Original instructions

Pantograph lift truck

HPT 10 XE
HPT 10 XM

0058 0059

first in intralogistics

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Address of manufacturer and contact details

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Rules for the operating company of industrial trucks

In addition to these operating instructions, a code of practice containing additional information for the operating companies of industrial trucks is also available.

This guide provides information for handling industrial trucks:

- Information on how to select suitable industrial trucks for a particular area of application
- Prerequisites for the safe operation of industrial trucks
- Information on the use of industrial trucks
- Information on transport, initial commissioning and storage of industrial trucks

Internet address and QR code

The information can be accessed at any time by pasting the address **https://m.still.de/vdma** in a web browser or by scanning the QR code.

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1

Foreword

Your industrial truck

General

The industrial trucks described in these operating instructions are built to the applicable standards and safety regulations. The industrial trucks are fitted with the most up-to-date technology It is now a matter of handling the trucks safely and maintaining their functionality.

These operating instructions provide the necessary information to do this. Read and observe theinformation provided before commissioning the industrial truck. This will prevent accidents and ensure that the warranty remains valid.

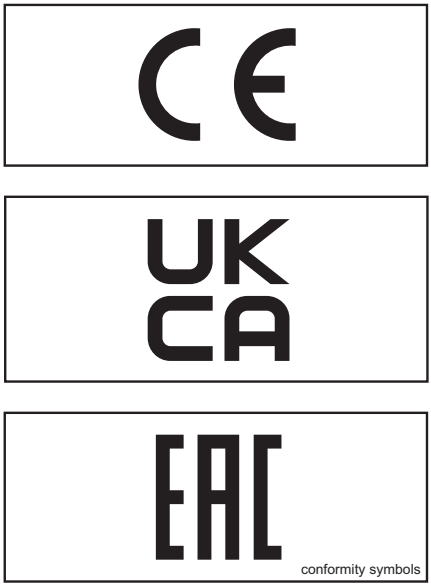
Conformity marking

The manufacturer uses the conformity marking to document the conformity of the industrial truck with the relevant directives at the time of placing on the market:

- CE: in the European Union (EU)
- UKCA: in the United Kingdom (UK)
- EAC: in the Eurasian Economic Union

The conformity marking is applied to the nameplate. A declaration of conformity is issued for the EU and UK markets.

An unauthorised structural change or addition to the industrial truck can compromise safety, thus invalidating the declaration of conformity.



conformity symbols

EC/EU declaration of conformity for the HPT 10 XE

EC/EU declaration of conformity

STILL GmbH
Berzeliusstraße 10
22113 Hamburg Germany

We declare herewith that the machine

Industrial truck type	Pantograph lift truck
Model	HPT 10 XE
Serial number	HLI0990000 - HLI1990000

conforms to EC Machinery Directive 2006/42/EC in the latest valid version and to EMC Directive 2014/30/EU in the latest valid version as determined for industrial trucks in the harmonized standard EN 12895: 2015+A1:2019. In addition, we declare, that radio equipment, if any, installed in this machine conforms to RED Directive 2014/53/EU in the latest version.

This declaration of conformity is issued under the sole responsibility of the manufacturer.

Person authorised to compile the technical file in accordance with the named directives:

Name	Paolo Campinoti
Address	Loc. Il Piano – 53031 Casole d'Elsa (SI) – ITALY

Hamburg, 01/04/ 2023

Fabio Mariotti
Manager Product Development

Donatella Germani
Manager Quality

EC/EU declaration of conformity for the HPT 10 XM

EC/EU declaration of conformity

STILL GmbH
Berzeliusstraße 10
22113 Hamburg Germany

We declare herewith that the machine

Industrial truck type	Pantograph lift truck
Model	HPT 10 XM
Serial number	HLI0990000 - HLI1990000

conforms to EC Machinery Directive 2006/42/EC in the latest valid version.

This declaration of conformity is issued under the sole responsibility of the manufacturer.

Person authorised to compile the technical file in accordance with the named directives:

Name	Paolo Campinoti
Address	Loc. Il Piano – 53031 Casole d'Elsa (SI) – ITALY

Hamburg, 01/04/ 2023

Fabio Mariotti
Manager Product Development

Donatella Germani
Manager Quality

UK Declaration of Conformity for HPT 10 XE

UK Declaration of Conformity

STILL GmbH
Berzeliusstraße 10
D-22113 Hamburg

We declare herewith that the machine

Industrial truck type	Scissor lift pallet truck
Model	HPT 10 XE
Serial No.	HLI0990000 - HLI1990000

conforms to Supply of Machinery Safety Regulations 2008, 2008 No. 1597 and to Electromagentic Compatibility Regulations 2016, 2016 No. 1091 as determined for industrial trucks in the designated standard EN 12895:2015+A1:2019. In addition, we declare, that radio equipment, if any, installed in this machine, conforms to Radio Equipment Regulations 2017, 2017 No. 1206.

This Declaration of Conformity is issued under the sole responsibility of the manufacturer.

Person authorised to compile the technical file in accordance with the named regulations.

Name	Terry Dudley (GB)
Address	Unit 4 Tunstall Arrow, James Brindley Way Stoke on Trent, ST6 5GF – England

Hamburg, 01/04/ 2023

Fabio Mariotti
Manager Product Development

Donatella Germani
Manager Quality

UK Declaration of Conformity for HPT 10 XM

UK Declaration of Conformity

STILL GmbH
Berzeliusstraße 10
D-22113 Hamburg

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Hamburg, 01/04/ 2023

Fabio Mariotti
Manager Product Development

Donatella Germani
Manager Quality

Information about the documentation

Documentation scope

These operating instructions describe all measures necessary for the safe operation and proper maintenance of your industrial truck in all possible variants at the time of printing. Special designs based on customer request are documented in separate operating instructions. If you have any questions, please contact your service centre.

Please enter the production no. and year of manufacture from the nameplate ⇒Chapter "Nameplate", Page 34 in the space provided:

Production no. .....

Year of manufacture .....

Please quote these numbers during all technical enquiries.

Operating instructions are provided with each industrial truck. These instructions must be stored carefully and must be available to the operator and operating company at any time.

If the operating instructions are lost, the operating company must obtain a replacement from the manufacturer immediately.

The operating instructions can be reordered as a spare part from the STILL service centre.

The personnel responsible for operating and maintaining the equipment must be familiar with these operating instructions.

The operating company (see ⇒Chapter "Definition of terms used for responsible persons", Page 16) must ensure that all users have received, read and understood these instructions.

Thank you for reading and complying with these instructions. If you have any questions or suggestions for improvements, or if you have found any errors, please contact your authorised service centre.

Issue date and currentness of manual

The issue date of this manual can be found on the title page.

STILL is constantly engaged in the further development of industrial trucks. These operating instructions are subject to change, and any claims based on the information and/or illustrations contained in them cannot be asserted.

If you require technical support for the industrial truck, please contact your authorised service centre.

Your partner

STILL GmbH

Berzeliusstr. 10

22113 Hamburg

Copyright and trademark rights

Explanation of information symbols used

⚠ DANGER

Indicates procedures that must be strictly adhered to in order to prevent the risk of fatalities.

⚠ WARNING

Indicates procedures that must be strictly adhered to in order to prevent the risk of injuries.

⚠ CAUTION

Indicates procedures that must be strictly adhered to in order to prevent material damage and/or destruction.

NOTE

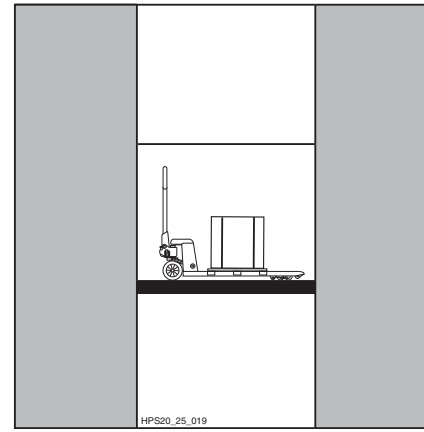
For technical requirements that require special attention.

ENVIRONMENT NOTE

To prevent environmental damage.

Typical graphics

This documentation explains the (usually sequential) chain of certain functions or operations. Schematic views of an industrial truck are used to illustrate these procedures.



NOTE

These schematic views are not representative of the structural state of the documented industrial truck. The views are used solely for the purpose of clarifying procedures.

Environmental considerations

Packaging

During delivery of the industrial truck, certain parts are packaged to provide protection during transport. This packaging must be removed completely prior to commissioning.

ENVIRONMENT NOTE

The packaging material must be properly disposed of after delivery of the industrial truck.

Disposal of units and batteries during repair work

It may be necessary to replace units as part of maintenance work. Replaced units must then be disposed of.

The industrial truck is made of different materials. Each of these materials must be

- disposed of,
- treated or
- recycled in accordance with regional and national regulations.

NOTE

The information provided by the battery manufacturer must be observed when disposing of batteries.

ENVIRONMENT NOTE

We recommend working with a waste management company for disposal purposes.

2

Use of the truck

Proper usage

The industrial truck described in these operating instructions is suitable for lifting and transporting loads on pallets, see ⇒Chapter "Handling loads", Page 48 .

The industrial truck must only be used for its intended purpose as set out and described in these operating instructions!

If the industrial truck is to be used for purposes other than those specified in the operating instructions, the approval of the manufacturer and, if applicable, the relevant regulatory authorities must be obtained beforehand to prevent hazards.

The maximum load to be lifted (rated capacity) is specified on the nameplate and must not be exceeded.

The industrial truck must be used only at the place of use stipulated, see ⇒Chapter "Place of use", Page 14 .

Improper use

The operating company or operator, and not the manufacturer, is liable for any hazards caused by impermissible use (see also ⇒Chapter "Definition of terms used for responsible persons", Page 16).

⚠ CAUTION

It is prohibited to use the truck for purposes other than those described in these operating instructions.

- The industrial truck may not be operated in areas where there is a risk of fire, explosion or corrosion, or in areas that are particularly dusty
- The transport of unstable, poorly stacked loads or fluids is dangerous and not permitted
- The industrial truck must not be pulled with the help of other industrial trucks, only by hand.
- The industrial truck must not be used if the load capacity is exceeded
- Foodstuffs must not come into direct contact with the industrial truck
- It is not permissible to use the industrial truck as a hydraulic jack or lever
- It is prohibited to transport persons or to use the truck as a scooter
- The industrial truck must not be used on slopes
- The industrial truck must not be used in areas that are insufficiently lit
- The tiller must not be turned at a right angle in order to stop the industrial truck
- The industrial truck must not be used for handling free-swinging loads
- The industrial truck must not be used if there is a danger of unintentional movement

Place of use

The industrial truck may only be used in buildings.

The sites on which the industrial truck is used must comply with the relevant legislation (condition of the ground, lighting etc.).

The floor areas must have an adequate load capacity (concrete, tarmac) and should have a flat, smooth surface.

The driveways, work areas and aisle widths must correspond with the specifications in these operating instructions.

The industrial truck is suitable for indoor use in countries ranging from the tropics to Nordic regions (see temperature ranges ⇒Chapter "Technical datasheet for the HPT 10 XE", Page 90). The industrial truck is not suitable for use in very humid environments.

The operating company (see ⇒Chapter "Definition of terms used for responsible persons", Page 16) must ensure suitable fire protection for the relevant application in the industrial truck's surroundings. If in doubt, contact the relevant authorities.

3

Safety

Definition of terms used for responsible persons

Operating company

The operating company is the natural or legal person or group who uses the industrial truck or on whose authority the truck is used.

The operating company must ensure that the industrial truck is used only for its proper purposes and in compliance with the safety regulations in these operating and maintenance instructions.

The operating company must ensure that all users read and understand the safety information.

The operating company is responsible for the scheduling and correct performance of regular safety checks.

We recommend that the national performance specifications are adhered to.

Qualified person

A qualified person is a fitter who works for the manufacturer or is a person who meets following requirements:

- A completed vocational qualification that demonstrably proves their professional expertise. This proof is to consist of a vocational qualification or a similar document.
- Professional experience indicating that the qualified person has gained practical experience of industrial trucks over a proven period during their career. During this time, this person has become familiar with a wide range of symptoms that require checks to be carried out, such as based on the results of a hazard assessment or a daily inspection.
- Recent professional involvement in the field of the industrial truck test in question and an appropriate further qualification are essential. The qualified person must have experience of carrying out the test in question or of carrying out similar tests. Moreover, such a person must also be aware of the latest technological developments regarding the industrial truck to be tested and the risk being assessed.

Operator

This industrial truck may be used only by persons who have received sufficient instruction on control and operation, and proven their ability to handle this industrial truck safely to the operating company's responsible representative.

The responsible operator must not make the industrial truck available to unauthorised persons.

Rights, duties and rules of behaviour for the operator

The operator must be informed of his rights and duties.

The operator must be granted the necessary rights.

The operator must wear appropriate protective equipment (protection suit, safety footwear, safety helmet, industrial goggles, gloves) for the application conditions, the job and the load to be lifted. Safety footwear must always be worn for safety.

The operator must be familiar with the operating instructions and have access to them at all times.

The operator must:

- Have read and understood the operating instructions
- Have familiarised themselves with safe operation of the industrial truck
- be physically and psychologically able to drive an industrial truck safely.

⚠ DANGER

Taking drugs, alcohol or medications that affect the responses of an individual limits the ability of that individual to drive an industrial truck!

Individuals under the influence of the aforementioned substances are not permitted to perform any work on or with an industrial truck.

Basic principles for safe operation

Changes and retrofitting

NOTE

Changes and retrofitting are prohibited!

Warning regarding non-original parts

Original parts, attachments and accessories are specially designed for this industrial truck. We specifically draw your attention to the fact that parts, attachments and accessories supplied by other companies have not been tested and approved by us.

⚠ CAUTION

Installation and/or use of such products may therefore have a negative impact on the design features of the industrial truck and thus impair active and/or passive safety.

We recommend that you obtain approval from the manufacturer and, if necessary, from the relevant regulatory authorities before installing such parts. The manufacturer accepts no liability for any damage caused by the use of non-original parts and accessories without approval.

Damage, defects and misuse of safety systems

The operator must report any damage or other defects to the industrial truck immediately to the supervisory personnel.

Industrial trucks that are not functional must not be used until they have been properly repaired.

Do not remove or disable safety systems.

Fixed set values may only be changed with the approval of the manufacturer.

Residual risk

Residual dangers, residual risks

Despite careful working and compliance with standards and regulations, the occurrence of other risks when using the industrial truck cannot be entirely excluded.

The industrial truck and all other system components comply with current safety requirements. Nevertheless, even when the truck is used for its proper purpose and all instructions are followed, some residual risk cannot be excluded.

Even beyond the narrow danger areas of the industrial truck itself, a residual risk cannot be excluded. Persons in this area around the industrial truck must exercise a heightened degree of awareness, so that they can react immediately in the event of any malfunction, incident or breakdown etc.

⚠ WARNING

All persons that are in the vicinity of the industrial truck must be instructed regarding these dangers that arise through use of the industrial truck.

In addition, we draw attention to the safety regulations in these operating instructions.

The risks can include:

- Escape of consumables due to leakages, rupture of lines and containers etc.
- Falling, tripping etc. when moving the industrial truck, especially if consumables have leaked.
- The stability of the industrial truck has been tested to the latest standards. These standards only take into account the static and dynamic tipping forces that can arise during specified use in accordance with the operating rules and intended purpose. The risk of exceeding the moment of tilt that arises from improper use or incorrect operation cannot be excluded in extreme cases, and will impact stability.
- Risk of feet being crushed under the load when the load is lowered.
- Pinch and shear points between the load, industrial truck and surroundings.

Residual risk

- Risk of accident when transporting loads due to slipping or falling.
- Loss of stability due to the load being unstable or the load slipping etc.
- Human error - Disregarding safety regulations.
- Risk caused by unrepaired damage.
- Risk caused by insufficient maintenance or testing.
- Risk caused by using the wrong consumables.
- Risk caused by exceeding testing intervals.

