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# **BELT CONVEYOR CBS 3 Series**

**User and maintenance manual**

## DECLARATION OF CONFORMITY

The company VIRGINIO NASTRI S.R.L., Via Seconda Strada, 161 - 36071 Arzignano (Vicenza) Italy Tel. +39 - 0444 - 45.06.20, fax +39 - 0444 - 61.18.40

declares under its own responsibility that the following machine:

Type: **Mod. CBS/3 Belt conveyor**

Serial n.: **22664/13**

Year of production: **2013**

- is **IN CONFORMITY** with the essential safety requirements indicated in the **98/377EC** Machines Directive.
- is **IN CONFORMITY** with the **2004/108/EC** and **2006/95/EC** Directives.

The following harmonised norms have been applied:

EN 50081 - 2                      electromagnetic compatibility – Generic emission standard part 2 industrial environment

EN 50082 - 2                      electromagnetic compatibility – Generic immunity standard part 2 industrial environment

The signer of the declaration:

Surname: **Virginio**

Name: **Domenico**

Position in the company: **PRESIDENT of VIRGINIO NASTRI S.R.L.**

Place and date: **Arzignano, 11/09/2013**

Signature:

A handwritten signature in black ink, appearing to be 'D. P.' with a stylized flourish.

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### OPTIONALS (IF PRESENT)

O.1	Pallet separator
O.2	Roller separator
O.3	Double roller separator
O.4	Spiral separator
O.5	Side sealing
O.6	Electric panel
O.7	Inverter

## INTRODUCTION

### P.1 MACHINE MARKING DATA

Producer:

VIRGINIO NASTRI srl  
Via Seconda Strada, 161 - Z.I.  
36071 ARZIGNANO (VI)

Technical data regarding the CBS 3 series belt conveyor (see drawing on Page 8)

<b>CBS Series</b>	<b>3</b>
Electric power supply (Volt)	400
Installed power (KW)	0.22
<b>DIMENSIONS AND MASS</b>	
Lower surface section (mm)	710
Sloped section (mm)	1300
Usable width (mm)	450
Total mass (Kg)	120
Sound level at the operator's workplace dB(A)	< 70

Technical assistance and information:

VIRGINIO NASTRI srl  
Via Seconda Strada, 161 - Z.I. ARZIGNANO (VI)  
Tel. 0444/450620 - 451520  
Fax 0444/671840

**Nota Bene:** The user instruction manual is an integral part of the machine. Knowledge of this manual is essential for safe machine use. This booklet is the Instruction Manual of the previously specified machine and has been compiled in conformity with the EEC 89/392 Directive, Annex I, section 1.7.4

### P.2 HOW TO USE AND KEEP THIS INSTRUCTION MANUAL

This instruction manual describes how to use the machine described herein and also supplies information on machine transportation, use, maintenance, final dismantling and the ordering of spare parts.

The instruction manual is a part of the machine and must be kept "for future reference" until final dismantling. It must be kept in the most suitable position for belt use and easy consultation.

This manual mirrors the state of the technology at the moment of machine production and sale.

VIRGINIO NASTRI srl reserves the right to update its production and manuals without updating previous versions.

Another copy of the manual can be requested should it be necessary, or if the original version supplied with the machine has been damaged or lost. The Client should refer to the data given on the EC applied to the machine itself.

### P.3 SAFETY WARNINGS

In order to ensure maximum working reliability, VIRGINIO NASTRI srl has accurately selected the materials and components used in the production of its apparatus, which is tested before delivery. Good machine return through time also depends on correct use and suitable preventive maintenance, in accordance with the instructions given in this manual.

All the construction elements, as well as the connection and command organs, were designed and produced with a safety level to resist irregular stress or stress that exceeds the levels indicated in this manual. The materials are of best quality and their introduction into the company, their storage and use in the workshop is constantly controlled in order to guarantee that they are not damaged, do not deteriorate and do not malfunction.

