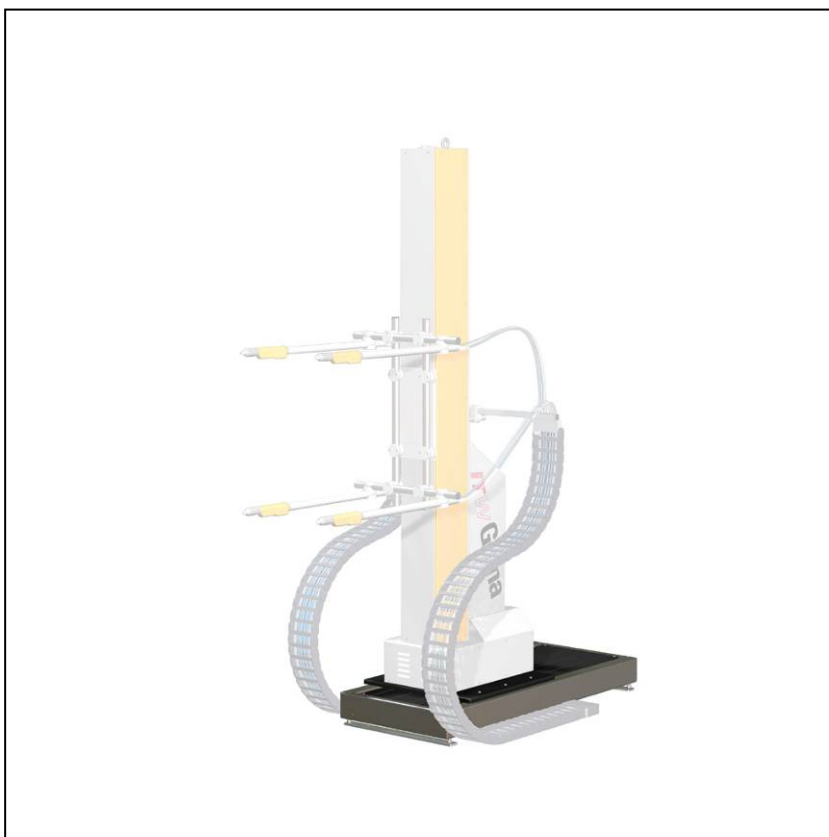


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Operating instructions and spare parts list

# XT10

## Horizontal axis



Translation of the original operating instructions

## Documentation XT10 Horizontal axis

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# General safety regulations

This chapter sets out the fundamental safety regulations that must be followed by the user and third parties using the XT10.

These safety regulations must be read and understood before the XT10 is put into operation.

---

## Safety symbols (pictograms)

The following warnings with their meanings can be found in the Gema operating instructions. The general safety precautions must also be followed as well as the regulations in the operating instructions.

**DANGER!**

Danger due to electrically live or moving parts. Possible consequences: death or serious injury

**WARNING!**

Improper use of the equipment could damage the machine or cause it to malfunction. Possible consequences: minor injuries or damage to equipment

**INFORMATION!**

Useful tips and other information



---

## Conformity of use

1. The XT10 is built to the latest specification and conforms to the recognized technical safety regulations and is designed for the normal application of powder coating.
2. Any other use is considered non-compliant. The manufacturer shall not be liable for damage resulting from such use; the user bears sole responsibility for such actions. Gema Switzerland GmbH must be consulted prior to any use of the XT10 for any purposes or substances other than those indicated in our guidelines.
3. Observance of the operating, service and maintenance instructions specified by the manufacturer is also part of conformity of use. The XT10 should only be used, maintained

and started up by trained personnel informed about and familiar with the possible hazards involved.

4. Start-up (i.e. the execution of a particular operation) is forbidden until it has been established that the XT10 horizontal axis has been set up and wired according to the guidelines for machinery (2006/42 EG). EN 60204-1 (machine safety) must also be observed.
5. Unauthorized modifications to the XT10 horizontal axis exempt the manufacturer from any liability from resulting damage.
6. The relevant accident prevention regulations, as well as other generally recognized safety regulations, occupational health and structural regulations are to be observed.
7. Furthermore, the country-specific safety regulations also must be observed.

Explosion protection	Protection type
 	IP54

## A summary of the directives and standards

### ***European directives RL***

2006/42/EG	Machinery
94/9/EWG	Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres
2004/108/EG	Electromagnetic Compatibility (EMC)

### ***EN European standards***

EN ISO 12100-1: 2004	Safety of Machinery – Basic Concepts, General Principles for Design –Part 1: Basic Terminology, Methodology
EN ISO 12100-2: 2004	Safety of Machinery – Basic Concepts, General Principles for Design – Part 2: Technical Principles
EN ISO 14121-1: 2007	Safety of Machinery – Risk Assessment, Part 1: Principles
EN 60204-1: 2006	Safety of Machinery – Electrical Equipment of Machines – Part 1: General requirements
EN 13980:2002	Potentially Explosive Atmospheres – Application of Quality Systems
EN ISO 9001: 2008	Quality Management Systems – Requirements
EN 61241-0:2006	Electrical Apparatus for Use in the Presence of Combustible Dust. General requirements
EN 61241-2-2: 1995	Electrical Apparatus for Use in the Presence of Combustible Dust. Part 2: Methods

EN 61241-10: 2004	Electrical Apparatus for Use in the Presence of Combustible Dust. Part 10: Classification of Areas Where Combustible Dusts Are or May Be Present
EN 1127-1:2008	Explosive Atmospheres . Basic Concepts and Methodology

## Product-specific safety measures

### XT10 Horizontal axis

The XT10 Horizontal axis is a constituent part of the system and is thus integrated into the safety system of the plant.

If it is to be used in a manner outside the scope of the safety concept, then corresponding measures must be taken.



**Note:**

For further information, see the more detailed Gema safety regulations!

## Special safety regulations for XT10 horizontal axis

1. The XM11 Horizontal axis may only be switched on and operated after careful reading of this manual. Incorrect operation of the axes control unit can lead to accidents, malfunctions or damage to the plant.
2. **Attention, the power of the horizontal axis is very much stronger than that of a human being!**  
All axes must be secured against access during operation (see local regulations).  
**Never stand under the Z carriage when the horizontal axis is not operating!**
3. The plugs and sockets of the axes control unit and the power unit of the XT10 horizontal axis should only be unplugged when the power supply is disconnected
4. The connecting cables between the control unit and the horizontal axis must be laid in such a way, that they cannot be damaged during axes operation. Please observe the local safety regulations!
5. The **maximum upper stroke limit** of the reciprocator must always be set with reference to the **maximum height of the booth gun slots**. If an incorrect (too high) stroke limit is set, this can lead to damage to the vertical axis and/or the booth!



**Warning:**

During a test run, it must be guaranteed that the unit is not damaged by the test! In particular, the limitations of the stroke range have to be observed (for further information, see chapter "Setting the upper mechanical stop")!

6. When repairing the horizontal axis, both the axis control unit and the horizontal axis must be disconnected from the mains according to the local safety regulations!
7. Repairs may be done only by authorized Gema service centers. Unauthorized conversions and modifications can lead to injuries and damage to the equipment. The Gema Switzerland GmbH guarantee would no longer be valid.
8. Only original Gema spare parts should be used! The use of spare parts from other manufacturers will invalidate the Gema guarantee conditions!
9. We point out that the customer himself is responsible for the safe operation of the equipment. Gema Switzerland GmbH is in no way responsible for any resulting damage.



