NORTH AMERICA, INC.

a member of the mk Technology Group

Technical Documentation

GUF-P 2000 BELT CONVEYOR

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

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

Technical Documentation
GUF-P 2000

1 GENERAL INFORMATION

1.1 Foreword

Congratulations on purchasing a conveyor from mk North America, Inc., a leading manufacturer of quality low profile conveyors. Our more than 30 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. In addition, your local representative can provide support in many instances.

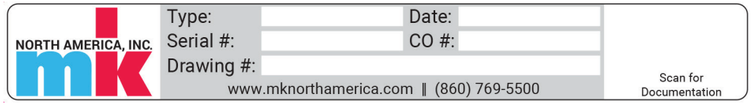
1.4 When your shipment arrives

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.

2 SERIAL NUMBER LABEL

• The conveyor's serial number is located on the frame at the drive end of the conveyor.



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.

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

Drawing #:
This number, if applicable, refers to the specific drawing that was created for this unit.

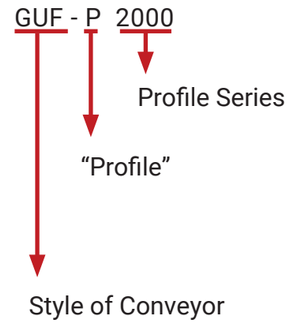
Date:
This is the date that the unit was scheduled to ship.

CO#:
This is the customer 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.

Scan for Documentation:
Scanning this QR code will bring you to a webpage specific for the conveyor on this order. From here you can access drawings and spare parts.

3 CONVEYOR DESCRIPTION

3.1 Explaining the conveyor **TYPE**.



Style of Conveyor

DGF (Doppel-Gurt Foerderer) Dual-Belt Conveyor

GUF (Gurt Foerderer) Belt Conveyor

KFG (Knickfoerderer Gurt) Bent "Gooseneck" Belt Conveyor

KFM (Knickförder Modular) Bent "Gooseneck" Plastic Modular Belt Conveyor

KGF (Kurvengurt Foerderer) Curve Belt Conveyor

KMF (Kurvengängiges Modulband) Curved Modular Belt Conveyor

KTF (Kettengurt Foerderer) Chain Conveyor

MBF (Modulband Foerderer) Modular Belt Conveyor

RBM (Rollenbahn Motor) Motorized Roller Conveyor

RBS (Rollerbahn Schwerkraft) Idler Roller Conveyor

RBT (Rollenbahn Tangentialkette) Drive Roller Conveyor

SBF (Scharnierband Foerderer) Hinged Belt Conveyor

SPU (Staufaehiges Pallettenumlaufystem) Continuous Motion Pallet Conveyor

SRF (Staurollen Foerderer) Accumulating Roller Conveyor

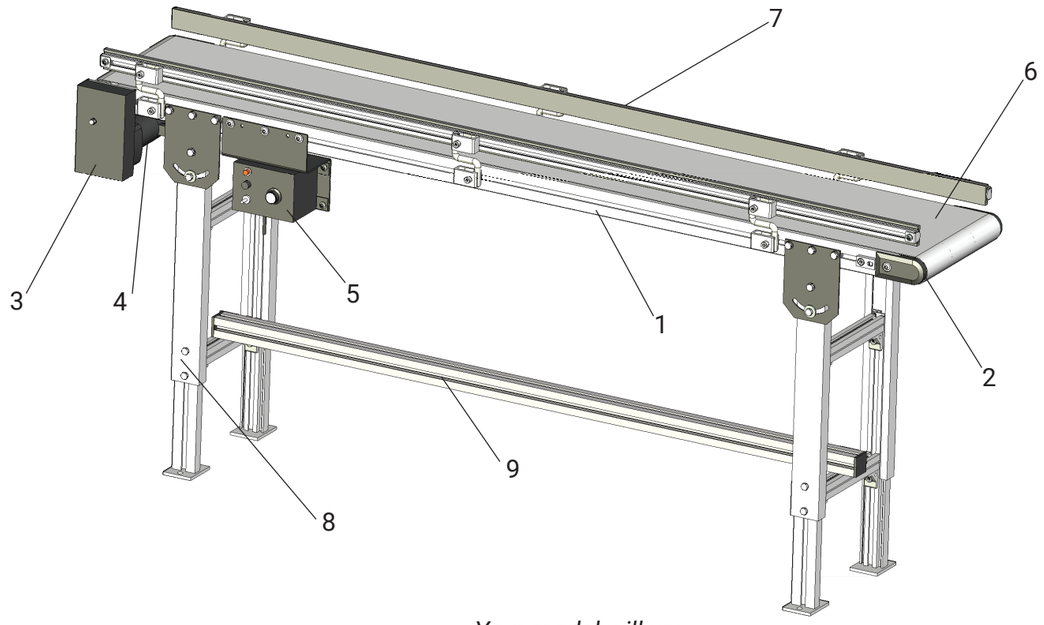
TKU (Taktkettenförderer) Timing Chain Conveyor

ZRF (Zahnriemen Förderer) Timing Belt Conveyor

3 CONVEYOR DESCRIPTION (CONT.)

3.2 Conveyor Components

The GUF-P 2000 has many typical conveyor components. Below is a description of the basic parts and options for the GUF-P 2000 conveyor. 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 mk proposal or approval drawing for specifics on items included in your order.



Your model will vary.

Typical Components

1) Conveyor Frame
2) Idler End
3) Gearmotor Mount / Drive Assembly
4) Gearmotor
5) Inverter / Speed Control
6) Belt
7) Side Rails
8) Support Stand
9) Stand Stringer

4 WARRANTY INFORMATION

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.[1.]

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[2.], 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.

[1.] 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.

[2.] 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.

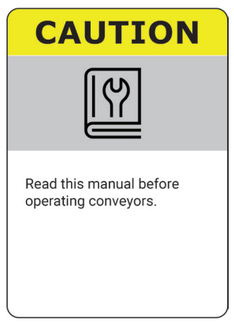
mk North America, Inc. reserves the right to change, modify or discontinue products and/or specifications with or without notice.

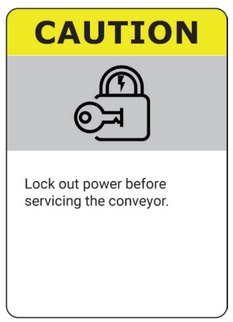
All of mk North America, Inc. products are covered by this warranty.

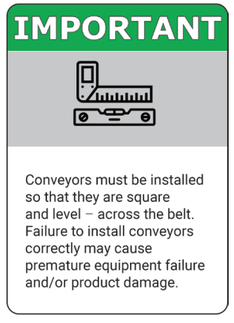
5 SAFETY REQUIREMENTS

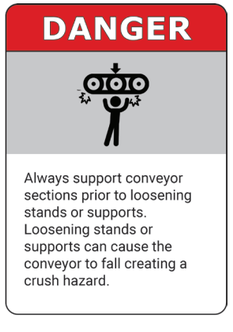
5.1 Warnings - Safety Guidelines

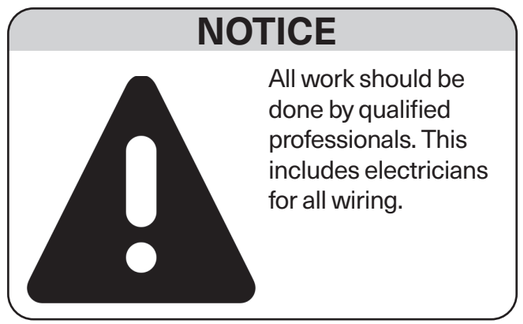
READ AND UNDERSTAND ALL OF THESE WARNINGS PRIOR TO OPERATING EQUIPMENT.











6 WEAR ITEMS & MAINTENANCE FOR SPECIFIC DRIVE & TAIL OPTIONS

6 WEAR ITEMS & MAINTENANCE FOR SPECIFIC DRIVE & TAIL OPTIONS (CONT.)

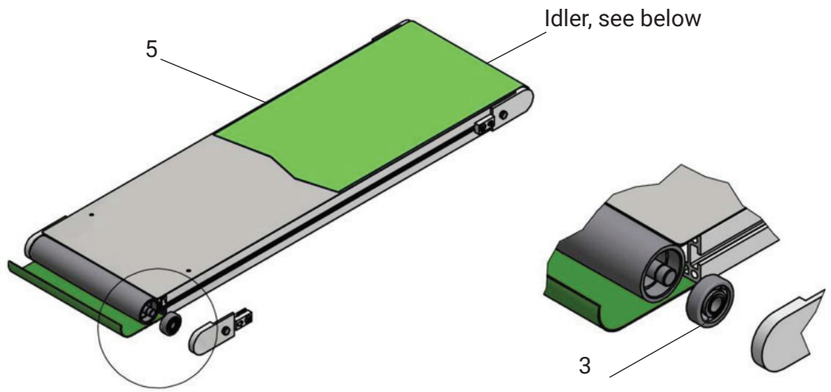
6.1 Important Notes About Wear Items & Maintenance

The following information regarding life of the wear items and service or adjustment intervals of the functional elements are only GUIDELINES. Conveyors 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.

