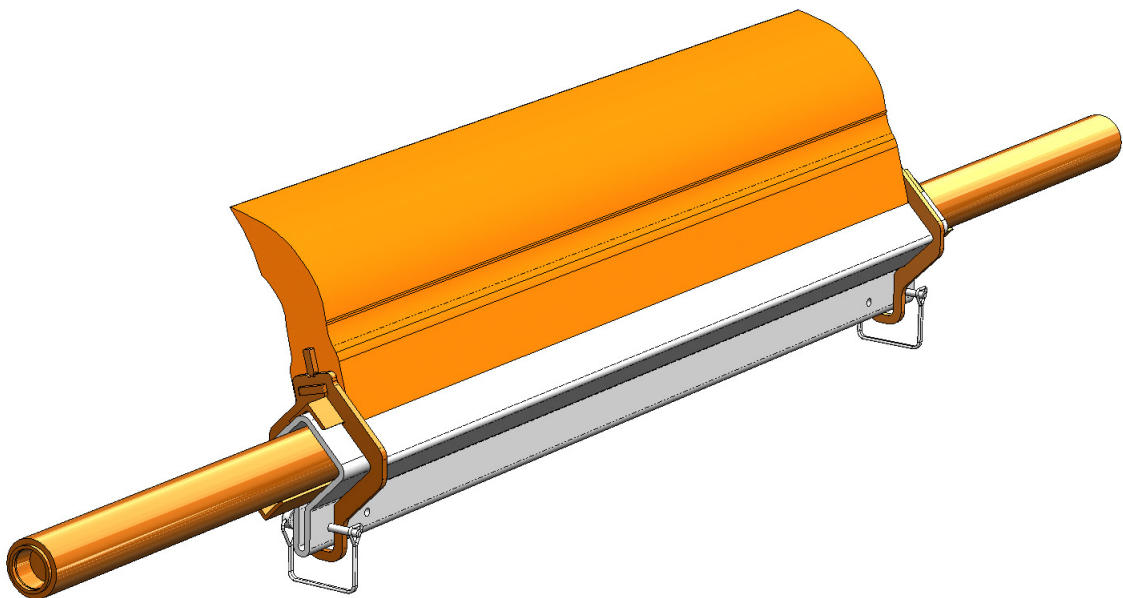




**MARTIN® QB™ #1**  
**Heavy-Duty**  
**Pre-cleaner**



**Installation instructions**  
**M4022UK**



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## 2 Introduction

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### 2.1 About these installation instructions

Non-compliance with these installation instructions can result in loss of compensation for damage and/or warranty claims.

#### 2.1.1 Scope

These installation instructions apply solely for the product described herein and are intended for those persons who install this product, commission it, and monitor its usage.

#### 2.1.2 Copyright

The products described and these installation instructions are protected by copyright. Any reproduction without a license will be prosecuted. All rights to the present document are reserved, including its reproduction and/or copying in any conceivable manner. Reprints of this document require the written consent of Martin Engineering.

The technical standard at the time of delivery of the product and its technical documentation is decisive for as long as no other information is provided. The product and documentation are subject to technical changes without prior notification. Earlier documents then lose their validity. Martin Engineering's General Terms of Sales and Delivery shall apply.

#### 2.1.3 Exclusion of liability

Martin Engineering guarantees the flawless function of its product in accordance with its advertising, the published product information, and its technical documentation. Martin Engineering shall assume no liability for efficiency and flawless function if the product is used for a purpose other than that described in the "Intended Use" section or for damage resulting from the use of accessories and/or spare parts which were not supplied and/or certified by Martin Engineering.

The Martin Engineering products are designed for a long service life. They conform to the state of the art in science and technology and were thoroughly inspected before shipment. In addition to this, Martin Engineering constantly performs product and market research for continuous product development.

Martin Engineering offers competent support whenever malfunctions and/or technical problems occur. Suitable actions are taken immediately. The warranty provisions of Martin Engineering apply and can be sent to you as needed.

## 2.1.4

### Reference to additional documents

Reference is made in these installation instructions to the following documents:

- Installation instructions for the MARTIN<sup>®</sup> Inspection door, Publication no. M3127.
- Installation instructions for the MARTIN<sup>®</sup> TWIST<sup>™</sup> Inline tensioners, Publication no. M3296.
- Installation instructions for the MARTIN<sup>®</sup> spring and air tensioner, Publication no. M3263.
- Installation instructions for the MARTIN<sup>®</sup> SG1S spring tensioner, Publication no. M3766

The following standards and directives were complied with in the preparation of these installation instructions:

- EU Machinery Directive (2006/42/EC)
- ISO/IEC Guide 37 "Installation instructions for products used by final consumers", 1995 Edition
- DIN 1421 "Organisation and numbering in texts", Edition 1983-01
- DIN/EN 12100 "Machine safety - basic definitions, general design guidelines", Edition 2013-08
- DIN/ISO 16016 "Technical product documentation - Protection notices for restricting the use of documents and products", Edition 2007-12
- DIN/EN 60204-1 "Safety of machines - Electrical Equipment of Machines, Part1 General requirements", Edition 2007-06
- DIN EN 82079-1 - Creation of user manuals - Structuring, content and presentation, Part 1 General principles and detailed requirements.

## 2.1.5

## Classification of the hazards

**DANGER!**

Represents an immediately threatening danger which leads to serious bodily injuries or death if not avoided.

**WARNING!**

Represents a possibly hazardous situation which could lead to serious bodily injuries or death if not avoided.

**CAUTION!**

Represents a possibly hazardous situation which could lead to minor bodily injuries and/or property damage if not avoided.

**NOTE**

Contains comments about the installation and/or the product's usage to point out situations which cause neither personal injury nor property damage but include important information.

**2.2****Intended usage**

Der MARTIN® QB™ #1 Heavy-Duty pre-cleaner is used exclusively for the cleaning of conveyor belts. These can have a belt width of up to 2400 mm and a belt speed of up to 4.6 m/s. The pre-cleaner can be directly installed on the head pulley.

Every other usage of this product is deemed misuse. Please contact Martin Engineering customer service if you would like to use this product for a different purpose. We will be happy to assist you with the product configuration.

**2.2.1****Conveyor systems with open transfer systems**

These installation instructions describe the installation on conveyor systems with encapsulated transfer systems. Various MARTIN® Inline mount plates can be used on open transfer systems.

Martin Engineering or one of its representatives can assist with the position or with special solutions in cases where the installation conditions are complicated such as insurmountable static components or a head pulley as the tensioning station.

**2.2.2****Usage in explosion-protected areas**

This product can also be used in potentially explosive areas under certain conditions. Contact Martin Engineering for more information on usage in potentially explosive areas.

The cleaner must not be used in a higher equipment protection category or under other operating conditions than those specified by Martin Engineering unless such usage has been approved by Martin Engineering.



### **2.2.3 Restrictions on the use of the product**

The product specified here may only be used within the scope of the specifications referred to above. Usage in a higher equipment protection category or under other operating conditions than those specified by Martin Engineering shall be deemed misuse and is only permitted if approved by Martin Engineering.

Martin Engineering or one of its representatives can assist you with the product configuration if you need to use this product for a different purpose.