It should be remembered that:

- 1) NO INTERVENTION SHOULD BE CARRIED OUT ON THE MACHINE, AND THE MACHINE ITSELF SHOULD NOT BE USED, UNTIL THIS MANUAL AND ALL ITS PARTS HAVE BEEN READ AND WELL UNDERSTOOD.
- 2) ALL THE PRECAUTIONS LISTED IN SECTION A: "SAFETY PRESCRIPTIONS AND INFORMATION" SHOULD BE FOLLOWED.
- 3) THE MACHINE CANNOT BE USED IN CONDITIONS OR FOR USES OTHER THAN THOSE INDICATED IN THE MANUAL. VIRGINIO NASTRI SRL CANNOT BE HELD RESPONSIBLE FOR FAULTS, INCONVENIENCES OR ACCIDENTS CAUSED BY THE NON-OBSERVANCE OF THIS PROHIBITION.

This manual is made up of three parts:

SECTION A: deals with "SAFETY PRESCRIPTIONS AND INFORMATION"

SECTION B: illustrates the MACHINE – OPERATION – TRANSPORTATION CHARACTERISTICS

SECTION C: deals with MAINTENANCE AND LUBRICATION INTERVENTIONS, with annexed LIST 3 – A DESCRIPTION OF THE SPARE PARTS

To make reading easier, the following terms have been used:

#### **DANGER**

DANGER is used when not respecting the prescriptions or tampering with organs can cause serious injury to people.

#### **WARNING**

WARNING is used when not respecting the instructions can damage either the machine, other elements associated with it, or the surrounding environment.

## SECTION A

### *General information for using the machine safely*

#### A.1 PERMITTED USE

This series of belt conveyors should be used prevalently for collecting and transporting plastic items which come from the moulding machine and moving them towards the accumulation area.

The height and slope of the belt can be regulated.

#### **WARNING:**

The maximum weight of the transported pieces must not exceed a total of 70Kg. The belts are not suitable for moving loose material.

The belt conveyors can be used easily by anyone who operate the system in which they are installed, and if correctly used do not cause any particular risk for the operator.

It is advisable to read this manual before using the machine.

VIRGINIO NASTRI srl cannot be held responsible in cases of:

- belt use that is obviously different from the uses indicated in this instruction booklet;
- supply faults;
- serious lack of the necessary maintenance;
- unauthorised modifications;
- the use of spare parts that are unauthorised or not specific for the model;
- exceptional events.

#### A.2 INFORMATION ON RESIDUE RISKS

Residue risk: a risk that remains permanently in spite of all the devices used, or a potential risk that is not evident (Directive n. 89/392/ point 1.7.2.).

If the instructions given in this manual are followed correctly, no intrinsic residue risks that may harm the operator are present. The following indications regarding the usage conditions are, however, true:

#### **DANGER:**

Risk of fire: this risk is present when the characteristics of the belt being used are not suitable for the use (in particular the temperature of the pieces to be transported).

Make sure, therefore, that the belt material has suitable characteristics. Further information is given in the following table.

Type of belt material	Max. temperature of pieces
GREEN POLYURETHANE	120° C

Risk of high temperature: the belt is used for transporting freshly moulded pieces, therefore hot. Should it be necessary to intervene, use protective gloves (in particular when touching the piece fall point).

#### A.3 REFERENCE NORMS AND LEGAL DISPOSITIONS

- This series of belt conveyors were designed and produced to satisfy the Essential Safety requirements prescribed by the 89/392 Directive, Annex I.
- Reference was made to the EN 60204 – 1 Standard, September 1993 edition, for the electric equipment.

## SECTION B

### *Information for using the belt*

**WARNING:** Before reading this section, the reader must be familiar with the points given in section A. Section A is an integral part of the user manual and it must be understood in order to use the machine SAFELY.

#### **B.1 MACHINE TECHNICAL DESCRIPTION AND LAYOUT**

The belt conveyors are made up of:

A supporting frame of press-folded steel, with containment projections on the sides. Everything is positioned on a support frame (13) that can be regulated as follows:

- Use the screws (14) to adjust the slope.
- To regulate the height, loosen the ball grips (15) and turn the flywheel (16) which runs along the threaded bar (17).

