

PLY SEPARATOR
PLY 130 WB – PLY 130 SA

OPERATION MANUAL



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Introduction

This machine is meant to cut in between the plies of a conveyor belt, an operation that is often required as a preparation before splicing a belt.

The PLY 130 is very rigid and accurate, compared to other machines in the market. This is an advantage for processing thin belts, especially if the coating material is rather difficult to cut. An example is rather thin PU belting.

This machine is able to split thicker belts than most other ply separators in the market and moreover, split them deeper.

Unlike most other ply separators in the market the PLY 130 SA has its own stand, increasing access ability and versatility.

The machine is provided with a foot switch, for a safe and convenient operation. The operation can be started and stopped, while both hands remain free to handle the belt.

There are two driven transport rollers in the machine, to pull the belt through.

Behind the rollers there is a blade, to cut in between the layers of the belt.

The gap in between the rollers and the blade is adjustable and thus the position of the cut can be chosen:

- Maximum thickness of the belt ply above the cut is 8 mm,
- Maximum thickness of the belt ply below the cut is 5 mm,
- Minimum thicknesses for each side is approx. 0.5 mm,
- Maximum total thickness of the belt is 10 mm.

Depth of the cut is adjustable, by adjusting the belt side guide:

- Maximum depth is 130 mm,
- Minimum is 40 mm with the side guide, and almost 0 mm without.

Working level is approx. 950 mm from the floor.

Electrical power supply data: 3 x 400 Volts/ 50 Hz or 3 x 460 Volts/ 60 Hz. For changes to be made to operate the PLY 130 on 3x 230V please see instruction on page 7



Operation

CAUTION: Before taking the machine into operation there should be checked whether the running direction is right, for safety reasons. If the direction switch is set to "FORWARD", the machine should run forward if the foot switch is applied (belt moves from Left to Right). If running direction is false, connections in the power supply socket should be changed. Do not operate the machine if the running direction is false.



The level where the belt is split is set by means of handle **A**. By moving this handle, the bottom roller is adjusted. The blade remains in a fixed position. So actually the distance in between the bottom of the belt and the splitting level is set. On the handle there is a scale, showing digits from 0 to 5. The 0 (zero) position of the handle corresponds with the smallest gap in between the bottom roller and the blade. The higher the number, the larger the gap in between the roller and the blade gets. The handle is fixed by means of knob **B**.

Determine the setting for a particular belt by trial and error on a test piece. Once the setting is found, note it down for the next operations.

Depth of the splitting is set by means of positioning side guide **C** on the input table. The position of this side guide can be adjusted with 5 mm increments.

For splitting a belt, direction switch **D** should be put in the "forward" position. If the foot switch is applied, the machine starts to run forward and a belt can be put through.

If for some reason one might want to run reverse, the direction switch should be moved to the “reverse” position, without applying the foot switch. As long as the switch is held in the “reverse” position, the machine will run reverse.

Maintenance

Replacing and adjusting a blade

CAUTION: The blade is extremely sharp and should be handled with great care.

The blade can be taken out after removing the two fastening screws. The screws can be reached from the bottom side of the blade holder, by means of a 5 mm Allen wrench. After taking a blade out, wrap it in a protective cover, like a piece of cardboard.

Clean up the blade area, before putting a new blade into the machine.

Set the adjuster handle on position 3, set the ruler on 125mm and put the blade jig on the input table of the machine, thin side towards the rollers.

Pull the blade jig into the machine, by powering the machine forward for some seconds, while pushing the blade jig into the machine by hand. The jig will go in until the end stop.

CAUTION: Take care not to get pinched in between the blade jig and the machine frame!

Put a new blade into the machine and put the nuts and screws in place. Do not tighten the screws yet.

Push the blade into the machine by hand, with its sharp edge against the blade jig which is in between the rollers.

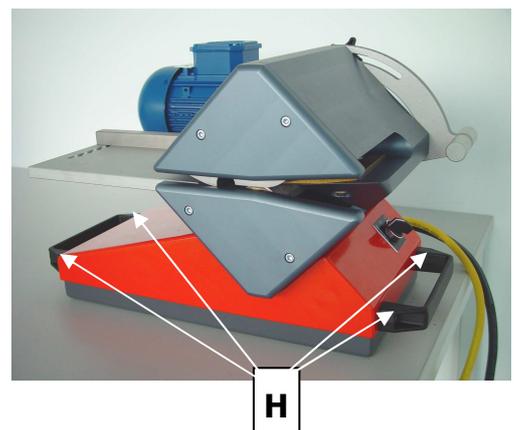
Tighten the screws while the blade is in this position. Make sure the blade does not move from this position while tightening the screws.

Remove the jig from the machine by turning the direction switch to "reverse".

Mounting type PLY 130 WB to a workbench

The bottom frame of the WB is provided with 4 holes, for fitting it to a workbench. The top of the machine can be taken off this bottom frame, by removing the four bolts from the handles **H**.

