



## Technical Documentation

# HQZ & RBM MODEL LIFT & TRANSFERS

Each serial number is unique to that specific conveyor and provides mk North America with complete order details.

The conveyor serial number is located on the frame of the conveyor. See section 2 for more details.

Your serial number is also recorded above.

Ensure the serial number tag above matches the serial number on your conveyor.

# Technical Documentation

## Lift & Transfer

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# 1 GENERAL INFORMATION

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## 1.1 Foreword

Congratulations on purchasing a conveyor from mk North America, Inc.. Our more than 25 years experience in material handling allows us to offer robust solutions with long life and reliable operation. We strive to make the best products in the industry even better and we are committed to making sure our customers get top notch support before, during, and after each and every sale.

## 1.2 The importance of reading your manual

Inside this manual you will find the instructions on how to set up and maintain your mk conveyor properly, as well as maximize its performance. Please take the time to read this manual and familiarize yourself with these set up and maintenance instructions. These instructions will help assure a long product life that requires a minimum amount of service and keeps your conveyor working at its maximum capacity.

## 1.3 If you need assistance

If you need assistance there are a variety of ways to get it. You can contact our customer service team Monday through Friday, 8am-5pm (Eastern Time) at 860-769-5500. You can also visit our website for additional information and technical documentation at [www.mknorthamerica.com](http://www.mknorthamerica.com). In addition, your local representative can provide support in many instances.

## 1.4 When your shipment arrives

- 1) Check your shipment
  - a) If you have not already done so, visually inspect the shipping crate/container for any damage caused during shipment.
  - b) Carefully unpack the crate/container making sure to inspect the components for damage that may have occurred inside the packaging materials.
  - c) If you find any damage, please contact the carrier and mk North America, Inc.
  - d) Lastly, check the contents against the packing slip provided by mk for any discrepancies. If you should find any, please contact mk North America, Inc.
- 2) Locate your ordered items
  - a) Each mk conveyor will ship in its own custom built container, carefully packaged in the most economical way.
  - b) Review the packing slip against your Purchase Order.

# Technical Documentation

## Lift & Transfer

### 2 DECODING YOUR SERIAL NUMBER

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- The conveyor's serial number is located on the frame of the conveyor.
- See image below for label example.
- **YOUR SERIAL NUMBER IS ON THE FRONT COVER OF THIS MANUAL.**
- We have provided an area in the back of this manual for you to add any notes about this unit.



**Serial #:** This number is unique to this item. With this number we can access all of the original order details.

**Date:** This is the date that the unit was scheduled to ship.

**Type:** This description refers to the type of unit that is associated with the particular serial number. The type should NOT be substituted for the serial number when inquiring.

**DWG#:** This number, if applicable, refers to the specific drawing that was created for this unit. Not all orders require a drawing and therefore in some cases no DWG# is assigned. If your DWG# field is blank it is not a cause for concern.

**SO#:** This is the shop order number in which this unit was built. This is an mk North America, Inc. internal number. This number is also referenced on any related invoices, etc.

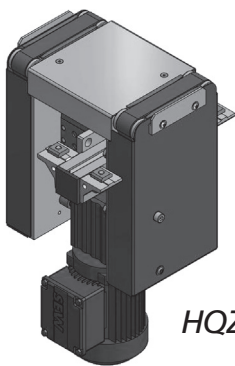
### 3 LIFT & TRANSFER DESCRIPTION

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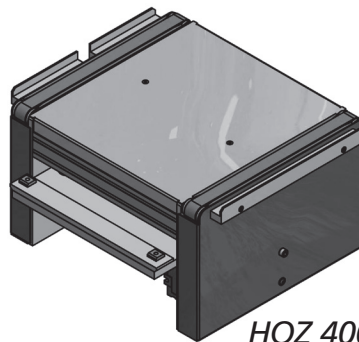
There are several different standard models of Lift & Transfers:

- HQZ 2045
- HQZ 400
- HQZ 600
- RBM 2010
- HQZ 2012

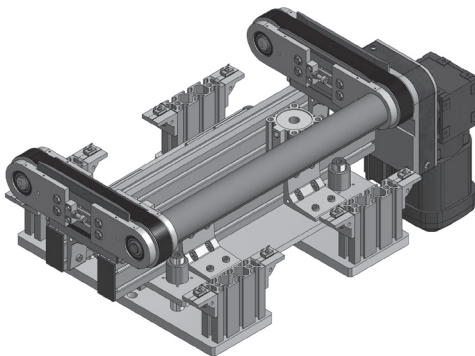
Below is an example of a each model. The items you receive will vary based on your actual purchase order. Items may appear different on your model based on your particular order requirements. Consult your approval drawing for specifics items included in your order.



HQZ 2045



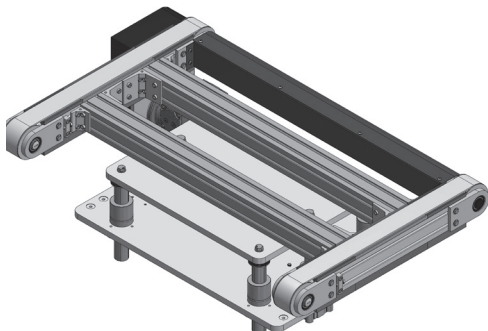
HQZ 400



HQZ 600



RBM 2010



HQZ 2012

*Your model may vary.  
While all of these models may look vastly  
different they are all essentially the same  
design. They are all comprised of a conveyor  
mounted to a guided, pneumatic cylinder that  
actuates in a vertical fashion.*

# Technical Documentation

## Lift & Transfer

### 4 WARRANTY INFORMATION

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#### Warranty

mk North America, Inc. (MKNA) offers a COMPLETE ONE YEAR WARRANTY from the date of delivery, to the original purchaser of the MKNA equipment (CUSTOMER), to be free from defects in material and workmanship; under normal use and with proper installation, maintenance and cleaning.

