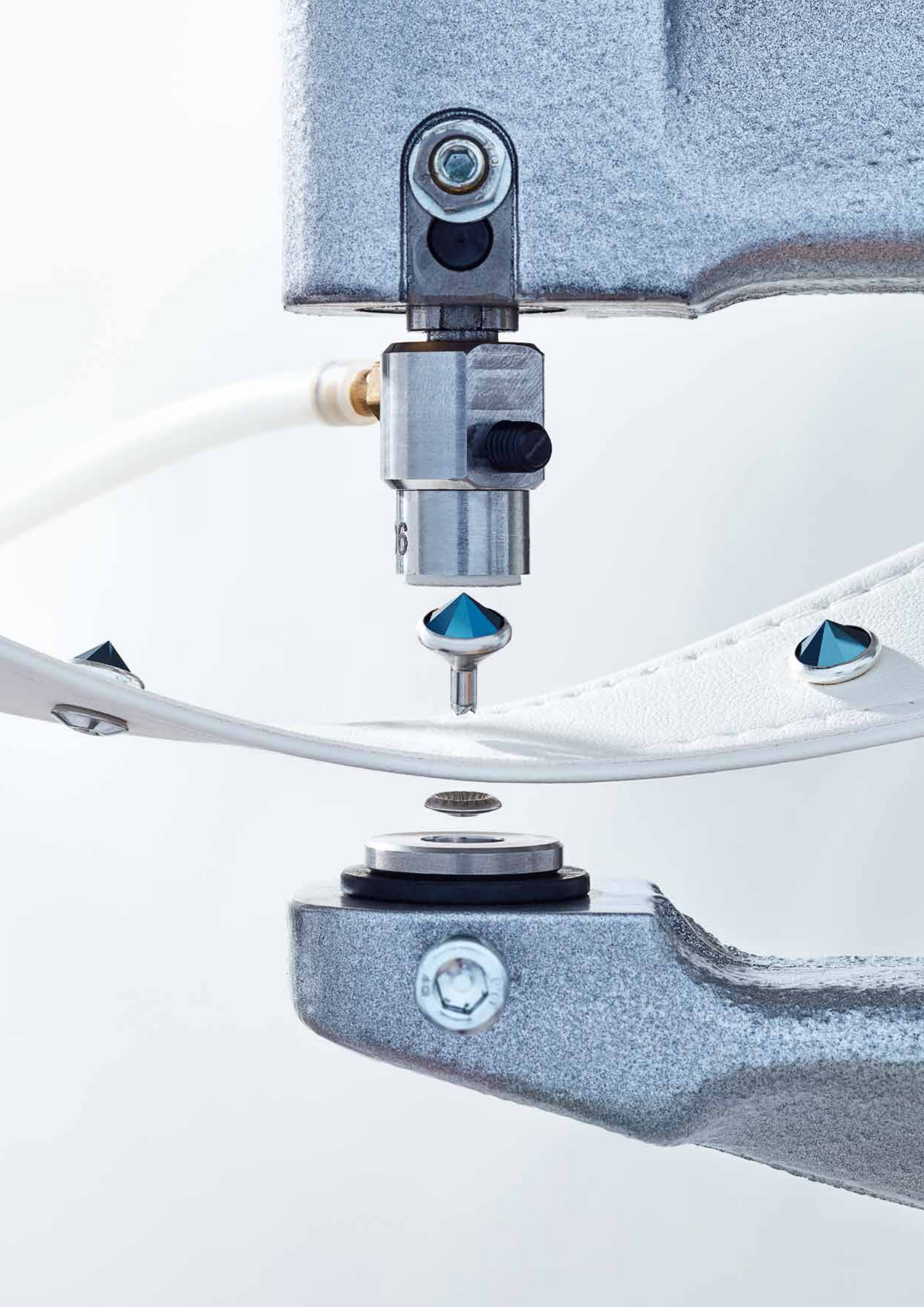


8

MECHANICAL APPLICATION

Many Swarovski products, such as 3D Studs, 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:

METAL TRIMMINGS	MECHANICAL APPLICATION
Standard Rivets, Square Rivets, Star Rivet, Spike Rivets, XIRIUS Flat Back Rivets, Cabochon Rivets	✔
Rose Pins	✔
3D Studs	✔

MACHINES AND TOOLS

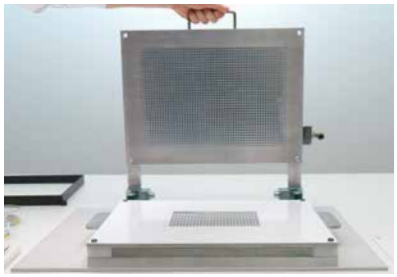
The following machines, tools and aids can be used for the mechanical application of Swarovski products:

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

Vacuum pump (art. 9040/022) with silicone hose allows products such as Rose Pins, 3D Studs and Rivets to be easily held in place in the fly press.

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.

For application of Rose Pins a **Rose Pin mold** can be used (patented by Gruppo Meccaniche Luciani). Please be advised that Swarovski does not provide the tools.

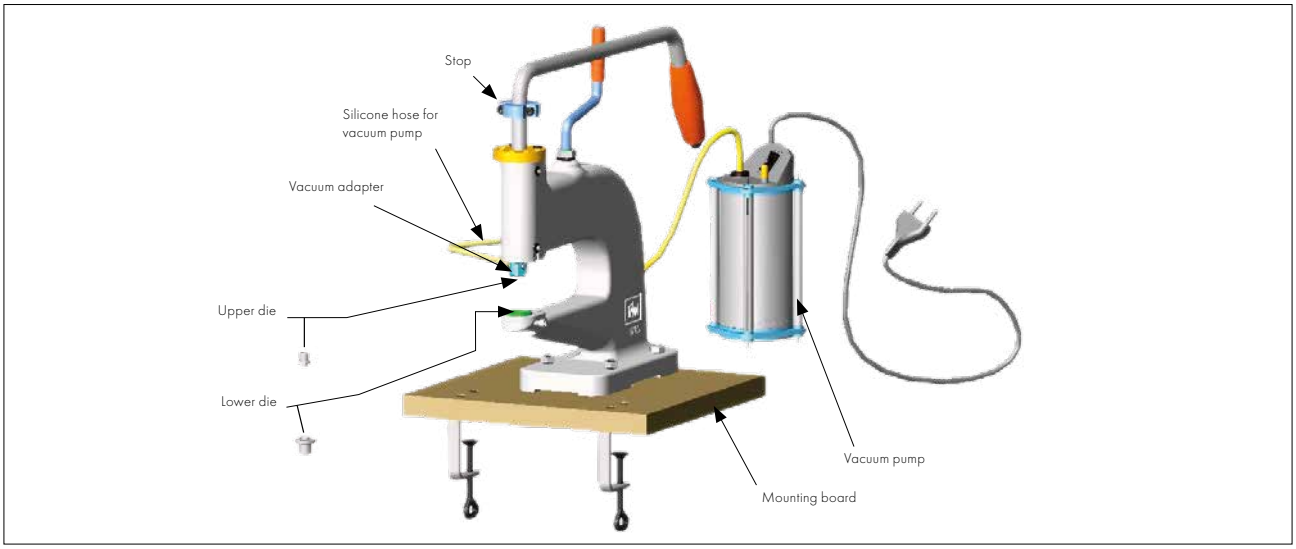


3D Studs can be applied using a **3D Stud mold** (offered by Gruppo Meccaniche Luciani). Please be advised that Swarovski does not provide the tools for this mold.