The manufacturer is not held responsible for accidents involving the industrial truck caused by the failure of the operating company to comply with these regulations either intentionally or carelessly.

Danger to employees

According to the German workplace safety ordinance (BetrSichV) and labour protection law (ArbSchG), the operating company must determine and assess hazards during operation, and establish the occupational health and safety measures required for employees. The operating company must therefore draw up appropriate operating instructions (§ 6 ArbSchG) and make them available to the operator. A responsible person must be appointed. The national regulations for the country of use must be observed.

NOTE

Please note the definition of the following responsible persons: "operating company" and "driver".

The construction and equipment of the industrial truck comply with the applicable conformity regulations and therefore have the conformity marking. These elements are therefore not included in the hazard assessment. Attachments possess their own conformity marking and likewise are not included for that reason. The operating company must, however, select the type and equipment of the industrial trucks so as to comply with the local provisions for deployment.

The result must be documented (§ 6 ArbSchG). In the case of industrial truck deployments involving similar hazard situations, it is permitted to summarise the results. This overview (see chapter "Overview of hazards and countermeasures") provides help on complying with this regulation. The overview specifies the primary hazards that, in the event of non-compliance, are the most frequent causes of accidents. If other major hazards are present as a result of the specific operating conditions, these hazards must also be taken into consideration.

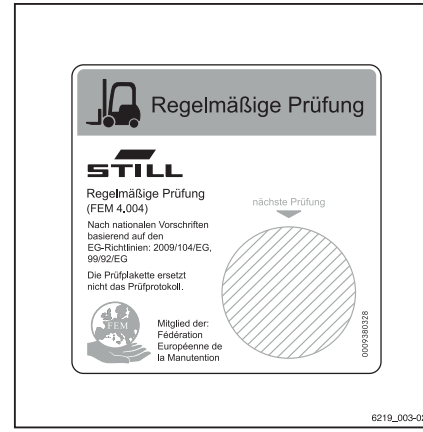
The conditions of use for industrial trucks are broadly similar in many plants, so that the hazards can be summarised in one overview. Observe the information provided by the relevant employers' liability insurance association on this subject.

Specific usage risks as a result of operating the industrial truck

Approval from the manufacturer and, if applicable, the relevant authorities, must be obtained each time the truck is used in a manner that is different to how it is used normally, and in cases where the operator is not certain that he can use the truck correctly and without the risk of accidents.

Safety tests

Carrying out regular testing on the industrial truck ▷



Safety inspection based on time and extraordinary incidents

The operating company must ensure that the industrial truck is checked by a competent person at least once a year or following unusual incidents.

As part of this testing, a complete check of the technical condition of the industrial truck must be performed with regard to accident safety. Furthermore, the industrial truck must be thoroughly checked for damage that could have been caused by improper use. A test log must be created. The results of the testing must be retained at least until a further two inspections have been carried out.

The inspection date is indicated by an adhesive label on the industrial truck.

– Arrange for the authorised service centre to perform regular testing on the industrial truck.

– Observe the guidelines regarding inspection work on industrial trucks as specified by FEM 4.004.

The operating company is responsible for ensuring any defects are remedied without delay.

– Notify the authorised service centre.

NOTE

In addition, observe the national regulations for the country of use.

Safety regulations for handling consumables

Permissible consumables

⚠ WARNING

Consumables can be dangerous.

Observe the safety regulations when handling such materials.

Please refer to the maintenance data table for the permissible substances that are necessary for operation (see ⇒Chapter "Maintenance data table", Page 68).

Oils

⚠ DANGER

Oils are flammable!

- Follow the statutory regulations.
- Do not allow oils to come into contact with hot engine parts.
- No smoking, fires or naked flames!

⚠ DANGER

Oils are toxic!

- Avoid contact and consumption.
- If vapour or fumes are inhaled, move to fresh air immediately.
- In the event of contact with the eyes, rinse thoroughly (for at least 10 minutes) with water and then consult an eye specialist.
- If swallowed, do not induce vomiting. Seek immediate medical attention.

⚠ WARNING

Prolonged intensive contact with the skin can result in dryness and irritate the skin!

- Avoid contact and consumption.
- Wear protective gloves.
- After any contact, wash the skin with soap and water, and then apply a skin care product.
- Immediately change soaked clothing and shoes.

⚠ WARNING

There is a risk of slipping on spilled oil, particularly when combined with water!

– Spilt oil should be removed immediately with oil-binding agents and disposed of according to the regulations.

ENVIRONMENT NOTE

Oil is a water-polluting substance!

- *Always store oil in containers that comply with the applicable regulations.*
- *Avoid spilling oils.*
- *Spilt oil should be removed immediately with oil-binding agents and disposed of according to the regulations.*
- *Dispose of old oils according to the regulations.*

Hydraulic fluid

⚠ WARNING

These fluids are pressurised during operation of the truck and are hazardous to your health.

– Do not spill the fluids.

– Follow the statutory regulations.

– Do not allow the fluids to come into contact with hot engine parts.

⚠ WARNING

These fluids are pressurised during operation of the truck and are hazardous to your health.

– Do not allow the fluids to come into contact with the skin.

– Avoid inhaling spray.

– Penetration of pressurised fluids into the skin is particularly dangerous if these fluids escape at high pressure due to leaks in the hydraulic system. In case of such injury, immediate medical assistance is required.

– To avoid injury, use appropriate personal protective equipment (e.g. protective gloves, industrial goggles, skin protection and skin care products).

ENVIRONMENT NOTE

Hydraulic fluid is a water-polluting substance.

- *Always store hydraulic fluid in containers that comply with regulations*
- *Avoid spills*
- *Spilt hydraulic fluid should be removed immediately with oil-binding agents and disposed of according to the regulations*
- *Dispose of old hydraulic fluid according to the regulations*

Battery acid

⚠ WARNING

Battery acid contains dissolved sulphuric acid. This is toxic.

– Avoid touching or swallowing the battery acid at all costs.

– In case of injury, seek medical advice immediately.

⚠ WARNING

Battery acid contains dissolved sulphuric acid. This is corrosive.

– When working with battery acid, use appropriate PSA (rubber gloves, apron, protection goggles).

– When working with battery acid, never wear a watch or jewellery.

– Do not allow any acid to get onto clothing or skin or into the eyes. If this does happen, rinse immediately with plenty of clean water.

– In case of injury, seek medical advice immediately.

– Immediately rinse away spilt battery acid with plenty of water.

– Follow the statutory regulations.

ENVIRONMENT NOTE

– Dispose of used battery acid in line with the applicable regulations.

Disposal of consumables

ENVIRONMENT NOTE

Materials that accumulate during repair, maintenance and cleaning must be collected properly and disposed of in accordance with the national regulations for the country in which the truck is being used. Work must only be carried out in areas designated for the purpose. Care must be taken to minimise any environmental pollution.

– Soak up any spilt fluids such as hydraulic oil or gearbox oil using an oil-binding agent.

– Neutralise any spilt battery acid immediately.

– Always observe national regulations concerning the disposal of used oil.

Emissions

The values specified apply to a standard truck (see technical datasheet). Different tyres, additional units etc. can produce different values.

Noise emissions

The HPT 10 XE scissor lift pallet truck emits the following sound-pressure levels:

Continuous sound pressure level at the HPT 10 XE scissor lift pallet truck	
L_{pAZ}	< 70 dB(A)

Battery

⚠ WARNING

During charging, the battery releases a mixture of oxygen and hydrogen (detonating gas). This gas mixture is explosive and must not be ignited.

Suitable ventilation and keeping it away from open flames can avoid the risk of explosion.

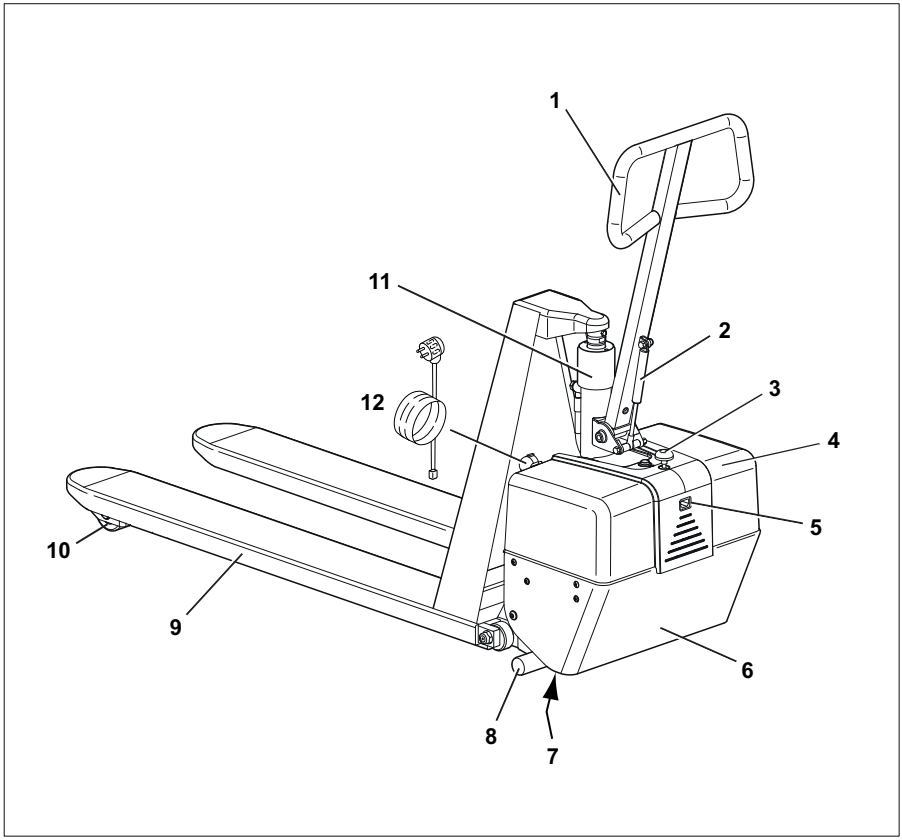
– Observe the safety regulations for handling the battery!

4

Overviews

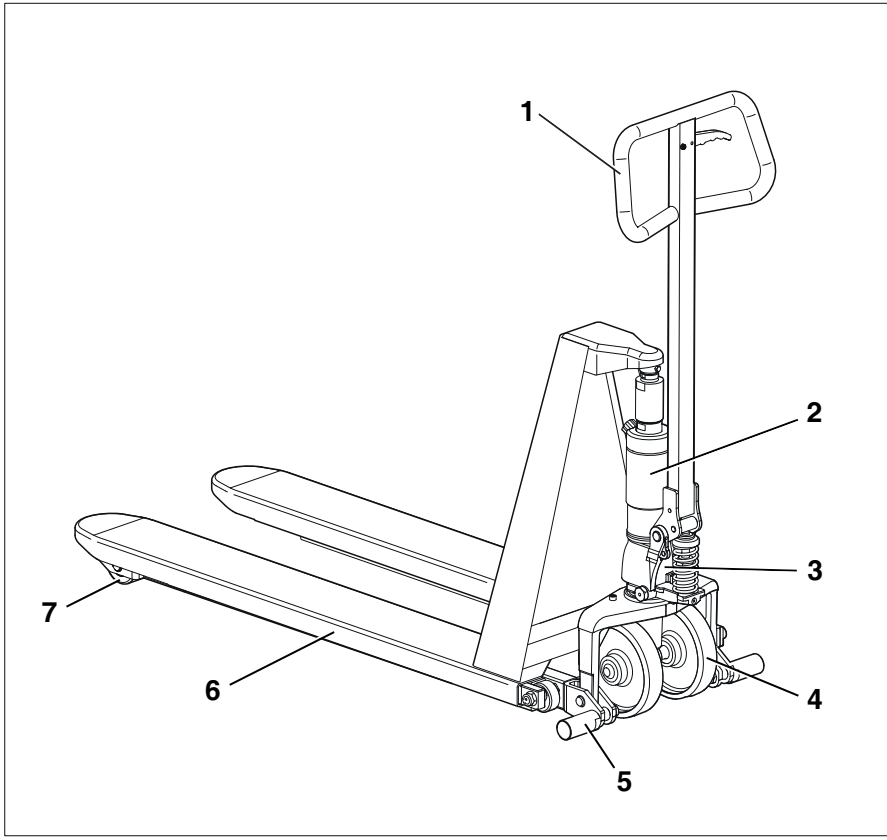
Overview

General view of the HPT 10 XE



1	Tiller	7	Steering rollers
2	Gas spring	8	Stabilisers
3	Emergency off switch (on/off switch)	9	Forks
4	Battery cover	10	Load castors
5	Battery charger socket	11	Lift cylinder
6	Cover of the pump motor	12	Mains cable

