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PROCESSING RECOMMENDATIONS FOR THE ARTICLE "ROSE PINS" BY COMPANY SWAROVSKI

The article group "Rose Pins" by company Swarovski was evaluated in terms of its applicability in the shoe industry and can be used provided the following processing instructions are adhered to.

The following document illustrates a processing recommendation describing the individual process and production steps of a ladies' court shoe model with crystals being applied on the different upper parts.

This ladies' shoe was manufactured using the cemented construction "AGO".


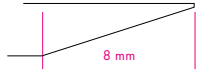




Special concern attention should be paid to the production stages, which temperature, pressure, and extension (ironing, pre-molding, lasting, sole setting, ...)

All critical production steps are explained using text and images and must comply with the instructions provided.

However, a pre-production of different shoe sizes should always be implemented before production launch in order to check all production parameters and tools regarding the respective upper materials, tanning methods, and leather finishing as well as the upper patterns and the positions of the Rose Pins.


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Work step	Machine / tool	Auxiliary materials	Conditions	Processing recommendations
SKIVING	<p>FORTUNA COMPUTER-CONTROLLED MULTIPLE SKIVING MACHINE</p> <p>Folding skiving</p> <p>Skiving is done over a width of 10 mm. That way there is no contact with the Rose Pins.</p>  <p>Lapseam skiving</p> <p>Currently, the leather part has to be skived over a width of 8 mm. Due to the length of the roller foot there is contact with the Rose Pins.</p> 		<p>Max. temperature –</p> <p>Max. pressure –</p> <p>Humidity –</p> <p>Time –</p>	<ul style="list-style-type: none"> – Minimum distance of 15 mm from the model edge must be observed due to the roller foot of the skiving machine for folding skiving cut. – Minimum distance for lapseam cut: 18 mm. – Distance from lasting allowance: lasting allowance + height of sole edge + 10 mm.
	  			



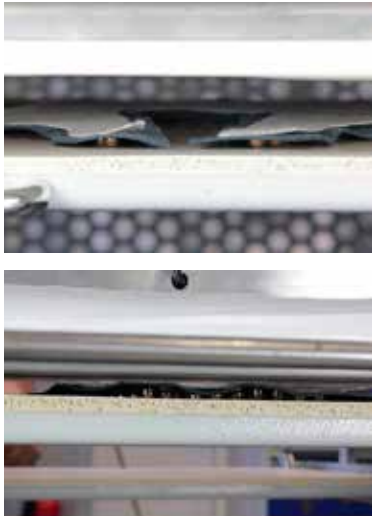
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Work step	Machine / tool	Auxiliary materials	Conditions	Processing recommendations
STAMPING 	STAMPING MACHINE	STAMPING FOIL	Max. temperature – Max. pressure 5 bar Humidity – Time –	– Company- and model-specific information on part number, size, width, etc. are stamped on the lasting allowance. – Distance of Rose Pins: lasting allowance + 10 mm. 





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Work step	Machine / tool	Auxiliary materials	Conditions	Processing recommendations
<p data-bbox="174 411 510 475">IRONING ON THE INTERLINING</p> 	<p data-bbox="533 411 869 443">IRONING MACHINE</p> 		<p data-bbox="1137 411 1361 475">Max. temperature 135°C</p> <p data-bbox="1137 507 1361 571">Max. pressure 6 bar</p> <p data-bbox="1137 603 1361 667">Humidity -</p> <p data-bbox="1137 699 1361 762">Time -</p>	<ul data-bbox="1384 411 2065 734" style="list-style-type: none"> - Ironing on the interlining in the ironing press. Parameters: temperature, pressure, and time (max. 12 sec / dependent on material). - Iron lining is attached to the back, therefore there is no contact with the Rose Pins. - An ironing table cover made of foamed rubber should be used in order to avoid the crystals being damaged. The foamed rubber should be at least 10 mm thick. 

