

THE IMPORTANCE OF ORIGINAL SPARE PARTS

It is completely normal for some parts of a machine to age before others, especially if the use is very intense for load and daily hours. Some consumable parts must be replaced during time to maintain performance.

And this is not a small matter, these problems must be held in high regard and resolved as soon as possible: every hour or day of plant shutdown means a lack in waste treatment, with related disposal problems and unforeseen extraordinary costs.

For this reason, correct programming of the spare parts warehouse is essential: this allows to program the maintenance of the machines, guaranteeing excellent and constant performance, reducing the possibility of unexpected plant downtime and, in any case, always being ready in case of emergency .

The original spare parts are always the safest answer. Coming directly from Teknofanghi, the original pieces ensure the inalterability of the performances and are covered by the further guarantee both in terms of quality and duration. The original spare parts are designed specifically for the unit that requires maintenance, thus guaranteeing perfect and therefore immediate assembly, to optimize intervention times and, ultimately, the operation of the machine.

THE EFFICIENCY OF THE WASHING SYSTEM

Our filter cloths are kept clean with an automatic washing system, **using special Teknofanghi designed spray nozzles**, which use less water and rapidly maintained without the use of any tools.

Yes, because the **maintenance of the washing system** is something that seems banal but **should not be underestimated**. Do you know what happens without a correct maintenance of the washing system?

Let's have a look: washing water contains salts and solid particles that, in the long run, can **abrade and deteriorate the nozzles**, reducing the efficiency of the washing system and consequently the efficiency of the filtering cloths.

How can the situation be solved? With a **very simple and rapid replacement of the damaged nozzles**. A small investment for a great result:

DAMAGE NOZZLES



DAMAGE NOZZLE



NEW NOZZLE



- EASY PROCEDURE FOR NOZZLE REPLACEMENT: NO TOOLS ARE NEEDED
- GREAT EFFICIENCY GUARANTEE IN WASHING OPERATIONS
- GREAT EFFICIENCY GUARANTEE IN FILTRATION AND DEWATERING
- SCHEDULED MAINTENANCE WITH NO EMERGENCY SITUATION

WHEN a BELT MAKES the DIFFERENCE: did you get a CHECK-UP to your MONOBELT®?

The belts used for our MONOBELT® is realized with the best materials and technologies, which allow us to guarantee it for 3 years against technical defects.

But what happens during years of operation? You can see it immediately: with rotation, pressure and abrasion, the **texture** of the belt **deteriorates and gradually flattens**, with a **reduction of the porosity and the permeability**.

The consequence is a **reduction of the efficiency** and an **increase of costs** for the dewatered and thickened sludge final disposal.

What to do? **SIMPLE: A CHANGE OF THE BELT.**



Why?

- GREAT EFFICIENCY GUARANTEE IN FLOW AND DRYNESS
- REDUCTION IN COSTS FOR SLUDGE FINAL DISPOSAL
- SCHEDULED MAINTENANCE WITH NO EMERGENCY SITUATION
- REDUCTION OF ALARM SITUATION AND MACHINE STOP

CLOTH SUSTAINING BARS OF MONOBELT®

All our **MONOBELT®** belt filter presses have an extremely resistant structure, also in the support of the endless belt. In fact, there are specific **cloth sustaining bars** to guarantee the correct positioning and sliding of this one. But can these bars wear out or be subject to abrasion? Yes, of course!



With the **continuous sliding** of the belt during working time and the presence of **abrasive material** in the sludge, these **bars tend to wear out and flatten out.**

And the consequence? The endless **belt cannot slide correctly** and there will be a possible **reduction in pressing and dewatering efficiency.**

The first action that can be done is to check the consumption of the bars and make the correct maintenance as indicated in the manual.

But not to be found unprepared... keep in stock a complete set of cloth sustaining bars.

This can lead to:

- **GREAT EFFICIENCY GUARANTEE IN BELT SLIDING**
- **GREAT EFFICIENCY GUARANTEE IN PRESSING AND DEWATERING OPERATIONS**
- **SCHEDULED MAINTENANCE WITH NO EMERGENCY SITUATION**

ROLLERS CHECK UP

One of the most evident differences between our **MONOBELT®** and the others belt filter presses is the reduced and optimized number of **rollers**.



These rollers are made with the **best materials** and with a long-life guarantee, but during the years of operations they are obviously **subjected to mechanical forces**, especially if the treated **sludge is rich in abrasive solid components**.

And which is the **consequence** of this deteriorating action? The rollers **no longer grip** and the **cloth does not slide properly**; this problem can cause a **reduction in the dewatering and pressing efficiency** of the MONOBELT®.

