

Cleaning and Disinfecting Volta Belts

All cleaning and disinfecting procedures must be re-examined periodically to confirm that the required hygiene level is maintained. Evaluation and inspection procedures should be carried out in order to verify that long term compliance with procedures is observed and specific local regulations and requirements are met.

As for any other plant operation, cleaning and disinfecting should be equally documented. If a HACCP concept is applied, these procedures should be treated as Critical Control Points (CCPs).

If a Quality System like ISO is in operation, they should be integrated in the System.

It is vital that all cleaning procedures consider the following critical factors that could affect hygiene levels and influence the longevity of the belt itself.

- The amount of time the belt is exposed to the cleaning/disinfecting substance.
- The concentration of the cleaning/disinfecting chemicals.
- The ambient temperature.
- The conveyor construction.

General Information:

- Safety is a primary concern; you should observe any local health and safety regulation and use common sense when dealing with any machinery. Particular care should be taken in the machine around the area of the pulleys or rollers which can easily trap body parts and cause serious injuries.
- Most large Detergents and Cleaning Solvent manufacturers have tested their solvent's effects on Volta belts and can therefore recommend the best solution for your application.
- When converting from Modular belt to Volta Positive Drive belts the cleaning procedure can be simplified and the use of highly concentrated harsh chemicals can be reduced. You are advised to re-evaluate your procedure in order to save time, use less water and use less chemicals. By re-evaluating the procedure you can also reduce costs and increase belt life.
- We do not recommend that you remove Volta belts for soaking. This procedure was developed in order to combat the low hygiene level of modular belts and is generally not necessary once Volta Positive Drive Belts have been fitted, in which case you are advised to re-evaluate your cleaning procedure. If you still feel the need to perform the soaking stage, Volta can offer you a lace solution which enables frequent belt removal. We suggest that you contact your nearest Volta representative to evaluate the effect this could have on the belt.
- One of the most important recommendations regarding the belt cleaning procedure is for you to make sure that the belt is left as dry as possible at the end of the process; any leftover "pools" of water will reduce the belt life.

Cleaning Procedure Tips

1) **Completely stop and disconnect any electrical flow to the conveyor.**

2) **Release the quick tension unit.**

3) **Removal of Bulky Product Residue.**

We advise you not to use any sharp tools or harsh metal brushes/Wire wool to remove stuck material; a flat low friction tool or soft cloth should be used to loosen remains if necessary.

4) **Pre- Rinse**

In order to remove any food residue remaining the belt surface should be thoroughly rinsed by using low pressure water at 130°F/54°C to 160°F/71°C. Water pressure used should be at 10 to 15 Bar. A thorough pre-rinse can reduce the amount of chemicals required in the cleaning process. You should avoid rinsing of belt surface closely with high pressure water jet.

5) **Foaming**

Selecting the detergent type most suitable will depend on the character of the product being conveyed. We recommend that you consult with your Detergent supplier for best cleaning results and minimal possible harm to the belt surface.

Commonly used Mild Alkaline Foam Cleaner, Acidic Foam Cleaner, or Chlorinated Alkaline Foam cleaner with concentration of 2-3% and applying time of around 15 minutes are safe to use on all Volta belts.

6) **Post-Rinse**

The post rinse process is to ensure that all pieces of remaining product wastage will be removed from the equipment. During this process it is also important to make sure that all chemical residues are thoroughly removed. A low pressure wash with warm water is best for this stage of the process. Water temperature should not exceed 130°F/54°C to 160°F/71°C. Any residual chemicals could cause damage to the conveyor belt and reduce its life span.

7) **Additional Sanitizing.**

It is highly important to make sure that your belt has been meticulously cleaned before beginning the sanitation process. Sanitation chemicals will not have any effect on a surface that is not completely clean.

As for the foaming stage, selecting the detergent type most suitable will depend on the character of the product being conveyed. We recommend that you consult with your Detergent supplier for best cleaning results and minimal possible damage to the belt surface.

Commonly used Neutral Foaming Disinfection, Per-Acetic Acid and Alkaline Disinfections with concentration of 1- 2% and applying time of around 15 minutes are safe to use on all Volta belts.

Various types of chemical disinfectants act differently on certain groups of bacteria and under certain pH-ranges. In order to achieve the maximum disinfecting effect, you are recommended to periodically alternate the type of the chemical disinfectant applied. If using Chlorine at this stage it is not recommended to exceed 200ppm, Ozone can be used according to local health and safety regulation.

Check-list after cleaning procedure:

1. It is most important that all harsh chemical residues are rinsed off the surface of the belt.
2. Make sure that the belt is left dry as possible at the end of the process; any leftover "pools" of water will reduce the belt life. Run the conveyor or lift the belt to drain the excess water.

Check list before activating your production line:

1. Chemical residues have been rinsed of the belt.
2. Tension (if necessary) was restored to the correct measure.
3. Belt tracking is restored.
4. There are no obstructions along the conveyor construction that could prevent the belt from running smoothly.
5. Belt is not vacuumed pinned to the conveyor.

Conveyor Constructions Tips(must comply with local health and safety regulations):

1. All plant equipment should be designed to be adequately cleanable.
2. Open Side-Guards should be fitted - or removable sides for easy access to internal wash down.
3. Create a natural flow design - avoid any dirt traps and fluid accumulation points.
4. Include a quick tension unit - allows for easy tension release and belt lifting for internal wash down.
5. Open-Side conveyor - a possible solution for easy endless belt removing and refitting.