



# Storage Instructions of Gurtec GmbH

*as of 2017-11-01*

Client & Project Details	
<b>Client</b>	All
<b>Project</b>	All
<b>Site Location</b>	All
<b>End User</b>	All

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## 1 BACKGROUND

This document provides guidance on how GURTEC Conveyor Component products should be stored. This does not remove the responsibility of the company storing the goods from the need to assess the situation and ensure that whatever actions are taken meet the principles of this document and they deem them safe and within acceptable methods.

The first and primary objective when storing any GURTEC product is to avoid the possibility of any person being injured when storage of the goods.

The second objective is to ensure that the goods are stored under suitable conditions to prevent damage of goods and ensure performance operation upon installation.

Failure to follow these storage instructions may invalidate the product warranty therefore it is recommended that these instructions are followed at all times.

## 2 HANDLING AND STORAGE

This document details the methods of the items for short and long term storage. It does not address some associated issues with long term storage such as insect damage etc.

## 3 CONVEYOR ROLLERS

Conveyor rollers are packed separately from frames and typically they are packed on timber pallets and or in timber crates/boxes (wooden and packing residues shall be disposed according to local regulations).

Pallets, crates, and boxes have provision for handling by a fork lift. The steel straps securing the items should remain intact until the goods are ready to be unpacked. Typical packing of rollers can be seen below (Figures 1 & 2)



Figure 1 – Box/crate



Figure 2 - Pallet

It is most important that items are carefully unloaded from the truck to avoid damage. Do not drop any item to the ground as brackets may be bent or bearing seals and shaft dislodged from the roller shell. Any roller so damaged cannot be rectified on site and will have to be returned to Gurtec for repair or remanufacture.

Rollers shall be stored horizontally. Rollers should be stacked on pallets or still in their packed condition until installation. Rollers should be stowed undercover out of harsh environmental

conditions, typically warehouse. If items are stored outside and subject to weather during the pre-erection period, then they shall be kept well clear of the ground. This is only short term period less than 6 months. Rollers must **not** be allowed to be immersed in pools of water.

All rubber disc or lagged rollers shall be stored under cover and out of direct sunlight to minimize UV damage.

For correct installation instructions please refer to Installation Operation and Maintenance Manual.

## 3.1 LONG-TERM STORAGE OF CONVEYOR ROLLERS

Over a period of time the grease in a stationary roller bearing and seal will tend to slump towards the bottom of the roller. If left unattended, this can have a negative effect on the roller performance.

If long term storage of a roller is required, special consideration should be given to assure the future performance of the rollers is not compromised. In this event, it is recommended that the roller shaft is regularly rotated to ensure the grease in the bearing and seal is evenly distributed.

If the rollers are to be stored in a crate/box, it is good practice to ensure that one end of the crate will allow access to rotate the spindle (shaft). Examples of this packing are shown in figures 3 & 4.



Figure 3



Figure 4

To ensure the optimum roller performance then each roller shaft should be turned for two full rotations every month. It is good practice to mark with a pen on the shaft and the tube with start locations and then each time the shaft is rotated a separate color is used to provide a visual record that this activity has taken place.

GURTEC conveyor rollers are factory-lubricated and sealed-for-life. It is essential that, for satisfactory operation and to meet the conditions of guarantee, no re-greasing be attempted during the warranty period.

## 4 IDLER FRAMES

Idler frames are typically packed on timber pallets/skids and or in timber crates/boxes (wooden and packing residues shall be disposed according to local regulations).

Pallets, crates, and boxes have provision for handling by a fork lift. The steel straps securing the items should remain intact until the goods are ready to be unpacked. Typical packing of frames

can be seen below (Figures 5 & 6)



Figure 5 – Pallet



Figure 6 - Skid

It is most important that items are carefully unloaded from the truck to avoid damage. Do not drop any item to the ground as brackets may be bent or damaged. Any frames so damaged cannot be rectified on site and will have to be returned to GURTEC for repair or remanufacture.

Frames should be stacked on pallets or still in their packed condition until installation. Frames and a minimum should be stored on a hardstand area not subject to flooding. If possible store undercover out of harsh environmental conditions. Frames must **not** be allowed to be immersed in pools of water.

All rubber or mechanical items such as trainer idler pivots, impact bars etc. shall be stored under cover and out of direct sunlight to minimize UV damage.