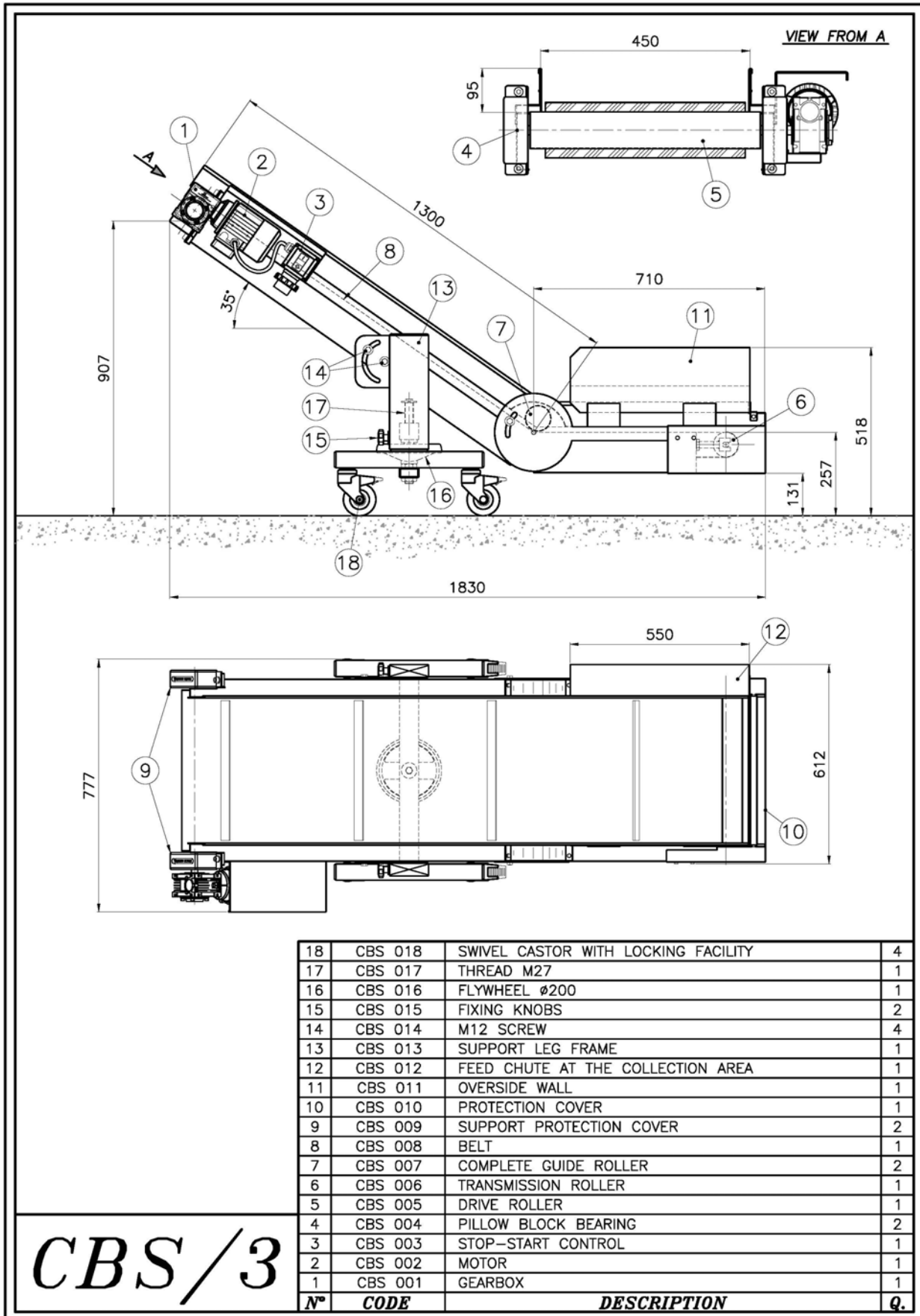
There are 4 casters with locking device (18) on the base for moving the device in the working area.

There are some supports (4) on the frame of the belt conveyor on which a cylinder (5) rotates. Rotation is activated by a gearmotor (1-2), which moves the belt (8) forward, so moving the return drum (6). Everything is controlled by a switch (3).