# About this manual

---

## General information

This operating manual contains all the important information you require for the working with the XT10 horizontal axis. It will safely guide you through the start-up process and give you references and tips for the optimal use of your new powder coating system.

Information about the function mode of the individual system components - booth, gun control unit, manual gun or powder injector - should be referenced to their corresponding documents.

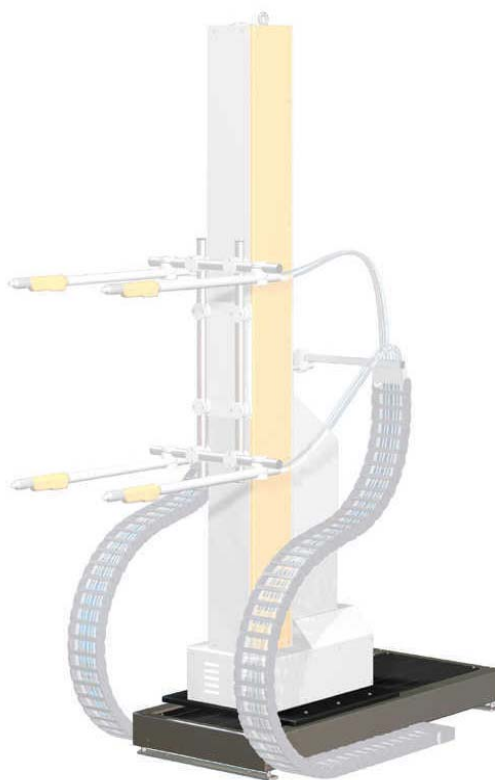


# Function description

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## Field of application

The XT10 Horizontal axis is used for the coating of parts with different widths. By coating in this way, the powder guns must be driven into each corresponding position for every given width. The XT10 Horizontal axis can be used in connection with a ZA reciprocator.



*XT10 Horizontal axis with ZA reciprocator*

---

## Special characteristics

The XT10 Horizontal axis is a feeding axis and has the following characteristics:

- Same control as for the ZA reciprocator
- Freely adjustable speed setting on the axes control unit
- Built-in leveling pads
- Minimum space requirement
- No additional space required for dismantling and service works
- Low overall height
- Manually movable when the control unit is switched off
- Intermediate and larger sizes available in steps of 50 mm

(For more information about the controlling of the axis, see the axes control unit operating manual)

---

## Reasonably foreseeable misuse

- Operation in rooms with gases
- Horizontal axis is not anchored firmly to the floor
- The axis mounted on the horizontal axis is not fixed properly
- Incorrect programming of the end points and travel distance
- Operation without the proper training
- Operating the horizontal axis without the protective fence

# Technical data

---

## XT10 Horizontal axis

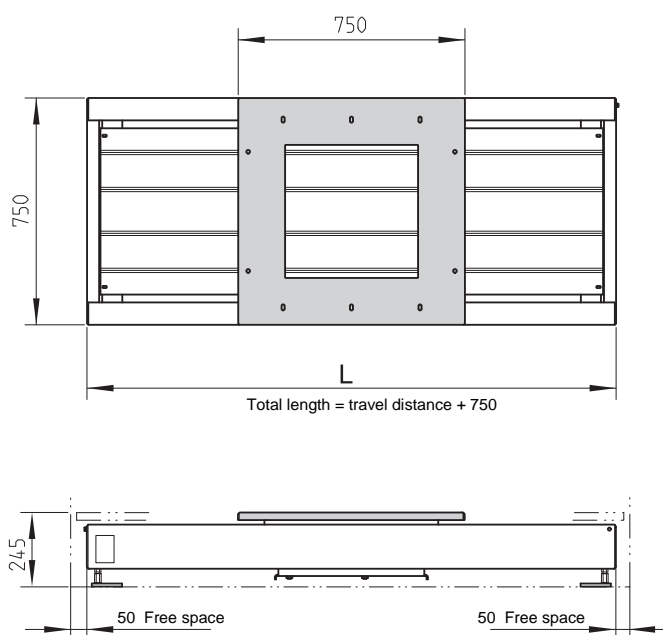
### Electrical data

XT10	
Power supply	230 VAC (from control unit)
Tolerance	± 10%
Power consumption	0.3 kW
Frequency	50/60 Hz
Protection type	IP54
Isolation	Class F
Control unit	CM-30
Temperature range	10 °C - 40 °C (50 °F - 104 °F)

### Mechanical data

XT10	
Speed	0,01-0,6 m/s
Acceleration	0,1-2,0 m/s <sup>2</sup>
Position detection	with incremental pulse generator
Reference point	corresponds to the zero point
Zero point	selectable in both end positions
Travel distance min.	400 mm
Travel distance max.	on request

## Dimensions



*Horizontalachse XT10 - Abmessungen*

## Versions

The XT10 Horizontal axis is available in two versions with different travel distances.

	<b>XT10-10</b>	<b>XT10-14</b>
Travel distance length	1000 mm	1400 mm
Weight	150 kg	166 kg

# Set-up, assembly and commissioning



---

**Warning:**

If a free-standing horizontal axis is not anchored firmly to the floor, uncontrolled movement of the machine or insufficient stability can cause injuries.

- Firmly anchor the horizontal axis to the floor if it is not mounted to another axis of motion
- 



---

**Warning:**

The movement of the reciprocator can cause injuries.

- Erect a protective fence around the reciprocator so that there is no danger of injury during normal operation.
- 



---

**Danger:**

Injuries can occur inside the protective fence due to the movement of the reciprocator!

- In order to enter the inner area, the door interlocks must be released by the control unit. This release signal may only be activated by technical personnel.
- 

Except for normal operation, all other operating modes must be set up by an authorized technical representative.



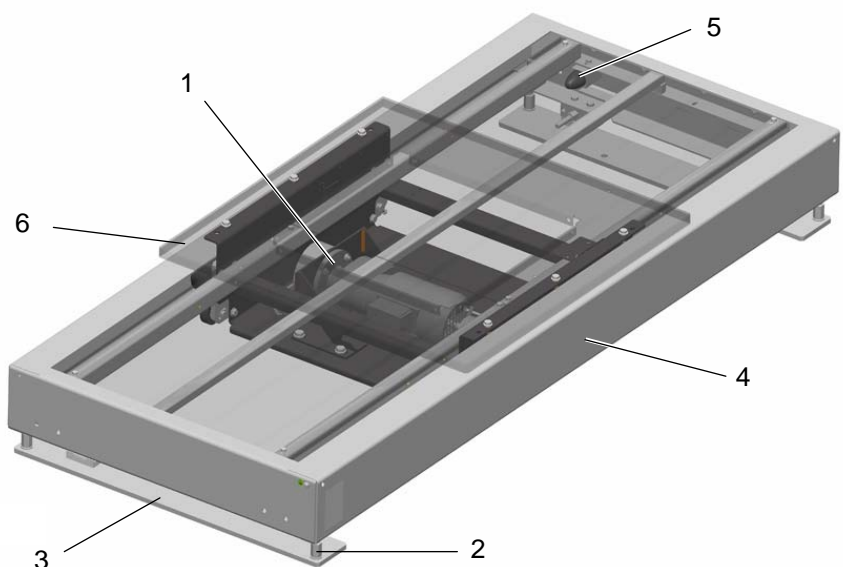


# Design and function

---

## Mechanical structure

The XT10 Horizontal axis consists of the following components:



*XT10 Horizontal axis - mechanical structure*

- |   |                       |   |               |
|---|-----------------------|---|---------------|
| 1 | Drive unit - complete | 4 | Frame         |
| 2 | Leveling bolt         | 5 | Rubber buffer |
| 3 | Baseboard             | 6 | Carriage      |

---

## Function description

- The XT10 Horizontal axis is a feeding axis for adjusting the gun position to the parts to be coated
- The XT10 Horizontal axis position detection takes place by a pulse generator installed onto the drive unit
- The drive takes place by the drive unit, installed onto the axis carriage (motor with spur gear and pulse generator) and the toothed belt, installed into the travel frame

---

## Safety and monitoring devices

All moving axes must be secured by the customer before start-up and during operation by providing fencing (see the local regulations)!

