

Operating Manual for the Light Track Trolley 51.12 / 35



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This operating manual was produced in accordance with the current state of technology at the time of printing.

The right to change on the basis of further developments is reserved.

Dimensions and weights are approximated.

Photographs show special layouts in some cases.



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Certificate of conformity with type of construction

1 INTRODUCTION

1.1 General rules

Effective legal provisions and accident prevention regulations in the respective areas of application must generally be observed. If they are not observed, the operator of the machine is liable for the legal consequences.

In the event of differences between prevailing regulations applying to the operator's use of the machine and the manufacturer's or its suppliers' regulations, whichever stipulations are the most stringent must apply.

The buyer must provide all necessary machinery, equipment and material resources for putting the delivered product into operation and training staff. He must also make available unrestricted, safe and sufficiently long track and work sections, on which staff can learn how to operate and use the delivered product and practise these tasks.

ROBEL Bahnbaumaschinen GmbH, together with its customer service organisation, is happy to provide advice, training and other consultative services; details and conditions relating to these services must be agreed separately.

1.2 Intended audience for operating instructions

These instructions contain the necessary information for using the machine they describe in accordance with its designated use.

The instructions have been written exclusively for technically qualified personnel. Qualified personnel in this sense are:

- personnel who have proven their ability to use this machine, either on the basis of certificates or experience,
- persons who are familiar with the safety concepts of machines;
- maintenance and service personnel who are specially trained to repair machinery and systems of this type.

Only persons who can read and understand these instructions are allowed to use the machine. They must have read and understood these instructions and have confirmed this with their signature. Use, maintenance and operation of the machine may only take place taking into account and strictly complying with the operating and safety regulations, official regulations, especially relating to safety, and industrial and environmental protection effective at the respective railways and specialist divisions, and operating, maintenance and safety regulations or other rules stipulated by the manufacturer or supplier.

1.3 Liability exclusions

The manufacturer declares that he is excluded from any liability for damage incurred if the device is used for any other purposes than those specified according to its designated use. Non-designated use also occurs if the machine is operated without safeguards.

Any use of the device other than that specified above is not designated and endangers the lives and health of operating and maintenance personnel as well as the material assets of the operating company. The manufacturer of the machine declares himself free from liability for damage to persons or property belonging to the operating company or third parties if:

- the device is not used as intended,
- the operating and maintenance personnel have not read or understood the available instructions and have used the machine for purposes other than it was devised for,
- the operating and maintenance personnel are not sufficiently qualified or the system is operated under conditions which exceed the specified limiting values,
- the system is not serviced according to the rules within the specified intervals.

These exclusions from liability for damage to people or material property do not affect other grounds for exclusion.

1.4 Copyright

Specific characteristics and constructional features of the machine are the intellectual property of ROBEL Bahnbaumaschinen GmbH. The copyright on these operating instructions remains the property of ROBEL Bahnbaumaschinen GmbH. They may not be reproduced either in full or in part, published or otherwise exploited for competitive purposes, regardless of whether payment takes place or not. The operating company personnel may not pass on the contents of the instructions to anyone outside the business

1.5 Acceptance, equipment, operating licence

The buyer is responsible for checking that the purchased item is equipped according to the specified and agreed specifications and that its condition, operative capability, and especially its safety features conform to these specifications; the buyer is responsible for accepting the purchased item according to the contractually agreed stipulations.

The buyer must install all equipment stipulated by respective operating and safety regulations, standards, statutory requirements or other regulations in the purchased item, such as fire extinguishers, First Aid boxes, signalling and telecommunications equipment, additional warning equipment, protective clothing, safety information etc.

Delivery of the purchased item does not include this kind of equipment, unless other agreements have been reached.

The buyer is also responsible for presenting the purchased item with the necessary documentation to the office in charge for granting the operating licence. The necessary documentation to do this (descriptions, proof, certificates, etc.), to be supplied by the manufacturer or supplier, must be specified and agreed in the contract of sale.

The buyer shall pay for any other measures that might be necessary to obtain additional operating licences.

1.6 Conventions/Legend/Symbols



Contains important information about the machine, its operation or about a section of the instructions on hand.

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LIGHT TRACK TROLLEY

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2 SAFETY

2.1 General Dangers

The device 51.12 is built to be used as open and manually driven light track trolley for transporting machinery and materials.

2.2 Safety regulations

The necessary requirements for protecting life, health, material property and the environment when handling the machine must take precedence!

- Before using the device, make sure that all the relevant
 - statutory safety regulations,
 - stipulations of the respective building code and works rules,
 - stipulations of the respective professional and trade associations,
 - industrial and environmental safety regulations,
 - licensing regulations,
 - internal company regulations and
 - all other applicable regulations,

in addition to and in concert with the manufacturer's safety and operating regulations of the device and the equipment located in it have been verifiably acknowledged by all persons affected.

If necessary, the office in charge of operation must lay down additional regulations and measures geared to the special tasks of the machine to ensure that all safety requirements are met.

We would ask you to pay special attention and adhere to the following safety regulations pertaining to the system, in addition to the information detailed above.

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LIGHT TRACK TROLLEY

2.3 Safety principles

The basic accident prevention regulations of the Professional Organisations have to be adhered to.

- Only properly trained personnel are to put the device into operation!

Possible sources of danger are also indicated on the device with warning signs and/or labels.

