

SWAROVSKI

APPLICATION MANUAL 2016

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Swarovski is the premium brand for the finest crystal embellishments since 1895. It is recognized for its innovative excellence and its collaborations with top-class designers and brands in the fashion, jewelry, accessories, interior design, and lighting industries across the globe.

Available in myriad colors, effects, shapes, and sizes, crystals from Swarovski offer designers a fabulous palette of inspiration, and are produced according to the innovative, lead-free* Advanced Crystal standard. Born out of a passion for detail and high-precision cutting, these precious ingredients impart refined glamour to everything they embellish. They can be recognized by the 'Crystals from Swarovski' seal, which serves as a certificate of authenticity that identifies products made with genuine Swarovski crystals.

A family-owned company for more than 100 years, with values rooted in integrity, respect, and excellence, Swarovski is noted as much for its ethics in business as for its contemporary artistry and innovative flair.

[SWAROVSKI.COM/PROFESSIONAL](https://www.swarovski.com/professional)

* Crystal glass and all other materials containing 0.009% lead or less.



SEAL YOUR SUCCESS

Be part of our exclusive Ingredient Branding program



SWAROVSKI

CRYSTAL COLLECTION

TAKE THOUSANDS OF CRYSTALS WHEREVER YOU GO

INSPIRATION IS ONLY AN APP AWAY

Wherever you are, whatever you're looking for, search over 15,000 loose elements and 200,000 forward-integrated elements with Swarovski's inspirational new Crystal Collection App. Online or offline, stay app-to-date with the latest innovations and find popular classics – it's easy to install, easy to browse, easy to use.



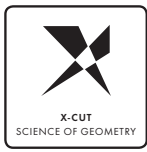
Made for iPad



Made for Tablets

SWAROVSKI.COM/COLLECTIONAPP

EXCELLENCE, THROUGH INNOVATION AND ORIGIN



X-CUT
Advanced optical measurement and high-precision manufacturing deliver premium cuts characterized by unmatched brilliance.



HOTFIX GLUE
The variable temperatures at which Hotfix glue can be activated enable the application of crystals on a broad range of textiles.



PLATINUM PRO
With its new advanced foiling technique, Swarovski has set a new standard in the lifespan of crystals.



CRYSTALS - MADE IN AUSTRIA
The combination of innovation with sustainability and respect for individual wellbeing means that quality is always assured.

PREMIUM, BY SERVICE AND DESIGN



DESIGN SERVICE
Throughout its global network of Design Centers, Swarovski offers exceptional service provided by the industry's best creative talent.



GLOBAL SERVICE
Swarovski's Global Service Network provides customers with dedicated personal assistance on a local level.



APPLICATION SERVICE
A comprehensive range of application services means customers benefit from the extensive experience of leading international experts, as well as internal specialists.



DESIGNER EDITIONS
Creative collaborations with top designers result in exclusive cuts and unique designs for Swarovski crystal.

COMPLIANCE, WITH INTEGRITY



ADVANCED CRYSTAL
Swarovski's patented lead-free* formula has changed the DNA of crystal while still offering the same sparkle, dependability, and variety for which Swarovski is famous.



CLEAR
Regular legal monitoring of chemical requirements and reasonable testing provide customers with the comfort of trust in Swarovski's products.

*Crystal glass and all other materials containing 0.009% lead or less.



OEKO-TEX
Oeko-Tex® Standard 100 Class II (direct contact with skin) certification creates confidence in chemical safety of textile applications.



COMPLIANCE SERVICE
Assessments regarding substance limitations as well as compliance information and advice to support customers in complying with relevant laws, regulations, and voluntary standards.

[SWAROVSKI.COM/PROFESSIONAL](https://www.swarovski.com/professional)

GENERAL INFORMATION

Swarovski offers a comprehensive range of services, tailored to customers' requirements, for the application of Swarovski products.

APPLICATION MANUAL

This Application Manual offers extensive information on the various Application Services provided by Swarovski. Thanks to their outstanding quality, and with the help of specially developed application techniques, Swarovski products can be processed easily and quickly to produce a high-quality finished product. The processes involved are described in this manual on a step-by-step basis, with photos and illustrations.

Each application method contains detailed information on the following areas:

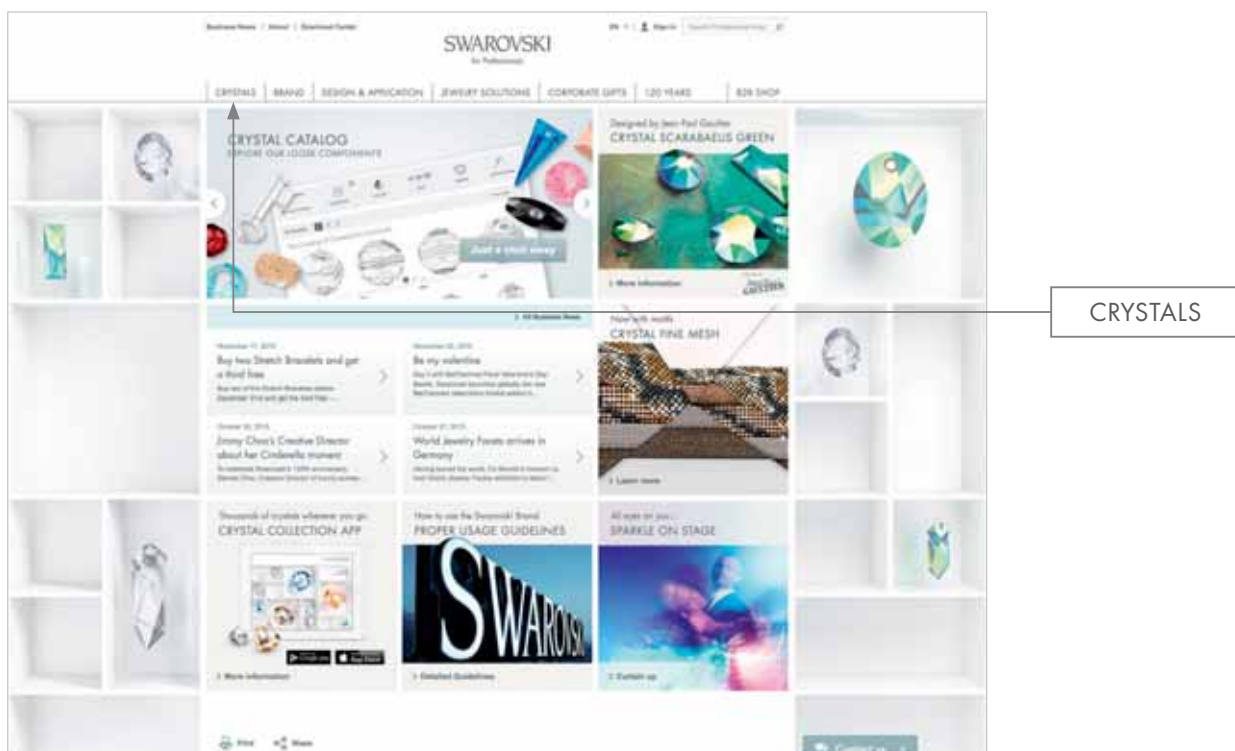
Product Overview	Swarovski products that are suitable for the application technique in question
Machines, Tools, and Aids	List of machines, tools, and aids necessary for application
Suppliers	Selection of suppliers that sell these machines, tools, and aids
Application	Detailed description of the entire application process and the product-specific procedure. Furthermore, the Hotfix Selector outlines extensive application parameters for suitable product and carrier material combinations
Useful Information	Advice and tips on working with Swarovski products
Quick Assistance	A checklist of typical application problems, along with possible causes and recommendations on avoiding them (in each chapter these are marked with a ?!)

Extensive care instructions and further information on laws, regulations, norms, and standards are featured at the end of the manual.

APPLICATION ONLINE: SWAROVSKI.COM/PROFESSIONAL

All the information contained in this manual is regularly updated on the Swarovski products business website (SWAROVSKI.COM/PROFESSIONAL). In addition, application techniques are demonstrated through animations and videos. The site is an excellent way to find out about Swarovski's application services and application techniques.

To gain access to the restricted section of the business website, please contact your local Swarovski representative.



APPLICATION SERVICES

Swarovski offers a comprehensive range of services, tailored to your requirements, for applying Swarovski products. In doing so, the company aims to meet the needs of each industry, and to jointly offer flexible and integrated solutions.

- Technical enquiry service
- Compliance service
- Technical customer support – field services
- Application partner network

Technical enquiry service

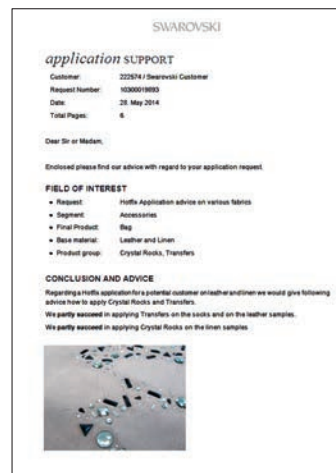
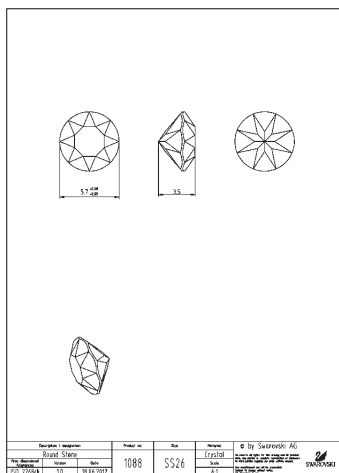
Available worldwide, the technical enquiry service can help you in the following areas:

- Product information
- Technical drawing
- Care instructions
- Information on industry standards
- Individual application tests based on customer samples
- Information on machines, tools, and aids

Compliance service

The worldwide available compliance service can support you in the following areas:

- Certificates
- Information on laws and regulations
- Compliance information of Swarovski crystals
- Compliance statement to customer-specific requirements



For further information, please contact your local Swarovski office.

Technical customer support – field services

Swarovski imparts its crystal application expertise through customized **Crystal Application Workshops, Crystal Application Consultancy, Troubleshooting, and Technical Assessments**. These can take place either on customers' premises or at Swarovski locations. The focus is always on customers' individual needs, the efficient use of Swarovski products, and on the quality of the crystal application.

Our services have been created to take advantage of our comprehensive crystal application expertise in the following areas: mastery of the relevant techniques, technical knowledge of Swarovski products, process-engineering competencies, and our experience of crystal application equipment, together with our product manufacturing knowledge of various industries.



Service results (dependent on the particular individual service package):

PREVENTION OF INCREASED DEVELOPMENT COSTS THROUGH TECHNICAL INPUT IN:

- The correct choice of Swarovski products
- The correct technical design
- The correct application technique
- The correct integration of an application process into the entire process landscape
- Application process set-up

PREVENTION OF COST COMPLAINTS THROUGH TECHNICAL INPUT IN:

- The correct positioning and arrangement of Swarovski products
- Learning how to check the quality of crystal applications
- Suitability of the customer's equipment, tools, and aids

PREVENTION OF INCREASED STAFF DEVELOPMENT COSTS THROUGH:

- Staff training in appropriate application techniques
- Building your technical knowledge base, thereby enabling you to be self-sufficient

Application partner network

As a company with a global sales network and deep understanding of the market, Swarovski has comprehensive knowledge of various application companies and their services from around the world.

Based on this knowledge, Swarovski has developed a global application partner network. These partners offer a wide range of technical and product-related services, as well as tailored production solutions. In order to qualify and to get access to the application partner network, certain criteria with regard to application techniques, know-how as well as product assortment need to be fulfilled by the application partners.

Application partners can assist you with a variety of application techniques, such as gluing, Hotfix application, sewing, embroidery, and mechanical application. In addition, many partners can carry out technically complex solutions, such as Flat Back Leather and the automated, mechanical application of Rivets. The services offered by our partners range from product and design consultancy, to prototyping and carrying out production, and make up a key component of our customer focus.

Should you require a professional partner to assist you in applying items such as Flat Backs onto interior, Transfer Motifs onto T-shirts, Rivets onto belts, or Plastic Trimmings onto jeans, the "Application Partner Platform" or your local Swarovski office can offer guidance.

Application Partner Platform (APP)

The Application Partner Platform enables you to find the right application partner swiftly and easily, wherever in the world production may be taking place. Through a tailored "search function", you can send out a specific, detailed request (e.g. searching for a specific country, an application technique, or products) to select partners around the world.

The platform is made up of two core areas – "Find a Partner" and "Become a Partner":

Find a Partner

Using the search function, this area enables you to locate the best application partner for your application work. You are immediately provided with a list of application partners, which you can download and save. If you use the search function for a specific enquiry regarding an application service, you receive detailed information from the application partners contacted.

Become a Partner

If you are interested in becoming an application partner yourself, the "Become a Partner" section contains key information on the requirements and an application form to complete. Your local Swarovski office will then contact you as soon as possible.

The screenshot shows the 'Find a Partner' search form on the Swarovski Professional website. The form is titled 'Find a Partner' and includes a search bar with the text 'Please fill out the search fields to find the right partner for your request.' Below the search bar, there are several input fields: 'Company', 'City', 'Continent', and 'Country'. The 'Continent' and 'Country' fields are dropdown menus with 'please choose' as the selected option. Below these fields, there is a 'Products' section with four checkboxes: 'Flat Backs Hotfix', 'Flat Backs for Hotfix', 'Crystal Tattoos', and 'Crystal Trimmings'. The form is part of a larger navigation menu that includes 'CRYSTALS', 'DESIGN & APPLICATION', 'JEWELRY SOLUTIONS', 'CORPORATE GIFTS', and 'IGB SHOP'. The 'DESIGN & APPLICATION' menu item is currently selected, and the 'Application & Manufacturing' sub-menu is active.

Access to the Application Partner Platform:

Part of the "Application Partner Platform" is located in the restricted area of the business website [SWAROVSKI.COM/PROFESSIONAL](https://www.swarovski.com/professional). Under "Design & Application" → "Application & Manufacturing" you will find access to the Application Partner Platform.

For access to the restricted area of the business website and for further information, please contact your local Swarovski office or register online on the business website.

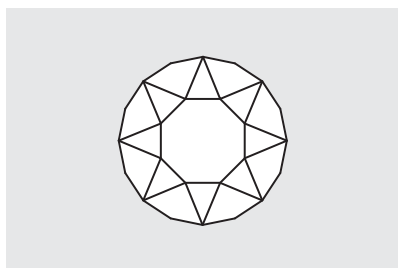
GENERAL PRODUCT INFORMATION

This list offers an overview of Swarovski products that are suitable for the application methods described. Product categories/ descriptions are based on the 2014 Collection.