## **2.3 Occupational safety**

### **2.3.1 Safety information, occupational safety**

These installation instructions must be read through in their entirety before work may be started on the product or on the conveyor system supplied by the customer.

The owner-operator must ensure that all installation, inspection and maintenance work is performed solely by trained specialists.

Work on conveyor systems and their accessories must always be performed during shut-down. The procedures described in the applicable installation instructions for shutting down the conveyor system must always be complied with.

All of the safety devices and safeguards must be reattached and/or made operational immediately following completion of the work.

The installation must be carried out to completion before the system is started up. The flawless execution of all operating steps must be tested before the conveyor system can be started up again. Please observe all information on the installation and start-up of the product.

## 2.3.2

### **Duties of the owner-operator**

This product's owner-operator must ensure that this product is installed, serviced and used solely by those persons who

- know the rules regarding occupational safety and accident prevention,
- were trained on using this product and have read and understood these installation instructions.

## 2.3.3

### **Authorised personnel**

Personnel are considered authorised when they have suitable training and technical experience, can demonstrate knowledge of the applicable standards and guidelines, and are able to evaluate tasks in order to recognise critical situations at an early stage.

### **Operating, maintenance and installation personnel**

Personnel are considered authorised when they have been trained on using the product and have read and understood these operating instructions in their entirety.

## 3 Description of the product

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### 3.1 Design and function

The MARTIN® QB™ #1 Heavy-Duty belt cleaner is designed for the most difficult applications and allows blades to be changed simply by removing a single pin wire lock. The installation position of the pre-cleaner on the head pulley (e.g. QC™ #2) immediately downstream of the head pulley guarantees that the cleaned off material is returned to the material flow.

Although pre-cleaners and secondary cleaners can each be used individually, the installation of a system consisting of pre-cleaners and secondary cleaners is recommended for an optimal cleaning result.



#### NOTE

An unfavourable or improperly installed product can disrupt the conveyor process or contaminate the bulk material to be transported.

The owner-operator is responsible for taking the required countermeasures.

In the case of applications with contaminants, Martin Engineering or one of its representatives can assist with the positioning or with special solutions.

### 3.2 Inline Reversing tensioners

The MARTIN® QB™ #1 Heavy-Duty pre-cleaner and the Martin Engineering Inline Reversing tensioners, which are specially developed for it, offer the best possible results and correspond to the general state of the art.

Martin Engineering recommends the following Inline Reversing tensioners for the MARTIN® QB™ #1 Heavy-Duty pre-cleaner:

- MARTIN® TWIST™ Inline tensioner:  
Part number 31443-XI+E or 38850-X.
- MARTIN® Spring tensioner:  
Part number 38180-X.
- MARTIN® SG1S Spring tensioner:  
Part number SG1S-T+I.

## 3.3

### **Type clarification**

Blades for the MARTIN® QB™ #1 Heavy-Duty pre-cleaner are available in various material designs. The required material can be selected in accordance with the material conditions. The selection of the various blade materials is listed in the “Part numbers” section.

## 4 Preparing for the installation

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### 4.1 Before the installation

#### 4.1.1 Required materials and tools

Along with the standard tools, the following special equipment may be needed for the installation and maintenance of your product.

- Lifting device with a capacity greater than the weight of the belt cleaner (see delivery note for weight data).

#### 4.1.2 Preparatory measures



##### NOTE

Perform the inspections described carefully and completely. The shipping company is liable for any transport damage! Please contact the shipper with any damage claims.



##### NOTE

An unfavourable or improperly installed product can disrupt the conveyor process or contaminate the bulk material to be transported.

The owner-operator is responsible for taking the required countermeasures.

In the case of applications with contaminants, please seek the advice of Martin Engineering or one of its representatives.

1. Inspect the delivery for the following conditions:
  - Is the delivery complete? Does the number of pallets/ crates/containers delivered match the number on the delivery note?
  - Do all of the transport packages appear to be undamaged? Does damage to the packaging exist which indicates damage to the product contained inside?

2. Always record any incompleteness or transport damage discovered in the delivery and have it confirmed by the shipper. All damaged products must be kept for inspection.
3. The delivery should include the following parts, depending on the scope of the order:
  - MARTIN® QB™#1 Heavy-Duty Pre-Cleaner,
  - possible accessories as contained in the order,
  - two Conveyor Products Warning Labels Part No. 23395.
4. Report any missing or damaged parts to Martin Engineering or one of its contracted dealers.

## 5 Installation

### 5.1

#### Safety information



##### NOTE

Read this section completely before starting any kind of work!



##### WARNING! RISK OF INJURY!

Body parts and/or clothing can be pulled in by rotating components or the moving conveyor belt.

*Shut off the power supply to the conveyor system and its accessories and secure it against unauthorised reactivation before performing any installation or maintenance work. Post warning signs!*



##### WARNING! RISK OF EXPLOSION!

Increased risk when using a cutting torch or welding device in closed rooms!

*Check the gas and dust content of the air before usage.*



##### NOTE

The chute wall on which the Inline-Reversing tensioner is to be installed is designated as the “operator side”. The other chute wall is designated as the “far side”.

When dual Inline-Reversing tensioners are installed, the easiest side to access is the “operator side”.

**5.2**

**Installation process**

**5.2.1**

**Determination of the installation position**

The position of the mainframe and Inline-Reversing tensioner of the MARTIN® QB™ #1 Heavy-Duty pre-cleaner must be determined on both sides of the chute wall. In this process, the positions are determined where the mainframe of the MARTIN® QB™ #1 Heavy-Duty pre-cleaner is routed through the chute wall and where the Inline-Reversing tensioner is installed on the chute wall.

The MARTIN® QB™ #1 Heavy-Duty pre-cleaner is operated together with an Inline-Reversing tensioner. This is not installed in the delivery state and is installed together with the pre-cleaner during the general installation.

The installation of the MARTIN® QB™ #1 Heavy-Duty pre-cleaner and the Inline-Reversing tensioner is described in these installation instructions and in those of the Inline-Reversing tensioner.

An overview of the installation steps follows:

No.	Installation step	Instructions
1	Positioning the pre-cleaner mainframe	M4022
2	Installing the pre-cleaner	M4022
3	Installing the Inline-Reversing tensioner	M3296 or M3263 or M3766
4	Installing the blade	M4022

Tab. 1: Installation steps

Various on-site conditions requiring different work steps are possible for the installation. These are presented as follows:

Installation on an encapsulated transfer system

- Follow the instructions given in Section 5.2.2.

Installation on an encapsulated transfer system with pre-existing installation openings and air line brackets for belt cleaners.

- Follow the instructions given in Section 5.2.3.

Installation on an open transfer system

- Use the equipment provided at the site to comply with the dimensions for correct installation.



1. Deactivate the conveyor system and all accessories before starting the installation work and secure them against unauthorised reactivation.



#### NOTE

The MARTIN® QB™ #1 Heavy-Duty pre-cleaner is installed exclusively in the lower front quarter of a head pulley. Always comply with the specified installation dimensions.