6 WEAR ITEMS & MAINTENANCE FOR SPECIFIC DRIVE & TAIL OPTIONS (CONT.)

6.2 GUF-P 2000 AA



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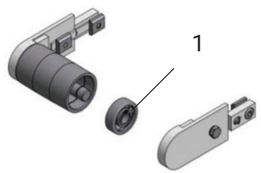	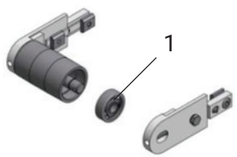	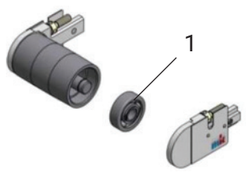
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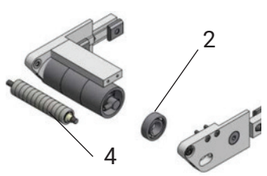
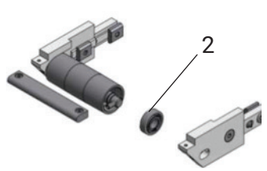
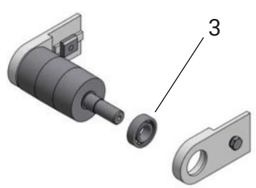
		

NOTE: Not all items shown in all views for clarity.

(Cont.)

6 WEAR ITEMS & MAINTENANCE FOR SPECIFIC DRIVE & TAIL OPTIONS (CONT.)

6.2 GUF-P 2000 AA (Cont.)

Maintenance Work for GUF-P 2000 AA

Position	Description	Action*	Interval in Hours (Months)	Lubricant
1, 2, 3, 4	Roller Bearing	I	1,000 Hours (Max. 6 Months)	
5	Belt	I, C	500 Hours (Max. 3 Months)	
		R	If damaged or stretched	

** LEGEND: **I**nspect, **R**eplace, **T**ension, **C**lean, **L**ubricate (grease).*

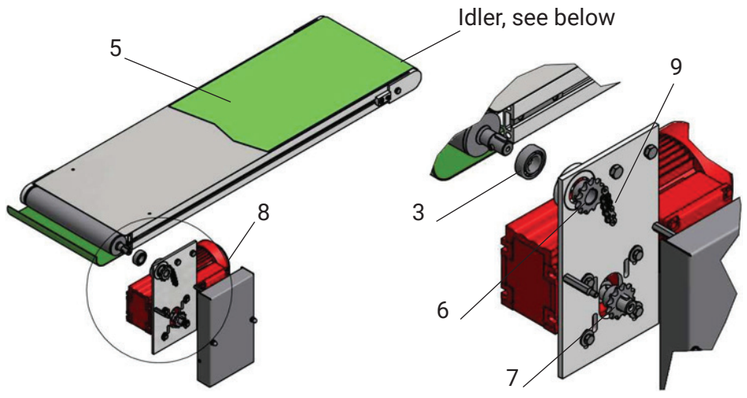
Wear Items for GUF-P 2000 AA

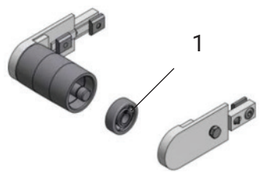
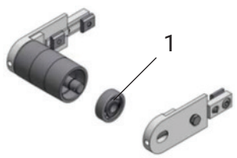
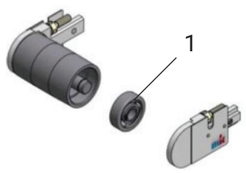
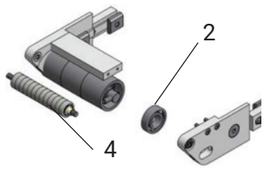
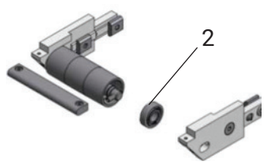
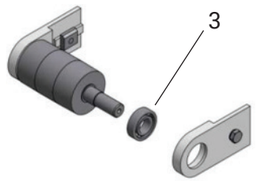
Position	Description	Part Number
1	Roller Bearing 6302-2RS1	K101000378
2	Roller Bearing 6002-2RS1	K101000368
3	Roller Bearing 6003-2RS1	K101000383
4	Roller Bearing 626-2RS1	K101000321
5	Belt	Inquire with mk North America

NOTE: For adjusting the belt tensioning, please see the related section for details. When cleaning the belt, avoid any harsh chemicals or detergents.

6 WEAR ITEMS & MAINTENANCE FOR SPECIFIC DRIVE & TAIL OPTIONS (CONT.)

6.3 GUF-P 2000 AC



Idler 01	Idler 09	Idler 11
		
Tail 13	**Tail 17**	**Tail 19**
		

NOTE: Not all items shown in all views for clarity.

(Cont.)

6 WEAR ITEMS & MAINTENANCE FOR SPECIFIC DRIVE & TAIL OPTIONS (CONT.)

6.3 GUF-P 2000 AC (Cont.)

Maintenance Work for GUF-P 2000 AC

Position	Description	Action*	Interval in Hours (Months)	Lubricant
1, 2, 3, 4	Roller Bearing	I	1,000 Hours (Max. 6 Months)	
5	Belt	I, C	500 Hours (Max. 3 Months)	
		R	If damaged or stretched	
6, 7	Sprocket	I, C	1,000 Hours (Max. 6 Months)	SAE20 - SAE50
8	Gearmotor	I	Service & maintenance per manufacturer's documentation	
9	Chain	T, C, L, I	500 Hours (Max. 3 Months)	SAE20 - SAE50
		R	If max. stretch is 3% or greater	

** LEGEND: Inspect, **R**eplace, **T**ension, **C**lean, **L**ubricate (grease).*

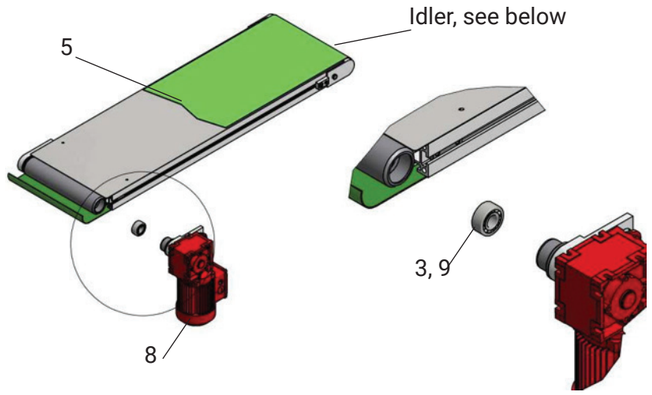
Wear Items for GUF-P 2000 AC

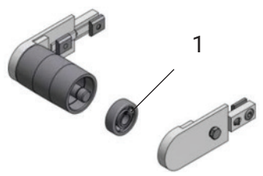
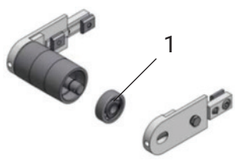
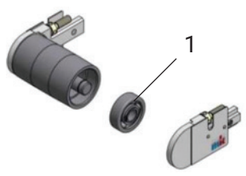
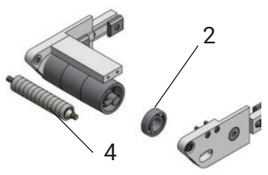
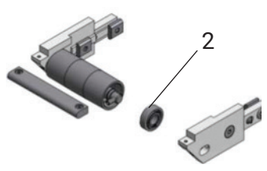
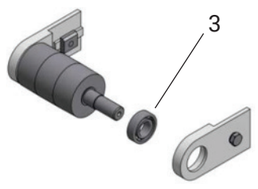
Position	Description	Part Number
1	Roller Bearing 6302-2RS1	K101000378
2	Roller Bearing 6002-2RS1	K101000368
3	Roller Bearing 6003-2RS1	K101000383
4	Roller Bearing 626-2RS1	K101000321
5	Belt	Inquire with mk North America
6	Sprocket at Drive Roll	Inquire with mk North America
7	Sprocket Gearmotor	Inquire with mk North America
8	Gearmotor	Inquire with mk North America
9	Roller Chain	Inquire with mk North America
10	Roller Chain Connecting Link	Inquire with mk North America

NOTE: For adjusting the belt tensioning, please see the related section for details. When cleaning the belt, avoid any harsh chemicals or detergents.

6 WEAR ITEMS & MAINTENANCE FOR SPECIFIC DRIVE & TAIL OPTIONS (CONT.)

6.4 GUF-P 2000 AF



Idler 01	Idler 09	Idler 11
		
Tail 13	**Tail 17**	**Tail 19**
		

NOTE: Not all items shown in all views for clarity.

(Cont.)

6 WEAR ITEMS & MAINTENANCE FOR SPECIFIC DRIVE & TAIL OPTIONS (CONT.)

6.4 GUF-P 2000 AF (Cont.)

Maintenance Work for GUF-P 2000 AF

Position	Description	Action*	Interval in Hours (Months)	Lubricant
1, 2, 3, 4, 9	Roller Bearing	I	1,000 Hours (Max. 6 Months)	
5	Belt	I, C	500 Hours (Max. 3 Months)	
		R	If damaged or stretched	
8	Gearmotor	I	Service & Maintenance per manufacturer's documentation	

** LEGEND: **I**nspect, **R**eplace, **T**ension, **C**lean, **L**ubricate (grease).*

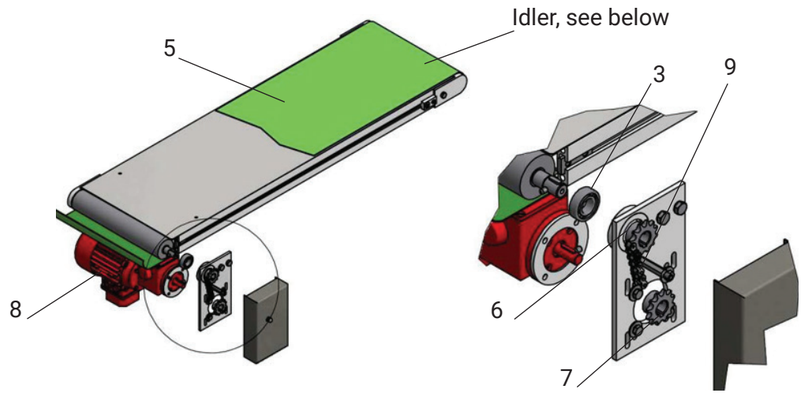
Wear Items for GUF-P 2000 AF

Position	Description	Part Number
1	Roller Bearing 6302-2RS1	K101000378
2	Roller Bearing 6002-2RS1	K101000368
3	Roller Bearing 6003-2RS1	K101000383
4	Roller Bearing 626-2RS1	K101000321
5	Belt	Inquire with mk North America
8	Gearmotor	Inquire with mk North America
9	Roller Bearing 6004-2RS1	K101000398

NOTE: For adjusting the belt tensioning, please see the related section for details. When cleaning the belt, avoid any harsh chemicals or detergents.