Additionally MKNA offers a LIMITED 10 YEAR WARRANTY on all equipment that MKNA is the original manufacturer of, to be free from defect and workmanship.<sup>1</sup>

This warranty is extended by MKNA only to CUSTOMER, and is non-transferable. All warranty requests shall be made by CUSTOMER.

MKNA will replace or repair, at our factory or any other location we designate<sup>2</sup>, any defective part within the warranty period and without charge. It is at MKNA's sole discretion whether to repair or replace. CUSTOMER will provide MKNA with a prompt written notice of the defect, including the serial number of the unit (when applicable) and the date of delivery.

At MKNA's request CUSTOMER will return all defective parts for evaluation at MKNA. MKNA will provide CUSTOMER with a return goods authorization number (RGA#). No parts will be returned without a RGA#. The RGA# must clearly be marked on all labels, packages and packing slips.

CUSTOMER shall pay all costs for packaging, shipping, duties and/or any other related costs in the sending or receiving of parts. CUSTOMER is responsible for all labor associated with sending or receiving of parts.

MKNA PROVIDES NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE; UNLESS IT IS AGREED TO BY MKNA AND CUSTOMER IN WRITING PRIOR TO PLACEMENT OF ORDER. Such agreement requires approval of MKNA Management.

UNDER NO CIRCUMSTANCES SHALL MKNA BE HELD LIABLE FOR DAMAGES OR LIABILITY FOR LOSS OF PRODUCTION, PRODUCT, EQUIPMENT OR PROFITS OR LIABILITY FOR DIRECT, INCIDENTAL, INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES TO PERSONS OR PROPERTY, WHATSOEVER. CUSTOMER agrees that it is their sole remedy for liability of any kind, including negligence with respect to the equipment and services furnished by MKNA shall be limited to the remedies provided herein. This warranty shall not apply to any failure of the unit or its components caused by lack of maintenance and/or improper maintenance, incorrect adjustments, misuse or unreasonable use or exposure to chemicals and/or environments which the unit is not designed for. Unauthorized modification of the unit or the use of non-MKNA replacement parts and building components voids this warranty.

<sup>1</sup>. The limited 10 year warranty does not apply to equipment and components manufactured by others. Such equipment and components are subject to any limitation contained in the original manufacturer's warranty and include, but are not limited to: bearings, belts, casters, controllers, motors and pneumatic devices.

<sup>2</sup>. No work will be performed by MKNA or an MKNA factory authorized service representative at the site of installation unless in MKNA's opinion it is impractical for Customer to remove and return the defective part to MKNA's factory.

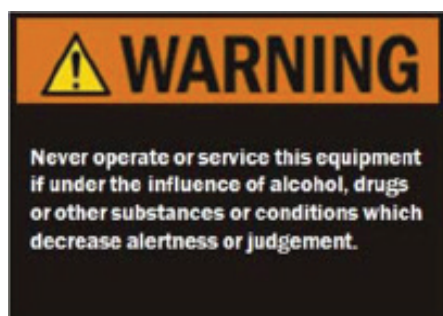
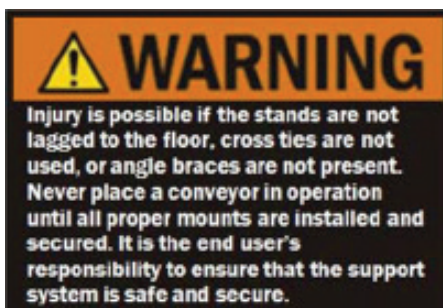
EXCEPT AS EXPRESSLY STATED HEREIN, THERE ARE NO WARRANTIES, EXPRESSED OR IMPLIED, BY OPERATION OF LAW OR OTHERWISE, OF THE EQUIPMENT OR SERVICES FURNISHED BY MKNA OR FACTORY AUTHORIZED SERVICE REPRESENTATIVE. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF.

mk North America, Inc. reserves the right to change, modify or discontinue products and/or specifications with or without notice.

All of mk North America, Inc. products are covered by this warranty.

## 5 SAFETY REQUIREMENTS

**READ AND UNDERSTAND ALL OF THESE WARNINGS PRIOR TO OPERATING EQUIPMENT.**



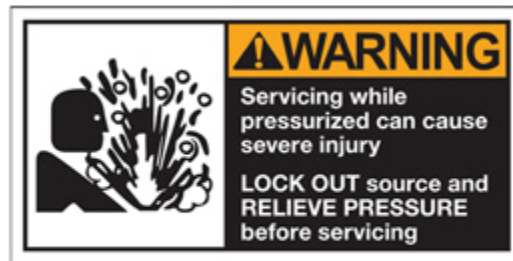
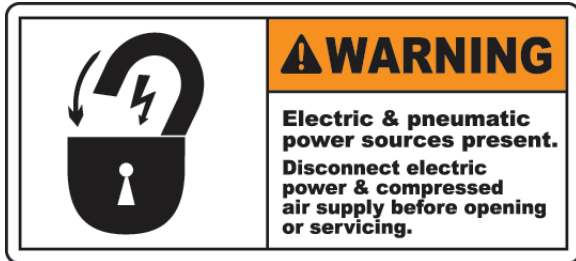


