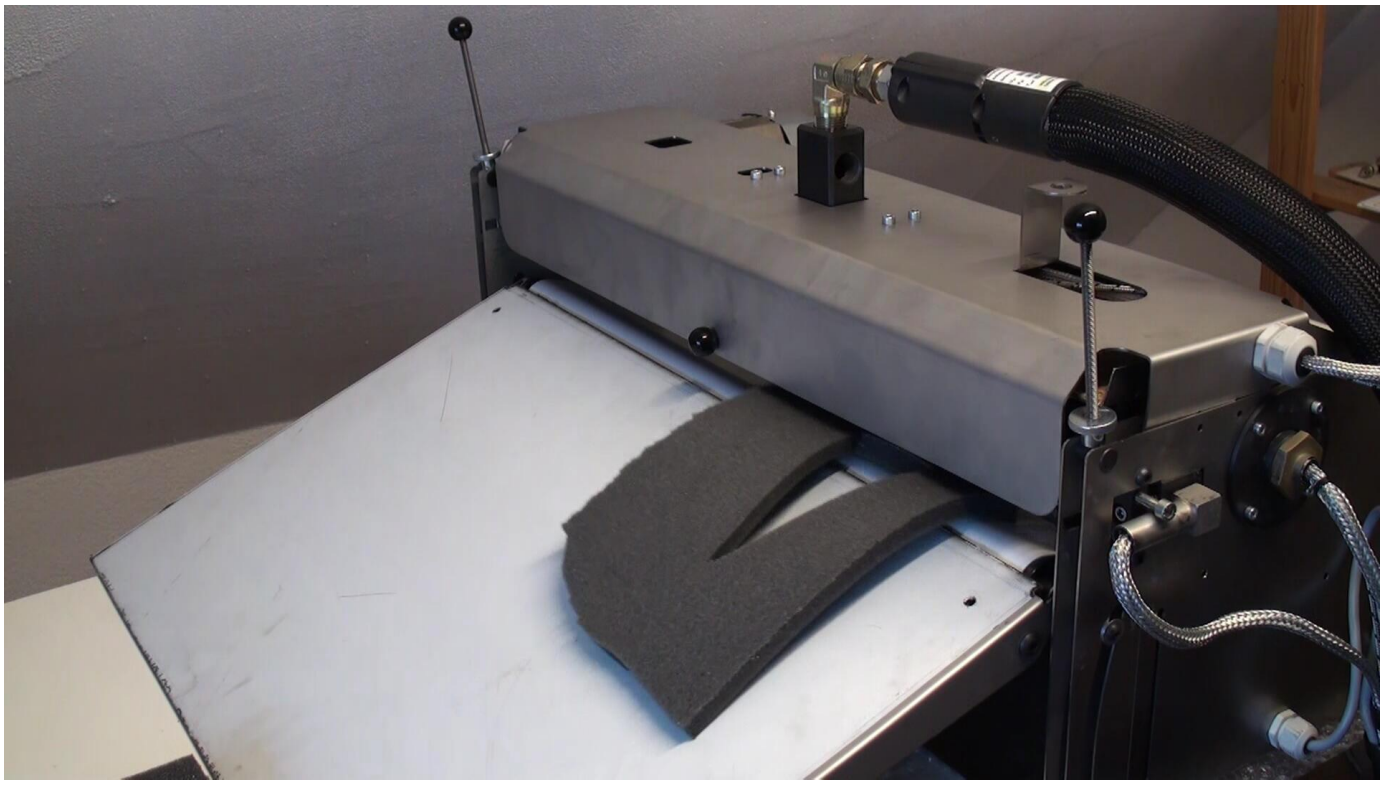
# TSG 652

## Hot Wheel Coater with Conveyor to process Hot melt glue



**Advantages of the hot wheel coater against conventional glue applications are**

- the application of a very fine and uniform film of hot-melt onto the workpiece surface.
- the short application time for the glue film and a better tack of material.
- the elimination of the hot glue seams where deforms the foam parts applicated with material guns.
- no deformation of the workpiece and his surfaces as usually by gluing with hot air.
- to increase production and quality significantly without extra costs.
- short ROI (return of investment).