# Start-up

---

## Assembly of the XT10 Horizontal axis

The axis must be leveled, in order to ensure a safe and perfect operation.

After positioning, the XT10 Horizontal axis must be firmly fixed on the floor.

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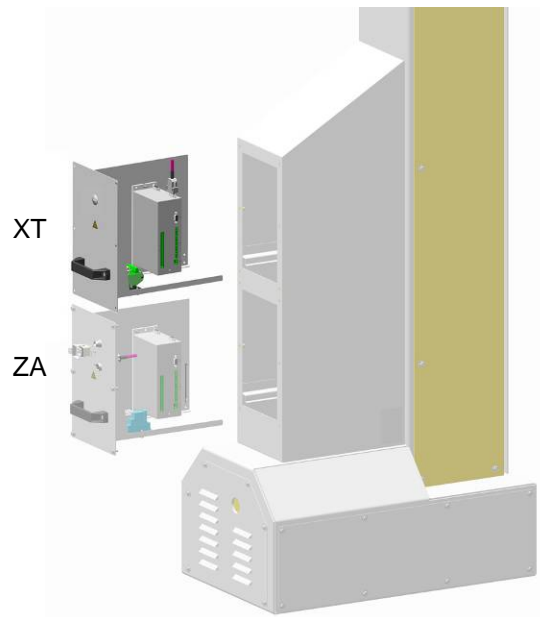
## Connecting the XT10 Horizontal axis to the ZA reciprocator

1. The cables to be connected are lying loose on the carriage plate of the horizontal axis



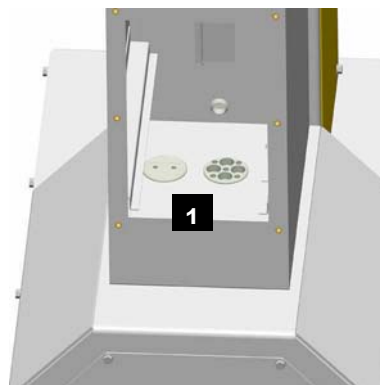
*XT10 Horizontal axis with connection cable*

2. Both cables must be inserted into the cable duct in the ZA reciprocator (1)
3. Loosen the screws on the rear side of the ZA reciprocator and pull out the electrical modules



*Electrical modules in the ZA reciprocator*

4. Break out the required opening in the feed-through rubber and pull through the cables.



*Cable feed-through in the ZA reciprocator*

5. Connect the cable (according to the enclosed wiring diagram)
6. Push back the electrical modules and fasten them

## Preparation for start-up




---

**Warning:**

**Before connecting or switching on the horizontal axis, read carefully these operating instructions!**

**Before the horizontal axis is put into operation, the upper stroke limit must be set on the reciprocator control unit!**

---

(see the user manual of the axis control unit)

## General information




---

**Warning:**

**Before start-up works are done, make certain that nobody can switch on the horizontal axis! Switch off and lock the mains switch!**

---

Before starting up, the following checks should be done:

- Check the gun holder and hose holder if they are firmly fitted. Mount the gun holder in such a way that they do not hit the bottom of the booth slots on start-up and cause damage
- Lay out the cables and hoses in such a way that even at the highest stroke no strain can arise
- Make sure that no guns can collide with the work pieces
- Check the grounding of the guns and hose carriers
- Check if the upper and the lower reversing point of the Z carriage are set correctly. The stroke length of the reciprocator must be in the range of the booth opening (collision danger!)
- Make sure that the automatic guns cannot collide with the work pieces (incorrectly adjusted stroke parameters on the reciprocator control unit)

## Reference point

At every start-up after the mains have been interrupted, the reference point of the reciprocator must be referred again (see "Reference point and mechanical stops"). After the reference point is reached, the reciprocator begins to carry out the movements set on the reciprocator control unit.

Before the horizontal axis is put into operation, the travel distance must be set on the axis control unit (see therefore the corresponding axis control unit operating manual)!



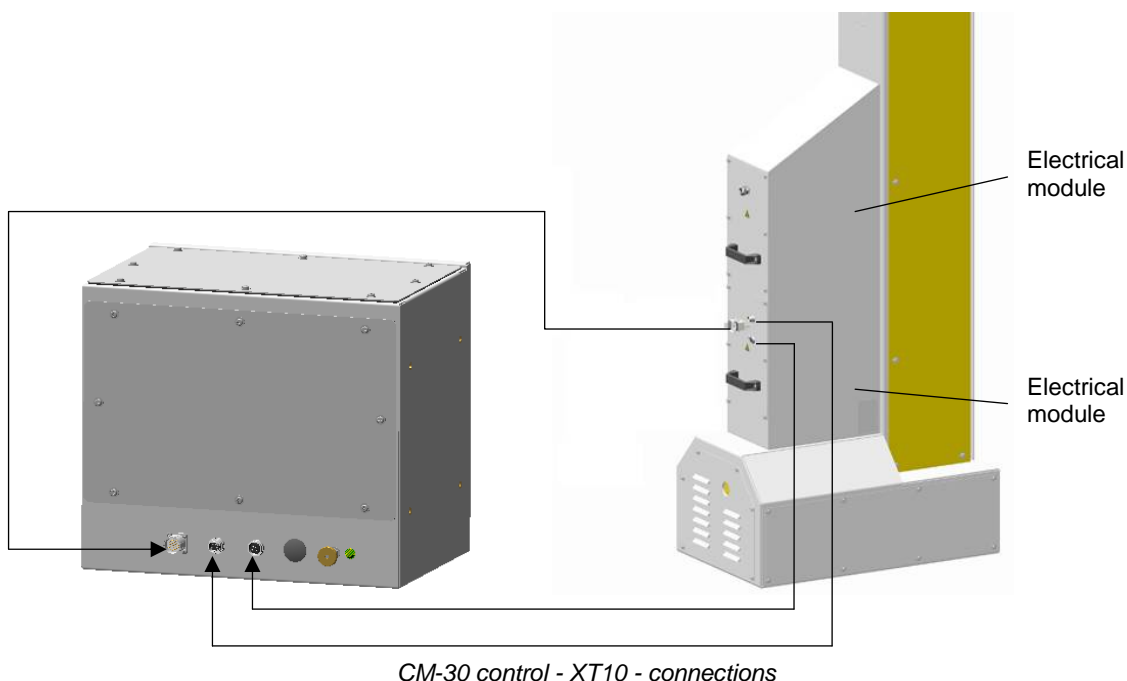

---

**Warning:**

**Incorrect setting of the travel distance can cause damages to the reciprocator, to the booth and/or to the applicators!**

---

## Electrical connections / cable connections



**Note:**

All internal connections between the XT10 axis and the electrical module are to be made according to the enclosed wiring diagram.