2.4 Protection and use of the device

- Protect the device to prevent unauthorised persons starting it up or using its facilities or equipment.
- The device should only be started up and used if all necessary conditions for safe operation have been fulfilled.

2.5 Accident prevention

The accident prevention regulations of the Civil Engineering association also find application in these operating instructions and are to be carefully read and strictly adhered to.

- Always observe the general and internal accident prevention regulations
- Familiarise yourself with potential risks of accidents connected with the machine's specific area of activity and ensure that you receive appropriate training before using the device.
- Check to make sure the machine is in proper working condition before using it:
 - Make sure equipment, devices, tools, accessories and safety equipment, etc. are complete and intact.
 - Make sure servicing and maintenance work has been carried out professionally and on time.
- Beware of the particular dangers of the machine and your work area, especially:
 - persons and obstacles,
 - compliance with safety clearances,
 - traffic on adjacent tracks,
 - compliance with all operationally necessary protective measures.
- Use only tools and appliances that work properly.
- Also eliminate minor defects immediately; this will enable you to avoid more serious defects.
- Make sure that tools and accessories are in safekeeping.

2.6 First Aid

Always ensure that the First Aid kit is properly equipped.

- For First Aid measures and the appropriate kit, consult the medical service or doctor assigned to your office.

2.7 Personal Protective Equipment

Personal Protective Equipment must be worn during operation and maintenance.

Refer to:

- Operating Manual
- national safety regulations;
- regulations of the professional associations;
- other applicable regulations;

to find out which PPE must be worn.

In the event of any discrepancy between the existing regulations applicable to the machine owner and the instructions provided by the manufacturer and its suppliers, the stricter regulation shall apply.

2.8 Hazard notes

All of the following notes and instructions aim to protect the personal safety and physical well-being of the operator from danger and to protect the appliance operator's assets from damage. These instructions use specific naming conventions throughout to differentiate between types of danger and the degree of consequences that might arise if instructions are not followed. These are:

 DANGER	
	Indicates that non-observance of the instructions result in death or severe injury of the operator.
 WARNING	
	Indicates that non-observance of the instructions may result in death or severe injury of the operator.
 CAUTION	
	Indicates that non-observance of the instructions may result in injury of the operator.
NOTICE	
Indicates that non-observance of the instructions may result in damage to the owner's property.	

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LIGHT TRACK TROLLEY

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3 TECHNICAL DATA

3.1 Dimensions and Weights

3.1.1 Track gauge 1435 mm

Length	approx. 840 mm
Width	approx. 1.865 mm
Height	approx. 250 mm
Platform width	approx. 800 mm
Platform length	approx. 1.620 mm
Track gauge	1.435 mm
Wheel diameter (wheels insulated)	90 mm
Weight	approx. 29,5 kg
Max. carrying weight	700 kg

3.1.2 Track gauge 1000 mm

Length	approx. 840 mm
Width	approx. 1.430 mm
Height	approx. 250 mm
Platform width	approx. 800 mm
Platform length	approx. 1.185 mm
Track gauge	1.000 mm
Wheel diameter (wheels insulated)	90 mm
Weight	approx. 28 kg
Max. carrying weight	700 kg

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3.1.3 Track gauge 1520 mm

Length	approx. 840 mm
Width	approx. 1.950 mm
Height	approx. 250 mm
Platform width	approx. 800 mm
Platform length	approx. 1.705 mm
Track gauge	1.520 mm
Wheel diameter (wheels insulated)	90 mm
Weight	approx. 35 kg
Max. carrying weight	700 kg

3.2 Special equipment (if ordered)

Handle, weight	approx. 2 kg
Dead man's brake	approx. 5 kg

4 DESCRIPTION

4.1 Area of Use

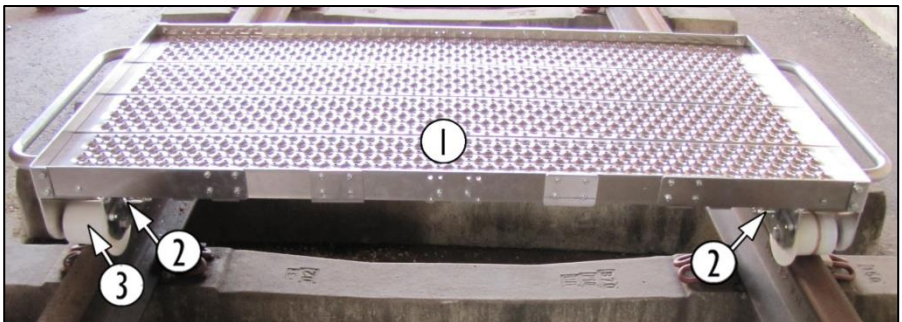
The device 51.12 is built to be used as open and self driven light track trolley for transporting machinery and materials.

4.2 Foreseeable misuse

Transportation of people on the light track trolley is **not** allowed.

4.3 Component Parts

The light track trolley consists of a platform with two handles, four insulated track wheels, and two spring locks which serve as brakes on two wheels.



