



# BASIC INFORMATION

## INTRODUCTION

Crystal components can be processed very simply and effectively thanks to the unrivalled product quality and the application systems developed by Swarovski. To maximize these benefits, Swarovski has introduced its unique Application Support service which passes all its application expertise onto all its users.

This manual gives you a brief overview of the most important crystal processing techniques. You can obtain more in-depth support from our technical specialists, who are available throughout the world, or on our business-to-business website: [www.business.swarovski.com](http://www.business.swarovski.com).

Here you will find, amongst other things, a wide range of multimedia support which we are continually developing, including animations, FAQs and hints and tips, which will help you meet a variety of technical challenges. Turning dreams into reality is, after all, what the fashion business is all about!

## OVERVIEW OF APPLICATION METHODS

PRODUCT GROUPS	SELECTION OF PROCESSING OPTIONS						
	GLUING*	HEAT*	BEADING	SEWING*	SOLDERING*	MECHANICAL*	SETTING
ROUND STONES	■						■
FLAT BACKS NO HOTFIX	■						■
FLAT BACKS HOTFIX		■					
SEW-ON STONES	■		■	■			
FANCY STONES	■		■	■			■
BEADS			■	■			
CRYSTAL PEARLS			■	■			
PENDANTS			■	■			■
TRANSFERS		■					
CRYSTAL FABRIC	■	■		■			
PLASTIC TRIMMINGS	■	■	■	■		■	■
ZIPPERS				■			
BUTTONS & FASTENERS			■	■		■	
METAL TRIMMINGS	■			■		■	■
CRYSTAL MESH NO HOTFIX			■	■			
CRYSTAL MESH HOTFIX	■	■		■			
CUPCHAINS & FINDINGS			■	■	■	■	■

\* These application methods are described in detail in this manual. You can obtain information about all other types of application from your Swarovski partner or on our website [www.business.swarovski.com](http://www.business.swarovski.com).

Our oral, written, and advice by testing are recommendations based on our current state of knowledge and the information provided by our suppliers. It does not discharge you from carrying out your own tests of the proposed techniques and their suitability for the intended application. You will therefore apply, use and process the techniques and products within your sole responsibility.



## SEWING

Swarovski has a wide range of crystal components that are ideal for sewing onto fabric, including Sew-on Stones, Lochrosen, Beads, Crystal Pearls, Pendants, Crystal Buttons, Zippers, Cupchains, Findings, Metal and Plastic Trimmings, Crystal Fabric, Crystal Mesh and Multicomponents. These components can be sewn onto a wide variety of materials using a standard sewing machine.

## OVERVIEW OF TOOLS AND AIDS



1



2



3



4 + 5

**1 Sewing machine**

Sewing machines are the best tool for creating a wide range of different designs using forward-integrated products on textile carrier materials. We recommend using a conventional sewing machine, but industrial machines are equally suitable. Many products need zigzag stitch, and a button sewing program is also useful. An upper and lower feed make it easier to sew on Trimmings.

**2 Foot**

For the majority of our products you will only need the sewing machine's standard foot. If you fix two pieces of metal to the standard foot, you will find it very easy to sew on Trimmings and Bandings. For other product groups, such as Crystal Buttons, you will need a button foot.

**3 Sewing machine needle**

Be sure that you use the right size of needle, so that the needle does not damage the crystals. The best needle is a size 80.

**4 Thread**

We recommend using a thread of at least 60 weight. A stronger, synthetic thread is suitable in particular for Sew-on Stones and Crystal Buttons. This tear-resistant thread will produce high quality results.

**5 Hand sewing needle**

We recommend using needles that are as thin as possible for hand sewing. This makes it easier to pull the needle and thread through the holes in the products.

## PREPARING FOR MACHINE SEWING

Effective preparation is the key to producing successful results. One particularly important factor is the choice of the right needle (size 80 is recommended), thread and thread tension. If the upper and lower threads are the same length, they will cross over in the middle of the fabric, resulting in even stitches. The fabric must not crinkle. You should try out the stitching on a spare piece of fabric first.

Put the bobbin into the machine so that the thread runs clockwise. Make sure that the thread runs easily and evenly.

You should not normally have to adjust the tension of the lower thread, as tensioning the upper thread will be sufficient.

**ZIGZAG STITCH**

In order to ensure that zigzag seams look perfect, adjust the thread tensions carefully. Carry out tests on spare pieces of fabric, as dense zigzag stitching is hard to unpick. If necessary, reduce the tension on the upper thread.

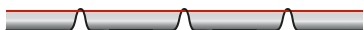
**UPPER THREAD TENSION**

## 1. Correct tension



If the thread tension is correct, the stitches will be clearly visible on both sides of the fabric. The threads will cross over in the middle of the fabric. The fabric must not crinkle. The same amount of the upper and lower threads must be used for each stitch.