## Checkpoints before switching on

Before switching on, the following checks should be done:

- Check if the cables and hoses are laid out correctly
- Check if the guns have a clear run and do not touch the booth slots
- Check the distance between the work pieces and the guns



**Warning:**

Before connecting or switching on the horizontal axis, read carefully these operating instructions!

## Grounding / protection type

All metal parts of the horizontal axis must be grounded according to the local safety regulations. The grounding screw is located on the horizontal axis base.

All electrical installations are implemented in accordance to VDE IP54 protection type regulations!

## Hoses and cables

All movable hoses and cables must be laid out in such a way that they are neither subjected to any loads nor can hang on other parts. The electric cables of the reciprocators must be protected from mechanical damage.

## Reference point and mechanical stops

The reference point serves as starting point for the axis control unit for calculating the reversing points as well as the maximum travel distance.

Each time the reciprocator is switched on, the control unit requests that the carriage travels to the reference point (zero point). The carriage travels to the mechanical stop, which means onto the rubber buffer.

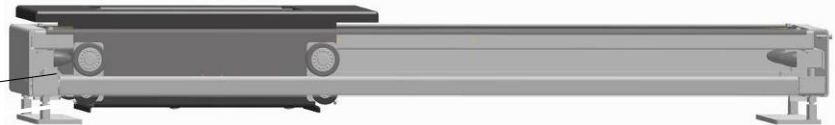
The control unit notes this and gives the distance how far the carriage must travel from this position to decompress the rubber buffer. The standard value for the XT axis is 30, that means 30 mm away from the mechanical stop. For this reason, the Axis control unit must be programmed in such a way that the reference point is always 30 mm before the lowest mechanical stop (zero point).



### Attention!

**In order to avoid damages to the booth, to the gun holders etc. the reference point must be set before the first start-up!**

Rubber buffer



*XT10 horizontal axis - reference point and mechanical stops*



### Warning:

**In order to avoid damages to the booth or the gun holders, the reference point must be checked before the first start-up and if necessary, reset!**

**It must be noted that the axes in reference travel moves up to 30 mm behind the control's zero point!**



### Warning:

**The reference point must be referenced before each start-up (at each switching on, after an interruption of the power supply etc.)!**

## Initial start-up



**Danger!**  
**Never stand on the horizontal axis or under the carriage of the vertical axis when it is in operation! Danger of accident!**



**Warning:**  
**The power of the horizontal axis is much stronger than that of a human being!**  
**All axes must be secured against admittance during operation (see local regulations).**

Before start-up the horizontal axis, the following points must be noted:

- The frame and the drive carriage of the axis **must** be grounded! The grounding of the frame must be done by the customer
- Adapt the system parameters in the axes control unit (see the axes control unit operating instructions)

In addition, the following checks are necessary before the initial start-up:

- Travel distance  
 Check by moving manually, as well as in accordance to the axes control operating manual
- Control unit  
 Check the cable connections (correct connections, squeezed parts, cable lengths, cable movement etc.)
- Stability  
 Horizontal axis and carriage plate must be stable!



# Maintenance



---

**Danger:**

Injuries can occur inside the protective fence due to the movement of the reciprocator!

- In order to enter the inner area, the door interlocks must be released by the control unit. This release signal may only be activated by technical personnel.

---

---

## General information



---

**Warning:**

Before maintenance work can be carried out on the horizontal axis, it must be ensured that the horizontal axis cannot be turned on by third parties!

The horizontal axis has to be free of load and disconnected from mains!

---

The XT10 horizontal axis was designed to operate with a minimum of maintenance. The motor gear box is self-lubricating and maintenance-free.

Regular maintenance and inspection of the horizontal axis increases the working reliability and avoids damages, repair downtimes etc.!

## Maintenance schedule


**Note:**

The following maintenance schedule is based on operation of 8 hours per day.

Time interval	Maintenance works
weekly	- Blow off the outside of the horizontal axis with compressed air or clean it with a soft cloth at least once a week.
monthly	- Check the drive unit gearbox for oil loss - Check the interior of the horizontal axis for deposits of powder dust and if present, clean it
every 6 months	- Check the drive belt for wear and tension - Check the rollers on the carriage for free movement and wear - Check the running surfaces for wear and deposits and, if present, clean them


**Note:**

The parts, which are to be replaced during maintenance work, are available as spare parts. Please refer to the spare parts list too!

## Drive unit


**Danger:**

During assembly, cleaning, maintenance and commissioning when close to energized components, an electrical shock can cause serious injury or death.

- All work must be carried out only by technical personnel and when no power is applied!

The motor gear box is self-lubricating and maintenance-free.

Observe the contamination of the enclosure - strong contamination on the outside can increase the operating temperature of the drive unit!

Therefore, clean the drive unit from time to time (with a vacuum cleaner etc.). Check the drive unit gearbox monthly for oil loss. If the drive unit gearbox has to be changed for any reason, the complete unit has to be replaced!

## Replacing the drive unit

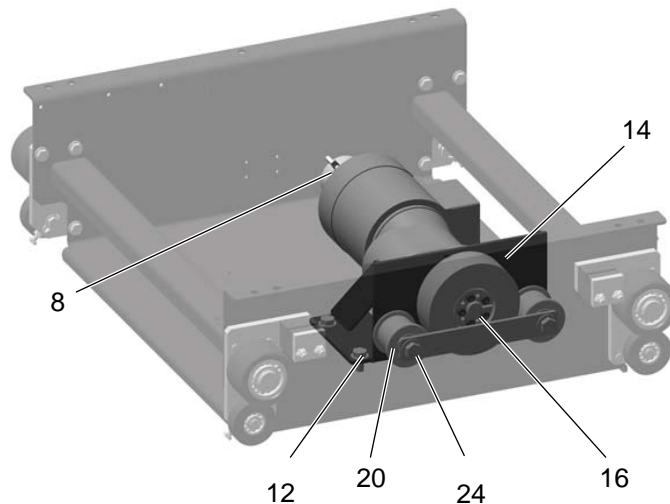


### WARNING!

There is the risk of burns if contact is made with electrical components that have become overheated!

- All work must be carried out only by technical personnel and when no power is applied!

If it is necessary to replace a drive unit gearbox, the complete motor unit must be dismantled from the horizontal axis. Therefore, the horizontal axis has to be free of load and disconnected from mains.



*XT10 Horizontal axis - drive unit*

### Procedure:

1. Remove the Z axis from the carriage plate
2. Remove the carriage plate
3. Remove both cover panels
4. Loosen the tensioning screws, so that the drive belt is slack
5. Remove the drive belt
6. Uncouple the motor power supply cable, in order to use it with the new motor again
7. Remove the incremental pulse generator (8)
8. Loosen the fixing screws (12 - 4 pieces) and take out the motor drive unit
9. Loosen the screws (24) and remove the guide rollers (20)
10. Loosen the clamping set (16) and remove the drive wheel
11. Loosen the screws (14) and remove the holder from the motor drive unit

**The installation takes place exactly in the reverse order!**

## Drive belt



### **Warning:**

**Injuries can arise if fingers, hair or articles of clothing get caught between the drive belt and the drive wheel or toothed wheel.**

**- All work must be carried out only by technical personnel**

The toothed drive belt should be checked regularly because it is exposed to large loads when in operation.