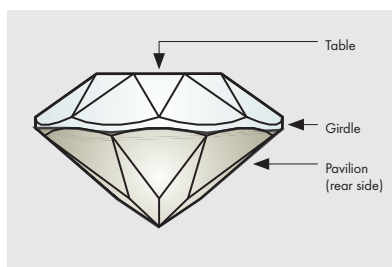
Round Stones	Round Stones are loose crystal elements. Most of them are pointed on the reverse side, making them easy to apply in either metal claw settings or pre-set cavities in die-cast metal alloys. The assortment features a wide variety of different cuts, the most innovative one is the XIRIUS Chaton.
Fancy Stones & Settings	Fancy Stones are offered in numerous shapes ranging from classical gemstone-inspired cuts to progressive trend cuts. They come in a huge assortment of different sizes and colors. Showing either a faceted or flat reverse side, Fancy Stones can be glued into pre-cast cavities or used in metal settings. Their precision-cut facets ensure the highest brilliance and endow design ideas with a unique sparkle.
Beads	Beads offer the highest standard available on the market. The high-quality precision cutting and the clear through-hole achieve high brilliance and clarity. Rounded hole edges reduce the wear on thread and increase the durability of designs. The assortment is divided into classic, romantic, and progressive shape characteristics. They are available in the latest fashion colors, effects, and cuts.
BeCharmed & Pavé	The BeCharmed assortment, from Beads, Crystal Pearls, Pavé, and Rondelles, to Stoppers and Pavé Balls in a brilliant array of colors and effects, offers unlimited combination possibilities. All products of this unique line feature a high-quality stainless steel part with Swarovski branding and a 4.5 mm-diameter hole, which is the standard size for existing charm concepts, making BeCharmed pieces ideal collectibles.
Crystal Pearls	Crystal Pearls are perfect replicas of genuine pearls. They are made of a unique crystal core covered with an innovative pearl coating, which features a flawless, silky smooth, rounded surface. They are available in a variety of shapes, sizes, and colors and are delivered loosely threaded or, if desired, also knotted.
Pendants	Pendants have timeless elegance and are available in a large range of classical and avant-garde cuts and shapes, as well as in many colors and effects. Pendants offer a whole range of design possibilities for different segments thanks to their easy application, with the hole on top requiring only a jump ring/ pinch bail with a chain or cord.
Flat Backs No Hotfix	Flat Backs No Hotfix are loose crystal elements backed with platinum foiling for extra brilliance and protection. These Flat Backs are easy to apply to a variety of carrier materials using standard one- or two-component glues. They are available in a multitude of sizes, colors, shapes, and cuts.
Flat Backs Hotfix	Flat Backs Hotfix are loose crystal elements with a flat reverse side that has been pre-coated with a heat-sensitive glue. These Flat Backs can be easily applied to a large range of textile carrier materials using heat to produce a durable and long-lasting crystal effect. Flat Backs Hotfix are available in a multitude of colors, shapes, and cuts.
Sew-on Articles	Sew-on Articles are loose crystals that can be easily sewn (either by hand, or with a standard domestic or industrial embroidery sewing machine) onto any type of textile or accessory. Sew-on Articles come in two- or three-hole varieties, including round, oval, and triangle holes for use in a wide range of decorative applications for fine embroidery or even jewelry. Lochrosen are crystals with just one hole. Sew-on Articles have rounded edges on the hole entry and exit areas to guarantee thread protection.
Self-adhesive Elements	Self-adhesive Elements such as Crystal-it, Crystal Fabric-it, Crystaltex-it Chaton or Crystal Rocks-it are eye-catching and innovative products that come ready-to-apply. They are pressure-sensitive and self-adhesive. When applied to paper and solid surfaces, they can create elegant, romantic, or sporty designs.
Transfers	Transfers are ideal for Hotfix application on all kinds of textiles. They are available in a large range of motifs and numbers of rows, which are made up of different articles from the Flat Back Hotfix assortment. Featuring designs from the in-house design team, they can comprise XIRIUS and XILION Roses, or Creation Stones, as well as Metallics and Cabochons.
Synthetics Hotfix	These versatile products open up a multitude of creative design possibilities through their numerous application techniques. They combine elegant crystals from Swarovski that can be applied using Hotfix technology with synthetic carrier materials. They are ideal for use in the textile, interior design, jewelry, and accessories segments.
Plastic Trimmings	Plastic Trimmings are plastic carrier materials with integrated crystals. These multi-functional products can either be hand- or machine-sewn or glued onto various surfaces. The range of bandings not only offers a color selection of chatons, but also a variety of casing colors.
Buttons, Fasteners & Zippers	Crystal Buttons can be used in exactly the same way as standard buttons. The assortment of available buttons ranges from those for shirts, blouses, jackets, and coats, to buttons for denim and accessories. They are suitable for hand and mechanical application. Zippers from our assortment are unique because the crystals are integrated into the zipper teeth, allowing them to be used in the same way as standard zippers.

Metal Trimmings	Metal Trimmings are forward-integrated metal products. They can be sewn by hand or machine and mechanically applied onto different fabrics or other materials. Metal Trimmings are bestsellers among the textile, shoe, and accessories segments because their wide range of application possibilities ensures that they can be used in a multitude of different ways.
Crystal Mesh	Crystal Mesh is a flexible metal mesh carrier with integrated loose crystals. The product is available in a wide range of colors and casings, either as a Hotfix version, which can be applied using heat, or as a No Hotfix version that can be hand- or machine-sewn.
Cupchains & Findings	These products are metal chains and findings that can integrate either Round or Fancy Stones and Beads into any creative design. They can be divided into seven sub-categories: Single Stone Settings, Cupchains and Brass Components, Multi Stone Settings, Channels, Metal Buttons, Rondelles, and Linked Findings. Each of these groupings is available in a wide variety of shapes, sizes, colors, and platings.

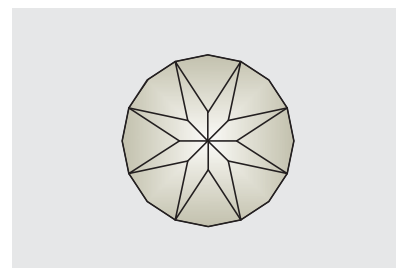
Crystal specifications



Front view



Side view



Rear view (Pavilion)

Foiling

Foiling is the process of mirror coating the reverse side of the crystals.



Silver Foiling (A)

A silver mirror finish for XIRIUS and XILION Hotfix articles only.



Platinum Pro Foiling (F)

A silver mirror finish that is coated with a platinum colored protective layer of highest quality. The Platinum Pro Foiling is not only resistant to environmental damage from chlorine, salt water, and perfume – it can also withstand processes such as soldering and electroplating, giving it unprecedented durability (e.g. art. 4120).



Aluminum Foiling (M)

An aluminum mirror finish is applied using a vacuum coating process (e.g. art. 2855 Flat Back HF).



Protective Layer (P) for Beads and Pendants

Protective layer is a transparent lacquer system that is applied over the effects. This lacquer is designed to protect the effects from scratches, fingerprints, and other damage and also helps to prevent moisture that can lead to corrosion (e.g. from perspiration) penetrating into the effect layer when jewelry is designed to incorporate Crystal Stones that are not set in casings/settings.



Unfoiled (U)

Effects

Vacuum Coating Effects

Vacuum coating processes on the surface of the crystal produce either a special surface or a translucent effect, according to the application methods used.

Please find below a list of all Swarovski effects followed by an explanation of the special vacuum coating processes.


Surface Effects

(Vacuum coating on the surface of the crystal)

	Effect Code	Name
	AB	Aurore Boreale
	ANTP	Antique Pink
	API	Astral Pink
	BLSH	Blue Shade
	BRSH	Bronze Shade
	CAL	Comet Argent Light
	COP	Copper
	DOR	Dorado
	GSHA	Golden Shadow
	HEM	Hematite (only on Jet)
	IRIG	Iridescent Green
	LISH	Lilac Shadow
	LTCH	Light Chrome
	LUMG	Luminous Green
	METSH	Metallic Sunshine
	METBL	Metallic Blue
	MLGLD	Metallic Light Gold
	MOL	Moonlight
	NUT	Nut (only on Jet)
	PARSH	Paradise Shine
	REDM	Red Magma
	ROGL	Rose Gold
	SAT	Satin
	SCGR	Scarabaeus Green designed by JPG
	SSHA	Silver Shade
	TRA	Transmission

Translucent Effects

(Vacuum coating on the reverse side of the crystal, effect shines through the transparent crystal)

	Effect Code	Name
	BBL	Bermuda Blue
	HEL	Heliotrope
	MBL	Meridian Blue
	SINI	Silver Night
	TAB	Tabac
	VL	Vitrail Light
	VM	Vitrail Medium
	VOL	Volcano

Patina Effects

(Partial coating of the correspondingly modified effects)

Effect Code	Name
BLAPA	Black Patina
GOLPA	Gold Patina
ROSPA	Rose Patina
SILPA	Silver Patina
WHIPA	White Patina

Lacquer^{PRO} Effects

A premium opaque varnish which is applied to the reverse side of the crystal instead of foiling, resulting in an opalescent appearance.

Effect Code	Name
L104	Powder Blue
L102	Powder Green
L105	Powder Grey
L103	Powder Rose
L101	Powder Yellow

Variations on Surface Effects

2x



Both sides of the stone are treated with an effect (e.g. art. 5000AB 2).

B



Effects on three sides of a cube shape (e.g. art. 5601 AB B).

V



The effect is used in reverse. A surface effect is used like a translucent effect (e.g. art. 2420 NoHF SSHA V - Silver Shade on the reverse side).

Z



Only a part of the stone is treated with an effect (e.g. art. 4869 HEL Z).

FC (Full Coated)

Improved technology allows for the perfectly homogeneous, all-round application of high-intensity metallic effects in the Bead assortment (art. 5000).

CAL'V'SI & CAL'VZ'SI

The effect CAL (Comet Argent Light) is also used as a mirror coating on the reverse side of the crystal instead of standard foilings (A, F, ...) in special cases (e.g. art. 2035).

/G

Article with partly (PF) or fully frosted (FF) surface (e.g. art. 2611/G)

PA (Patina)

Innovative technology allows for the partly coated application of adapted effects. Its historical edge and "used" look give it a certain timelessness, without losing its crystalline appearance (e.g. art. 2034).

Special Surface Effects

Swarovski has been able to achieve various special surface effects by using special chemical and mechanical processes on the surface of the crystals.



MAT




COS

<i>Effect Code</i>	<i>Name</i>
MAT	Matt Finish
COS	Cosmojet

The Matt Finish effect is achieved by performing a chemical matting process on the entire surface of the crystal. Small variations in the size of the articles may occur as a result of this chemical process.

Using a special process, the outer facets of Flat Back Roses can be blackened. The Cosmojet effect is only possible for the color Crystal (001).

Colors

 Crystal 001	 Violet 371
 White Opal 234	 Light Amethyst 212
 Light Silk 261	 Smoky Mauve 265
 Silk 391	 Provence Lavender 283
 Light Peach 362	 Light Sapphire 211
 Rosaline 508	 Light Azure 361
 Rose Water Opal 395	 Aquamarine 202
 Vintage Rose 319	 Air Blue Opal 285
 Blush Rose 257	 Sapphire 206
 Light Rose 223	 Capri Blue 243
 Rose Peach 262	 Dark Indigo 288
 Padparadscha 542	 Montana 207
 Indian Pink 289	 Turquoise 267
 Hyacinth 236	 Caribbean Blue Opal 394
 Light Siam 227	 Light Turquoise 263
 Indian Siam*** 327	 Blue Zircon 229
 Rose 209	 Indicolite 379
 Fuchsia 502	 Indian Sapphire 217
 Ruby 501	 Denim Blue 266
 Siam 208	 Black Diamond 215
 Burgundy 515	 Pacific Opal 390
 Garnet 241	 Chrysolite Opal 294
 Amethyst 204	 Chrysolite 238
 Cyclamen Opal 398	 Peridot 214
 Purple Velvet 277	 Erinite 360
 Tanzanite 539	 Fern Green 291

 Dark Moss Green 260
 Emerald 205
 Palace Green Opal 393
 Olivine 228
 Khaki 550
 Greige 284
 Light Grey Opal 383
 Sand Opal 287
 Light Colorado Topaz 246
 Jonquil 213
 Yellow Opal 231
 Light Topaz 226
 Sunflower 292
 Topaz 203
 Tangerine 259
 Light Smoked Topaz 221
 Smoked Topaz 220
 Smoky Quartz 225
 Graphite 253
 Jet 280

Ceramics

 Marbled Light Grey 657
 Marbled Terracotta 655
 Marbled Yellow 652
 Marbled Blue 654
 Marbled Black 653

Effects

 Crystal Silver Shade 001 SSHA
 Crystal Moonlight 001 MOL
 Crystal Aurore Boreale 001 AB
 Crystal Luminous Green* 001 LUMG
 Crystal Golden Shadow 001 GSHA
 Crystal Metallic Sunshine* 001 METSH
 Crystal Rose Gold* 001 ROGL
 Crystal Copper* 001 COP
 Crystal Astral Pink 001 API
 Crystal Red Magma* 001 REDM
 Crystal Antique Pink* 001 ANTP
 Crystal Vitrail Light** 001 VL
 Crystal Paradise Shine 001 PARSH
 Crystal Vitrail Medium** 001 VM
 Crystal Volcano** 001 VOL
 Crystal Lilac Shadow 001 LISH
 Crystal Heliotrope** 001 HEL
 Crystal Bermuda Blue** 001 BBL
 Crystal Metallic Blue* 001 METBL
 Crystal Blue Shade* 001 BLSH
 Crystal Tabac** 001 TAB
 Crystal Scarabaeus Green**** 001 SCGR
 Crystal Iridescent Green* 001 IRIG
 Crystal Dorado* 001 DOR
 Crystal Metallic Light Gold* 001 MLGLD
 Crystal Bronze Shade* 001 BRSH

 Crystal Satin* 001 SAT
 Crystal Light Chrome* 001 LTCH
 Crystal Comet Argent Light* 001 CAL
 Crystal Silver Night** 001 SINI
 Jet Nut* 280 NUT
 Jet Hematite* 280 HEM

Crystal Lacquer^{PRO} Effects

 Crystal Powder Yellow* 001 L101
 Crystal Powder Rose* 001 L103
 Crystal Powder Blue* 001 L104
 Crystal Powder Green* 001 L102
 Crystal Powder Grey* 001 L105

Crystal Patina

 Crystal White Patina 001 WHIPA
 Crystal Rose Patina* 001 ROSPA
 Crystal Silver Patina* 001 SILPA
 Crystal Gold Patina* 001 GOLPA
 Crystal Black Patina* 001 BLAPA

Classic Colors: This color range offers a wide choice of traditional Swarovski crystal colors.
 Exclusive Colors: This color range is offered exclusively by Swarovski.

The listed colors and effects are based on the Color Chart for Round Stones (2016).

The standard assortment of colors and effects may vary per product group. Slight changes in shades are unavoidable. Colors may vary according to cut and shape.

The plating resistance of effects is tested according to Swarovski's plating guidelines (SWAROVSKI.COM/PROFESSIONAL). Customers are advised to carry out their own tests if customers' plating parameters diverge from Swarovski plating guidelines. Details for parameter settings can be found on page 19.

* Crystals are not resistant to plating and similar processing.
 ** Crystals are resistant to plating only if they are foiled.
 *** The color Indian Siam is available only for a specific size range. Please refer to the current Collection.
 **** Designed by Jean Paul Gaultier

Testing the plating-resistance

For testing the plating-resistance of effects, the following parameter settings have to be considered:



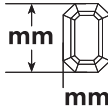
Note: Swarovski cannot warrant the resistance of effects when the parameters as set out above are changed. Swarovski's declaration of resistance does not discharge customer from carrying out its own tests of the suitability for the intended finishing of products. The use and processing of these techniques and products are solely the user's responsibility.

Sizes

Various measurement abbreviations are used to classify the jewelry stones.