2. Determine the position of the mainframe centre for the pre-cleaner as described in the following.

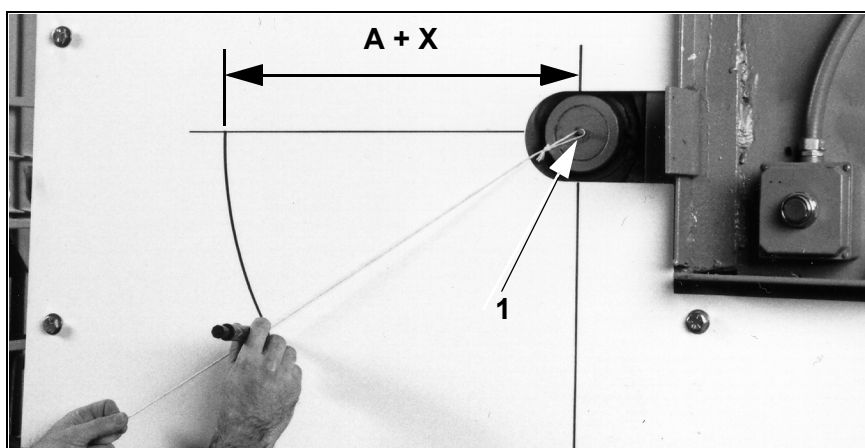


Fig. 1: Marking of the installation radius



#### NOTE

Martin Engineering recommends installing a MARTIN® inspection door for the purpose of better accessibility for maintenance and repairs.

3. Mark the vertical and horizontal centre line of the driving drum on the operator side of the chute wall to determine the centre point (1, Fig. 1) of the driving drum. The vertical line must run at a right angle with respect to the conveyor belt line.
4. Determine and/or measure the radius (Dimension A) of the driving drum together with the thickness of the coating and the conveyor belt.

Pulley diameter in mm	Dimension X in mm
300 - 475	102
> 475	89

\*incl. rubber coating and conveyor belt

Tab. 2: X-values for the positioning of the mainframe

- Add dimension X from Table 2 to Dimension A.
- Draw the arc of a circle with the dimension determined in step 5 around the centre of the chute wall (1, Fig. 1).

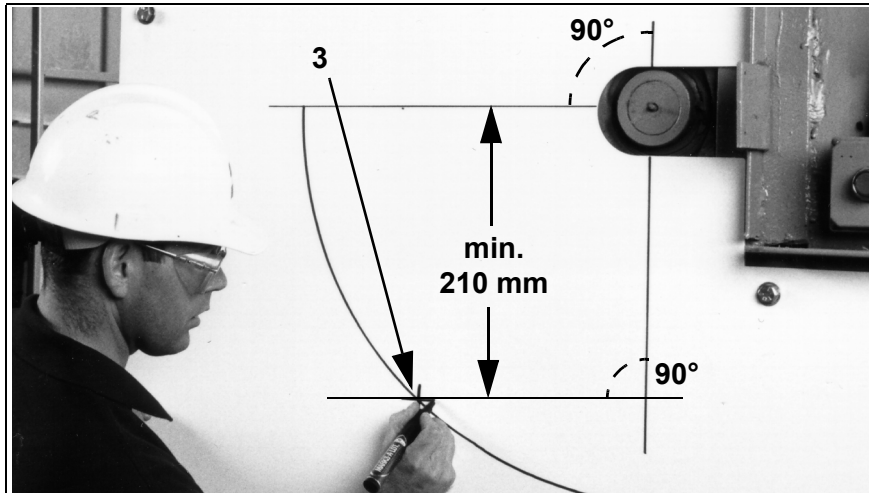


Fig. 2: Marking of the installation height



### WARNING! RISK OF INJURY!

The pre-cleaner is heavy and can cause serious injuries if it is dropped during lifting or moving.

*Always use a suitable lifting device or engage the help of several persons when lifting the pre-cleaner. Do not stand under hanging loads.*

- Mark a horizontal line at a distance of 216 mm beneath the horizontal centre line of the head pulley. The cutting point with the arc marked in step 5 is the centre of the mainframe (3, Fig. 2).

**NOTE**

This is the best possible installation position and that recommended by Martin Engineering for achieving an optimal cleaning result with the MARTIN® QB™ #1 Heavy-Duty pre-cleaner. If structural conditions make this impossible, then the pre-cleaner can also be installed in consultation with Martin Engineering at an angle of 20° upwards or downwards, with the installation radius being complied with in all cases.

8. Repeat steps 1 to 6 on the far side of the chute wall.

**5.2.2****Installing the Inline-Reversing tensioner**

Follow the instructions for installing your Inline-Reversing tensioner in accompanying installation manual. (See sections 2.1.4).

