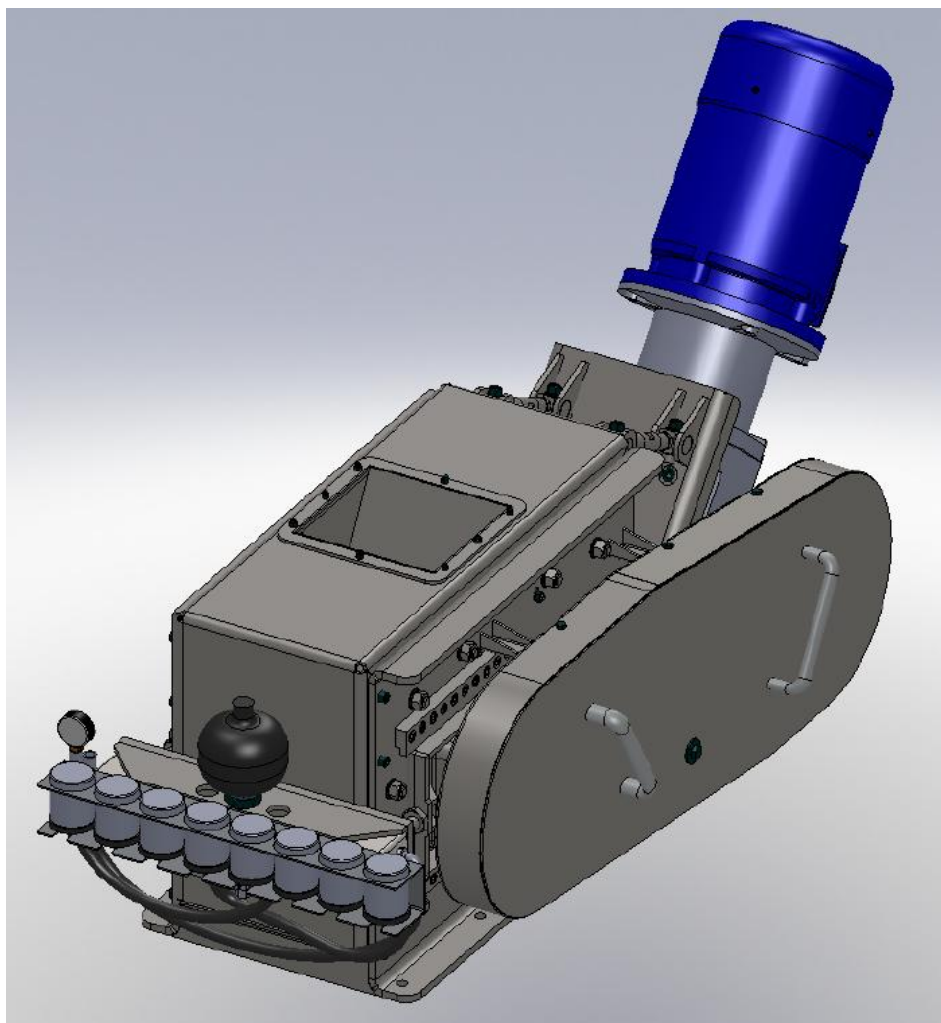


## Roller Mill HVS-300-300 with Hydraulic Tensioning



### *Instructions for Use & Service Manual*

Your order No.		
Our order No.		
CE- No.		
Delivery date	<b>04-01-2011</b>	



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## General Information

### Preamble

The present instructions for use & service manual, prepared by *Envitec a/s* is primarily intended for the operator of this installation.

The instructions for use & service manual are to accompany the installation throughout its lifetime.

To ensure the full benefit of your new *Envitec a/s* equipment, it is important that you carefully read the instructions for use & service manual, and follow its advice and recommendations regarding safety, operation and maintenance such as described.

It is the buyer's responsibility that the operator, cleaning staff and service personnel have read and understood these instructions for use & service manual. Moreover, it is the responsibility of the buyer, that staff and personnel involved in the use of *Envitec a/s* equipment, have the necessary education and training to undertake the tasks they are given. The instructions for use & service manual must always be kept in such a way that it is accessible for operators, cleaning staff and service personnel.