PP, SS
 Pearl Plate (PP), Sieve Size or Stone Size (SS)
 for round crystals.



mm
 Metric figures in millimeters for crystal components and
 geometric forms.

•	PP 0 0.70-0.80 mm	•	PP 21 (SS 10) 2.70-2.80 mm	•	SS 26 5.61-5.78 mm	•	SS 45 9.85-10.19 mm
•	PP 1 (SS 000) 0.80-0.90 mm	•	PP 22 (SS 10) 2.80-2.90 mm	•	SS 27 5.78-5.96 mm	•	
•	PP 2 (SS 00) 0.90-1.00 mm	•	PP 23 (SS 11) 2.90-3.00 mm	•	SS 28 5.96-6.14 mm	•	SS 46 10.19-10.54 mm
•	PP 3 (SS 0) 1.00-1.10 mm	•	PP 24 (SS 12) 3.00-3.20 mm	•	SS 29 6.14-6.32 mm	•	
•	PP 4 (SS 1) 1.10-1.20 mm	•	PP 25 (SS 13) 3.20-3.30 mm	•	SS 30 6.32-6.50 mm	•	SS 47 10.54-10.91 mm
•	PP 5 (SS 2) 1.20-1.30 mm	•	PP 26 (SS 13) 3.30-3.40 mm	•	SS 31 6.50-6.68 mm	•	
•	PP 6 (SS 2) 1.30-1.35 mm	•	PP 27 (SS 14) 3.40-3.50 mm	•	SS 32 6.68-6.87 mm	•	SS 48 10.91-11.30 mm
•	PP 7 (SS 3) 1.35-1.40 mm	•	PP 28 (SS 14) 3.50-3.60 mm	•	SS 33 6.87-7.07 mm	•	
•	PP 8 (SS 3) 1.40-1.50 mm	•	PP 29 (SS 15) 3.60-3.70 mm	•	SS 34 7.07-7.27 mm	•	SS 49 11.30-11.72 mm
•	PP 9 (SS 4) 1.50-1.60 mm	•	PP 30 (SS 15) 3.70-3.80 mm	•	SS 35 7.27-7.48 mm	•	
•	PP 10 (SS 4) 1.60-1.70 mm	•	PP 31 (SS 16) 3.80-4.00 mm	•	SS 36 7.48-7.70 mm	•	SS 50 11.72-11.97 mm
•	PP 11 (SS 5) 1.70-1.80 mm	•	PP 32 (SS 17) 4.00-4.10 mm	•	SS 37 7.70-7.93 mm	•	
•	PP 12 (SS 5) 1.80-1.90 mm	•	PP 33 (SS 17) 4.10-4.20 mm	•	SS 38 7.93-8.16 mm	•	SS 55 12.97-13.22 mm
•	PP 13 (SS 6) 1.90-2.00 mm	•	SS 18 4.20-4.40 mm	•	SS 39 8.16-8.41 mm	•	
•	PP 14 (SS 6) 2.00-2.10 mm	•	SS 19 4.40-4.60 mm	•	SS 40 8.41-8.67 mm	•	SS 60 14.22-14.47 mm
•	PP 15 (SS 7) 2.10-2.20 mm	•	SS 20 4.60-4.80 mm	•	SS 41 8.67-8.95 mm	•	
•	PP 16 (SS 7) 2.20-2.30 mm	•	SS 21 4.80-4.90 mm	•	SS 42 8.95-9.23 mm	•	SS 65 15.47-15.72 mm
•	PP 17 (SS 8) 2.30-2.40 mm	•	SS 22 4.90-5.10 mm	•	SS 43 9.23-9.53 mm	•	
•	PP 18 (SS 8) 2.40-2.50 mm	•	SS 23 5.10-5.27 mm	•	SS 44 9.53-9.85 mm	•	SS 70 16.72-16.97 mm
•	PP 19 (SS 9) 2.50-2.60 mm	•	SS 24 5.27-5.44 mm	•		•	
•	PP 20 (SS 9) 2.60-2.70 mm	•	SS 25 5.44-5.61 mm	•		•	SS 75 17.97-18.22 mm

SWAROVSKI PRODUCTS AND SUITABLE APPLICATION TECHNIQUES

		Soldering	Plating	Setting	Gluing	Hoflix Application	Sewing	Embroidery	Hand Application	Mechanical Application	Ceralun
Round Stones				✓	✓						✓
Fancy Stones & Settings	Fancy Stones			✓	✓						✓
	Settings	✓	✓	✓			✓ ¹		✓		
Beads							✓ ¹		✓		
BeCharmed & Pavé							✓ ¹		✓		
Crystal Pearls							✓ ¹		✓		
Pendants							✓ ¹		✓		
Flat Backs No Hoflix				✓	✓						✓
Flat Backs Hoflix	XILION Rose & XIRIUS Rose					✓					
	Framed Flat Backs					✓					
	Creation Stones					✓					
	Creation Stones Plus					✓					
	Cabochon Round					✓					
Sew-on Articles							✓	✓ ²	✓		
Self-adhesive Elements					✓						
Transfers	XILION Transfers & XIRIUS Transfers					✓					
	Creation Transfers					✓					
	Creation Transfers Plus					✓					
	Pearl Transfers					✓					
	Diamond Transfers					✓					
	Metallic Transfers					✓					
	Mezzo Transfers					✓					
Synthetics Hoflix	Crystal Fabric				✓	✓					
	Crystal Rocks & Crystal Fine Rocks				✓	✓					
	Crystaltex				✓	✓	✓ ³				
Plastic Trimmings	Basic Bandings				✓		✓	✓ ⁴			
	Fishnet Bandings						✓				
	Decorative Bandings						✓				
	Plastic Components						✓ ¹		✓		
Buttons, Fasteners & Zippers	Crystal Buttons						✓		✓		
	Buttons with Plastic Shank						✓		✓		
	Snap Fasteners & Decorative Buttons									✓	
	Inset Snap Fasteners & XIRIUS Flat Back Snap Fasteners									✓	
	Jeans Buttons									✓	
	Buttons with Metal Shank						✓		✓		
	Zippers						✓				
Metal Trimmings	Chaton & Flat Back Bandings / Motifs				✓		✓				
	Spike Bandings				✓		✓ ¹				
	Rivets (Crystal Pearl, Square, Chessboard, Star, Spike)									✓	
	Roses & Chaton Montées						✓ ¹		✓		
	Rose Pins, Chessboard Pins & Rhombus Pins									✓	
	Crystal Studs									✓	
Crystal Mesh					✓	✓	✓ ⁵				
Cupchains & Findings		✓	✓				✓		✓		

1 These products are not suitable for sewing with a sewing machine 2 Art. 3129 3 Not suitable for Crystaltex Chaton Bandings 4 Art. 50 002, 50 003, and 50 004 (single-row)
5 Crystal Fine Mesh is not suitable for sewing with a sewing machine

MECHANICAL APPLICATION

Many Swarovski products, such as Snap Fasteners, Rivets, and Rose Pins can be applied manually or mechanically, using either semi- or fully-automated machines.

This simple application technique is used primarily in the textile and accessories fields.

PRODUCT OVERVIEW

The following products are suitable for mechanical application:

BUTTONS, FASTENERS & ZIPPERS	MECHANICAL APPLICATION
Snap Fasteners, Decorative Buttons, Inset Snap Fasteners, and XIRIUS Flat Back Snap Fasteners	✓
Jeans Buttons	✓

METAL TRIMMINGS	MECHANICAL APPLICATION
Rivets, Crystal Pearl Rivets, Square Rivets, Chessboard Rivets, Star Rivets, and Spike Rivets	✓
Rose Pins, Chessboard Pins, and Rhombus Pins	✓
Crystal Studs	✓

MACHINES, TOOLS, AND AIDS

The following machines, tools, and aids can be used for the mechanical application of Swarovski products:



The **fly press** (art. 9040/019, with mounting board) represents an easy way to mechanically apply the products.



For the application of various products, such as Rivets, Rose Pins, Crystal Studs, Decorative Buttons and Snap Fasteners, a **hand tool** can be used. Please be advised that Swarovski does not provide the necessary tools.



Some Swarovski products can be applied using a semi- or fully-**automatic attaching machine** (e.g. Rose Pins). In this process, the feed on the machine must be adjusted to the product being processed.

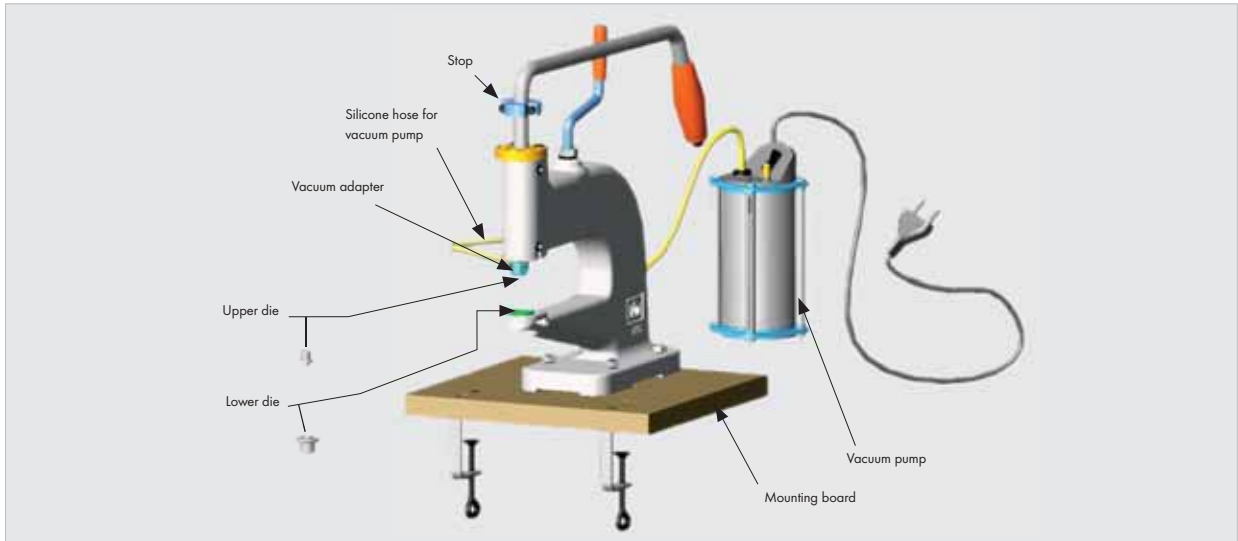


Vacuum pump with silicone hose allows Rivets and Pins to be easily held in place for the fly press (art. 9040/022).



It is recommended that **protective eyewear** is worn during mechanical application, to prevent injury.

Swarovski offers a variety of different tools for the fly press, depending on the product employed. The tools offered have the following specifications: upper die (M6 screw thread), lower die (12,15 mm + 0,03/- 0,10).
 If using a fly press from a provider other than Swarovski, confirm the thread sizes before ordering the tools.



Fly press including possible dies and aids for application (in this case for the application of Rivets).

Snap Fasteners and Decorative Buttons

1780/100 Snap Fastener

	Parts	Upper Die	Lower Die
	<p>Female</p>	<p>Art. 9060/005</p>	<p>Art. 9060/004</p>
<p>Male</p>	Required Application Tools	<p>Art. 9060/006</p>	<p>Art. 9060/007</p>

1780/114 Snap Fastener

	Parts	Upper Die	Lower Die
	<p>Female</p>	<p>Art. 9060/005</p>	<p>Art. 9060/004</p>
<p>Male</p>	Required Application Tools	<p>Art. 9060/006</p>	<p>Art. 9060/007</p>

1781/100 Decorative Button



Parts	Required Application Tools	
Upper Die	Lower Die	
Female	Art. 9060/005	Art. 9060/004

1781/114 Decorative Button



Parts	Required Application Tools	
Upper Die	Lower Die	
Female	Art. 9060/005	Art. 9060/004

Inset Snap Fasteners

1782/190 Inset Snap Fastener



Parts	Required Pre-Punch Tools		Required Application Tools	
Female	Upper Die	Lower Die	Upper Die	Lower Die
Male	Art. 9060/022 (M6)	Art. 9060/023	Art. 9060/024 (M6)	Art. 9060/025 Art. 9060/026

Tools for the Inset Snap Fastener are also available as a set: art. 9060/021.

XIRIUS Flat Back Snap Fastener

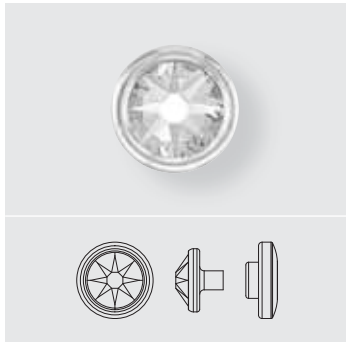
The XIRIUS Flat Back Snap Fastener is applied using a fly press. The product consists of two parts: the decorative (upper) part and the closure (lower) part. For the application with a fly press, both parts need a specific upper and a lower die.

A vacuum pump (art. 9040/022) and a vacuum adapter (art. 9040/105) enable an easy fixation of the products in the upper die during application.



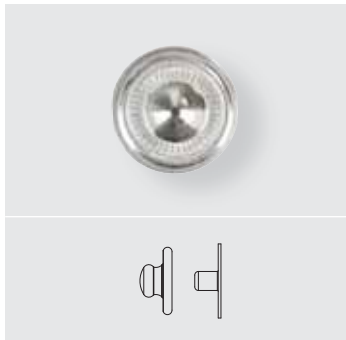
Vacuum adapter (art. 9040/105) with external screw instead of inner thread to fix the upper die (art. 9060/032 and art. 9060/034).

1783/300 01 XIRIUS Flat Back Snap Fastener



Parts	Required Application Tools			
	Upper Die	Vacuum Adapter	Spare Part*	Lower Die
<p>Female</p>	<p>Art. 9060/032</p>	<p>Art. 9040/105</p>	<p>Art. 9060/036</p>	<p>Art. 9060/033</p>

1783/300 02 XIRIUS Flat Back Snap Fastener



Parts	Required Application Tools		
	Upper Die	Vacuum Adapter	Lower Die
<p>Male</p>	<p>Art. 9060/034</p>	<p>Art. 9040/105</p>	<p>Art. 9060/035</p>

* The spare part (plastic insert) is integrated into the upper die as standard. It should be changed when it becomes worn.