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 tools for application (in this case for the application of Rivets).

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 leather or fabric strengths, listed in the "Application" subsection, are followed. A vacuum pump and adapter allow 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[1]	Spare Part for Upper Die (insert)[2]	Lower Die for application with Back Part:	Lower Die for application with Back Part:	Lower Die for application without Back Part for Rivet casing color 088 Stainless Steel	Lower Die for application without Back Part for Rivet casing color 081 Gold 082 Silver 086 Gun Metal
				 53 007	 53 009		
		Art. 9040/023		 Art. 9070/010	 Art. 9070/012	 Art. 9070/011	 Art. 9040/015
53 000  SS 18	Art. 9040/005 M8	Art. 9040/023	Art. 9040/008	■	■	■	■
	Art. 9040/014 M6	–					
53 001  SS 29	Art. 9070/005 M8	Art. 9040/023	Art. 9070/008	■	■	■	■
	Art. 9070/009 M6	–					
53 002  SS 18 (short shank)	Art. 9040/005 M8	Art. 9040/023	Art. 9040/008				■
	Art. 9040/014 M6	–					
53 005  SS 34	Art. 9040/064 M8	Art. 9040/023	Art. 9040/062	■	■	■	■
	Art. 9040/063 M6	–					
53 006  SS 39	Art. 9040/067 M8	Art. 9040/023	Art. 9040/065	■	■	■	■
	Art. 9040/066 M6	–					

1 When using Swarovski's fly press, tools with M8 thread and the corresponding vacuum adapter are necessary.

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

Required Application Tools

	Upper Die	Vacuum Adapter[1]	Spare Part for Upper Die (insert)[2]	Lower Die for application with Back Part:	Lower Die for application with Back Part:	Lower Die for application without Back Part for Rivet casing color 088 Stainless Steel	Lower Die for application without Back Part for Rivet casing color 081 Gold 082 Silver 086 Gun Metal
		 Art. 9040/105		 53 007	 53 009		
				 Art. 9070/010	 Art. 9070/012	 Art. 9070/011	 Art. 9040/015
53 500  4 mm	Art. 9040/106	Art. 9040/105	–	■	■		■
53 501  6 mm	Art. 9040/107	Art. 9040/105	–	■	■		■
53 502  8 mm	Art. 9040/108	Art. 9040/105	–	■	■		■
53 700  10 mm	Art. 9040/112	Art. 9040/105	Art. 9040/113	■	■		■
53 010  SS 29	Art. 9040/123	Art. 9040/105	Art. 9040/124	■	■		■
53 011  SS 39	Art. 9040/125	Art. 9040/105	Art. 9040/126	■	■		■
53 503  8 mm	Art. 9040/127	Art. 9040/105	Art. 9040/128	■	■		■

1 When using Swarovski's fly press, tools with M8 thread and the corresponding vacuum adapter are necessary.

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

Required Application Tools

	Upper Die	Vacuum Adapter[1]	Spare Part for Upper Die (insert)[2]	Lower Die for application with Back Part:	Lower Die for application with Back Part:
		 Art. 9040/023		 56 198	 56 199
				 Art. 9070/023	 Art. 9070/023

56 101


SS 16

Art. 9040/130 M8	Art. 9040/023	Art. 9040/132
Art. 9040/131 M6	–	

56 102


SS 20

Art. 9040/133 M8	Art. 9040/023	Art. 9040/135
Art. 9040/134 M6	–	

56 103


SS 34

Art. 9040/136 M8	Art. 9040/023	Art. 9040/138
Art. 9040/137 M6	–	

56 104


SS 40

Art. 9040/139 M8	Art. 9040/023	Art. 9040/141
Art. 9040/140 M6	–	

56 105


SS 48

Art. 9040/142 M8	Art. 9040/023	Art. 9040/144
Art. 9040/143 M6	–	

1 When using Swarovski's fly press, tools with M8 thread and the corresponding vacuum adapter are necessary.

2 The Spare Part (plastic insert) is incorporated into the Upper Die as standard. It should be changed when it becomes worn.

Required Application Tools

Upper Die	Vacuum Adapter[1]	Spare Part for Upper Die (insert)[2]	Lower Die for application with Back Part:	Lower Die for application with Back Part:
	 Art. 9040/023		 56 198	 56 199
			 Art. 9070/023	 Art. 9070/023

56 106

SS 16

Art. 9040/145 M8	Art. 9040/023	Art. 9040/147
Art. 9040/146 M6	-	

56 107

SS 34

Art. 9040/148 M8	Art. 9040/023	Art. 9040/150
Art. 9040/149 M6	-	

Additional information vacuum adapter

Vacuum adapter (art. 9040/023) with M6 outer thread and M8 inner thread.

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

1 When using Swarovski's fly press, tools with M8 thread and the corresponding vacuum adapter are necessary.

2 The Spare Part (plastic insert) is incorporated into the Upper Die as standard. It should be changed when it becomes worn.

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.

Please note: All Rose Pin spare parts have been adapted in summer 2017. They look slightly different now while making it easier to replace the spare part in the upper die.

53 301 Rose Pin (SS 10)

Required Application Tools

Upper Die	Spare Part[1]	Lower Die	Centering Aid[2]
 Art. 9040/090 M6	 Art. 9040/094	 Art. 9070/013	 Art. 9070/017

53 302 Rose Pin (SS 16)

Required Application Tools

Upper Die	Spare Part[1]	Lower Die
 Art. 9040/091 M6	 Art. 9040/095	 Art. 9070/014

53 303 Rose Pin (SS 20)

Required Application Tools

Upper Die	Spare Part[1]	Lower Die
 Art. 9040/092 M6	 Art. 9040/096	 Art. 9070/014

53 304 Rose Pin (SS 34)

Required Application Tools

Upper Die	Spare Part[1]	Lower Die
 Art. 9040/093 M6	 Art. 9040/097	 Art. 9070/016

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

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

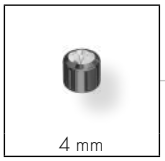
3D STUDS

For the application with the fly press, the following tools can be used. Please consider that a vacuum pump (art. 9040/022) is necessary to hold the Back Part in place. The vacuum connection is integrated directly into the upper die.