When the top is taken off, the bottom frame can be mounted to a workbench.



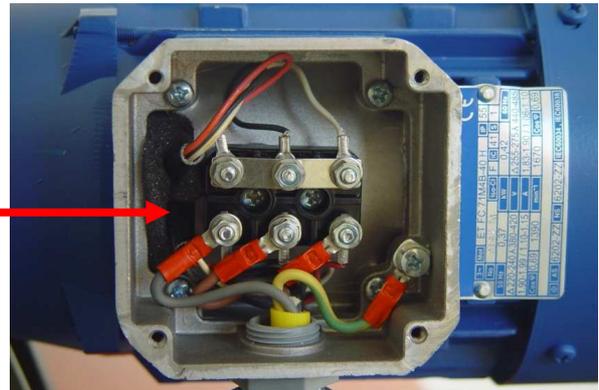
Changes to be made to operate the PLY 130 on 3x 230V

1) Change the tab on the transformer in the control unit to 230V:

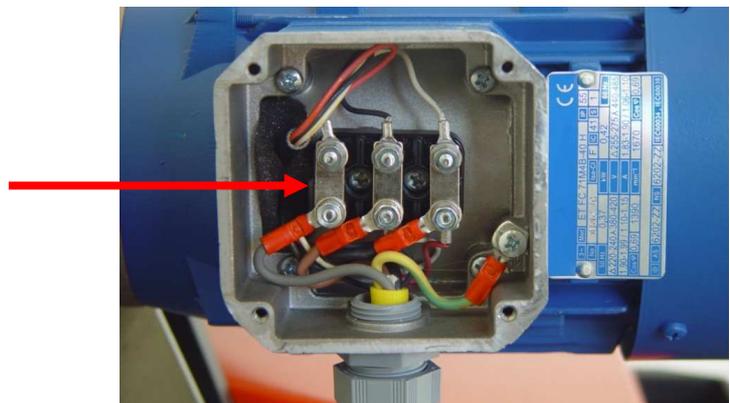


2) change the connection in the motor to a triangular connection, see photos:

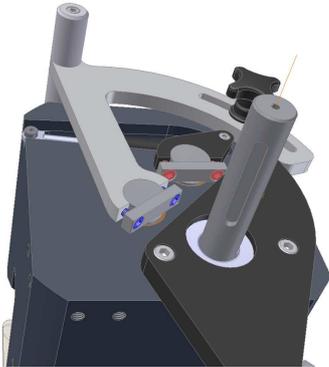
A) connection as it is now, for 400V (or 460V):



B) changed to operation on 230V:



Adjustment of clearance between rollers and the blade



Clearance in between the top roller and the blade can be adjusted by means of the red colored screws.

Minimum clearance in between the bottom roller and the blade can be adjusted by means of the blue colored screws.

Minimum clearance should be adjusted to 0.2 mm, or 0.008". 2 plies of standard (80 gr/m²) paper can be used as a gauge.

- The motor can be moved aside after unscrewing the torque arm of the motor. It may stay on the shaft and the electrics may remain connected.
- Take out the fitting bolt of the air spring to the main frame (totally left on the picture).
- Turn the (black) lever and shaft a little counterclockwise. The air spring extends from the aluminum frame now.
- Put two plies of standard paper in between the top roller and the blade and push the air spring to its position. Check the clearance in between the blade and the top roller.
- For increasing the clearance: Loosen the left (red) screw a little bit and tighten the right one. This way the shaft turns a little counterclockwise, related to the black lever. You need a short 5 mm Allen key to reach the screws.
- For decreasing the clearance: Loosen the right (red) screw a little bit and tighten the left one. This way the shaft turns a little clockwise, related to the black lever.
- Push the air spring to its position and put the fitting bolt in.
- Check for the clearance in between the top roller and the blade, by moving the paper a little. It should just pinch.
- Repeat adjustment of the (red) screws if necessary, until clearance is OK.

Adjusting the minimum clearance in between the bottom roller and the blade is made similarly. The adjuster handle should be moved up till the end stop ("0" position).

Warranty

Our standard warranty terms are applicable for the ply separator PLY 130. A copy of these terms is available at your request.

Recycling of the press

If the ply separator becomes too old or redundant, make it unusable immediately.

Do not discard electrical appliances with household waste.

As specified in the European Directive 2002/96/EC, used electrical goods must be collected separately and recycled ecologically.

Contact your local authorities for further information.

EC DECLARATION OF CONFORMITY

according to appendix IIA of the Machine Directive

Novitool TMC
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We, Novitool TMC, declare that the machines:

PLY SEPARATOR, PLY 130 SA and PLY 130 WB

comply to the following Directives and Standards:

Machine Directive 98/37/EC
NEN-EN ISO 12100-1, NEN-EN ISO 12100-2, NEN-EN 294, NEN-EN 349, NEN-EN 418

The Netherlands,
Heerhugowaard,
January 2009

J.S. van 't Schip

NOTES

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