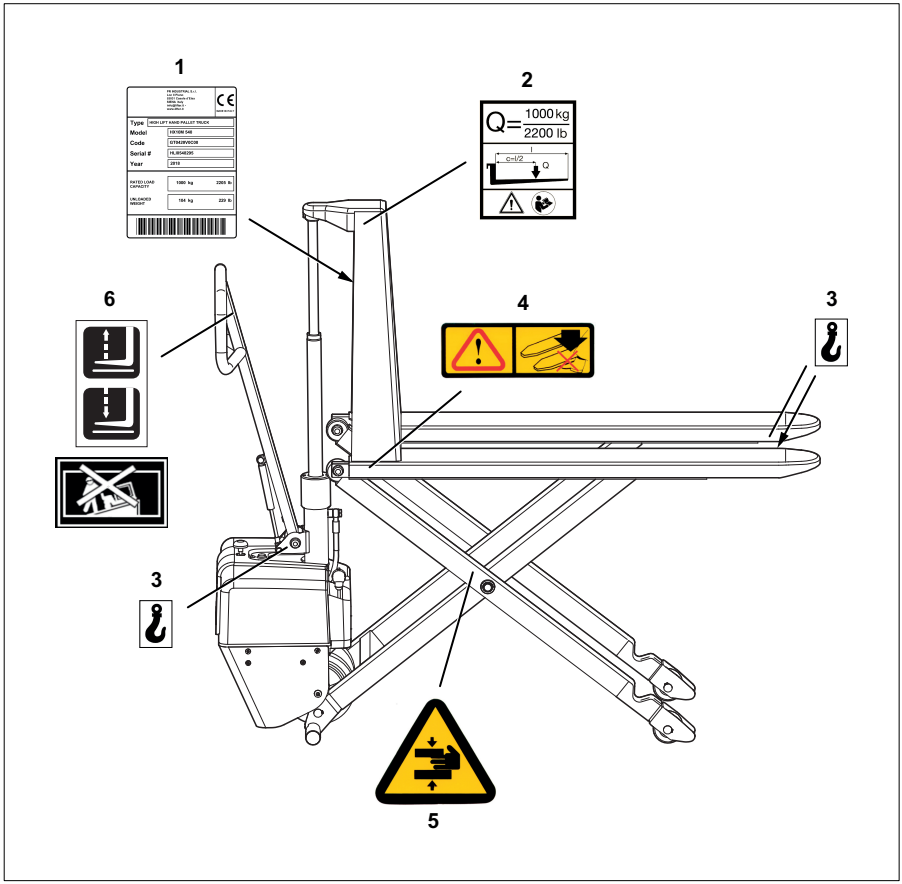
General view of the HPT 10 XM



1	Tiller	5	Stabilisers
2	Lift cylinder/hydraulic oil tank	6	Forks
3	Hydraulic pump	7	Load castors
4	Steering rollers		

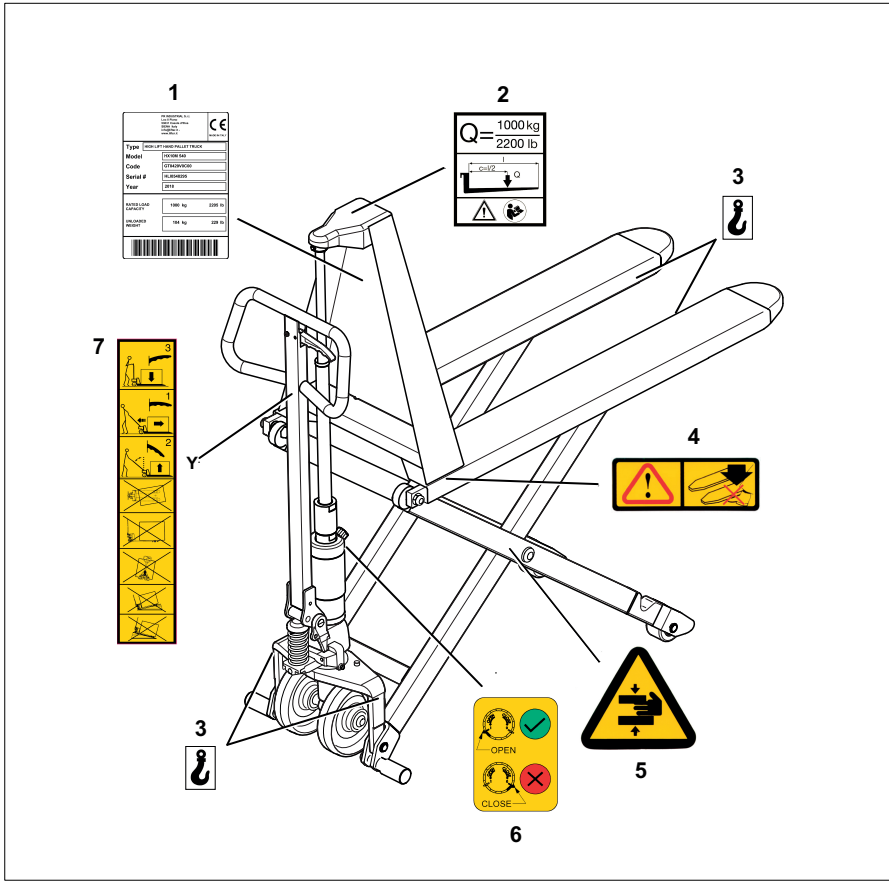
Labelling points

Overview of labelling points on the HPT 10 XE



1 Nameplate
2 Decal information: Load capacity / Load centre of gravity / Caution / Read the operating instructions
3 Decal information: Lifting gear fixing point
4 Warning sign: Caution / Stay away from the area beneath the fork, risk of crushing
5 Warning sign: Do not reach into the pantograph mechanism, risk of crushing
6 Decal information: Lift load / Lower load / Do not drive on slopes

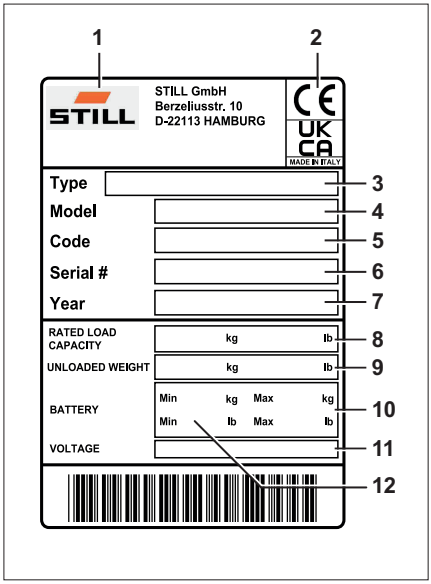
Overview of labelling points on the HPT 10 XM



1 Nameplate
2 Decal information: Load capacity / Load centre of gravity / Caution / Read the operating instructions
3 Decal information: Lifting gear fixing point
4 Warning sign: Caution / Stay away from the area beneath the fork, risk of crushing
5 Warning sign: Do not reach into the pantograph mechanism, risk of crushing
6 Decal information: Open/close the hydraulic oil tank
7 Decal information: Lift load / Lower load / Transport load / Do not drive on slopes

Nameplate

It is possible to identify the industrial truck from the information on the nameplate.



1 Manufacturer
2 CE labelling
3 Model
4 Manufacturer's code
5 Serial number
6 Year of manufacture
7 Rated capacity
8 Tare weight
9 Max. battery weight
10 Battery nominal voltage in V
11 Min. battery weight

5

Operation

Tasks before initial commissioning

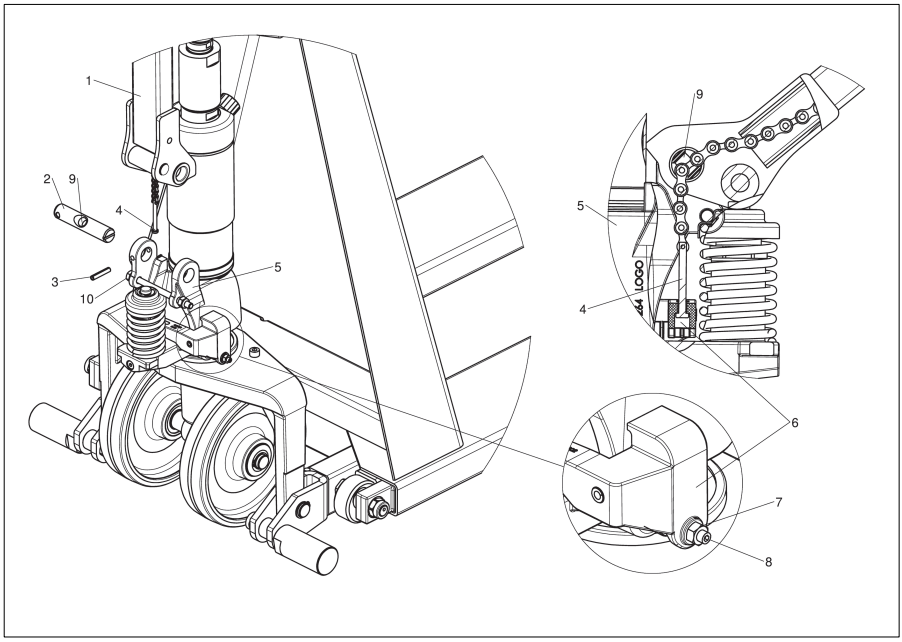
Assembling and adjusting the tiller on the HTP 10 XM

⚠ DANGER

Do not use the industrial truck until the tiller has been successfully assembled and adjusted, and function checking has been carried out successfully.

If the industrial truck is delivered without the tiller fitted, the tiller must be fitted before initial commissioning.

Assembling the tiller



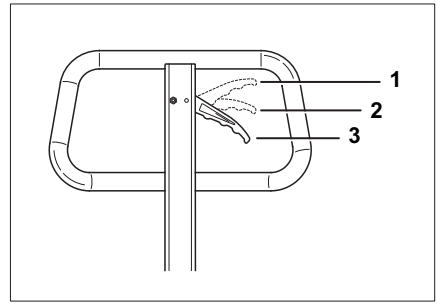
⚠ CAUTION

Remove the locking pin (10) only after the tiller has been fitted on the pump unit.

– Assemble the tiller (1) on the pump unit (5) using the bolt (2) and the plug (3) (included in delivery). When positioning the tiller, feed the chain (4) through the hole in the bolt (9).
– Turn the tiller a little and remove the locking pin (10) for the steering spring.
– Lift the lowering lever (6) until the end of the chain (4) can be hooked onto the lowering lever. Fully insert the pin at the end of the chain into the holding fixture on the lowering lever (see illustration).

Adjusting the "lift-lower" operating lever ▷

– Push the "lift-lower" operating lever down to the "lifting" position.
– Use the tiller to perform pump actions until the fork has reached the maximum lift height.
– Move the "lift-lower" operating lever to the middle "transport" position.
– Ensure that the tiller is in the vertical position.
– Loosen the locking screw (7).
– Slowly turn the adjustment screw (8) clockwise. As soon as the fork starts to lower, turn the adjustment screw 1½ rotations anticlockwise.
– Tighten the locking screw (7).



"Lift-lower" operating lever
1 Lowering
2 Transport
3 Lifting

Function checking

– Check whether the "lift-lower" operating lever is correctly adjusted using the following steps:

Operating lever in the middle "transport" position:

• The fork must not lift or lower when the tiller is in any position.

Operating lever in the upper "lower" position:

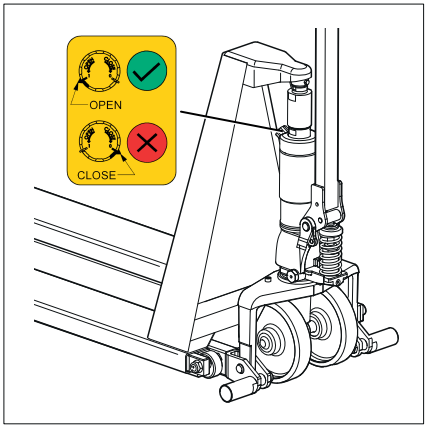
• The fork must lower when the tiller is in any position.

– If the check fails, repeat the adjustment process for the operating lever.

Unlocking the cover of the oil tank on the HPT 10 XM

When the industrial truck is delivered, the cover of the oil tank is in the "CLOSE" position.

– Turn the cover to the "OPEN" position during initial commissioning to allow the oil to circulate.



Checks and tasks before daily use

Visual inspections

⚠ WARNING

Damage or other defects on the industrial truck can result in accidents.

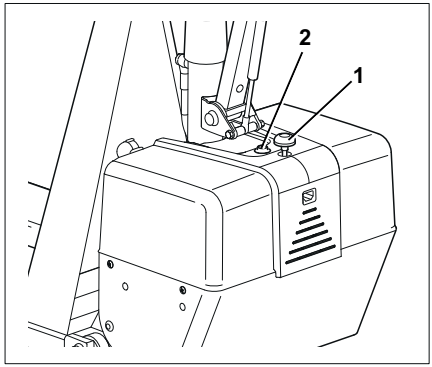
If damage or other defects are identified on the industrial truck during the following inspections, do not use the industrial truck until it has been repaired properly. Do not remove or disable safety systems and controls. Do not change any predefined set values.

Prior to commissioning, ensure that the truck is safe for operation:

- Fork arms and other lifting accessories must not show any visible signs of damage (e.g. bends, cracks, significant wear).
- Check the area under the industrial truck for leaking consumables.
- Check that all decal information labels are present and legible. Damaged or missing adhesive labels must be replaced according to the overview of labelling points, see ⇒Chapter "Labelling points", Page 32 .
- Check the visible areas of the hydraulic system for damage and leakages. Damaged components must be replaced.
- Visually inspect the wheels and rollers for wear and damage and check that they are securely mounted.
- Report defects to the supervisory personnel.

Switching the industrial truck on and off

Switching the HPT 10 XE on and ▷ off



– Pull out the emergency off switch (1) to switch on the industrial truck. When switched on, the indicator LED (2) on the battery cover shows the charge state of the battery.
– Push the emergency off switch to switch off the industrial truck.

Parking the industrial truck securely

⚠ WARNING

Do not park the industrial truck on a slope.

Make sure that the industrial truck cannot roll away unintentionally.

Never park the industrial truck in areas where it could create risks for other traffic.

Always park the industrial truck so that it is protected from rain or snow.

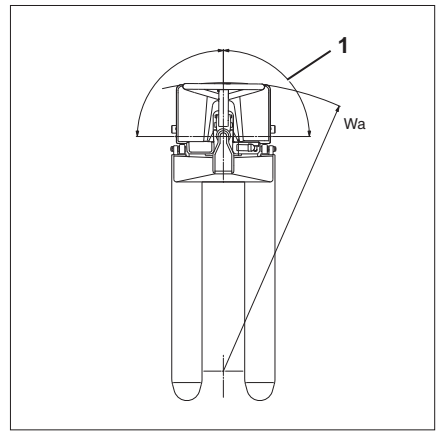
– Lower the forks completely.
– Actuate the parking brake, (special equipment), see ⇒Chapter "Parking brake on the HTP 10 XM (special equipment)", Page 46 .
– In electric industrial trucks, actuate the emergency off switch.

Steering

Steering

The industrial truck can be steered by swivelling the tiller within the angle indicated (1).

At maximum steering lock, the industrial truck can be turned in the smallest turning radius (Wa), see ⇒Chapter "Technical datasheet for the HPT 10 XE", Page 90 .



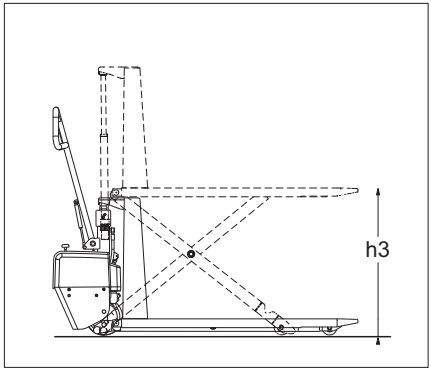
Lifting

Lifting system

The following lifting system is fitted on this industrial truck:

Pantograph lift on the HPT 10 XE ▷

When the scissor lift is raised electrically, the lift cylinder raises the forks up to the max. height (h3).



Pantograph lift on the HPT 10 XM

When the scissor lift is raised mechanically, the lift cylinder raises the forks continuously up to the max. height (h3).

Operating devices for the lifting system on the HPT 10 XE

⚠ DANGER

Risk of fatal injury!

Keep clear of the area beneath the raised fork.

Never exceed the rated capacity indicated on the nameplate. Otherwise stability cannot be guaranteed!

⚠ DANGER

Risk of accident!

Do not step onto the forks. Do not lift people.

Never grab or climb onto moving parts of the industrial truck.

When transporting loads, the forks must be in the low position, with a maximum clearance of 300 mm from the ground.

Lifting the forks

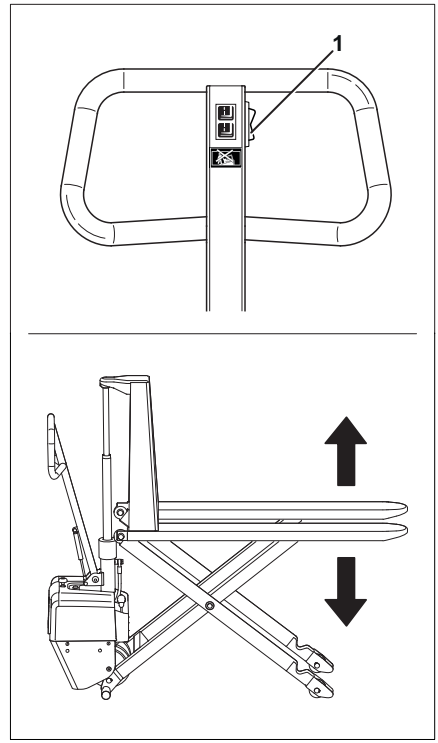
– Press the "lift-lower" control switch upwards ▷ (1).

The forks are raised.

Lowering the forks

– Press the "lift-lower" control switch downwards (1).

The forks are lowered.



Operating devices for the lifting system on the HPT 10 XM

⚠ DANGER

Risk of fatal injury!

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Never exceed the rated capacity indicated on the nameplate. Otherwise stability cannot be guaranteed!

⚠ DANGER

Risk of accident!

Do not step onto the forks. Do not lift people.

Never grab or climb onto moving parts of the industrial truck.

When transporting loads, the forks must be in the low position, with a maximum clearance of 300 mm from the ground.

Lowering the forks

– Pull the "lift-lower" operating lever upwards (1).

The forks are lowered.

Lifting the forks

– Push the "lift-lower" operating lever downwards (3).

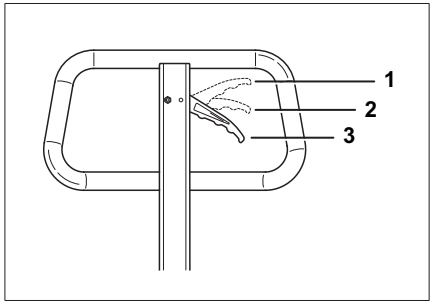
– Perform a pumping action with the tiller.

The forks are raised.

Transport

– Move the "lift-lower" operating lever to the middle position (2).

