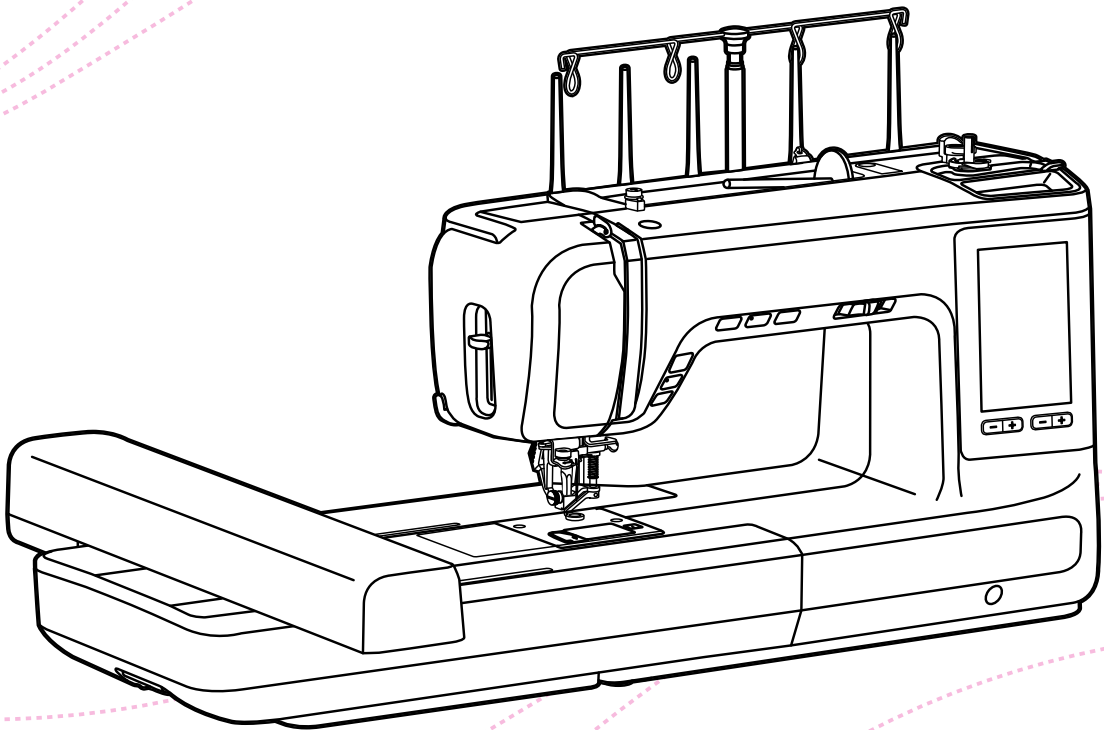


NECCHI

Instruction Manual

SEWING+EMBROIDERY COMBO

C1200



Artist Tool



NecchiAIO

Enjoy your Necchi time!



Important safety instructions

When using an electrical appliance, basic safety should always be followed, including the following:

Read all instructions before using this machine.

DANGER - To reduce the risk of electric shock:

1. An appliance should never be left unattended when plugged in.
2. Always unplug this appliance from the electric outlet immediately after using and before cleaning.

WARNING - To reduce the risk of burns, fire, electric shock, or injury to persons:

1. Read the instruction carefully before you use the machine
2. Keep the instructions at a suitable place close to the machine and hand it over if you give the machine to a third party.
3. Use the machine only in dry locations.
4. Never leave the machine unattended with children or elderly people as they may not be able to estimate the risk.
5. This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.
6. Children shall not play with the appliance.
7. Cleaning and user maintenance shall not be made by children without supervision.
8. Always switch off the machine if you carry out preparation for work (change the needle, feed the yarn through the machine, change the footer, etc.).
9. Always unplug the machine if you leave it unattended, to avoid injury by expediently switch on the machine.
10. Always unplug the machine if you carry out maintenance (oiling, cleaning).
11. Don't use the machine if it's wet or in humid environment.
12. Never pull at the cord, always unplug the machine by gripping the plug.
13. If the LED lamp is damaged or broken, it must be replaced by the manufacturer or it's service agent or a similarly qualified person, in order to avoid a hazard.