For further information regarding operation, cleaning, lubrication and maintenance of your *Envitec a/s* equipment, please contact *Envitec a/s*.

### Specification Plate

When approaching *Envitec a/s* regarding the equipment, please specify the information printed on the specification plate, in order to facilitate the handling of your enquiry and to avoid misunderstandings.

<b>EUROmilling a/s</b>		
Grinding & Mixing Technology		
Højvangsvej 8 DK- 4340 Tølløse.		
Tlf. (45) 59194080 Fax. (45) 59194083 Web. <a href="http://www.euromilling.dk">www.euromilling.dk</a>		
Type		<b>CE</b>
CE-Nr.		
År		
Vægt Kg.		

**"OVERENSSTEMMELSESERKLÆRING"****Maskindirektivets bilag II A.**

Hermed erklæres at nedennævnte maskine er fremstillet i overensstemmelse med maskindirektivet **89/392/EØF**.

Med senere tillæg, bl.a. ved anvendelse af de harmoniserede standarder **EN 292-1, EN 292-2, EN 294, EN 953 og EN 1050**.

Maskinen er desuden i overensstemmelse med lavspændingsdirektivet **73/23EØF** gennem anvendelsen af de harmoniserede standarder **EN 60204-1**.

Maskinen er desuden i overensstemmelse med **EMC** direktivet **89/336/EØF** gennem anvendelsen af de harmoniserede standarder **EN 50081-2, EN 50082-2**.

**„DECLARATION OF CONFORMITY“****Machinery directive appendix II A.**

We hereby declare that the machine specified below has been manufactured in accordance with the machinery directive **89/392/EEC** and subsequent endorsements, partly through the application of the harmonized standards **EN 292-1, EN 292-2, EN 294, EN 953, and EN 1050**.

The machine also conforms to the requirements in the low-voltage directive **73/23/EEC** through the application of the harmonized standard **EN 60204-1**.

The machine further conforms to the **EMC** directive **89/336/EEC** through the application of the harmonized standards **EN 50081-2 and EN 50082-2**.

**"KONFORMITÄT SERKLÄRUNG"****Maschinenrichtlinie Anhang II A.**

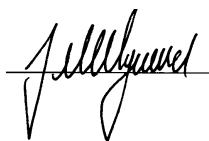
Hiermit erklären wir, dass die nachstehende Maschine in Übereinstimmung mit der Maschinenrichtlinie **89/392/EWG** hergestellt ist.

Mit späteren Änderungen, u.a. durch die Anwendung der harmonisierten Normen **EN 292-1, EN 292-2, EN 294, EN 953 und EN 1050**.

Die Maschine entspricht ferner der Niederspannungsrichtlinie **73/23/EWG** durch die Anwendung der harmonisierten Norm **EN 60204-1**.

Die Maschine entspricht ferner der **EMV**-Richtlinie **89/336/EWG** durch die Anwendung der harmonisierten Normen **EN 50081-2, EN 50082-2**.

<b>Fabrikant:</b>	<b>Maskine</b>	<b>Machine</b>	<b>Maschine</b>	<b>: Roller Mill</b>
<b>Manufacturer:</b>				
<b>Hersteller:</b>	<b>Type</b>	<b>Type</b>	<b>Typ</b>	<b>: HVS-300-300 with</b>
<b>EURO milling a/s</b>	<b>Model</b>	<b>Model</b>	<b>Modell</b>	<b>: tensioning</b>
<b>Højvangsvej 8</b>				
<b>DK-4340 Tølløse</b>	<b>Nr.</b>	<b>No.</b>	<b>Nr.</b>	<b>:</b>
<b>Tlf. (+45) 59194080</b>				
<b>Fax. (+45) 59194083</b>	<b>Dato / år</b>	<b>Date / Year</b>	<b>Datum / Jahr</b>	<b>: 21-01-2011</b>
<b>www.euromilling.dk</b>				



**The equipment is delivered in conformity with the NORSOK Standard Z-15.**

## Description

### Intended application

**The Roller Mill HVS-300-300** is made of stainless steel, and intended for the specific purpose of crushing "proppants" or "kaks".