5.2.3

Installing the pre-cleaner

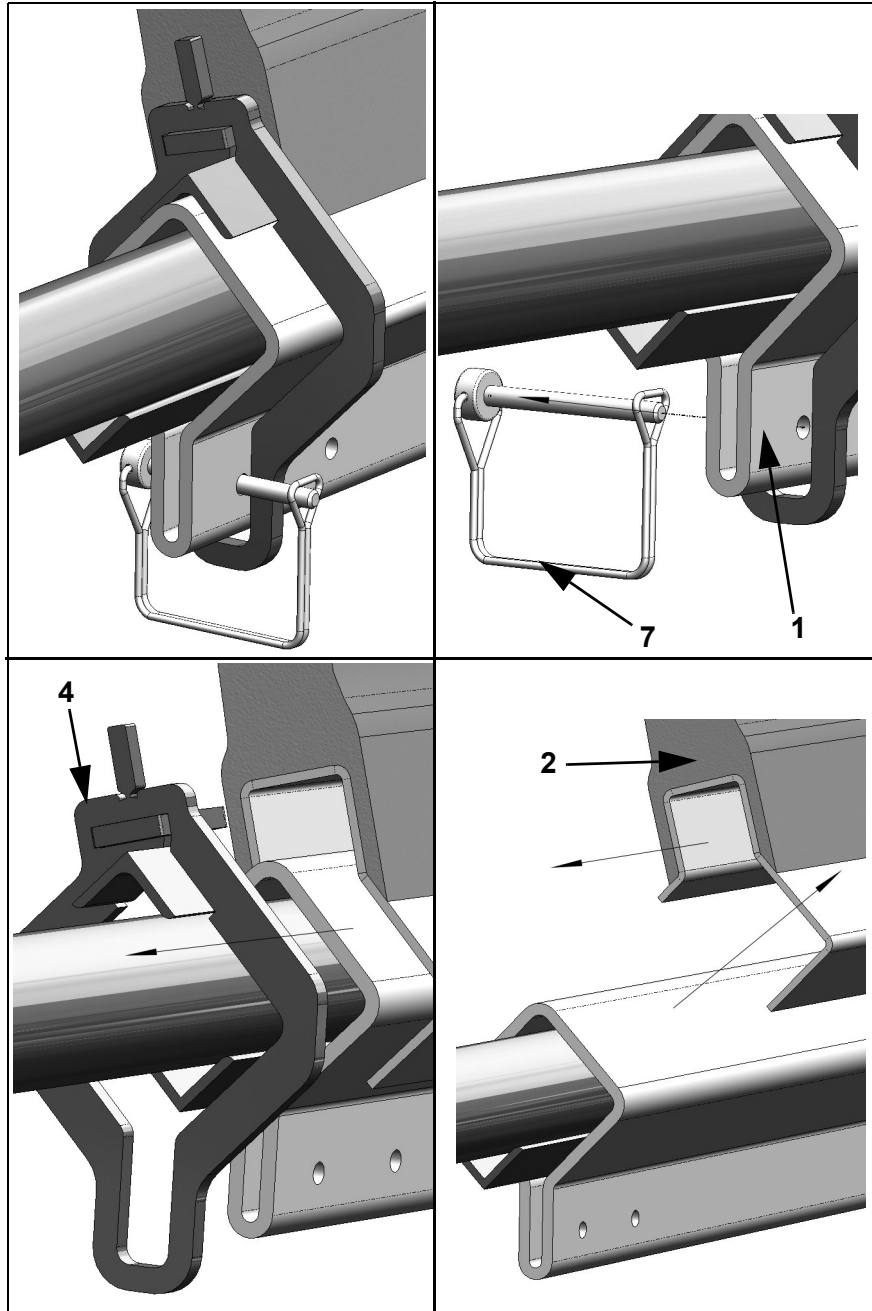


Fig. 3: Removing the blade



**NOTE**

The numbering of the parts in the following sections is based on the item numbers of the parts list from the parts numbers section.

1. First remove the blade from the mainframe as described in the following:
  - Open the pin hitch (7, Fig. 3) and remove it from the mainframe (1, Fig. 3).
  - Pull the blade stop (4 or 3, Fig. 3) out of the mainframe from the side.
  - Pull the blade (2, Fig. 3) laterally out of the blade stop on the far side and then pull it upwards and out.
2. Install the telescope axes (5 and 6, Fig.4) on both sides of the chute in the previously installed Inline-Reversing tensioner.

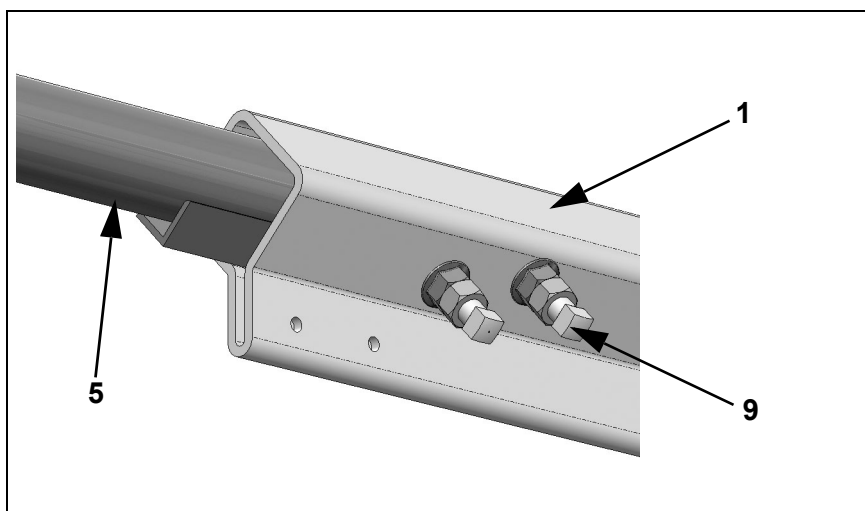


Fig. 4: Installing the mainframe



**NOTE**

The telescope axle is an individual continuous axle for belt widths of 84 (2200) or greater. Therefore the telescope axle must first be inserted into the mainframe (1, Fig. 4) for belt widths of this size or greater and both frames must be installed together in the Inline-Reversing tensioner.

3. Slide the two blade stops (4 and 3, Fig. 3) onto the right and left sides of the mainframe (1, Fig. 3).
4. Slide the mainframe (1, Fig. 4) onto the telescope axle (5, Fig. 4) on one side and then slide it onto the telescope axle on the far side.
5. Do not lock the mainframe yet, but place the blade (2, Fig. 3) on the mainframe.



## NOTE

Ensure in this process that the blade is positioned in a way that its tip points against the conveyor belt.

6. Perform Step 1 in reverse order.

### 5.2.4

#### Centring the mainframe beneath the conveyor belt

Measure the clearances (A) and (B) between the edge of the cleaning elements and the conveyor belt edge.



Fig. 5: Centring the mainframe (for example)

Shift the cleaner so that clearance A is equal to clearance B. The conveyor belt must protrude around 50 to 100 mm from the left and right sides. The blade must be centrally aligned beneath the conveyor belt.

### 5.2.5

#### Aligning the mainframe in parallel to the conveyor belt

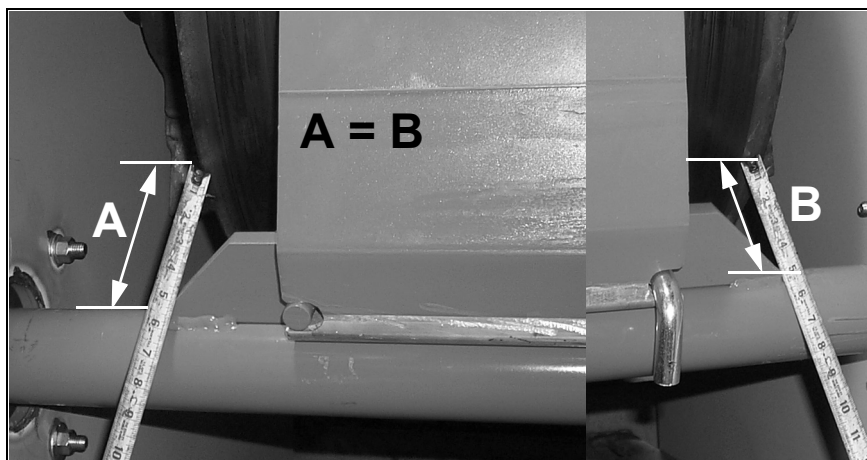


Fig. 6: Aligning the mainframe in parallel to the head pulley (as an example)

Measure the clearance on both sides between the blade and the head pulley. Place the blade onto the conveyor belt for this. The measurements must be the same on both sides

## 5.2.6

## Aligning the mainframe horizontally

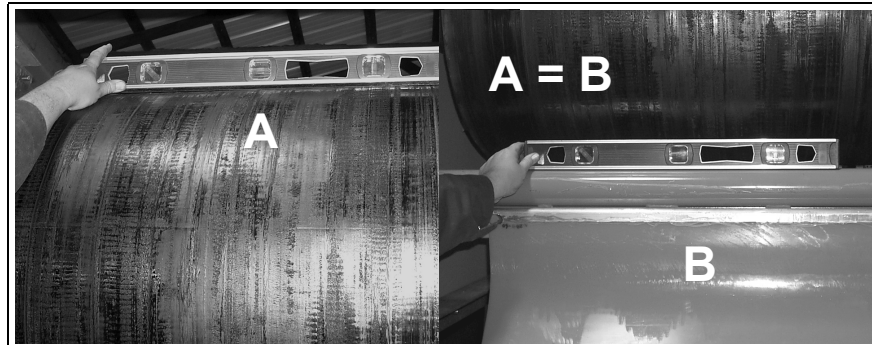


Fig. 7: Aligning the mainframe horizontally (for example)

Align the mainframe horizontally with respect to the head pulley or check whether the blade rests evenly against the conveyor belt.