6 WEAR ITEMS & MAINTENANCE FOR SPECIFIC DRIVE & TAIL OPTIONS (CONT.)

6.5 GUF-P 2000 AG



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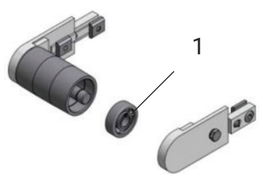
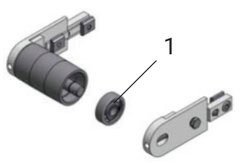
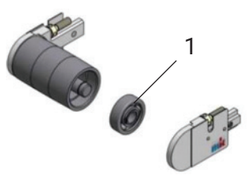
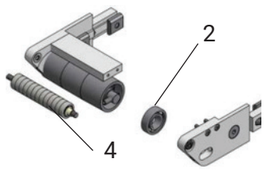
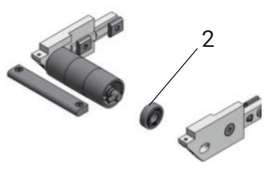
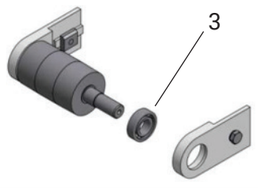
		
Tail 13	**Tail 17**	**Tail 19**
		

NOTE: Not all items shown in all views for clarity.

(Cont.)

6 WEAR ITEMS & MAINTENANCE FOR SPECIFIC DRIVE & TAIL OPTIONS (CONT.)

6.5 GUF-P 2000 AG (Cont.)

Maintenance Work for GUF-P 2000 AG

Position	Description	Action*	Interval in Hours (Months)	Lubricant
1, 2, 3, 4	Roller Bearing	I	1,000 Hours (Max. 6 Months)	
5	Belt	I, C	500 Hours (Max. 3 Months)	
		R	If damaged or stretched	
6, 7	Sprocket	I, C	1,000 Hours (Max. 6 Months)	SAE20 - SAE50
8	Gearmotor	I	Service & maintenance per manufacturer's documentation	
9	Chain	T, C, L, I	500 Hours (Max. 3 Months)	SAE20 - SAE50
		R	If max. stretch is 3% or greater	

** LEGEND: **I**nspect, **R**eplace, **T**ension, **C**lean, **L**ubricate (grease).*

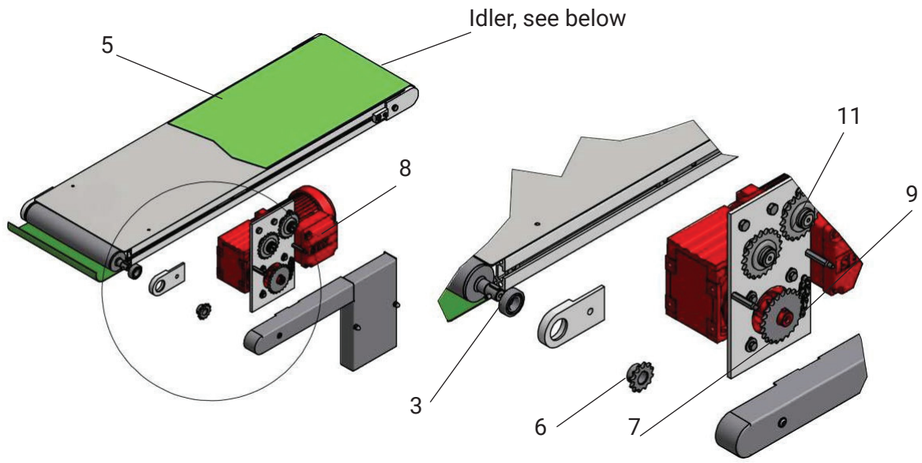
Wear Items for GUF-P 2000 AG

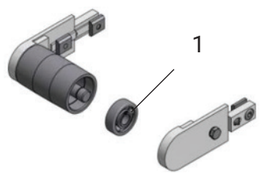
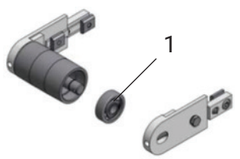
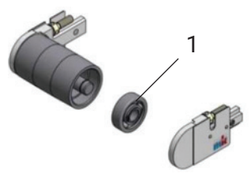
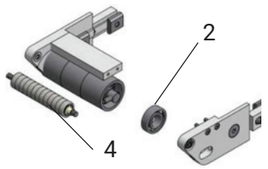
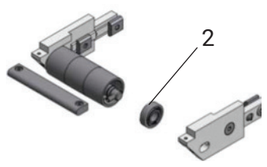
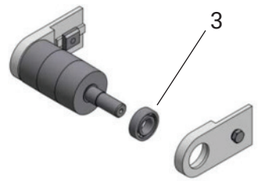
Position	Description	Part Number
1	Roller Bearing 6302-2RS1	K101000378
2	Roller Bearing 6002-2RS1	K101000368
3	Roller Bearing 6003-2RS1	K101000383
4	Roller Bearing 626-2RS1	K101000321
5	Belt	Inquire with mk North America
6	Sprocket at Drive Roll	Inquire with mk North America
7	Sprocket Gearmotor	Inquire with mk North America
8	Gearmotor	Inquire with mk North America
9	Roller Chain	Inquire with mk North America
10	Roller Chain Connecting Link	Inquire with mk North America

NOTE: For adjusting the belt tensioning, please see the related section for details. When cleaning the belt, avoid any harsh chemicals or detergents.

6 WEAR ITEMS & MAINTENANCE FOR SPECIFIC DRIVE & TAIL OPTIONS (CONT.)

6.6 GUF-P 2000 AM



Idler 01	Idler 09	Idler 11
		
Tail 13	**Tail 17**	**Tail 19**
		

NOTE: Not all items shown in all views for clarity.

(Cont.)

6 WEAR ITEMS & MAINTENANCE FOR SPECIFIC DRIVE & TAIL OPTIONS (CONT.)

6.6 GUF-P 2000 AM (Cont.)

Maintenance Work for GUF-P 2000 AM

Position	Description	Action*	Interval in Hours (Months)	Lubricant
1, 2, 3, 4	Roller Bearing	I	1,000 Hours (Max. 6 Months)	
5	Belt	I, C	500 Hours (Max. 3 Months)	
		R	If damaged or stretched	
6, 7, 11	Sprocket	I, C	1,000 Hours (Max. 6 Months)	SAE20 - SAE50
8	Gearmotor	I	Service & maintenance per manufacturer's documentation	
9	Chain	T, C, L, I	500 Hours (Max. 3 Months)	SAE20 - SAE50
		R	If max. stretch is 3% or greater	

** LEGEND: **I**nspect, **R**eplace, **T**ension, **C**lean, **L**ubricate (grease).*

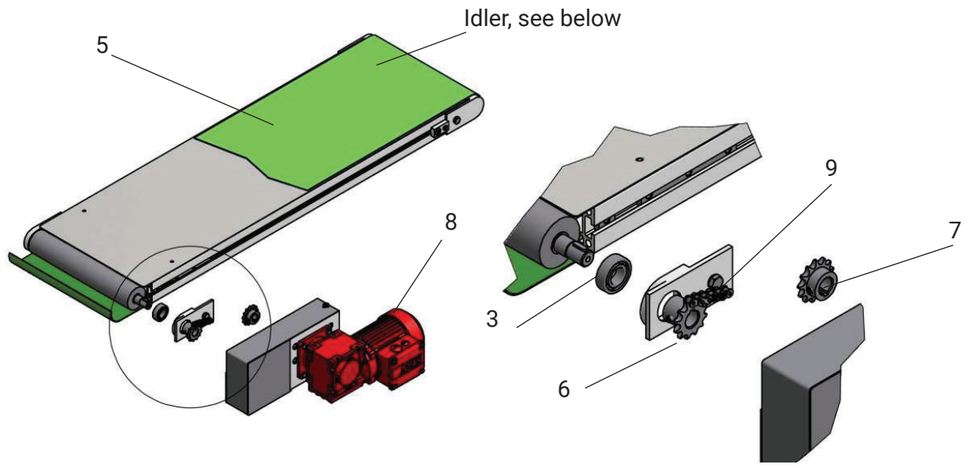
Wear Items for GUF-P 2000 AM

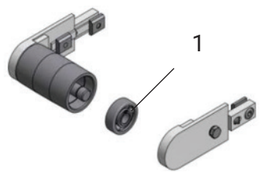
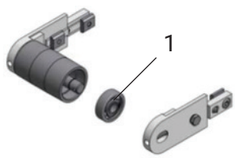
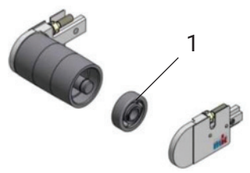
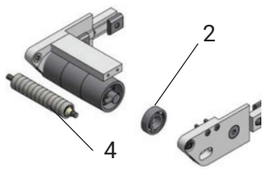
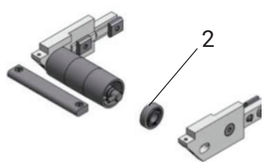
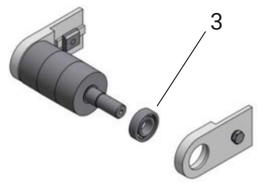
Position	Description	Part Number
1	Roller Bearing 6302-2RS1	K101000378
2	Roller Bearing 6002-2RS1	K101000368
3	Roller Bearing 6003-2RS1	K101000383
4	Roller Bearing 626-2RS1	K101000321
5	Belt	Inquire with mk North America
6	Sprocket at Drive Roll	Inquire with mk North America
7	Sprocket Gearmotor	Inquire with mk North America
8	Gearmotor	Inquire with mk North America
9	Roller Chain	K11401
10	Roller Chain Connecting Link	K114010001
11	Idler Sprocket (2x)	K114018021

NOTE: For adjusting the belt tensioning, please see the related section for details. When cleaning the belt, avoid any harsh chemicals or detergents.