For correct installation instructions please refer to Installation Operation and Maintenance Manual

## 5 CONVEYOR PULLEYS

Conveyor pulley assemblies should be lifted by the pulley shell only. The recommended method is to use a spreader bar and lifting chain with hooks\*, to securely support both ends of the pulley's shell rim overhang without damaging the ends of the shell, lagging, or speed sensing flags where fitted. (Refer Figure. 7)

Alternatively, two (2) adequately rated textile slings with appropriate end fittings, together with lifting chain and hooks, may be used; the textile slings being placed under and around the pulley shell (positioned over end disks) so that it is securely supported. (Refer Figure. 8)

Under **no** circumstances shall chains be used on the pulley shaft as this will result in damage to the pulley shaft.

The pulley assembly must **not** be lifted by the bearing housing cap eye bolts (where fitted). These are only fitted to lift the bearing housings.

\*It will be noted that lifting hooks shall **not** have pointed ends which make contact with the

underside of the shell. A flat lifting hook must be used which has flush contact with the shell.

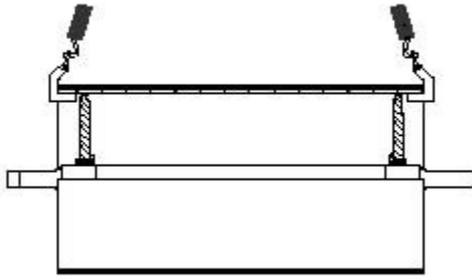


Figure 7

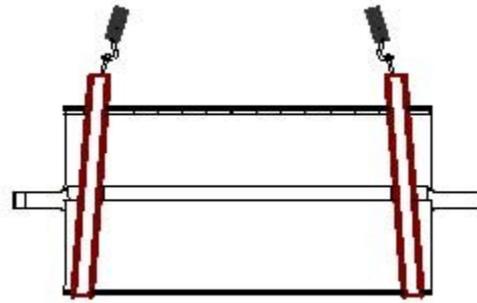


Figure 8

### Correct Lifting Technique

Lagged conveyor pulleys when delivered have the lagging protected by wood battens or alternative protection wrapped around the pulley shell lagged surface.

**Warning** – care must be taken when cutting band, as the wood battens may cause injury, (wooden and packing residues shall be disposed according to local regulations).

If the pulley is not lagged the circumferential pulley shell surface will be coated with a rust inhibiting compound (Tecnofluid - BQ70 or equivalent). Exposed portions of the pulley shaft are also protected with a coat of rust inhibiting compound (Tecnofluid - BQ70 or equivalent).

The complete pulley is strapped to timber battens and/or steel frames to ensure stability during transport. When bearing assemblies are fitted they are supported by timber battens to prevent movement and avoid brinelling during transport, refer to Figure 9



Figure 9 – Standard Pulley Packing

All packing and protection provided to the conveyor pulley should remain intact until the pulley is required for installation.

The pulley shall be stored in a horizontal position clear of the ground to prevent damage due to

immersion in pools of water. Preferably, conveyor pulleys should be protected from the weather during the pre-erection period and stored out of direct sunlight to minimize any heat effect upon the pulley lagging.

Care must be taken to avoid storing pulleys in areas that experience vibration. For example, do not store pulleys near roads handling heavy vehicles or near machinery where ground vibration can be present.

**IMPORTANT** - Total Pulley weight must not be supported by the bearings

For correct installation instructions please refer to Installation Operation and Maintenance Manual

## 5.1 LONG-TERM STORAGE OF CONVEYOR PULLEYS

Additional to the above section 2.3 , if long term storage of pulleys is required consideration to the following should be given:

*a) Standard Pulley weight less than 15 tons complete assembled pulley:*

Pulley shall be stored in a clean, safe, dry, covered environment with adequate ventilation and lagging out of direct sunlight. A warehouse or shed would be an acceptable location. Pulleys should remain in their packed state until required for installation.

Bearings Housings must be packed full with good high viscose (NLGI 3 preferred) and excellent water resistant grease. All grease nipples and seals need to be fully sealed to prevent condensation entering the housing.

If possible the housing is to be fully sealed with a high-build, solvent-free strippable thermoplastic (for example Enviropeel E170).