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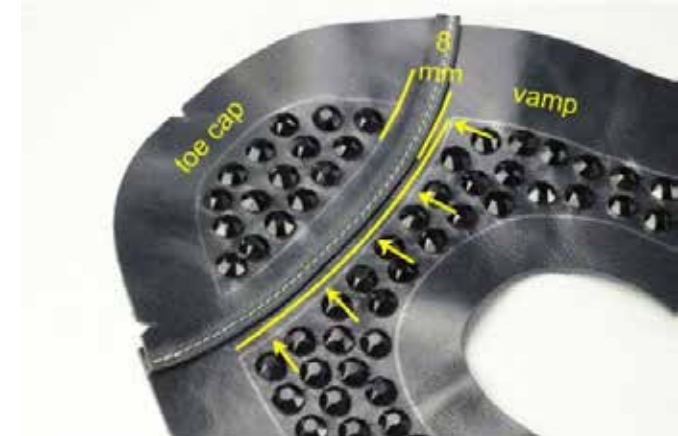
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Work step	Machine / tool	Auxiliary materials	Conditions	Processing recommendations
MACHINE FOLDING OVER	FOLDING MACHINE	FOLDING RIBBON FOLDING CEMENT	Max. temperature 180°C Max. pressure – Humidity – Time –	<ul style="list-style-type: none"> – Folding the upper edge using a folding machine. – The hot-melt adhesive (approx. 180°C) is applied to the previously skived folding strip; the upper edge is folded using a small “folding hammer.” – Distance to the Rose Pins: double folding width + 5 mm.
 	 			

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Work step	Machine / tool	Auxiliary materials	Conditions	Processing recommendations
STITCHING THE TOE CAP TO THE FRONT PART	FLAT-BED SEWING MACHINE WITH ROLLER FOOT	YARN NEEDLE	Max. temperature – Max. pressure – Humidity – Time –	<ul style="list-style-type: none"> - Minimum distance from the part edge "toe cap": at least roller foot width + 2 mm. - Distance of Rose Pins, e.g. on the front part, can be adjusted 2 mm closer to the Lapseam marking.



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Work step	Machine / tool	Auxiliary materials	Conditions	Processing recommendations
STITCHING ON THE HEEL COUNTER	FLAT-BED SEWING MACHINE WITH ROLLER FOOT	YARN NEEDLE	Max. temperature – Max. pressure – Humidity – Time –	– Minimum distance from the part edge “heel counter”: at least roller foot width + 2 mm. – Distance of Rose Pins, e.g. on the front part, can be adjusted 2 mm closer to the lapseam marking.



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Work step	Machine / tool	Auxiliary materials	Conditions	Processing recommendations
RUB DOWN BACK SEAM AND LAY ON THE TAPE	"RUBBING-DOWN" MACHINE		Max. temperature – Max. pressure 5 bar Humidity – Time –	– Edge distance of Rose Pins must be observed! – 5 mm + extra "back seam" (e.g. 3 mm), so in total 8 mm. – The back seam is flattened between both rolls with a maximum pressure of 5 bar.



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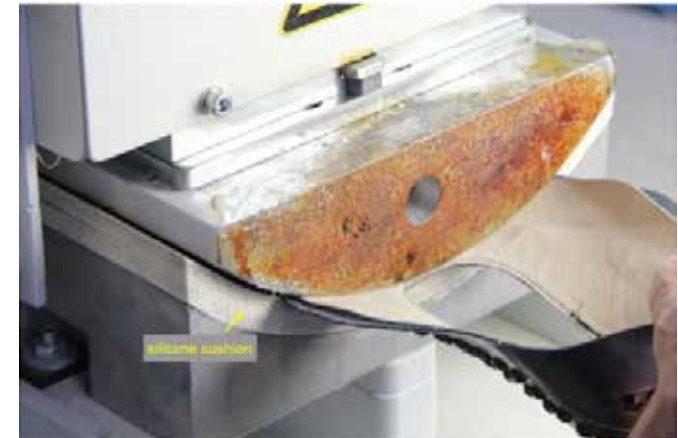
Work step	Machine / tool	Auxiliary materials	Conditions	Processing recommendations
STITCHING IN LINING, STITCHING EDGES	POST BED STITCHING MACHINE	YARN NEEDLE	Max. temperature – Max. pressure – Humidity – Time –	– Edge distance of the Rose Pins from the upper edge: at least roller foot width + 2 mm.