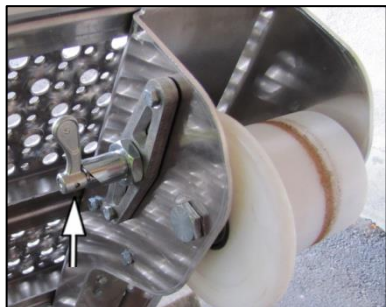
- 1 Platform with handles (right / left)
- 2 Spring locks as brakes
- 3 Insulated track wheels (4x)

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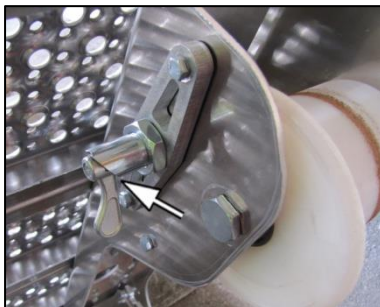
LIGHT TRACK TROLLEY

Detail: Spring lock brake

Brake released

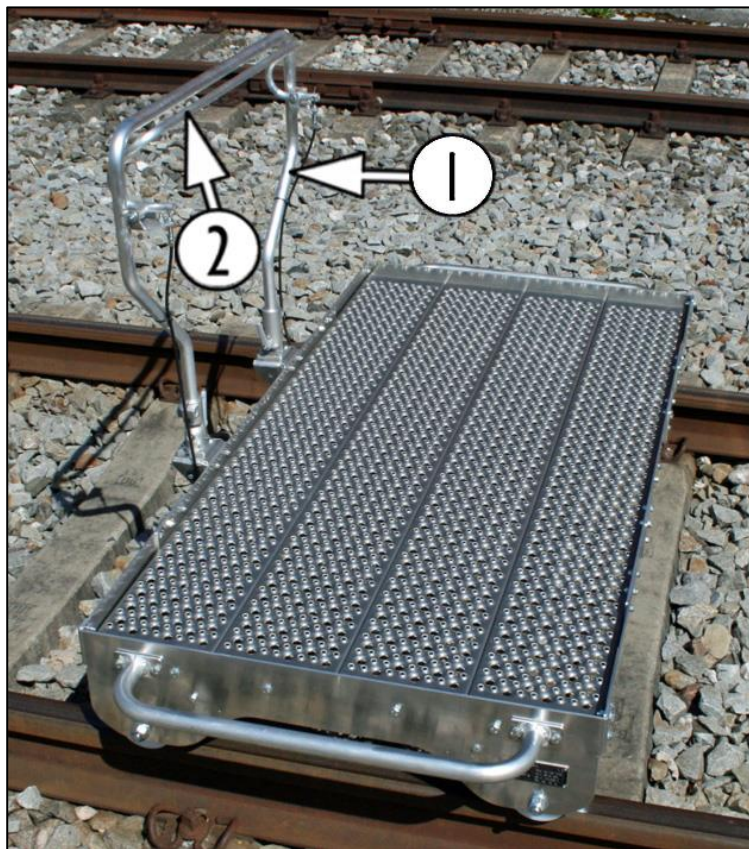


Brake locked



4.4 Special Equipment

4.4.1 Dead man's brake



- 1 Handle for pushing the light track trolley
- 2 Dead man's brake lever

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LIGHT TRACK TROLLEY

4.4.2 Light track trolley with strap grip



4.5 Signs and labels

4.5.1 Signs and labels used

Identification plate



4.5.2 Position on the device

The identification plate is located on the side of the frame.



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5 OPERATING CONDITIONS

5.1 Operating

Max. operating temperature +85°C; no further restrictions regarding weather conditions.

5.2 Storage

The max. temperature for storing the device is +85°C. The storage area must be dry and free of dust.

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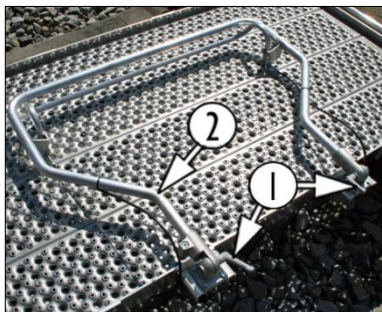
5.3 Transport

The trolley can be transported on all transport routes without incurring any damage if it is properly tied down and shock protected.

With dead man's brake

For transporting the trolley you can clap the strap grip down to the loading platform.

- Untighten the clamping levers (1).
- Clap the handle (2) down.
- Tighten the clamping levers (1).

*Transport position*

6 OPERATING INSTRUCTIONS

6.1 Pre Use Checks

1. Check to make sure the light track trolley is assembled correctly and in proper working condition before using it. That means especially that the trolley must be free of mechanical damage and move easily without application of load.
2. Check labelling is intact and legible.
3. Check that maintenance brake test has **not** expired.
4. Check that both braked wheels resist movement when brakes are applied.
5. If the light track trolley is equipped with a dead man's brake, the brake must be locked as long and as soon as the brake lever is released.

CAUTION

If either of the braked wheels rotates when the brakes are applied, remove the trolley from service!

6.2 Operating and Handling



WARNING



Danger of uncontrolled movements!

The spring lock brakes of a moving trolley cannot be operated from outside.

- The light track trolley may be put on track and used on horizontal rails only!



CAUTION



Danger of slipping and blocking!

Danger of slipping and blocking at releasing the spring lock brakes, especially if trolley is loaded or sleepers are wet!

- Release the spring lock brakes carefully.