# Technical Documentation

## Lift & Transfer

### 5 SAFETY REQUIREMENTS (CONT.)

**READ AND UNDERSTAND ALL OF THESE WARNINGS PRIOR TO OPERATING EQUIPMENT.**



- OBSERVE ALL MANUFACTURER'S INSTRUCTIONS
- Maintenance and repair work of pneumatic equipment may only be performed by specially trained personnel!
- De-pressurize the machine's pneumatic equipment before starting any maintenance or repair work.
- Hose lines should be replaced regularly during preventative maintenance even without visible damages.
- Before restarting the machine after maintenance or repair work, ensure that all screws are tightened and removed covers, strainers or filters are reinstalled.
- After completing maintenance or repair work and before restarting the production ensure that:
  - All required maintenance and repair materials, tools and equipment are removed from the work area.
  - All safety devices of the system are working properly!



## 6 WEAR ITEMS & MAINTENANCE

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6.1	Important Notes About Wear Items & Maintenance	9
6.2	HQZ 2045 / HQZ 400	10
6.3	HQZ 600	12
6.4	RBM 2010	14
6.5	HQZ 2012	16

### 6.1 Important Notes About Wear Items & Maintenance

The following information regarding life of the wear items and service or adjustment intervals of the functional elements are only GUIDELINES. Lift and Transfers are application-specific products whose life expectancy can vary depending on their relative loads and speeds, and which can be significantly influenced by environmental factors.

- All moving components and screw connections should be checked every 6 months.
- All safety-relevant components should be part of a regularly scheduled weekly inspection
- The proper function of these components must be confirmed at all times.
- Do NOT operate conveyors if safety-relevant components are damaged or missing.
- All parts which contact the product should be cleaned weekly (example: belt).
- Belts require little special care. They are easily cleaned using lukewarm soapy water.
- Remove heavy grease coatings with ethyl alcohol.
- Blow off debris from belts with structured surfaces using compressed air.

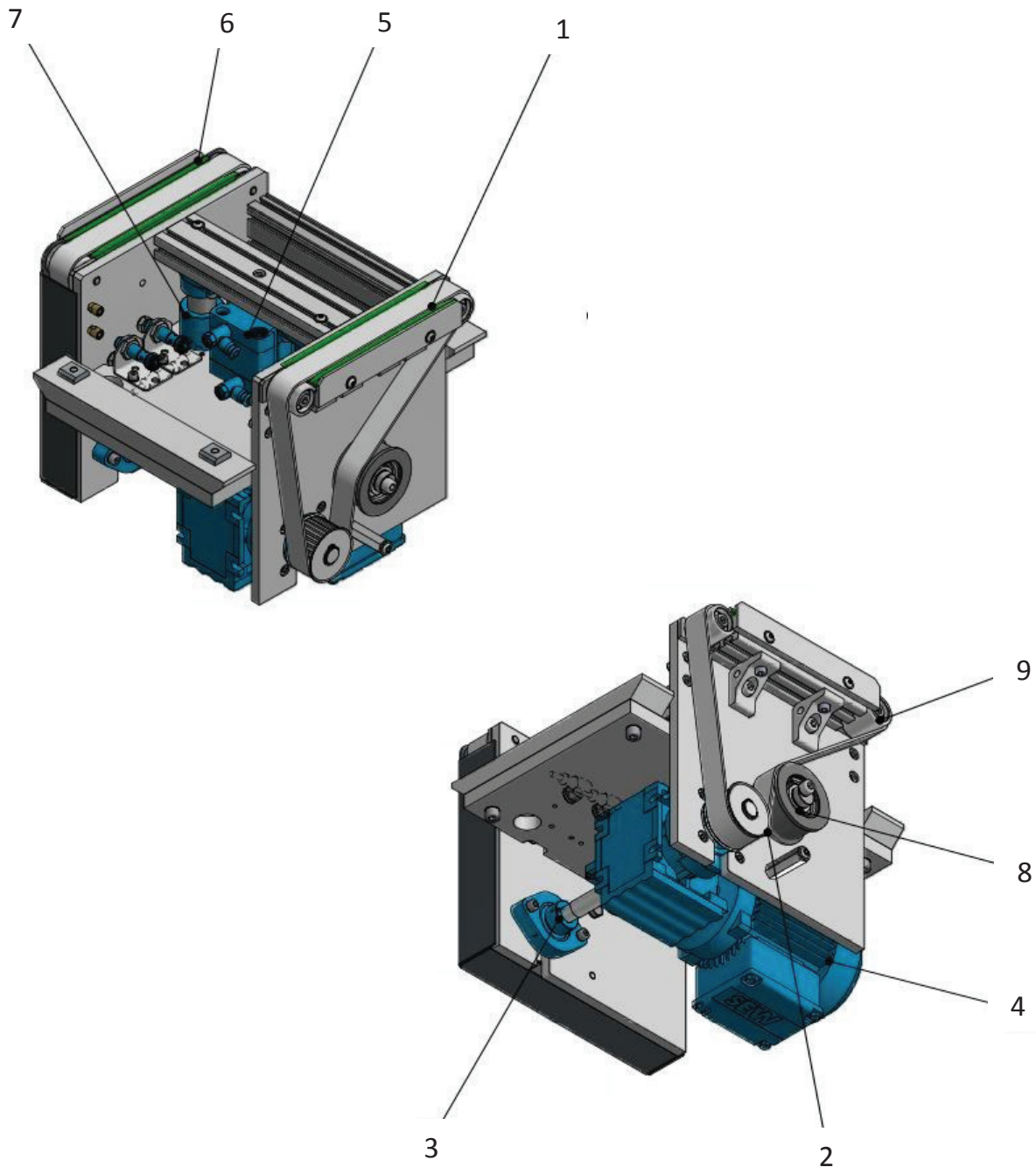
# Technical Documentation

## Lift & Transfer

### 6 WEAR ITEMS & MAINTENANCE (CONT.)

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#### 6.2 HQZ 2045 / HQZ 400



*NOTE: Not all items shown in all views for clarity. Not all views are to scale.*