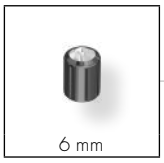
Required Application Tools

Upper Die	Insert	Insert	Insert	Lower Die	Linear Grid*	Changing Pin	Back Part
							
Art. 9060/040	Art. 9060/041	Art. 9060/042	Art. 9060/043	Art. 9060/044	Art. 9060/045	Art. 9060/015	Art. 54 004

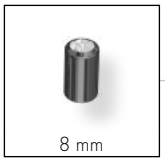
54 001

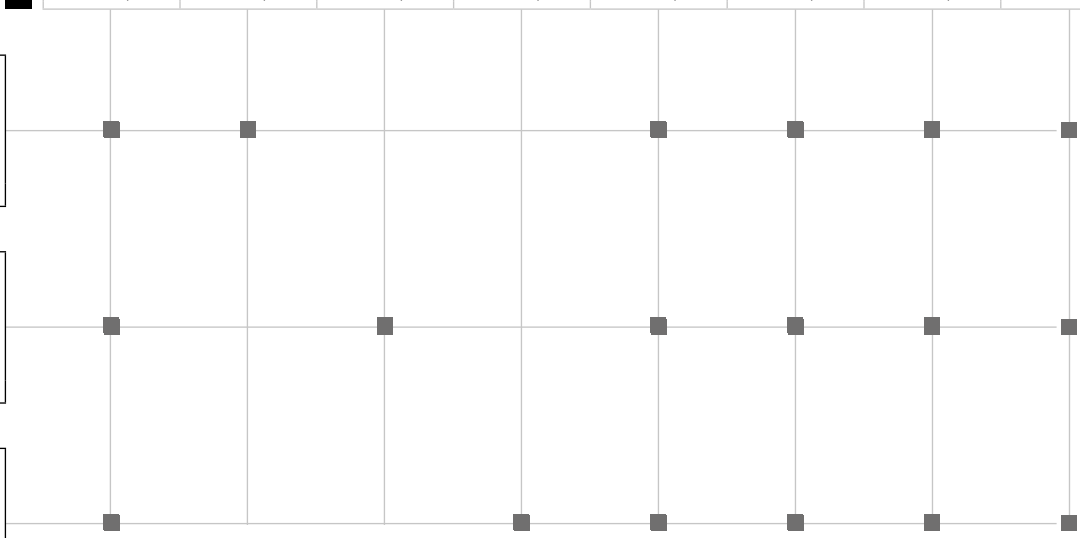


54 002



54 003





* Optional tool for the even/linear application of more than one 3D Stud.

SUPPLIERS

This list provides an overview of selected suppliers worldwide.

MACHINES & TOOLS	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. Standard Rivet Company	www.swarovski-professional.com www.sinojiuzhou.com www.seungminsm.co.kr www.standardrivet.com
Tools for Rivets (fly press)	Swarovski: **Rivet 53 000** Upper die (M8): art. 9040/005 Upper die (M6): art. 9040/014 Spare part (plastic insert) for upper die (art. 9040/005 and 9040/014): art. 9040/008 Lower die for Rivet application with Back Part 53 007: art. 9070/010 Lower die for Rivet application with Back Part 53 009: art. 9070/012 Lower die for Rivet application without Back Part (Rivet casing 081, 082 and 086): art. 9040/015 Lower die for Rivet application without Back Part (Rivet casing 088): art. 9070/011 Vacuum adapter for upper die (art. 9040/005): art. 9040/023 **Rivet 53 001** Upper die (M8): art. 9070/005 Upper die (M6): art. 9070/009 Spare part (plastic insert) for upper die (art. 9070/005 and 9070/009): art. 9070/008 Lower die for Rivet application with Back Part 53 007: art. 9070/010 Lower die for Rivet application with Back Part 53 009: art. 9070/012 Lower die for Rivet application without Back Part (Rivet casing 081, 082 and 086): art. 9040/015 Lower die for Rivet application without Back Part (Rivet casing 088): art. 9070/011 Vacuum adapter for upper die (art. 9070/005): art. 9040/023 **Rivet 53 002** Upper die (M8): art. 9040/005 Upper die (M6): art. 9040/014 Spare part (plastic insert) for upper die (art. 9040/005 and 9040/014): art. 9040/008 Lower die for Rivet application without Back Part (Rivet casing 081, 082 and 086): art. 9040/015 Vacuum adapter for upper die (art. 9040/005): art. 9040/023 **Rivet 53 005** Upper die (M8): art. 9040/064 Upper die (M6): art. 9040/063 Spare part (plastic insert) for upper die (art. 9040/064 and 9040/063): art. 9040/062 Lower die for Rivet application with Back Part 53 007: art. 9070/010 Lower die for Rivet application with Back Part 53 009: art. 9070/012 Lower die for Rivet application without Back Part (Rivet casing 081, 082 and 086): art. 9040/015 Lower die for Rivet application without Back Part (Rivet casing 088): art. 9070/011 Vacuum adapter for upper die (art. 9040/064): art. 9040/023	www.swarovski-professional.com

MACHINES & TOOLS	SUPPLIER	CONTACT
	Rivet 53 006 Upper die (M8): art. 9040/067 Upper die (M6): art. 9040/066 Spare part (plastic insert) for upper die (art. 9040/067 and 9040/066): art. 9040/065 Lower die for Rivet application with Back Part 53 007: art. 9070/010 Lower die for Rivet application with Back Part 53 009: art. 9070/012 Lower die for Rivet application without Back Part (Rivet casing 081, 082 and 086): art. 9040/015 Lower die for Rivet application without Back Part (Rivet casing 088): art. 9070/011 Vacuum adapter for upper die (art. 9040/067): art. 9040/023	
Tools for Square Rivets (fly press)	Swarovski: **Square Rivet 53 500** Upper die: art. 9040/106 Lower die for Rivet application with Back Part 53 007: art. 9070/010 Lower die for Rivet application with Back Part 53 009: art. 9070/012 Lower die for Rivet application without Back Part (Rivet casing 081, 082 and 086): art. 9040/015 Vacuum adapter for upper die: art. 9040/105 **Square Rivet 53 501** Upper die: art. 9040/107 Lower die for Rivet application with Back Part 53 007: art. 9070/010 Lower die for Rivet application with Back Part 53 009: art. 9070/012 Lower die for Rivet application without Back Part (Rivet casing 081, 082 and 086): art. 9040/015 Vacuum adapter for upper die: art. 9040/105 **Square Rivet 53 502** Upper die: art. 9040/108 Lower die for Rivet application with Back Part 53 007: art. 9070/010 Lower die for Rivet application with Back Part 53 009: art. 9070/012 Lower die for Rivet application without Back Part (Rivet casing 081, 082 and 086): art. 9040/015 Vacuum adapter for upper die: art. 9040/105	www.swarovski-professional.com
Tools for Star Rivets (fly press)	Swarovski: **Star Rivet 53 700** Upper die: art. 9040/112 Spare part (plastic insert) for upper die (art. 9040/112): art. 9040/113 Lower die for Rivet application with Back Part 53 007: art. 9070/010 Lower die for Rivet application with Back Part 53 009: art. 9070/012 Lower die for Rivet application without Back Part (Rivet casing 081, 082 and 086): art. 9040/015 Vacuum adapter for upper die: art. 9040/105	www.swarovski-professional.com

