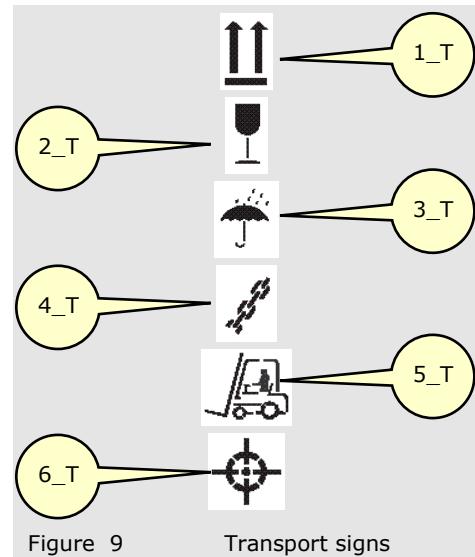


Figure 9

Transport signs



## 8.2 Transport by forklift truck

### **⚠ CAUTION**

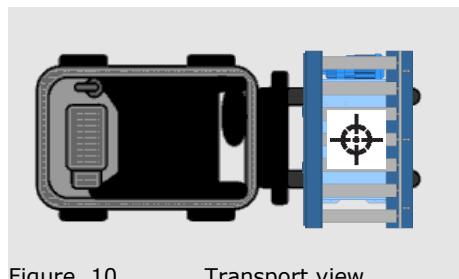
#### **Risk of tipping when transporting the die changing cart**



In case of unfavourable positioning on the forklift truck, the die changing cart can tip over and cause damage to property.

Pay attention to the centre of gravity and make sure that the die changing cart rests completely on the forks.

The movement of the die changing cart with a forklift or similar is only allowed without load (without die)!



Lift the die changing cart with a fork lift truck and put the cart on a pallet.

Figure 10 Transport view

1. Lift the die changing cart with a fork lift truck.
2. Put the die changing cart on a pallet.
3. Secure the cart with suitable and approved straps or ropes against slipping.
4. Load the die changing cart and bring the cart to the destination.

### **⚠ WARNING**

#### **Injury due to an uncontrolled movement**



Uncontrolled movement of the die changing cart (when the brake is released) is possible.

The brake of the die changing cart must always be applied, exception: movement of the die changing cart.

→ See chapter 11.1 Apply and release the brake

5. Make sure that the brake of the die changing cart is applied.



## 9 Assembly and installation

### NOTE

**The die changing cart is shipped fully assembled; the docking hooks are to be mounted by the customer.**

→ See chapter 9.1 Docking hooks

### NOTE

**Charge the battery completely before first use!**

→ See chapter 11.3 Auxiliary drive

### ⚠ WARNING

#### **Injury due to an uncontrolled movement**



Uncontrolled movement of the die changing cart (when the brake is released) is possible.

The brake of the die changing cart must always be applied, exception: movement of the die changing cart.

→ See chapter 11.1 Apply and release the brake



## 9.1 Docking hooks

### NOTE

Docking hooks have to be fixed by qualified personnel.