Once the dimensions are correct and the pre-cleaner aligned, the mainframe can be attached accordingly using the SHS screws (9, Fig. 4). If this is not the case, then the mainframe must be reinstalled or repositioned.

## 5.2.7

## Tightening the pre-cleaner

**CAUTION! RISK OF DAMAGE!**

Excess or uneven tightening of the belt cleaner on the conveyor belt can cause material damage.

*Always tighten the belt cleaners in accordance with the specification and also ensure uniform tightening whenever dual Inline-Reversing tensioners are used.*

Follow the instructions for installing your Inline-Reversing tensioner in its accompanying installation manual.



The tension values in connection with the SG1S spring tensioner are provided in the following

Belt width		Spring length (compressed)*
[in.]	[mm]	[mm]
18	500	69
24	650	66
30	800	62
36	1000	59
42	1200	56
48	1400	53
54	1600	63
60	1800	62
66	1900	60
72	2000	59
84	2200	56
96	2400	53
*Dual Inline-Reversing tensioners are used for belt widths of 48 (1400) or greater.		

Tab. 3: Tension values of the SG1S spring tensioner

Consult the respective installation manual for the tension values with the twist or spring tensioner.

## 5.3

## Operation with loading

**NOTE**

Read through this section completely before starting any work on the belt cleaner or on the customer's conveyor system.

**CAUTION! FLYING OBJECTS!**

Forgotten tools or installation parts can fall off of the running conveyor belt and cause minor injuries and property damage. *Always remove any tools from the installation site and conveyor belt upon completion of the installation work before switching on the power supply.*

**WARNING! RISK OF INJURY!**

Body parts and/or clothing can be pulled in by rotating components or the moving conveyor belt. *Shut off the power supply to the conveyor system and its accessories and secure it against unauthorised reactivation before performing any installation or maintenance work. Post warning signs!*

1. Remove all tools and fire protection covers from the installation site and the conveyor belt.
2. Operate the conveyor system for 1 hour under load.

**CAUTION! RISK OF DAMAGE!**

Never operate the fully tensed belt cleaner for longer than 15 minutes on the running unloaded conveyor belt. A risk of damage due to overheating exists for the belt cleaner and/or the conveyor belt.

*Only operate the fully tensed belt cleaner on the running and fully loaded conveyor belt.*

3. Shut off the conveyor system after the 1-hour operation under load, shut off the power supply and secure it against unauthorized reactivation.
4. Check whether all of the fastening points are securely tightened. Tighten any loose connections.

5. Inspect the belt cleaner for the following conditions:
  - Wear: minor break-in wear is normal. This stops as soon as the blades have adjusted to the shape of the conveyor belt.
  - Bulk material accumulation: No bulk materials must accumulate between the blades and return side.
6. Note the corresponding information in Section 5.4 “Installation - Check list” and Section 7 “Troubleshooting” in cases of excess wear, bulk material accumulation or other problems.

## 5.4

### Installation - Check list

The “Installation - Check list” table below can be helpful in solving possible problems if the system does not function as expected following operation with loading of the belt cleaners. Consult Section 7 “Troubleshooting” if problems continue to exist:

Installation - Check list
The pre-cleaner is installed on both sides in accordance with the dimensions in Section 5.2 ff.
The pre-cleaner is installed in the proper position and all critical installation dimensions are complied with.
The blades are aligned in the centre of the conveyor belt and/or the head pulley.

Tab. 4: Installation - Check list

Placement of the warning labels and warning trailers

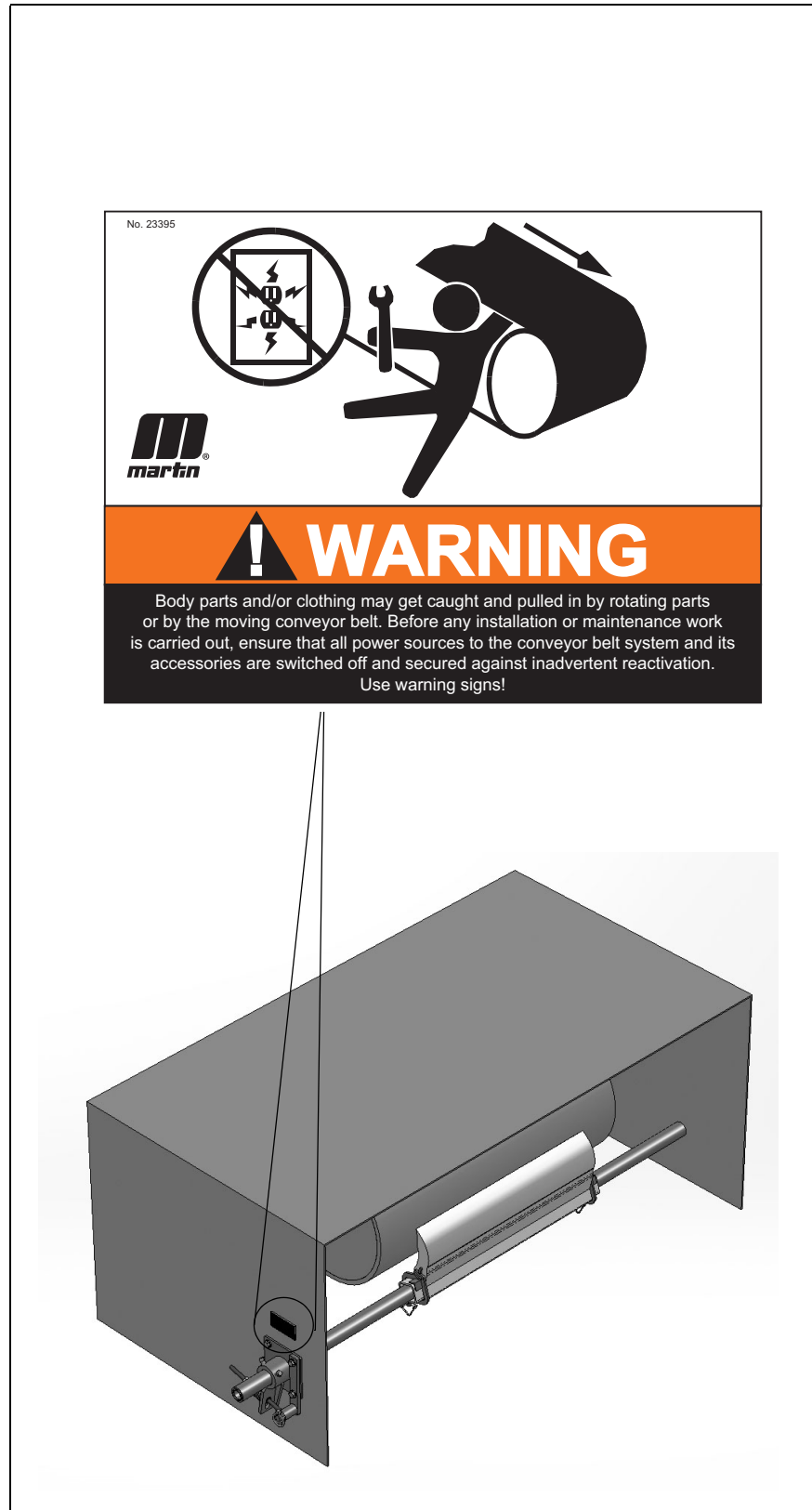


Fig. 8: Conveyor Products Warning Labels

## 6 Maintenance

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### 6.1 Safety information



#### NOTE

Maintenance inspections must be performed at least once a week. Shorter maintenance intervals may be required depending on the operating conditions.