MACHINES & TOOLS	SUPPLIER	CONTACT
Tools for Spike Rivets (fly press)	Swarovski: **Spike Rivet 53 010** Upper die: art. 9040/123 Spare part (plastic insert) for upper die (art. 9040/123): art. 9040/124 Lower die for Rivet application with Back Part 53 007: art. 9070/010 Lower die for Rivet application with Back Part 53 009: art. 9070/012 Lower die for Rivet application without Back Part (Rivet casing 081, 082 and 086): art. 9040/015 Vacuum adapter for upper die: art. 9040/105 **Spike Rivet 53 011** Upper die: art. 9040/125 Spare part (plastic insert) for upper die (art. 9040/125): art. 9040/126 Lower die for Rivet application with Back Part 53 007: art. 9070/010 Lower die for Rivet application with Back Part 53 009: art. 9070/012 Lower die for Rivet application without Back Part (Rivet casing 081, 082 and 086): art. 9040/015 Vacuum adapter for upper die: art. 9040/105 **Spike Rivet 53 503** Upper die: art. 9040/127 Spare part (plastic insert) for upper die (art. 9040/127): art. 9040/128 Lower die for Rivet application with Back Part 53 007: art. 9070/010 Lower die for Rivet application with Back Part 53 009: art. 9070/012 Lower die for Rivet application without Back Part (Rivet casing 081, 082 and 086): art. 9040/015 Vacuum adapter for upper die: art. 9040/105	www.swarovski-professional.com
Tools for XIRIUS Flat Back Rivets (fly press)	Swarovski: **XIRIUS Flat Back Rivet 56 101** Upper die (M8): art. 9040/130 Upper die (M6): art. 9040/131 Spare part (plastic insert) for upper die (art. 9040/130 and art. 9040/131): art. 9040/132 Lower die for Flat Back Rivets application with Back Part 56 198: art. 9070/023 Vacuum adapter for upper die (art. 9040/130): art. 9040/023 **XIRIUS Flat Back Rivet 56 102** Upper die (M8): art. 9040/133 Upper die (M6): art. 9040/134 Spare part (plastic insert) for upper die (art. 9040/133 and art. 9040/134): art. 9040/135 Lower die for Flat Back Rivets application with Back Part 56 198: art. 9070/023 Vacuum adapter for upper die (art. 9040/133): art. 9040/023 **XIRIUS Flat Back Rivet 56 103** Upper die (M8): art. 9040/136 Upper die (M6): art. 9040/137 Spare part (plastic insert) for upper die (art. 9040/136 and art. 9040/137): art. 9040/138 Lower die for Flat Back Rivets application with Back Part 56 199: art. 9070/023 Vacuum adapter for upper die (art. 9040/136): art. 9040/023	www.swarovski-professional.com

MACHINES & TOOLS	SUPPLIER	CONTACT
	XIRIUS Flat Back Rivet 56 104 Upper die (M8): art. 9040/139 Upper die (M6): art. 9040/140 Spare part (plastic insert) for upper die (art. 9040/139 and art. 9040/140): art. 9040/141 Lower die for Flat Back Rivets application with Back Part 56 199: art. 9070/023 Vacuum adapter for upper die (art. 9040/139): art. 9040/023 **XIRIUS Flat Back Rivet 56 105** Upper die (M8): art. 9040/142 Upper die (M6): art. 9040/143 Spare part (plastic insert) for upper die (art. 9040/142 and art. 9040/143): art. 9040/144 Lower die for Flat Back Rivets application with Back Part 56 199: art. 9070/023 Vacuum adapter for upper die (art. 9040/142): art. 9040/023	
Tools for Cabochon Rivets (fly press)	Swarovski: **Cabochon Rivet 56 106** Upper die (M8): art. 9040/145 Upper die (M6): art. 9040/146 Spare part (plastic insert) for upper die (art. 9040/145 and art. 9040/146): art. 9040/147 Lower die for Cabochon Rivets application with Back Part 56 198: art. 9070/023 Vacuum adapter for upper die (art. 9040/145): art. 9040/023 **Cabochon Rivet 56 107** Upper die (M8): art. 9040/148 Upper die (M6): art. 9040/149 Spare part (plastic insert) for upper die (art. 9040/148 and art. 9040/149): art. 9040/150 Lower die for Cabochon Rivets application with Back Part 56 199: art. 9070/023 Vacuum adapter for upper die (art. 9040/148): art. 9040/023	www.swarovski-professional.com
Tools for Rose Pins (fly press)	Swarovski: **Rose Pin 53 301** Upper die (M6): art. 9040/090 Spare part (plastic insert) for upper die (art. 9040/090): art. 9040/094 Lower die: art. 9070/013 Centering aid: art. 9070/017 **Rose Pin 53 302** Upper die (M6): art. 9040/091 Spare part (plastic insert) for upper die (art. 9040/091): art. 9040/095 Lower die: art. 9070/014 **Rose Pin 53 303** Upper die (M6): art. 9040/092 Spare part (plastic insert) for upper die (art. 9040/092): art. 9040/096 Lower die: art. 9070/014 **Rose Pin 53 304** Upper die (M6): art. 9040/093 Spare part (plastic insert) for upper die (art. 9040/093): art. 9040/097 Lower die: art. 9070/016	www.swarovski-professional.com

MACHINES & TOOLS	SUPPLIER	CONTACT
Tools for 3D Studs (fly press)	Swarovski: **3D Stud 54 001** Upper die for Back Part 54 004: art. 9060/040 Insert: art. 9060/041 Lower die: art. 9060/044 Linear grid: art. 9060/045 Changing pin: art. 9060/015 **3D Stud 54 002** Upper die for Back Part 54 004: art. 9060/040 Insert: art. 9060/042 Lower die: art. 9060/044 Linear grid: art. 9060/045 Changing pin: art. 9060/015 **3D Stud 54 003** Upper die for Back Part 54 004: art. 9060/040 Insert: art. 9060/043 Lower die: art. 9060/044 Linear grid: art. 9060/045 Changing pin: art. 9060/015	www.swarovski-professional.com
Vacuum pump with silicone hose	Swarovski: art. 9040/022	www.swarovski-professional.com
Automatic attaching machine	Jiuzhou Machinery Co., Ltd. Prym Fashion GmbH Seung Min Industrial Co., Ltd. Sagitta SPA	www.sinojiuzhou.com www.prym-fashion.com www.seungminsm.co.kr www.sagitta.it
Rose Pin mold	Gruppo Meccaniche Luciani Srl	www.gruppomeccanicheluciani.com
3D Stud mold	Gruppo Meccaniche Luciani Srl	www.gruppomeccanicheluciani.com

APPLICATION

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

CHECKING MATERIAL STRENGTH

PRODUCT-SPECIFIC APPLICATION

CHECKING MATERIAL STRENGTH

It is 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 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.