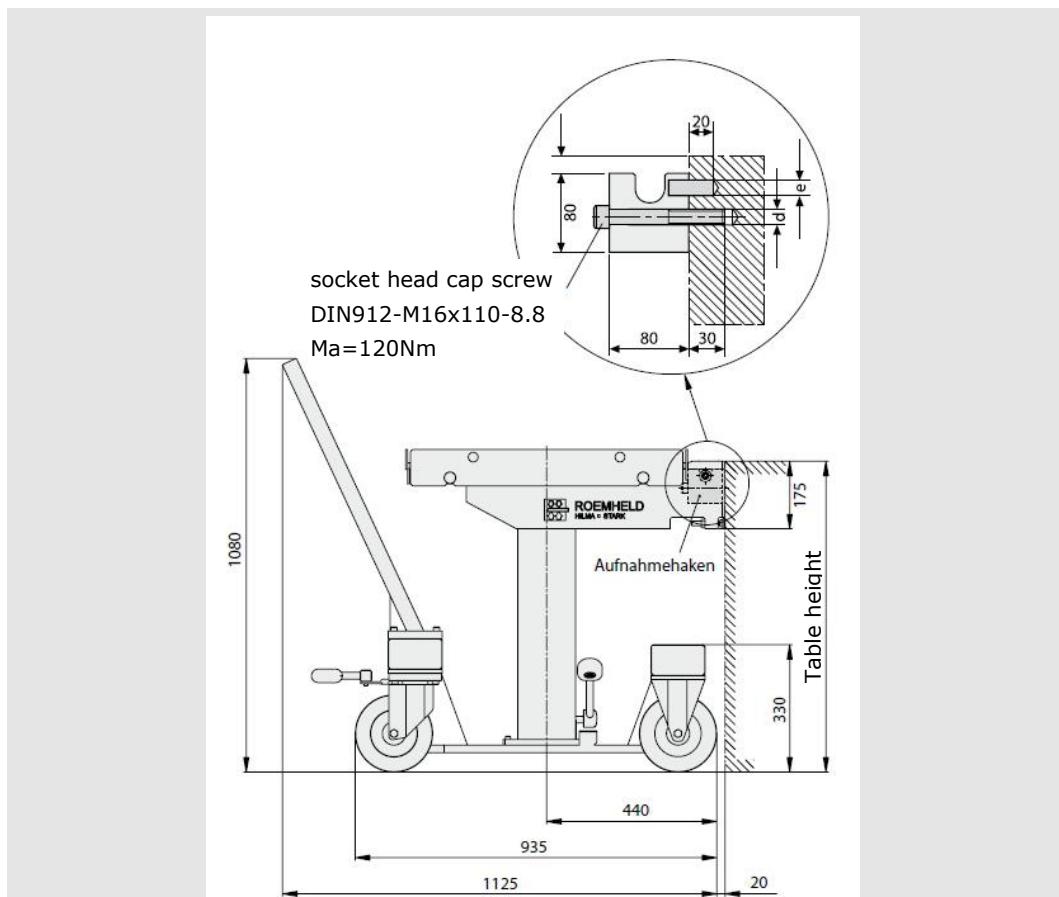


Figure 11 Position - docking hooks

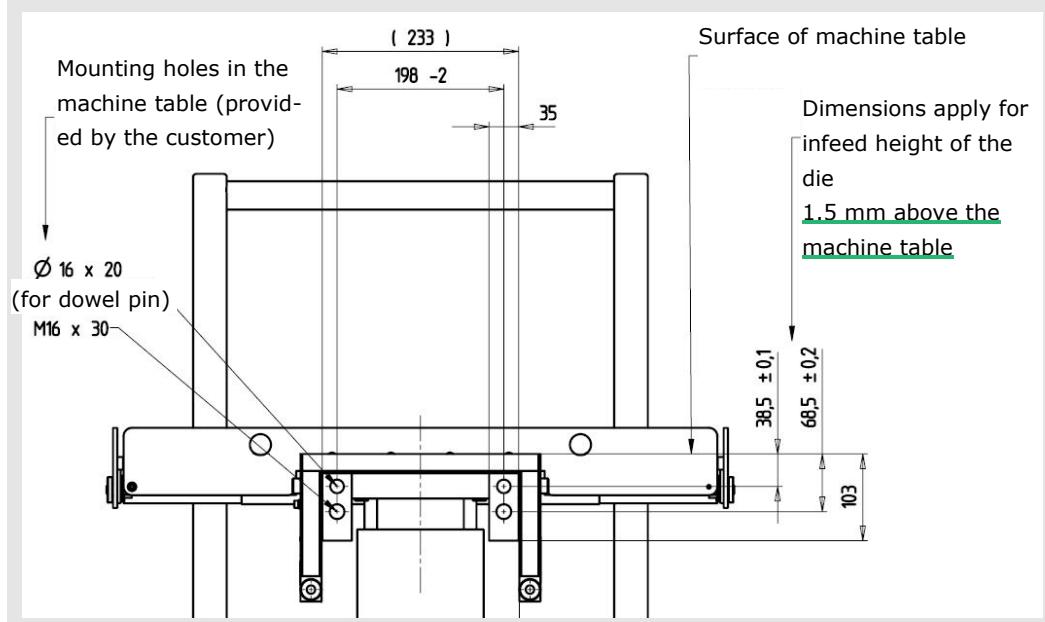


Figure 12 Dimensions - docking hooks

**NOTE**

**Pay attention to the load capacity of the mounting surface.  
While docked, it must be possible to completely support the load at the mounting surface.**

→ Functional diagram in the appendix

Docking hooks can be fitted to:

- Racks
- Machine tables

Further possibilities must be agreed with the manufacturer.

**NOTE**

**Further docking hooks can be obtained from the manufacturer.**

## 10 Setup, start up and setting

**⚠ WARNING****Injury due to an uncontrolled movement**

Uncontrolled movement of the die changing cart (when the brake is released) is possible.

The brake of the die changing cart must always be applied, exception: movement of the die changing cart.

→ See chapter 11.1 Apply and release the brake

### 10.1 Before each use

**⚠ WARNING****Risk of injury in the case of damage**

Damage to the die changing cart can cause serious injury.

When ascertaining a damage, it is prohibited to use the die changing cart.

**⚠ WARNING****Danger of injury due to a lifting or lowering movement**

Components of the product make a movement while they are in operation. This can cause injuries.

Do not reach into the stroke area during the lifting or lowering movement.



Before each use, perform the following visual inspections for damage:

- Fixed rollers (8 off) (quantity: 2) and steering rollers (10) (quantity: 2)
- Locking plates (3) and (14) (quantity: 4)
- Ball table (12)
- Docking rod (4)
- Adjusting screws (6)
- Version with auxiliary drive (optional):  
On/Off button (15), charge plug (16), throttle (17), drive wheel (18),  
Determine charging status of the battery in the auxiliary drive and charge  
if necessary.

