Heat Press Guidelines

Ioline has collected and tested heat press processes that improve results when transferring flat-back-hotfix Rhinestones and crystals from motifs to garments and accessories. General guidelines and advice are included below. There is no 'right' answer for all materials, brands of stones, or heat press models. Always use the following information as a starting point and test both the stones and materials with the heat press before starting full production of a design.

Heat Press Settings

1. **Optimal Temperatures** are between 120° C (250° F) - 170° C (340° F) depending on material and press time. The goal is to get the glue hot enough to absorb into, and bond with, the material but not to get absorbed completely away from the crystal.

   a. If the adhesive soaks into the fabric, shorten the application time first then reduce the pressure or temperature.

   b. Larger stones require longer times OR increased temperature and pressure.

   c. Mixing stones with large size differences, 30ss and 6ss for example, may cause problems. The glue melts much faster on the small stones and may get completely absorbed into the material by the time the glue on the large stone is melted.

   d. When applying stones to thicker fabric (pile knit, artificial fur, denim, etc.), increase the pressure and application time.

   e. When applying stones to delicate fabrics, decrease the pressure and application time. Also test whether a Teflon® sheet is required between the stones and heating element.

2. **Arm Pressure** set to LOW. Excessive pressure may damage the stones or cause an undesirable finished product.

3. **Press Time** (heat press closed on design) depends on the temperature and the material. The table below provides generic combinations to start testing with.

Material	Press Time (seconds) @ 163° C (325° F)					
	6ss	10ss	12ss	16ss	20ss	30ss
Cotton	8	12	15	20	25	28
Wool	13	17	20	25	30	33
Denim	18	22	25	30	35	38
Lycra	10	14	17	22	27	30
Silk	8	12	15	20	25	28
Synthetics	7	11	14	19	24	27
Synthetic Suede	20	24	27	32	37	40
Artificial Fur	30	34	37	42	47	50

Hint

Always test stones, materials, and the heat press together before starting full production of a motif embellished garment or accessory. All guidelines in this manual will not work as described in every situation.

Process Hints

1. Proper adhesion depends on adsorption of the adhesive into the substrate when used with textiles. Materials with water-proofing treatments do not work well as they resist absorption.

   To test for an incompatible coating, lay a sample flat and sprinkle water on it. If the water beads up instead of absorbing, the adhesive on the stones will not work with the material.

2. Pre-heat the garment or accessory in the heat press WITHOUT the motif for 5-10 seconds. This removes moisture from the material and improves the bond during adhesive melting.

3. Cut the excess *Transfer Sheet* away from the motif before application. Get the edges close to the motif outlines. This will reduce marks on the fabric from the unused *Transfer Sheet* adhesive.

4. Protect the heat press with a *Protective Sheet* between the top and bottom *Platens* of the press. The most common protective material is a Teflon® sheet although heavy craft paper (like a brown paper bag) will work too.

5. Don't remove the *Transfer Sheet* until the design has cooled. This takes from 1 to 5 minutes. Test the time to make sure.

6. Protect *Synthetic Suede* and *Fur* fabrics after application by peeling off the *Transfer Sheet* in the direction of the nap.

7. If crystals do not set properly during the first process attempt, re-apply heat with adjusted pressure and/or temperature.

8. The adhesive will continue to harden for 24 hours after application so do not subject the product to wear or washing for one day after production.

9. It is possible to bond crystals to materials other than textiles. Metal, glass, wood and paper are possible. Testing is critical to determine correct process steps and product life.

Embellished Garment Care

The following guidelines are generic hints specific to an embellished garment or accessory. *It is absolutely necessary to follow the cleaning instructions of the garment over those listed below.*

1. To increase the life of the embellished garment or accessory, do not wash them for 24 hours after the transfer.

2. **Washing Instructions**:
   a. Water temperature 16° C (60° F)
   b. Gentle cycle
   c. Mild detergent
   d. Turn garment inside out or place in soft wash bag
   e. Do not use chlorine bleach

3. **Drying Options:**
   a. Hang dry
   b. Turn garment inside out, tumble dry low heat, gentle cycle.
   c. Professional dry cleaning is possible with some crystal brands. Check stone manufacturer specifications first.

> **ⓘ Note**
>
> Always follow your garment care instructions before following the *Embellished Garment Care* guidelines. These always supersede the generic suggestions in this manual.

Embellishing with a Motif

This section outlines steps required to make a Rhinestone embellished garment or accessory. It also shows how the Ioline **CrystalPress** and **CrystalStudio** fit in the process. Start with the design and end with a finished product ready to sell. Familiarity with the *Operation* chapter and the *CrystalStudio User Guide* is required.