*(Cont.)*

## 6 WEAR ITEMS & MAINTENANCE (CONT.)

### 6.2 HQZ 2045 / HQZ 400 (Cont.)

#### Maintenance Work

Position	Description	Action *	Interval in Hours (Months)
1	Pulley	I, C	500 Hours (Max. 3 Months)
		R	If wear is indicated
2	Timing Belt	I, C, T	500 Hours (Max. 3 Months)
		R	If wear is indicated
3	Bearing	I	1,000 Hours (Max. 6 Months)
4	Gearmotor	I	Service & Maintenance per manufacturer's documentation
5	Cylinder	I, C	500 Hours (Max. 3 Months)
		R	If wear is indicated
6	Wearstrip	I, C	1,000 Hours (Max. 6 months)
		R	If wear is indicated
7	Linear Bushing	I, C	500 Hours (Max. 3 Months)
		R	If wear is indicated
8	Eccentric Bearing	I, C	1,000 Hours (Max. 6 Months)
		R	If wear is indicated
9	Roller	I, C	1,000 Hours (Max. 6 Months)
		R	If wear is indicated

\* LEGEND: *Inspect, Replace, Tension, Clean*

#### Replacement Parts

Contact mk North America with your serial number for spare parts for your specific system

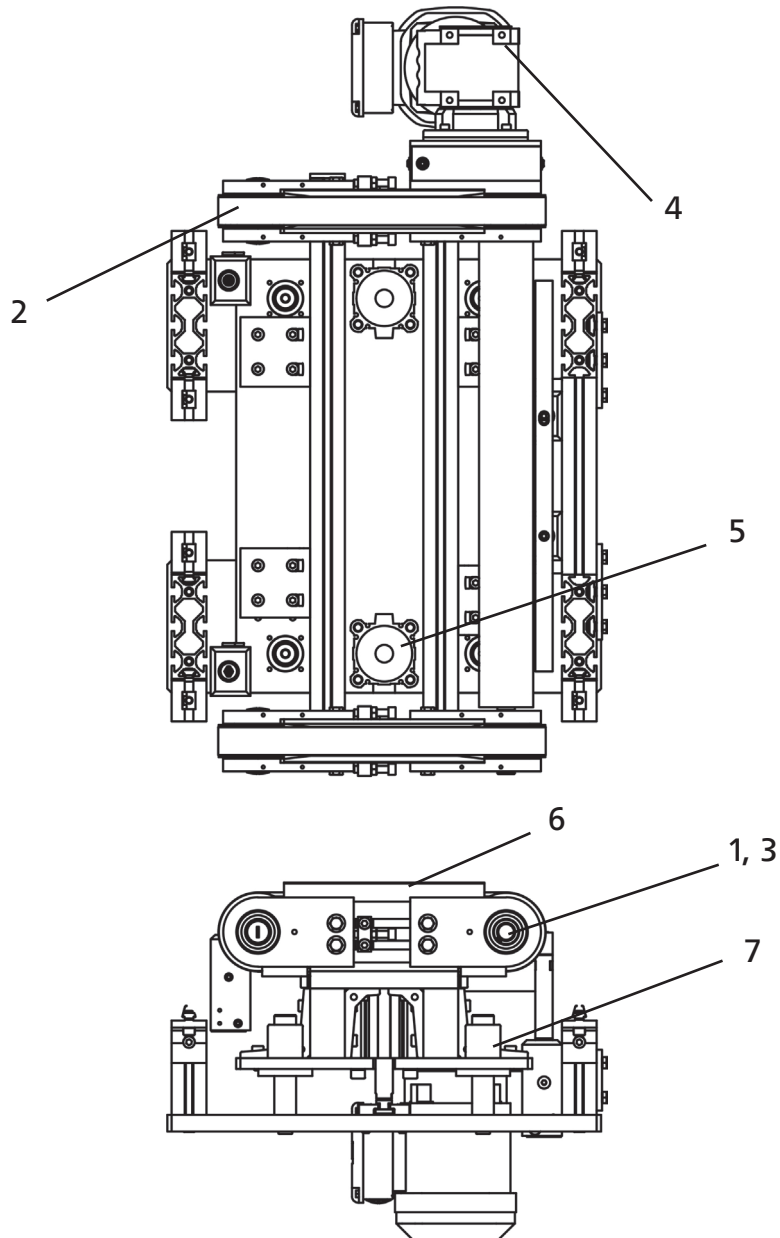
# Technical Documentation

## Lift & Transfer

### 6 WEAR ITEMS & MAINTENANCE (CONT.)

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#### 6.4 HQZ 600



*NOTE: Not all items shown in all views for clarity. Not all views are to scale.*