Jeans Buttons

1790/100 Jeans Button

	Parts	Upper Die ³	Lower Die	Thread Adapter
	 Female	Required Application Tools	 Art. 9060/001	 Art. 9060/016

1790/104 Jeans Button

	Parts	Upper Die ³	Spare Part ⁴	Lower Die	Thread Adapter	Changing Pin
	 Female	Required Application Tools	 Art. 9060/009 ¹	 Art. 9060/011	 Art. 9060/016	 Art. 9060/014 (M6) ²
Tool Set						
						Art. 9060/020

1790/114 Jeans Button

	Parts	Upper Die ³	Lower Die	Thread Adapter
	 Female	Required Application Tools	 Art. 9060/001	 Art. 9060/016

1790/140 Jeans Button

	Parts	Upper Die ³	Spare Part ⁴	Lower Die	Thread Adapter	Changing Pin
	 Female	Required Application Tools	 Art. 9060/009 ¹	 Art. 9060/010	 Art. 9060/016	 Art. 9060/014 (M6) ²
Tool Set						
						Art. 9060/020

- 1 The plastic insert for the upper die (art. 9060/009) must be ordered separately depending on the type of button it will be used with.
- 2 The appropriate thread adapter is supplied with the fly press art. 9040/017 and art. 9040/019.
- 3 Holder for Insert
- 4 Insert for Upper Die

1791/120 Jeans Button

	Parts		Upper Die ³	Spare Part ⁴	Lower Die	Thread Adapter	Changing Pin
	Female		 Art. 9060/009 ¹	 Art. 9060/012	 Art. 9060/016	 Art. 9060/014 (M6) ²	 Art. 9060/015
			Tool Set				
			 Art. 9060/020				

1792/100 Jeans Button

	Parts		Upper Die ³	Spare Part ⁴	Lower Die	Thread Adapter	Changing Pin
	Female		 Art. 9060/009 ¹	 Art. 9060/013	 Art. 9060/016	 Art. 9060/014 (M6) ²	 Art. 9060/015
			Tool Set				
			 Art. 9060/020				

1795/140 Jeans Button

	Parts		Upper Die ³	Spare Part ⁴	Lower Die	Thread Adapter	Changing Pin
	Female		 Art. 9060/009 ¹	 Art. 9060/018	 Art. 9060/016	 Art. 9060/014 (M6) ²	 Art. 9060/015
			Tool Set				
			 Art. 9060/020				

1796/140 Jeans Button

	Parts		Upper Die ³	Spare Part ⁴	Lower Die	Thread Adapter	Changing Pin
	Female		 Art. 9060/009 ¹	 Art. 9060/018	 Art. 9060/016	 Art. 9060/014 (M6) ²	 Art. 9060/015
			Tool Set				
			 Art. 9060/020				

1 The plastic insert for the upper die (art. 9060/009) must be ordered separately depending on the type of button it will be used with.
 2 The appropriate thread adapter is supplied with the fly press art. 9040/017 and art. 9040/019.
 3 Holder for Insert
 4 Insert for Upper Die

1791/120 Jeans Button



Parts	Upper Die ³	Spare Part ⁴	Lower Die	Thread Adapter	Changing Pin
 <p>Female</p>	 Art. 9060/009 ¹	 Art. 9060/012	 Art. 9060/016	 Art. 9060/014 (M6) ²	 Art. 9060/015
	Tool Set  Art. 9060/020				











Required Application Tools

1 The plastic insert for the upper die (art. 9060/009) must be ordered separately depending on the type of button it will be used with.
 2 The appropriate thread adapter is supplied with the fly press art. 9040/017 and art. 9040/019.
 3 Holder for Insert
 4 Insert for Upper Die

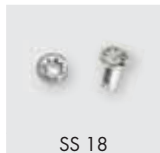
Rivets

Rivets can be applied to various materials with or without Back Parts. The correct die combination must be chosen accordingly. Please ensure that the recommended fabric strengths, listed in the "Application" subsection (page 141), are followed.

A vacuum pump and adapter allow Rivets and Crystal Pearl Rivets to be easily picked up and applied. Upper dies are thus available with different thread strengths. When using the Swarovski vacuum adapter, dies with an M8 thread are required. Alternatively, dies with M6 threads are available for presses from other manufacturers, or when not using a vacuum adapter. ?!

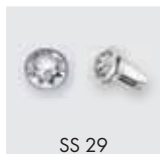
Required Application Tools	Upper die	Vacuum Adapter	Spare part for upper die (insert) ¹	Lower die for application with Back Part:	Lower die for application with Back Part:	Lower die for application without Back Part for Rivet Casing 088 Stainless Steel	Lower die for application without Back Part for Rivet Casing 081 Gold 082 Silver 086 Gun Metal 093 Rose Gold
					 53 007	 53 009	
				 Art. 9070/010	 Art. 9070/012	 Art. 9070/011	 Art. 9040/015

53 000



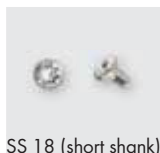
Art. 9040/005 M8	Art. 9040/023	Art. 9040/008
Art. 9040/014 M6 ²	-	

53 001



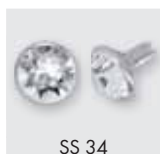
Art. 9070/005 M8	Art. 9040/023	Art. 9070/008
Art. 9070/009 M6	-	

53 002



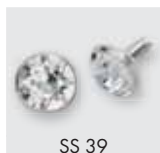
Art. 9040/005 M8	Art. 9040/023	Art. 9040/008
Art. 9040/014 M6 ²	-	

53 005



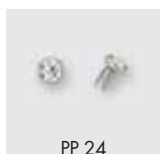
Art. 9040/064 M8	Art. 9040/023	Art. 9040/062
Art. 9040/063 M6	-	

53 006



Art. 9040/067 M8	Art. 9040/023	Art. 9040/065
Art. 9040/066 M6	-	

53 008



Art. 9040/083 M8	Art. 9040/023	Art. 9040/084
Art. 9040/085 M6	-	

¹ The spare part (plastic insert) is incorporated into the upper die as standard. It should be changed when it becomes worn.

² Tools with no Adapter (e.g. 9040/014 M6) can be screwed directly in a fly press directly. The fly press therefore must have the option of a vacuum directly through the shaft.

Required Application Tools

Upper die	Vacuum Adapter	Spare part for upper die (insert) ¹	Lower die for application with Back Part:	Lower die for application with Back Part:	Lower die for application without Back Part for Rivet Casing 088 Stainless Steel	Lower die for application without Back Part for Rivet Casing 081 Gold 082 Silver 086 Gun Metal 093 Rose Gold
			 53 007	 53 009		
			 Art. 9070/010	 Art. 9070/012	 Art. 9070/011	 Art. 9040/015

53 400

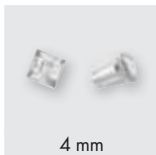
Art. 9040/068 M8	Art. 9040/023	Art. 9040/074
Art. 9040/071 M6	-	

53 401

Art. 9040/069 M8	Art. 9040/023	Art. 9040/075
Art. 9040/079 M6	-	

53 402

Art. 9040/070 M8	Art. 9040/023	Art. 9040/076
Art. 9040/073 M6	-	

53 500

Art. 9040/106	Art. 9040/105	-
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53 501

Art. 9040/107	Art. 9040/105	-
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53 502






Art. 9040/108	Art. 9040/105	-
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53 600

Art. 9040/110 M8	Art. 9040/023	Art. 9040/111
Art. 9040/109 M6	-	

¹ The spare part (plastic insert) is incorporated into the upper die as standard. It should be changed when it becomes worn.

² Tools with no Adapter (e.g. 9040/014 M6) can be screwed directly in a fly press directly. The fly press therefore must have the option of a vacuum directly through the shaft.

Required Application Tools	Upper die	Vacuum Adapter	Spare part for upper die (insert) ¹	Lower die for application with Back Part:	Lower die for application with Back Part:	Lower die for application without Back Part for Rivet Casing 088 Stainless Steel	Lower die for application without Back Part for Rivet Casing 081 Gold 082 Silver 086 Gun Metal 093 Rose Gold
							
							

53 700



Art. 9040/112	Art. 9040/105	Art. 9040/113
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53 010



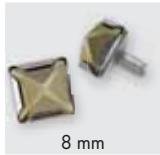
Art. 9040/123	Art. 9040/105	Art. 9040/124
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53 011

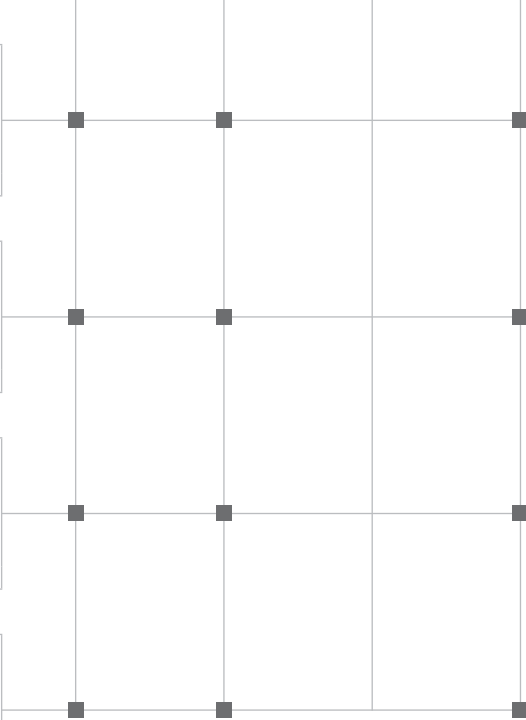


Art. 9040/125	Art. 9040/105	Art. 9040/126
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53 503



Art. 9040/127	Art. 9040/105	Art. 9040/128
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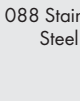
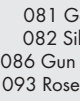








¹ The spare part (plastic insert) is incorporated into the upper die as standard. It should be changed when it becomes worn.

² Tools with no Adapter (e.g. 9040/014 M6) can be screwed directly in a fly press directly. The fly press therefore must have the option of a vacuum directly through the shaft.

Rivet Flat Shaft

The **Rivet Flat Shaft**, available in stone size SS 29, presents a new addition to the existing assortment. It's easy to apply and no back part is needed, which not only reduces the distance between fabric and rivet but also ensures a flat surface on the back side.

Required Application Tools	Upper die	Vacuum Adapter	Spare part for upper die (insert) ¹	Lower die for application with Back Part: 53 007	Lower die for application with Back Part: 53 009	Lower die for application without Back Part for Rivet Casing 088 Stainless Steel	Lower die for application without Back Part for Rivet Casing 081 Gold 082 Silver 086 Gun Metal 093 Rose Gold
							
							
				Art. 9070/010	Art. 9070/012	Art. 9070/011	Art. 9040/015

53 003



Art. 9070/005 M8	Art. 9040/023	Art. 9070/008	2
-	-		

No back part is necessary for the application of the Rivet Flat Shaft. The big advantage of this Rivet is the possibility of applying it with an automatic attaching machine.

Please note: Lower die (art. 9070/010) was updated in autumn 2014. The new version can be used for all Rivet applications the former tool version was used for. However, please consider that for new Rivets such as the Rivet Flat Shaft, only the optimized version of the tool can be used. If a lower die with article number 9070/010 was bought before October 2014 the tool must be replaced in order to apply the Rivet Flat Shaft successfully.

A vacuum pump and a specially developed vacuum adapter (art. 9040/023) enable easy intake and application of the Rivet Flat Shaft. Generally, it is recommended to apply this Rivet only on non-elastic fabrics like jeans or leather with a material thickness of 2 - 3.5 mm.



Vacuum adapter with M6 outer thread for fixing to the fly press and M8 inner thread to hold the upper die (art. 9040/023).



Specially developed **vacuum adapter** with external screw instead of thread to fix the upper die (art. 9040/105).

¹ The spare part (plastic insert) is incorporated into the upper die as standard. It should be changed when it becomes worn.






² 53 003 is designed for ring rolling application and is self-backing. The rivet can be proceed on automatic and semi-automatic machines as well as with a fly press and therefore use lower die 9070/010 without any back part (53 007).

Rose Pins

A vacuum pump allows Rose Pins to be easily picked up and applied. The vacuum connection is integrated directly into the upper die. An additional vacuum adapter is not necessary.



53 301 Rose Pins (SS 10)



Part	Required Application Tools	Upper Die	Spare Part*	Lower Die	Centering aid
 Female		 Art. 9040/090 M6	 Art. 9040/094	 Art. 9070/013	 Art. 9070/017




53 302 Rose Pins (SS 16)



Part	Required Application Tools	Upper Die	Spare Part*	Lower Die
 Female		 Art. 9040/091 M6	 Art. 9040/095	 Art. 9070/014

53 303 Rose Pins (SS 20)







Part	Required Application Tools	Upper Die	Spare Part*	Lower Die
 Female		 Art. 9040/092 M6	 Art. 9040/096	 Art. 9070/014

* The spare part (plastic insert) is integrated into the upper die as standard. It should be changed when it becomes worn.

?!

53 304 Rose Pins (SS 34)



Part	Upper Die	Spare Part*	Lower Die
 Female	 Art. 9040/093 M6	 Art. 9040/097	 Art. 9070/016

* The spare part (plastic insert) is integrated into the upper die as standard. It should be changed when it becomes worn.

?!



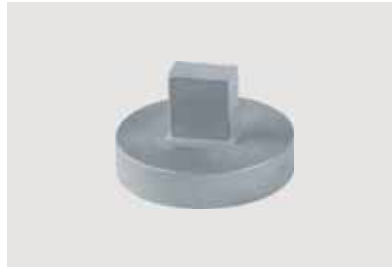
The **centering aid** for Rose Pins 53 301 (art. 9070/017) allows the product to be easily positioned in the upper die.

Chessboard Pins and Rhombus Pins

Chessboard Pins and Rhombus Pins can be easily applied to various materials by using a fly press. A vacuum pump (art. 9040/022) and a vacuum adapter (art. 9040/105) enable an easy intake and application of the Pins.



Specially developed **vacuum adapter** (art. 9040/105) with external screw instead of thread to fix the upper die.



The **centering aid** for Rhombus Pins 53 320 (art. 9070/022) allows the product to be easily positioned in the upper die.

53 310 Chessboard Pin (6 mm)



Part	Upper Die	Vacuum Adapter	Spare Part	Lower Die	Centering aid
 Female	 Art. 9040/114	 Art. 9040/105	 Art. 9040/117	 Art. 9070/019	 Art. 9070/022

53 311 Chessboard Pin (10 mm)



Part	Upper Die	Vacuum Adapter	Spare Part	Lower Die	Centering aid
 Female	 Art. 9040/115	 Art. 9040/105	 Art. 9040/118	 Art. 9070/020	 Art. 9070/022

53 320 Rhombus Pin (10x6 mm)



Part	Upper Die	Vacuum Adapter	Spare Part	Lower Die	Centering aid
 Female	 Art. 9040/116	 Art. 9040/105	 Art. 9040/119	 Art. 9070/021	 Art. 9070/022

* The spare part (plastic insert) is integrated into the upper die as standard. It should be changed when it becomes worn.



Crystal Studs

A vacuum pump enables an easy intake and application of Crystal Studs. In the upper die the vacuum adapter is already integrated. Therefore, an additional adapter is not needed.

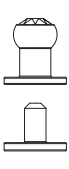

53 730 (PP 24 long shaft)



Parts	Upper Die	Lower Die	Buttonhole punching tool
 Female	 Art. 9040/120 M6	 Art. 9040/121	 Art. 9040/122

53 731 (PP 24 short shaft)



Parts	Upper Die	Lower Die	Buttonhole punching tool
 Female	 Art. 9040/120 M6	 Art. 9040/121	 Art. 9040/122



The **buttonhole punching tool** (art. 9040/122) can be used to create the buttonhole.

SUPPLIERS

This list provides an overview of selected suppliers worldwide.