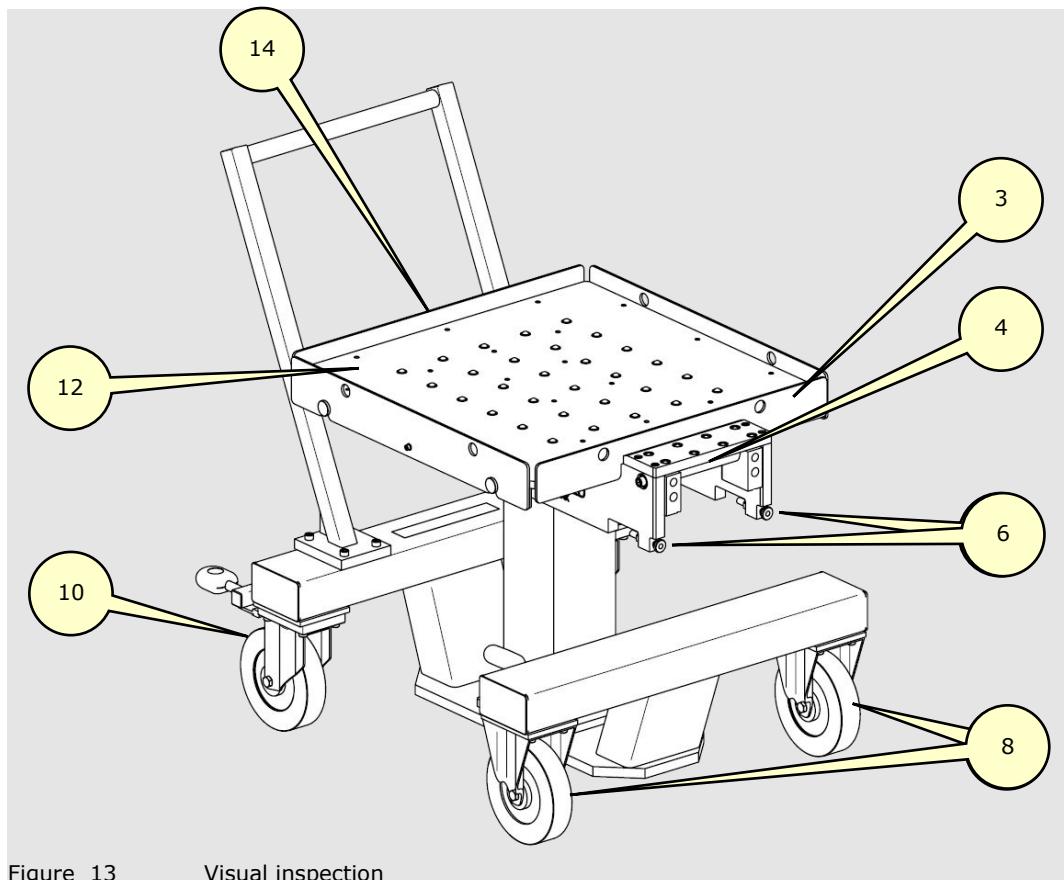


Figure 13 Visual inspection

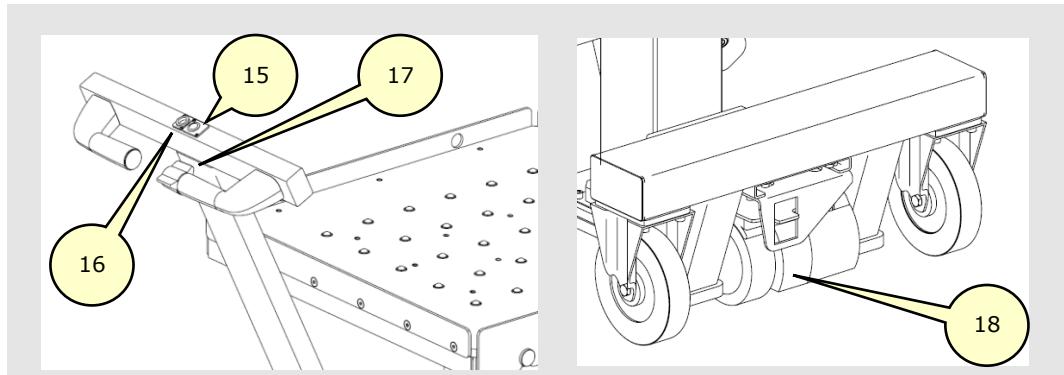


Figure 14 Visual inspection auxiliary drive

See chapter 13.1 Trouble shooting

See chapter 11.4 Auxiliary drive



## 11 Operation

### 11.1 Apply and release the brake

Safe loading and unloading of the die changing cart is only possible when the brake (B-1) is applied.

Transport of the die changing cart is only possible when the brake (B-1) is released.