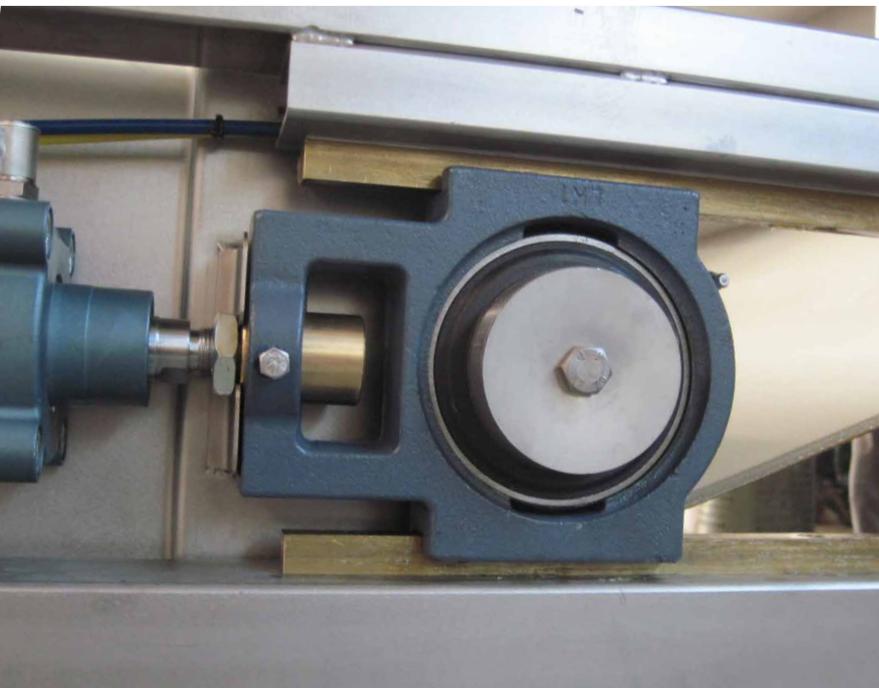
It is important to check and follow the correct maintenance... **and always be foresighted by having a set of spare rollers in stock**.

This investment can permit you to:

- GREAT EFFICIENCY GUARANTEE IN PRESSING AND DEWATERING OPERATIONS
- QUICK MAINTENANCE IN CASE OF NEED
- NO EMERGENCY SITUATION WITH LONG STOPS

THE CORRECTION OF THE ENDLESS BELT: BRASS RAILS

There are two components that are fundamental for the **belt correction**; the first one is the couple of brass rails. But these ones are subject to wear; let's see how.



The **continuous sliding action** leads these brass rails to **wear out** with time and use... and if they are too much deteriorated there may be a **wrong correction of the endless belt** with a **malfunction of the unit**, until the alarm is triggered and the **machine stops**.

First of all, we suggest checking the brass rails and if you notice a consumption you have to change them, so... **remember to keep in stock a set of brass rails for your MONOBELT®.**

This can lead to:

- EXCELLENT CONDITION OF BELT CORRECTION
- GREAT EFFICIENCY GUARANTEE DEWATERING OPERATION
- SCHEDULED MAINTENANCE WITH NO EMERGENCY SITUATION

LET'S TALK ABOUT PNEUMATIC ACTUATORS



One of the **main components of the pneumatic system** of the MONOBELT® belt filter press is surely the **pneumatic actuator**.

The pneumatic actuators installed on our machines are of high quality and guarantee, but like all **parts subject to wear**, they can present **some problems over the time**.



The most common problem for a pneumatic actuator is, of course, the **wear** and the consequent possible **loss of air** due to the constant and intense use of the machine.

And what entails this loss of air on the operation of the MONOBELT®? The first consequence is the **decrease in sludge pressing and dewatering efficiency**; then it is possible to notice an **increase in electricity consumption and in compressed air**, with the overloading of the compressor.