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# Hot Wheel Coater with Conveyor for Hotmelt

## 1. Operation mode

The hot wheel coater is constructed for industrial Hot melt glue applications. For the glue film application, put the workpiece manually onto the silicone coated conveyor belt where goes below the hot glue wheel. In touch with the glue wheel, a fine hot melt film is applicated onto the workpiece.

## 2. Installation of the hot wheel coater

The hot wheel coater is put onto a solide base – workbench – and connected directly onto 3x400/230VAC

## 3. Commissioning of the hot wheel coater

- Start up the heating of the Glue roll and calibration roll. Once the temperature of the rolls reach the ajusted temperature of the temperature controller, the electric motor drive for the rolls and the conveyor can be started. The speed of the rolls is 35rpm resp. 10m/min fix, optionally with frequency inverter adjustable with a potentiometer between 4-10m/min.
- Befor you start to put the glue between the rolls, the glue roll and the calibration roll should be in contact (no gap). The Gap for the glue film thickness is adjusted even the motor turn, otherwise the hot glue can drop through the gap onto the conveyor.
- The motor is stopped only at the end of work. Befor you stop the motor reduce again the gap between glue roll and calibration roll to zero. It's preferable to stop the motor if the most melted glue between the rolls is consumed.
- To prevent glue droops onto the chassis, we propose to put some paper or plastic foile below the conveyor onto the round plate of the coater.

## 4. Wheel drive

The hot wheel coater is driven by a worm gear motor. The motor is electrically protected with a motor protection switch or the frequency inverter and mechanically by a coupling
The speed of the rolls is 35rpm resp. 10m/min fix, optionally with frequency inverter adjustable with a potentiometer between 4-10m/min.

## 5. Conveyor drive

The conveyor is driven and synchronized with a theeted belt. The Conveyor is tensed at the deflector roll by 2 hexagon socket screws. If even the conveyor belt drifts you can ajuste the belt by loosen or tighten of these screws. If the belt drift to the left side, loosen the left side screw a little bit or tighten the rigt side screw. Do never tighten or loosening more then a quart turn of the srew, then observe whats happen.

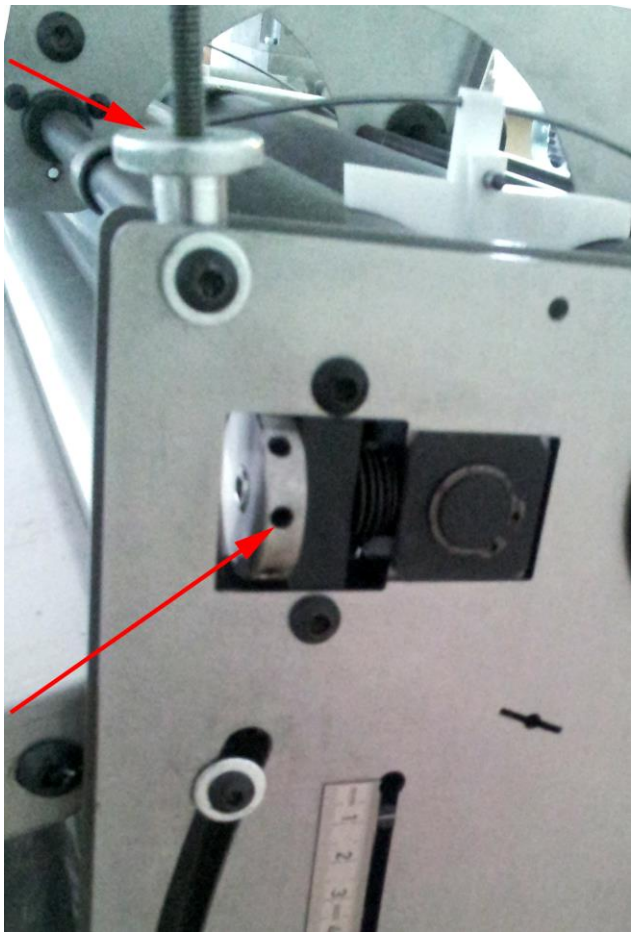
## 6. Height ajustement of conveyor

The distance between the conveyor and the glue application roll is adjustable between 5-200mm.