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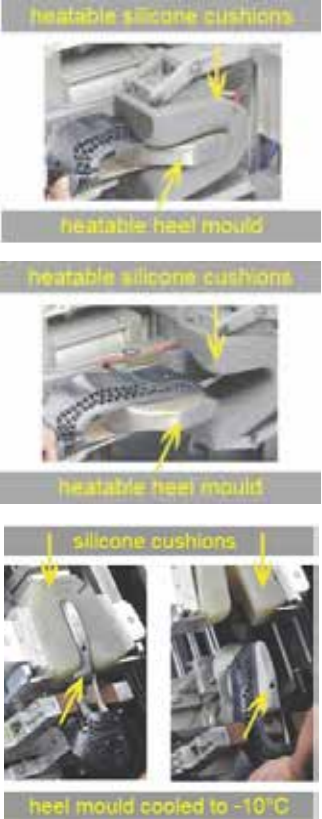
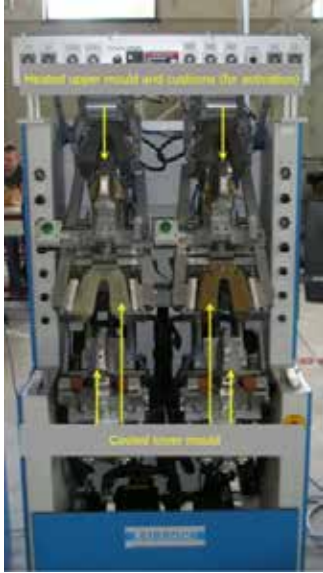

PROCESSING RECOMMENDATIONS FOR THE ARTICLE ROSE PINS BY COMPANY SWAROVSKI

Work step	Machine / tool	Auxiliary materials	Conditions	Processing recommendations
IRONING ON / MOLDING THE THERMOPLASTIC TOE PUFF	TOE PUFF MOLDING MACHINE	THERMOPLASTIC TOE PUFF	<p>Max. temperature 130°C</p> <p>Max. pressure 5 bar</p> <p>Humidity –</p> <p>Time –</p>	<ul style="list-style-type: none"> - The Rose Pins are on a silicone cushion (lower part of the machine), which is soft and heat-resistant. - Turn off the lower heat of the machine, work only with upper heat. - Maximum temperature resistance of Rose Pins must be observed! - The silicone cushion must be at least 15 mm thick with a shore hardness of 30 Shore A.



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Work step	Machine / tool	Auxiliary materials	Conditions	Processing recommendations
<p>BACKPART PRE-MOLDING</p> 	<p>BACKPART MOLDING MACHINE</p> 	<p>THERMOPLASTIC HEEL COUNTER</p>	<p>Max. temperature -10°C to 110°C</p> <p>Max. pressure 5 bar</p> <p>Humidity Yes, only on the lining side</p> <p>Time -</p>	<ul style="list-style-type: none"> - When activating the heel counter (on the silicone cushion), temperature must be observed because of the glue of the Rose Pins! - Tanning type of leather as well as heat resistance of leather finish must be observed and tested, if necessary. - If necessary, set lower temperature and/or extend activation time. - Increase temperature at the last on the lining side to a maximum of 110°C. - Actual heel forming on cooled (down to -10°C) heel mold and silicone cushion max. shore hardness: 70 Shore A. 