**The drive belt should be checked for wear and tension every 6 months.**

**Powder deposits should be removed with a vacuum cleaner, because this can influence the quiet running and shorten the service life of the drive belt**

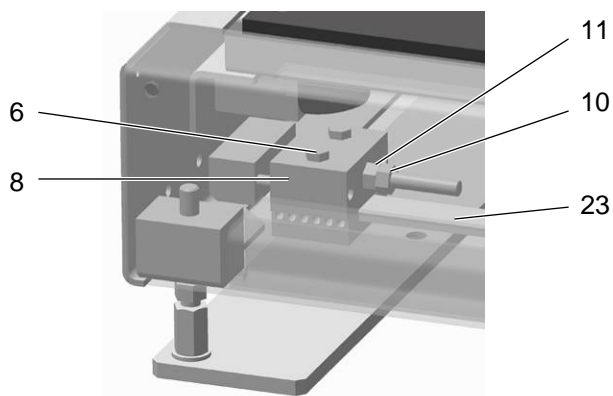
- Switch on the horizontal axis and check the drive belt for elongation or wear (noisy running, strong vibration of the belt when reversing the direction of travel)



### **Warning:**

**For safety reasons, two people should always carry out the following maintenance work!**

## Tensioning the drive belt

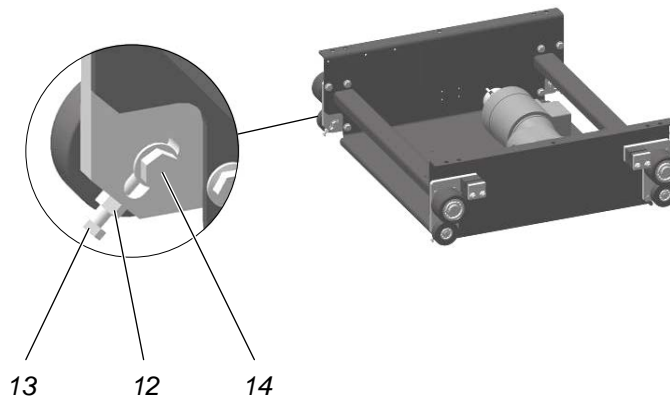


*XT10 Horizontal axis - Tensioning the drive belt*

- Clamp the drive belt (**23**) with the clamp block (**8**) and tighten the screws (**6**)
- Tension the drive belt with the tensioning screw (**11**), so that the drive belt will deflect 2-3 cm
- Tighten the lock nut (**10**)

## Counter rollers

If the X carriage starts to vibrate excessively during operation, especially at the reversing points, in most cases the cause lies in too much play in the carriage rollers, or even loose rollers!



*XT carriage - rollers*

**In this case, proceed as follows:**

1. Switch off the electric power
2. Remove the carriage and the panels
3. Loosen the roller screw (**14**) lightly
4. Loosen the lock nut (**12**)
5. Adjust the roller pressure with the screw (**13**), in such a way that the roller can just be turned by hand
6. Tighten the roller screw (**14**)
7. Tighten the lock nut (**12**)
8. Fit the panels again and fasten them firmly

**The carriage should run evenly and quietly again!**



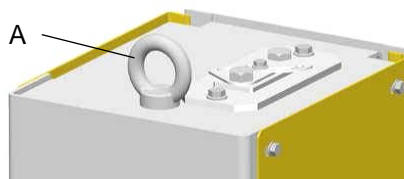
# Decommissioning, storage

---

## Introduction

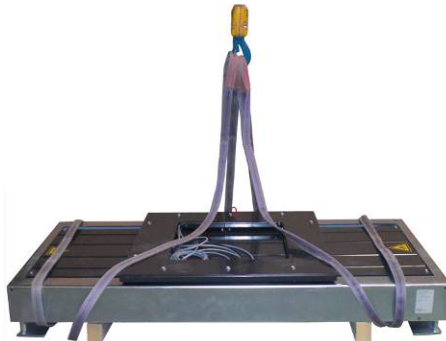
### Safety rules

Before lifting a reciprocator off of its horizontal axes, it must be secured from falling over with a lifting device such as a crane, fork lift, etc. The point of attachment is the eye bolt (**A**) at the top of the reciprocator.



*ZA.. reciprocator - Top view*

The horizontal axes should be lifted up using lifting straps:



### Requirements on personnel carrying out the work

All work should be carried out only by authorized technical personnel.

---

## Storage conditions

### Type of storage

Horizontal axes can be stacked.



### Storage duration

If the physical conditions are maintained, the unit can be stored indefinitely.

### Space requirements

The space requirements correspond to the sizes of the axes of motion.

The load-bearing capacity of the floor should be at least 200 kg/m<sup>2</sup>.

There are no special requirements concerning distance to neighboring equipment.

### Physical requirements

Storage must be inside a dry building at a temperature between 5 – 50 °C.

### Hazard notes

There is no danger to personnel or the environment if the unit is stored properly.



---

## Shut-down

### Decommissioning

Before starting any kind of work, the axes of motion must be disconnected from the power supply:

- Unplug the power cable
- Unplug the ground cable

### Cleaning

The running surfaces of horizontal axis must be thoroughly cleaned.

---

## Maintenance during storage

### Maintenance schedule

No maintenance schedule is necessary.

### Maintenance works

During long-term storage, periodically perform a visual check for corrosion.



# Packing, transport

---

## Introduction

This chapter describes special precautions that must be taken during internal transport of the product if:

- the customer himself must pack, transport and ship the product, such as to have renovations or service work carried out by the manufacturer

or

- the product must be shipped for disposal (recycling).

### Requirements on personnel carrying out the work

All work must be carried out by personnel trained in packing machines.

---

## Packing material

### Selection of packing material

Suitably stable wood packing material must be used.

### Procedure when packing

Transport the unit only in a horizontal position.

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## Transport

### Data concerning goods to be transported

The space requirements correspond to the size of the axes of motion plus the packaging.

### Loading, transferring the load, unloading

At least one fork lift must be available.



# Fault clearance

## Troubleshooting



**Warning:**  
Faults may be fixed by trained personnel only!

Error/fault	Procedures/remedy
Reciprocator with carriage plate is waggling	<p>Check the connecting bolts between reciprocator, carriage plate and the carriage for tightness</p> <p>Adjust the counter rollers without clearance by the corresponding screws on the running wheel bearing/guide wheel bearing (see also the spare parts list)</p> <p><b>Warning:</b> In no case press the counter rollers, otherwise they wear quickly!</p>
Reference point not reached	<p>Remove the powder accumulation on the running surfaces</p> <p>Check for a foreign body - if present, remove it</p> <p>Check the XT10 Horizontal axis for proper running (move manually)</p> <p>Consider the indications in the axes control unit operating manual!</p>



# Spare parts list

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## Ordering spare parts

When ordering spare parts for powder coating equipment, please indicate the following specifications:

- Type and serial number of your powder coating equipment
- Order number, quantity and description of each spare part

**Example:**

- **Type** XT10  
**Serial number** 1234 5678
- Order no. 203 386, 1 piece, Clamp - Ø 18/15 mm

When ordering cable or hose material, the required length must also be given. The spare part numbers of this bulk stock is always marked with an \*.

Wearing parts are always marked with a #.