The fork can be moved without the lifting function and lowering function.



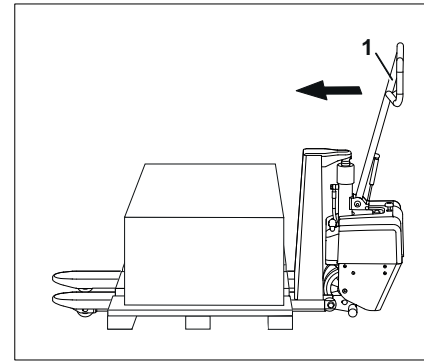
"Lift-lower" operating lever
1 Lowering
2 Transport
3 Lifting

Brakes

Braking the industrial truck

To brake the industrial truck, with or without a load, proceed as follows:

– Move the tiller (1) in the opposite direction to the drive direction and use your muscular strength to reduce the speed of the industrial truck. ▷



⚠ WARNING

Risk of crushing!

If the truck is decelerated too quickly, the load could slip forwards and lead to damage as a result of crushing.

Emergency stop

If the industrial truck is carrying a load and reaches a speed that is too high, it is possible to perform an emergency stop.

⚠ CAUTION

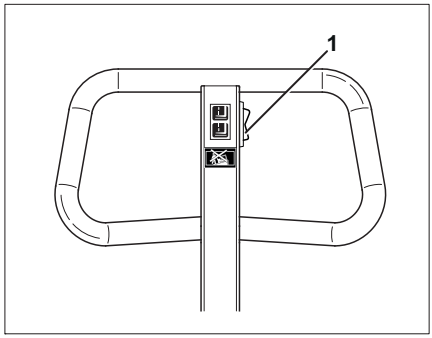
Risk of tipping!

The transportation speed must be adapted to suit the ground conditions. Transport heavy loads slowly and carefully.

HPT 10 XE

– Push the switch (1) on the tiller downwards. ▷

The pallet is lowered and is braked by the ground.

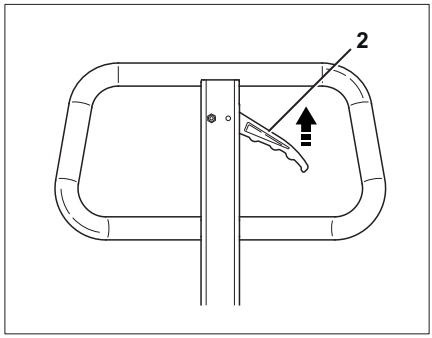


HPT 10 XM

– Pull the operating lever (1) on the tiller upwards. ▷

The pallet is lowered and is braked by the ground.

– Also brake the industrial truck as usual, see ⇒ Chapter "Braking the industrial truck", Page 45 .



⚠ WARNING

Risk of injury!

If travelling at a high speed, the load could slip forwards and cause damage as a result of crushing.

Parking brake on the HTP 10 XM (special equipment)

The industrial truck can be equipped with a parking brake as special equipment. This is intended solely for secure parking of the industrial truck and is not to be used as a service brake.

Actuating the parking brake

– Pull the locking lever (2) and at the same time move the operating lever (1) from the lower position to the upper position.

– Release the locking lever (2) again.

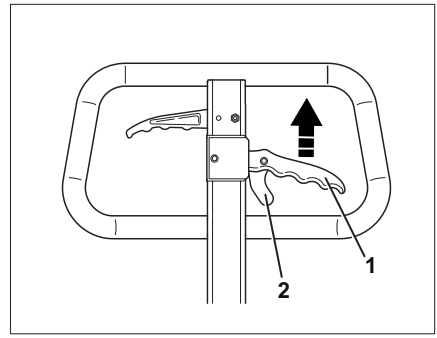
The parking brake is now applied.

Releasing the parking brake

– Pull the locking lever (2) and at the same time move the operating lever (1) from the upper position to the lower position.

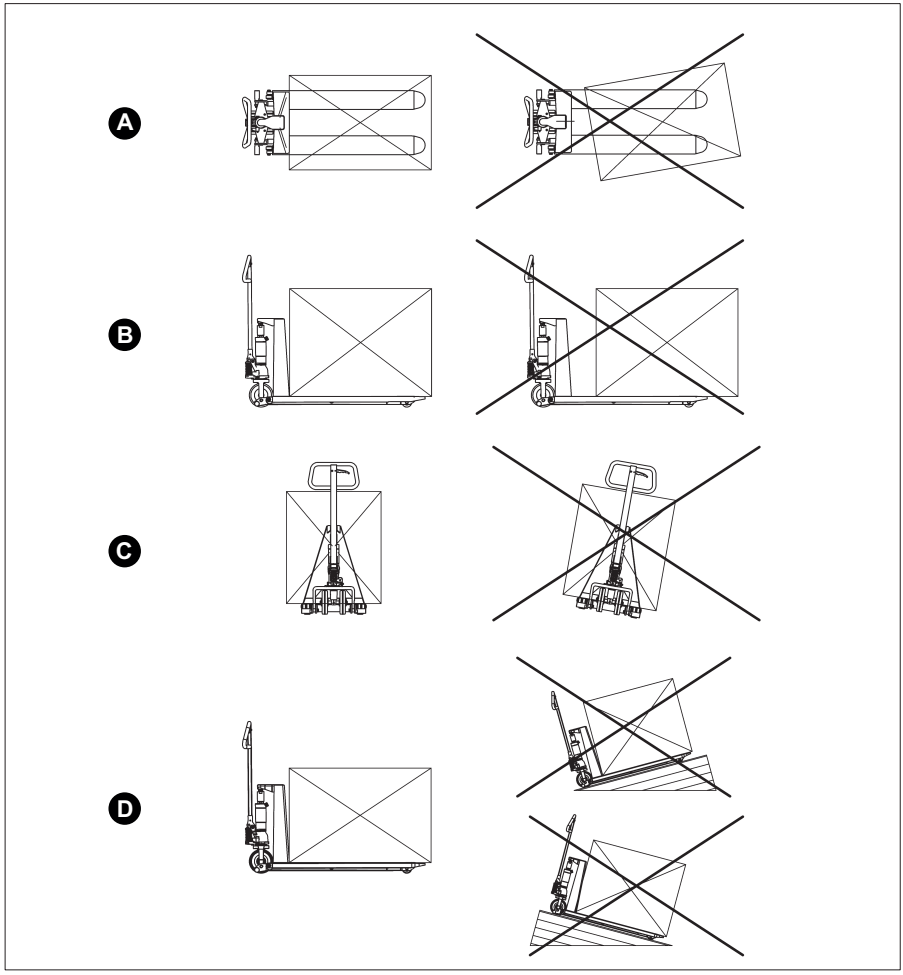
– Release the locking lever (2) again.

The parking brake is released.



Handling loads

Safety regulations for handling loads



A Do not pick up the load at an angle to the forks.
B Position the load at the back of the fork.
C Only transport loads with an even weight distribution.
D Do not transport loads on a gradient.

⚠ DANGER

Risk of injury!

Never exceed the rated capacity indicated on the nameplate. Otherwise stability cannot be guaranteed!

Keep clear of the area beneath the raised fork.

Do not step onto the fork. Do not lift people.

⚠ DANGER

Risk of accident!

Do not use a loaded industrial truck on a gradient.

When transporting loads, the fork must be in the low position, with a maximum clearance of 300 mm from the ground.

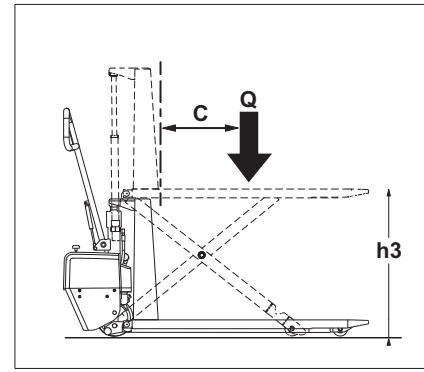
Warn people in the working environment when approaching. Stop when danger is imminent. Do not stop in the path of moving industrial trucks.

Before the load pick-up

Load capacity

The load capacity (Q) indicated for the industrial truck must not be exceeded. It is influenced by the load centre of gravity.

The smaller the load distance (c) from the fork back, the more stable the industrial truck is, see ⇒Chapter "Technical datasheet for the HPT 10 XE", Page 90 .



Taking up loading units

To make sure that the load is securely supported, it must be ensured that the fork is positioned as far as possible under the load.

If possible, the load should rest on the back of the fork.

The load must not protrude too far over the fork tips.

Loads are to be picked up and transported between the fork arms as close as possible to the centre.

Taking up load

– Only place those pallets into stock that do not exceed the specified maximum dimensions of 1000 x 1200 mm. Damaged loading equipment and improperly designed loading units may not be used.

– Attach or secure the load to the load-carrying equipment so that the load cannot move or fall.

– Place the loading units into stock so that the defined aisle width is not reduced by protruding parts.

Transporting loads

– When transporting loads, lower the fork to the low position (a maximum clearance of 300 mm from the ground).

– Do not pick up or transport loads on a gradient.

– Adjust the speed to the ambient conditions while transporting loads. Reduce the speed on curves, narrow aisles and undulating roadways to avoid the risk of tipping. Avoid quick stops and steering movements.

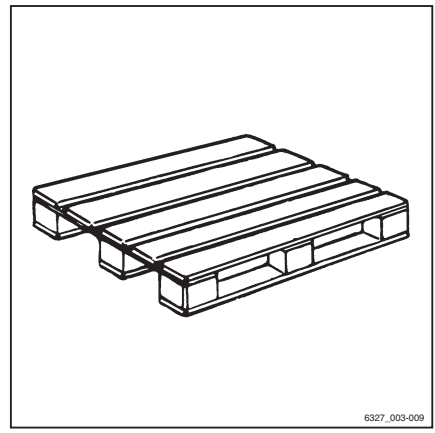
– When manoeuvring, always ensure that there is sufficient space for steering with the tiller. Remove obstacles in the manoeuvring area.

As a rule, loading units (e.g. pallets) are to be transported individually. ▷

Transporting several loading units at a time is only permissible under the following conditions:

- When instructed by the supervisor
- The technical requirements ensure that transport is safe

The operator must ensure that the loading unit is in the proper condition. Only safely and carefully positioned loading units may be transported.

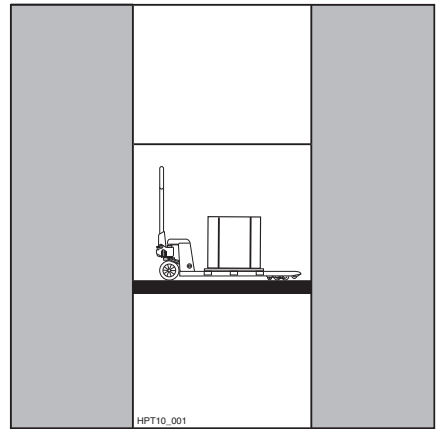


Driving on lifts

For this industrial truck, the operator may only use lifts with a sufficient load capacity and which the operating company (see ⇒Chapter "Definition of terms used for responsible persons", Page 16) has authorisation for use.

– Drive the industrial truck with the forks forwards into the lift without touching the shaft walls. ▷

– Park the industrial truck securely in the lift, see ⇒Chapter "Parking the industrial truck securely", Page 40 to prevent uncontrolled movements of the load or the industrial truck.



The distance from the shaft wall must be at least 100 mm.

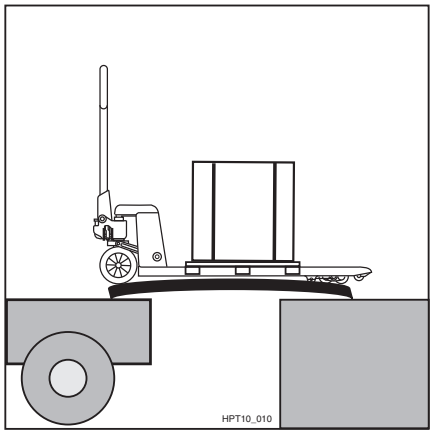
⚠ DANGER

Risk of accidents!

– Personnel accompanying the truck onto the lift are only allowed to occupy the lift once the industrial truck is secure and must exit the lift first after the trip.

The maximum weight of the industrial truck comprises the net weight and the maximum load, see ⇒Chapter "Technical datasheet for the HPT 10 XE", Page 90 .

Driving on loading bridges ▷



⚠ DANGER

Risk of accidents!

- Before driving across a loading bridge, ensure that it is properly attached and secured and has adequate load capacity (lorry, bridge etc.).
- Drive slowly and with care on the loading bridge.
- Ensure that the lorry onto which you will be driving is adequately secured to prevent its shifting and can support the load of the industrial truck.

The lorry driver and the operator of the industrial truck must agree on the departure time.

Cold store application

Cold store application

The industrial truck is suitable for use in cold stores; refer to the temperature ranges ⇒Chapter "Technical datasheet for the HPT 10 XE", Page 90 .

⚠ CAUTION

Changing from a cold internal temperature to a warm outside temperature may result in the formation of condensation water. This water may freeze on re-entry to the cold store and block moving parts of the industrial truck.

It is essential that close attention is paid to the duration of deployment in the different temperature ranges for both types of application.

The industrial truck must be dry before it can be used in the cold store.

⚠ WARNING

Risk of injury!

If condensation water freezes in the cold store, do not try to free parts that have become stuck with your hands.

– Always park the industrial truck outside the cold store.

Using batteries in the cold store

⚠ CAUTION

Risk of component damage!

Batteries should not be left in the cold store overnight without power uptake or charging.

– Charge the battery outside the cold store and operate the industrial truck using a replacement battery.

To compensate for the fall in capacity at low temperatures, it is advisable to use batteries with the maximum nominal capacity in the respective battery dimensions for the truck series.

The battery must be fully charged before each shift.

Cold store application

On discharge, the battery voltage is therefore generally lower at low temperatures, and the final discharged voltage is reached earlier, i.e. the battery's capacity is lower.

Operation in special business situations

Transport

Transporting

– Park the industrial truck securely, see ⇒Chapter "Parking the industrial truck securely", Page 40 .

When the industrial truck is driven onto a means of transport, observe the following:

- The load capacity/lifting capacity of the means of transport, ramps and loading bridges must be greater than the loading weight of the industrial truck.
- When turning the tiller, the industrial truck could veer off the loading bridge towards the edge. This can cause the industrial truck to crash.

⚠ CAUTION

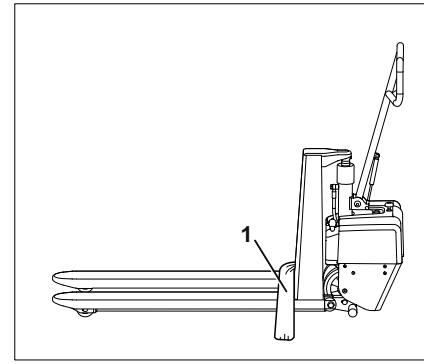
If the industrial truck is not secured against rolling away, this could result in damage to the cargo or cause accidents.

– Lash the industrial truck to secure it.

Lashing down

– Park the industrial truck securely, see ⇒Chapter "Parking the industrial truck securely", Page 40 .

– Use tension belts (1) to secure the industrial truck against slipping and rolling away. ▷



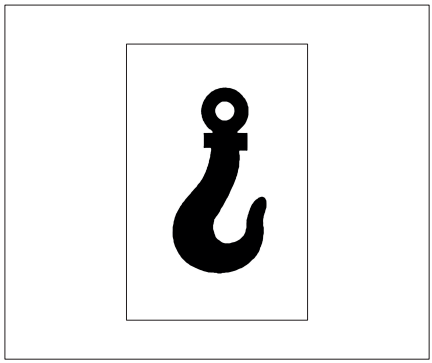
Transporting by crane

⚠ DANGER

Danger due to overloading the lifting gear!