The Roller Mill HVS-300-300 is equipped with 2 mill rollers coated with hardmetal; these are individually, but synchronously, driven "fixed rollers", which are adjusted to have a fixed desired distance, and are thus not in direct contact.

To ensure against overloading or foreign elements in the product, the rollers are fixed by means of a hydraulic tensioning system enabling the rollers to open.

The hydraulic tensioning system consists of 2 cylinders and 1 Diaphragm accumulator and a manometer. The pressure is applied / adjusted for 1 roller by means of a manually activated oil pressure pump.

As the outset the pressure has been fixed at 50 bar, i.e. the pressure is 2500 kilos per cylinder, entailing a roller pressure of 5000 kilos.

The rollers are driven by cog wheel belt transmission and a ATEX approved gear motor, (6.30kW, 1740r/min, 440V Y, 60Hz, 11.40A, cos. phi 0.82

IEC, IP 56, IMV1/IM3011, IC411, ICLF, Ex de, IIC, T4, L, 40°C, 1000m) mounted on an adjustable console.

The rollers are secured by means of adjustable PUR sealings at the roller sides, in order that no product may pass without being crushed.

At the shaft passages are mounted shaft stuffing boxes, type WA 60-80-8

## Safety Regulations

### Warning Symbols

Safety and warning symbols are applied and affixed to the machine and must be observed by operators, cleaning staff and service personnel.

**Immediate source of danger, which may result in severe personal damage**



*Envitec a/s* disclaims all responsibility for damages caused by use of this installation in non-conformity with the instructions and directions of these instructions for use.

*Envitec a/s` s* responsibility is limited to repair or replacement of components, which have proved defectuous.

## Safety Regulations

### Personnel

The responsible buyer / user must make sure that the personnel going to work with the installation (operator, cleaning staff, service personnel etc.) have the necessary background and are familiar with and have understood the instructions for use.

Only those persons, who, as part of their work, require it, are allowed access to the installation.

Should it be necessary to provide access to the installation to persons, who have no knowledge of its function (for instance in connection with repair, visitors or demonstration), suitable safety precautions are to be observed.

### Operation

Always make sure that the installation is used in a safe manner, and that it is in a good mechanical condition.

The installation may only be used when all safety precautions have been made and are in good order, that is to say, that guard, grids, covers etc. are to be firmly bolted on, etc.

When in operation, it is not allowed to take any regulatory actions on the installation.

If used alone, the installation must be equipped with a main switch.

### Cleaning, Maintenance, and Repair

Only persons, for whom it is part of their work, may undertake cleaning, maintenance and repair.

Cleaning, maintenance, and repair may ONLY be undertaken, when the installation is switched off, the power has been disconnected, and the compressed air, if used, is disengaged.

It is the responsibility of the buyer to ensure that the staff carrying out work such as cleaning, maintenance and repair is informed about the location of various switches on the installation.



## **Installation / Mounting**

### **Transport**

In transport the installation is always delivered on a pallet or other form of support wrapped in plastic foil. The plastic foil should not be removed until the installation is being mounted as it protects its surface.

### **Weight**

As to the weight of the installation, please consult the technical specifications.

### **Lifting**

The installation can be handled either by crane lift or by means of a fork-lift truck.

### **Mounting**

By the mounting it is important to consider the subsequent servicing of the machine. There must be easy access around the entire Roller Mill.

The gear motor of the machine may not be covered or placed in such a way, that the cooling becomes insufficient.

The Mill is mounted on level floor. The foundation of the Mill is securely anchored by means of suitable bolts.

### **Power Connection**

Electrical connection of the motors belonging to the machine must always be undertaken by an authorized electrician.

It is recommended to mount an ammeter, so that the motor load may be controlled.

The direction of rotation of the motor is indicated by an arrow.