All dimensions of plastic hoses are specified with the external and internal diameter:

**Example:**

Ø 8/6 mm, 8 mm outside diameter (o/d) / 6 mm inside diameter (i/d)



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**WARNING!**

**Only original Gema spare parts should be used, because the explosion protection will also be preserved that way. The use of spare parts from other manufacturers will invalidate the Gema guarantee conditions!**

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## XT10 Horizontal axis - spare parts list



### Attention!

When ordering toothed belts, indicate the toothed belt length (according to travel distance + 855 mm).

By replacing the toothed belt, screw in the grub screw, so that the steel cables in the toothed belt are touched and the grounding is ensured!

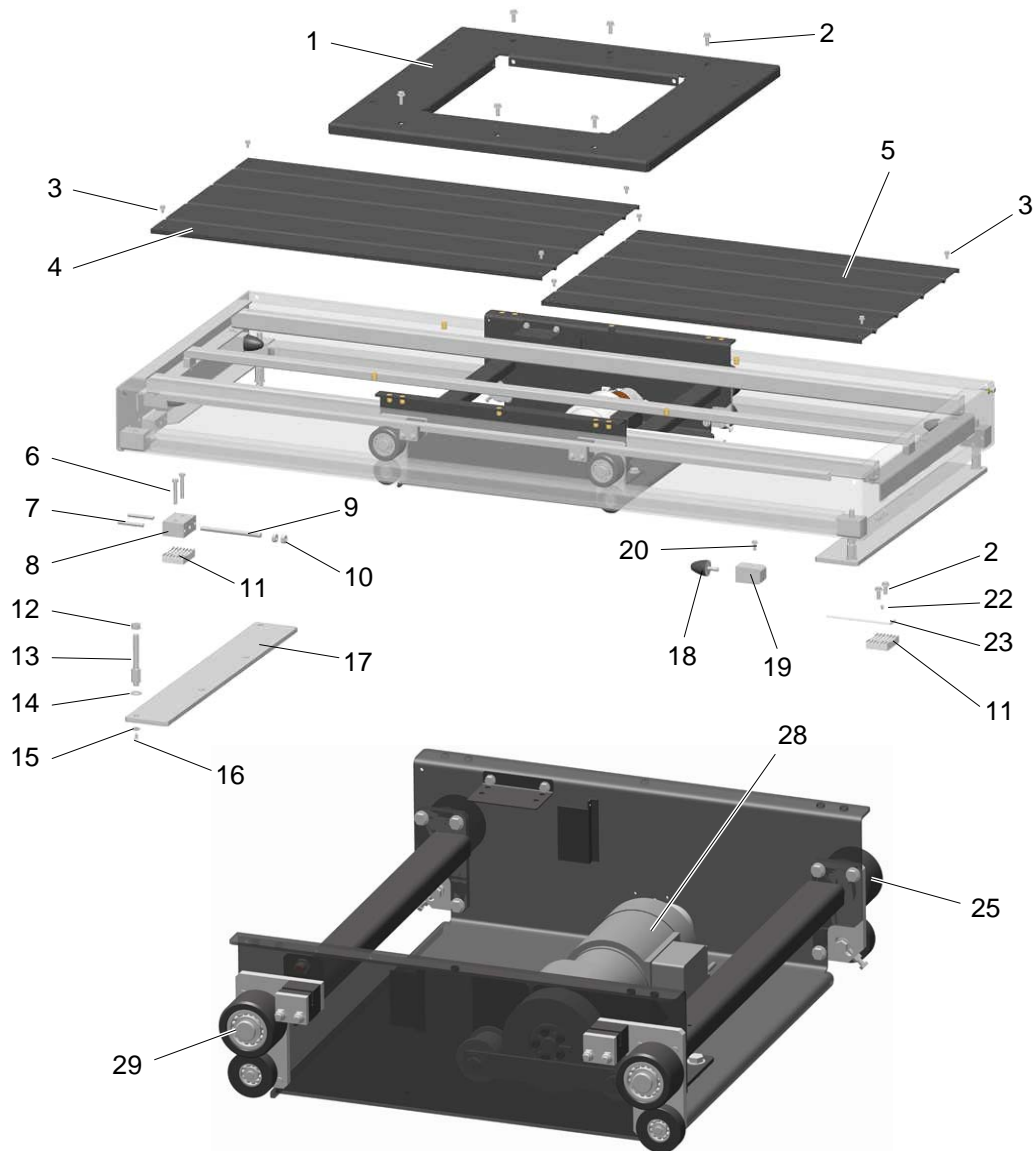
1	ZA.. carriage plate	387 355
2	Hexagon shakeproof screw - M8x20 mm	244 422
3	Hexagon screw - M6x10 mm	1001 081
4	Cover panel - indicate the travel distance	on request
5	Cover panel - firm side	372 463
6	Hexagon screw - M8x50 mm	213 993
7	Headless screw - M8x60 mm	258 482
8	Clamping plate	372 420
9	Threaded bolt - M10x140 mm	258 474
10	Hexagon nut - M10	215 589
11	Clamp plate	345 067
12	Hexagon nut - M12	215 597
13	Threaded bolt - M12x115 mm	372 676
14	Washer - Ø 13/24x2.5 mm	215 830
15	Washer - M6 (for countersunk-head screw)	258 431
16	Countersunk-head screw - M6x12 mm	214 680
17	Baseboard	372 404
18	Rubber buffer - Ø 35x40 mm, M8	211 664
19	Buffer holder	389 285
20	Hexagon shakeproof screw - M6x16 mm	244 503
22	Allen grub screw - M6x10 mm	214 841
23	Drive belt	103 730#*
25	Running wheel bearing - complete (see corresponding spare parts list)	
28	XT10 drive unit - complete (see corresponding spare parts list)	
29	Guide wheel bearing - complete (see corresponding spare parts list)	
	XT10 Electrical module on ZA05 (not shown, see corresponding spare parts list)	