CHECKING MATERIAL STRENGTH

PRODUCT-SPECIFIC APPLICATION

PRODUCT-SPECIFIC APPLICATION

Before starting, make sure the fly press is aligned and upper and lower dies are arranged along an axis. Dies should be clean, polished and intact.

By carrying out pre-application tests, contracted or crinkled material after the application can be avoided, as well as too much space between fabric and pieces.

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

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.

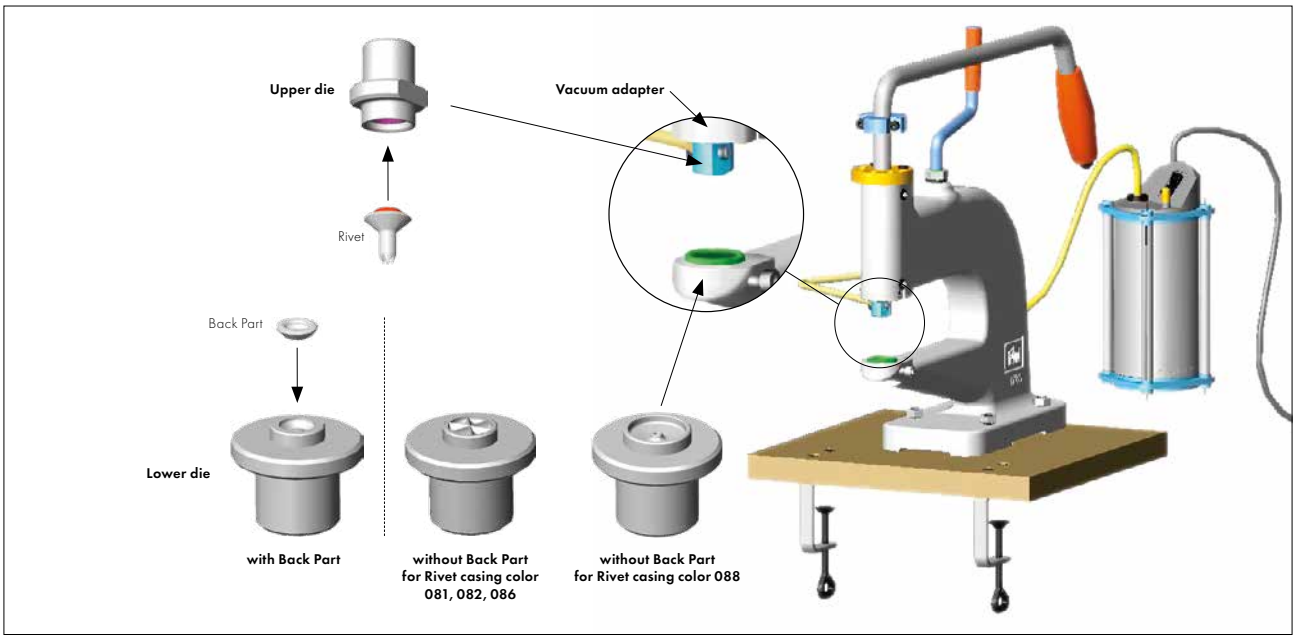
	ART.	SIZE	MATERIAL THICKNESS*	POSSIBLE BACK PARTS
RIVETS	**53 000**	SS 18	2.0 – 2.5 mm	53 007 and 53 009
	53 001	SS 29	2.0 – 2.5 mm	53 007 and 53 009
	53 002	SS 18	1.5 – 2.0 mm	
	53 005	SS 34	2.0 – 2.5 mm	53 007 and 53 009
	53 006	SS 39	2.2 – 2.7 mm	53 007 and 53 009
SQUARE RIVETS	**53 500**	4 mm	2.0 – 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
STAR RIVET	**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
XIRIUS FLAT BACK RIVETS	**56 101**	SS 16	0.8 – 1.5 mm	56 198
	56 102	SS 20	0.8 – 1.5 mm	56 198
	56 103	SS 34	1.5 – 4.0 mm	56 199
	56 104	SS 40	1.5 – 4.0 mm	56 199
	56 105	SS 48	1.5 – 4.0 mm	56 199
CABOCHON RIVETS	**56 106**	SS 16	0.8 – 1.5 mm	56 198
	56 107	SS 34	1.5 – 4.0 mm	56 199

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

Application with a fly press

In many cases it is possible to select between both versions of the Back Parts. 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.



CRYSTAL APPLICATION INSTRUCTION MOVIE

Rivets - Application with a fly press
Learn how to properly apply Rivets using a fly press by watching instruction movie online at http://swarovs.ki/rivets-fly-press