The distance is read of the scale.

The gap should be approx.. 0,5-1mm less then the foam and depend also on the shore hardness of the foam.

A hard foam needs less pressure then a soft foam.



## 7. Adjusting of the glue thickness

The glue film thickness is adjusted by the glue application roll. To incrase the gap between the fix calibraten roll and the glue application roll tighten the small handwheel manually or with a stick.

The screw has a pitch of 1mm, a turn of 90° on the handwheel means a gap of 0,25mm.

## 8. Lateral End Stop Plates

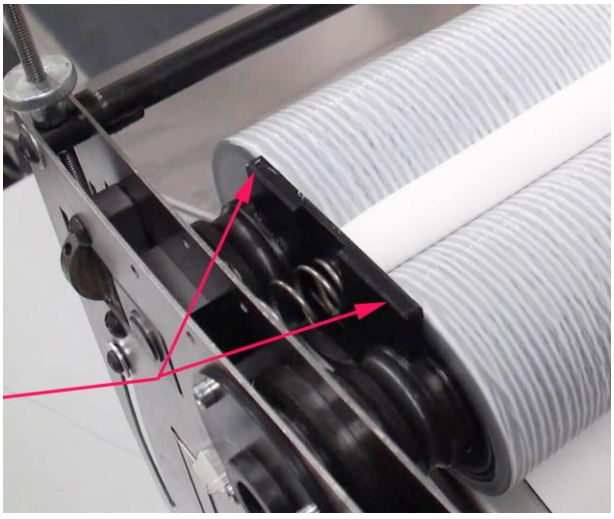
Lateral plate's covers prevent that the glue goes out at the end of the wheels.

Because the calibration and the glue application wheel are different sizes, it's important that these plates are put according to left and right side version.

Correct mounted plates are horizontally aligned with the Wheels.

If alignement is not horizontally, changes the left with the right side plate are interchanged.

The Lateral End Stop Plates are pressed by Springs against the Wheel Walls.



# Maintenance of the Hot Wheel Coater

## At the end of work

Befor you finish to work with the Hot Wheel Coater try to empty the rest of glue between the rolls with the last serie of work pieces.

Befor you stop the hot wheel coater reduce the gap between calibration roll and glue roll to zero, and then stop the motor. To prevent eventually glue drops onto the conveyor we propose to put some paper or plastic foil below the roll.

Eventually fouling (Ablagerungen - Verschmutzungen) and glue drops should be cleaned immediately.

Daily

Check that the conveyor belt run well. No dity or fouling on the lateral belt sides

Daily

Check the conveyor belt to be correctly tightened

weekly

Check the electric plugs and cables against damage

Monthly

# Processing of PUR-Hotmelt

The hot wheel coater is designed also to process PUR-hotmelt with a longer reaction time of minimum 1 hour.

The quantity of melted glue between the rolls is relatively small, short time used and refill with new glue. For this reson you do not need nitrogen neutralization.

Befor you finish to work with the Hot Wheel Coater try to empty the rest of PUR-Hotmelt glue between the rolls with the last serie of work pieces.

For cleaning put immediately at the end of work the proposed cleaner between the rolls and let run the rolls again. The remaining PUR Hotmelt will be solved by the cleaning material. After ~5 minutes stop the hot wheel coater, open the gap at maximum ~2-3mm and let drope down the hot liquid onto a paper.

# PUR-Melter Unit

The hotmelt is melted by a heating plate and pressed out over a piston with air pressure.

The candle of PUR-Melt is not melted completely but only on the surface of the heating plate and with the quantity of material where will be used continiousely. If the candle is melted down to ¾ of the length, the melter must be refilled with a new candle. This prevent, that the piston remain any time in the clean aerea of the cylinder.

Because there is no air contact with the material, the PUR-Hotmelt cans not reacte into the Melter.

At the end of work, the Material Output nozzle must be closed by a Plug to prevent that the material into the nozzle will react with the humidity of the air.