\* Please indicate length

# Wearing part



## XT10 Horizontal axis - spare parts



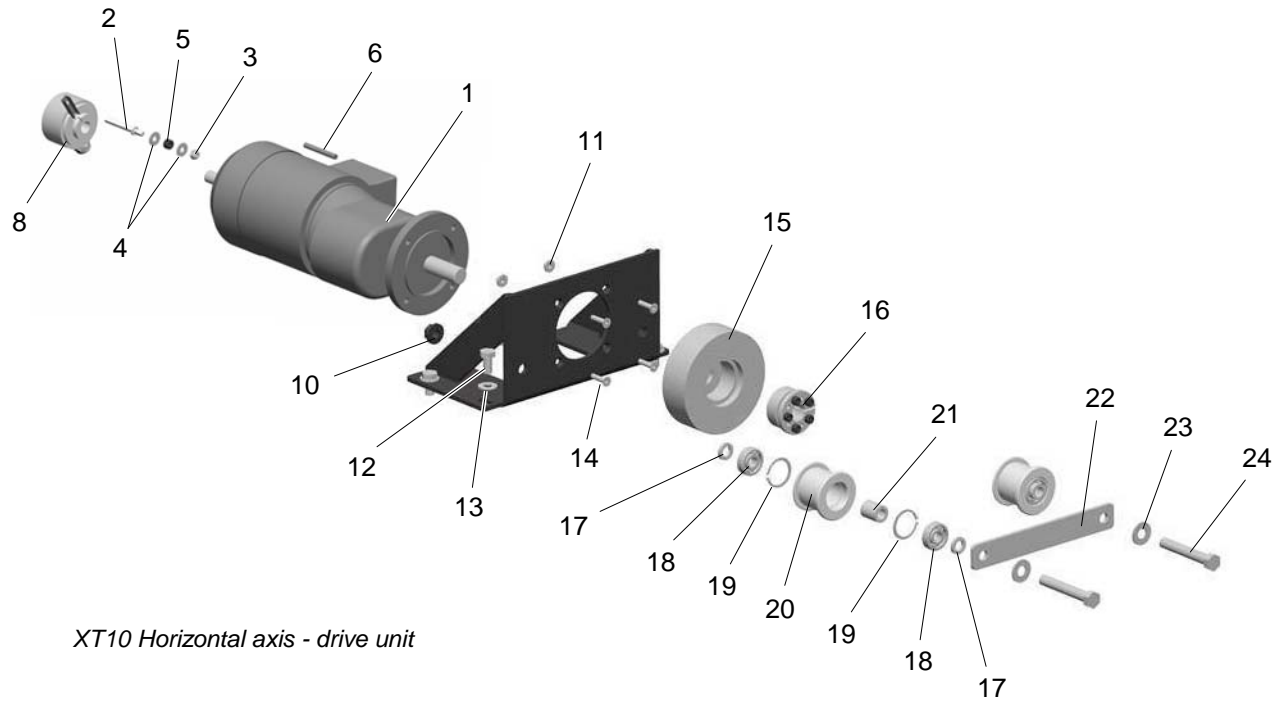
XT10 Horizontal axis - spare parts list

## Drive unit

1	Motor/gearbox unit - 0.18 kW, complete (pos. 1-5)	
	- for XT Axes with serial numbers 18301.xxxx (see Rating plate)	1003 823
	- for XT Axes with serial numbers 18302.xxxx (see Rating plate)	1008 445
2	Torque support - Ø 6 mm	1003 819
3	Locknut - M6	1003 822
4	Washer - Ø 6.4/16x1.6 mm	215 805
5	Cable bush - ID 5 mm	1003 821
6	Motor cable - L=2.5 m	387 169
8	Incremental pulse generator	268 925
10	Hexagon ribbed nut - M12	1003 797
11	Hexagon shakeproof nut - M6	244 430
12	Hexagon screw - M10x20 mm	214 108
13	Ribbed washer - M10	237 981
14	Countersunk Allen screw - M6x25 mm	241 598
15	Toothed belt wheel <sup>1)</sup>	1003 814
16	Clamping set - Ø 20/47x22 mm <sup>1)</sup>	257 583
17	Spacer ring - Ø 20/12.1x3.7 mm	1003 795
18	Deep groove ball bearing - Ø 12/32x10 mm	245 720
19	Snap ring - A-32	235 741
20	Guide roller	1003 793
21	Spacer ring - Ø 20/12.1x25 mm	1003 812
22	Roller fixing plate - L=120 mm	1003 796
23	Ribbed washer - M12	237 973
24	Hexagon screw - M12x80 mm	221 325

<sup>1)</sup> If these parts must be replaced, clean off all grease before assembly!

## Drive unit

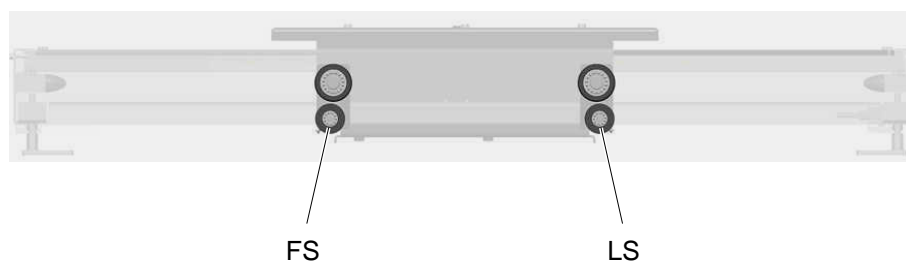


*XT10 Horizontal axis - drive unit*

## Running wheel bearing

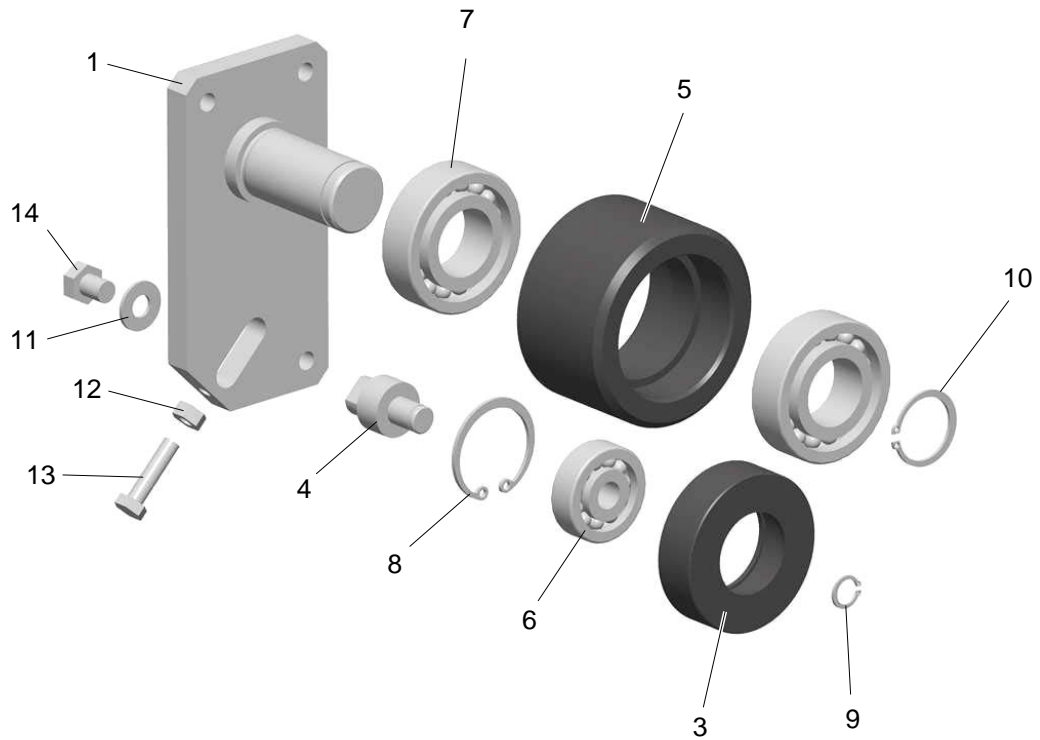
	Running wheel bearing - complete, FS	1003 808
	Running wheel bearing - complete, LS	1003 806
1	Running wheel bearing (support) - FS	1003 809#
1	Running wheel bearing (support) - LS	1003 807#
3	Counter roller	390 658#
4	Bearing bolt	1003 813
5	Running wheel - Ø 73 mm	1003 805#
6	Deep groove ball bearing - Ø 10/35x11 mm	201 359#
7	Deep groove ball bearing - Ø 15/52x15 mm	258 415#
8	Snap ring - I-35	216 135
9	Snap ring - A-10	256 358
10	Snap ring - A-25	237 094
11	Ribbed washer - M8	242 870
12	Hexagon nut - M6	205 095
13	Hexagon screw - M6x25 mm	213 845
14	Hexagon screw - M8x10 mm	213 900