#### NOTE

Read this section completely before starting any kind of work.



#### WARNING! RISK OF INJURY!

Body parts and/or clothing can be pulled in by rotating components or the moving conveyor belt.

*Shut off the power supply to the conveyor system and its accessories and secure it against unauthorised reactivation before performing any maintenance work.*

*Post warning signs!*

### 6.2 Weekly maintenance

1. Shut off the power supplies of the conveyor belt and any additional equipment and secure them against unauthorised reactivation.
2. Remove all material deposits from the blade and the mainframe.
3. Check whether all of the fastening points are securely tightened. Tighten any loose connections.
4. Check the cleaner tension and retighten if necessary.
5. Check the blades for wear, damage and missing parts.



## NOTE

Take the corresponding parts out of service if any indications of functional disturbances are noticed. Contact Martin Engineering or one of its representatives for support. Do NOT start up the conveyor system until the cause of the problems has been recognised and eliminated.



## CAUTION! RISK OF DAMAGE!

Blades must not be worn out beyond the wear line; this can cause serious material damage.

*Inspect the blades regularly and replace them in a timely manner!*

6. Follow the instructions in Section 6.3 to replace any worn out blades.
7. Clean all of the warning labels. Replace illegible warning labels immediately. Warning labels can be purchased from Martin Engineering or a contracted dealer.



## CAUTION! FLYING OBJECTS!

Forgotten tools or installation parts can fall off of the running conveyor belt and cause minor injuries and property damage.

*Always remove any tools from the installation site and conveyor belt upon completion of the installation work before switching on the power supply.*

8. Remove all tools from the work area.
9. Switch on the conveyor system.



**WARNING! RISK OF INJURY!**

Body parts and/or clothing can be pulled in by rotating components or the moving conveyor belt.  
*Do not touch or reach into the conveyor system or its accessories during operation.*



**CAUTION! RISK OF DAMAGE!**

Never operate the belt cleaner for longer than 15 minutes on the running unloaded conveyor belt. A risk of damage due to overheating exists for the belt cleaner and/or the conveyor belt.  
*Never operate the belt cleaner unless the conveyor belt is running.*

- 10. Observe the cleaner and check the cleaning performance.

**6.3**

**Replacing the blades**



**WARNING! RISK OF INJURY!**

Body parts and/or clothing can be pulled in by rotating components or the moving conveyor belt.  
*Shut off the power supply to the conveyor system and its accessories and secure it against unauthorised reactivation before performing any installation or maintenance work. Post warning signs!*

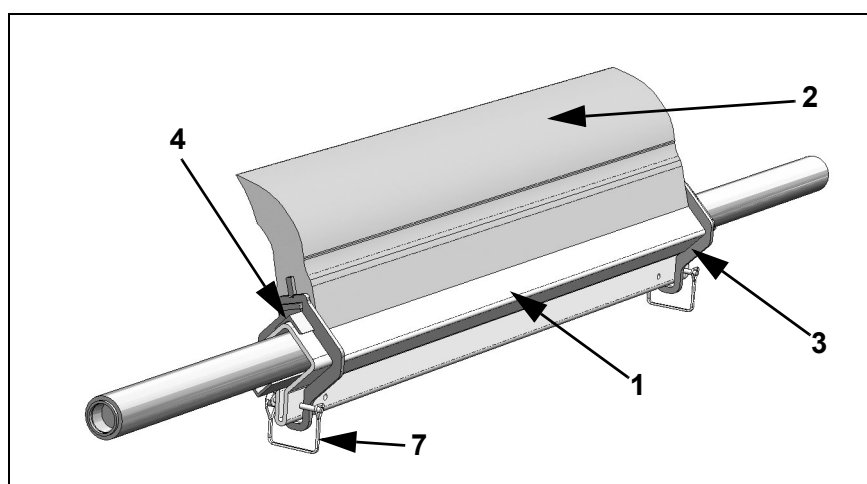


Fig. 9: Replacing the blade

1. Slacken the Inline-Reversing tensioners as specified in the corresponding installation instructions.
2. Release the wire lock pins (not shown) on the Inline Reversing tensioner when using the spring tensioner or turn the cleaner away from the head pulley with the help of the pins when using the MARTIN® TWIST™ Inline Reversing tensioner.
3. The Inline Reversing tensioner may need to be completely removed.
4. Fold the cleaner down forwards.
5. Remove the pin wire lock (7, Fig. 8).
6. Pull the blade stop (4 or 8, Fig. 8) out of the mainframe (1, Fig. 8) from the side.
7. Remove the blade (2, Fig. 8) by pulling the entire blade in the direction of the operator side (possibly with light hammer hits) and then pulling it up.
8. Install the new blade in reverse order.
9. Place the blade back against the head pulley.
10. If the Inline Reversing tensioner was deinstalled, then install it again as described in its installation instructions.
11. Tighten the wire lock pins of the Inline Reversing tensioner and the stop sleeve (spring tensioners only).
12. Inspect the installation as described in Section 5.4 Installation - Check list.
13. Tighten the cleaner (Consult the tension values provided in the installation manual of your Inline Reversing tensioner).
14. Remove all tools from the work area.
15. Switch the conveyor back on.
16. Observe the cleaner and check the cleaning performance.



# 7 Troubleshooting

## 7.1 Safety information



### NOTE

The product is exposed to highly diverse bulk materials and is often used under extreme operating and environmental conditions. Malfunctions other than those listed below can therefore occur. In this case, either Martin Engineering or one of its representatives can assist with the positioning or with special solutions. Do not start up the conveyor system again until the fault has been recognised and cleared.

## 7.2 Troubleshooting

Check the following items if excessively high wear on the blades and/or unsatisfactory cleaning performance are/is noticed following installation:

Symptom	Cause	Remedy
High wear on the blades.	The cleaner is too tightly tensed on the conveyor belt.	Reduce the tension. See the Inline-Reversing tensioner manual for tension values
	Cleaner installed in the material flow.	Install the cleaner in a different place.
Insufficient cleaning performance and material accumulation.	The cleaner is not tensed enough or is tensed too tightly on the conveyor belt.	Increase or reduce the tension.
	The blades are worn.	Inspect the blades and replace if necessary. (See “Weekly maintenance”).
	The cleaner is installed too high up on the head pulley and impairs the material flow.	Install the cleaner at a lower level.
Unusual pattern of wear or damage to the blade.	Damaged conveyor belt or connection points.	Inspect the conveyor belt’s connection points and repair or replace as needed.
	Cleaner installed in the material flow.	Install the cleaner in a different place.
	Different tension values of the Inline-Reversing tensioner.	Check the tension values and possibly retighten.