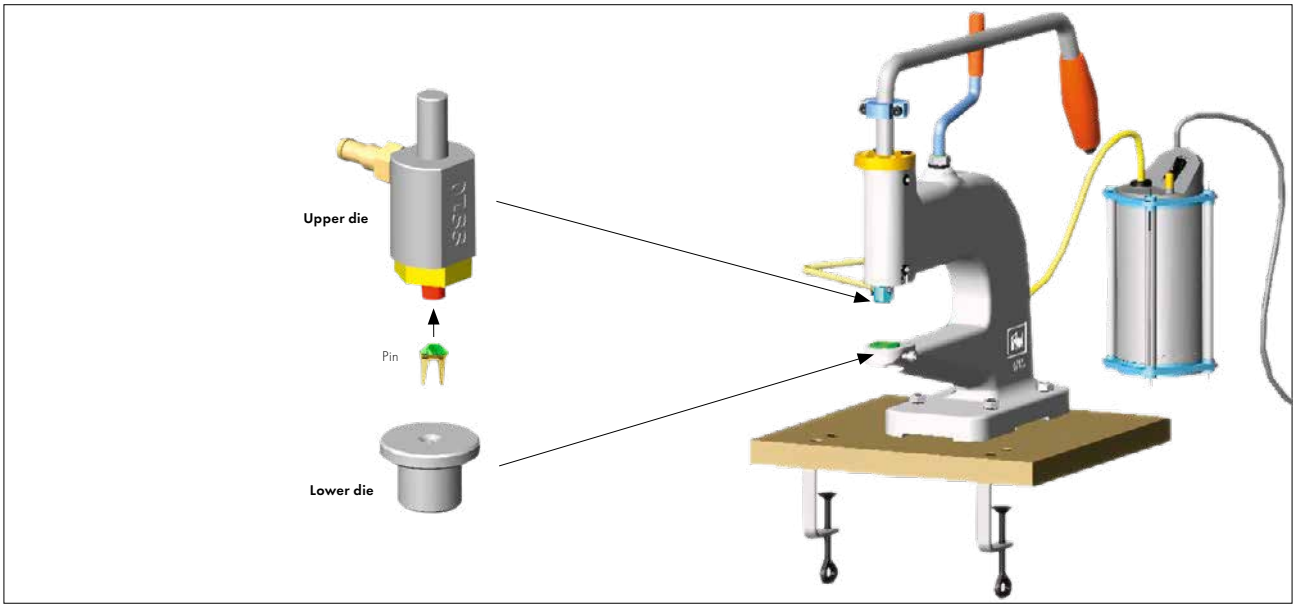
ROSE PINS

Pins can be easily applied using a fly press, a semi- or fully-automated attaching machine. The application with the fly press 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

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

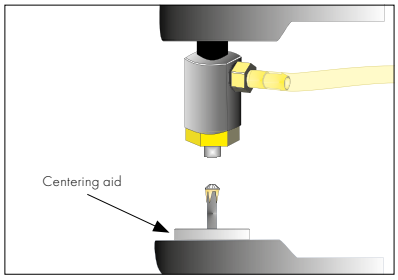
Application with a fly press



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, such as critical parts of a shoe. After application, ensure the Pins are not heated up to more than 80 °C (176 °F).

CRYSTAL APPLICATION INSTRUCTION MOVIE

Rose Pins - Application with a fly press
Learn how to properly apply Rose Pins using a fly press by watching the corresponding instruction movie online at http://swarovs.ki/rosepinsflypress

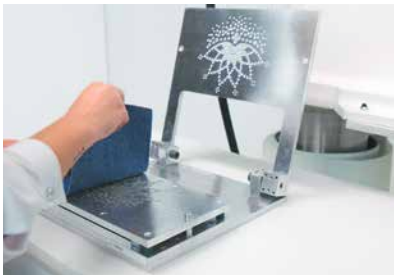
Application with a Rose Pin mold

To apply Rose Pins a Rose Pin mold (patented by Gruppo Meccaniche Luciani) can be used. Therefore Rose Pins are sieved into cavities of the lower part of the mold by using PVC masks specific for each diameter/design. In a next step base material is put into the mold. By closing mold and adding pressure by using a hydraulic press Rose Pins are applied onto base material simultaneously in one step.

1 Place the first PVC mask onto the lower part of the mold.

2 Sieve Rose Pins into the mask with the claws pointing upwards. Use one mask for each Rose Pin size and repeat the sieving step with all masks.

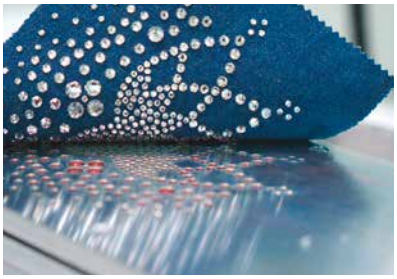
3 After having sieved all Rose Pins into the mold, remove the masks.



4 Put the fabric onto the lower part of the mold. Right site of fabric is facing down.

5 Close the mold and place it in a hydraulic press.

6 Press the mold with the hydraulic press.



7 After pressing, open the mold and remove the fabric with the applied Rose Pins.

CRYSTAL APPLICATION INSTRUCTION MOVIE

Rose Pins - Application with a Rose Pin mold
Learn how to apply many Rose Pins simultaneously using a mold by watching our instruction movie online at http://swarovs.ki/rosepinsmoldpress

3D STUDS

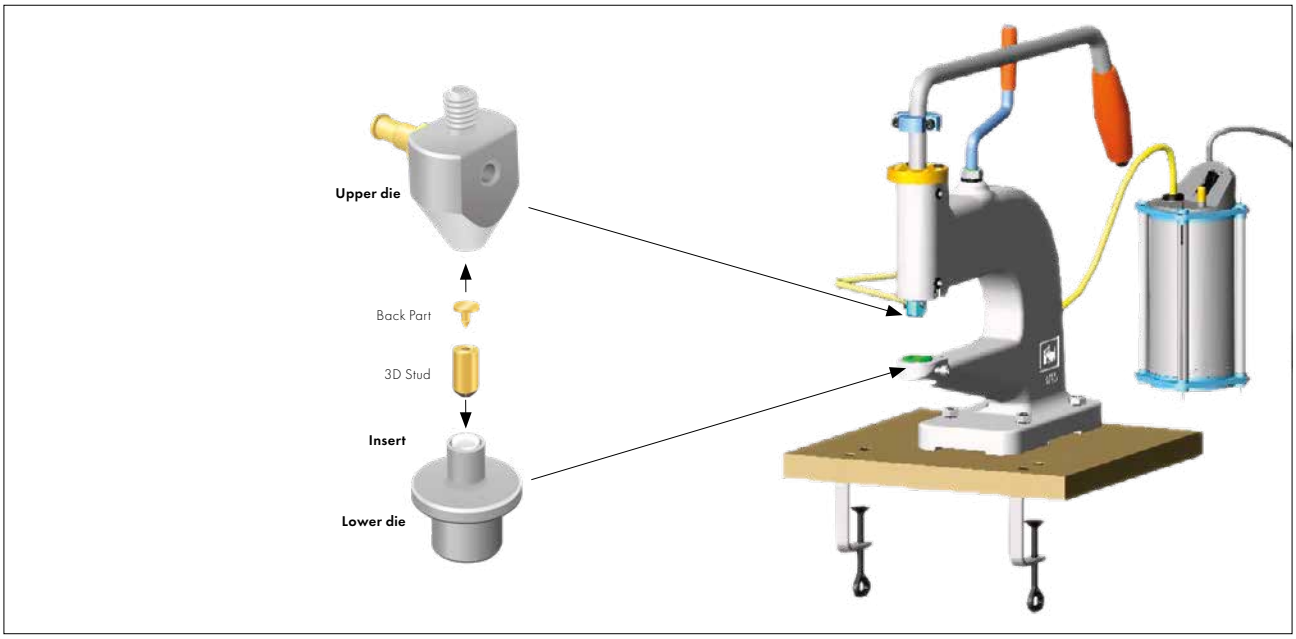
This product can be applied on different carrier materials using either a fly press or a 3D Stud mold. Application tests on your carrier material of choice – especially stretchable fabrics – are recommended. Before applying 3D Studs to any leather or fabric, please also test the metal- and especially silver compatibility with the corresponding carrier material. Please consider the material thickness before starting the application.