#### Apply the brake:

Depress one of the two pedals (B-1) to the lower detent position with the foot

#### Release the brake:

Press upwards one of the two pedals (B-1) to the upper detent position with the foot

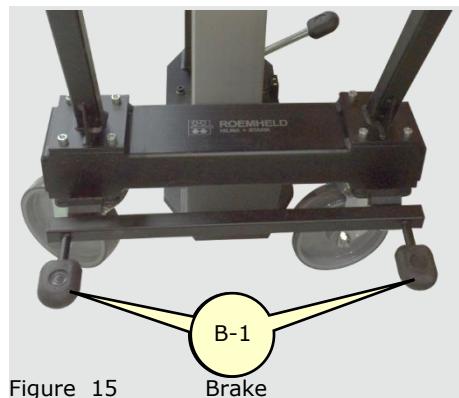


Figure 15

Brake

#### ⚠ WARNING

##### Injury due to an uncontrolled movement



Uncontrolled movement of the die changing cart (when the brake is released) is possible.

The brake of the die changing cart must always be applied, exception: movement of the die changing cart.

### 11.2 Lift and lower the ball table

#### ⚠ WARNING

##### Injury due to an uncontrolled movement



Uncontrolled movement of the die changing cart (when the brake is released) is possible.

The brake of the die changing cart must always be applied, exception: movement of the die changing cart.

→ See chapter 11.1 Apply and release the brake

#### ⚠ WARNING

##### Danger of injury due to a lifting or lowering movement



Components of the product make a movement while they are in operation. This can cause injuries.

Do not reach into the stroke area during the lifting or lowering movement.

**Lift the ball table:**

Operate the pedal (B-2) from above with pump movements until the ball table attains the required height

**Lower the ball table:**

Press the pedal (B-2) upwards from below with the foot until the ball table has attained the required height

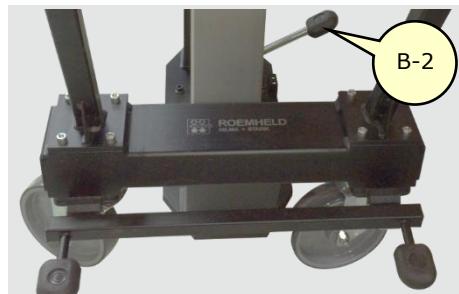


Figure 16 Pedal

### 11.3 Auxiliary drive (optional)

#### 11.3.1 Status indicators on/off button

	Green	OK / Battery charged 100%
	Orange	Battery charged 50%
	Red	Battery charged <30%
	Red flashing	Battery completely discharged. <b>Do not use!</b> Charge battery immediately!
	Orange flashing	Battery is charging
	Green flashing	Battery is charged 100% and connected to charger.

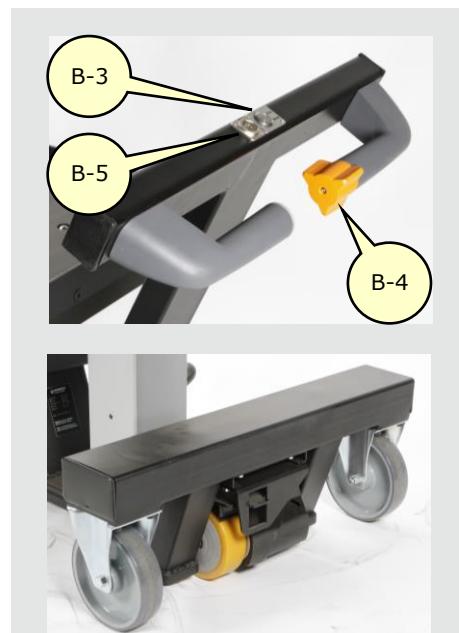


Figure 17 Auxiliary drive

#### 11.3.2 Charge battery

Connect the associated battery charger to the mains power supply and plug the CLR connector of the battery charger into the charging socket (B-5).

The status indicator must flash in orange colour. The charging process can last up to 3 hours.

After the charging process has been completed, the status indicator flashes in green colour. Push the locking lug of the CLR connector and remove the plug at the same time. Disconnect the battery charger from the mains.

If possible, the battery can be charged at any time (also several times a day). You do not have to wait until the battery is empty.

**Note**

**The optional auxiliary drive battery must be charged at least once a month, even when not in use, to prevent damage and performance degradation.**  
**Recharge a completely discharged battery immediately!**

**DANGER****Batteries**

Incorrect handling of batteries can cause serious injuries:



- When charging, ensure sufficient air circulation of the charger
- Do not carry out charging in potentially explosive areas
- Supplied batteries must not be disassembled.
- Use of other batteries only after consultation with the manufacturer.

**11.3.3 Operation**

Before using the battery for the first time, it must be fully charged!

Switch on the auxiliary drive with the on/off button (B-3) Only when the status indicator of the button lights continuously green, the auxiliary drive may be used.

If the auxiliary drive is not in use, switch off with the on/off button. Otherwise, the auxiliary drive goes into stand-by mode after a few minutes to protect the battery.

To reactivate, operate the on/off button.