Tab. 5: Troubleshooting

Symptom	Cause	Remedy
Deformed or broken mainframe caused by the blade slippage.	Blade at or beyond the wear line.	Replace blade.
	Incorrect positioning of the mainframe.	Check the position of the mainframe and correct if necessary.
Noises or vibrations.	Cleaner on the conveyor belt too loose or too tightly tensed.	Correct the tension if necessary.
	The blade's urethane is possibly not suitable for the application.	Contact Martin Engineering or one of its representatives.
Corrosion or chemical decomposition.	The blade's urethane is possibly not suitable for the application.	Contact Martin Engineering or one of its representatives.

Tab. 5: Troubleshooting

## 8 Storage, deinstallation, disposal

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### 8.1 Storage

To ensure optimal function of your product, Martin Engineering recommends storing rubber and urethane components in a dry place at room temperature where they are protected against direct sunlight.

The best storage conditions are at +0 °C to +30 °C and 60% relative humidity.

### 8.2 Deinstallation

The deinstallation is carried out in the reverse order of the installation (see Section 5.2, page 14).

### 8.3 Disposal

Assemblies and/or single parts of the Martin Engineering products must be professionally disposed of after usage as follows.

- Complete assemblies must be dismantled, sorted by material type, and separately disposed of.

Comply with all nationally and internationally applicable disposal regulations when disposing of the product.

# 9 Part numbers

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This section lists the product designations with their associated part numbers for the MARTIN® QB™ #1 Heavy-Duty belt cleaner and its accessories.

Please always indicate the part numbers in every order.

## 9.1 Explanation of part numbers

### MARTIN® QB™ #1 Heavy-Duty Pre-Cleaner

Part number

<b>CCPQBI-aabccdde</b>	
<b>a</b>	<b>Belt width in inches</b>
<b>b</b>	<b>Blade design</b>
<b>T:</b>	slits & segments
<b>W:</b>	segments
<b>Y:</b>	slits
<b>Z:</b>	solid
<b>c</b>	<b>Cleaning width in inches</b>
<b>d</b>	<b>blade colour*</b>
<b>e</b>	<b>Inline-Reversing tensioner</b>
<b>T:</b>	Twist Inline-Reversing tensioner
<b>S:</b>	Spring tensioner
<b>G:</b>	SG1S Inline-Reversing tensioner

\* See Fig.10 for options

## 9.2 Inline-Reversing tensioner

- MARTIN<sup>®</sup> TWIST<sup>™</sup> Inline-Reversing tensioner:  
Part number 31443-XI+E or 38850.
- MARTIN<sup>®</sup> Spring tensioner:  
Part number 38180.
- Martin<sup>®</sup> SG1S  
Spring tensioner Part no. SG1S-T+I

## 9.3 Martin<sup>®</sup> Inspection Doors

With standard rubber door, up to 177 °C:

- 229 × 305 mm: Part no. CYAR-0912.
- 305 × 356 mm: Part no. CYAR-1214.
- 305 × 457 mm: Part no. CYAR-1218.
- 457 × 610 mm: Part no. CYAR-1824.
- 610 × 610 mm: Part no. CYAR- 2424.

With steel door (dust-proof):

- 229 × 305 mm: Part no. CYA-0912.
- 305 × 356 mm: Part no. CYA-1214.
- 305 × 457 mm: Part no. CYA-1218.
- 457 × 610 mm: Part no. CYA-1824.
- 610 × 610 mm: Part no. CYA-2424.

## 9.4 Installation manuals

- MARTIN<sup>®</sup> TWIST<sup>™</sup> Inline-Reversing tensioners:  
Publication number M3296.
- MARTIN<sup>®</sup> Spring and air tensioner:  
Publication number M3263.
- Martin<sup>®</sup> SG1S Spring tensioner:  
Publication number M3766.
- Martin<sup>®</sup> Inspection Door:  
Publication number M3127.

**9.5**

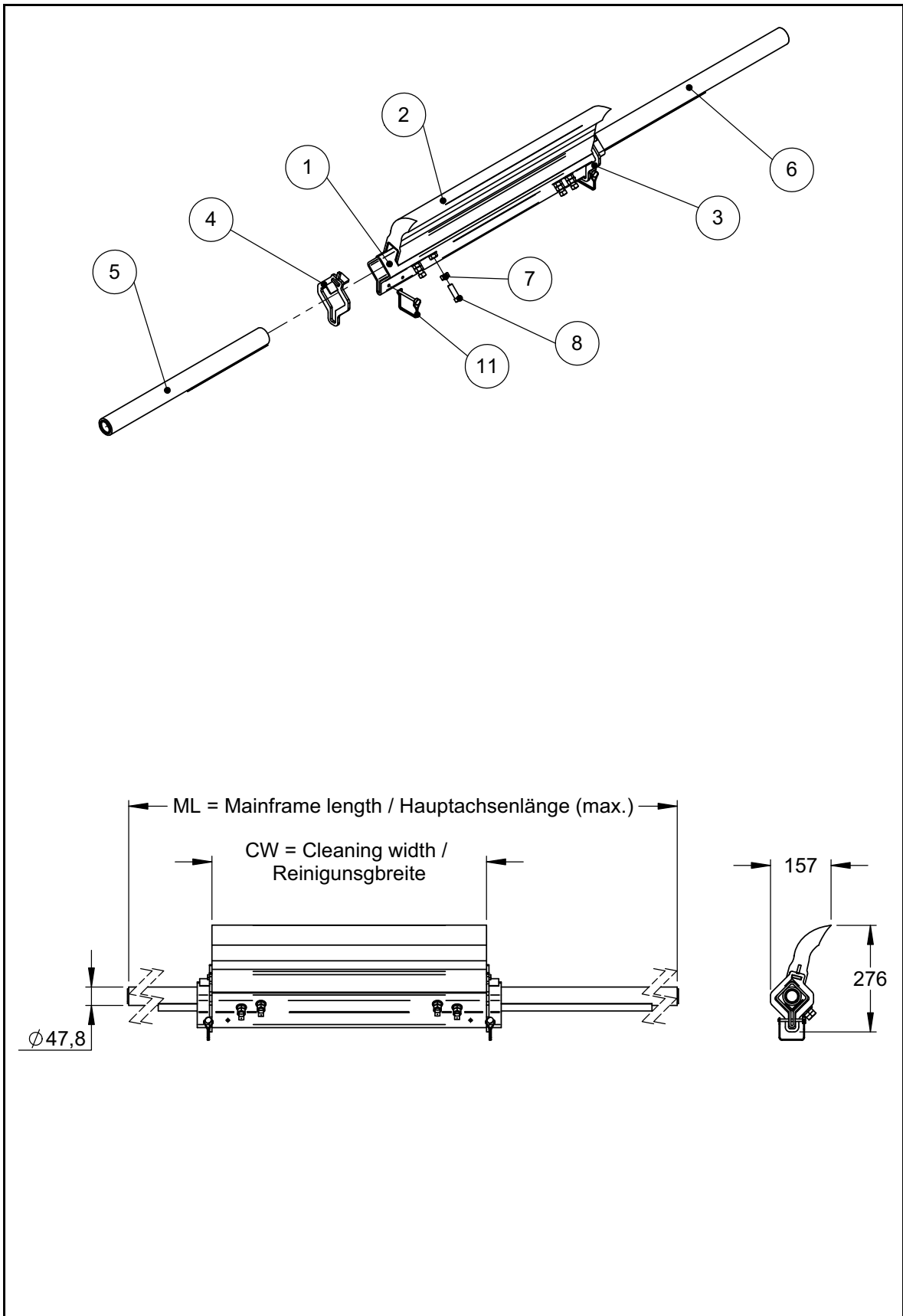
**Accessories**

- Hanger mount:  
Part No. 27382+E.  
For the installation of twist, air and spring tensioners on the conveyor belt frame instead of on a chute wall.