6.2.1 Generally

- The **empty** light track trolley can be put on track by two persons.
- The transported goods have to be distributed uniformly on the loading area, secure load if necessary.
- The total weight of the UDL (uniformly distributed load) should **not exceed 700 kg!**

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6.2.2 Variant without Dead man's brake

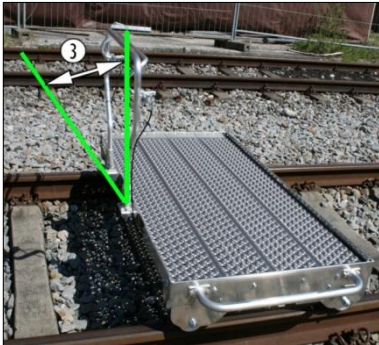
- Both spring lock brakes have to be locked.
- In order to put the brakes into effect, the light track trolley has to be pushed along the track, until the bolts click in to place.
- Conduct a push test in both directions to ensure braked wheels do **not turn**.

6.2.3 Variant with Dead man's brake

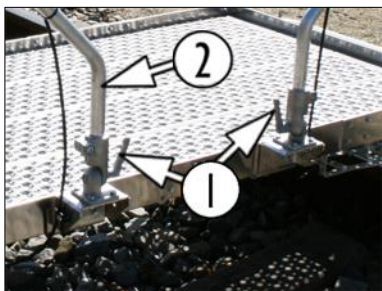
- In order to put the dead man's brake into effect, the light track trolley has to be pushed along the track and the brake lever has to be released.
- Especially on descending tracks, take care that the dead man's brake is locking both wheels.
- Conduct a push test in both directions to ensure braked wheels do **not turn** without activating the brake lever.

Adjusting the handle

To adjust the height of the handle, the handle can set in steps of 15° (3).



- Untighten the clamping levers (1).
- Put the handle (2) in convenient position and catch it.
- Tighten the clamping levers (1).



6.3 Loading the trolley

- Distribute the transported goods uniformly on the loading area, secure load if necessary.

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7 MAINTENANCE

7.1 Maintenance schedule

Maintenance and Inspection	Daily	Every 3 months	done	Comments
Visual check of the device	X			
Perform brake test	X			
Ensure all wheels are secure and in tact		X		
Ensure all wheel bearings spin freely and that there are no irregularities		X		
Ensure all wheel profile and flanges are in tolerance		X		
Ensure all frame bolts are tight and in place		X		
Ensure that there are no cracks in the frame		X		
Check lubrication		X		
Verify correct operation of braking system & adjust if necessary		X		
Verify operation of brake release levers & repair/adjust as necessary.		X		

7.2 Greasing the spring locks

- The spring locks have to be well lubricated to move easily.

7.3 Oiling the Bowden Cable of dead man's brake

- If equipped with dead man's brake, the Bowden wire has to be lubricated regularly to move easily.

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7.4 Perform brake test

- A maintenance brake test should be completed as follows.
 1. Check spring lock, brake handle and mechanism for correct operation.
 2. Check that both brake pins operate correctly when fail safe brake lever (dead man's brake) is released.
 3. The date of the next maintenance brake test must be marked on the trolley.



- The brakes must be maintained and tested at a periodicity of no greater than 3 months.

7.5 Cleaning and care

- Remove any dirt that is clinging to the trolley regularly.

8 TROUBLESHOOTING

Error	Reason	Remedy
Dead man's brake malfunctioning	Bowden cable not oiled	Oil Bowden cable
	Dirt or foreign body in orifices of wheels	Remove dirt
Spring lock brake malfunctioning	Spring locks not greased	Grease spring locks

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9 DISPOSAL AND ENVIRONMENTAL PROTECTION

9.1 Environmental protection

- While working on or with the device, comply with the legal regulations for waste prevention and proper recycling/ disposal and also follow the environmental laws applicable in the user country.
- Particularly, make sure that during the repair and maintenance work, water polluting substances such as greases and oils do not pollute the ground or get into the drains.

9.2 Disposal

The disposal of the device (including machine parts, lubricants) will depend upon the local regulations for waste disposal.



If the device reaches the end of its life cycle, ensure a safe and proper disposal, particularly of parts or substances which are harmful for the environment. These include, among others, lubricants and plastics.

- Since there is a risk of potential environmental pollution, have the device disposed of by an approved specialist firm.
- In any case, check which materials can be used for recycling. Have these disposed of by appropriate waste management companies.

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Certificate of conformity with type of construction

**Bescheinigung der Konformität mit der Bauart (deutsche Originalfassung)**

Certificate of Conformity with type of construction (English translation)
Certificat de conformité avec le type de construction (Traduction française)

gemäß den Anforderungen aus EN 13977: 2011, Anhang E

as defined by EN 13977: 2011, Annex E
conformément à la norme EN 13977: 2011, Annexe E

Hersteller (Name und Anschrift):

Manufacturer (name and address):
Fabricant (nom et adresse):

ROBEL Bahnbaumaschinen GmbH
Industriestraße 31
D-83395 Freilassing

Hiermit erklären wir, dass der

Herewith we declare that the model
Par la présente, nous déclarons, que le modèle

ROBEL Förderwagen Typ 51.12

ROBEL Light Track Trolley type 51.12
ROBEL Chariot léger type 51.12

mit der Bauart 51.12 mit folgenden Seriennummern

with type 51.12 with following serial numbers:
avec type de construction 51.12 avec les
numéros de série suivants:

Ab **RO 51.12-01945S**
beginning **RO 51.12-01945S**
à partir de **RO 51.12-01945S**

und folgendem Herstellungsdatum (Monat/Jahr)

and following date of manufacture (month/year):
et la date de fabrication suivante (mois/année):

ab **01/2017**
beginning **01/2017**
à partir de **01/2017**

übereinstimmt.

corresponds.
correspond.