### **Dismantling and removal / scrapping**

Removal / scrapping of the Mill must be undertaken in an environmentally acceptable manner in conformity with the local environmental laws and regulations.

Take the installation apart and sort it into parts made of steel, plastics, oil – miscellaneous. The parts are to be delivered to the respective scrap dealers.

## Running-in

### Starting up the Roller Mill

**Important:** It must be checked that tools, bolts, nuts, and other foreign elements may not have been dropped into the Roller Mill, or elsewhere in the plant, during mounting. It may be potentially lethal, during start up of the Roller Mill, if these foreign elements have not been removed.

The Roller Mill may never be started or test run without all safety regulations being observed.

### Noise Level

The noise level is measured at 72 dB (A) at operation with empty Roller Mill in the factory.

This noise level may change depending on the product which is being crushed in the Mill.

Therefore, measure the noise level at the place where the Roller Mill is mounted; if the level exceeds 85 dB (A) hearing protection must be used.



## Daily Operation

### The crushed product

Regularly control the crushed product, and check that it is in accordance with the desired structure.

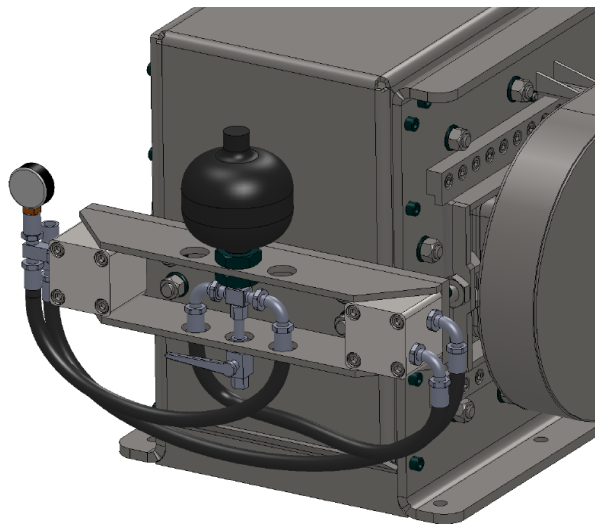
If this is not the case, the reason may be too much material lead to the mill, or that the pressure on the rollers or the distance between the rollers needs adjustment.

### Adjustment of the mill rollers

To ensure against overloading or foreign elements in the product, the rollers are fixed by means of a hydraulic tensioning system, enabling the rollers to open.

The hydraulic tensioning system consists of 2 cylinders and 1 diaphragm accumulator and a manometer. The pressure is applied / adjusted for the roller by means of a manually activated oil pressure pump.

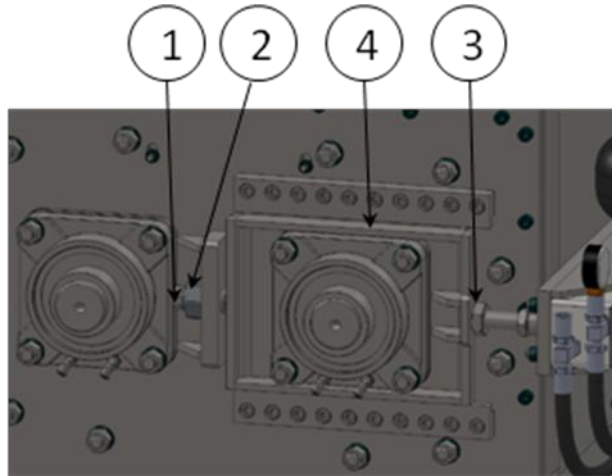
As the outset the pressure has been fixed at 50 bars, i.e. the pressure is 2500 kilos per cylinder, entailing a roller pressure of 5000 kilos.



### The adjustment may only be carried out when the mill is not in operation!

Before you can adjust the rollers you have to dismantle the transmission system. See the section “Transmission”.

