

## WARNINGS RE belt bend conveyors



The products described in this manual may be modified at any time in terms of presentation, operation or use. Under no circumstances can their description be considered as a contractual element.

The conveyor has been sized and chosen according to the specifications given in your technical specifications, price offer and/or purchase order. No change in the working conditions (such as room or product temperature, cleaning conditions, etc ...) should be made.

This conveyor is only intended for the conveying of products. No other use is allowed. In particular, it cannot be used as a working table or serve as a support for a person, machine or tools.



## CAUTION:

In order to reduce the risks of fire, electrical shock and injury of the people using electrical equipment, it is recommended to always follow basic safety precautions, including the followings:

- Do not commission the conveyor before having read, understood and applied the recommendations included in this manual.
- Disconnect the power supply and ensure that the machine has come to a full standstill, before doing any cleaning, maintenance or servicing.
- Keep this technical manual for later use.

Failure to follow these instructions could result in death, serious injuries or considerable material damage:

- Isolate the power supply before making any assembly or disassembly as well as when changing fuses or making changes to the structure.
- Before commissioning, ensure that the on-site voltage corresponds to the voltage of the unit.
- Emergency stops must remain operative at all times. The release of emergency stops must not cause uncontrolled running.



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## **USE:**

This belt bend conveyor is a machine used for loading, unloading and handling unit loads. It has been designed and sized for this application. Any other use, that differs from the one indicated in this manual, may cause damages to the equipment and present a danger for the user.

- 1. Do not wear loose clothing or jewelry that can get caught in moving parts. Wear a protective cap to secure long hair,
- 2. The conveyor must be connected to a correctly protected and grounded electrical installation.
- 3. Do not operate the conveyor in reverse,
- 4. Do not walk or lean on the slider bed,
- 5. Use only original spare parts.
- 6. The machine (once it is unserviceable) and all the components should be disposed of in accordance with statutory regulations (notably Packaging directive 94/62/EC and WEEE).

Unjustified removal of protection devices, incorrect use, faulty installation or inappropriate operation could represent a serious risk to people and equipment.



## **General part list**

RE belt bend conveyor



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Refer to sheets:

- RE 03 (Exploded view)
- RE 04 + RE 05 (Details of belt fitting )
- RE 06 (Fitting and adjusting of tracking guides).

#### Item Nr:

- 1. Frame
- 2. Inner casing
- 3. End reinforcing spacer
- 4. Lower protective plate
- 5. Guiding support
- 6. Reinforced lining (G.V. high speed option)
- 7. Support section
- 8. Tracking guide
- 9. Gauge adjusting rod
- 10. Inner bearing housing
- 11. Roller tape
- 12. Keyed driving cone
- 13. Driven cone
- 14. External bearing unit with base plate
- 15. Protective cap

- 17. Package guiding edge strip
- 18. Cowl end piece

16. Upper cowling

- 19. Backing plate
- 21. Belt with reinforcements
- 22. Metal screws  $\varnothing$  10 x 35 zinc-coated steel
- 23. Bearing support lug stainless steel
- 24. Bearing spacer bush stainless steel
- 25. Bearing 6200ZZ (Ø 10 x 30 x 9)
- 26. Bottom nut  $\emptyset$  10 zinc-coated steel
- 27. Stainless steel screw for GV model
- 28. Washer ZU
- 29. Bearing 608 ZZ
- 30. Bottom nut M8
- 31. Reinforcement sewn onto the belt

#### Note:

- All necessary screws are available as standard items from retailers.
- Belt bend conveyors can be set up and dismantled without any special tools.
- The tracking guides (item nr 8) and the support section (item nr 7), when supplied as spare parts, require a specific adjustment on the machine (see sheet RE 06).



## **Exploded view**

Without the screws



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# **Belt fitting**



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Nr	Description
21	Belt
22	Metal screws $\emptyset$ 10 x 35 – zinc-coated steel
23	Bearing support lug – stainless steel
24	Bearing spacer bush – stainless steel
25	Bearing 6200ZZ (Ø 10 x 30 x 9)
26	Bottom nut $\emptyset$ 10 - zinc-coated steel
31	Reinforcement sewn onto the belt



# Fitting of belt for « GV » bend





Nr	Description
21	Belt
22	Metal screws $\emptyset$ 10 x 35 – zinc-coated steel
23	Bearing support lug – stainless steel
24	Bearing spacer bush – stainless steel
25	Bearing 6200ZZ (Ø 10 x 30 x 9)
26	Bottom nut $\emptyset$ 10 - zinc-coated steel
27	Stainless steel screw for GV model
28	Washer ZU
29	Bearing 608 ZZ
30	Bottom nut M8
31	Reinforcement sewn onto the belt





# Commissioning

[See sheets RE01, RE02 to RE12]



The belt bend conveyors are tested before dispatch (see sheet RE00) and set after the testing period. Upon receipt, please report any anomalies occurred during transport.

#### A BEFORE COMMISSIONING, ensure that :

The belt is in a horizontal position.

The conveyor has been sealed to the ground and/or bolted and/or suspended, etc ... There is a minimum slack with the straight conveyors placed before and after the belt bend conveyor.

The electrical installation complies with the regulations in force.

#### B START-UP :

Check that no object has slipped under the protective parts and engine casing. Make sure that the belt running direction is correct. Make sure that the running is smooth.

#### C WARRANTY :

The warranty covers all manufacturing defects and the replacement of the concerned parts, within the limit of the value of the machine.