Angewandte harmonisierte Normen:

Applied harmonized standards:
Normes harmonisées appliquées:

DIN EN 13977: 2011
DIN EN ISO 12100: 2011

Bevollmächtigt für die techn. Dokumentation:

Responsible person for technical documentation:
Personne chargée pour la documentation technique:

Mag. Bernhard Lair
Abt. Technische Dokumentation
Industriestraße 31, D-83395 Freilassing

Freilassing, *2017-08-23*


Wolfgang R. Fally - Geschäftsführer
- General Manager - Gérant

Ort, Datum
Place, date / Lieu, date

Unterschrift, Angabe der Funktion im Unternehmen
Signature, acting in the company / Signature, en qualité de

轻型轨道小车

产品说明书

51.12 / 35



5112_35_Titel.jpg

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1 简介

1.1 总则

一般情况下，使用本产品必须遵守相应应用领域适用的有效法律规定和事故预防措施。如未遵守，机器操作人员承担任何法律后果的责任。

如果适用于操作人员机器使用的现行规定与制造商或供应商的规定不一致，则必须以最严格的规定为准。

买方必须提供一切必要的机械、设备和材料资源，以便将交付的产品投入生产并培训员工。买方还必须提供无限制、安全且足够长的轨道和工作区段，使工作人员能够学习如何操作和使用所交付的产品并进行实操作业训练。

德国Robel轨道机械有限公司及其客户服务部门乐于提供进一步的建议、培训或其他咨询服务。

1.2 本说明书的阅读对象

本说明书包含了正确使用它们所描述的机器必需的信息。

本说明书是专门为技术上合格的人员编写的。从这个意义上说，合格人员包括：

- 已根据证书或经验证明有使用这台机器的能力的人员，
- 熟悉机器安全概念的人；
- 受过专门培训负责修理此类机械及系统的维护和服务人员。

只有能够阅读和理解本说明书的人才可以使用这台机器。他们必须已经阅读并理解了本说明书，并且已经通过他们的签名证实了这一点。只有在考虑到以下情况并严格遵守以下规定的情况下，才可以使用、维护和操作本产品：各铁路及专业部门的有效工务与安全规程、官方规定，特别是有关安全、工业和环境保护、操作、维护及安全的条例或制造商或供应商规定的其他规则。

1.3 责任免除

制造商声明，如果该设备是用于任何其他用途，而不是其指定用途，则制造商对所产生的任何损害不承担任何责任。如果在没有防护措施的情况下操作机器，也属非指定用途的范畴。

本说明书并未指定除机器规定使用方式以外的、危及操作和维护人员的生命与健康以及作业公司的物质资产的任何使用。如果下列情况发生，该机器的制造商声明对作业公司或第三方的人员或财产不承担损害责任：

- 该装置未按指定用途使用，
- 操作和维护人员未阅读和理解有效说明书，并将机器用于既定用途以外的其他用途，
- 操作和维护人员不具备足够的资格，或者系统在超过规定的限制值的条件下运行，
- 系统没有在规定的间隔时间内进行保养。

这些对人身或物质财产损害的责任免除并不影响其他除外责任依据。

1.4 版权

该机器的具体特性和结构特征均为德国Robel轨道机械有限公司的知识产权。本产品说明书的版权归德国Robel轨道机械有限公司所有。不论是否付费，不得全部或部分复制、出版或为竞争性目的而以其他方式加以利用。作业公司的人员不得将说明书内容传递给企业以外的人。

1.5 验收、设备、经营许可证

买方负责检查所购物品是否按照规定和约定的规格配置，其状态、运行能力，特别是其安全性能是否符合本规定；买方有责任按照合同约定对所采购的货物进行验收。

买方必须在采购的物项中安装相应操作与安全规程、标准、法定要求或其他规例规定的所有设备，如灭火器、急救箱、信号与通讯设备、附加报警装置、防护服、安全信息等。

采购物品的交付不包括此类设备，除非达成了其他协议。

买方还负责向负责颁发经营许可证的机构提交采购物项所需的文件。完成这项工作所需的文件（说明、证明、证书等）需由制造商或供应商提供的，必须在销售合同中加以规定和约定。

买方须支付为取得额外经营许可证而可能需要采取的任何其他措施产生的费用。

1.6 惯例/说明/符号



包含关于机器及其操作，或关于现有部分说明的重要信息。

此页留空。

2 安全

2.1 一般危险

该装置51.12是作为机械及材料运输用开放式及手动驱动轻型轨道小车而设计和制造的。

2.2 安全规程

在操作机器时，必须优先考虑保护生命、健康、物质财产和环境的必要要求！

■ 在使用该装置之前请确保知悉以下所有相关规定：

- 法定安全条例
- 各建筑守则及工程规则的条文，
- 各专业和行业协会的规定，
- 工业与环境安全条例
- 许可证条例，
- 公司内部规章制度以及
- 适用的其他所有条例，