6 WEAR ITEMS & MAINTENANCE FOR SPECIFIC DRIVE & TAIL OPTIONS (CONT.)

6.7 GUF-P 2000 AS



Idler 01	Idler 09	Idler 11
		
Tail 13	**Tail 17**	**Tail 19**
		

NOTE: Not all items shown in all views for clarity.

(Cont.)

6 WEAR ITEMS & MAINTENANCE FOR SPECIFIC DRIVE & TAIL OPTIONS (CONT.)

6.7 GUF-P 2000 AS (Cont.)

Maintenance Work for GUF-P 2000 AS

Position	Description	Action*	Interval in Hours (Months)	Lubricant
1, 2, 3, 4	Roller Bearing	I	1,000 Hours (Max. 6 Months)	
5	Belt	I, C	500 Hours (Max. 3 Months)	
		R	If damaged or stretched	
6, 7	Sprocket	I, C	1,000 Hours (Max. 6 Months)	SAE20 - SAE50
8	Gearmotor	I	Service & maintenance per manufacturer's documentation	
9	Chain	T, C, L, I	500 Hours (Max. 3 Months)	SAE20 - SAE50
		R	If max. stretch is 3% or greater	

** LEGEND: **I**nspect, **R**eplace, **T**ension, **C**lean, **L**ubricate (grease).*

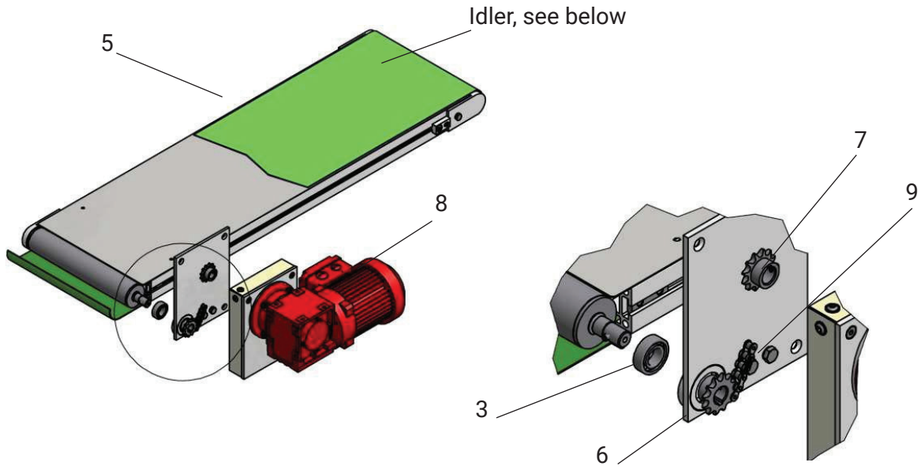
Wear Items for GUF-P 2000 AS

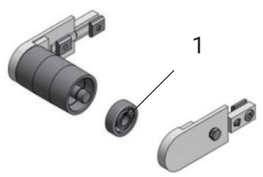
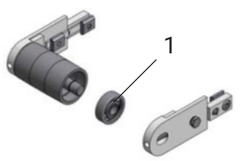
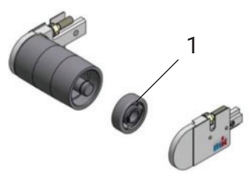
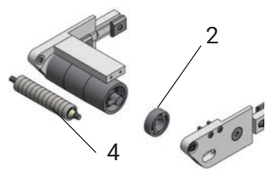
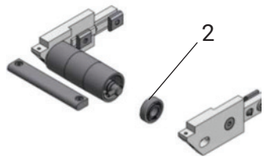
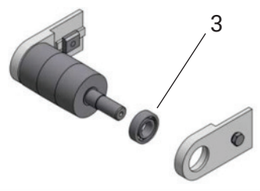
Position	Description	Part Number
1	Roller Bearing 6302-2RS1	K101000378
2	Roller Bearing 6002-2RS1	K101000368
3	Roller Bearing 6003-2RS1	K101000383
4	Roller Bearing 626-2RS1	K101000321
5	Belt	Inquire with mk North America
6	Sprocket at Drive Roll	Inquire with mk North America
7	Sprocket Gearmotor	Inquire with mk North America
8	Gearmotor	Inquire with mk North America
9	Roller Chain	K11401
10	Roller Chain Connecting Link	K114010001

NOTE: For adjusting the belt tensioning, please see the related section for details. When cleaning the belt, avoid any harsh chemicals or detergents.

6 WEAR ITEMS & MAINTENANCE FOR SPECIFIC DRIVE & TAIL OPTIONS (CONT.)

6.8 GUF-P 2000 AU



Idler 01	Idler 09	Idler 11
		
Tail 13	**Tail 17**	**Tail 19**
		

NOTE: Not all items shown in all views for clarity.

(Cont.)

6 WEAR ITEMS & MAINTENANCE FOR SPECIFIC DRIVE & TAIL OPTIONS (CONT.)

6.8 GUF-P 2000 AU (Cont.)

Maintenance Work for GUF-P 2000 AU

Position	Description	Action*	Interval in Hours (Months)	Lubricant
1, 2, 3, 4	Roller Bearing	I	1,000 Hours (Max. 6 Months)	
5	Belt	I, C	500 Hours (Max. 3 Months)	
		R	If damaged or stretched	
6, 7	Sprocket	I, C	1,000 Hours (Max. 6 Months)	SAE20 - SAE50
8	Gearmotor	I	Service & maintenance per manufacturer's documentation	
9	Chain	T, C, L, I	500 Hours (Max. 3 Months)	SAE20 - SAE50
		R	If max. stretch is 3% or greater	

** LEGEND: Inspect, Replace, Tension, Clean, Lubricate (grease).*

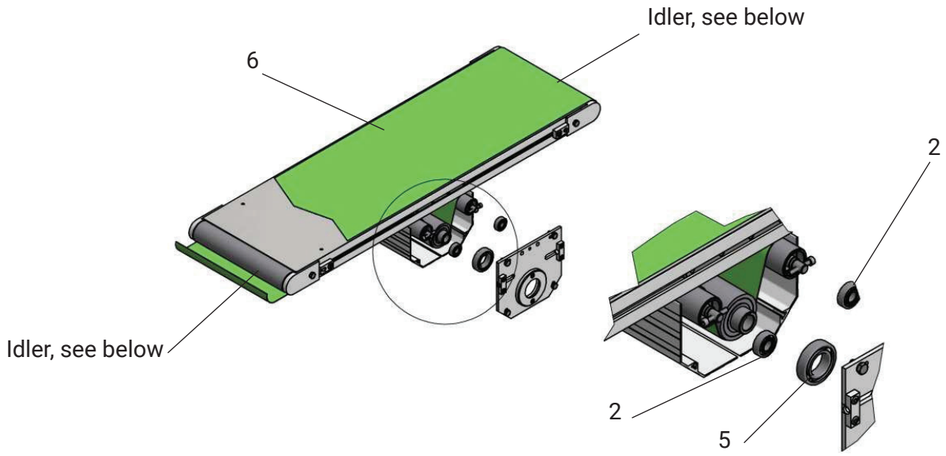
Wear Items for GUF-P 2000 AU

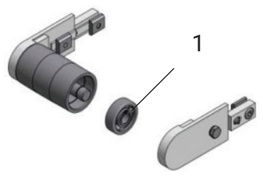
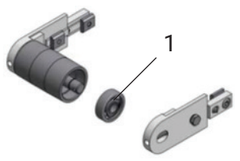
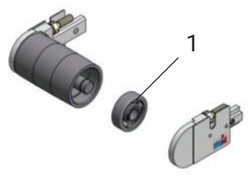
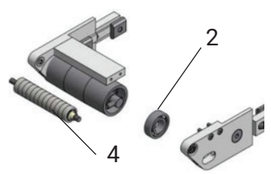
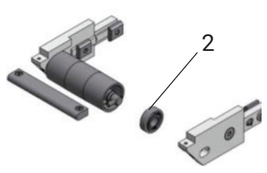
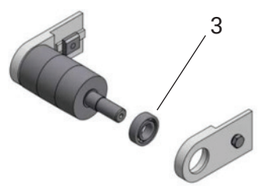
Position	Description	Part Number
1	Roller Bearing 6302-2RS1	K101000378
2	Roller Bearing 6002-2RS1	K101000368
3	Roller Bearing 6003-2RS1	K101000383
4	Roller Bearing 626-2RS1	K101000321
5	Belt	Inquire with mk North America
6	Sprocket at Drive Roll	Inquire with mk North America
7	Sprocket Gearmotor	Inquire with mk North America
8	Gearmotor	Inquire with mk North America
9	Roller Chain	Inquire with mk North America
10	Roller Chain Connecting Link	Inquire with mk North America

NOTE: For adjusting the belt tensioning, please see the related section for details. When cleaning the belt, avoid any harsh chemicals or detergents.