	ART.	LENGTH OF SHANK	MATERIAL THICKNESS*
3D STUDS	**54 001**	4 mm	0.7 - 1.2 mm
	54 002	6 mm	0.7 - 1.2 mm
	54 003	8 mm	0.7 - 1.2 mm

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

Application with a fly press

First, position the upper and lower die in the press. Make sure to choose the corresponding insert for the 3D Stud to be applied, and position it in the lower die with the cavity pointing upwards:



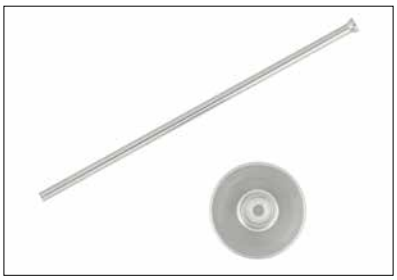
When the upper and lower die (with insert) are positioned in the fly press, follow the application steps:

1 Place the 3D Stud in the lower die, with the crystal side pointing downwards.

2 Attach the vacuum pump to the upper die and turn the vacuum pump on. The Back Part can now easily be positioned into the upper die with the arrow pointing downwards.

3 Position the carrier material with the right side pointing downwards. Apply the 3D Stud by carefully closing the handle of the fly press.

Changing the plastic insert



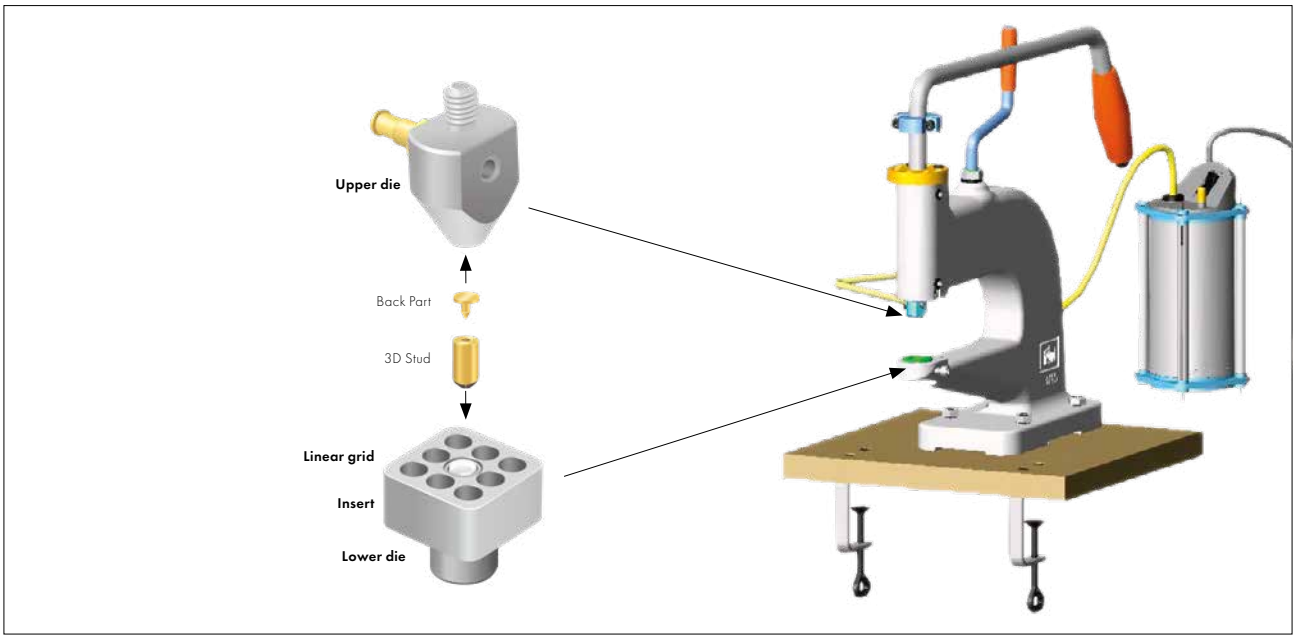
1 When a 3D Stud of another size is being applied, the corresponding plastic insert has to be changed first.

2 Take the lower die out of the fly press and press the changing pin through the small hole at the rear side of the lower die to uncase the plastic insert.

3 Choose the matching insert for applying a 3D Stud of another size and push it into the lower die. Make sure the cavity of the insert is located at the upper side of the tool.

Even positioning of 3D Studs with fly press

To facilitate the even positioning of 3D Studs, the linear grid tool can be used. By enclosing already applied 3D Studs it makes it possible to apply further 3D Studs very close to the existing ones. The linear grid tool has to be positioned on top of the lower die as shown in the following illustration:



When the upper and lower die (with insert) are positioned in the fly press, follow the application steps:

1 Position the linear grid on top of the lower die.

2 Set a 3D Stud, crystal pointing downwards, in the lower die with proper insert (big cavity in the middle of the linear grid).

3 Turn the fabric around, place an already applied 3D Stud in one of the linear grids cavities, crystal side facing down.

4 Place a Back Part in the upper die and close the handle of the fly press.

5 Now the 3D Stud is applied evenly and close to another 3D Stud.

CRYSTAL APPLICATION INSTRUCTION MOVIE

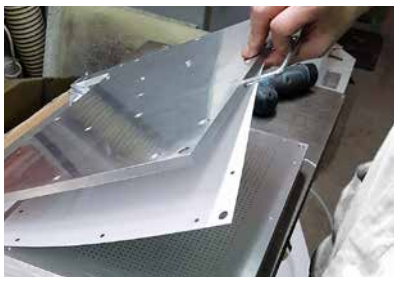
3D Studs - Application with fly press
Learn how to apply 3D Studs using a fly press by watching our instruction movie online at http://swarovs.ki/3dstudsflypress

Application with 3D Stud mold

When a bigger quantity of 3D Studs that are one size or different sizes are applied at once, the use of a mold and a hydraulic press is recommended. Please acquire the mold and suitable tools directly from the supplier Gruppo Meccaniche Luciani (www.gruppomeccanicheluciani.com). Detailed information can be requested from the supplier.

When applying more than 100 3D Studs, the 3D Stud mold application is up to four times faster compared to the application with fly press.