除此之外，所有受影响人员均已知悉制造商规定的关于其中所置装置和设备的安全与操作规程。

必要时，负责操作的办公室必须针对机器的特殊作业制定额外的规章和措施，以确保满足所有的安全要求。

除上述信息外，我们还要求您特别注意并遵守以下与该系统相关的安全规则。

2.3 安全原则

必须遵守专业机构的基本预防事故规定。

- 只有经过适当培训的人员才能将设备投入运行！

可能的危险源也应在设备上以警告标志和/或说明标示。

2.4 装置的保护和使用

- 保护该装置，以防止未经授权的人启动或使用其设施或设备。
- 只有在满足了安全运行的所有必要条件后，才能启动和使用该装置。

2.5 事故预防

土木工程协会的事故预防规定也适用于本说明书，必须仔细阅读并严格遵守。

- 始终遵守通用的及内部的事故预防规例
- 了解与机器特定活动区域相关的事实的潜在风险，并确保您在使用该设备之前接受了适当的培训。
- 使用前检查机器是否处于正常工作状态：
 - 确保设备、装置、工具、附件和安全设备等齐备且完好无损。
 - 确保维修和维护工作及时、专业地进行。
- 留意机器和工作区域的特殊危险，特别是：
 - 人与障碍，
 - 遵守安全间隙，
 - 邻近轨道上的交通，
 - 遵守所有操作上必要的保护措施。
- 只使用工作正常的工具和器具。
- 同时立即消除小缺陷，这将使您能够规避更严重的缺陷。
- 确保工具和配件妥善保管。

2.6 急救

始终确保急救箱有适当的装备。

- 对于急救措施和相应急救箱，请咨询您办事处所在地的医疗服务人员或医生。

2.7 人身防护设备

操作和维护过程中必须穿戴人身防护设备。

请参阅：

- 产品说明书
- 国家安全条例；
- 专业协会的规例；
- 其他适用规定；

确定必需穿戴的PPE（人身防护设备）。

如适用于机器所有者的现行规例与制造商及其供应商所提供的说明书有任何不一致之处，则较严格者适用。

2.8 危险须知

以下各注意事项和说明旨在保护操作人员的人身安全和身体健康，使其免受危险伤害，并保护器具操作人员的资产，使其免受损坏。这些说明始终使用特定的命名惯例来区分危险的类型以及如果没有遵循这些说明可能产生的后果的程度。其中包括：

 危险	
	表示不遵守本说明书会导致操作人员死亡或严重受伤。

 警告	
	该符号表示不遵守本说明书可能导致操作人员死亡或重伤。

 小心	
	该符号表示不遵照指示可能导致操作人员受伤。

留意	
该留意项表示不遵守本说明书可能导致业主财产遭受损害。	

3 技术参数

3.1 尺寸和重量

3.1.1 轨距1435毫米

长度	约840毫米
宽度	约1.865毫米
高度	约250毫米
平台宽度	约800毫米
平台长度	约1.620毫米
轨距	1.435 mm
车轮直径（车轮绝缘）	90 mm
重量	约29,5公斤
载重量最大值	700 kg

3.1.2 轨距1000毫米

长度	约840毫米
宽度	约1.430毫米
高度	约250毫米
平台宽度	约800毫米
平台长度	约1.185毫米
轨距	1.000 mm
车轮直径（车轮绝缘）	90 mm

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轻型轨道小车

重量	约28公斤
载重量最大值	700 kg

3.1.3 轨距1520毫米

长度	约840毫米
宽度	约1.950毫米
高度	约250毫米
平台宽度	约800毫米
平台长度	约1.705毫米
轨距	1.520 mm
车轮直径（车轮绝缘）	90 mm
重量	约35公斤
载重量最大值	700 kg

3.2 专用设备（如订购）

手柄，重量	约2公斤
安全制动器	约5公斤

4 简介

4.1 使用范围

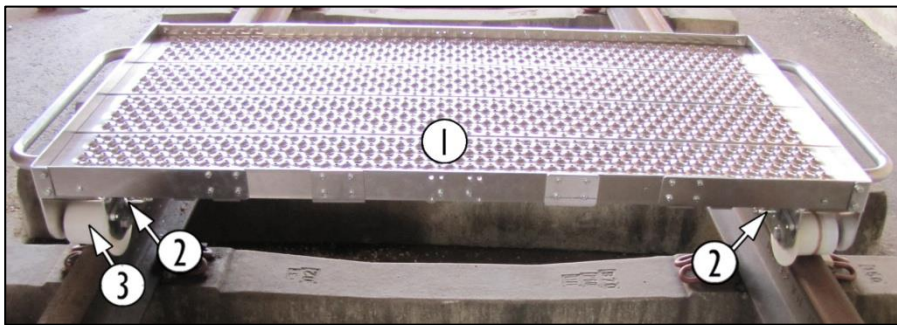
该装置51.12是作为机械及材料运输用开放式及手动驱动轻型轨道小车而设计和制造的。

4.2 可预见的误用

禁止用轻型轨道小车运送人员。

4.3 部件

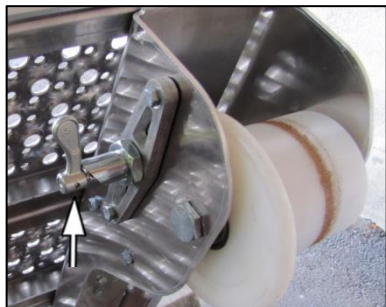
轻型轨道小车由一个有两个手柄的平台、四个绝缘轨道轮和两个作为两个车轮的制动器的弹簧锁组成。