- Load the industrial truck by crane only if the load capacity of the hoists and harnesses is greater than the loading weight of the industrial truck.
- Make sure that harness parts (hooks, shackles, straps and similar items) are used only in the indicated load direction.
- The harnesses must not be damaged by parts of the industrial truck. Use suitable edge protection.
- Never walk underneath the raised industrial truck.
- Keep people out of the danger area.

- Park the industrial truck securely before lifting it, see ⇒ Chapter "Parking the industrial truck securely", Page 40 .
- Determine the loading weight of the industrial truck. Read the weights indicated on the nameplate.
- Only use the labelled fixing points for the lifting gear. The fixing points are marked by decal information, see ⇒ Chapter "Labelling points", Page 32 .
- Carefully lift the industrial truck and set it down. Avoid any oscillating motions.



"Fixing point for the lifting gear" adhesive label

Handling the HTP 10 XE battery

Safety regulations for handling the battery

– Observe the battery manufacturer's instructions for use when performing maintenance on the battery.

– Do not use the battery if the battery exhibits external damage or becomes hot.

– Observe the following safety rules when maintaining, charging and changing the battery.

– When charging and maintaining the battery, observe the manufacturer's maintenance instructions for the battery and the battery charger. These activities can be carried out by properly trained personnel.

– If you have any questions, contact your authorised service centre.

⚠ WARNING

Risk of crushing and shearing!

The battery is very heavy. If limbs are crushed between the battery and truck chassis or under the battery, there is a risk of serious injury.

Safety shoes must always be worn when replacing the battery.

Fire protection measures

⚠ DANGER

Risk of explosion due to flammable gases!

During charging, the battery releases a mixture of oxygen and hydrogen (oxyhydrogen gas). This gas mixture is explosive and must not be ignited.

There must be no flammable materials or spark-forming operating materials within 2 m of the industrial truck and the battery charger.

– Take the following safety precautions when working with batteries.

– Keep away from open flames and do not smoke.

– Ensure that work areas are adequately ventilated.
– Do not place any metal objects on the battery.
– Have fire extinguishing equipment ready.

Battery weight and dimensions

⚠ DANGER

Risk of tipping due to change in battery weight!

The battery weight and dimensions affect the stability of the industrial truck. The weight ratios must not be changed when replacing the battery. The battery weight must remain within the weight range specified on the nameplate.

– Note the battery weight.

Damage to cables and battery male connectors

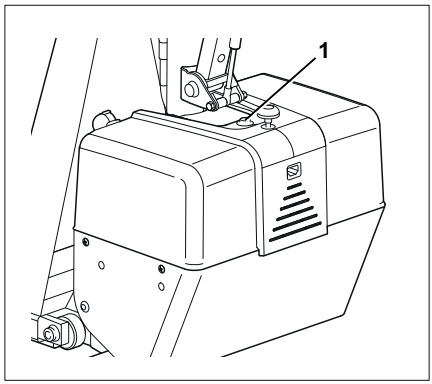
⚠ CAUTION

There is a risk of short circuit if cables are damaged.

– Check the battery cable for damage.
– When removing and installing the battery, ensure that the battery cables are not damaged.

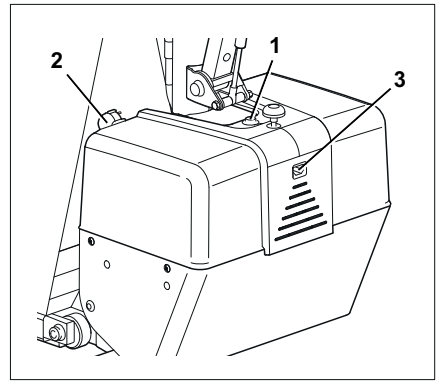
Checking the battery charge status ▷

The indicator LED (1) on the battery cover shows the charge state of the battery. The display switches on when the industrial truck is switched on.



Charge indicator	
Green	Battery charge status good
Yellow	Battery charge only sufficient for a few work cycles. The battery must be recharged.
Red	Residual charge less than 20%. Lifting the load is blocked. The industrial truck can still be driven to the nearest charging station.

Charging the battery



⚠ CAUTION

Deep discharge shortens the service life of the battery.

- If the remaining battery charge is less than 20% (battery charge indicator: red), charge the battery immediately.
- Avoid partial charging.
- Do not leave batteries in a discharged or partly discharged state.

All lifting functions and lowering functions of the industrial truck are blocked while charging is in progress. The charge indicator (1) shows the progress of the charging process.

- Lower the forks to the ground.
- Remove the supplied mains cable (2) from the compartment provided.
- Connect the mains cable to the socket (3) on the battery charger and to the mains. The charging process starts.

The charging process ends automatically when the battery is fully charged. The charge indicator lights up in green.

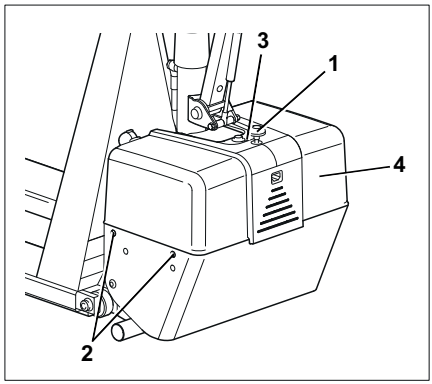
- Stow the mains cable back in the compartment provided.

Removing and attaching the battery cover

Removing

- Park the industrial truck securely, see ⇒Chapter "Parking the industrial truck securely", Page 40

– Unscrew the actuation button for the emergency off switch (1).
– Remove the five screws (2, 3) on the battery cover.
– Lift off the battery cover (4).



Attaching

⚠ CAUTION

There is a risk of short circuit if cables are damaged!

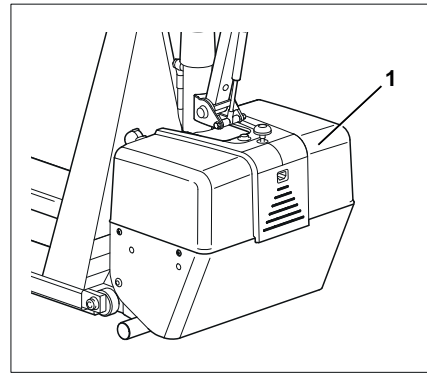
– When attaching the battery cover, make sure that the cables are not trapped.

– Fit and align the battery cover (4).
– Screw the five screws (2,3) onto the battery cover.
– Screw on the actuation button for the emergency off switch (1).

Replacing the battery

– Park the industrial truck securely, see ⇒Chapter "Parking the industrial truck securely", Page 40

– Remove the battery cover (1), see ⇒Chapter "Safety regulations for handling the battery", Page 57 .



– Loosen the retaining strap (2) for the battery.

– Remove the battery cables from the battery terminals (3).

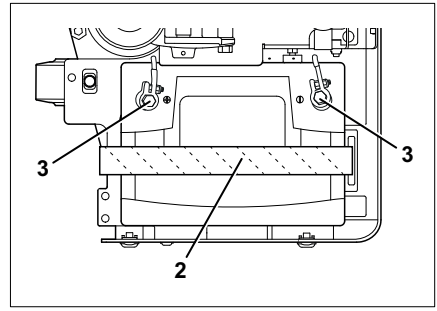
– Remove the battery, dispose of if necessary, see ⇒Chapter "Disposal of units and batteries during repair work", Page 10 .

– Check the parameters of the new battery, see ⇒Chapter "Technical datasheet for the HPT 10 XE", Page 90 . Insert the new battery.

– Connect the battery cables. Ensure that the polarity is correct.

– Hold the battery in position using the retaining strap. Ensure that the retaining strap is securely in place.

– Attach the battery cover, see ⇒Chapter "Safety regulations for handling the battery", Page 57 .



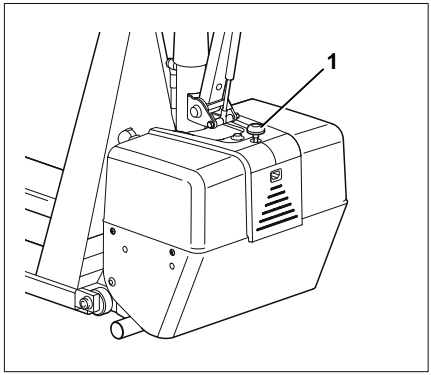
Damage to cables

⚠ CAUTION

When removing and reinstalling the battery, make sure not to damage the battery cables.

Procedure in emergencies

Emergency shutdown



In an emergency, all electrical functions on the industrial truck can be shut down.

– Press the emergency stop switch (1).

⚠ WARNING

Pressing emergency stop switch (1) shuts down the industrial truck's electrical functions.

This safety system may only be used in an emergency or for safely parking the industrial truck.

In lifting mode this has the following effect:

- There are no lift and lower functions available.

Cleaning

Cleaning the industrial truck

⚠ WARNING

Risk of fire!

Combustible fluids may not be used to clean the truck.

⚠ CAUTION

Failure to follow these instructions could result in damaged components!

– Follow the manufacturer's guidelines for working with cleaning materials.

– Before lubrication, clean the oil filling openings and their surroundings, and the lubricating nipples.

NOTE

Please note: The more often the industrial truck is cleaned, the more frequently it must be lubricated.

– Clean plastic parts, in particular the battery cover, with plastic cleaning materials only.

– Clean all parts of the industrial truck, apart from the electric components, using a damp cloth.

– Under no circumstances should you use a direct water jet or steam for cleaning.

– Electric components can be cleaned using dehumidified compressed air (max. 5 bar) or a brush (non-metallic).

After cleaning

– Dry the truck carefully (e.g. with compressed air).

– Put the industrial truck into operation in accordance with regulations.

⚠ CAUTION

Risk of short circuit!

– If any humidity has penetrated the motor of an electric industrial truck, despite the precautionary measures taken, this must first be dried out using compressed air.

6

Maintenance

General maintenance information

Qualifications of personnel

Only qualified and authorised personnel are allowed to perform maintenance work. The annual testing must be carried out by a qualified person. The examination and assessment by the qualified person must not be affected by operational and economic conditions and must be conducted solely from a safety perspective. The qualified person must have sufficient knowledge and experience to be able to assess the condition of an industrial truck and the effectiveness of the protective equipment according to technical conventions and the principles for testing industrial trucks.

Maintenance work for which no special qualifications are necessary

Simple maintenance work, such as checking the hydraulic oil level, may be carried out by untrained personnel. This does not require the qualifications described above. Refer to these operating instructions for further information.

Information regarding performing maintenance

This section contains all the information required to determine when your industrial truck must be serviced. Be sure to perform maintenance within the time limit according to the maintenance overview; this is essential to obtain the full operability, performance and service life from the industrial truck, and is a precondition for any warranty claims.

Ordering spare parts and wearing parts

Spare parts can be requested and ordered from the STILL service centre.

Only use spare parts as per the manufacturer's instructions. The use of unapproved spare parts can result in an increased risk of accidents due to insufficient quality or incorrect assignment.

Anyone using unapproved spare parts shall assume unlimited liability in the event of damage or harm.

Maintenance data table

Unit	Operating materials	Specifications	Dimension
Hydraulic system on the HPT 10 XE	Hydraulic oil	HVLP 46	Max. 1.75 l
Hydraulic system on the HPT 10 XM	Hydraulic oil	HVLP 46	Max. 0.7 l
Carbon brushes 1.6-kW pump motor		Minimum dimension	10.5 mm
Steering rollers (HPT 10 XE and HPT 10 XM)			ø 200 x 50 mm
Load castors (HPT 10 XE and HPT 10 XM)			ø 82 x 82 mm

Safety regulations for maintenance

General information

To prevent accidents during maintenance and repair work, all necessary safety measures must be taken, e.g.:

- Ensuring that unintentional movement of the industrial truck is prevented.
- Ensuring that a raised lifting accessory cannot be lowered when work is being carried out beneath it.
- Always disconnect the battery supply when working on the industrial truck.

Working on the electrical equipment

Work may only be performed on electrical equipment in the industrial truck in a voltage-free state. Function checks, inspections and adjustments on energised parts may only be performed by qualified persons, taking the necessary precautions into account. Rings, metal bracelets etc. must be removed before working on electrical components.

To prevent damage to e-systems with electronic components, such as an electronic lifting function, these components must be removed from the industrial truck before starting electric welding work.

Work on the electrical system is only permitted with the approval of the authorised service centre.

Preparation for maintenance

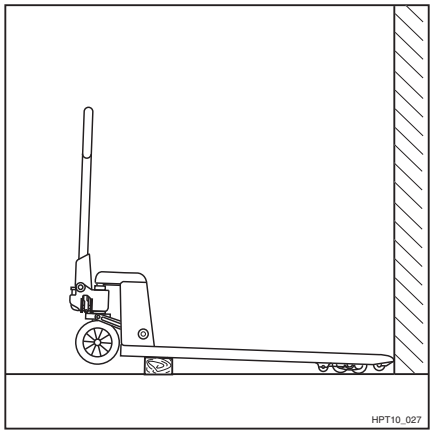
Jacking up

The industrial truck must be jacked up for some maintenance work. Make sure that the industrial truck is only jacked up on level surfaces, and is secured against rolling and dropping.

⚠ WARNING

For electric industrial trucks, the battery cables must be disconnected before the industrial truck is jacked up!

– Position the industrial truck with the fork tips ▷ against a wall.
– Jack up the industrial truck until the steering rollers are no longer in contact with the ground.
– Check that the industrial truck cannot fall down or roll away.



Performing maintenance

Maintenance schedule

The work must be performed by the authorised service centre according to the maintenance intervals listed below.

NOTE

The tasks marked with (*) are described in the following chapters.

In addition, the tasks in the chapter entitled "Preserving operational readiness" must be carried out each time maintenance is performed:

- Roller maintenance (*)
- Battery maintenance (*)
- Lifting system maintenance (*)

Maintenance schedule for the HPT 10 XM

Function group	Maintenance task	Interval (months)		
		3	6	12
Tiller	Adjust the "lift-lower" operating lever (*)			•
Hydraulics	Check the hydraulic oil level and top up the hydraulic oil (*)			•

Maintenance schedule for the HPT 10 XE

Function group	Maintenance task	Interval (months)		
		3	6	12
Chassis frame and fork	Check the fork and load lift system (*)		•	
	Check that the nuts and bolts are tightened	•		
	Lubricate the joints	•		
Steering rollers and load castors	Check the wheels and rollers for wear (*)	•		
	Check the wheel bearings for play		•	
	Check the anchorings	•		
Tiller	Check the tiller for play		•	
	Check lateral movement	•		
	Check that the tiller automatically returns to the vertical position		•	
Electrical system	Check that the electrical system is in working order	•		
	Check the cables and the connections	•		
	Check that the control switch is working correctly	•		
Hydraulics	Check the hydraulic oil level and top up the hydraulic oil (*)		•	

Function group	Maintenance task	Interval (months)		
		3	6	12
	Change the hydraulic oil (*)			•
	Check the high-pressure valve (*)			•
	Check the flow control valve			•
Electric motor	Check the wear of the carbon brushes (*)	•		
	Check the electrical connections on the pump motor (*)	•		
Battery	Check the battery condition, acid level and acid density	•		
	Check that the battery is securely in place	•		
	Check the connections and cables at the battery (*)		•	
	Coat the terminals and cable shoes with battery grease		•	
Safety systems	Visual inspection	•		

Adjusting the "lift-lower" operating lever on the HTP 10 XM

Adjusting the "lift-lower" operating lever ▷

– Push the "lift-lower" operating lever down to the "lifting" position.

– Use the tiller to perform pump actions until the fork has reached the maximum lift height.

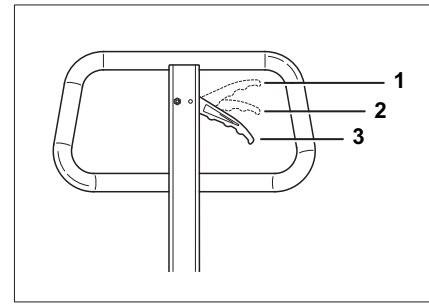
– Move the "lift-lower" operating lever to the middle "transport" position.