6 WEAR ITEMS & MAINTENANCE FOR SPECIFIC DRIVE & TAIL OPTIONS (CONT.)

6.9 GUF-P 2000 BA



Idler 01	Idler 09	Idler 11
		
Tail 13	**Tail 17**	**Tail 19**
		

NOTE: Not all items shown in all views for clarity.

(Cont.)

6.9 GUF-P 2000 BA (Cont.)

Maintenance Work for GUF-P 2000 BA

Position	Description	Action*	Interval in Hours (Months)	Lubricant
1, 2, 3, 4, 5	Roller Bearing	I	1,000 Hours (Max. 6 Months)	
6	Belt	I, C	500 Hours (Max. 3 Months)	

** LEGEND: Inspect, Replace, Tension, Clean, Lubricate (grease).*

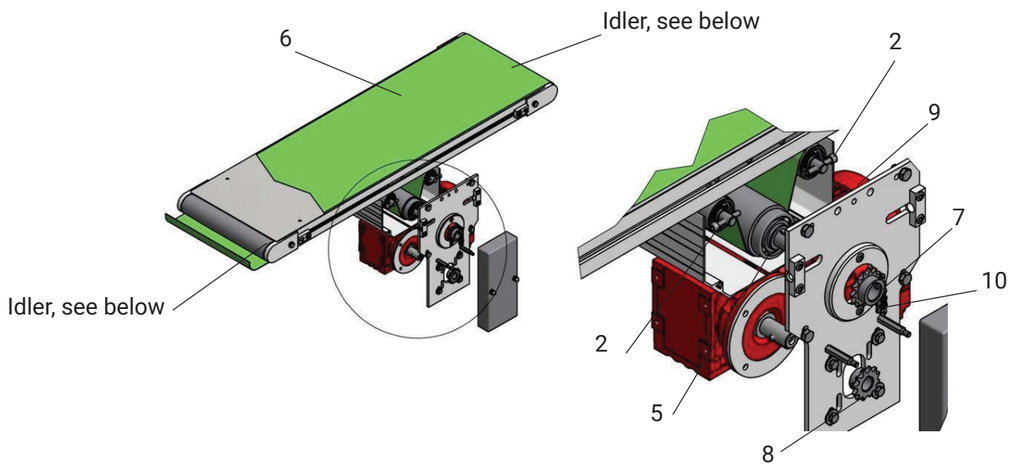
Wear Items for GUF-P 2000 BA

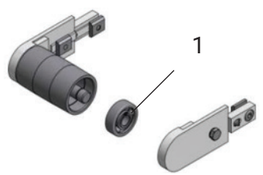
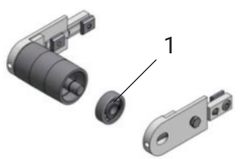
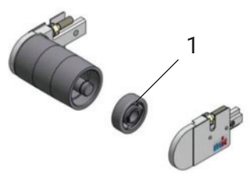
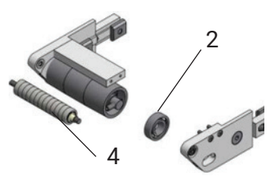
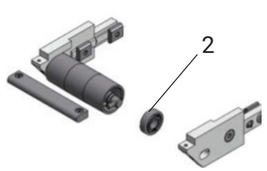
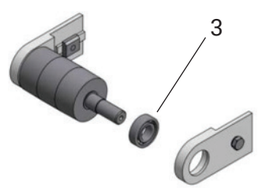
Position	Description	Part Number
1	Roller Bearing 6302-2RS1	K101000378
2	Roller Bearing 6002-2RS1	K101000368
3	Roller Bearing 6003-2RS1	K101000383
4	Roller Bearing 626-2RS1	K101000321
5	Roller Bearing 6006-2RS1	K101000428
6	Belt	Inquire with mk North America

NOTE: For adjusting the belt tensioning, please see the related section for details. When cleaning the belt, avoid any harsh chemicals or detergents.

6 WEAR ITEMS & MAINTENANCE FOR SPECIFIC DRIVE & TAIL OPTIONS (CONT.)

6.10 GUF-P 2000 BC



Idler 01	Idler 09	Idler 11
		
Tail 13	**Tail 17**	**Tail 19**
		

NOTE: Not all items shown in all views for clarity.

(Cont.)

6 WEAR ITEMS & MAINTENANCE FOR SPECIFIC DRIVE & TAIL OPTIONS (CONT.)

6.10 GUF-P 2000 BC (Cont.)

Maintenance Work for GUF-C 2000 BC

Position	Description	Action*	Interval in Hours (Months)	Lubricant
1, 2, 3, 4, 5	Roller Bearing	I	1,000 Hours (Max. 6 Months)	
6	Belt	I, C	500 Hours (Max. 3 Months)	
		R	If damaged or stretched	
7, 8	Sprocket	I, C	1,000 Hours (Max. 6 Months)	SAE20 - SAE50
9	Gearmotor	I	Service & maintenance per manufacturer's documentation	
10	Chain	T, C, L, I	500 Hours (Max. 3 Months)	SAE20 - SAE50
		R	If max. stretch is 3% or greater	

** LEGEND: Inspect, Replace, Tension, Clean, Lubricate (grease).*

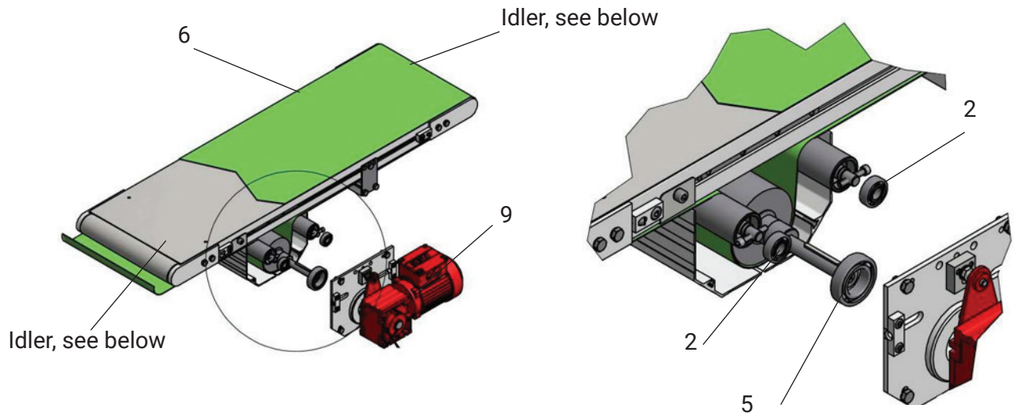
Wear Items for GUF-P 2000 BC

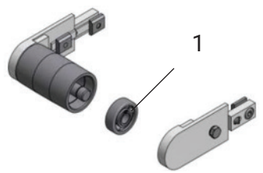
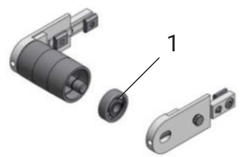
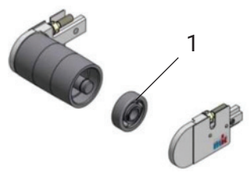
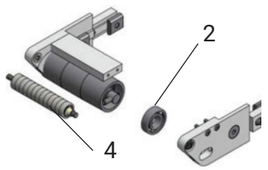
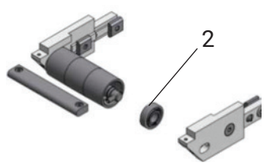
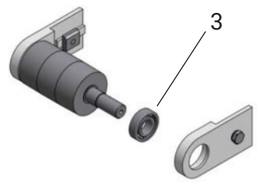
Position	Description	Part Number
1	Roller Bearing 6302-2RS1	K101000378
2	Roller Bearing 6002-2RS1	K101000368
3	Roller Bearing 6003-2RS1	K101000383
4	Roller Bearing 626-2RS1	K101000321
5	Roller Bearing 6006-2RS1	K101000321
6	Belt	Inquire with mk North America
7	Sprocket at Drive Roll	Inquire with mk North America
8	Sprocket Gearmotor	Inquire with mk North America
9	Gearmotor	Inquire with mk North America
10	Roller Chain	Inquire with mk North America
11	Roller Chain Connecting Link	Inquire with mk North America

NOTE: For adjusting the belt tensioning, please see the related section for details. When cleaning the belt, avoid any harsh chemicals or detergents.

6 WEAR ITEMS & MAINTENANCE FOR SPECIFIC DRIVE & TAIL OPTIONS (CONT.)

6.11 GUF-P 2000 BF



Idler 01	Idler 09	Idler 11
		
Tail 13	**Tail 17**	**Tail 19**
		

NOTE: Not all items shown in all views for clarity.

(Cont.)