To make sure that the milling process is running correct and the milled particles have the right size, there is a backstop (pos.1 picture below) in each side of the mill. Use Feeler gauges from the top of the mill and check the distance between the rollers to make sure that the rollers are running parallel and the distance is correct. Loosen the locknut pos. 2 and make the adjustment on the backstop bolt. Make sure that there is pressure on the hydraulic cylinder and that the bolt pos. 3 is in contact with the bearing console pos. 4.



### Ball bearings

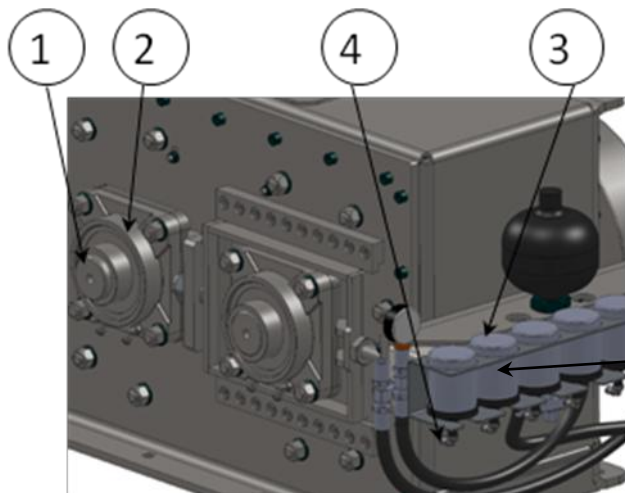
The roller shafts pos.1 are suspended in ball bearings pos.2, of the type SKF FY-60TF

### Lubrication

The bearings and the sealing are automatic lubricated from the lubricator's pos.3. The lubricator will empty it selves in 1 month. Then it has to be replaced by a new one.

### Changing the lubricator

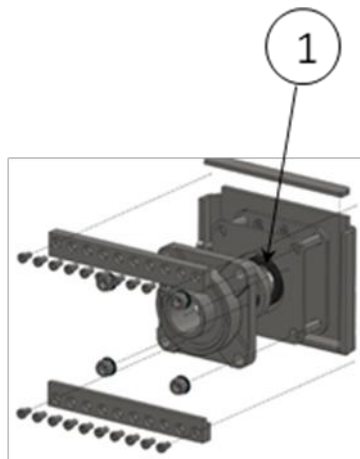
Remove the tube in the bottom by pushing the ring on the fitting pos.4 in, and then pull out the tube, then the lubricator can be removed. Pick up the new ECO booster and the yellow activator and then follow the guide in the chapter about the ECO booster. The bearing and the area between the sealing and the bearing is being lubricated.



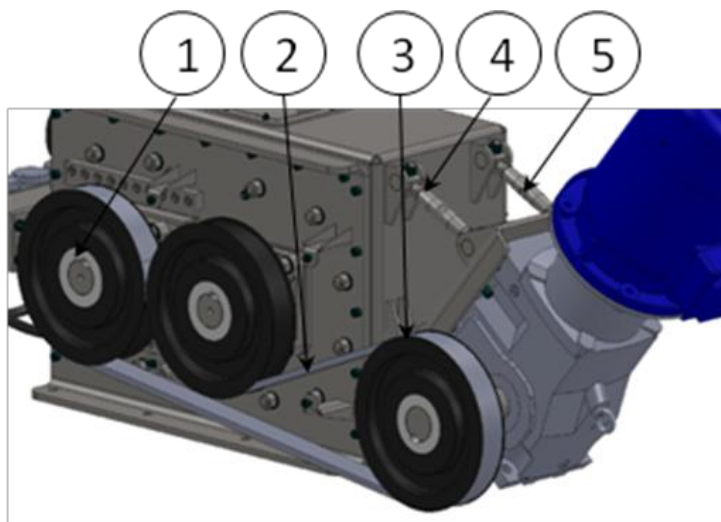
This is just an illustration! The red top showed in this picture is not the right color to use in this case.  
**Use the yellow one**

### Splash rings between bearings and roller housing

Between bearings and roller housing have been mounted stuffing boxes, type WA 60-80-8. Pos.1