The forward or backward movement of the auxiliary drive can be controlled by the drive sensor (B-4).

(forwards max. 3 km/h / backwards max. 2 km/h).

**Note**

**To avoid overloading the auxiliary drive, do not operate the throttle when the brake is locked.**

**NOTE**

**The die changing cart has no driving brake!**

**Therefore the driving speed is always to be chosen so that the cart can be stopped at any time by physical strength.**

**Even if the auxiliary drive ensures a certain braking performance, after releasing the throttle, it is inevitable that the cart will run after it due to the mass.**



## 11.4 Move the die changing cart

To move the die changing cart, bring the **ball table into the lower position** (lower completely) and release the brake. Hold the push handle **with both hands** and drive the die changing cart at walking speed to its destination. Then, immediately apply the brake.

- See chapter 11.2 Lift and lower the ball table
- Push handle, see chapter 7.1 General overview
- See chapter 11.1 Apply and release the brake

### CAUTION



#### Risk of accident

Risk of accident by persons and objects in the path of the cart.  
No persons or objects may be located in the path of the cart.

### CAUTION



#### Injury due to an uncontrolled movement

Swerving of the die changing cart with one-handed movement is possible. This can result in property damage and personal injury.  
The die changing cart is to be moved with both hands.

### CAUTION



#### Risk of tipping

By shifting the centre of gravity, property damage and personal injury may occur.  
Move the die changing cart only when the ball table is in the lower position; exception: docking

### NOTE

**With risky driving behaviour, there is an increased risk of accidents.  
Always move the die changing cart considerate and defensive.  
Take curves at a reduced speed and with particular care.**

### NOTE

**The die changing cart has no driving brake!  
Therefore the driving speed is always to be chosen so that the cart can be stopped at any time by physical strength.**



## 11.5 Docking and undocking of the die changing cart

### Definition:

Docking: couple or connect

Undocking: uncoupling, loosen or disconnect

The following cross-references are relevant for the following activities:

- Chapter 11.1 Apply and release the brake,
- chapter 11.2 Lift and lower the ball table,
- chapter 11.4 Movement of the die changing cart

### ⚠ WARNING



#### Danger of crushing

To stay in the docking area can lead to crushing injury.

No person is allowed to stay in the docking area.

### Docking:

1. Release the brake and push the die changing cart in front of the docking hooks (5).
2. Apply the brake and pump upwards the ball table above the docking hooks (5).
3. Release the brake and the docking rod (4) by moving the die changing cart into position above the docking hooks (5).
4. Apply the brake and lower the ball table until the docking rod (4) engages in the docking hooks (5).

◀ Extend the load balls

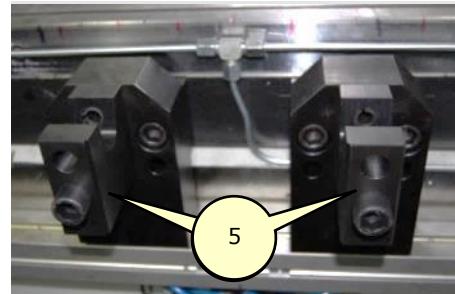


Figure 18 Docking hooks



Figure 19 Docking rod

### Undocking:

1. Lift the ball table until the docking rod (4) is lifted out of the docking hooks (5).

↳ Retract the load balls

2. Apply the brake and pull the die changing cart from the docking hooks (5).

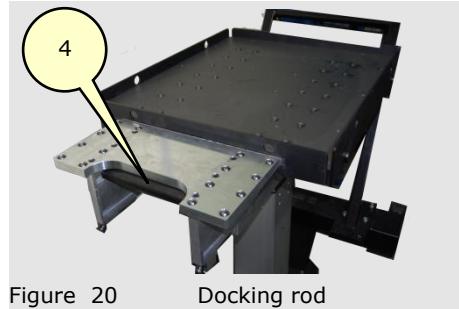


Figure 20 Docking rod

3. Apply the brake and lower the ball table to the lower position.

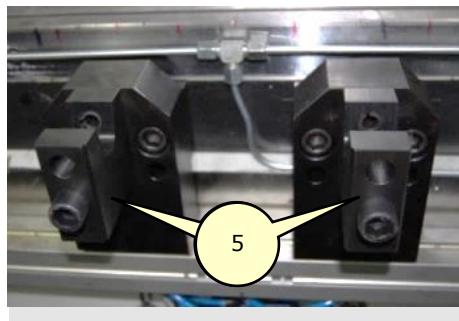


Figure 21 Docking hooks

### 11.6 Align the ball table

Before die loading, the ball table must be aligned horizontally. For this purpose, the die changing cart must be docked to the docking hooks.

→ See chapter 11.5 Docking and undocking of the die changing cart

1. Loosen the lock nuts (16) with a suitable tool.
2. Horizontally position the ball table (12) by using the adjusting screws (6).
3. Tighten the lock nuts (16) with a suitable tool.