## 2. Surface tension too tight



The drawing shows the threads crossing over on top of the fabric.

The stitches are pulling slightly which is making the fabric crinkle. The lower thread is visible on the upper surface of the fabric. Reduce the tension of the upper thread by setting the tension knob to a lower value.

## 3. Surface tension too loose



The drawing shows the threads crossing over on the underside of the fabric. Each stitch has too much thread and the seam is loose.

Increase the tension of the upper thread by setting the tension knob to a higher value.

Before you adjust the thread tension, check whether you have threaded up the sewing machine correctly, or whether you need to remove dust and stray pieces of thread from the machine. These are the most common causes of problems.

If necessary, carry out some tests on spare pieces of fabric.

	ARTICLE NUMBER	TYPE OF SEWING MACHINE	FOOT	TYPE OF STITCH	COMMENTS
<b>SEW-ON STONES</b>	3200, 3210, 3223, 3230, 3240, 3250, 3270	Standard sewing machine	Button foot	Button program or zigzag stitch without feed function	Switch off the lower feed, adjust the stitch length and stitch into every hole.
<b>PLASTIC TRIMMINGS</b>	Basic Bandings – single row	Standard sewing machine	Modified standard foot	Zigzag stitch wider than the Trimming	Make sure that the Trimming runs straight in the foot.
	Basic Bandings – multi-row	Standard sewing machine	Standard foot	Straight stitch	Stitch between the first and second row of crystals.
	Decorative Bandings	Special sewing machine	Special foot	Programmed stitch	Decorative Bandings are also available with embroidery fabric.
	Satin Bandings	Standard sewing machine	Standard foot or zipper foot	Straight stitch	The satin ribbon makes these very easy to apply.
	Fishnet Bandings	Standard sewing machine	Modified standard foot	Straight stitch	Adjust the needle bar so that the stitches are next to the crystals.
	Stretch Bandings	Standard sewing machine	Zipper foot	Straight stitch	Stitch between the rows of stones
	Elastic Bandings	Standard sewing machine	Modified standard foot	Zigzag stitch wider than the Trimming	Make sure that the Trimming runs straight in the foot.
	Swarotex Bandings Hotfix	Standard sewing machine	Standard foot	Straight stitch	You can sew on the Mesh, which has already been ironed on, between the first and second row of crystals.
	Swarotex Bandings No Hotfix	Standard sewing machine	Standard foot	Straight stitch	Stitch between the rows of stones.
	Plastic Components	Standard sewing machine, button machine	Button foot	Zigzag stitch	Switch off the lower feed and adapt the stitch length to the product.
	Buckles	Standard sewing machine, button machine	Button foot	Zigzag stitch	Switch off the lower feed and adapt the stitch length to the product.
<b>ZIPPERS</b>		Standard sewing machine	Zipper foot	Straight stitch	Sew on in the same way as a standard zipper.
<b>CRYSTAL BUTTONS</b>	3002, 3014, 3016, 3017, 3021/4, 3027, 3025, 3028, 3026, 3030/4, 3036, 3031/4, 3037, 3035, 3038, 3122	Standard sewing machine, button machine	Button foot	Button program or zigzag stitch without feed function	Switch off the lower feed and adapt the stitch length to the product.
	3810, 3811, 3815, 3817, 3818, 1763, 1770	Button machine	Special foot	Special sewing program	Adjust the machine to Crystal Buttons.
<b>FASTENERS</b>	Lingerie Fasteners	Standard sewing machine	Standard foot	Straight stitch	Thread the material through the eyelet and stitch next to the fastener.
	Magnet Fasteners	Standard sewing machine	Standard foot	Straight stitch	Thread the material through the eyelet and stitch next to the fastener.
<b>METAL TRIMMINGS</b>	Chaton Bandings	Standard sewing machine	Standard foot	Straight stitch	Stitch between the first and second row of crystals.
	Flat Back Bandings	Standard sewing machine	Standard foot	Straight stitch	Stitch between the first and second row of crystals.
	Chaton & Flat Back Ornamentals	Standard sewing machine	Standard foot or zipper foot	Straight stitch	Easy to sew on using the embroidery fabric/net on the side.
<b>CRYSTAL MESH</b>	Hotfix	Standard sewing machine	Standard foot	Straight stitch	You can sew on the Mesh, which has already been ironed on, between the first and second row of crystals.
	No Hotfix	Standard sewing machine	Standard foot	Straight stitch	Stitch between the first and second row of crystals.
<b>CUPCHAINS</b>		Standard sewing machine	Modified standard foot	Zigzag stitch	Make sure that the Cupchain runs straight in the foot.