– Ensure that the tiller is in the vertical position.

– Loosen the locking screw (7).

– Slowly turn the adjustment screw (8) clockwise. As soon as the fork starts to lower, turn the adjustment screw 1½ rotations anticlockwise.

– Tighten the locking screw (7).



"Lift-lower" operating lever
1 Lowering
2 Transport
3 Lifting

Function checking

– Check whether the "lift-lower" operating lever is correctly adjusted using the following steps:

Operating lever in the middle "transport" position:

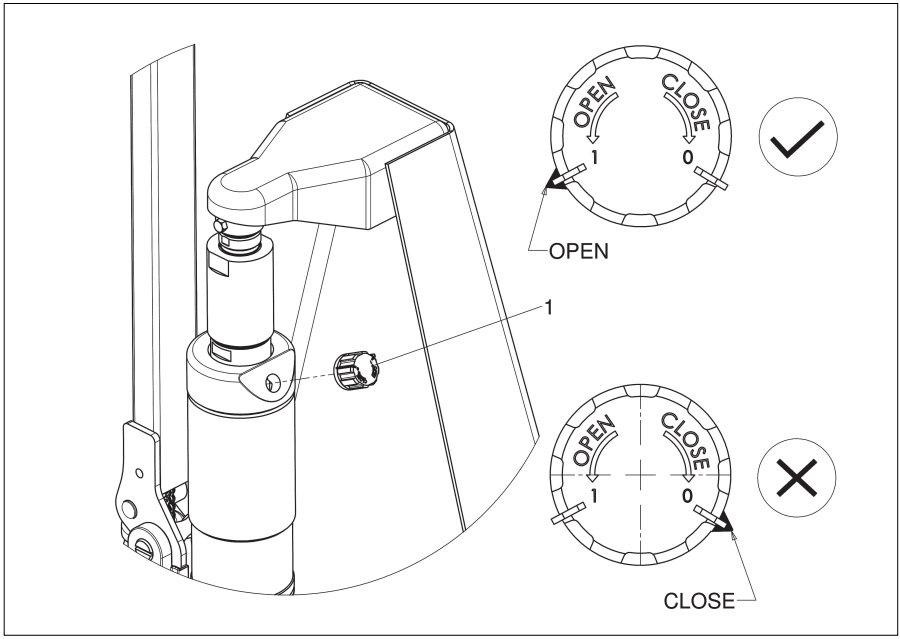
- The fork must not lift or lower when the tiller is in any position.

Operating lever in the upper "lower" position:

- The fork must lower when the tiller is in any position.

– If the check fails, repeat the adjustment process for the operating lever.

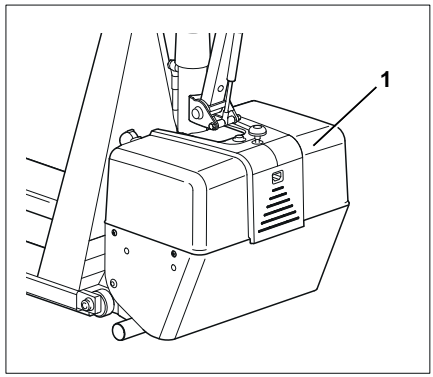
Checking the hydraulic oil level and topping up the hydraulic oil on the HPT 10 XM

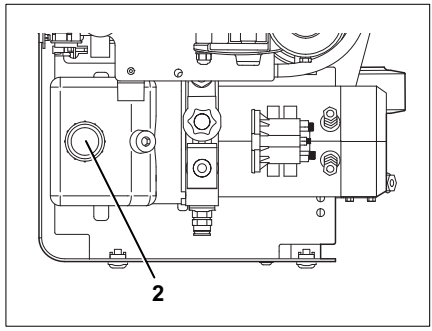


The oil level must be sufficient to lift the fork completely. If the maximum lift height is less than 800 mm, the hydraulic oil must be topped up.

– Lower the fork.
– Remove the cover (1) of the oil tank.
– Check the hydraulic oil level. The oil level must lie at approx. 70 mm below the upper edge of the oil tank.
– If necessary, top up with hydraulic oil of the corresponding specification, see ⇒Chapter "Maintenance data table", Page 68 .
– Actuate the pump cylinder a few times using the tiller to bleed the oil circuit.
– Carefully fit the cover of the oil tank. Finally, turn the cover to the "OPEN" position to allow the oil to circulate.

Checking the hydraulic oil level and topping up the hydraulic oil on the HPT 10 XE ▷





– Lower the fork.
– Remove the battery cover (1), see ⇒Chapter "Safety regulations for handling the battery", Page 57 .
– Remove the cover (2) of the oil tank.
– Check the oil level.

The oil level must lie at approx. 10 mm below the upper edge of the oil tank.

– If necessary, top up with hydraulic oil of the corresponding specification, see ⇒Chapter "Maintenance data table", Page 68 .
– Refit the cover of the oil tank.
– Fit the battery cover, see ⇒Chapter "Safety regulations for handling the battery", Page 57 .

Changing the hydraulic oil on the ▷ HPT 10 XE

⚠ WARNING

Consumables are toxic!

– Observe the safety regulations for working with hydraulic oil; see ⇒Chapter "Oils", Page 24 .

– Park the industrial truck securely, see ⇒Chapter "Parking the industrial truck securely", Page 40

– Jack up the industrial truck, see ⇒Chapter "Jacking up", Page 70 .

– Remove the battery cover (1), see ⇒Chapter "Safety regulations for handling the battery", Page 57 .

– Remove the cover (2) of the oil tank.

– Drain the oil tank using a suitable oil change suction pump (3).

ENVIRONMENT NOTE

- *Dispose of used oil according to applicable regulations.*

– Top up with hydraulic oil of the corresponding specification.

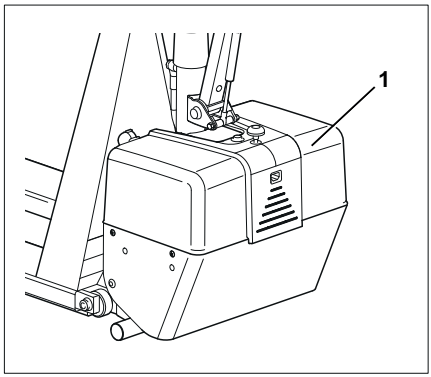
Hydraulic oil for the HPT 10 XE

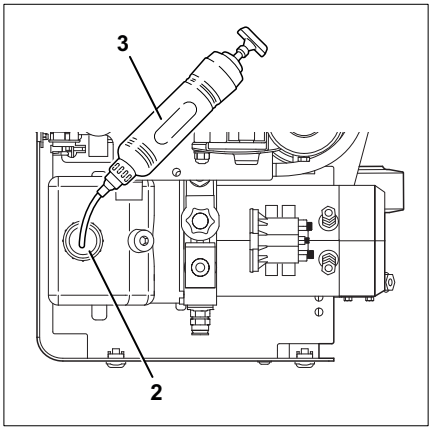
Operating materials	Specifications	Dimension
Hydraulic oil	HVLP 46	Max. 1.75 l

The oil level must lie at approx. 10 mm below the upper edge of the oil tank.

– Refit the cover of the oil tank.

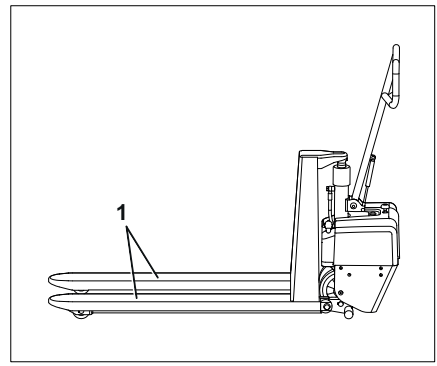
– Fit the battery cover, see ⇒Chapter "Safety regulations for handling the battery", Page 57 .





Checking the forks

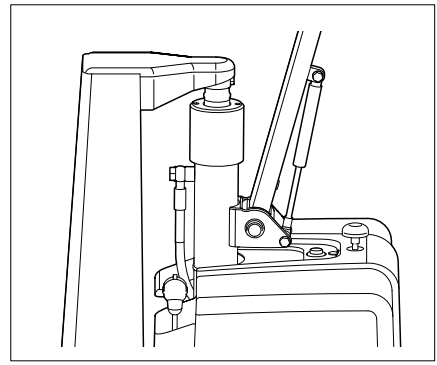
– Carry out a visual inspection of the forks (1) ▷ to identify excessive deformation or cracks, and have these issues repaired as necessary.



⚠ CAUTION

– Repairs and replacements on the chassis must only be carried out by the authorised service centre.

Checking the hydraulic system for leak tightness on the HTP 10 XE ▷



– Check the screw joints of the hose connection for leak tightness.

– Check the connections, cylinder and pump motor for leak tightness.

– Tighten any leaking connections and repair or replace the faulty cylinder as necessary.

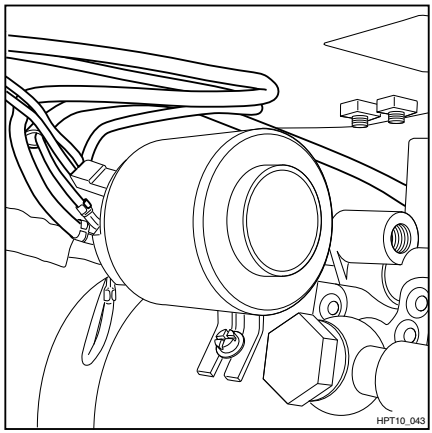
Checking the electrical connections at the pump motor on the HPT 10 XE

– Check the mountings, condition and insulation of the wiring at the pump motor.

NOTE

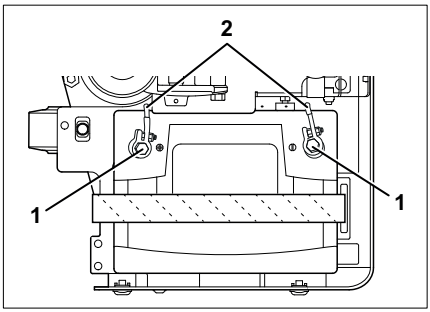
Oxidised connections and faulty wiring lead to voltage drops causing disturbance.

– Remove any traces of oxidation and replace faulty cables.



Maintaining the electrical system on the HPT 10 XE

Checking connections and cables at the battery



– Remove the battery cover, see ⇒Chapter "Safety regulations for handling the battery", Page 57 .

– Check the condition of the cables (1) and battery terminals; lubricate with battery grease if necessary.

– Check that the cable connections (2) are correctly mounted and tighten if necessary.

– Attach the battery cover, see ⇒Chapter "Safety regulations for handling the battery", Page 57 .

Checking the function of the lift-lower control switch ▷

– Park the industrial truck.

– Press the control switch (1) upwards.

The forks are raised.

– Press the control switch (1) downwards.

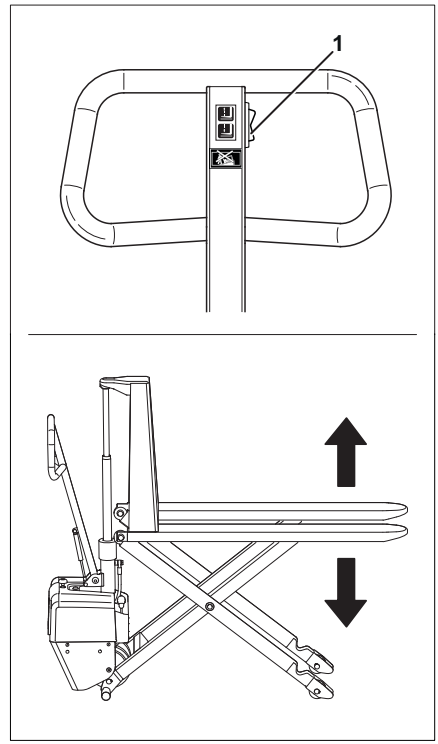
The forks are lowered.

Checks in the event of a malfunction:

– Check battery charging.

– Check the hydraulic oil level.

– Check the electrical connections for damage and secure positioning.



Maintenance of the pump motor, HPT 10 XE

Exchange of the carbon brushes

– Park the industrial truck securely, see ⇒Chapter "Parking the industrial truck securely", Page 40 .

– Remove the battery cover, see ⇒Chapter "Safety regulations for handling the battery", Page 57 .

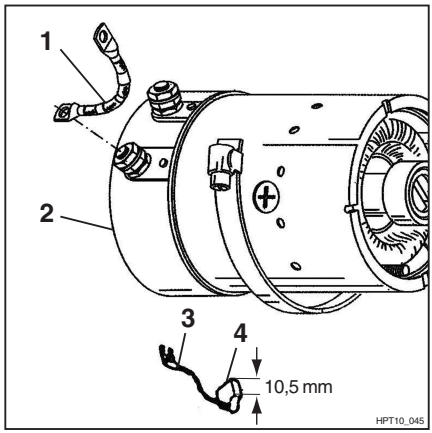
– Disconnect the battery, see ⇒Chapter "Replacing the battery", Page 61 .

To remove the panelling:

– Mark and disconnect connecting cable (1). ▷
– Unscrew the screws from cover (2) and remove the cover.
– Remove connecting cable (3) from carbon brushes (4).
– Lift the retaining springs.
– Remove the carbon brushes.

The length of the carbon brushes must not fall short of the minimum length, see ⇒Chapter "Maintenance data table", Page 68 .

– Change all the carbon brushes if one carbon brush does not meet this requirement.



⚠ CAUTION

Before refitting, check that there is no trace of burning on the collector. If old carbon brushes are used, make sure that you do not turn or cant them. Contact the STILL service centre.

– Reattach cover (2).
– Connect connecting cable (1) in accordance with the marking and make sure that the polarity is correct.
– Attach the battery cover, see ⇒Chapter "Safety regulations for handling the battery", Page 57 .

Checking the high-pressure valve on the HTP 10 XE

⚠ DANGER

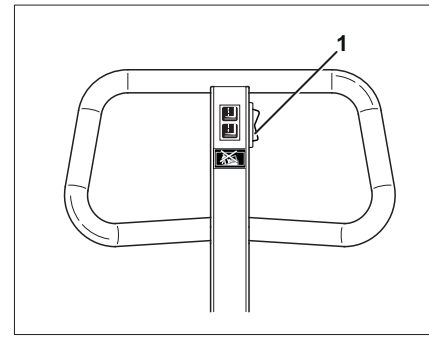
Risk of fatal injury!

Make sure that stability is guaranteed.

Check the high-pressure valve as follows:

– Prepare the test pallet.
– Distribute the test weight evenly on the test pallet; max. load **1000 kg** (+10%).

– Press the **lift-lower** control button (1) upwards. The load must be raised to the max. height. ▷



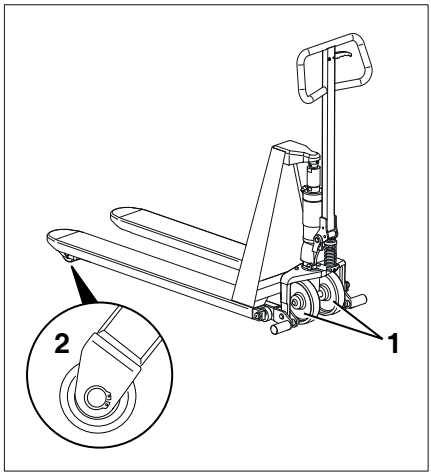
If the load is not raised to the max. height, contact the STILL service centre.

Preserving operational readiness

Maintaining the rollers on the HPT 10 XE / XM

The running surface of the steering rollers (1) and of the load castors (2) must not be damaged.

– Replace damaged or worn steering rollers and load castors with new ones of the same size, see ⇒Chapter "Technical datasheet for the HPT 10 XE", Page 90 .