## 6 WEAR ITEMS & MAINTENANCE (CONT.)

### 6.4 HQZ 600 (Cont.)

#### Maintenance Work

Position	Description	Action *	Interval in Hours (Months)
1	Pulley	I, C	500 Hours (Max. 3 Months)
		R	If wear is indicated
2	Timing Belt	I, C, T	500 Hours (Max. 3 Months)
		R	If wear is indicated
3	Bearing	I	1,000 Hours (Max. 6 Months)
4	Gearmotor	I	Service & Maintenance per manufacturer's documentation
5	Cylinder	I, C	500 Hours (Max. 3 Months)
		R	If wear is indicated
6	Wearstrip	I, C	1,000 Hours (Max. 6 months)
		R	If wear is indicated
7	Bushing	I, C	500 Hours (Max. 3 Months)
		R	If wear is indicated

\* LEGEND: *Inspect, Replace, Tension, Clean*

#### Replacement Parts

Contact mk North America with your serial number for spare parts for your specific system

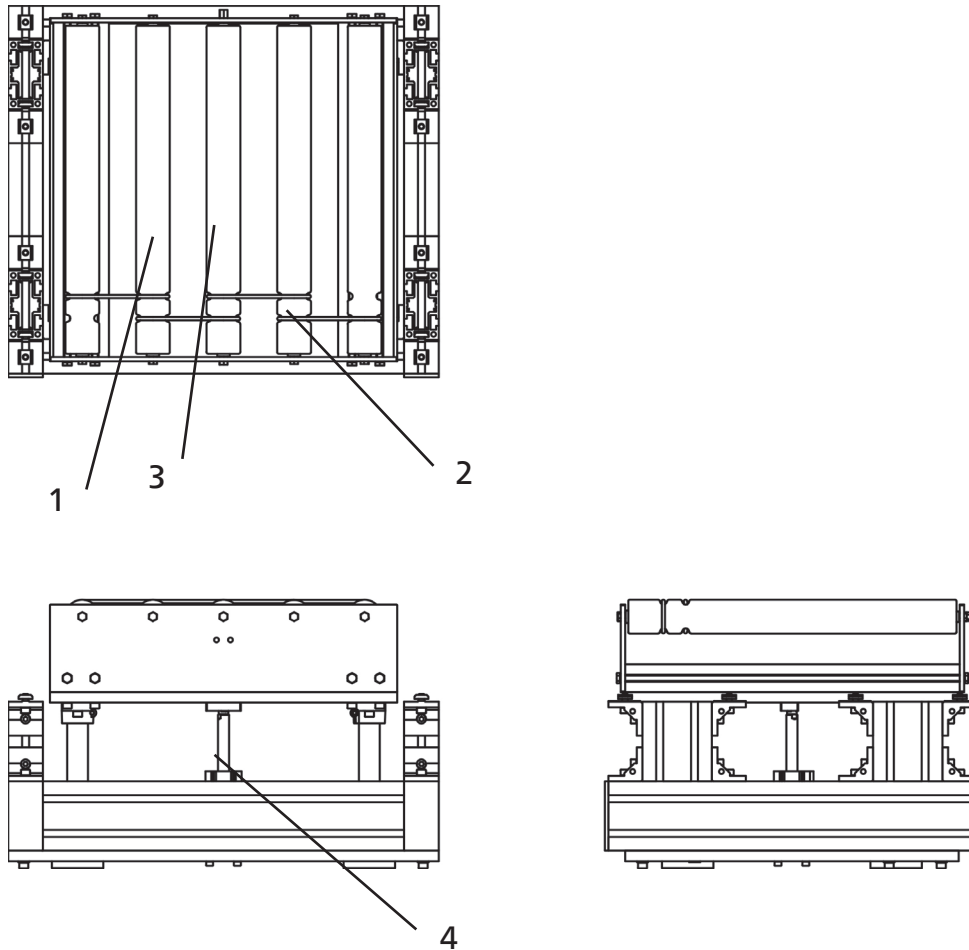
# Technical Documentation

## Lift & Transfer

### 6 WEAR ITEMS & MAINTENANCE (CONT.)

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#### 6.5 RBM 2010



*NOTE: Not all items shown in all views for clarity. Not all views are to scale.*

## 6 WEAR ITEMS & MAINTENANCE (CONT.)

### 6.5 RBM 2010 (Cont.)

#### Maintenance Work

Position	Description	Action*	Interval in Hours (Months)
1	Roller	I, C	1,000 Hours (Max. 6 Months)
2	V-Belt or O-Ring	I	500 Hours (Max. 3 Months)
		R	Replace if wear is present
3	Motorized Roller	I, C	Service & Maintenance per manufacturer's documentations
4	Cylinder	I, C	500 Hours (Max. 3 Months)
		R	Replace is wear is present

\* *LEGEND: Inspect, Replace, Tension, Clean*

#### Replacement Parts

Contact mk North America with your serial number for spare parts for your specific system