**Sew-on Stones**



**Plastic Trimmings**

Basic Bandings – single row



**Plastic Trimmings**

Basic Bandings – multi-row



**Plastic Trimmings**

Satin Bandings



**Plastic Trimmings**

Fishnet Bandings



**Plastic Trimmings**

Stretch Bandings



**Plastic Trimmings**

Swarotex Bandings Hotfix and No Hotfix



**Zippers**



**Crystal Buttons**



**Fasteners**

Magnet Fasteners



**Fasteners**

Lingerie Fasteners



**Metal Trimmings**

Chaton Bandings



**Crystal Mesh**



**Cupchains**



## HINTS AND TIPS

### SAFETY SPECTACLES

When sewing crystal components using a sewing machine, we recommend wearing safety spectacles, to prevent any possible injury.

### LOCHROSEN

Lochrosen can easily be sewn on by hand with the help of small bead.

### CRYSTAL BUTTONS

Before sewing on decorative Crystal Buttons using a machine, it is essential to set the button machine to the correct number of holes and stitches and the correct stitch length. This prevents the Crystal Button from being damaged or causing injury during the sewing process.

### EYELET BUTTONS

When applying eyelet buttons, you should adjust the button machine to ensure that the eyelet buttons are processed correctly and that no damage is caused.

### SEWING CRYSTAL MESH NO HOTFIX



Score the transparent carrier film using a knife and ruler before stitching the mesh. Sew along the scored line with a sewing machine. Make sure that you only remove the transparent film after you have sewn on the mesh.

### ZIPPERS

Using a zipper foot you can sew very close to the teeth of the zipper. It can also be helpful to adjust the needle bar.

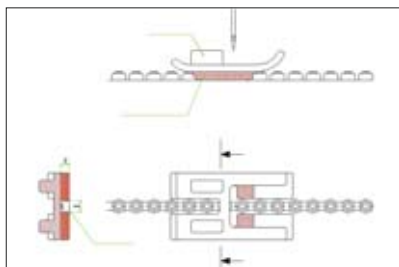
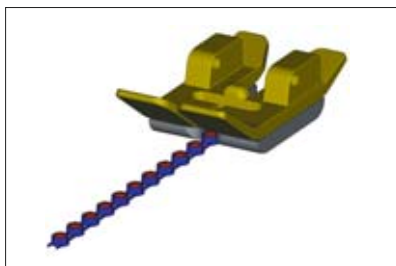
### THREAD TENSION

If the stitches do not look perfect, you can adjust the surface tension. If the thread tension is correct, the stitches will be clearly visible on both sides of the fabric. The threads will cross over in the middle of the fabric.

### MODIFIED FOOT

To sew on single-row Trimmings using a sewing machine, you need a standard foot for the machine, two pieces of metal and a suitable adhesive. The best solution is to use two small aluminum plates which should be of a different width and height depending on the Trimmings. For article 50 002 the width is 2.7 mm and the height 2.3 mm. For article 50 003 the width is 3.4 mm and the height 2.5 mm. For article 50 004 the width is 4.4 mm and the height 3.5 mm.

The two pieces of metal must be stuck to the underside of the standard foot.



Trimming	W	H
50 002	2.7	2.3
50 003	3.4	2.5
50 004	4.4	3.5

## TROUBLESHOOTING

### FAULT

The product or fabric is not fed through correctly.	1, 2, 3
The machine misses stitches out.	4, 5, 6, 7
The thread tears.	4, 6, 8, 9
The needle breaks.	10, 11, 12, 13
The crystals break out of the cups.	14

FAULT	CAUSE	RECOMMENDATION
1	The foot pressure may be too low.	Increase the foot pressure following the instructions.
2	There may be dust between the rows of teeth in the feed.	Clean the teeth.
3	The upper feed is faulty.	Replace the upper feed.
4	The needle may be bent or damaged.	Replace the needle.
5	The needle is not fitted correctly.	It must be pushed right up to the stop.
6	The machine may be threaded wrongly.	Rethread the machine.
7	The tension of the two threads may be incorrectly set.	Check the thread tension and refer to the Thread tension section.
8	There may be knots in the thread or it may be too thin.	Check the thread for faults and, if necessary, replace it.
9	The components which form the stitches may be damaged.	Have the sewing machine checked by an engineer.
10	You may be using the wrong needle.	Choose a needle of the correct size for the carrier material.
11	It may be that the bobbin case is not correctly fitted.	Check the bobbin case.
12	The needle is too thick and gets stuck in the product.	Use a thinner needle.
13	The needle hits the crystal.	Sew more slowly so that you can feed the product through the machine more carefully.
14	The needle damages the cup.	Check the length of the stitch and the thickness of the needle.