Alternatively, a “shrink-wrap” plastic can be used in conjunction with moisture monitors and desiccant breather.

If nether of the above systems are possible then the bearing housing should be fully packed and the Bearings must be rotated at least five revolutions every three months.

If the pulley has been stored for 3 years or longer, then the grease should be tested for suitability prior to being put into service.

Exposed portions of the pulley shaft shall be coated annually with rust inhibiting compound (Tecnofluid - BQ70 or equivalent).

Lagging in contact with timber or steel battens must be rotated to prevent permanent deformation of rubber.

*b) Heavy Duty Pulley weight greater than 15 tons complete assembled pulley:*

Incorporating the above, with the below amendments

Bearings must be rotated at least ten revolutions every three months (unless sealed in thermoplastic or shrink wrap).

Lagging in contact with timber or steel battens must be rotated to prevent permanent deformation of rubber.

Special requirements shall be adapted to the packing to limit the amount of surface point contact on the rubber, i.e. curved support profile.

*c) Extra Heavy Duty Pulley weight >30T Complete Assembled Pulley*

It is recommended to have the bearings not assembled on the pulleys and installed at a later date prior to installation. Sub components must be stored as per section 3.3 following.

Should entire pulley be assembled, then incorporating the above with the below.

Purpose built cradle must be designed to limit the point contact with the shell, i.e. curved support. Extra rubber support must be used on the cradle to give extra protection to the lagging.

**IMPORTANT** - Total Pulley weight must not be supported by the bearings

\* Once ready for installation the packed grease should be removed and replaced with operating grease. It is important that the operating grease be compatible with the packed grease i.e. same base oil etc.

## 6 CONVEYOR BELT CLEANERS & ACCESSORIES

Pallets, crates, and boxes have provision for handling by a fork lift. The steel straps securing the items should remain intact until the goods are ready to be unpacked.

Belt Cleaners and Accessories must be stored in a covered warehouse/shed with adequate ventilation and protection from environmental conditions.

All rubber or polyurethane items shall be stored under cover and out of direct sunlight to minimize UV damage.

## 7 OTHER CONVEYOR SUB COMPONENTS

Pallets, crates, and boxes have provision for handling by a fork lift. The steel straps securing the items should remain intact until the goods are ready to be unpacked.

Bearing housings must be stored in their original condition or unpacked in a covered warehouse/shed with adequate ventilation and protection from environmental conditions.

The internal surface of the bearing housings bores will be coated with a rust inhibiting compound (Tecnofluid - BQ70 or equivalent). Exposed portions of the housing i.e. Labyrinth area will also be protected with a coat of rust inhibiting compound (Tecnofluid - BQ70 or equivalent). (Figure 10)

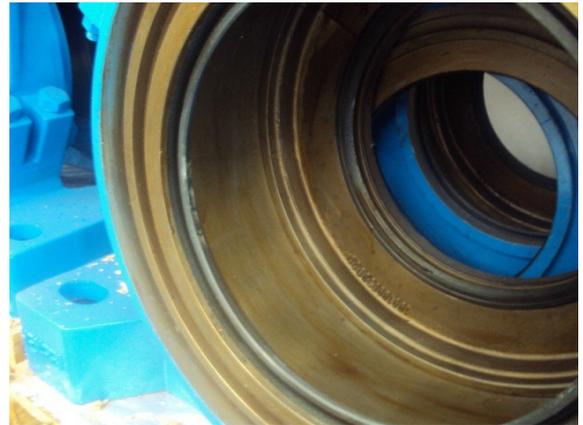


Figure 10 – Bearing housing surface

It is good practice and recommended to apply rust inhibiting compound at least once a year.

The boxes/ crates and or pallets can be stacked on stacking shelves seen below (Figures 11)



Figure 11 – Housing Storage

Bearings and Locking Assemblies crates/boxes must be stored in their original condition in a covered warehouse/shed with adequate ventilation and protection from environmental conditions. All packing and protection provided to the Bearings and Locking Assemblies should remain intact until they are required for installation.

The boxes/crates can be stacked on stacking shelves seen below (Figures 12).



Figure 12 – Bearings and Locking elements

## 8 INSTALLATION

Please refer to the applicable Installation and Operating Manual (IOM) for information on how to appropriately install and maintain the equipment.