In the lower section there is a projection cover (11) and a chute (12), which gather the transported pieces.

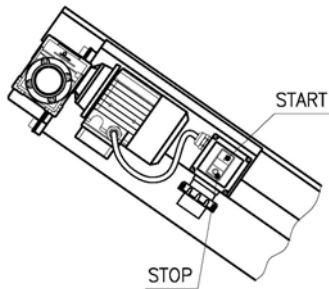
*The sound level emitted by the machine at the operator's working area is < 70 dB(A).*

*The switch is equipped with a device (minimum voltage coil) which automatically deactivates the switch when there is no current. This guarantees safety against unexpected machine starting when the power supply returns.*





## B.2 COMMANDS



Pic. A

As described in the previous paragraph, the switch with belt starting and stopping pushbuttons is positioned next to the discharge area. (fig. A)

Emergency stop: when necessary directly disconnect the belt supply plug.

## B.3 REGULATIONS

### Regulating the belt height (fig. B)

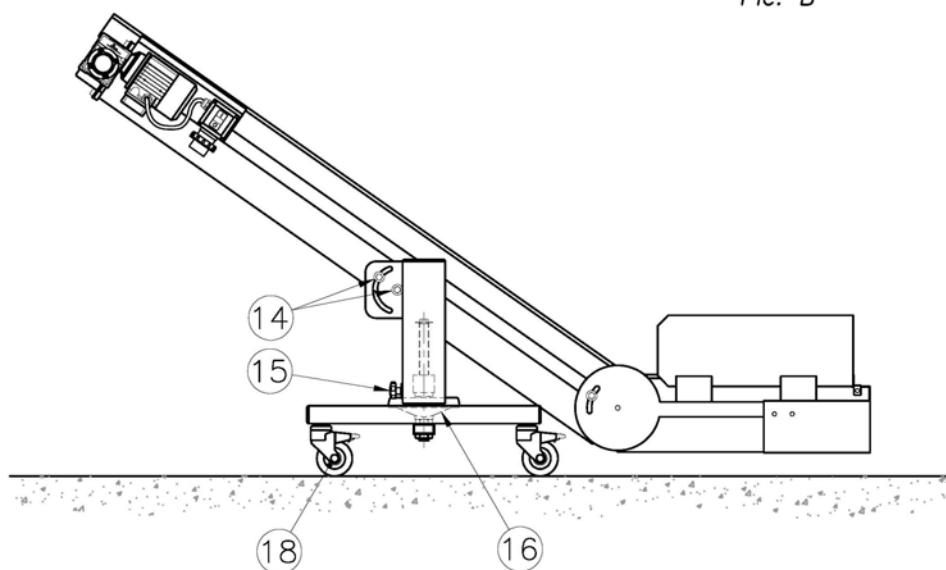
Loosen the locking ball grips (15), turn the flywheel (16) to regulate then tighten the ball grips again (15).

### Regulating the belt slope (fig. B)

#### **WARNING:**

If the belt is already sloped, loosening the lock nuts puts the belt out of balance because of the counter reaction of the lower surface section.

Two people are necessary to carry out this operation, one to support and regulate the belt, the other to loosen and tighten the lock nuts again (14).



Pic. B

## B.4 TRANSPORTATION AND INSTALLATION

### Transportation

The belt conveyors are packed using stretch film. The switch boxes and the gearmotors are also protected with sponge rubber.