MACHINES / TOOLS / AIDS	SUPPLIER	CONTACT
Fly press	Swarovski: Fly press without mounting board: art. 9040/017 Fly press with mounting board: art. 9040/019 Jiuzhou Machinery Co., Ltd. Seung Min Industrial Co., Ltd. S.P.S. Tecnologia Meccanica Srl Standard Rivet Company	www.swarovski.com/professional www.sinojiuzhou.com www.seungminsm.co.kr www.spstecnologiameccanicasrl.it www.standardrivet.com
Tools for Snap Fasteners (fly press)	Swarovski: Snap Fastener 1780/100 and 1780/114 Upper die: art. 9060/005 (1st stage) and art. 9060/006 (2nd stage) Lower die: art. 9060/004 (1st stage) and art. 9060/007 (2nd stage)	www.swarovski.com/professional
Tools for Decorative Buttons (fly press)	Swarovski: Decorative Buttons 1781/100 and 1781/114 Upper die: art. 9060/005 Lower die: art. 9060/004	www.swarovski.com/professional
Tools for Inset Snap Fasteners (fly press)	Swarovski: Inset Snap Fastener 1782/190 Pre-punch upper die: art. 9060/022 Pre-punch lower die: art. 9060/023 Upper die (M6) for Front Part and Back Part: art. 9060/024 Lower die for Front Part: art. 9060/025 Lower die for Back Part: art. 9060/026 All tools as set: art. 9060/021	www.swarovski.com/professional
Tools for XIRIUS Flat Back Snap Fasteners (fly press)	Swarovski: XIRIUS Flat Back Snap Fastener 1783/300 Vacuum adapter for upper dies: art. 9040/105 Upper die for decorative part (art. 1783/300 01): art. 9060/032 Spare part (plastic insert) for upper die (art. 9060/032): art. 9060/036 Lower die for decorative part (art. 1783/300 01): art. 9060/033 Upper die for closure part (art. 1783/300 02): art. 9060/034 Lower die for closure part (art. 1783/300 02): art. 9060/035	www.swarovski.com/professional

MACHINES / TOOLS / AIDS	SUPPLIER	CONTACT
Tools for Jeans Buttons (fly press)	<p>Swarovski:</p> <p>Jeans Button 1790/100 and 1790/114</p> <p>Upper die: art. 9060/001 Lower die: art. 9060/016 Thread adapter (M6): art. 9060/014</p> <p>Jeans Button 1790/104</p> <p>Upper die: art. 9060/009 Spare part (plastic insert) for upper die: art. 9060/011 Lower die: art. 9060/016 Thread adapter (M6): art. 9060/014 Changing pin: art. 9060/015</p> <p>Jeans Button 1790/140</p> <p>Upper die: art. 9060/009 Spare part (plastic insert) for upper die: art. 9060/010 Lower die: art. 9060/016 Thread adapter (M6): art. 9060/014 Changing pin: art. 9060/015</p> <p>Jeans Button 1791/120</p> <p>Upper die: art. 9060/009 Spare part (plastic insert) for upper die: art. 9060/012 Lower die: art. 9060/016 Thread adapter (M6): art. 9060/014 Changing pin: art. 9060/015</p> <p>Jeans Button 1792/100</p> <p>Upper die: art. 9060/009 Spare part (plastic insert) for upper die: art. 9060/013 Lower die: art. 9060/016 Thread adapter (M6): art. 9060/014 Changing pin: art. 9060/015</p> <p>Crystal Fine Rocks Jeans Button 1795/140, Chessboard Buttons 1796/140 and Crystal Fabric Jeans Button 1797/140</p> <p>Upper die: art. 9060/009 Spare part (plastic insert) for upper die: art. 9060/018 Lower die: art. 9060/016 Thread adapter (M6): art. 9060/014 Changing pin: art. 9060/015</p> <p>All tools as set for Jeans Buttons 1790/104, 1790/140, 1791/120, 1792/100, Crystal Fine Rocks Jeans Button 1795/140, Chessboard Buttons 1796/140 and Crystal Fabric Jeans Button 1797/140: art. 9060/020</p>	<p>www.swarovski.com/professional</p>

MACHINES / TOOLS / AIDS	SUPPLIER	CONTACT
Tools for Rivets (fly press)	<p>Swarovski:</p> <p>Rivet 53 000</p> <p>Upper die (M8): art. 9040/005</p> <p>Upper die (M6): art. 9040/014</p> <p>Spare part (plastic insert) for upper die (art. 9040/005 and 9040/014): art. 9040/008</p> <p>Lower die for Rivet application with Back Part 53 007: art. 9070/010</p> <p>Lower die for Rivet application with Back Part 53 009: art. 9070/012</p> <p>Lower die for Rivet application without Back Part (Rivet casing 081, 082 and 086): art. 9040/015</p> <p>Lower die for Rivet application without Back Part (Rivet casing 088): art. 9070/011</p> <p>Vacuum adapter for upper die: art. 9040/023</p> <p>Rivet 53 001</p> <p>Upper die (M8): art. 9070/005</p> <p>Upper die (M6): art. 9070/009</p> <p>Spare part (plastic insert) for upper die (art. 9070/005 and 9070/009): art. 9070/008</p> <p>Lower die for Rivet application with Back Part 53 007: art. 9070/010</p> <p>Lower die for Rivet application with Back Part 53 009: art. 9070/012</p> <p>Lower die for Rivet application without Back Part (Rivet casing 081, 082 and 086): art. 9040/015</p> <p>Lower die for Rivet application without Back Part (Rivet casing 088): art. 9070/011</p> <p>Vacuum adapter for upper die: art. 9040/023</p> <p>Rivet 53 002</p> <p>Upper die (M8): art. 9040/005</p> <p>Upper die (M6): art. 9040/014</p> <p>Spare part (plastic insert) for upper die (art. 9040/005 and 9040/014): art. 9040/008</p> <p>Lower die for Rivet application without Back Part (Rivet casing 081, 082 and 086): art. 9040/015</p> <p>Vacuum adapter for upper die: art. 9040/023</p> <p>Rivet 53 003</p> <p>Upper die (M8): art. 9070/005</p> <p>Spare part (plastic insert) for upper die (art. 9070/005): art. 9070/008</p> <p>Lower die for Rivet application without any Back Part (53 007): art. 9070/010</p> <p>Vacuum adapter for upper die: art. 9040/023</p>	<p>www.swarovski.com/professional</p>

MACHINES / TOOLS / AIDS	SUPPLIER	CONTACT
(cont. from page 145)	<p>Rivet 53 005</p> <p>Upper die (M8): art. 9040/064</p> <p>Upper die (M6): art. 9040/063</p> <p>Spare part (plastic insert) for upper die (art. 9040/064 and 9040/063): art. 9040/062</p> <p>Lower die for Rivet application with Back Part 53 007: art. 9070/010</p> <p>Lower die for Rivet application with Back Part 53 009: art. 9070/012</p> <p>Lower die for Rivet application without Back Part (Rivet casing 081, 082 and 086): art. 9040/015</p> <p>Lower die for Rivet application without Back Part (Rivet casing 088): art. 9070/011</p> <p>Vacuum adapter for upper die: art. 9040/023</p> <p>Rivet 53 006</p> <p>Upper die (M8): art. 9040/067</p> <p>Upper die (M6): art. 9040/066</p> <p>Spare part (plastic insert) for upper die (art. 9040/067 and 9040/066): art. 9040/065</p> <p>Lower die for Rivet application with Back Part 53 007: art. 9070/010</p> <p>Lower die for Rivet application with Back Part 53 009: art. 9070/012</p> <p>Lower die for Rivet application without Back Part (Rivet casing 081, 082 and 086): art. 9040/015</p> <p>Lower die for Rivet application without Back Part (Rivet casing 088): art. 9070/011</p> <p>Vacuum adapter for upper die: art. 9040/023</p> <p>Rivet 53 008</p> <p>Upper die (M8): art. 9040/083</p> <p>Upper die (M6): art. 9040/085</p> <p>Spare part (plastic insert) for upper die (art. 9040/083 and 9040/085): art. 9040/084</p> <p>Lower die for Rivet application with Back Part 53 009: art. 9070/012</p> <p>Lower die for Rivet application without Back Part (Rivet casing 088): art. 9070/011</p> <p>Vacuum adapter for upper die: art. 9040/023</p>	
Tools for Crystal Pearl Rivets (fly press)	<p>Swarovski:</p> <p>Crystal Pearl Rivet 53 400</p> <p>Upper die (M8): art. 9040/068</p> <p>Upper die (M6): art. 9040/071</p> <p>Spare part (plastic insert) for upper die (art. 9040/068 and 9040/071): art. 9040/074</p> <p>Lower die for Rivet application with Back Part 53 007: art. 9070/010</p> <p>Lower die for Rivet application with Back Part 53 009: art. 9070/012</p> <p>Lower die for Rivet application without Back Part (Rivet casing 081, 082 and 086): art. 9040/015</p> <p>Vacuum adapter for upper die: art. 9040/023</p>	www.swarovski.com/professional

MACHINES / TOOLS / AIDS	SUPPLIER	CONTACT
(cont. from page 146)	<p>Crystal Pearl Rivet 53 401</p> <p>Upper die (M8): art. 9040/069</p> <p>Upper die (M6): art. 9040/072</p> <p>Spare part (plastic insert) for upper die (art. 9040/069 and 9040/072): art. 9040/075</p> <p>Lower die for Rivet application with Back Part 53 007: art. 9070/010</p> <p>Lower die for Rivet application with Back Part 53 009: art. 9070/012</p> <p>Lower die for Rivet application without Back Part (Rivet casing 081, 082 and 086): art. 9040/015</p> <p>Vacuum adapter for upper die: art. 9040/023</p> <p>Crystal Pearl Rivet 53 402</p> <p>Upper die (M8): art. 9040/070</p> <p>Upper die (M6): art. 9040/073</p> <p>Spare part (plastic insert) for upper die (art. 9040/070 and 9040/073): art. 9040/076</p> <p>Lower die for Rivet application with Back Part 53 007: art. 9070/010</p> <p>Lower die for Rivet application with Back Part 53 009: art. 9070/012</p> <p>Lower die for Rivet application without Back Part (Rivet casing 081, 082 and 086): art. 9040/015</p> <p>Vacuum adapter for upper die: art. 9040/023</p>	
Tools for Square Rivets (fly press)	<p>Swarovski:</p> <p>Square Rivet 53 500</p> <p>Upper die: art. 9040/106</p> <p>Lower die for Rivet application with Back Part 53 007: art. 9070/010</p> <p>Lower die for Rivet application with Back Part 53 009: art. 9070/012</p> <p>Lower die for Rivet application without Back Part (Rivet casing 081, 082 and 086): art. 9040/015</p> <p>Lower die for Rivet application without Back Part (Rivet casing 088): art. 9070/011</p> <p>Vacuum adapter for upper die: art. 9040/105</p> <p>Square Rivet 53 501</p> <p>Upper die: art. 9040/107</p> <p>Lower die for Rivet application with Back Part 53 007: art. 9070/010</p> <p>Lower die for Rivet application with Back Part 53 009: art. 9070/012</p> <p>Lower die for Rivet application without Back Part (Rivet casing 081, 082 and 086): art. 9040/015</p> <p>Vacuum adapter for upper die: art. 9040/105</p>	<p>www.swarovski.com/professional</p>

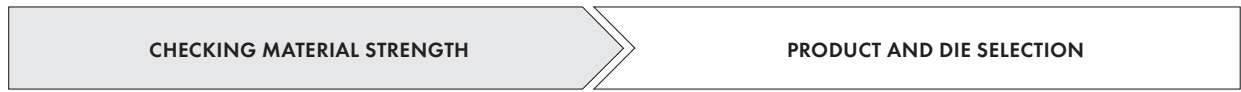
MACHINES / TOOLS / AIDS	SUPPLIER	CONTACT
(cont. from page 147)	<p>Square Rivet 53 502</p> <p>Upper die: art. 9040/108</p> <p>Lower die for Rivet application with Back Part 53 007: art. 9070/010</p> <p>Lower die for Rivet application with Back Part 53 009: art. 9070/012</p> <p>Lower die for Rivet application without Back Part (Rivet casing 081, 082 and 086): art. 9040/015</p> <p>Vacuum adapter for upper die: art. 9040/105</p>	
Tools for Chessboard Rivets (fly press)	<p>Swarovski:</p> <p>Chessboard Rivet 53 600</p> <p>Upper die (M8): art. 9040/110</p> <p>Upper die (M6): art. 9040/109</p> <p>Spare part (plastic insert) for upper die (art. 9040/110 and 9040/109): art. 9040/111</p> <p>Lower die for Rivet application with Back Part 53 007: art. 9070/010</p> <p>Lower die for Rivet application with Back Part 53 009: art. 9070/012</p> <p>Vacuum adapter for upper die: art. 9040/105</p>	www.swarovski.com/professional
Tools for Star Rivets (fly press)	<p>Swarovski:</p> <p>Star Rivet 53 700</p> <p>Upper die: art. 9040/112</p> <p>Spare part (plastic insert) for upper die (art. 9040/112): art. 9040/113</p> <p>Lower die for Rivet application with Back Part 53 007: art. 9070/010</p> <p>Lower die for Rivet application with Back Part 53 009: art. 9070/012</p> <p>Lower die for Rivet application without Back Part (Rivet casing 081, 082 and 086): art. 9040/015</p> <p>Vacuum adapter for upper die: art. 9040/105</p>	www.swarovski.com/professional
Tools for Spike Rivets (fly press)	<p>Swarovski:</p> <p>Spike Rivet 53 010</p> <p>Upper die: art. 9040/123</p> <p>Spare part (plastic insert) for upper die (art. 9040/123): art. 9040/124</p> <p>Lower die for Rivet application with Back Part 53 007: art. 9070/010</p> <p>Lower die for Rivet application with Back Part 53 009: art. 9070/012</p> <p>Lower die for Rivet application without Back Part (Rivet casing 081, 082 and 086): art. 9040/015</p> <p>Vacuum adapter for upper die: art. 9040/105</p>	www.swarovski.com/professional

MACHINES / TOOLS / AIDS	SUPPLIER	CONTACT
(cont. from page 148)	<p>Spike Rivet 53 011</p> <p>Upper die: art. 9040/125</p> <p>Spare part (plastic insert) for upper die (art. 9040/125): art. 9040/126</p> <p>Lower die for Rivet application with Back Part 53 007: art. 9070/010</p> <p>Lower die for Rivet application with Back Part 53 009: art. 9070/012</p> <p>Lower die for Rivet application without Back Part (Rivet casing 081, 082 and 086): art. 9040/015</p> <p>Vacuum adapter for upper die: art. 9040/105</p> <p>Spike Rivet 53 503</p> <p>Upper die: art. 9040/127</p> <p>Spare part (plastic insert) for upper die (art. 9040/127): art. 9040/128</p> <p>Lower die for Rivet application with Back Part 53 007: art. 9070/010</p> <p>Lower die for Rivet application with Back Part 53 009: art. 9070/012</p> <p>Lower die for Rivet application without Back Part (Rivet casing 081, 082 and 086): art. 9040/015</p> <p>Vacuum adapter for upper die: art. 9040/105</p>	
Tools for Rose Pins (fly press)	<p>Swarovski:</p> <p>Rose Pin 53 301</p> <p>Upper die (M6): art. 9040/090</p> <p>Spare part (plastic insert) for upper die (art. 9040/090): art. 9040/094</p> <p>Lower die: art. 9070/013</p> <p>Centering aid: art. 9070/017</p> <p>Rose Pin 53 302</p> <p>Upper die (M6): art. 9040/091</p> <p>Spare part (plastic insert) for upper die (art. 9040/091): art. 9040/095</p> <p>Lower die: art. 9070/014</p> <p>Rose Pin 53 303</p> <p>Upper die (M6): art. 9040/092</p> <p>Spare part (plastic insert) for upper die (art. 9040/092): art. 9040/096</p> <p>Lower die: art. 9070/014</p> <p>Rose Pin 53 304</p> <p>Upper die (M6): art. 9040/093</p> <p>Spare part (plastic insert) for upper die (art. 9040/093): art. 9040/097</p> <p>Lower die: art. 9070/016</p>	<p>www.swarovski.com/professional</p>