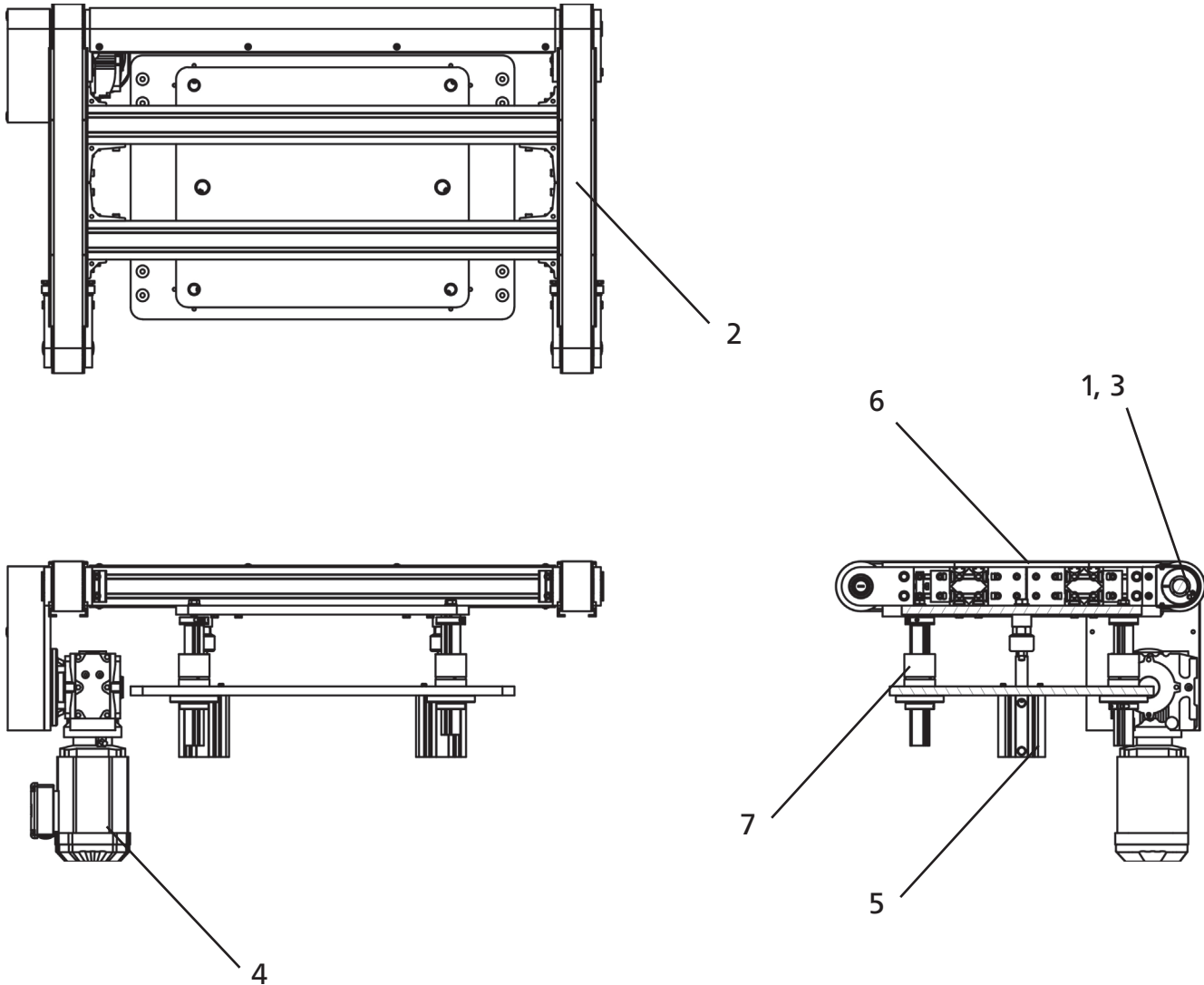
# Technical Documentation

## Lift & Transfer

### 6 WEAR ITEMS & MAINTENANCE (CONT.)

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#### 6.6 HQZ 2012



*NOTE: Not all items shown in all views for clarity. Not all views are to scale.*

## 6 WEAR ITEMS & MAINTENANCE (CONT.)

### 6.6 HQZ 2012 (Cont.)

#### Maintenance Work

Position	Description	Action *	Interval in Hours (Months)
1	Pulley	I, C	500 Hours (Max. 3 Months)
		R	If wear is indicated
2	Timing Belt	I, C, T	500 Hours (Max. 3 Months)
		R	If wear is indicated
3	Bearing	I	1,000 Hours (Max. 6 Months)
4	Gearmotor	I	Service & Maintenance per manufacturer's documentation
5	Cylinder	I, C	500 Hours (Max. 3 Months)
		R	If wear is indicated
6	Wearstrip	I, C	1,000 Hours (Max. 6 months)
		R	If wear is indicated
7	Bushing	I, C	500 Hours (Max. 3 Months)
		R	If wear is indicated

\* LEGEND: *Inspect, Replace, Tension, Clean*

#### Replacement Parts

Contact mk North America with your serial number for spare parts for your specific system

# Technical Documentation

## Lift & Transfer

### 7 CONVEYOR MAINTENANCE - BELT TENSIONING & TRACKING



All work to be performed by qualified personnel only.  
Conveyor power must be disconnected before replacing belt.

7.1	General Remarks	18
7.2	HQZ 2045 / HQZ 400	19
7.3	HQZ 600 / HQZ 2012	20

#### 7.1 General Remarks:

- Prior to delivery of the mk conveyor, the belt was tensioned and tracked at the factory.
- Conveyor belts should not require additional tracking once installed.
- It may be necessary to remove the lift and transfer from the main conveyor system prior to servicing.
- Any interfering parts must also be removed.
- Reassemble in reverse order.
- Never operate without all guards in place.