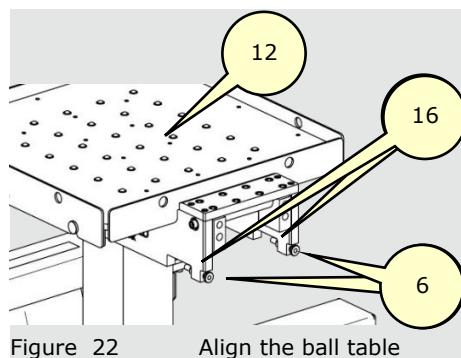


Figure 22 Align the ball table

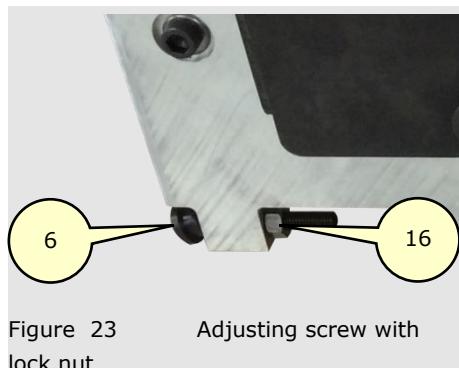


Figure 23 Adjusting screw with lock nut



## 11.7 Die loading and unloading

### NOTE

**Loading and unloading of dies must be made in docked position.**

### NOTE

**Recommendation to prevent tipping of the die:**

**max. distance of the centre of mass of the die above the contact area  
 = smallest edge length of the contact area.**

**Position the center of mass centered over the ball table.**

**For unfavourable die dimensions, adaptors can be used to locate the die.**

→ See chapter 11.5 Docking, undocking

### Loading:

1. Remove locking plate (3) and if extra-wide dies the side bars (14a).
2. Push the die guided to the centre of the ball table (center of mass centered over the ball table).
3. Fix the locking plate (3) at the die changing cart if possible, and if necessary secure the die with appropriate means; e.g. strapping down.

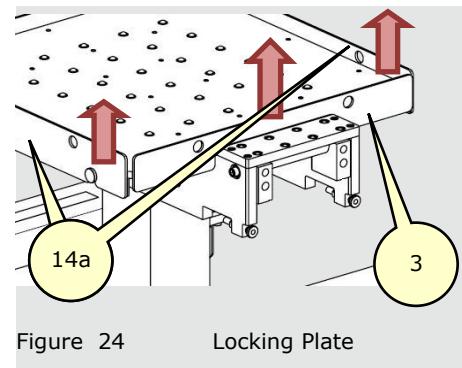


Figure 24

Locking Plate

### Unloading:

1. Remove locking plate (3).
2. Push the die from ball table.
3. Fix the locking plate (3) and if necessary the side bars (14a) back at the die changing cart.

### ⚠ WARNING

#### Pay attention to die weight



Exceeding the die weight can result in serious injuries to the operator, damages to the die or the die changing cart.

Maximum admissible die weight must not be exceeded.

### ⚠ CAUTION



#### Increased risk of hand injury

Sharp edges can cause cuts.



Make sure to wear hand protection during the die change.

**⚠ WARNING****Danger of crushing**

During die guidance, crushing may occur at the side bars.

The die must be guided so that a crushing at the side bars is avoided.

**⚠ CAUTION****Tipping over and falling**

Not centred loads can lead to tipping over of the die changing cart and thus to injuries and property damages.

Loads on the ball table must always be centrically positioned, considering the centre of gravity.

**NOTE**

**Check proper locking of the docking rod at the docking hooks before each die change.**

**NOTE**

**The die change may only be carried out on the same level.**

→ See chapter 11.6 Align the ball table

**NOTE**

**Die change has to be effected by two people as far as possible.**



## 12 Stopping

### 12.1 Stopping in normal case

#### **WARNING**

##### **Injury due to an uncontrolled movement**



Uncontrolled movement of the die changing cart (when the brake is released) is possible.

The brake of the die changing cart must always be applied, exception: movement of the die changing cart.

→ See chapter 11.1 Apply and release the brake

→ See chapter 11.3 Auxiliary drive

### 12.2 Set out of operation (switch off and secure)

#### **WARNING**

##### **Injury due to an uncontrolled movement**



Uncontrolled movement of the die changing cart (when the brake is released) is possible.

The brake of the die changing cart must always be applied, exception: movement of the die changing cart.

→ See chapter 11.1 Apply and release the brake

→ See chapter 11.3 Auxiliary drive

## 13 Exceptional situations

### 13.1 Trouble shooting

In the event of faults and unusual phenomena, such as spill out of hydraulic oil, park die changing cart, switch off the auxiliary drive, apply the brake and inform qualified personnel.