Before You Start

Ensure you have the following ready before starting the project:

1. Properly setup **CrystalPress** and **CrystalStudio** software according to directions in the *CrystalPress Quick Start Guide*.

2. Design software like Ioline Design or CorelDraw®.

4. *Transfer Sheet* and enough crystals to complete the design and maintain minimums stated in the *Operation* chapter.

5. A heat press, protective sheets, and garment or accessory for the motif transfer.

Process Step Symbols

The following process steps have symbols that indicate which equipment or software is involved. They are identified below.

COMPUTER OR SOFTWARE #
Requires computer or software activity not related to Ioline **CrystalPress** products. Consult vendor documentation for help.

CRYSTALPRESS EQUIPMENT #
These steps involve use of the **CrystalPress** machine. Read the *Operation* chapter for information and instructions.

CRYSTALSTUDIO SOFTWARE #
CrystalStudio software is used for these steps. Read the *CrystalStudio User Guide* for help using the program.

HEAT PRESS EQUIPMENT #
These steps require use of the heat press. Consult vendor documentation and the *Operation* chapter for advice.

FINISHED PRODUCT #
Information and processes related to the finished product after the transfer is complete.

CREATE THE MOTIF DESIGN

CREATE A DESIGN ❶
Use a *Vector* based design program like Ioline Design, CorelDraw®, or Adobe Illustrator® to make a motif design outline.

EXPORT DESIGN ❷
Output the design in HPGL (.plt) or DXF (.dxf) *Vector* formats.

IMPORT DESIGN ❸
Import the design into the **CrystalStudio** software and make sure all the outlines are visible.

CREATE MOTIF FROM DESIGN ❹
In **CrystalStudio**, apply stones to the design outlines to create a motif. Use *Layers* to combine different sizes and colors.

PREPARE JOB ❺
Adjust settings like multiple copies and spacing between stones. Assign stone sizes to the sorters to match layers.

PRODUCE THE MOTIF

SETUP SORTER BOWLS ❶
Install the correct *Sorter Wheels* into the **CrystalPress**. Ensure stone sizes in machine match **CrystalStudio** *Layers*.

LOAD CONSUMABLES ❷
Load a *Transfer Sheet* and pour stones into the *Sorter Bowls*. Make sure to load the proper amount.

POWER ON ❸
Power on the **CrystalPress** by pressing the power switch to the 'O' position. Stay clear of moving parts during initialization.

Hint

The **CrystalStudio** software requires *Vector* based design images to create motifs. *Vector* images are a collection of outlines with defined coordinates for the end point of each line.

Bitmap images are NOT compatible with **CrystalStudio**. A bitmap image is similar to a photograph in that it is a collection of dots, each with a specific color.

Note

Make sure that the *Layers* in the **CrystalStudio** are assigned the correct stone sizes to match what is loaded in the *Sorter Bowls* in the **CrystalPress**.

Produce the Motif (continued)

PREPARE TO PRINT ❹
Press the *Print/Pause* key so the *Status* light is red. Move the *Transfer Sheet* with *Arrow keys* to position where the motif will start.

CRYSTALPRESS READY ❺
Press the *Reset* key on the *Keypad* to set the beginning point for the motif. The *Status* light will turn green.

PRINT MOTIF ❻
Press the 'GO' button in **CrystalStudio**. The **CrystalPress** will make the motif to match what is displayed in **CrystalStudio**.

Transfer the Motif

REMOVE THE MOTIF ❶
When the motif is finished, lift the *Pinch Wheels* then remove the motif from the **CrystalPress**.

CHECK THE MOTIF ❷
Inspect the motif to ensure that no stones were placed upside down or fell off during the process of removal.

PRE-HEAT THE HEAT PRESS ❸
Set the heat press temperature and pressure that is appropriate for the stone size and material then turn on to pre-heat.

PRE-HEAT THE MATERIAL ❹
Line the heat press *Platen* with a *Protective Sheet* then place the material on the *Platen*. Pre-heat the material for 5-10 seconds.

POSITION THE MOTIF ❺
Remove the cover sheet from the motif (if used). Position the motif on the material making sure adhesive side is down.

Transfer the Motif (continued)

Press the Motif ❻
Close the heat press arm onto the material and lock it down. Leave it locked in place for the time required for your design.

Remove the Material ❼
Open the heat press arm after enough time. Remove the material then set it aside to cool for as long as the design requires.

Finishing

Remove the Backing ❶
After the motif has cooled, slowly remove the *Transfer Tape* backing. Make sure the stones stay adhered to the material.

Check the Product ❷
Check the motif to ensure that all the stones are in place and that they are all bonded properly.

Deliver the Product ❸
Provide the finished product to the customer. Remind them not to wash the garment for 24 hours from the transfer time.