MACHINES / TOOLS / AIDS	SUPPLIER	CONTACT
Tools for Chessboard Pins (fly press)	<p>Swarovski:</p> <p>Chessboard Pin 53 310</p> <p>Upper die: art. 9040/114</p> <p>Spare part (plastic insert) for upper die (art. 9040/114): art. 9040/117</p> <p>Lower die: art. 9070/019</p> <p>Vacuum adapter for upper die: art. 9040/105</p> <p>Chessboard Pin 53 311</p> <p>Upper die: art. 9040/115</p> <p>Spare part (plastic insert) for upper die (art. 9040/115): art. 9040/118</p> <p>Lower die: art. 9070/020</p> <p>Vacuum adapter for upper die: art. 9040/105</p>	www.swarovski.com/professional
Tools for Rhombus Pins (fly press)	<p>Swarovski:</p> <p>Rhombus Pin 53 320</p> <p>Upper die: art. 9040/116</p> <p>Spare part (plastic insert) for upper die (art. 9040/116): 9040/119</p> <p>Lower die: art. 9070/021</p> <p>Centering aid: art. 9070/022</p> <p>Vacuum adapter for upper die: art. 9040/105</p>	www.swarovski.com/professional
Tools for Crystal Studs (fly press)	<p>Swarovski:</p> <p>Crystal Stud 53 730 and 53 731</p> <p>Buttonhole punching tool: art. 9040/122</p> <p>Upper die (M6): art. 9040/120</p> <p>Lower die: art. 9040/121</p>	www.swarovski.com/professional
Vacuum pump with silicone hose	Swarovski: art. 9040/022	www.swarovski.com/professional
Hand tool	Jewelrythings, Inc.	www.jewelrythings.com
Automatic attaching machine	<p>Jiuzhou Machinery Co., Ltd.</p> <p>Prym Fashion GmbH</p> <p>Seung Min Industrial Co., Ltd.</p> <p>S.P.S. Tecnologia Meccanica Srl</p>	<p>www.sinojiuzhou.com</p> <p>www.prym-fashion.com</p> <p>www.seungminsm.co.kr</p> <p>www.spstecnologiameccanicasrl.it</p>

APPLICATION

Various Swarovski products can be applied using mechanical force, creating a lasting bond with the carrier material.



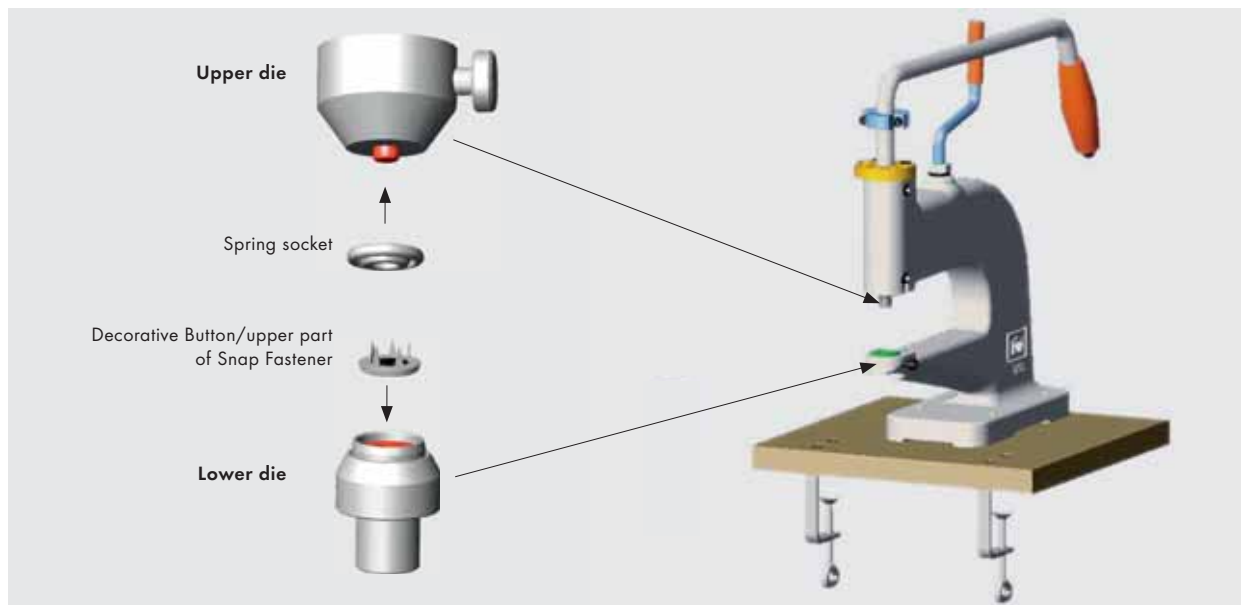
It is very important to carefully check the thickness of the fabric or leather before beginning the application process. With very thick fabrics, a hole can be punched beforehand for the application of Jeans Buttons and Rivets. The fabric should not crinkle or become gathered after application. To check this, carry out tests on fabric or leather scraps before going ahead with the application process. It is also important to make sure that the die sits straight and firmly in the fly press, as this can often cause application problems. It is recommended that you carry out a few test runs to identify the ideal pressure. The offset/pressure can be regulated using an adjustable stop that is fastened to the handle of the fly press. ?!



Snap Fasteners and Decorative Buttons

To apply Snap Fasteners and Decorative Buttons with a fly press, first fix the required dies into place in the fly press. A Decorative Button is the upper part of a Snap Fastener, which is applied purely for decorative purposes and thus does not require a closure. When applying Snap Fasteners, a second stage is required in order to fix the closure in place.

STAGE 1: DECORATIVE BUTTONS/UPPER PART OF SNAP FASTENERS





1 Place the Decorative Button/upper part of the Snap Fastener in the lower die, with the claws pointing upwards.



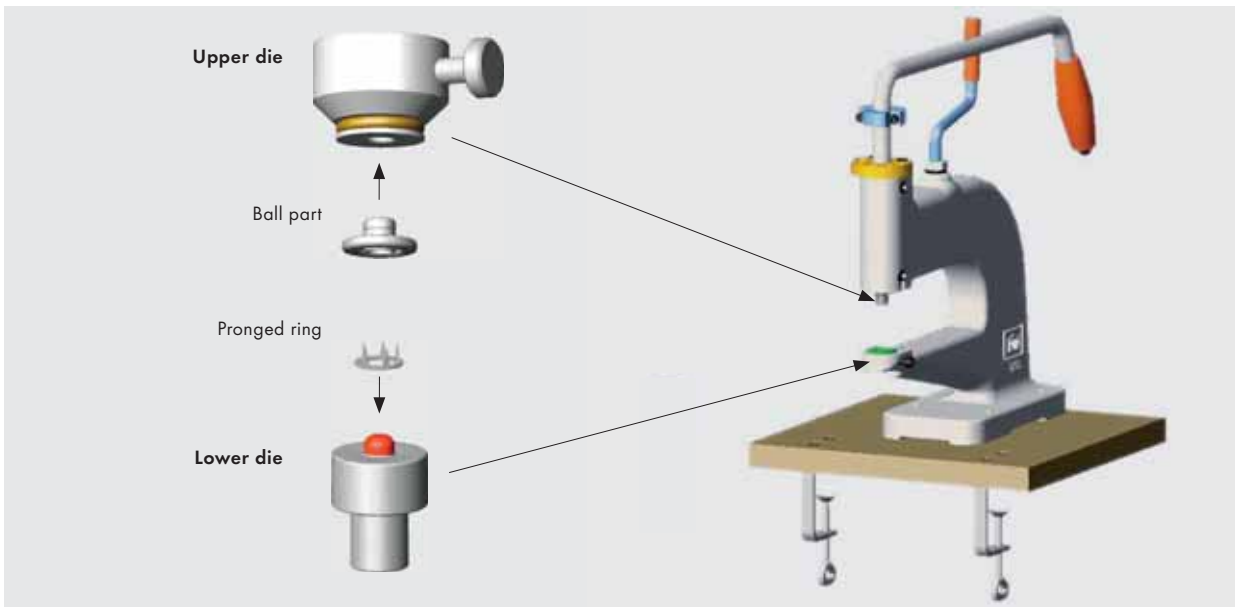
2 Place the spring socket in the upper die.



3 Apply the product to the textile in the previously marked position. Regulate the offset/pressure using the adjustable stop.

Note: To make finding the right application position easier, it can be marked prior to the application. Therefore place the textile on an eraser and put the Decorative Button / upper part of the Snap Fastener on top of it (with claws pointing downwards). Press the Button into the textile. The material is marked while the eraser prevents the claws from getting destroyed.

STAGE 2: SNAP FASTENER CLOSURE



1 Place the pronged ring in the lower die, with the prongs pointing upwards.







2 Place the ball part in the upper die.



3 Apply the product to the textile in the previously marked position, ensuring it is on the right side of the fabric. Regulate the offset/pressure using the adjustable stop.

Inset Snap Fastener

Inset Snap Fasteners can be easily applied by using a fly press or a pneumatic attaching machine. The Inset Snap Fastener consists of following components:

COMPONENTS			
			
Open metal cap	Backing washer	Socket	Crystal socket

STAGE 1: PRE-PUNCHING OF THE CARRIER MATERIAL

It is necessary to pre-punch the carrier material before the application of the front and the back part of the Inset Snap Fastener. Material – fabric or multiple layers up to a thickness of 5.00 mm – may be pre-punched all together.



1 Fix the required dies into place in the fly press and start the pre-punching process.



2 Care must be taken that the pre-punching process is in the exact position of the intended application of the Inset Snap Fastener. The front and the back of the fabric can be pre-punched at once.

STAGE 2: APPLICATION OF THE FRONT PART



1 Insert the required dies into the fly press. First, place the socket, with its shaft facing upwards into the lower die. Please ensure that it sits firmly in the lower die.



2 The backing washer, with the rounded face downwards, is then slid over the socket shaft.



3 The pre-punched material is now laid over the combination of the socket and backing washer. Double check if it is the right side of the fabric. Turn the front side up. The open metal cap, with the rounded face upwards, is slid over the socket shaft and onto the carrier material. Regulate the pressure using the adjustable stop.

STAGE 3: APPLICATION OF THE BACK PART



1 Change only the lower die. The upper die is used to apply both front and back part. Insert the crystal socket into the lower die with its shaft facing upwards and the crystal pointing down.



2 Slide one backing washer – rounded face downwards – over the socket shaft.



3 The pre-punched material is now placed on top of both the crystal socket and the backing washer. Care must be taken to ensure the application is on the right side of the fabric. Turn the back up. The next step is to place the second backing washer onto the carrier material with the rounded section facing upwards.

XIRIUS Flat Back Snap Fastener

XIRIUS Flat Back Snap Fasteners can be easily applied using a fly press. The application is divided into two steps as the product consists of two parts (decorative part and closure).

It is important to carefully check and to consider the thickness of the fabric before beginning the application process.

ART.	SIZE	MATERIAL THICKNESS*
1783/300	SS 20	1 - 3 mm

* Could vary due to character and production of carrier materials.

The material should not contract or crinkle after the application. To avoid this happening, tests are highly recommended on some fabric samples before starting the final application process.

In order to prevent possible injury, the wearing of protective eyewear is recommended when mechanically applying crystal products.

STAGE 1: APPLICATION OF THE DECORATIVE (UPPER) PART



1 Place the vacuum adapter and the tools in the fly press. Make sure that they are fixed and connect the vacuum adapter to vacuum pump.



2 Place the decorative part in the upper die and the spring socket in the lower die. The vacuum will keep the decorative part in upper position during application.



3 Apply the product on the carrier material. Adjust the offset/pressure using the adjustable stop.

STAGE 2: APPLICATION OF THE CLOSURE (LOWER) PART



1 Replace the upper and lower die in order to apply the Snap Fastener closure.



2 Place the ball part in the upper die (will be kept in position by vacuum) and the counterpart in the lower die.



3 Apply the product on the carrier material. Adjust the offset/pressure using the adjustable stop. Check the functionality of the Snap Fastener after the application.

Jeans Buttons

To apply Jeans Buttons, first fix the required dies into place in the fly press. When applying Jeans Buttons 1790/104, 1790/140, 1791/120, 1792/100, 1796/140 and 1797/140 the corresponding plastic insert has to be changed.

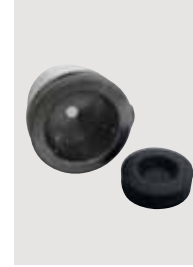
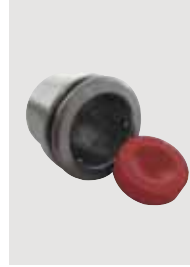
CHANGING THE PLASTIC INSERT



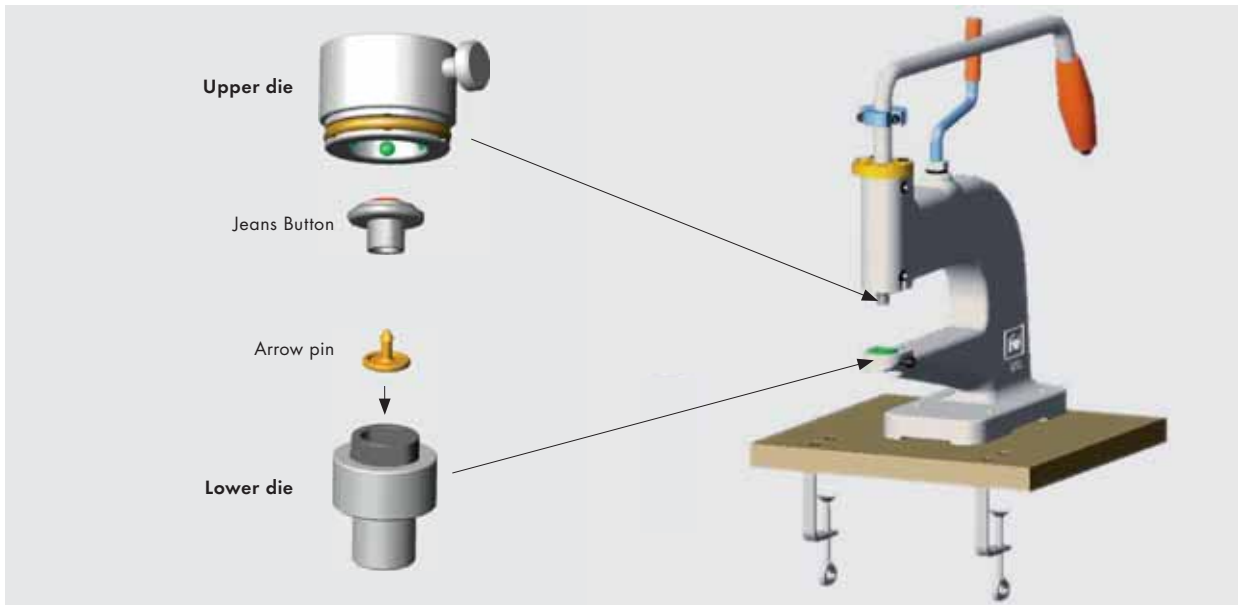
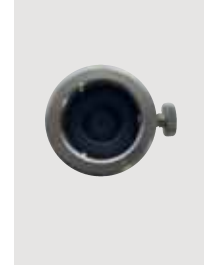
1 To change the insert according to the Swarovski products used, you will need the changing pin and the new plastic insert.