## 14 Maintenance

### 14.1 Maintenance by qualified person

#### **NOTE**

**In case of maintenance or repair works by a qualified person, pay attention to the operating manual and danger warnings of the sub-components.**



- Documentation of the sub-components in the appendix
- See chapter 11.3 Auxiliary drive
- Chapter 12.2 Set out of operation

Operation	daily	weekly	every 2 weeks	monthly	quarterly	half-yearly	yearly	100,000 cycles
Check the required brake force and wear on the brake pads						x		
Check the wear of the steering rollers and the fixed rollers						x		
Check all fixing screws				x				
Check the wear of the guide unit at the lifting module						x		
Charging the integrated battery of auxiliary drive				x				

## 14.2 Maintenance by the operator

### Note

**The optional auxiliary drive battery must be charged at least once a month, even when not in use, to prevent damage and performance degradation.**  
**Recharge a completely discharged battery immediately!**

- See chapter 10.1 Before each use
- See chapter 11.3 Auxiliary drive

## 14.3 Plan for maintenance

- See chapter 14.1 Maintenance by qualified person



## 14.4 Cleaning

### NOTE

#### Decision on implementation by qualified personnel.

Clean with dry cleaning clothes or cleaning rags and lubricate slightly metallic components (e.g. plates, guides, etc.). Do not use solvents.

### ⚠ WARNING

#### Danger of injury due to a lifting or lowering movement



Components of the product make a movement while they are in operation. This can cause injuries.

Do not reach into the stroke area during the lifting or lowering movement.

## 15 Disassembly

### NOTE

#### All disassembly works shall be carried out by qualified personnel.

## 16 Storage and disposal

### NOTE

Properly and sustainably store and dispose of operating fluids and lubricants in compliance with the statutory regulations.

### NOTE

Avoid direct sunlight and high humidity.

### NOTE

Disposal of the machine may only be made by authorized agents.

### NOTE

If possible, send parts and operating fluids for recycling.

## 17 Spare parts

### NOTE

Various spare parts may have longer delivery times.

### NOTE

A detailed list of all spare parts and wearing parts is available in a separate list in the appendix.



## 18 Original Declaration of Conformity



### EG-Konformitätserklärung

im Sinne der EG-Maschinenrichtlinie 2006/42/EG, Anh. II 1. A

Hersteller	In der Gemeinschaft ansässige Person, die bevollmächtigt ist, die technischen Unterlagen zusammenzustellen
Hilma-Römhled GmbH	Frank Grosche
Schützenstraße 74	Hilma-Römhled GmbH
57271 Hilchenbach	Schützenstraße 74
	DE – 57271 Hilchenbach

#### Beschreibung und Identifizierung der Maschine

Produkt / Erzeugnis Werkzeug-Wechselwagen, Baureihe 8.8913.xxxx  
 Typen Artikelnummern siehe beiliegende Auflistung

**Es wird ausdrücklich erklärt, dass die Maschine allen einschlägigen Bestimmungen der folgenden EG-Richtlinien entspricht.**

2006/42/EG Richtlinie 2006/42/EG des Europäischen Parlaments und des Rates vom 17.Mai 2006 über Maschinen und zur Änderung der Richtlinie 95/16/EG (Neufassung) (1)

#### Fundstelle der angewandten harmonisierten Normen entsprechend Artikel 7 Absatz 2

EN 1570-1:2011	Sicherheitsanforderungen an Hubtische - Teil 1: Hubtische, die bis zu zwei feste Haltestellen anfahren
EN 547 3:1996+ A1: 2008	Sicherheit von Maschinen - Körpermaße des Menschen - Teil 3: Körpermaßdaten
EN 6141:2006+ A1: 2009	Sicherheit von Maschinen - Ergonomische Gestaltungsgrundsätze – Teil 1: Begriffe und allgemeine Leitsätze
EN ISO 4413: 2010	Fluidtechnik - Allgemeine Regeln und sicherheitstechnische Anforderungen an Hydraulikanlagen und deren Bauteile (ISO 4413:2010)
EN ISO 13857: 2008	Sicherheit von Maschinen - Sicherheitsabstände gegen das Erreichen von Gefährdungsbereichen mit den oberen und unteren Gliedmaßen (ISO 13857:2008)
EN 349: 1993+ A1: 2008	Sicherheit von Maschinen - Mindestabstände zur Vermeidung des Quetschens von Körperteilen
EN ISO 12100:2010-11	Sicherheit von Maschinen – Allgemeine Gestaltungsleitsätze – Risikobewertung und Risikominderung (ISO 12100:2010)
EN 60204-1:2006 AC:2010 + A1:2009	Sicherheit von Maschinen – Elektrische Ausrüstung von Maschinen – Teil 1: Allgemeine Anforderungen

Hilchenbach, 22.11.2017

Ort, Datum

Unterschrift  
 Hans-Joachim Molka  
 Geschäftsführer



## EG-Konformitätserklärung

### Anlage

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**Werkzeug-Wechselwagen, Baureihe 8.8913.xxx, Auflistung der Artikelnummern:**

8.8913.0015  
8.8913.0016  
8.8913.0017  
8.8913.0018  
8.8913.0019  
8.8913.0020  
8.8913.0100  
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## 19 Appendix