**9.6**

**Warning labels / Warning trailers**

- Conveyor Products Warning Label:  
Part no. 23395



# Part numbers

ND	Item / Pos.	Qty. / Anz.	Description / Beschreibung	P/N / Teile-Nr.
	1	1	QB1 mainframe / Hauptachse	s.C. / s.T.
	2	1	QB1 blade / Abstreiferblatt	s.C. / S.T.
	3	1	Blade stop - Right / Sicherungsblech - Rechts	CCPQBIMRA-010R
	4	1	Blade stop - Left / Sicherungsblech - Links	CCPQBIMRA-010L
	5	1	Pipe end weldment / Teleskoprohr	s.C. / s.T.
	6	s.C. / s.T.	Pipe end weldment / Teleskoprohr	s.C. / s.T.
	7	4	Hex nut 1/2 / Sechskantmutter	11771
	8	4	SHS screw 1/2 x 1-1/2 / Vierkantkopfschraube	33190
X	9	2	Cable 1/16 / Kabel	102249
X	10	2	Cable clip 1/16 / Kabelklemme	28112
	11	2	Pin wire lock 1/4 X 2-1/2 / Sicherungsbolzen	32772

Part number / Teilenummer	Blade color/ Blattfarbe	Range of application / Anwendungsbereich
CCPQBX-XXXXXORX	Orange	Used for 80% of all applications / Geeignet für 80% aller Anwendungen
CCPQBX-XXXXXBRX	Brown / Braun	Used for chemical applications / Anwendung mit Chemikalien
CCPQBX-XXXXXCLX	Clear / Klar	Used for dry products / Anwendung bei Trockenprodukten
CCPQBX-XXXXXGRX	Green / Grün	Used for temperatures above 120°C / Anwendung bei Temperaturen >120°C
CCPQBX-XXXXXNBX	Navy blue / Marineblau	Used for sticky materials / Anwendung bei klebrigen Produkten



Part number / Teilenummer	DIM		Part number item / Teilenr. Pos.				Qty. item / Anz. Pos.
	CW	ML	1	2	5	6	6
CCPQBI-18X12XXX	305	1165	CCPQBIMR-018	CCPQBIBR-012XXX	30354-01	30354-02	1
CCPQBI-18X16XXX	406	1165	CCPQBIMR-018	CCPQBIBR-016XXX	30354-01	30354-02	1
CCPQBI-24X18XXX	457	1435	CCPQBIMR-024	CCPQBIBR-018XXX	30354-02	30354-02	1
CCPQBI-24X22XXX	559	1435	CCPQBIMR-024	CCPQBIBR-022XXX	30354-02	30354-02	1
CCPQBI-30X24XXX	610	1880	CCPQBIMR-030	CCPQBIBR-024XXX	30354-02	30354-03	1
CCPQBI-30X28XXX	711	1880	CCPQBIMR-030	CCPQBIBR-028XXX	30354-02	30354-03	1
CCPQBI-36X30XXX	762	2030	CCPQBIMR-036	CCPQBIBR-030XXX	30354-02	30354-03	1
CCPQBI-36X34XXX	864	2030	CCPQBIMR-036	CCPQBIBR-034XXX	30354-02	30354-03	1
CCPQBI-42X36XXX	914	2185	CCPQBIMR-042	CCPQBIBR-036XXX	30354-02	30354-03	1
CCPQBI-42X40XXX	1016	2185	CCPQBIMR-042	CCPQBIBR-040XXX	30354-02	30354-03	1
CCPQBI-48X42XXX	1067	2335	CCPQBIMR-048	CCPQBIBR-042XXX	30354-02	30354-03	1
CCPQBI-48X46XXX	1168	2335	CCPQBIMR-048	CCPQBIBR-046XXX	30354-02	30354-03	1
CCPQBI-54X48XXX	1219	2490	CCPQBIMR-054	CCPQBIBR-048XXX	30354-02	30354-03	1
CCPQBI-54X52XXX	1321	2490	CCPQBIMR-054	CCPQBIBR-052XXX	30354-02	30354-03	1
CCPQBI-60X54XXX	1372	2930	CCPQBIMR-060	CCPQBIBR-054XXX	30354-03	30354-03	1
CCPQBI-60X58XXX	1473	2930	CCPQBIMR-060	CCPQBIBR-058XXX	30354-03	30354-03	1
CCPQBI-66X60XXX	1524	3085	CCPQBIMR-066	CCPQBIBR-060XXX	30354-03	30354-03	1
CCPQBI-66X64XXX	1626	3085	CCPQBIMR-066	CCPQBIBR-064XXX	30354-03	30354-03	1
CCPQBI-72X66XXX	1676	3235	CCPQBIMR-072	CCPQBIBR-066XXX	30354-03	30354-03	1
CCPQBI-72X70XXX	1778	3235	CCPQBIMR-072	CCPQBIBR-070XXX	30354-03	30354-03	1
CCPQBI-84X78XXX	1981	3124	CCPQBIMR-084	CCPQBIBR-078XXX	30354-04	-	-
CCPQBI-84X82XXX	2083	3124	CCPQBIMR-084	CCPQBIBR-082XXX	30354-04	-	-
CCPQBI-96X90XXX	2286	3429	CCPQBIMR-096	CCPQBIBR-090XXX	30354-05	-	-
CCPQBI-96X94XXX	2388	3429	CCPQBIMR-096	CCPQBIBR-094XXX	30354-05	-	-



**Declaration of incorporation in accordance with Machinery Directive (2006/42/EG)  
Annex II B for the installation of an incomplete machine**

We, Martin Engineering,

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D-65396 Walluf

Fax: +49 6123 75533

herewith declare that the product named in the following

Product designation:

**Belt cleaner**

of make / type:

**MARTIN<sup>®</sup> QB<sup>™</sup>#1 Heavy-Duty Pre-Cleaner**

with serial number:

**not required**

meets the following requirements:

**EC - Machinery Directive 2006/42/EC**

**DIN EN 618 - Equipment and systems for bulk materials**

The following harmonised standards were particularly applied:

**DIN EN ISO 12100 Safety of Machinery**

Notified authority:

**not required**

The installation instructions belonging to the product and the technical documentation are enclosed with the product in their original version.

The commissioning of this product is prohibited until it has been determined that the system in which it is to be installed meets the requirements of versions 98/37/EC and 2006/42/EC of the EC Directive.

Date: 05/01/2015

Manufacturer's signature Managing director, Michael Hengl