2 Use the changing pin to slowly slide the plastic insert out of the attaching die from above, through the hole.



3 Press the new plastic insert into the attaching die right up to the top.



1 Place the top part of the Jeans Button in the upper die.



2 Place the arrow pin in the lower die.



3 Carry out the application in the desired position. Regulate the offset/pressure using the adjustable stop.

Rivets

For the application of Rivets, use a fly press or a semi-automatic attaching machine: The following instructions focus on the application with the fly press. As a first step, attach the appropriate die to the fly press.

Rivets can be applied on various materials with or without Back Parts. Rivet 53 002 is specially designed for application without a Back Part. For applications on leather, Stainless Steel Rivets (color code 088) and Back Parts are recommended.

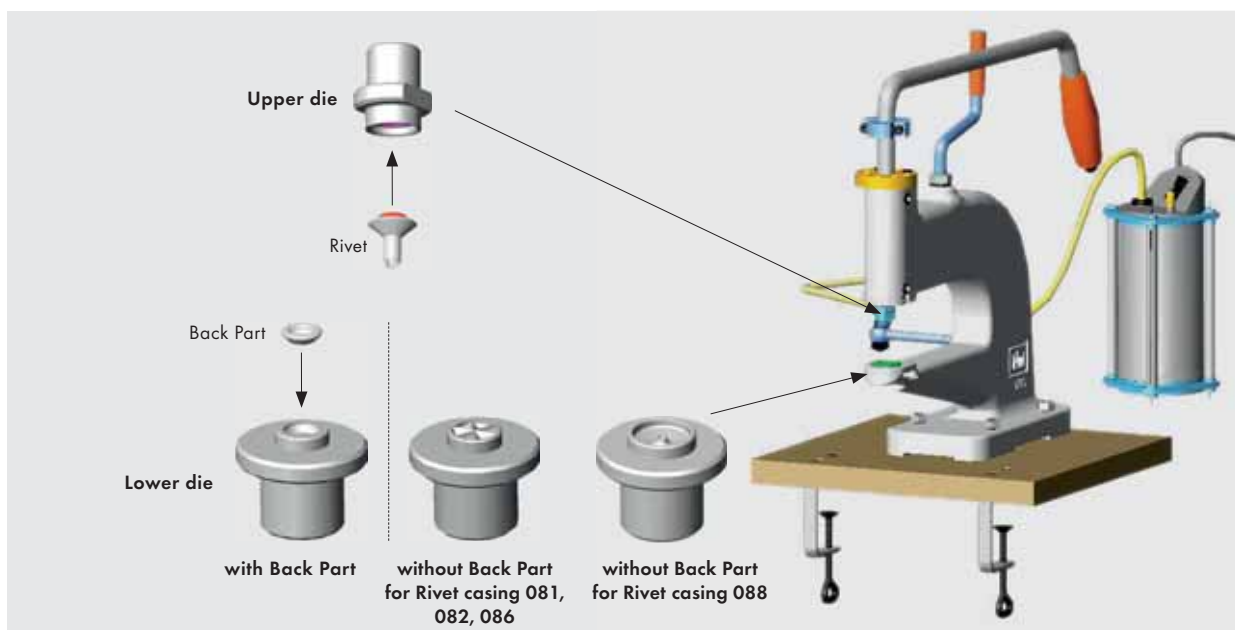
Please note the material thickness when selecting Rivets. The dies should be selected accordingly.

	ART.	SIZE	MATERIAL THICKNESS*	POSSIBLE BACK PARTS
RIVETS	53 008	PP 24	1.5 - 2.0 mm	53 009
	53 000	SS 18	2.0 - 2.5 mm	53 007 and 53 009
	53 001	SS 29	2.0 - 2.5 mm	53 007 and 53 009
	53 005	SS 34	2.0 - 2.5 mm	53 007 and 53 009
	53 006	SS 39	2.2 - 2.7 mm	53 007 and 53 009
RIVET FLAT SHAFT¹	53 003	SS 29	2.0 - 3.5 mm	
CRYSTAL PEARL RIVETS	53 400	6 mm	2.0 - 2.5 mm	53 007 and 53 009
	53 401	8 mm	2.0 - 2.5 mm	53 007 and 53 009
	53 402	10 mm	2.2 - 2.7 mm	53 007 and 53 009
SQUARE RIVETS	53 500	4 mm	2.0 - 2.5 mm	53 007 and 53 009
	53 501	6 mm	2.0 - 2.5 mm	53 007 and 53 009
	53 502	8 mm	2.2 - 2.7 mm	53 007 and 53 009
CHESSBOARD RIVETS	53 600	6 mm	2.0 - 2.5 mm	53 007 and 53 009
STAR RIVETS	53 700	10 mm	1.5 - 3.0 mm	53 007 and 53 009
SPIKE RIVETS	53 010	SS 29	2.0 - 3.0 mm	53 007 and 53 009
	53 011	SS 39	2.0 - 3.0 mm	53 007 and 53 009
	53 503	8 mm	2.0 - 3.0 mm	53 007 and 53 009

* This can vary according to the roughness and production of the carrier material.

In many cases it is possible to select between both versions of the Back Part. For applications on **thinner fabrics**, it is better to use the **larger** Back Part (art. 53 007). Its size means this Back Part can better hold the split Rivet shaft, avoiding any damage to the crystal.

For **multi-layered or thicker** materials, the **smaller** Back Part (art. 53 009) can be used. To create a lasting bond, this requires less space for the split Rivet shaft. If the carrier material proves too thick, or is made up of several layers, it is recommended to punch a hole before application.



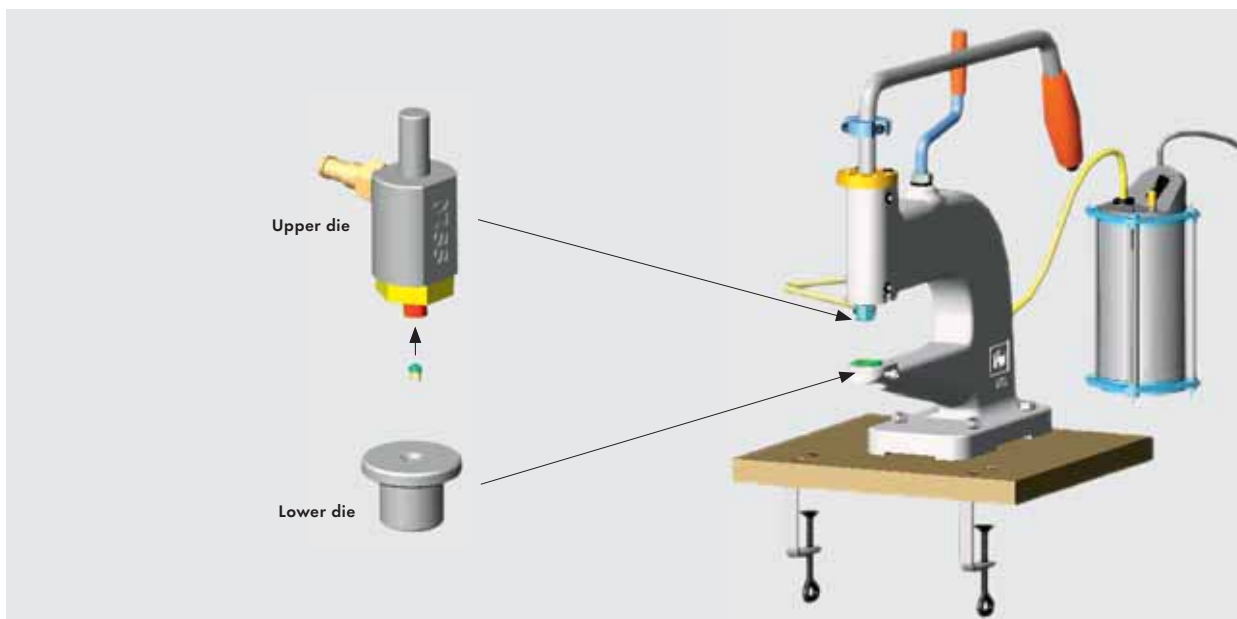
¹ 53 003 is designed for ring rolling application and is self-backing. The rivet can be proceed on automatic and semi-automatic machines as well as with a fly press and therefore use lower die 9070/010 without any back part (53 007).

Rose Pins, Chessboard Pins and Rhombus Pins

Pins can be easily applied using a fly press, a semi- or fully-automated attaching machine or a hand tool. The application with the fly press and the semi-automatic attaching machine will be explained step by step. Please note the material thickness when selecting Pins.

	ART.	SIZE	MATERIAL THICKNESS*
ROSE PINS	53 301	SS 10	1 - 2 mm
	53 302	SS 16	1 - 2 mm
	53 303	SS 20	1 - 2 mm
	53 304	SS 34	1 - 2 mm
CHESSBOARD PINS	53 310	6 mm	1 - 2 mm
	53 311	10 mm	1 - 2 mm
RHOMBUS PINS	53 320	10 x 6 mm	1 - 2 mm

* This can vary according to the roughness and production of the carrier material.



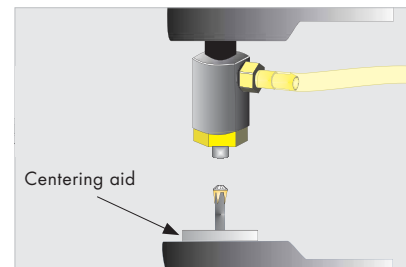
To apply Pins, attach the appropriate die to the fly press.



1 Place the Pin in the upper die.



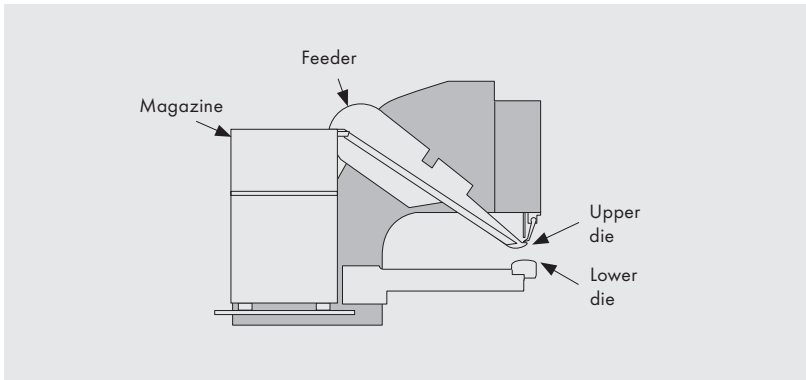
2 Position the carrier material and apply. Regulate the offset/pressure using the adjustable stop.



To facilitate the positioning of the small Rose Pin (art. 53 301, SS 10) in the upper die, the centering aid can be used. The tool must be removed before applying the Rose Pin.

Note: Do not apply Pins on areas of the carrier material that are under high mechanical stress (e.g. shoe industry). After application, ensure the Pins are not heated up to more than 80 °C (176 °F).

APPLICATION WITH A SEMI-AUTOMATIC ATTACHING MACHINE



To apply Rose Pins and Chessboard Pins, the semi-automatic attaching machine must be adjusted to the Pin size and carrier material (dies, feed and magazine). Please follow the machine manufacturer's instructions (S.P.S. Tecnologia Meccanica).



1 Set up the machine.



2 Add the Rose Pins.



3 Position the carrier material and apply.

Note: When applying Rose Pin motifs, it is helpful to have a corresponding template or marking on the carrier material to ensure the correct positioning.

Crystal Studs

Crystal Studs can be easily applied to various materials by using a fly press. Please consider the material thickness.

ART.	LENGTH OF SHANK	MATERIAL THICKNESS*
53 730	8 mm	0.5 – 4.0 mm
53 731	6 mm	0.5 – 2.5 mm

* This can vary according to the roughness and production of the carrier material.

It is important to carefully check the thickness of the fabric before beginning the application process. To avoid contraction or crinkling of the material after the application, tests are highly recommended on fabric samples before going ahead with the actual application process.



1 Pre-punch the carrier material on the designated position for the Crystal Stud.



2 Place the tools in the fly press. Make sure that they are sitting straight and firmly.



3 Connect the vacuum pump and turn it on.



4 Place the lower part of the Crystal Stud in the lower die.



5 Place the lower part in the upper die (crystal pointing upwards).



6 Put the carrier material with the pre-punched hole over the lower part.



7 Apply the Crystal Stud by closing the handle.



8 The Crystal Stud is now applied.



9 Create the buttonhole with a buttonhole punching tool (art. 9040/122).

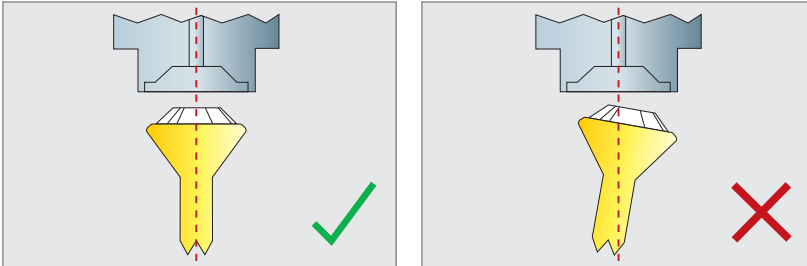


10 The latch can be closed now.

USEFUL INFORMATION

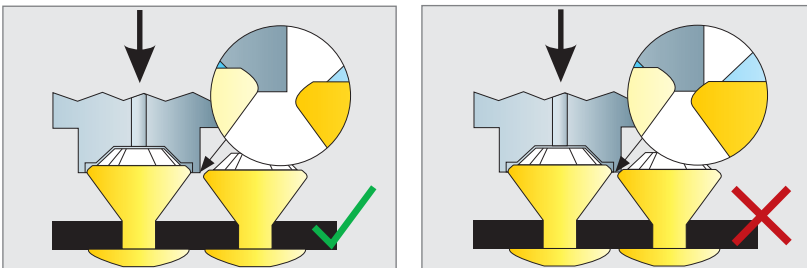
Optimum product/die alignment

In general, when carrying out mechanical applications it is important to ensure the proper alignment of products in the dies, so as to avoid any problems.



Minimum gaps

Please note that during application, the product is entirely surrounded by the upper die. To prevent neighboring products from being damaged, check the minimum space required by the die when calculating the gap between each item.



Die maintenance

Please check the dies used before and during production, and change them when they become worn. For machines with vacuum connections, blockages in the upper die can be released using a needle.