The manufacturer is not liable for damages resulting from an abnormal use, insufficient or inadequate maintenance, or exceptional circumstances. Examples of cases which are not covered:

- Cleaning with NOT suitable products,
- Accumulation on the conveyor,
- Occasional abnormal overloads,
- Modification of the drive without prior explicit approval FROM the manufacturer,
- Additional components directly welded on the machine, or accessories interfering with normal operation,
- Operating in aggressive environment which was not specified when choosing the equipment.
- Objects falling directly on the slider bed, cylinders/cones or any other piece of the conveyor.
- Power surges or incorrect supply.
- Change of the initial settings of the machine (sheet RE08, § C).
- ...



# Replacing a belt

[See sheets CCD-RE01, RE02 to RE11]



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## A DISMANTLING (Sheets RE 03, 04, 05 & 06)

- 1) Slacken the tension of both bearing units 14 and both inner housings 10,
- 2) Dismantle the housings and bearings 10,
- 3) Remove the protective cowlings 4, 16 & cowl end pieces 18,
- 4) Separate the bearings 25 from their guides 8,
- 5) Seize the inner casing 2 => see sheet RE07 and pictures sheet RE10 for 180° curve
  If the machine is mounted with supports, leave them fixed only to the frame 1.

#### B **FITTING**

- 1) Check the adjustments of the tracking guides according to the sheet RE06,
- 2) Feed the new belt into the machine (sheet RE09, picture 2),
- 3) Unstrap the cones from the frame,
- 4) Put the backing plates 19 of the inner housing 10 on the inner axe of the cone,
- 5) Put the inner casing 2 into place and fit the cones using a strap (picture n°3), (see special feature below for 180° curve §D)

- 6) Strap the cone (inner side) to the frame (sheet RE09, picture 1),
- 7) Extract the belt on the inner side (picture 2),

8) Proceed with :

- Cleaning the tracking guides 8,
- Cleaning the driving cone's lagging 11,
- Check the wear of the supports 6 or 7.
- $\Rightarrow$  Change the defective parts!
  - 6) Hook the bearings 25 in their tracking guides 8, and if necessary manually push the belt to help inserting it.
  - Tense the belt by adjusting the bearing tensioners of the cones,
  - 8) Do a manual test run by pushing the belt (see RE09, picture 4),
  - => You should be able to fit it easily! /!\ Do not use force!
  - 9) Reinstall the protective cowlings 4, 16 & cowl end pieces 18,

#### C ADJUSTMENTS :

- 1) Adjusting of the external bearing units 14: slide the bearing units to align them with the 2 punch marks referring to the factory settings (sheet RE09, picture 5).
- 2) Adjusting of the inner bearing units 10: align them with the punch marks (sheet RE09, picture 6).

#### These first 2 operations might be insufficient.

The following abnormalities may occur :

- Important waving of the top cover of the belt on the inner radius
- => slightly tighten both inner bearings simultaneously (1 to 2 mm each).
- Derailment during the manual test run
- => tighten the outer bearing unit on the side of the derailment (from 1 to 3 mm).

If necessary repeat the proceeding.



#### **Caution :**

Excess tension = can lead to a blockage of bearings

#### D SPECIAL FEATURE FOR 180° MODEL: see sheet RE10

Dismantling: It is not necessary to remove the inner casing 2. Simply unbolt the attachments of the supports (picture 7) and extract the belt directly by opening the outside frame (picture 8).



## Dissmantling and fitting Of belt bend conveyors

[see sheet RE08]



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Picture n°2



Picture n°3



Picture n°4



Picture n°5



Picture n°6





# Fitting and dismantling of bends



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Picture n°7









## Maintenance



#### A PREVENTIVE CHECK-UP: (1<sup>st</sup> visit after 200 hours)

#### Every 2000 hours:

*Visual check* of the general state of the curve, mainly focusing on the following points: belt wear, smooth running and flatness of the top cover.

*Audible check* for irregular noise, in order to detect any defect in the guidance system. If necessary, plan a maintenance operation and buy a replacement belt 21.

#### Every 6000 hours or 1 year (sheet RE 03, 04, 05 & 06)

Complete the inspection by dismantling the upper cowls, items 16 and 18, for any cleaning that may be required and to check the condition of the bearings 25 and of the guides 6 or 7 and 8.

The condition of the belt must also be checked on its outer radius section.

Check the wear of the reinforced lining of the driving cone 11.

Open the cover on the housings 10 for cleaning.

#### B **OPERATING FAILURES (sheet RE 06) :**

- a) Blocking or jamming due to soiling or foreign bodies.
- b) Jerk operation and abnormal fatigue of the drive systems. Main reasons:
  - Belt too much tensed.
  - Wear of the guiding profiles 7 & 8
- c) Slipping of the drum under the belt. Main reasons:
  - Worn drum lagging
  - Abnormal wear on the tracking guide 8
  - Wear of the belt

Caution :

d) Avoid insufficient or excessive tension.

#### $\Rightarrow$ Corrective action to be taken: refer to sheets RE 08, 09 & 10.



Excessive tension = BLOCKING = Quick wear of the guides and bearings.







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#### PERIODIC MAINTENANCE CHART

Operating time	Observation / Servicing action / Remarks	Dates
200 h / 15 days		
2000 h / 6 months		
6000 h / 1 year		
/ 2 years		
/ 3 years		
/ 4 years		
/ 5 years		
/ 6 years		
/ 7 years		