### NOTE

**The following documents can be requested from the manufacturer on request.**

Operating manual BA\_M4301 Lifting module Shop-Floor

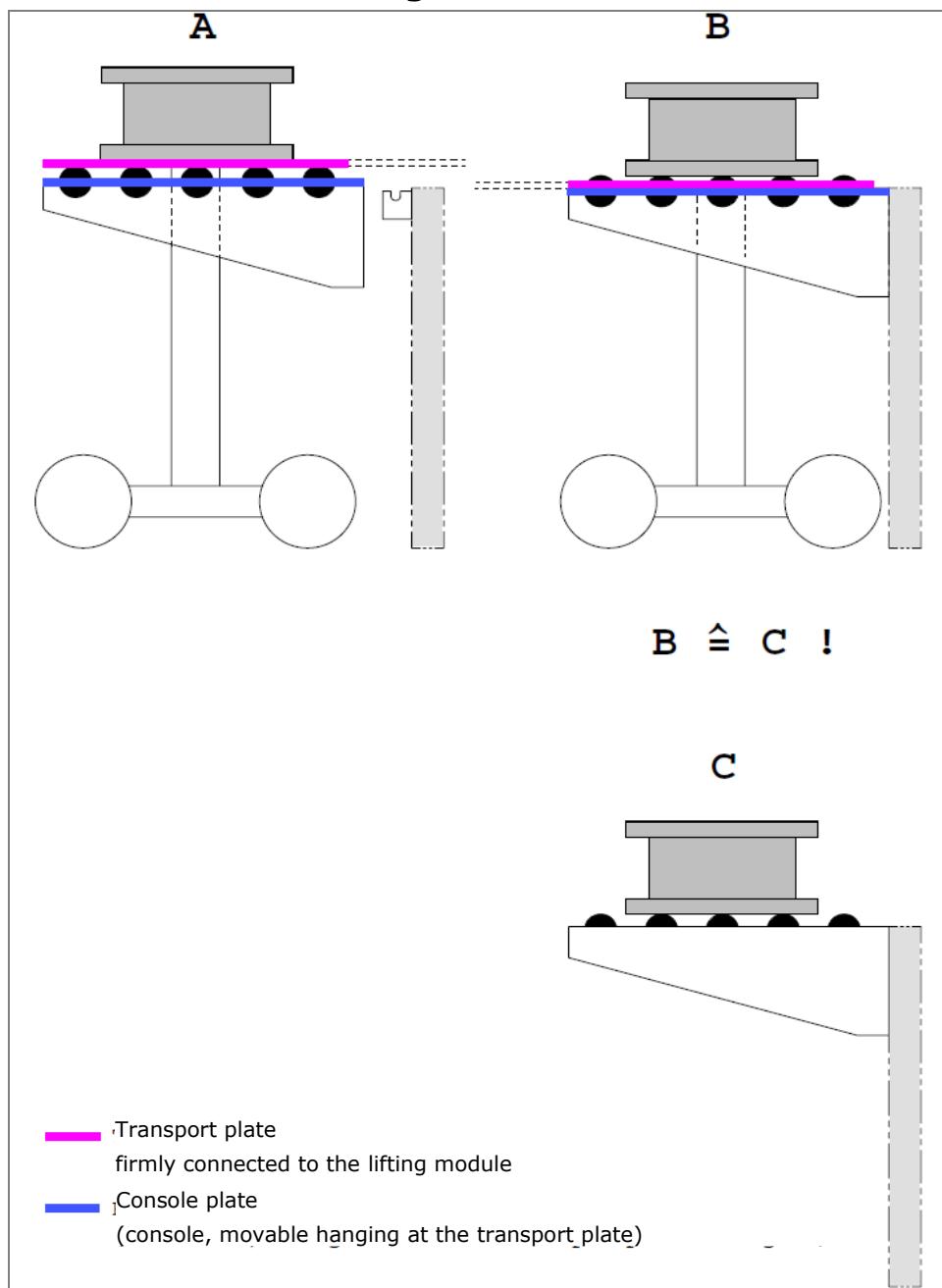
Operating manual BAS\_8900818 / 819 Cart module w / w/o auxiliary drive

Operating manual BAS\_6400856 / 876 Cart module (width 650 / 850 mm)

Technical documentation of the auxiliary drive and the charger

Spare and wearing parts list

### 19.1 Functional diagram





## Product monitoring

Die changing cart

Year of construction:

Model:

We are required by law to monitor our products even after their delivery. This concerns, in particular, the following aspects:

- Have operating data or settings been changed?
- Are there experiences with the machine that might be important for other operators?
- Do recurring faults occur?
- Are there difficulties with the operating manual?
- Do dangerous defects occur in the practice that have been overlooked in the planning?
- Are there abusive applications?

Please let us know, what could be important to us. Just use this form and send or fax it to our address.

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[www.roemheld-group.com](http://www.roemheld-group.com)

### Observations

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**Place, date, company stamp, name, signature**