6 WEAR ITEMS & MAINTENANCE FOR SPECIFIC DRIVE & TAIL OPTIONS (CONT.)

6.10 GUF-P 2000 BF (Cont.)

Maintenance Work for GUF-C 2000 BF

Position	Description	Action*	Interval in Hours (Months)	Lubricant
1, 2, 3, 4, 5	Roller Bearing	I	1,000 Hours (Max. 6 Months)	
6	Belt	I, C	500 Hours (Max. 3 Months)	
		R	If damaged or stretched	
7, 8	Sprocket	I, C	1,000 Hours (Max. 6 Months)	SAE20 - SAE50
9	Gearmotor	I	Service & maintenance per manufacturer's documentation	
10	Chain	T, C, L, I	500 Hours (Max. 3 Months)	SAE20 - SAE50
		R	If max. stretch is 3% or greater	

** LEGEND: Inspect, Replace, Tension, Clean, Lubricate (grease).*

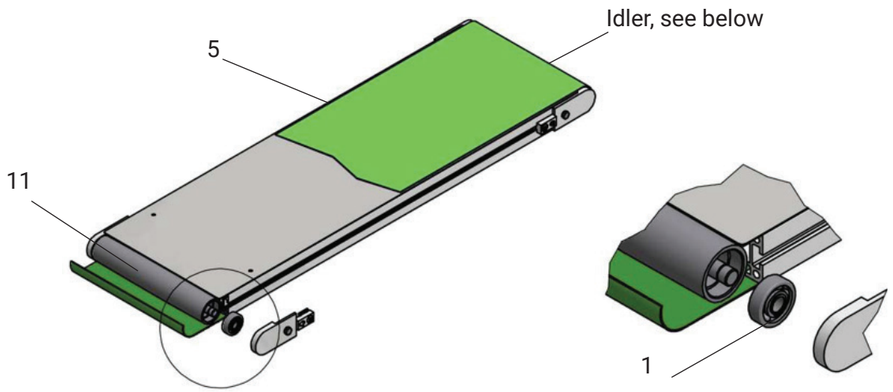
Wear Items for GUF-P 2000 BF

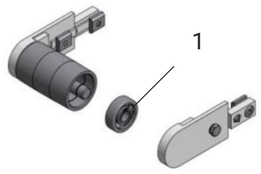
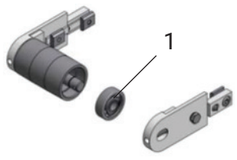
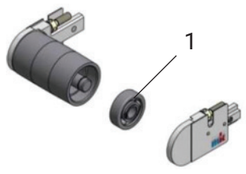
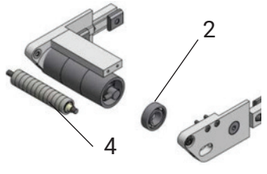
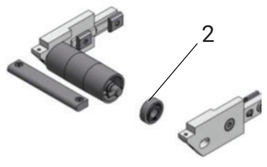
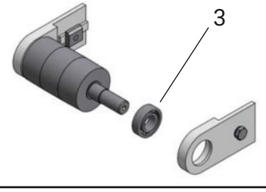
Position	Description	Part Number
1	Roller Bearing 6302-2RS1	K101000378
2	Roller Bearing 6002-2RS1	K101000368
3	Roller Bearing 6003-2RS1	K101000383
4	Roller Bearing 626-2RS1	K101000321
5	Roller Bearing 6006-2RS1	K101000321
6	Belt	Inquire with mk North America
9	Gearmotor	Inquire with mk North America

NOTE: For adjusting the belt tensioning, please see the related section for details. When cleaning the belt, avoid any harsh chemicals or detergents.

6 WEAR ITEMS & MAINTENANCE FOR SPECIFIC DRIVE & TAIL OPTIONS (CONT.)

6.12 GUF-P 2000 CA



Idler 01	Idler 09	Idler 11
		
Tail 13	**Tail 17**	**Tail 19**
		

NOTE: Not all items shown in all views for clarity.

(Cont.)

6 WEAR ITEMS & MAINTENANCE FOR SPECIFIC DRIVE & TAIL OPTIONS (CONT.)

6.11 GUF-P 2000 CA (Cont.)

Maintenance Work for GUF-P 2000 CA

Position	Description	Action*	Interval in Hours (Months)	Lubricant
1, 2, 3, 4	Roller Bearing	I	1,000 Hours (Max. 6 Months)	
5	Belt	I, C	500 Hours (Max. 3 Months)	
11	Motorized Drive Drum	I, C	Service & maintenance per manufacturer's documentation	

** LEGEND: **I**nspect, **R**eplace, **T**ension, **C**lean, **L**ubricate (grease).*

Wear Items for GUF-P 2000 CA

Position	Description	Part Number
1	Roller Bearing 6302-2RS1	K101000378
2	Roller Bearing 6302-2RS1	K101000368
3	Roller Bearing 6303-2RS1	K101000383
4	Roller Bearing 626-2RS1	K101000321
5	Belt	Inquire with mk North America
11	Motorized Drive Drum	Inquire with mk North America

NOTE: For adjusting the belt tensioning, please see the related section for details. When cleaning the belt, avoid any harsh chemicals or detergents.

7 CONVEYOR BELT MAINTENANCE - TENSIONING & TRACKING

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

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

7.1 General Remarks

All work to be performed by qualified personnel only.

General Remarks:

- Belts may need to be tracked due to shifting during shipping.
- Prior to delivery of the mk conveyor, the chain was tensioned and tracked at the factory.
- Belt pretension conveyor length x 0.3%.
- Alternate tightening set screws AND loosen the other side as applicable in order to avoid over tensioning the belt.
- Belt tracking should only be done at the idler end.

Tensioning and tracking is done while the conveyor is in operation. Use extreme caution of all pinch, pull and other hazards.

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

7.2 Tail 01

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 drive end).

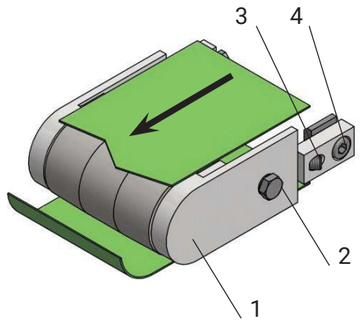
General instructions to be performed on both sides of conveyor:

Loosen screws (2) and (4) to move tension blocks and complete tail assembly (1) out (arrow direction) in order to pretension the belt. Tighten screw (4) and, using the fine adjustment set screw (3), continue to tension the belt until correct tension is achieved. Finally, tighten screw (2) and move alignment block back into ready position.

Pretension example:

Mark the belt surface with two lines spaced 1,000 mm apart. After tensioning, this distance should measure 1,003 mm. The conveyor is then ready for operation.

Fine-tune belt travel (see Belt Tracking, below).



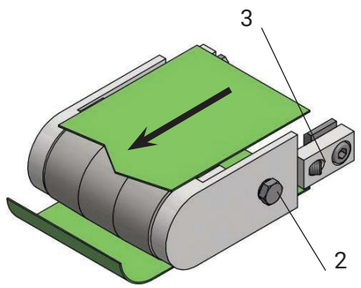
Arrow indicates direction of travel.

Belt Tracking

Caution!

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

To track the belt, loosen screw (2). Turn the fine adjustment set screw (3) at the tail, until the belt has centered itself on the tail drum. Finally, retighten screw (2) and move alignment block back into ready position.



Arrow indicates direction of travel.

7.3 Tail 09

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 drive end).

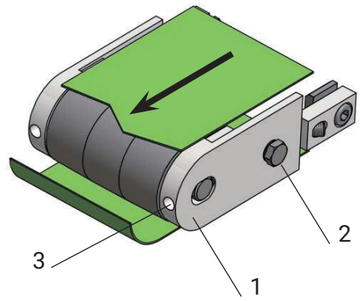
General instructions to be performed on both sides of conveyor:

Loosen screw (2) and move complete tail assembly (1) out (arrow direction) in order to pretension the belt. Tighten screw (2) and, using the fine adjustment set screw (3), continue to tension the belt until correct tension is achieved.

Pretension example:

Mark the belt surface with two lines spaced 1,000 mm apart. After tensioning, this distance should measure 1,003 mm. The conveyor is then ready for operation.

Fine-tune belt travel (see Belt Tracking, below).



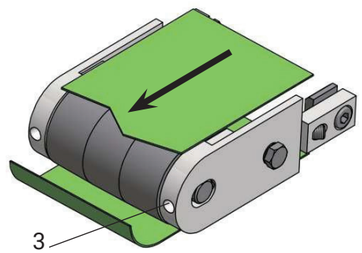
Arrow indicates direction of travel.

Belt Tracking

Caution!

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

Turn the fine adjustment set screw (3) at the tail, until the belt has centered itself on the tail drum.



Arrow indicates direction of travel.

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

7.4 Tail 11

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 drive end).

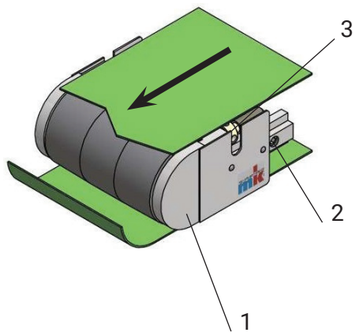
General Instructions:

Loosen set screw (2) and move tail stock (1) out (arrow direction) by turning adjustment screw (3) until belt is properly tensioned. Tighten set screw (2).

Pretension example:

Mark the belt surface with two lines spaced 1,000 mm apart. After tensioning, this distance should measure 1,003 mm. The conveyor is then ready for operation.

Fine-tune belt travel (see Belt Tracking, below).



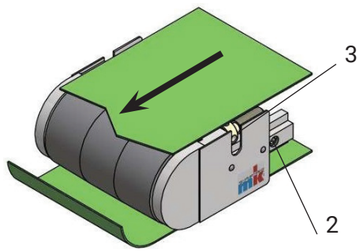
Arrow indicates direction of travel.

Belt Tracking

Caution!