QUICK ASSISTANCE

The following table outlines common problems with mechanical applications and their causes, and offers advice on how to avoid them. Further details and descriptions can be found in the section marked with a **?!**

PROBLEM	CAUSE
The product is not ideally affixed onto the carrier material.	1, 2, 3, 4, 5
The fabric ripples or crinkles.	2, 3, 4, 5
The dies cannot be inserted in the fly press.	3, 6, 7, 8
It is not possible to unscrew the dies.	6, 8, 9
The crystals break.	2, 3, 4, 5, 10
The crystals do not hold in the upper die.	12, 13

CAUSE	RECOMMENDATION
1 The pressure may be too low.	Apply the product again using increased pressure; adjust the stop.
2 The carrier material is too thick or consists of too many layers.	With Rivets, select the smaller Back Part. With Rivets and Jeans Buttons a hole can be pre-punched.
3 The dies/spare parts for the upper die are defective or have been wrongly inserted.	Check the dies and if necessary, replace or repair them.
4 The product has been applied using the wrong dies.	Check to make sure that the right dies are being used for the product.
5 The dies have not been inserted correctly.	Make sure that the products are placed exactly in the right position on the dies. By turning the fly press handle slowly, it is possible to see if the upper and lower parts of the tool meet exactly.
6 The fly press and dies do not fit together.	Make sure that the fly press and the upper die have the same thread size (M6 or M8).
7 The upper die cannot be fitted.	Check the fastening screw on the upper die; it may have been screwed too tightly.
8 The die/spare part may be damaged.	Check the dies; if they are faulty use a new die or spare part.
9 The screw on the upper die has broken off.	Carefully try to loosen the screw using pliers. Oil from time to time; it may be necessary to center-drill the die.
10 The pressure may be too high.	Apply the product again using slightly less pressure; adjust the stop.
11 The die damages the crystal.	Check the dies and if necessary replace the upper die or the spare parts.
12 The vacuum hose is blocked or damaged.	Check and if necessary change the vacuum hose.
13 The vacuum hole in the upper die (Rivet) is blocked.	Clean the vacuum hole and if necessary change the spare part.

CARE INSTRUCTIONS

To ensure the highest quality and longest-lasting applications of Swarovski products, proper care is essential. The Swarovski Hotfix adhesive is characterized by its wash resistance and easy-care properties.

TEXTILE CARE INSTRUCTIONS

								
General Recommendations		Turn inside out, choose a gentle wash cycle and use mild laundry detergent. To protect the crystals as much as possible, the use of a soft wash bag is recommended.			Turn inside out and use mild laundry detergent.	Do not wash!	Chlorine bleach may be used.	Do not use chlorine bleach!
Round Stones		✓						✓
Fancy Stones		✓						✓
Beads	Beads	✓						✓
	Crystal Mesh Balls				✓			✓
BeCharmed & Pavé			✓					✓
Crystal Pearls					✓			✓
Pendants						✓		✓
Flat Backs No Hotfix ¹		✓						✓
Flat Backs Hotfix	XILION Rose & XIRIUS Rose ¹	✓						✓
	Framed Flat Backs	✓						✓
	Creation Stones	✓						✓
	Creation Stones Plus ²				✓			✓
	Cabochons				✓			✓
Sew-on Articles		✓						✓
Self-adhesive Elements						✓		✓
Transfers	XILION Transfers & XIRIUS Transfers	✓						✓
	Creation, Diamond	✓						✓
	Metallic & Mezzo Transfers		✓					✓
	Creation Transfers Plus ²				✓			✓
	Pearl Transfers				✓			✓
Synthetics Hotfix	Crystal Fabric		✓					✓
	Crystal Rocks & Crystal Fine Rocks		✓					✓
	Graphic Fabric & Graphic (Fine) Rocks				✓			✓
	Crystal Medley		✓					✓
	Crystalltex ³		✓					✓
Plastic Trimmings	Basic Bandings	✓						✓
	Fishnet Bandings	✓						✓
	Decorative Bandings		✓					✓
	Plastic Components		✓					✓
Buttons, Fasteners & Zippers	Crystal Buttons	✓						✓
	Buttons with Plastic Shank		✓					✓
	Snap Fasteners & Decorative Buttons		✓					✓
	Jeans Buttons		✓					✓
	Buttons with Metal Shank		✓					✓
	Zippers			✓				✓
Metal Trimmings	Chaton & Flat Back Bandings & Spike Bandings				✓			✓
	Rivets, Square Rivets, Chessboard Rivets & Star Rivets		✓					✓
	Crystal Pearl Rivets				✓			✓
	Spike Rivets				✓			✓
	Roses & Chaton Montées		✓					✓
	Rose Pins, Chessboard Pins & Rhombus Pins		✓					✓
	Crystal Studs				✓			✓
Crystal Mesh					✓			✓
Cupchains & Findings						✓		✓

1 XIRIUS size SS 40 and SS 48: only wash with a hand wash program.

2 Creation Stones Plus have a stone size of 8 - 10 mm.

3 It is recommended to wash Crystalltex Cabochon with a hand wash program.

TEXTILE CARE INSTRUCTIONS

					
	Turn inside out and dry at reduced temperature.	Do not tumble dry!	Iron inside out using a silk/polyester/viscose setting. Ironing the textile inside out and using a pressing cloth is recommended.	Iron inside out using a wool setting.	Do not iron! Do not iron directly over the crystals.
Round Stones		✓			✓
Fancy Stones		✓			✓
Beads	Beads	✓			✓
	Crystal Mesh Balls		✓		✓
BeCharmed & Pavé		✓			✓
Crystal Pearls		✓			✓
Pendants		✓			✓
Flat Backs No Hotfix ¹		✓			✓
Flat Backs Hotfix	XILION Rose & XIRIUS Rose ¹	✓		✓	
	Framed Flat Backs			✓	
	Creation Stones	✓		✓	
	Creation Stones Plus ²		✓		✓
	Cabochons	✓		✓	
Sew-on Articles		✓			✓
Self-adhesive Elements		✓			✓
Transfers	XILION Transfers & XIRIUS Transfers	✓		✓	
	Creation, Diamond	✓		✓	
	Metallic & Mezzo Transfers		✓	✓	
	Creation Transfers Plus ²		✓		✓
	Pearl Transfers	✓		✓	
Synthetics Hotfix	Crystal Fabric		✓	✓	
	Crystal Rocks & Crystal Fine Rocks		✓	✓	
	Graphic Fabric & Graphic (Fine) Rocks		✓	✓	
	Crystal Medley		✓	✓	
	Crystaltex ³		✓	✓	
Plastic Trimmings	Basic Bandings	✓			✓
	Fishnet Bandings		✓		✓
	Decorative Bandings		✓		✓
	Plastic Components		✓		✓
Buttons, Fasteners & Zippers	Crystal Buttons		✓		✓
	Buttons with Plastic Shank		✓		✓
	Snap Fasteners & Decorative Buttons		✓		✓
	Jeans Buttons		✓		✓
	Buttons with Metal Shank		✓		✓
Zippers		✓			✓
Metal Trimmings	Chaton & Flat Back Bandings & Spike Bandings		✓		✓
	Rivets, Square Rivets, Chessboard Rivets & Star Rivets		✓		✓
	Crystal Pearl Rivets		✓		✓
	Spike Rivets		✓		✓
	Roses & Chaton Montées		✓		✓
	Rose Pins, Chessboard Pins & Rhombus Pins		✓		✓
Crystal Studs					✓
Crystal Mesh		✓			✓
Cupchains & Findings		✓			✓

TEXTILE CARE INSTRUCTIONS

					
		The textile can be gently dry-cleaned using perchlorethylene. Turn inside out.	The textile can be gently dry-cleaned using hydrocarbon. Turn inside out.	The textile will withstand gentle professional wet cleaning. Turn inside out.	The textile may not be dry-cleaned.
		To protect the crystals as much as possible, the use of a soft wash bag is recommended.			
Round Stones			✓	✓	
Fancy Stones			✓	✓	
Beads	Beads	✓	✓	✓	
	Crystal Mesh Balls		✓	✓	
BeCharmed & Pavé			✓	✓	
Crystal Pearls			✓	✓	
Pendants					✓
Flat Backs No Hotfix ¹			✓	✓	
Flat Backs Hotfix	XILION Rose & XIRIUS Rose ¹	✓	✓	✓	
	Framed Flat Backs	✓	✓	✓	
	Creation Stones	✓	✓	✓	
	Creation Stones Plus ²	✓	✓	✓	
	Cabochons	✓	✓	✓	
Sew-on Articles		✓	✓	✓	
Self-adhesive Elements					✓
Transfers	XILION Transfers & XIRIUS Transfers	✓	✓	✓	
	Creation, Diamond	✓	✓	✓	
	Metallic & Mezzo Transfers		✓	✓	
	Creation Transfers Plus ²	✓	✓	✓	
	Pearl Transfers	✓	✓	✓	
Synthetics Hotfix	Crystal Fabric		✓	✓	
	Crystal Rocks & Crystal Fine Rocks		✓	✓	
	Graphic Fabric & Graphic (Fine) Rocks		✓	✓	
	Crystal Medley		✓	✓	
	Crystaltex ³		✓	✓	
Plastic Trimmings	Basic Bandings	✓	✓	✓	
	Fishnet Bandings	✓	✓	✓	
	Decorative Bandings	✓	✓	✓	
	Plastic Components	✓	✓	✓	
Buttons, Fasteners & Zippers	Crystal Buttons	✓	✓	✓	
	Buttons with Plastic Shank	✓	✓	✓	
	Snap Fasteners & Decorative Buttons	✓	✓	✓	
	Jeans Buttons		✓	✓	
	Buttons with Metal Shank		✓	✓	
	Zippers		✓	✓	
Metal Trimmings	Chaton & Flat Back Bandings & Spike Bandings		✓	✓	
	Rivets, Square Rivets, Chessboard Rivets & Star Rivets	✓	✓	✓	
	Crystal Pearl Rivets		✓	✓	
	Spike Rivets	✓	✓	✓	
	Roses & Chaton Montées	✓	✓	✓	
	Rose Pins, Chessboard Pins & Rhombus Pins	✓	✓	✓	
	Crystal Studs		✓	✓	
Crystal Mesh			✓	✓	
Cupchains & Findings					✓

GENERAL CARE INSTRUCTIONS

A light layer of dust is most easily removed with a clean, dry and antistatic cloth. To avoid unsightly fingerprints on the crystal, wear white cotton gloves during the cleaning process. For heavier dirt, lukewarm water with a little dishwashing detergent will suffice. Ideally you should use a damp and clean microfiber or thin, lint-free cotton cloth. Gently wipe each individual crystal and dry with a clean cloth. Again, wearing white cotton gloves is recommended.

When cleaning with moisture, make sure to use cleaning agents that do not damage the surrounding material. By correctly cleaning your Swarovski crystals, you will restore their full reflectivity.



Cloth

LAWS, REGULATIONS, NORMS & STANDARDS

The composition of loose and forward-integrated crystals in the Advanced Crystal standard is compliant with regulatory industry norms and laws regarding the restriction or prohibition of certain

substances for finished products in the most relevant segments of our customers' business.

WARNING NOTICES

General Warning



Loose crystals may present a small parts hazard to young children, particularly children under three years old. Depending on the size of the crystal and any attached material (such as glue, fabric, etc.), children may choke on, inhale, swallow, or insert the crystal into their noses. Magnetic products with crystal applications pose a particular risk of serious intestinal injury if ingested. The application techniques as stated in the Application Manual do not guarantee that crystals will not come loose. For each application, the manufacturer must determine whether the product meets the relevant requirements related to small parts hazards and assess any risk it may pose to small children. Failure to follow Swarovski's care instructions may result in damage to the crystal, which could pose a risk of laceration or other harm.

Warning for Crystal Tattoos

Crystal Tattoos may be applied on healthy skin only. Do not adhere to eyes or on mucous membranes. Crystal Tattoos are not recommended for young children. Loose crystals may present a small parts hazard to young children, particularly children under three years old. If a crystal comes loose, depending on the size of the crystal, children may choke on, inhale, swallow, or insert the crystal into their noses.

Warning for Magnetic Products

Loose crystals may present a small parts hazard to young children, particularly children under three years old. Magnetic products with crystal applications pose a particular risk of serious intestinal injuries if ingested. For each application of magnetic crystal products, the manufacturer must determine whether the product meets relevant requirements related to small parts hazards and assess any risk it may pose to small children.

Warning for Tableware

The application of loose crystals to tableware presents a potential risk of aspiration, choking, swallowing, or tooth damage should crystals become loose. To reduce this risk, crystals should never be applied to any surface of tableware likely to come in contact with food or the mouth, and crystals should never be placed on any tableware intended for use by children. Tableware with

crystals intended for decorative use only should be marked as such. To avoid dishwasher damage, tableware decorated with crystals should be washed by hand. The application techniques or suggestions in this manual do not guarantee that crystals will not come loose. For each application, the manufacturer must determine whether the product meets relevant requirements related to small parts hazards or use in food contact items and assess any risk it may pose to users.

The use of crystals (which may contain restricted substances deemed hazardous under local laws) and adhesives on tableware is subject to legal restrictions in specific countries. The customer is fully responsible for complying with these country-specific provisions and shall defend, indemnify, and hold Swarovski harmless from any and all third-party claims based on product liability or otherwise relating to uses of Swarovski products, and waives all its own claims against Swarovski.

Unsuitable Applications

Crystals from Swarovski are intended for use in the fields of fashion, jewelry, accessories, textile products, and for interior décor. Due to their physical properties, crystals from Swarovski are unsuitable for other uses (e.g. gluing onto teeth, using on or near mucous membranes, and other unsafe uses). The customer shall defend, indemnify, and hold Swarovski harmless from any and all third-party claims based on product liability or otherwise relating to uses of Swarovski products purchased by the customer, and waives all its own claims.

Responsibility of User

Any oral, written, or test-based advice that Swarovski provides regarding techniques for the application of its products are recommendations based on Swarovski's current knowledge and the information provided by its suppliers. Such advice does not discharge the customer from carrying out its own tests of techniques it proposes to use and their suitability for the intended application. The application, use, and processing of these techniques and products are solely the user's responsibility.

CARE INSTRUCTIONS

Not following Swarovski care instructions can damage the product and thus lead to damage of textiles or other damage.

Please note that with all standard washing processes (whether carried out by a household washing machine or via dry cleaning) the rotation of the drum places significant mechanical forces on the textiles. The most important factor in ensuring a secure wash is correctly applying the product, without compromising its adhesion. The larger the product employed, and the more products are applied next to each other, the greater the risk of damage. Swarovski products are made out of crystal or contain crystal and must thus be handled with suitable care.

In general, it is recommended that a soft wash bag is used and that the washer drum is filled to protect against damage. To maintain the quality of crystals from Swarovski, the following is also important: before washing, turn items of clothing inside out, select a gentle wash cycle, and use a mild detergent. According to DIN EN ISO 3758, our care instructions list all product groups, meaning each product used by customers must be assessed separately with regard to its washability and suitability for its purpose/the end product. The recommendations given by Swarovski reflect our current level of knowledge. Swarovski uses these recommendations to decide on the suitability of the product for textile applications. Customers are solely responsible for defining the recommended cleaning process for the end product, and must consider the care advice of Swarovski and any other manufacturers in doing so. The type of shape, cut, surface effect, and size, as well as the weight of the application and the quantity of crystals used has a significant impact on the cleaning process to be followed.

To avoid all risks, customers/textile cleaning companies should remove any large crystal stones, buttons, etc., that have been stitched on before cleaning, and stitch them back on again afterwards.

Content is subject to change without notice.

Errors and misprints excepted.

Please note, the actual products may deviate from the pictures in color and effect.

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