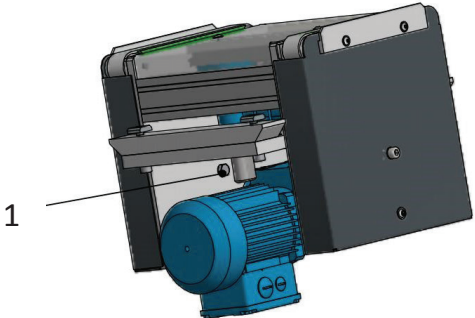
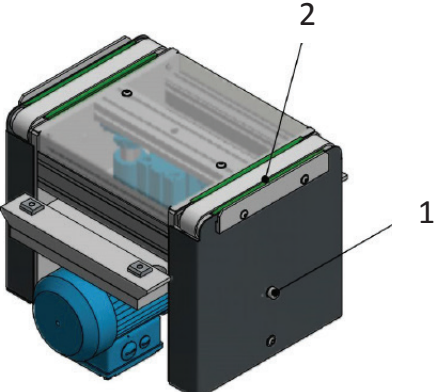
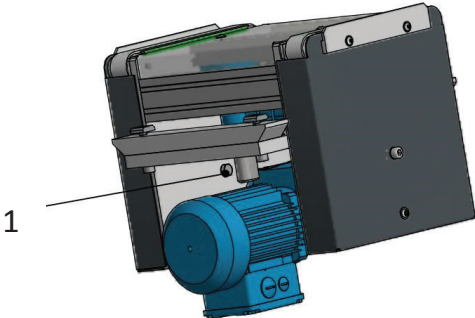


## 7 CONVEYOR MAINTENANCE - BELT TENSIONING & TRACKING (CONT.)

### 7.2 HQZ 2045 / HQZ 400



**All work to be performed by qualified personnel only.**

<p>Loosen screw (1).</p>	
<p>Fine tune timing belt tracking using the set screw (1) until timing belt is with the correct tension.</p> <p><b>IMPORTANT:</b> Turn on clockwise.</p> <p>The correct tension is checked at point (2).          The timing belt is properly tensioned if the belt can be lifted off the conveyor by hand, approximately 2-4 mm.</p>	
<p>Tighten screw (1).</p>	

# Technical Documentation

## Lift & Transfer

### 7 CONVEYOR MAINTENANCE - BELT TENSIONING & TRACKING

#### 7.3 HQZ 600 / HQZ 2012



All work to be performed by qualified personnel only.

#### Belt Tensioning

##### **Caution!**

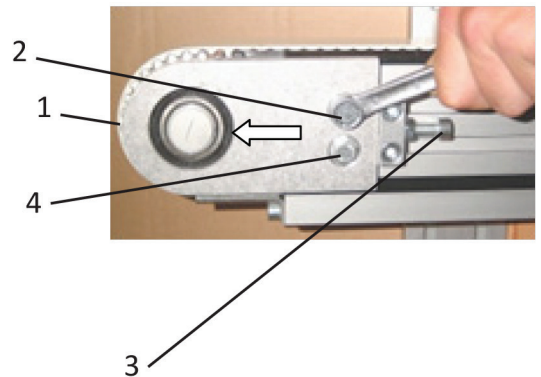
*Belt tensioning is only to be done at the idler end (opposite the motor end).*

General Instructions:

- The belt was tensioned and adjusted at the factory before delivery of the mk product.

Loosen screws (2) and (4) to pull the entire assembly (1) out (arrow direction) in order to pretension the timing belt. Tighten screw (4) and then finally adjust the timing belt with screw (3), see below.

Tighten bolt (2).

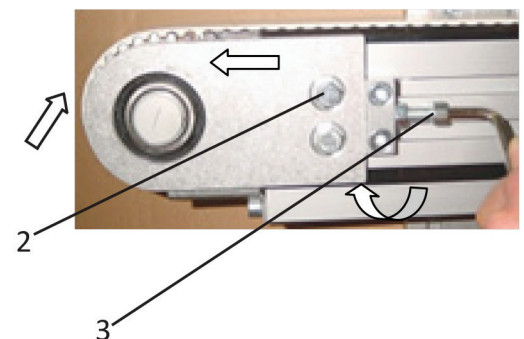


#### Belt Tracking

##### **Caution!**

*Tracking (or realignment) of the belt must only be done while the belt is moving (pinch points).*

Adjust bolt (2) and screw (3) in the direction of the arrow, for the fine adjustment to the timing belt until the belt is running centrally on the pulley. Tighten the bolt (2).



## 8 CONVEYOR MAINTENANCE - REPLACING THE BELT



All work to be performed by qualified personnel only.  
**Conveyor power must be disconnected before replacing the belt.**

8.1	General Remarks	21
8.2	HQZ 2045 / HQZ 400	22
8.3	HQZ 600	24
8.4	HQZ 2012	25

### 8.1 General Remarks:

- This section does not apply to RBM 2010.
- It may be necessary to remove the lift and transfer from the main conveyor system prior to servicing.
- Any interfering parts must also be removed.
- Reassemble in reverse order.
- Never operate without all guards in place.
- Always track and tension new belts after installing, see Section 7.
- It is recommended to replace belts in pairs.