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

After loosening the set screw (2), the adjustment screw (3) is used to change the orientation of the tail drum, until the belt has centered itself on the tail drum. Finally, retighten the set screw (2).



Arrow indicates direction of travel.

7.5 Tail 13

All work to be performed by qualified personnel only.

Belt Tensioning

Caution!

Belt tensioning is only to be done at the tail end (opposite the drive end).

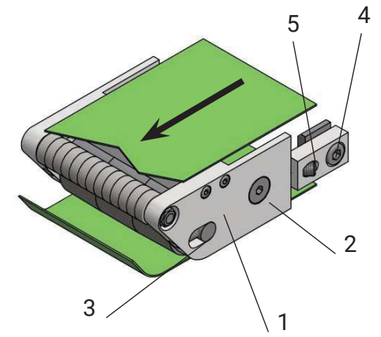
General Instructions:

Loosen screws (2) and (4) to move tension blocks and complete tail assembly (1) out (arrow direction) in order to pretension the belt. Tighten screw (4) and, using set screw (5), continue to tension the belt until correct tension is achieved. Finally, tighten screw (2).

Pretension example:

Mark the belt surface with two lines spaced 1,000 mm apart. After tensioning this distance should measure 1,003 mm. The conveyor is then ready for operation.

Fine-tune belt travel (see Belt Tracking, below).

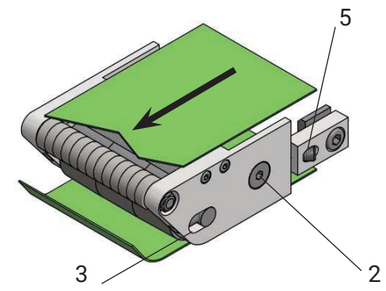


Arrow indicates direction of travel.

Belt Tracking

Caution!

To track the belt, loosen screw (2). Turn set screw (5) at the tail, until the belt has centered itself on the tail drum. Finally, retighten screw (2) and move alignment block back into ready position. Fine-tune belt tracking using set screw (3).



Arrow indicates direction of travel.

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

7.6 Tail 17

All work to be performed by qualified personnel only.

Belt Tensioning

Caution!

Belt tensioning is only to be done at the tail end (opposite the drive end).

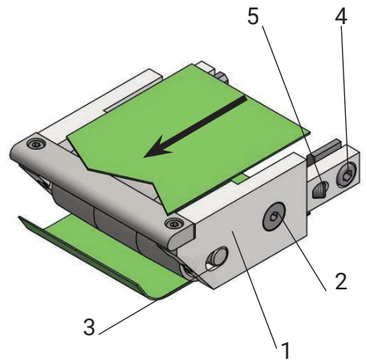
General Instructions:

Loosen screws (2) and (4) to move tension blocks and complete tail assembly (1) out (arrow direction) in order to pretension the belt. Tighten screw (4) and, using set screw (5), continue to tension the belt until correct tension is achieved. Finally, tighten screw (2).

Pretension example:

Mark the belt surface with two lines spaced 1,000 mm apart. After tensioning this distance should measure 1,003 mm. The conveyor is then ready for operation.

Fine-tune belt travel (see Belt Tracking, below).



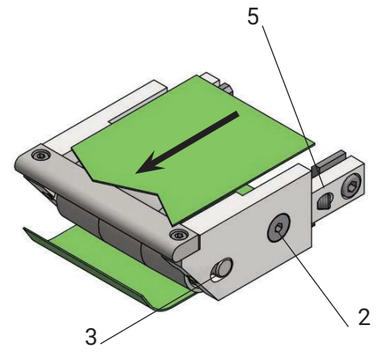
Arrow indicates direction of travel.

Belt Tracking

Caution!

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

To track the belt, loosen screw (2). Turn set screw (5) at the tail, until the belt has centered itself on the tail drum. Finally, retighten screw (2) and move alignment block back into ready position. Fine-tune belt tracking using set screw (3).



Arrow indicates direction of travel.

7.7 Center Drive Assembly (additional tracking feature) Drive Type BA, BC and BF

All work to be performed by qualified personnel only.

Tracking

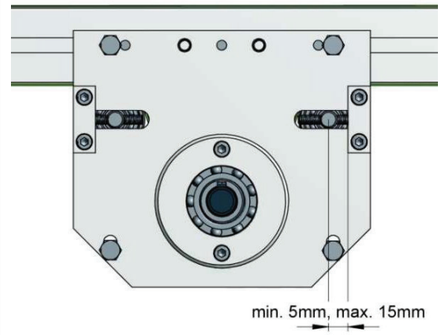
Caution!

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

The snub roller should always be at lest 5 mm away from the tension block. The maximum adjustment range is 10 mm (for a total of 15 mm away from the tension block).

Attention!

Care must be taken to maintain adjustment within the prescribed range. Never allow snub rollers to come in contact with drive drum.



8 CONVEYOR MAINTENANCE - BELT REPLACEMENT

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

8.1 General Remarks

All work to be performed by qualified personnel only.

General Remarks:

- Prior to replacing the belt, the tail assembly must be completely loosened and retracted - instructions for this are on the following pages.
- Any interfering parts must also be removed.
- When using an endless belt replacement belt, at least one side of the conveyor must be free and clear of stands, rails, and other accessories.
- Reassemble in reverse order.
- Replacement belts must be tracked and tensioned prior to use. (see Section 7)

Tensioning and tracking is done while the conveyor is in operation. Use extreme caution of all pinch, pull and other hazards.

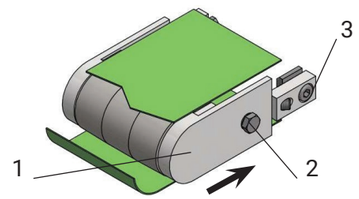
8 CONVEYOR MAINTENANCE - BELT REPLACEMENT (CONT.)

All work to be performed by qualified personnel only.

Conveyor power must be disconnected before replacing the belt.

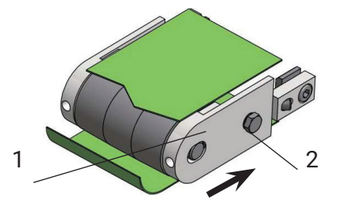
8.2 - Tail 01

Loosen screws (2) and (3) and push the entire tail assembly (1) and alignment blocks inward (arrow direction) to loosen belt. Retighten screws (2) and (3). The belt may now be replaced. See previous section for tensioning and tracking. All new belts must be tensioned and tracked.



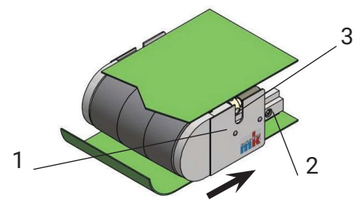
8.3 - Tail 09

Loosen screw (2) and push the entire tail assembly (1) inward (arrow direction) to loosen belt. Retighten screw (2). The belt may now be replaced. See previous section for tensioning and tracking. All new belts must be tensioned and tracked.



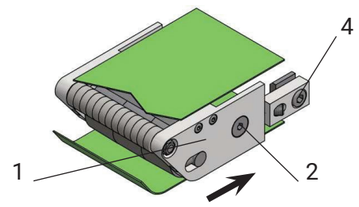
8.4 - Tail 11

Loosen screw (2) and move the entire tail assembly (1) inward (arrow direction) by turning the adjustment screw (3) to loosen the belt. Retighten screw (2). The belt may now be replaced. See previous section for tensioning and tracking. All new belts must be tensioned and tracked.



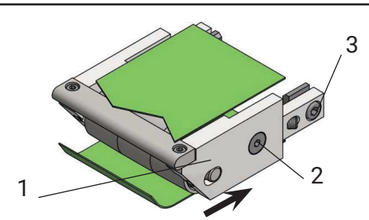
8.5 - Tail 13

Loosen screws (2) and (4) and push the entire tail assembly (1) and alignment blocks inward (arrow direction) to loosen belt. Retighten screws (2) and (4). The belt may now be replaced. See previous section for tensioning and tracking. All new belts must be tensioned and tracked.



8.6 - Tail 17

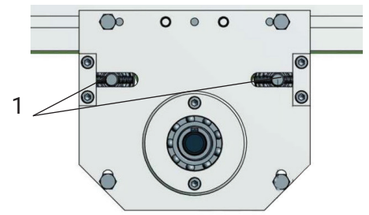
Loosen screws (2) and (3) and push the entire tail assembly (1) and alignment blocks inward (arrow direction) to loosen belt. Retighten screws (2) and (3). The belt may now be replaced. See previous section for tensioning and tracking. All new belts must be tensioned and tracked.



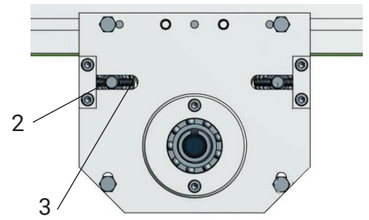
8.7 Additional Notes on GUF-P 2000 BA/BC

Prior to completing steps in Section 8.7, first complete steps in 8.2 through 8.6 as required. The steps below must be completed on both sides of the drive assembly.

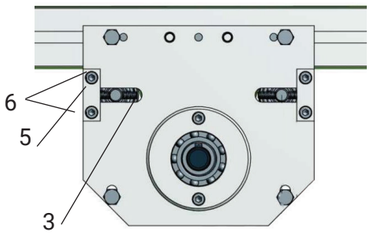
Loose the bolt (1) and remove the side covers.