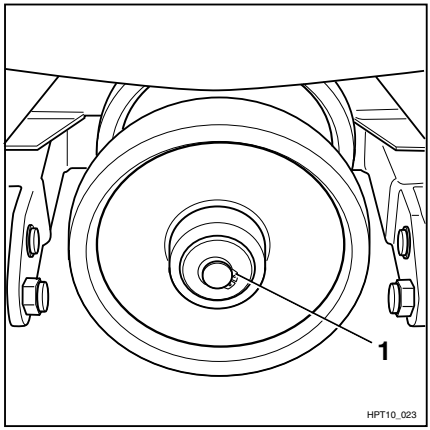
⚠ CAUTION

Incorrectly adjusted steering rollers or load castors could lead to problems with stability.

– This adjustment must only be made by the STILL service centre.

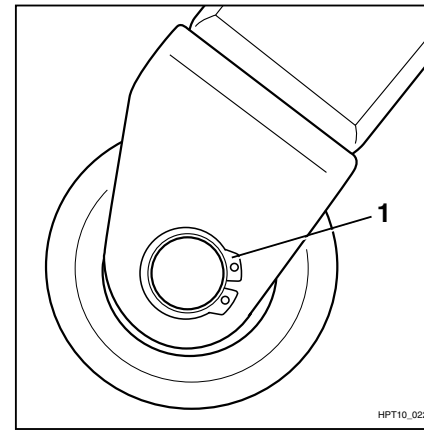
Checking the mounting of the steering rollers

– Check the snap ring (1) on both sides on the steering rollers for damage, and replace if necessary.



Checking the mounting of the load castors ▷

– Check the snap ring (1) on both sides on the load castors for damage, and replace if necessary.



Maintaining the battery on the HTP 10 XE

NOTE

Battery maintenance must be performed in accordance with the specifications from the battery manufacturer!

⚠ WARNING

There is a risk of damage, short circuit and explosion.

Do not place any metal objects or tools on the battery.

Keep away from naked flames and fire. Smoking is forbidden.

Maintaining the battery

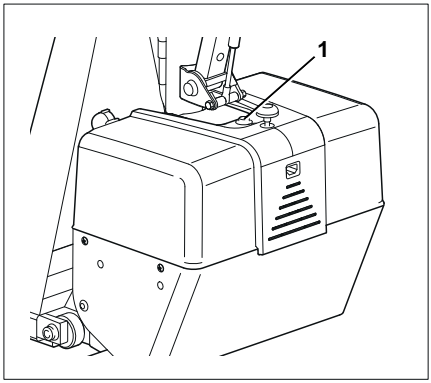
The cell covers of the battery must be kept dry and clean.

Terminals and cable shoes must be clean, lightly coated with battery grease and screwed on tightly.

– Neutralise any spilt battery acid immediately.

– Observe the safety regulations for handling battery acid (see the chapter entitled "Battery acid").

Checking the battery charge status ▷



⚠ CAUTION

Deep discharge shortens the service life of the battery.

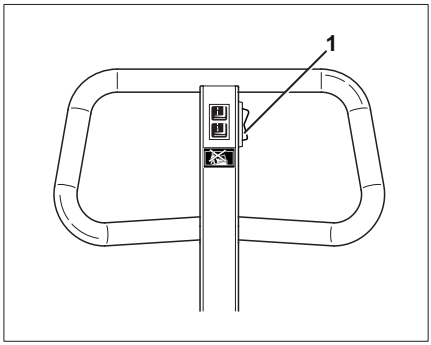
- If the remaining battery charge is less than 20% (battery charge indicator: red), charge the battery immediately.
- Avoid partial charging.
- Do not leave batteries in a discharged or partly discharged state.

The indicator LED (1) on the battery cover shows the charge state of the battery. The display switches on when the industrial truck is switched on.

Charge indicator	
Green	Battery charge status good
Yellow	Battery charge only sufficient for a few work cycles. The battery must be recharged.
Red	Residual charge less than 20%. Lifting the load is blocked. The industrial truck can still be driven to the nearest charging station.

Maintaining the lifting system on the HPT 10 XE / XM

HPT 10 XE ▷



Check the function of the scissor lift:

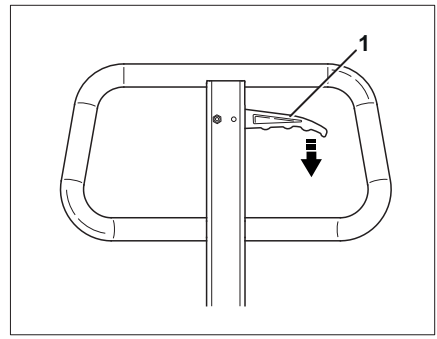
- Press the **lift-lower** control button (1) upwards. The scissor lift must extend to the maximum height without jerking.
- Press the **lift-lower** control button downwards. The scissor lift must retract again without jerking.

If the scissor lift does not extend and retract without jerking:

- Check the hydraulic oil level.
- Check the scissor mechanics for ease of movement.
- Check the lift cylinders and connections for leak tightness.
- Check the battery charge.

– Check the electric connections and cables for damage and secure positioning.

HPT 10 XM



Check the function of the scissor lift:

– Push the operating lever (1) downwards and perform a pump action with the tiller. The scissor lift must extend to the maximum height without jerking.

– Pull the operating lever upwards. The scissor lift must retract again without jerking.

If the scissor lift does not extend and retract without jerking:

– Check the hydraulic oil level.

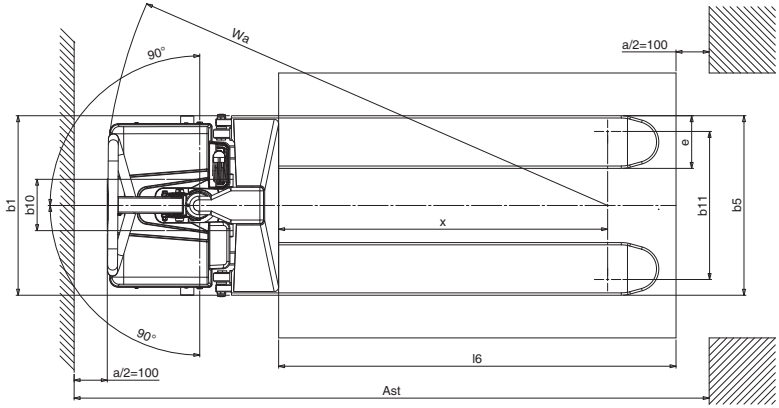
– Check the scissor mechanics for ease of movement.

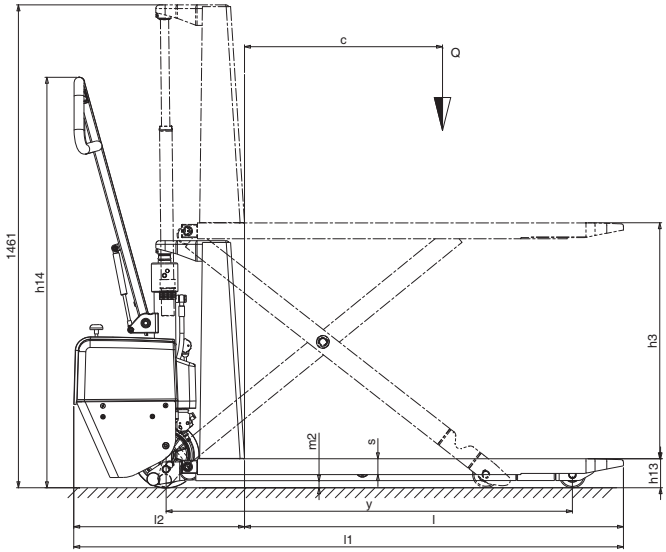
– Check the lift cylinders and connections for leak tightness.

7

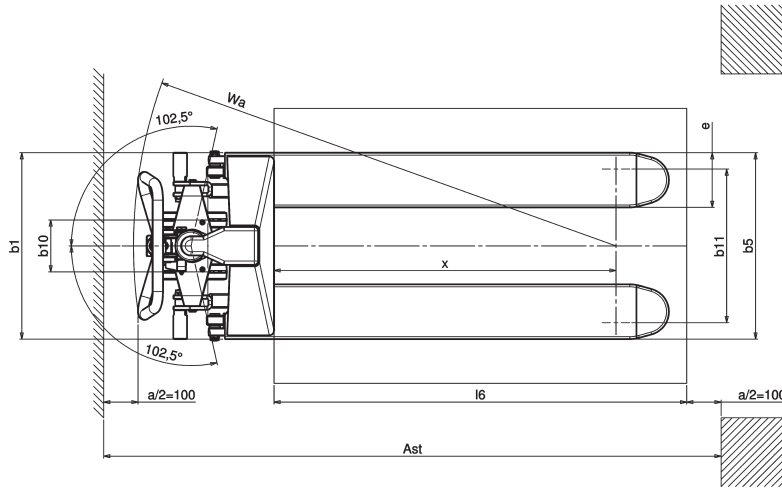
Technical data

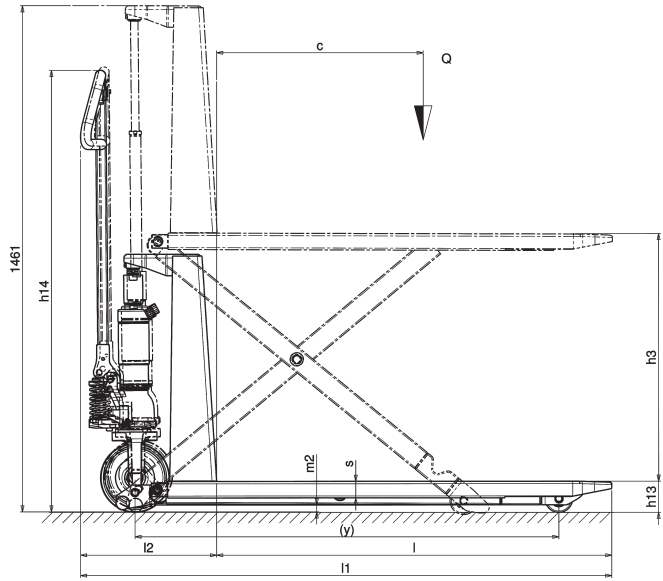
Dimensions HPT 10 XE





HPT 10 XM dimensions





Technical datasheet for the HPT 10 XE

NOTE

Values are valid for the standard trucks. Variants may deviate from this data.

HPT 10 XE 1150x540

Key data

1.1	Manufacturer			STILL GmbH
1.2	Manufacturer's type designation			HPT 10 XE
1.3	Drive			Manual
1.4	Operation			Pedestrian truck
1.5	Load capacity	Q	kg	1000
1.6	Load centre of gravity distance	c	mm	600
1.8	Load distance	x	mm	993
1.9	Wheelbase	y	mm	1231

Weight

2.1	Net weight		kg	144
2.2	Front/rear axle load with load		kg	435/709
2.3	Front/rear axle load without load		kg	116/28

Chassis frame/wheels

3.1	Tyres			Rubber/polyurethane
3.2	Front tyre size			200x50
3.3	Tyre size, rear (Ø x width)			80x50
3.4	Auxiliary wheels (Ø x width)			-
3.5	Wheels, number (x=driven) at front/rear			2/2
3.6	Front track width	b_{10}	mm	155
3.7	Track width, rear (min/max***)	b_{11}	mm	447

Basic dimensions

4.4	Lift	h_3	mm	715
4.9	Min./max. tiller height in driving position	h_{14}	mm	887/1244
4.15	Height when lowered	h_{13}	mm	85
4.19	Overall length	l_1	mm	1665
4.20	Length including fork back	l_2	mm	515
4.21	Overall width (front/rear min/max***)	b_1	mm	540
4.22	Fork arm dimensions	s/e/l	mm	48/160/1150
4.25	Width over forks (min/max***)	b_5	mm	540
4.32	Ground clearance at the middle of the wheelbase	m_2	mm	21
4.34	Aisle width for pallets 800 x 1200 crosswise	A_{st}	mm	2170
4.35	Turning radius	W_a	mm	1520

Performance data

5.2	Lifting speed with/without load		m/s	0.08/0.13
5.3	Lowering speed with/without load		m/s	0.13/0.06

Electric motor

6.2	Lift motor, power rating		kW	1.6
6.4	Battery voltage, rated capacity		V/Ah	12/60 (C20)
6.5	Battery weight		kg	14

Emissions

8.4	Sound pressure level in driver's ear		dB(A)	67

Permissible temperature range

Temperature		°C	-12 to +40

Deviating data if a gel battery is fitted

1.2	Manufacturer's type designation			HPT 10 XE 1150x540 GEL
2.1	Net weight		kg	149
2.2	Front/rear axle load with load		kg	440/709
2.3	Front/rear axle load without load		kg	121/28
6.4	Battery voltage, rated capacity		V/Ah	12/50-60
6.5	Battery weight		kg	19

HPT 10 XE 1150x680

Key data

1.1	Manufacturer			STILL GmbH
1.2	Manufacturer's type designation			HPT 10 XE 1150x680
1.3	Drive			Manual
1.4	Operation			Pedestrian truck
1.5	Load capacity	Q	kg	1000
1.6	Load centre of gravity distance	c	mm	600
1.8	Load distance	x	mm	993
1.9	Wheelbase	y	mm	1231

Weight

2.1	Net weight		kg	151
2.2	Front/rear axle load with load		kg	442/709
2.3	Front/rear axle load without load		kg	123/28

Chassis frame/wheels

3.1	Tyres			Rubber/polyur-ethane
3.2	Front tyre size			200x50
3.3	Tyre size, rear (Ø x width)			80x50
3.4	Auxiliary wheels (Ø x width)			-
3.5	Wheels, number (x=driven) at front/rear			2/2
3.6	Front track width	b_{10}	mm	155
3.7	Track width, rear (min/max***)	b_{11}	mm	587

Basic dimensions

4.4	Lift	h_3	mm	715
4.9	Min./max. tiller height in driving position	h_{14}	mm	887/1244
4.15	Height when lowered	h_{13}	mm	85
4.19	Overall length	l_1	mm	1665
4.20	Length including fork back	l_2	mm	515
4.21	Overall width (front/rear min/max***)	b_1	mm	680
4.22	Fork arm dimensions	s/e/l	mm	48/160/1150
4.25	Width over forks (min/max***)	b_5	mm	680
4.32	Ground clearance at the middle of the wheelbase	m_2	mm	21
4.34	Aisle width for pallets 800 x 1200 crosswise	A_{st}	mm	2170
4.35	Turning radius	W_a	mm	1520

Performance data

5.2	Lifting speed with/without load		m/s	0.08/0.13
5.3	Lowering speed with/without load		m/s	0.13/0.06

Electric motor

6.2	Lift motor, power rating		kW	1.6
6.4	Battery voltage, rated capacity		V/Ah	12/60 (C20)
6.5	Battery weight		kg	14

Emissions

8.4	Sound pressure level in driver's ear		dB(A)	67

Permissible temperature range

Temperature		°C	-12 to +40

HPT 10 XE 1525x540

Key data

1.1	Manufacturer			STILL GmbH
1.2	Manufacturer's type designation			HPT 10 XE 1525x540
1.3	Drive			Manual
1.4	Operation			Pedestrian truck
1.5	Load capacity	Q	kg	1000
1.6	Load centre of gravity distance	c	mm	762
1.8	Load distance	x	mm	1283
1.9	Wheelbase	y	mm	1531

Weight

2.1	Net weight		kg	240
2.2	Front/rear axle load with load		kg	500/740
2.3	Front/rear axle load without load		kg	160/80

Chassis frame/wheels

3.1	Tyres			Rubber/polyur-ethane
3.2	Front tyre size			200x50
3.3	Tyre size, rear (Ø x width)			80x50
3.4	Auxiliary wheels (Ø x width)			-
3.5	Wheels, number (x=driven) at front/rear			2/2
3.6	Front track width	b_{10}	mm	155
3.7	Track width, rear (min/max***)	b_{11}	mm	447