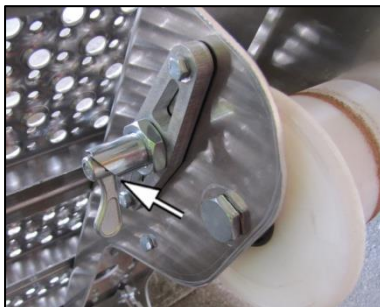
- 1 带有手柄的平台（右/左）
- 2 作为制动器的弹簧锁
- 3 绝缘轨道轮（4x）

详图：弹簧锁制动器

制动器松开

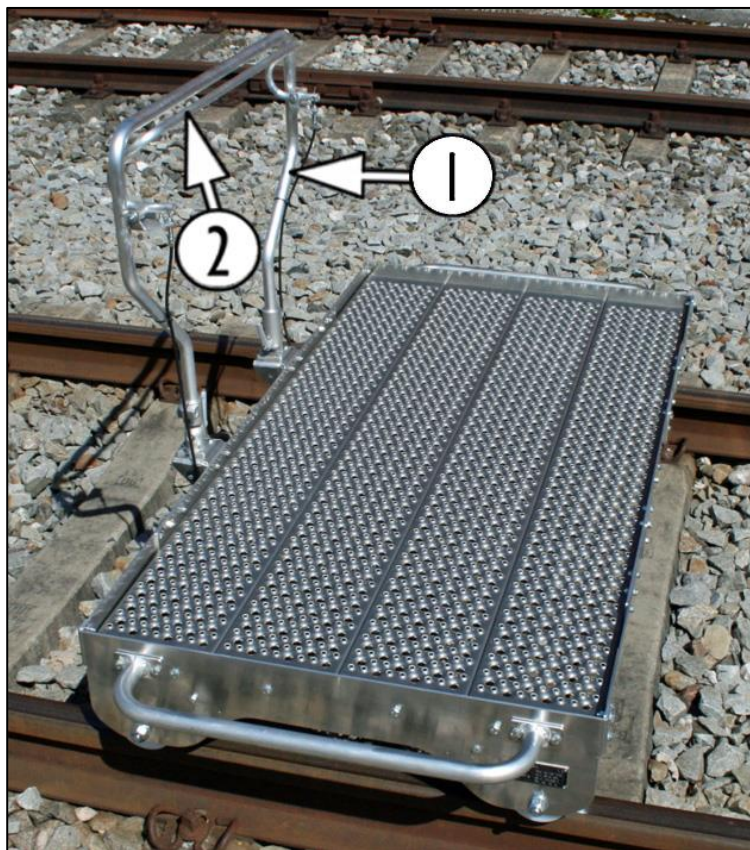


制动器锁定



4.4 专用设备

4.4.1 安全制动器



- 1 用于推动轻型轨道小车的手柄
- 2 安全制动器杆

4.4.2 带皮带把手的轻型轨道小车



4.5 标志和标签

4.5.1 使用的标志和标签

标识牌



4.5.2 在装置上的位置

标识牌位于框架的侧面。



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5 运行条件

5.1 操作

工作温度+85°C，对天气情况无进一步限制。

5.2 储存

该装置的最大储存温度为+85°C。储存区域必须干燥且没有灰尘。

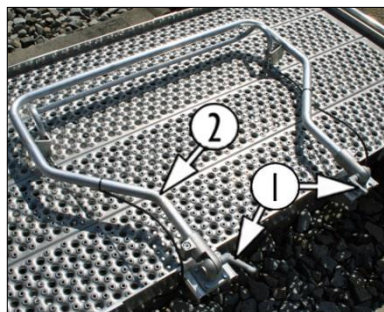
5.3 运输

这种推车如妥善捆缚并予以震动防护，则可以在所有的运输路线上运输，且不会引致任何损害。

带有安全制动器

运输此小车时，您可以将皮带把手向下轻拍到装卸平台上。

- 拧松夹紧杆（1）。
- 向下轻拍把手（2）
- 拧紧夹紧杆（1）。

**运输位置**

6 操作规程

6.1 使用前检查

1. 在使用轻型轨道小车前，应检查其装配是否正确，工作状态是否正常。这意味着，小车必须没有机械损坏，易于移动，且无需施加荷载。
2. 检查标签是否完好且清晰易读。
3. 检查维护制动试验是否过期。
4. 当使用制动器时，检查两个制动轮是否能够抵抗移动。
5. 如果轻型轨道小车配备了一个安全制动器，只要松开制动杆，则该制动器必须锁定。

CAUTION
小心

如果在使用制动器时，任何一个制动轮都会旋转，则停止使用该小车！

6.2 操作和处理

警告



不受控制的移动的危险！

移动小车的弹簧锁制动器无法从外部操作。

- 轻型轨道小车可以放在轨道上，且只能在水平轨道上使用！

小心



有打滑和堵塞的危险！

松开弹簧锁制动器时有发生打滑和阻塞的危险，特别是当小车已装载或轨枕被弄湿的时候！

- 小心松开弹簧锁制动器。

6.2.1 一般要求

- 空的轻型轨道小车可以由两个人放在轨道上。
- 运输的货物必须均匀地分放在装载区，必要时固定装载物。
- UDL（均匀分布的装载物）的总重量**不应超过700公斤!**