# Wearing part



*XT10 Horizontal axis - running wheel bearing*

## Running wheel bearing

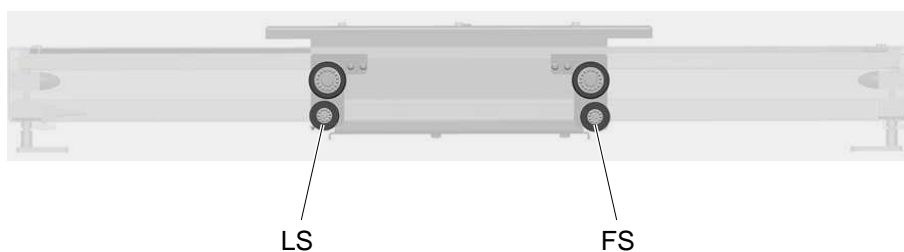


*Running wheel bearing - FS*

## Guide wheel bearing

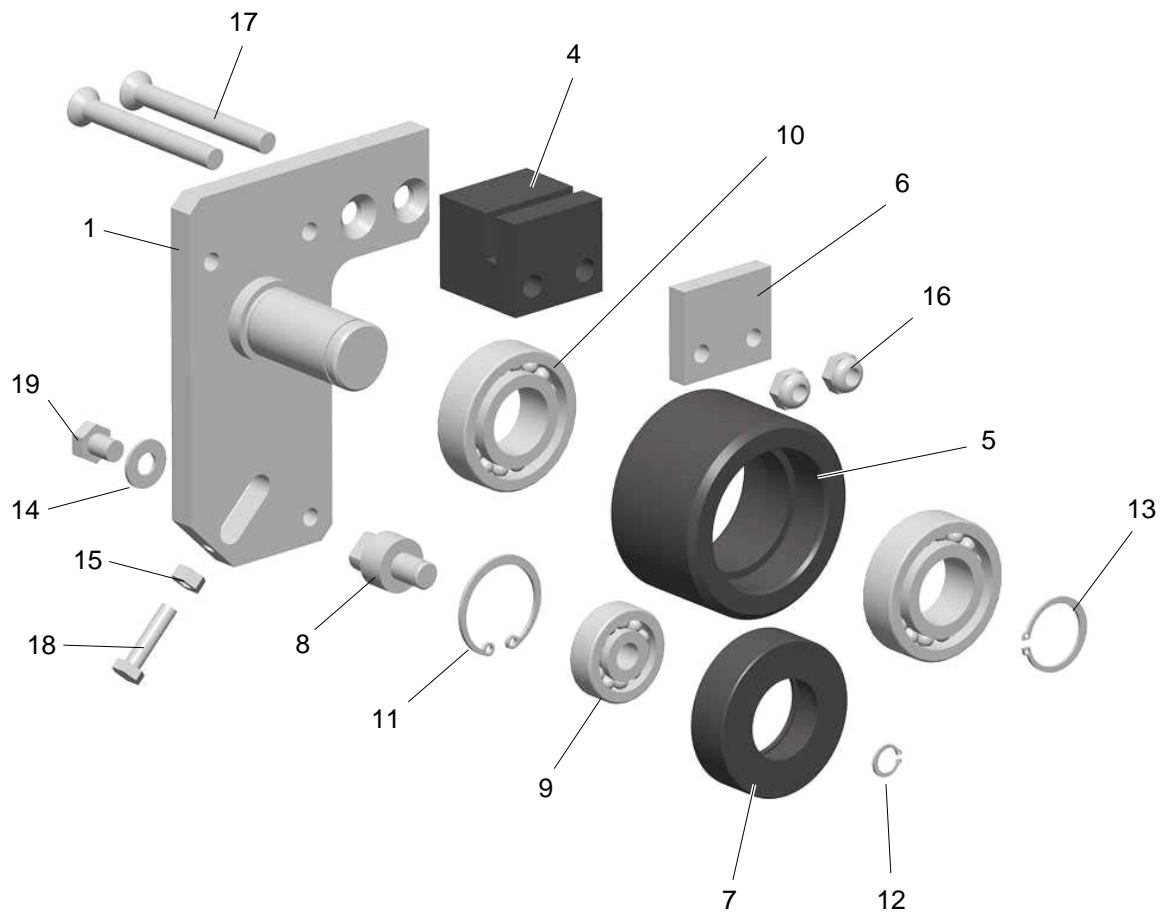
	Guide wheel bearing - complete, LS	1003 803
	Guide wheel bearing - complete, FS	1003 811
1	Guide wheel bearing (support) - LS	1003 804#
1	Guide wheel bearing (support) - FS	1003 810#
4	Guide profile	372 374#
5	Guide wheel - Ø 73 mm	1003 805#
6	Counter plate	372 382
7	Counter roller	390 658#
8	Bearing bolt	1003 813
9	Deep groove ball bearing - Ø 10/35x11 mm	201 359
10	Deep groove ball bearing - Ø 15/52x15 mm	258 415
11	Snap ring - I-35	216 135
12	Snap ring - A-10	256 358
13	Snap ring - A-25	237 094
14	Ribbed washer - M8	242 870
15	Hexagon nut - M6	205 095
16	Locknut - M8	221 317
17	Countersunk screw K-SI - M8x70 mm	258 440
18	Hexagon screw - M6x25 mm	213 845
19	Hexagon screw - M8x10 mm	213 900

# Wearing part



*XT10 Horizontal axis - guide wheel bearing*

## Guide wheel bearing

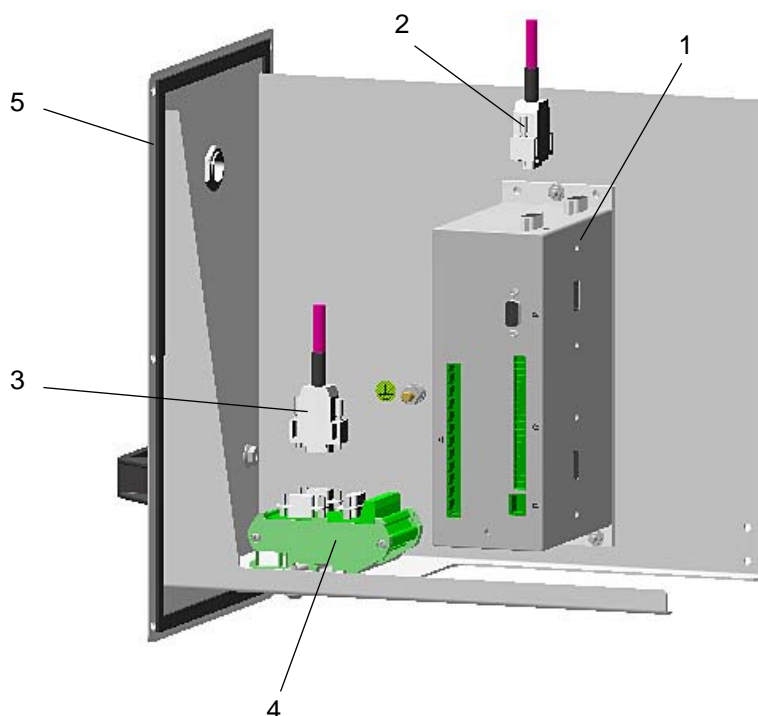


*Guide wheel bearing - LS*

## Electrical module

	Electrical module - complete	1003 983
1	Position regulator CDB	1003 986
2	CAN bus cable 0.55 m	386 995
3	CAN bus cable 1.0 m	391 620
4	CAN T-distribution box	265 772
5	Adhesive seal strip - 9x2 mm	100 250*

\* Please indicate length



*XT10 Horizontal axis - electrical module in the ZA05 Reciprocator*