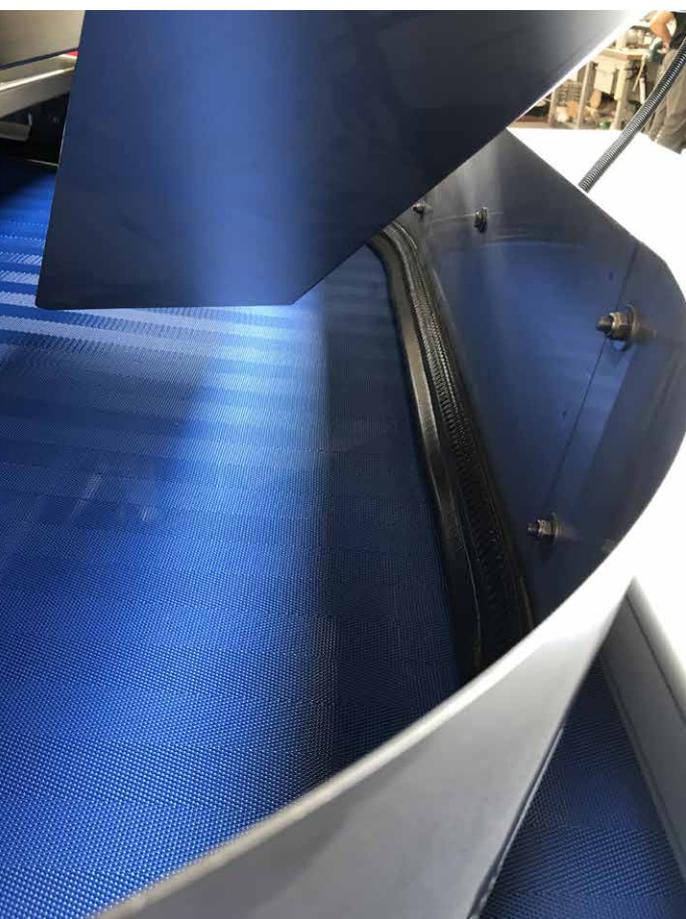
Our first suggestion is to always monitor the conditions of the pneumatic actuator, and the second one is to **always have in stock a complete change of pneumatic actuators for your MONOBELT®**.

That is why:

- QUICK MAINTENANCE WITH NO EMERGENCY SITUATION IN CASE OF NEED
- GREAT EFFICIENCY GUARANTEE IN PRESSING AND DEWATERING OPERATIONS
- OPTIMIZATION OF ENERGY CONSUMPTION
- OPTIMIZATION OF COMPRESSED AIR CONSUMPTION

LET'S TAKE STOCK OF THE GASKETS

To guarantee the **best performance** in dewatering and solid capture, all holding covers installed in the low pressure of MONOBELT® belt filter press are complete with **gaskets**.



But during years of operations, these **gaskets can be damaged and built up**. This kind of problem is quite simple to identify: the **sludge pass through** the damaged gaskets and **fall down on the piston for the belt correction and the bearings, damaging** all these parts and also **fouling the filtrate**.

That is why Teknofanghi suggests to always have a **complete set of spare gaskets**. A small investment for a great result:



- BEST QUALITY OF THE FILTRATE GUARANTEED
- GREAT PERFORMANCE GUARANTEE OF MECHANICAL PARTS LIKE PISTON AND BEARINGS
- SCHEDULED MAINTENANCE WITH NO EMERGENCY SITUATION
- EASY REPLACEMENT AND MAINTENANCE OPERATIONS

THE LIFE OF THE DOCTOR BLADES

Have you ever noticed a **loss of efficiency in removing dewatered sludge from the belt** of your MONOBELT® unit? If your answer is yes, you probably never noticed **what happened to the doctor blades** of the machine.

If the **sludge is too abrasive**, the **doctor blades** can get **consumed and ruined**.

The consequence is almost visible: the dewatered sludge cake doesn't stand out easily so **the efficiency of the doctor blades removal decrease**. Furthermore, if residues of sludge remain on the belt, it **loses water drainage efficiency**.

In case of problems or damage, it is important and suggestable to **always have a complete set of doctor blades for your belt filter press MONOBELT®**.

PROBLEMS CAUSED BY DAMAGED DOCTOR BLADES



NEW DOCTOR BLADES



The advantages?

- GREAT EFFICIENCY GUARANTEE IN DEWATERED SLUDGE CAKE REMOVAL
- GREAT EFFICIENCY GUARANTEE IN FILTRATION AND DEWATERING
- QUICK AND IMMEDIATE MAINTENANCE WITH NO EMERGENCY SITUATION

MAINTENANCE OF DEFLECTOR PLASTIC SCREWS

DEFLECTOR PLASTIC SCREWS



Our belt filter presses **MONOBELT®** have installed some **deflector plastic screws** that are useful to ensure a correct and homogeneous **distribution of the sludge** on the entire belt width.

These screws are **directly in contact with the cloth and the sludge**: the sludge flows with the cloth and is distributed, so it is normal to have a **consumption and a deterioration** over time because of these **mechanical forces**.

The abrasion of the plastic screws leads to a **reduction in their length, a worsening in sludge distribution** and consequently a **reduction in the efficiency of dewatering and pressing**.

It is important to make an ordinary maintenance to check the possible accumulation of the sludge and if the screws are in good conditions. If not, **be provident and always have a set of deflector plastic screws in stock**.

- QUICK MAINTENANCE OF YOUR MONOBELT IN CASE OF NEED
- GREAT EFFICIENCY GUARANTEE SLUDGE DISTRIBUTION
- GREAT EFFICIENCY GUARANTEE IN PRESSING AND DEWATERING OPERATIONS

THE IMPORTANCE OF THE BELT CORRECTION: THE BIL FINGER



To guarantee a correct and performing operation of the MONOBELT®, Teknofanghi has installed the **BIL finger** to **detect the endless belt position**, made with one inductive sensor and one stainless finger oscillating on bearings.