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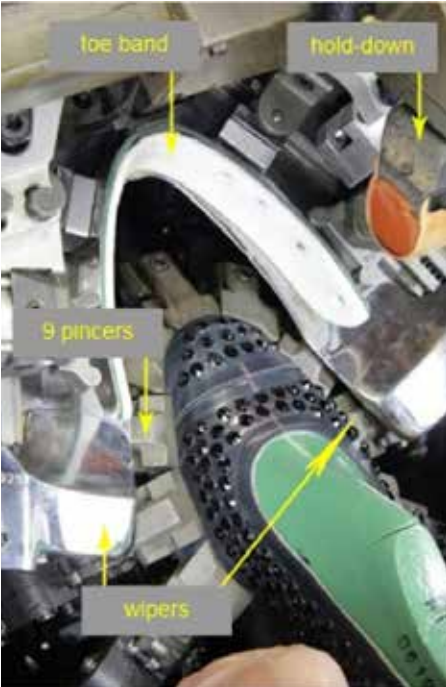
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Work step	Machine / tool	Auxiliary materials	Conditions	Processing recommendations
STEAMING THE UPPER, ACTIVATING THE TOE PUFF	STEAMER	THERMOPLASTIC HEEL COUNTER	<p>Max. temperature 110°C</p> <p>Max. pressure 5 bar</p> <p>Humidity Yes</p> <p>Time 15 secs max</p>	<p>- Upper with thermoplastic toe puff is activated using steam.</p> <p>- Activation time to be extended when temperature below 110°C.</p>







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Work step	Machine / tool	Auxiliary materials	Conditions	Processing recommendations
TOE LASTING	TOE LASTING MACHINE (WIPING-IN MACHINE)	THERMOPLASTIC ADHESIVE AS STRING ADHESIVE	Max. temperature 180°C Max. pressure 10 bar Humidity – Time –	– Position of Rose Pins must be observed: lasting allowance + 10 mm. – Hold-down pressure for all sizes: 10 bar max.
	 <p>1st step: First, the upper is fixated using the front middle pincer of the machine.</p> <p>2nd step: The remaining pincers grip the upper and pull it downward.</p> <p>Adhesive is applied to the underside of the insole.</p> <p>3rd step: The toe band is pressed onto the last toe. The pincers are released. The wipers close and from underneath press the lasting allowance against the underside of the insole. From above, the hold-down presses against the last toe.</p>			

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Work step	Machine / tool	Auxiliary materials	Conditions	Processing recommendations
HEEL AND SIDE LASTING	HEEL SEAT/SIDE LASTING MACHINE	THERMOPLASTIC ADHESIVE AS STRING ADHESIVE	<p>Max. temperature 180°C</p> <p>Max. pressure 10 bar</p> <p>Humidity –</p> <p>Time –</p>	<p>– Position of Rose Pins must be observed: lasting allowance + 10 mm.</p> <p>– Hold-down pressure for all Rose Pin types: 10 bar max.</p>
  	<p>1st step: The heel is pressed on with heel band. Adhesive is applied via glue nozzles.</p> <p>2nd step: Heel/side wipers turn down the lasting allowance and press it against the insole in order to achieve permanent bonding.</p> <p>The last toe rests on the toe support</p>			

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Work step	Machine / tool	Auxiliary materials	Conditions	Processing recommendations
MARKING THE HEIGHT OF THE SOLE EDGE	PRESSING DEVICE	SILVER MARKING PEN	Max. temperature – Max. pressure 5 bar Humidity – Time –	– Pressure is applied on the Rose Pins only in the toe area. – Felt mat on the hold-down (minimum thickness: 20 mm) should be used to prevent the crystals from breaking.



1st step:
In this appliance, the lasted upper, which is roughened in the area of the lasting allowance, is pressed together with the sole WITHOUT adhesive. Adhesion is simulated.



2nd step:
Using a silver marker, the height of the sole edge is marked on the upper.





Only the last toe receives direct pressure from the hold-down.





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Work step	Machine / tool	Auxiliary materials	Conditions	Processing recommendations
<p>ACTIVATING THE ADHESIVE FOR SOLE SETTING</p> <p>The upper, which has been coated in (PU) adhesive, and the outsole are activated in the activating device using heat.</p> 	<p>ACTIVATING DEVICE</p> 		<p>Max. temperature 80°C</p> <p>Max. pressure –</p> <p>Humidity –</p> <p>Time –</p>	<ul style="list-style-type: none"> – The processing instructions of the producer of the adhesive for the sole adhesion must be strictly adhered to. – Heat is applied to the upper (with the Rose Pins) from underneath and from the sides. – The adhesion of the Rose Pins onto their carrier is not affected by the heat of 80°C.