### **WARNING**

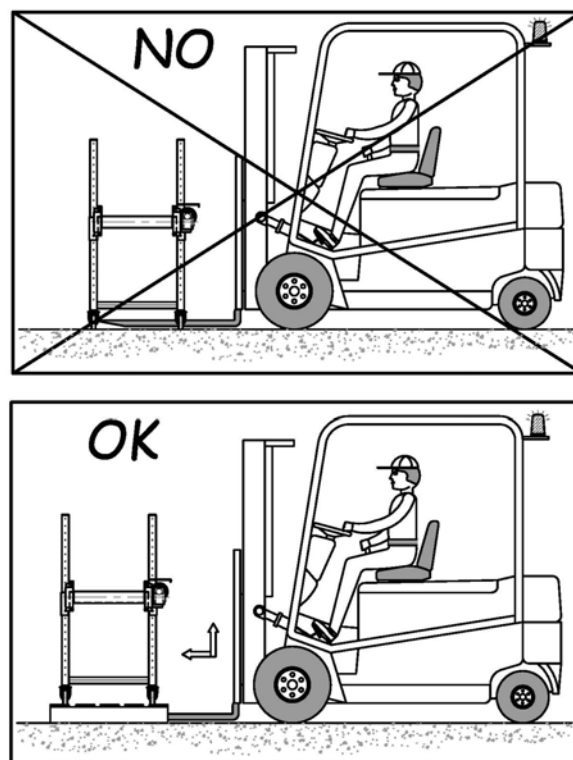
The packaging material (plastic film and sponge rubber) must not be disposed of in the environment. Instead, it must be eliminated in accordance with current regulations.

The belt conveyors can be raised using a fork lift truck. The dimensions and masses of this series of belts are indicated in section P1.

### **DANGER**

For operator safety and machine integrity please refer to the drawing in Fig. C, which shows where to insert the forks in order to permit stable belt raising.

Once on the loading surface of the lorry, use the levers to block the wheels. This fixes the machine. Suitable slings or fixing methods should also be prepared, to ensure stability during transportation.



Pic. C

### Installation

No special preliminary operations are necessary when starting the belt conveyors.

The belt must be connected to a socket having suitable characteristics and using the supplied plug.

When laying the cables, please make sure that they are protected against damage and that they cannot trip the operators.

### **WARNING:**

Before starting the belt conveyor:

- make sure that the supply voltage corresponds to the one specified on the plate. The plate can be found beside the belt buttons;
- make sure that the motors are turning in the right direction. Make sure that the belt rotates in the direction indicated by the arrow on the belt casing.

The belt conveyor should be positioned by inserting the lower surface opening (loading area) into the gap which passes under the press mould.

### **WARNING**

When the machine has been installed, the casters must be blocked using the levers present on each wheel.

## SECTION C

### *Information on maintenance and repairs*

#### C.1 MAINTENANCE INSTRUCTIONS

##### *GENERAL NOTES*

It is the duty of the operator to ensure that the machine is kept clean of foreign materials such as deposits, oil or others. The machine should therefore be cleaned at the end of each work shift when it has stopped and is in stable conditions.

##### **WARNING:**

In order to avoid any possibility of accidental starting, the operator should extract the plug from the socket before beginning any cleaning or maintenance operations.

If compressed air is used to clean, wear protective goggles and a protective mask. Distance people who are close to the machine and who could be hit by loose material and dust.

Do not use pressurised water directly on the electric apparatus.

Using flammable liquids for cleaning is prohibited.

Periodically check the state of the plates and replace them if necessary.

Once the machine has been cleaned, the operator should ensure that there are no worn or damaged parts (if there are, immediately request a technical maintenance intervention) or parts that are not solidly fixed (intervene as well as possible).

The operator and possible maintenance technician must wear suitable working clothes that do not fly about, and should not wear chains or bracelets or other items which can catch easily in the moving machine organs. Operators with long hair should use a hairnet against the risk of entanglement.

The machine protections and safety devices should not be removed unless absolutely necessary because of repair and/or maintenance interventions.

These safety devices should be replaced as soon as the reasons which caused their temporary removal have been removed, and in any case before the machine is started.

##### **WARNING:**

At the end of each machine intervention, lock the wheels using the levers (18, fig. B).

As this series of belt conveyors does not require particular maintenance, only the following need to be carried out

Inspect to ensure that :