Basic dimensions

4.4	Lift	h_3	mm	715
4.9	Min./max. tiller height in driving position	h_{14}	mm	887/1244
4.15	Height when lowered	h_{13}	mm	85
4.19	Overall length	l_1	mm	2040
4.20	Length including fork back	l_2	mm	515
4.21	Overall width (front/rear min/max***)	b_1	mm	540
4.22	Fork arm dimensions	s/e/l	mm	48/160/1525
4.25	Width over forks (min/max***)	b_5	mm	540
4.32	Ground clearance at the middle of the wheelbase	m_2	mm	21
4.34	Aisle width for pallets 800 x 1200 crosswise	A_{st}	mm	2474
4.35	Turning radius	W_a	mm	1806

Performance data

5.2	Lifting speed with/without load		m/s	0.08/0.13
5.3	Lowering speed with/without load		m/s	0.13/0.06

Electric motor

6.2	Lift motor, power rating		kW	1.6
6.4	Battery voltage, rated capacity		V/Ah	12/60 (C20)
6.5	Battery weight		kg	14

Emissions

8.4	Sound pressure level in driver's ear		dB(A)	67

Permissible temperature range

Temperature		°C	-12 to +40

Deviating data if a gel battery is fitted

1.2	Manufacturer's type designation			HPT 10 XE 1525x540 GEL
2.1	Net weight		kg	245
2.2	Front/rear axle load with load		kg	505/740
2.3	Front/rear axle load without load		kg	165/80
6.4	Battery voltage, rated capacity		V/Ah	12/50-60
6.5	Battery weight		kg	19

HPT 10 XE 1800x540

Key data

1.1	Manufacturer			STILL GmbH
1.2	Manufacturer's type designation			HPT 10 XE 1800x540
1.3	Drive			Manual
1.4	Operation			Pedestrian truck
1.5	Load capacity	Q	kg	1000
1.6	Load centre of gravity distance	c	mm	900
1.8	Load distance	x	mm	1509
1.9	Wheelbase	y	mm	1748

Weight

2.1	Net weight		kg	264
2.2	Front/rear axle load with load		kg	531/733
2.3	Front/rear axle load without load		kg	183/81

Chassis frame/wheels

3.1	Tyres			Rubber/polyur-ethane
3.2	Front tyre size			200x50
3.3	Tyre size, rear (Ø x width)			80x50
3.4	Auxiliary wheels (Ø x width)			-
3.5	Wheels, number (x=driven) at front/rear			2/2
3.6	Front track width	b_{10}	mm	155
3.7	Track width, rear (min/max***)	b_{11}	mm	447

Basic dimensions

4.4	Lift	h_3	mm	715
4.9	Min./max. tiller height in driving position	h_{14}	mm	887/1244
4.15	Height when lowered	h_{13}	mm	85
4.19	Overall length	l_1	mm	2315
4.20	Length including fork back	l_2	mm	515
4.21	Overall width (front/rear min/max***)	b_1	mm	540
4.22	Fork arm dimensions	s/e/l	mm	48/160/1800
4.25	Width over forks (min/max***)	b_5	mm	540
4.32	Ground clearance at the middle of the wheelbase	m_2	mm	21
4.34	Aisle width for pallets 800 x 1200 crosswise	A_{st}	mm	2726
4.35	Turning radius	W_a	mm	2031

Performance data

5.2	Lifting speed with/without load		m/s	0.08/0.13
5.3	Lowering speed with/without load		m/s	0.13/0.06

Electric motor

6.2	Lift motor, power rating		kW	1.6
6.4	Battery voltage, rated capacity		V/Ah	12/60 (C20)
6.5	Battery weight		kg	14

Emissions

8.4	Sound pressure level in driver's ear		dB(A)	67

Permissible temperature range

Temperature		°C	-12 to +40

Deviating data if a gel battery is fitted

1.2	Manufacturer's type designation			HPT 10 XE 1800x540 GEL
2.1	Net weight		kg	269
2.2	Front/rear axle load with load		kg	536/733
2.3	Front/rear axle load without load		kg	188/81
6.4	Battery voltage, rated capacity		V/Ah	12/50-60
6.5	Battery weight		kg	19

HPT 10 XE 2000x540

Key data

1.1	Manufacturer			STILL GmbH
1.2	Manufacturer's type designation			HPT 10 XE 2000x540
1.3	Drive			Manual
1.4	Operation			Pedestrian truck
1.5	Load capacity	Q	kg	1000
1.6	Load centre of gravity distance	c	mm	1000
1.8	Load distance	x	mm	1509
1.9	Wheelbase	y	mm	1748

Weight

2.1	Net weight		kg	267
2.2	Front/rear axle load with load		kg	476/791
2.3	Front/rear axle load without load		kg	185/82

Chassis frame/wheels

3.1	Tyres			Rubber/polyur-ethane
3.2	Front tyre size			200x50
3.3	Tyre size, rear (Ø x width)			80x50
3.4	Auxiliary wheels (Ø x width)			-
3.5	Wheels, number (x=driven) at front/rear			2/2
3.6	Front track width	b_{10}	mm	155
3.7	Track width, rear (min/max***)	b_{11}	mm	447

Basic dimensions

4.4	Lift	h_3	mm	715
4.9	Min./max. tiller height in driving position	h_{14}	mm	887/1244
4.15	Height when lowered	h_{13}	mm	85
4.19	Overall length	l_1	mm	2515
4.20	Length including fork back	l_2	mm	515
4.21	Overall width (front/rear min/max***)	b_1	mm	540
4.22	Fork arm dimensions	s/e/l	mm	48/160/2000
4.25	Width over forks (min/max***)	b_5	mm	540
4.32	Ground clearance at the middle of the wheelbase	m_2	mm	21
4.34	Aisle width for pallets 800 x 1200 crosswise	A_{st}	mm	2864
4.35	Turning radius	W_a	mm	2031

Performance data

5.2	Lifting speed with/without load		m/s	0.08/0.13
5.3	Lowering speed with/without load		m/s	0.13/0.06

Electric motor

6.2	Lift motor, power rating		kW	1.6
6.4	Battery voltage, rated capacity		V/Ah	12/60 (C20)
6.5	Battery weight		kg	14

Emissions

8.4	Sound pressure level in driver's ear		dB(A)	67

Permissible temperature range

Temperature		°C	-12 to +40

Deviating data if a gel battery is fitted

1.2	Manufacturer's type designation			HPT 10 XE 2000x540 GEL
2.1	Net weight		kg	272
2.2	Front/rear axle load with load		kg	481/791
2.3	Front/rear axle load without load		kg	190/82
6.4	Battery voltage, rated capacity		V/Ah	12/50-60
6.5	Battery weight		kg	19

Technical datasheet for the HPT 10 XM

NOTE

Values are valid for the standard trucks. Variants may deviate from this data.

HPT 10 XM (1150x540)

Key data

1.1	Manufacturer			STILL GmbH
1.2	Manufacturer's type designation			HTP 10 XM 1150x540
1.3	Drive			Manual
1.4	Operation			Pedestrian truck
1.5	Load capacity	Q	kg	1000
1.6	Load centre of gravity distance	c	mm	600
1.8	Load distance	x	mm	993
1.9	Wheelbase	y	mm	1231

Weight

2.1	Net weight		kg	104
2.2	Front/rear axle load with load		kg	391/713
2.3	Front/rear axle load without load		kg	71/33

Chassis frame/wheels

3.1	Tyres			Polyurethane/ polyurethane
3.2	Front tyre size			200x45
3.3	Tyre size, rear (Ø x width)			80x50
3.4	Auxiliary wheels (Ø x width)			-
3.5	Wheels, number (x=driven) at front/rear			2/2
3.6	Front track width	b_{10}	mm	155
3.7	Track width, rear (min/max***)	b_{11}	mm	447

Basic dimensions

4.4	Lift	h_3	mm	715
4.9	Min./max. tiller height in driving position	h_{14}	mm	735/1285
4.15	Height when lowered	h_{13}	mm	85
4.19	Overall length	l_1	mm	1545
4.20	Length including fork back	l_2	mm	395
4.21	Overall width (front/rear min/max***)	b_1	mm	540
4.22	Fork arm dimensions	s/e/l	mm	48/160/1150
4.25	Width over forks (min/max***)	b_5	mm	540
4.32	Ground clearance at the middle of the wheelbase	m_2	mm	21
4.34	Aisle width for pallets 800 x 1200 crosswise	A_{st}	mm	2090
4.35	Turning radius	W_a	mm	1440

Performance data

5.2	Lifting speed with/without load		Pump	68/26
5.3	Lowering speed with/without load		m/s	0

Permissible temperature range

Temperature		°C	-12 to +50

HPT 10 XM (1150x680)

Key data

1.1	Manufacturer			STILL GmbH
1.2	Manufacturer's type designation			HTP 10 XM 1150x680
1.3	Drive			Manual
1.4	Operation			Pedestrian truck
1.5	Load capacity	Q	kg	1000
1.6	Load centre of gravity distance	c	mm	600
1.8	Load distance	x	mm	993
1.9	Wheelbase	y	mm	1231

Weight

2.1	Net weight		kg	111
2.2	Front/rear axle load with load		kg	393/718
2.3	Front/rear axle load without load		kg	76/35

Chassis frame/wheels

3.1	Tyres			Polyurethane/ polyurethane
3.2	Front tyre size			200x45
3.3	Tyre size, rear (Ø x width)			80x50
3.4	Auxiliary wheels (Ø x width)			-
3.5	Wheels, number (x=driven) at front/rear			2/2
3.6	Front track width	b_{10}	mm	155
3.7	Track width, rear (min/max***)	b_{11}	mm	587

Basic dimensions

4.4	Lift	h_3	mm	715
4.9	Min./max. tiller height in driving position	h_{14}	mm	735/1285
4.15	Height when lowered	h_{13}	mm	85
4.19	Overall length	l_1	mm	1545
4.20	Length including fork back	l_2	mm	395
4.21	Overall width (front/rear min/max***)	b_1	mm	680
4.22	Fork arm dimensions	s/e/l	mm	48/160/1150
4.25	Width over forks (min/max***)	b_5	mm	680
4.32	Ground clearance at the middle of the wheelbase	m_2	mm	21
4.34	Aisle width for pallets 800 x 1200 crosswise	A_{st}	mm	2090
4.35	Turning radius	W_a	mm	1440

Performance data

5.2	Lifting speed with/without load		Pump	68/26
5.3	Lowering speed with/without load		m/s	0

Permissible temperature range

Temperature		°C	-12 to +50

HPT 10 XM (1500x540)

Key data

1.1	Manufacturer			STILL GmbH
1.2	Manufacturer's type designation			HTP 10 XM 1500x540
1.3	Drive			Manual
1.4	Operation			Pedestrian truck
1.5	Load capacity	Q	kg	1000
1.6	Load centre of gravity distance	c	mm	762
1.8	Load distance	x	mm	1283
1.9	Wheelbase	y	mm	1531

Weight

2.1	Net weight		kg	200
2.2	Front/rear axle load with load		kg	458/742
2.3	Front/rear axle load without load		kg	117/83

Chassis frame/wheels

3.1	Tyres			Polyurethane/ polyurethane
3.2	Front tyre size			200x45
3.3	Tyre size, rear (Ø x width)			80x50
3.4	Auxiliary wheels (Ø x width)			-
3.5	Wheels, number (x=driven) at front/rear			2/2
3.6	Front track width	b_{10}	mm	155
3.7	Track width, rear (min/max***)	b_{11}	mm	447

Basic dimensions

4.4	Lift	h_3	mm	715
4.9	Min./max. tiller height in driving position	h_{14}	mm	735/1285
4.15	Height when lowered	h_{13}	mm	85
4.19	Overall length	l_1	mm	1920
4.20	Length including fork back	l_2	mm	395
4.21	Overall width (front/rear min/max***)	b_1	mm	540
4.22	Fork arm dimensions	s/e/l	mm	48/160/1525
4.25	Width over forks (min/max***)	b_5	mm	540
4.32	Ground clearance at the middle of the wheelbase	m_2	mm	21
4.34	Aisle width for pallets 800 x 1200 crosswise	A_{st}	mm	2339
4.35	Turning radius	W_a	mm	1730

Performance data

5.2	Lifting speed with/without load		Pump	68/35
5.3	Lowering speed with/without load		m/s	0

Permissible temperature range

Temperature		°C	-12 to +50

HPT 10 XM (1800x540)

Key data

1.1	Manufacturer			STILL GmbH
1.2	Manufacturer's type designation			HTP 10 XM 1800x540
1.3	Drive			Manual
1.4	Operation			Pedestrian truck
1.5	Load capacity	Q	kg	1000
1.6	Load centre of gravity distance	c	mm	900
1.8	Load distance	x	mm	1509
1.9	Wheelbase	y	mm	1748

Weight

2.1	Net weight		kg	224
2.2	Front/rear axle load with load		kg	477/747
2.3	Front/rear axle load without load		kg	129/95

Chassis frame/wheels

3.1	Tyres			Polyurethane/ polyurethane
3.2	Front tyre size			200x45
3.3	Tyre size, rear (Ø x width)			80x50
3.4	Auxiliary wheels (Ø x width)			-
3.5	Wheels, number (x=driven) at front/rear			2/2
3.6	Front track width	b_{10}	mm	155
3.7	Track width, rear (min/max***)	b_{11}	mm	447

Basic dimensions

4.4	Lift	h_3	mm	715
4.9	Min./max. tiller height in driving position	h_{14}	mm	735/1285
4.15	Height when lowered	h_{13}	mm	85
4.19	Overall length	l_1	mm	2195
4.20	Length including fork back	l_2	mm	395
4.21	Overall width (front/rear min/max***)	b_1	mm	540
4.22	Fork arm dimensions	s/e/l	mm	48/160/1800
4.25	Width over forks (min/max***)	b_5	mm	540
4.32	Ground clearance at the middle of the wheelbase	m_2	mm	21
4.34	Aisle width for pallets 800 x 1200 crosswise	A_{st}	mm	2660
4.35	Turning radius	W_a	mm	1955

Performance data

5.2	Lifting speed with/without load		Pump	68/44
5.3	Lowering speed with/without load		m/s	0

Permissible temperature range

Temperature		°C	-12 to +50

HPT 10 XM (2000x540)

Key data

1.1	Manufacturer			STILL GmbH
1.2	Manufacturer's type designation			HTP 10 XM 2000x540
1.3	Drive			Manual
1.4	Operation			Pedestrian truck
1.5	Load capacity	Q	kg	1000
1.6	Load centre of gravity distance	c	mm	1000
1.8	Load distance	x	mm	1509
1.9	Wheelbase	y	mm	1748

Weight

2.1	Net weight		kg	227
2.2	Front/rear axle load with load		kg	420/807
2.3	Front/rear axle load without load		kg	128/99

Chassis frame/wheels

3.1	Tyres			Polyurethane/ polyurethane
3.2	Front tyre size			200x45
3.3	Tyre size, rear (Ø x width)			80x50
3.4	Auxiliary wheels (Ø x width)			-
3.5	Wheels, number (x=driven) at front/rear			2/2
3.6	Front track width	b_{10}	mm	155
3.7	Track width, rear (min/max***)	b_{11}	mm	447

Basic dimensions

4.4	Lift	h_3	mm	715
4.9	Min./max. tiller height in driving position	h_{14}	mm	735/1285
4.15	Height when lowered	h_{13}	mm	85
4.19	Overall length	l_1	mm	2395
4.20	Length including fork back	l_2	mm	395
4.21	Overall width (front/rear min/max***)	b_1	mm	540
4.22	Fork arm dimensions	s/e/l	mm	48/160/2000
4.25	Width over forks (min/max***)	b_5	mm	540
4.32	Ground clearance at the middle of the wheelbase	m_2	mm	21
4.34	Aisle width for pallets 800 x 1200 crosswise	A_{st}	mm	2660
4.35	Turning radius	W_a	mm	1955

Performance data

5.2	Lifting speed with/without load		Pump	68/44
5.3	Lowering speed with/without load		m/s	0

Permissible temperature range

Temperature		°C	-12 to +50

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