6.2.2 无安全制动器的变体

- 两个弹簧锁制动器都必须锁定。
- 为了使制动器生效，轻型轨道小车必须沿着轨道推进，直到螺栓卡入到位。
- 在两个方向上一次推动试验，以确保制动轮不会转动。

6.2.3 带有安全制动器的变体

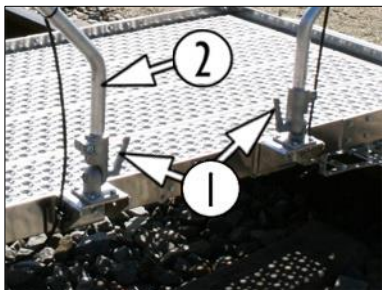
- 为了使安全制动器生效，轻型轨道小车必须沿着轨道推动，并且制动器杆必须松开。
- 特别是在下坡轨道上，要注意安全制动器对两个轮子的锁定作用。
- 在两个方向上进行推动试验，以确保制动轮在制动器杆未启动的情况下不会转动。

调整手柄

为了调整手柄的高度，手柄可按 15° （3）的步进设置。



- 拧松夹紧杆（1）。
- 把手柄（2）放在方便的位置并抓住它。
- 拧紧夹紧杆（1）。



6.3 装车

- 将运输的货物均匀地分放在装载区，必要时固定装载物。

7 保养维护

7.1 维护计划表

维护与检查	每日	每隔3个月	完成	评注
装置外观检查	X			
进行制动试验	X			
确保所有车轮牢固且完好。		X		
确保所有车轮轴承都能自由旋转，没有异常现象		X		
确保所有车轮型面和法兰都在容差范围内。		X		
确保所有框架螺栓紧固到位		X		
确保框架中没有裂缝		X		
检查润滑		X		
验证制动系统是否正确运行，必要时进行调整		X		
检查制动器松放杆的工作状态，必要时进行维修或调整。		X		

7.2 给弹簧锁上润滑脂

- 为了便于移动，弹簧锁必须经过很好的润滑。

7.3 给安全制动器的鲍登线上油

- 如果配备了安全制动器，鲍登线必须定期润滑，以便移动。

7.4 进行制动试验

- 维护制动试验应按以下步骤完成。
- 1. 检查弹簧锁、制动手柄和机械装置是否正常运行。
- 2. 检查两个制动销在故障安全制动杆（安全制动器）松开时是否正常运行。
- 3. 下一次维护制动试验的日期必须在小车上标明。



- 制动器必须在不超过3个月的周期内进行维护和测试。

7.5 清洁与护理

- 定期清除任何附着在小车上的污垢。

8 故障措施

故障描述	原因	补救措施
安全制动器失灵	鲍登线未上油	给鲍登线上油
	车轮孔口有污垢或异物	清除污垢
弹簧锁制动器失灵	弹簧锁未上油	给弹簧锁上润滑脂

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9 处置与环境保护

9.1 环境保护

- 在该装置上作业或使用产品进行作业时，遵守有关废物预防和适当回收/处置的法律规定，并遵守使用者所在国适用的环境法。
- 特别要注意的是，在维修和保养工作中，应确保水污染物质，如油脂和机油，不会污染地面或进入下水道。

9.2 处置

该装置的处理（包括机器部件、润滑剂）取决于当地的废物处理条例。



如果该装置的寿命周期结束，应确保进行安全且妥善的处理，特别是对环境有害的部件或物质的处理。其中包括润滑剂和塑料制品。

- 由于存在潜在的环境污染风险，请将该装置交由一家经批准的专业公司处理。
- 在任何情况下，检查哪些材料可用于回收利用。并将这些材料交由适当的废物管理公司处理。

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施工类证明



Bescheinigung der Konformität mit der Bauart (deutsche Originalfassung)

Certificate of Conformity with type of construction (English translation)
Certificat de conformité avec le type de construction (Traduction française)

gemäß den Anforderungen aus EN 13977: 2011, Anhang E

as defined by EN 13977: 2011, Annex E
conformément à la norme EN 13977: 2011, Annexe E

Hersteller (Name und Anschrift):

Manufacturer (name and address):

Fabricant (nom et adresse):

ROBEL Bahnbaumaschinen GmbH

Industriestraße 31

D-83395 Freilassing

Hiermit erklären wir, dass der

Herewith we declare that the model

Par la présente, nous déclarons, que le modèle

ROBEL Förderwagen Typ 51.12

ROBEL Light Track Trolley type 51.12

ROBEL Chariot léger type 51.12

mit der Bauart 51.12 mit folgenden Seriennummern

with type 51.12 with following serial numbers:

avec type de construction 51.12 avec les
numéros de série suivants:

Ab

beginning
à partir de

RO 51.12-01945S

RO 51.12-01945S

RO 51.12-01945S

und folgendem Herstellungsdatum (Monat/Jahr)

and following date of manufacture (month/year):

et la date de fabrication suivante (mois/année):

ab

beginning
à partir de

01/2017

01/2017

01/2017

übereinstimmt.

corresponds.

correspond.

Angewandte harmonisierte Normen:

Applied harmonized standards:

Normes harmonisées appliquées:

DIN EN 13977: 2011

DIN EN ISO 12100: 2011

Bevollmächtigt für die techn. Dokumentation:

Responsible person for technical documentation:

Personne chargée pour la documentation technique:

Mag. Bernhard Lair

Abt. Technische Dokumentation

Industriestraße 31, D-83395 Freilassing

Freilassing, 2017-08-23


Wolfgang R. Fally - Geschäftsführer
- General Manager - Gérant

Ort, Datum
Place, date / Lieu, date

Unterschrift, Angabe der Funktion im Unternehmen
Signature, acting in the company / Signature, en qualité de