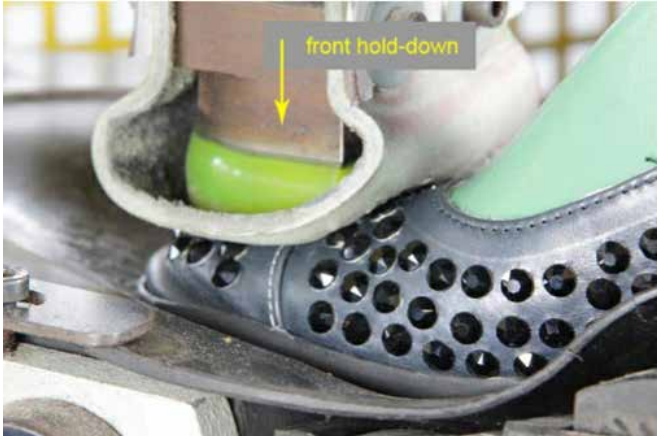
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Work step	Machine / tool	Auxiliary materials	Conditions	Processing recommendations
<p>PRESSING TOGETHER THE UPPER WITH THE SOLE USING A MEMBRANE PRESS</p> 	<p>MEMBRANE SOLE PRESS</p> 		<p>Max. temperature –</p> <p>Max. pressure –</p> <p>Humidity –</p> <p>Time –</p>	<ul style="list-style-type: none">– The applied sole is inserted into the membrane press together with the upper and is pressed.– The rubber membrane clasps around the upper and presses the sole against the upper from all sides.





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Work step	Machine / tool	Auxiliary materials	Conditions	Processing recommendations
<p>PRESSING TOGETHER UPPER AND SOLE USING A HYDRAULIC PRESS</p>  <p>The applied sole is inserted into a hydraulic press together with the upper and is pressed.</p>	 <p>HYDRAULIC SOLE PRESS</p>		<p>Max. temperature 80 °C</p> <p>Max. pressure 20 bar</p> <p>Humidity –</p> <p>Time –</p>	<ul style="list-style-type: none"> – Pressure of the front hold-down must be observed. Maximum value must not be exceeded. – Pressure specified by the producers of the sole and the adhesive must be observed. – Hold-down should be covered in a smooth, pliable material, e.g. soft bottom leather. 




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<p>POLISHING, FINISHING</p> <p>Cloth and horsehair brushes are not suited for polishing. It can lead to undesired edges and the crystals become dulled.</p>  	<p>FINISHING MACHINE</p> 		<p>Max. temperature –</p> <p>Max. pressure –</p> <p>Humidity –</p> <p>Time –</p>	<ul style="list-style-type: none"> – Brush the shoe in compliance with the finishing instructions of the leather manufacturer. – Cloth and horsehair brushes are not suited for the Rose Pins, as the crystals become dulled and are damaged. – Only use wool yarn polishing brush for Rose Pins. 

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Work step	Machine / tool	Auxiliary materials	Conditions	Processing recommendations
<p>BLOW-DRYING THE SHOE</p> 	<p>INDUSTRIAL BLOW-DRYER</p> 		<p>Max. temperature 100°C</p> <p>Max. pressure –</p> <p>Humidity –</p> <p>Time –</p>	<ul style="list-style-type: none"> - During this step, it is imperative that the maximum temperature of the Rose Pin adhesion is observed. - Use only the greatest diligence when blow-drying. Never keep the shoe under the blow-dryer constantly. Always blow-dry in short intervals. - Categorically avoid putting the Rose Pins under mechanical stress (pressure, torsion, shearing) after blow-drying. 

Using an industrial blow-dryer, creases and dents in a shoe can be "blow-dried out."