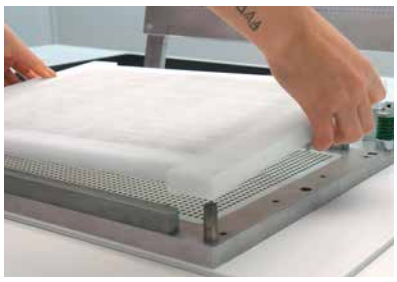
1 Before starting production with a new motif, the mask for the vacuum suction has to be fixed in the mold. Open the cover's plates by unscrewing the screws with a drill.



2 Place the mask for the vacuum suction channels between the two cover plates.

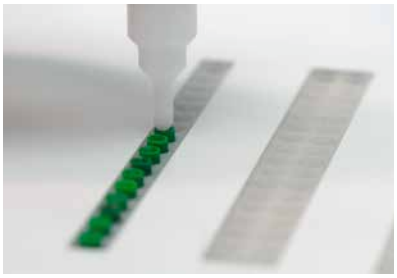
3 Screw the plates together.

4 Place a mask at the lower part of the mold. This mask fixes the metal pins which we insert later



5 Next, fix the plastic plate in the mold. In this plate we will later insert the colored metal pins and the 3D Studs.

6 Place the first PVC mask onto the lower part of the mold.

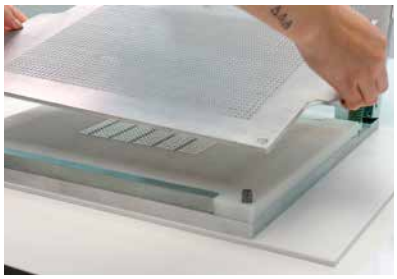


7 Insert the first metal pins into the mask's cavities, colored part upwards. Use the plastic pen to press down every single metal pin.

8 Place the next masks for another Stud size, insert proper metal pins and press them down again using the plastic pen. Repeat this steps till all metal pins are set.

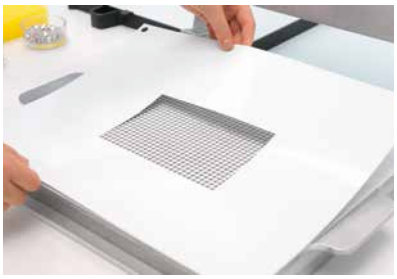
9 Remove the mask and start to set the 3D Studs.

10 Set all 3D Studs with crystals pointing downwards in corresponding cavities.



11 Put the middle metal plate back into the mold.

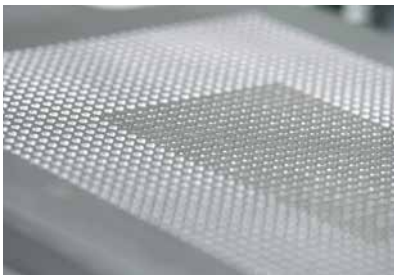
12 Place the first mask for the Back Parts on the middle plate.



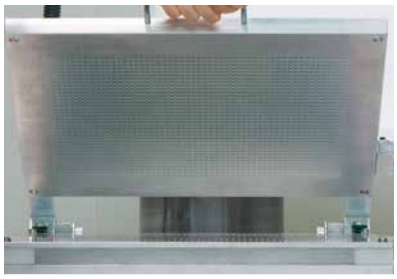
13 Depending on the motif, put another mask for the Back Parts onto the first mask.

14 Place the black frame on the masks. The frame makes sure no Back Parts get lost.

15 Empty the Back Parts onto the black frame and use a sponge to wipe them into the mask's cavities (arrows pointing downwards).



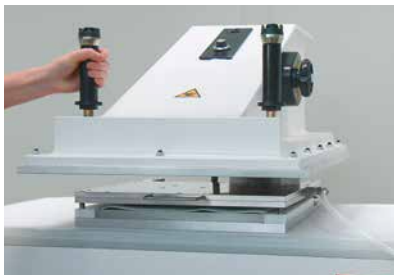
16 Remove the residual Back Parts, the black frame, and the masks. Make sure the middle metal plate stays in the mold.



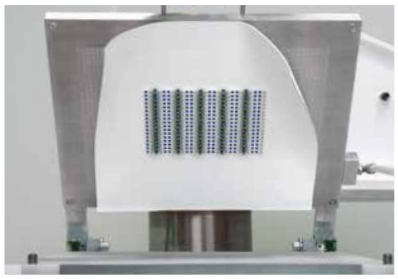
17 Switch on the vacuum system and close the cover of the mold.

18 Open the cover carefully again, all Back Parts are now attached to the cover.

19 Now remove the middle metal plate and place the fabric carefully in the mold. Right, proper site of fabric is facing down!



20 Close the cover of the mold and place it in a hydraulic press.



21 Close the press and apply all 3D Studs with one application step. 3D Studs are perfectly applied!

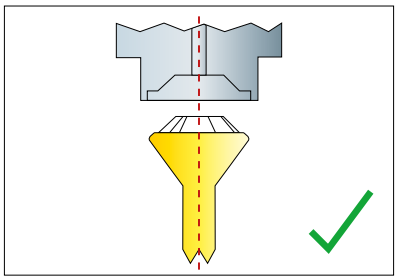
CRYSTAL APPLICATION INSTRUCTION MOVIE

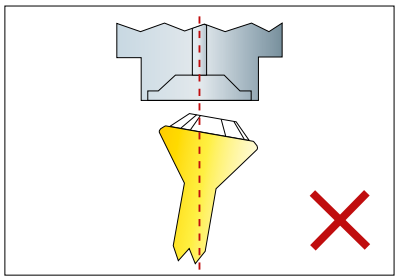
3D Studs - Application with a mold
Learn how to properly apply many 3D Studs simultaneously using a mold by watching instruction movie online at http://swarovs.ki/3dstudsmoldpress

USEFUL INFORMATION

OPTIMUM PRODUCT/DIE ALIGNMENT

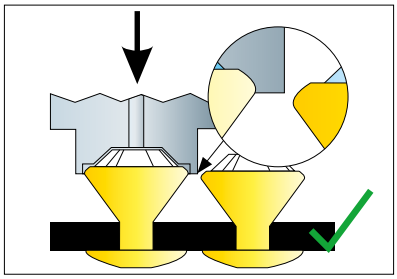
In general, when carrying out mechanical applications it is important to ensure the proper alignment of products in the dies, so as to avoid any problems.

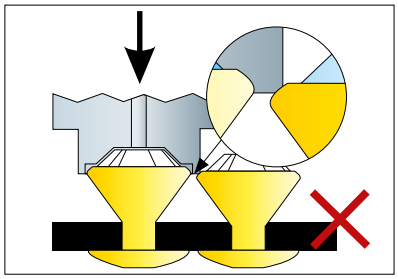




MINIMUM GAPS

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 typical mechanical application problems, along with possible causes and recommendations on avoiding them.

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 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 is blocked.	Clean the vacuum hole and if necessary change the spare part.