The BIL finger is directly in contact with the rotating endless belt, therefore **it is subject to its rubbing forces**.

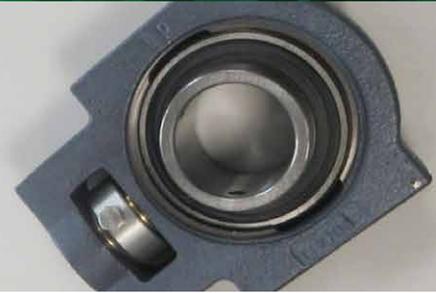
And which is the consequence of this mechanical force? Over time, the movement of the belt abrades the stainless finger of the sensor creating an **even deeper mark** (a real furrow). It can occur that **this mark becomes too deep**, with a consumption greater than 50% of the thickness, **or even cut the finger**, breaking it completely.

If this happens, the **machine goes into alarm**, with consequent **shutdown** of the dewatering system.

How to avoid these unpleasant situations? **Having a BIL finger as spare part in stock**. This will allow you:

- GREAT EFFICIENCY GUARANTEE IN CORRECTION OF THE ENDLESS BELT
- QUICK MAINTENANCE IN CASE OF NEED
- NO OUT-OF-ORDER SITUATIONS
- NO EXTRA CONSUMPTION OF THE ENDLESS BELT

THE IMPORTANCE OF BEING BEARINGS



DAMAGE BEARING



BEARING IN GOOD CONDITION



On its units, Teknofanghi uses special triple lip ball bearings, whose maintenance is explained in detail in each manual. Special attention must be paid in scheduling ordinary maintenance operations and in the type of grease to use.

But without these precautions and in case of problems, what happens? The most frequent problems that can occur are the **bearing block** and the **ovalization of the spheres**.

And the consequences can be very important:

- **machine alarm and plant shutdown;**
- **break of the reducers;**
- **consumption and abrasion of the shaft;**
- **problems on the functioning of the thickener:** if the screw doesn't rotate correctly, the sludge tends to accumulate, and it will be necessary some **extra washes of the cloth** with an **increase of maintenance and operating costs;**
- **problems on pneumatic system.**

So why not have **spare bearings in stock?** In case of emergency it is possible to change easily and rapidly the damaged one so to guarantee:

- **BEST EFFICIENCY OF THE UNIT AND THE SLUDGE TREATMENT**
- **REDUCTION IN COSTS FOR OPERATION AND EXTRAORDINARY MAINTENANCE**
- **REDUCTION OF ALARM SITUATION AND MACHINE STOP**
- **RAPID INTERVENTION IN CASE OF NEED**

MONOBELT® CAKE SIDE WALLS

Each component of our MONOBELT® belt filter presses is designed to ensure perfect operation over time and the protection of all sensitive parts.



Among these components we also find the **cake side walls**, special sides that contain the sludge during the pressing phases.

As for any component **subject to wear**, cake side walls can also be damaged over time and use. What happens in this case?

These sides are **no longer able to contain the sludge**, which falls sideways, risking seriously **damaging the lower transmission roller bearings**.

That is why Teknofanghi suggests to always have a **couple of cake side walls for each of your MONOBELT®**. A small investment for a great result:

- GREAT PERFORMANCE GUARANTEE OF MECHANICAL PARTS LIKE BEARINGS
- SCHEDULED MAINTENANCE WITH NO EMERGENCY SITUATION
- EASY REPLACEMENT AND MAINTENANCE OPERATIONS

THE CARTRIDGE DISK FILTER

Washing water is an important component for the maintenance of the operating efficiency of Teknofanghi machines. For this reason, our units are fitted with a **cartridge disk filter** (optional on MONOBELT®).

DISK FILTER



This disk filter has a filtering capacity up to 200 micron and it is useful to **avoid the clogging of the washing nozzles** and, in presence of a **solenoid valve**, it also **avoids blocking problems**.

Which are the consequences in case of **deteriorated or completely clogged disk filter**? These problems can cause a **reduction of the pressure of the washing water**, with a **reduction of the efficiency of the washing operation** and consequently of **dewatering and filtering process**.

If your machine is not equipped with this disk filter, we suggest you install it; if you already have it, please always make a good maintenance and **have a spare pack element for it**.

CLOGGED DISK FILTER



With this little shrewdness you have lot of advantages:

- **GREAT EFFICIENCY GUARANTEE IN WASHING OPERATIONS**
- **GREAT EFFICIENCY GUARANTEE IN DEWATERING AND FILTERING PROCESS**
- **NO PROBLEM IN THE OPERATION OF THE SOLENOID VALVE**
- **QUICK MAINTENANCE WITH NO EMERGENCY SITUATIONS**