# Technical Documentation

## Lift & Transfer

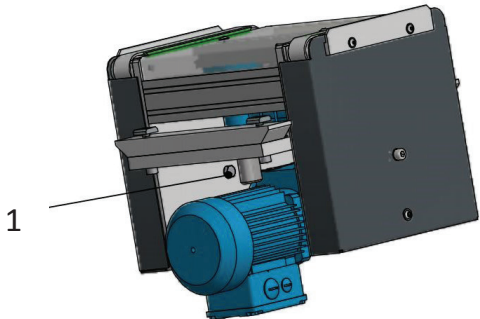
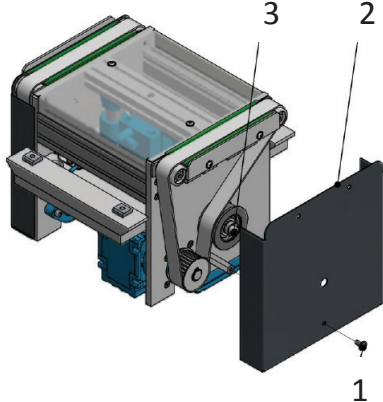
### 8 CONVEYOR MAINTENANCE - REPLACING THE BELT



All work to be performed by qualified personnel only.

Conveyor power **must** be disconnected before replacing the belt.

#### 8.1 HQZ 2045 / HQZ 400

<p>Loosen screw (1).</p>	
<p>Loosen screw (1).</p> <p>Remove side guard (2).</p> <p>Remove the pulley (3)</p> <p>Remove the old timing belt and put on the new one.</p> <p>Reassemble conveyor in reverse order, ensuring all guards are in place prior to operating.</p>	

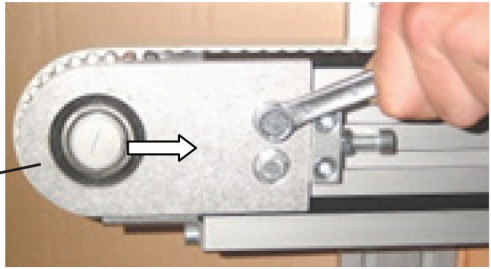
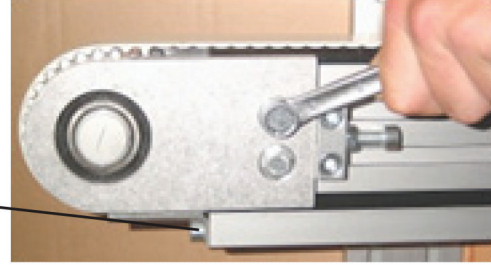
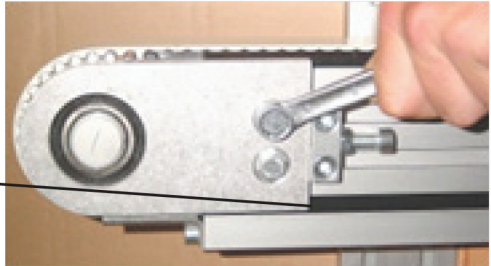


## 8 CONVEYOR MAINTENANCE - REPLACING THE BELT



**All work to be performed by qualified personnel only.**  
**Conveyor power must be disconnected before replacing the belt.**

### 8.2 HQZ 600

<p>Loosen all bolts and push the entire head (1) inwards (in the direction of the arrow), in order to create slack in the timing belt.</p>	
<p>Remove the belt return guard (2) by removing all screws. Do this at BOTH ends of the conveyor.</p>	
<p>Remove the closure strip (3) by sliding the material out of the end. This will expose the belt return channel.</p>	

#### Next Steps for Belt Removal and Replacement:

- The belt can now be replaced once all auxiliary obstructions are removed.
- To replace belt, slip it over the side of the conveyor and fit into the return channel.
- Reassemble conveyor in the reverse order.
- Track and tension belt prior to use. (see Section 7).

# Technical Documentation

## Lift & Transfer

### 8 CONVEYOR MAINTENANCE - REPLACING THE BELT



All work to be performed by qualified personnel only.

Conveyor power must be disconnected before replacing the belt.

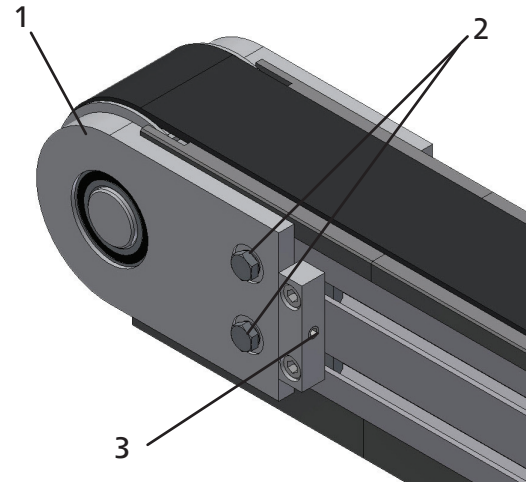
8.3 HQZ 2012

#### General Instructions:

Loosen bolts (2) and screw (3) on both sides of the assembly.

Push assembly (1) toward the conveyor frame to loosen the belt.

Complete steps below.



#### Next Steps for Belt Removal and Replacement:

- The belt can now be replaced, once all auxiliary obstructions are removed (see General Remarks).
- Slide the existing belt off the free side of the conveyor frame.
- To replace belt, slip it over the side of the conveyor.
- Ensure belt return is in UHMW-PE bottom guide.
- Reassemble conveyor in the reverse order.
- Track and tension belt prior to use. (see Section 7).



# Technical Documentation

## Lift & Transfer

### 9 NOTES & CONTACT INFORMATION

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#### 9.2 Contacting mk North America, Inc.



Email: [sales@mknorthamerica.com](mailto:sales@mknorthamerica.com)



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Fax: 860.769.5505



Technical Documentation  
HQZ & RBM  
LIFT & TRANSFERS

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