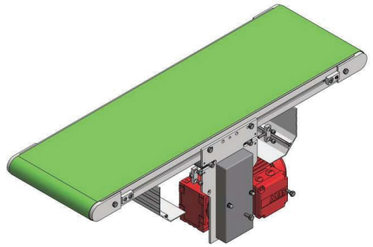


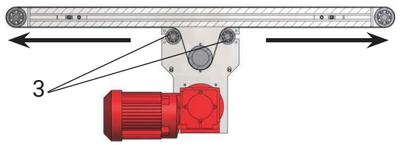
By loosing the bolt (2) the roller (3) is loosened and the belt is relaxed.



After loosing the roller (3) and relaxing the belt, the clamping element (5) has to be disassembled by removing the bolt (6). Then roller (3) is to be removed in direction of the arrow. DO THIS ON ALL SIDES OF THE MOTOR PLATE. The belt can now be removed.







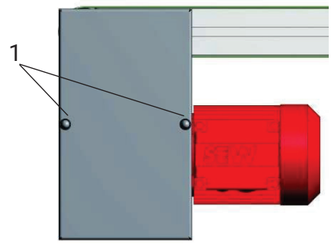
9 CONVEYOR MAINTENANCE - TENSIONING & GREASING OF DRIVE CHAIN

All work to be performed by qualified personnel only.
Conveyor power must be disconnected before performing maintenance.

THIS SECTION DOES NOT APPLY TO THE DRIVE VERSION AA, AF, BA and BF.
Do NOT lubricate timing belt and pulley drive trains.

9.1 Tensioning & Greasing of the Drive Chain - GUF-P 2000 AC/AG

Disconnect power prior to removing guards. Remove cap nuts (1) and remove the chain guard.

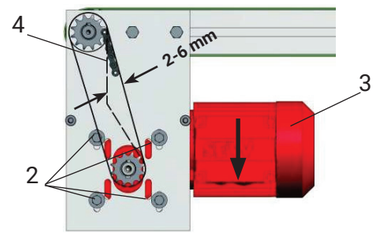


Tensioning the Drive Train

Loosen the mounting screws (2) of the motor (3). Lower the motor, thereby adding tension to the drive chain (4).

Ensure that all sprockets are aligned with each other.

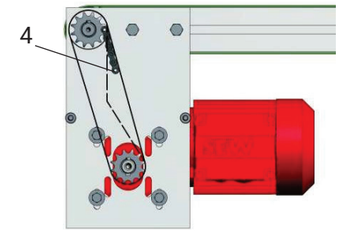
Do not over-tension the drive chain. Proper tension should allow 2-6 mm of chain movement on one side.



Greasing the Drive Train Chain

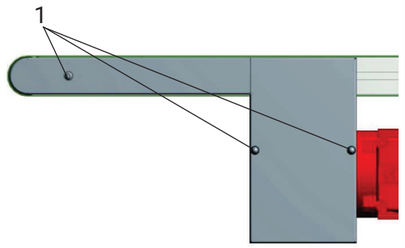
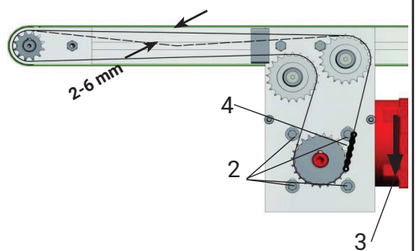
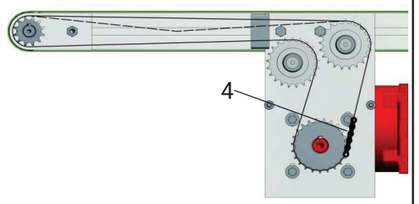
The drive chain (4) must be lubricated with grease in accordance with the maintenance instructions (see Section 6). Apply the lubricant with a brush to the chain edges, in order for the lubricant to penetrate the links completely.

Replace all guards before reapplying power to the conveyor.



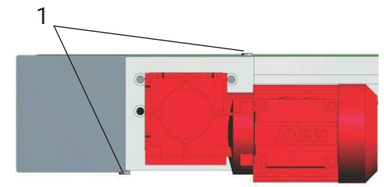
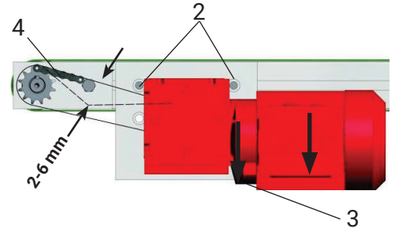
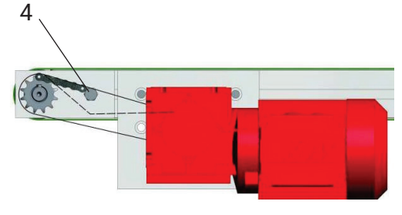
9 CONVEYOR MAINTENANCE - TENSIONING & GREASING OF DRIVE CHAIN (CONT.)

9.2 Tensioning & Greasing of the Drive Chain - GUF-P 2000 AM

Disconnect power prior to removing guards. Remove cap nuts (1) and remove the chain guard.	
Tensioning the Drive Train Loosen the mounting screws (2) of the motor (3). Lower the motor, thereby adding tension to the drive chain (4). Ensure that all sprockets are aligned with each other. Do not over-tension the drive chain. Proper tension should allow 2-6 mm of chain movement on one side.	
Greasing the Drive Train Chain The drive chain (4) must be lubricated with grease in accordance with the maintenance instructions (see Section 6). Apply the lubricant with a brush to the chain edges, in order for the lubricant to penetrate the links completely. Replace all guards before reapplying power to the conveyor.	

9 CONVEYOR MAINTENANCE - TENSIONING & GREASING OF DRIVE CHAIN (CONT.)

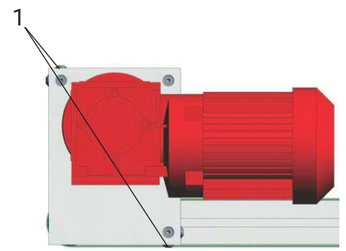
9.3 Tensioning & Greasing of the Drive Chain - GUF-P 2000 AS

Disconnect power prior to removing guards. Remove screws (1) and remove the chain guard.	
Tensioning the Drive Train Loosen the mounting screws (2) of the motor (3). Lower the motor, thereby adding tension to the drive chain (4). Ensure that all sprockets are aligned with each other. Do not over-tension the drive chain. Proper tension should allow 2-6 mm of chain movement on one side.	
Greasing the Drive Train Chain The drive chain (4) must be lubricated with grease in accordance with the maintenance instructions (see Section 6). Apply the lubricant with a brush to the chain edges, in order for the lubricant to penetrate the links completely. Replace all guards before reapplying power to the conveyor.	

9 CONVEYOR MAINTENANCE - TENSIONING & GREASING OF DRIVE CHAIN (CONT.)

9.4 Tensioning & Greasing of the Drive Chain - GUF-P 2000 AU

Disconnect power prior to removing guards. Remove the button-head screws (1) and remove the chain guard.

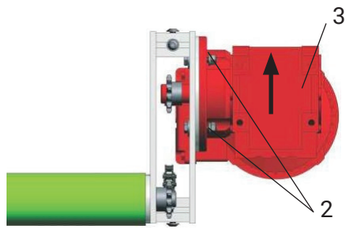


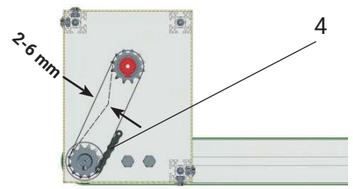
Tensioning the Drive Train

Loosen the mounting screws (2) of the motor (3). Raising the motor, thereby adding tension to the drive chain (4).

Ensure that all sprockets are aligned with each other.

Do not over-tension the drive chain. Proper tension should allow 2-6 mm of chain movement on one side.

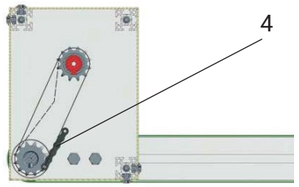




Greasing the Drive Train Chain

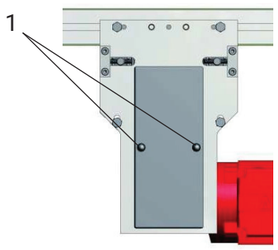
The drive chain (4) must be lubricated with grease in accordance with the maintenance instructions (see Section 6). Apply the lubricant with a brush to the chain edges, in order for the lubricant to penetrate the links completely.

Replace all guards before reapplying power to the conveyor.



9.5 Tensioning & Greasing of the Drive Chain - GUF-P 2000 BC

Disconnect power prior to removing guards. Remove cap nuts (1) and remove the chain guard.

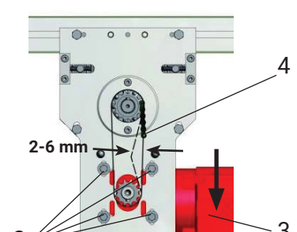


Tensioning the Drive Train

Loosen the mounting screws (2) of the motor (3). Lower the motor, thereby adding tension to the drive chain (4).

Ensure that all sprockets are aligned with each other.

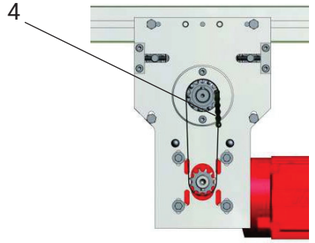
Do not over-tension the drive chain. Proper tension should allow 2-6 mm of chain movement on one side.



Greasing the Drive Train Chain

The drive chain (4) must be lubricated with grease in accordance with the maintenance instructions (see Section 6). Apply the lubricant with a brush to the chain edges, in order for the lubricant to penetrate the links completely.

Replace all guards before reapplying power to the conveyor.



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