## Transmission



Pos. 1, 3 pcs. TaperLock bushing 3020-Ø60

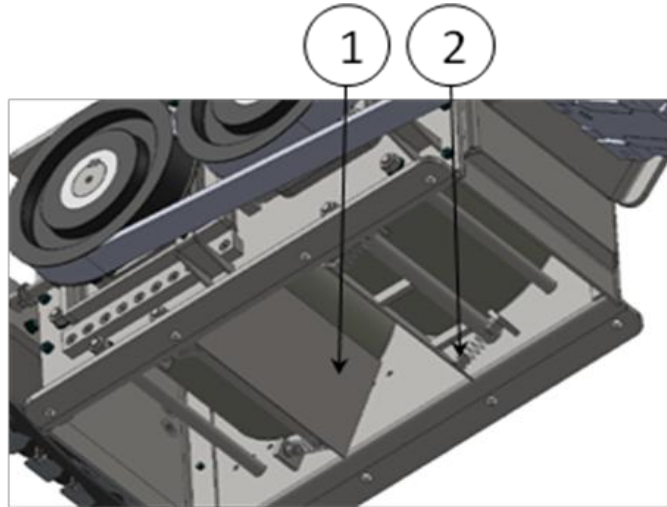
Pos. 2, 3 pcs. Tooth wheel belt DOBB.HTD REM 2660-D14 M-40

Pos. 3, 3 pcs. pulley type TB HTD SKIVE 64-14M-40

## Adjustment of the tooth wheel belt

The tension of the tooth wheel belt type DOBB.HTD REM 2660-D14 M-40 is adjusted with the rigging screws pos. 5 on the motor console by loosening the nuts pos. 4 on the tensioning spindle; after the adjustment has been completed it is important that the nuts pos. 4 are again securely tightened.

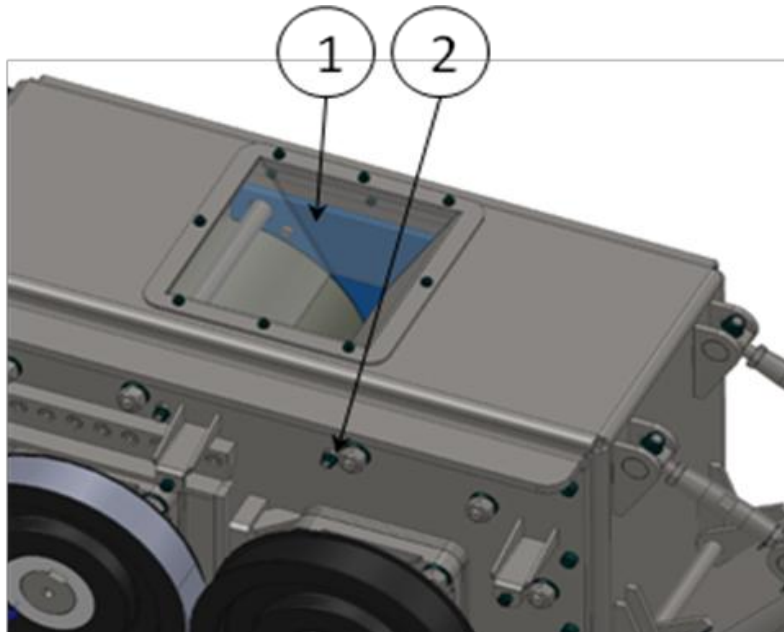
## Scrapers for Mill Rollers



The scrapers (pos. 1) are spring loaded and self adjusting; their purpose is to keep the mill rollers clean of material during operation.

4 pcs. Springs (pos. 2) per set of scraper, type Ø20 X 85 X 2,0mm. wire AISI304

## PUR sealing's at the mill rollers



**The PUR sealing may only be adjusted when the mill is not in operation!**

The adjustment is made by loosening the nuts pos. 2; the PUR sealing with the retainer plate's pos. 1 may then be adjusted down to the mill rollers.

After adjustment has been completed, tighten the nuts pos. 2 securely!!