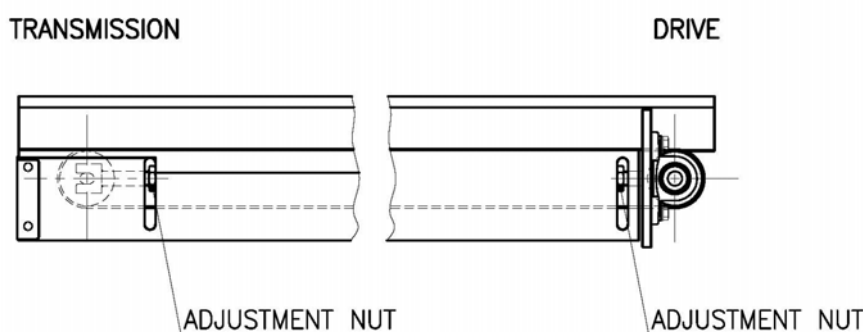
- the gearmotors are not leaking lubricant;
- the belt is tightened correctly (\*);
- the belt is centred correctly (\*);
- the electric cable insulating sheaths are in good condition (approx. every 2000 working hours).

**[\*] WARNING**

Before carrying out this operation the machine must be put out of service, therefore disconnect the plug from the mains socket after having switched off the belt.

If the belt has to be regulated, remove the casing at the end of the belt and use the regulating tension rods. To centre the belt unscrew the small casing at both the lower and the sloped part of the belt end, then use the regulating tension rods. Allow the belt to turn until the material is well centred on the drum (fig. D).

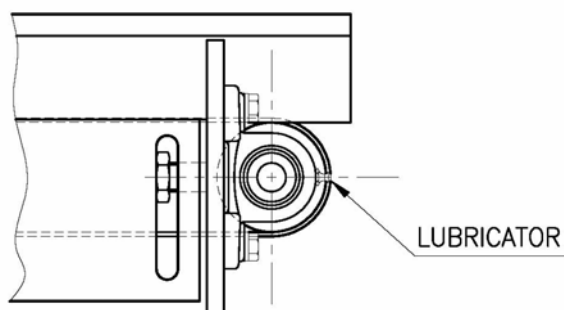
Pic. D



**DANGER**

Rotate the belt to check centring. Regulate while the machine is stopped and make the belt turn just for the time necessary to verify correct belt centring.

Every month make sure that the external motor and gearmotor temperatures are not too high (lower than 60°C). Should any irregularities occur, please contact the VIRGINIO NASTRI srl technicians directly.



Lubrication

Every month grease the two supports on the belt discharge section, under the protective casing, as indicated in the diagram (fig. E).

Pic. E

C.2 PLATES AND WARNINGS

The following danger symbol is present on the wrapping of terminal boards that can be powered:



This additional plate can be found on the belt:

			
Via Seconda strada,161 -Z.I. 36071 Arzignano(Vicenza) - ITALY Tel. ++39.0444.450620-451520 Fax ++39.0444.671840			
MODELLO MODEL	<input type="text"/>		
MATRICOLA SERIAL NUMBER	<input type="text"/>	ANNO COSTRUZIONE YEAR OF MANUFACTURE	<input type="text"/>

### C.3 SPARE PARTS

Should it become necessary to order spare parts, please refer to the address given in para. P1. When ordering, always give the part code and the quantity of pieces needed.

Note: Only original spare parts supplied by VIRGINIO NASTRI srl guarantee function reliability.

It should be noted, in particular, that some components have safety characteristics for personnel, therefore only use those spare parts that are recommended by VIRGINIO NASTRI srl.

#### SPARE PARTS AND CODES

CODE CBS

VIRGINIO BELT CONVEYORS

**CODE****DESCRIPTION**

CBS 001	GEARBOX
CBS 002	MOTOR
CBS 003	STOP-START CONTROL 0.6 - 1 A
CBS 004	PILLOW BLOCK BEARING
CBS 005	DRIVE ROLLER
CBS 006	TRANSMISSION ROLLER
CBS 007	COMPLETE GUIDE ROLLER
CBS 008	BELT
CBS 009	SUPPORT PROTECTION COVER
CBS 010	PROTECTION COVER
CBS 011	OVERSIDE WALL
CBS 012	FEED CHUTE AT THE COLLECTION AREA
CBS 013	SUPPORT LEG FRAME
CBS 014	M12 SCREW
CBS 015	FIXING KNOBS
CBS 016	FLYWHEEL Ø 200 mm
CBS 017	THREAD M27
CBS 018	SWIVEL CASTOR WITH LOCKING FACILITY

## C.4 WIRING DIAGRAM