14. Never use the machine if the air vents are blocked, keep the air vents of the machine free from dust, fusel and leftovers.
15. The sound pressure level at normal operation is smaller than 80dB(A).
16. Do not dispose of electrical appliances as unsorted municipal waste, use separate collection facilities.
17. Contact your local government for information regarding the collection systems available.
18. If electrical appliances are disposed of in landfills or dumps, hazardous substances can leak into the groundwater and get into the food chain, damaging your health and well-being.
19. When replacing old appliances with new ones, the retailer is legally obligated to take back your old appliance for disposal at least for free of charge.
20. The appliance is not to be used by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction. (For outside Europe)
21. Children being supervised not to play with the appliance. (For outside Europe)

SAVE THESE INSTRUCTIONS

This machine is intended for household use only.

Be sure to use the machine in the temperature range from 5°C to 40°C.

If the temperature is excessively low, the machine can fail to operate normally.

To carry the machine, hold the carrying handle with your hand, and support the machine with the other hand.

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Creative Patterns

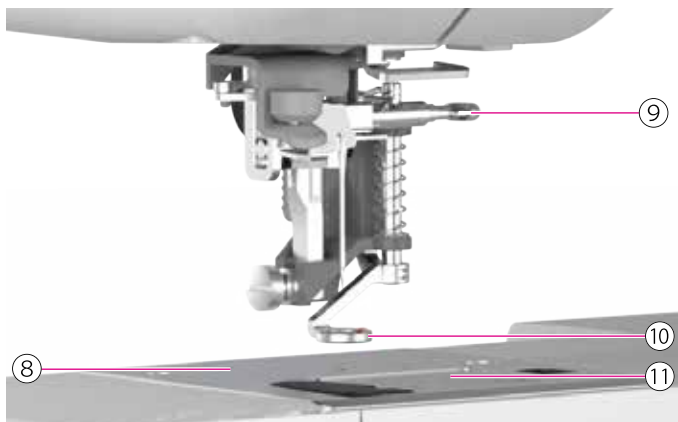
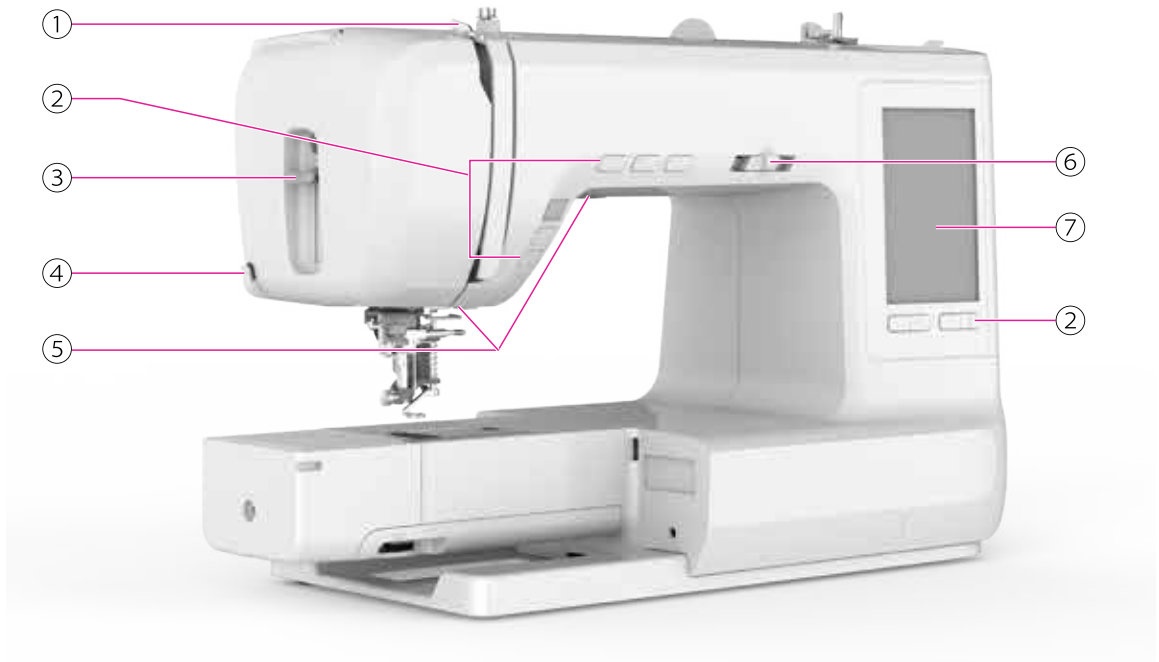
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Machine Introduction

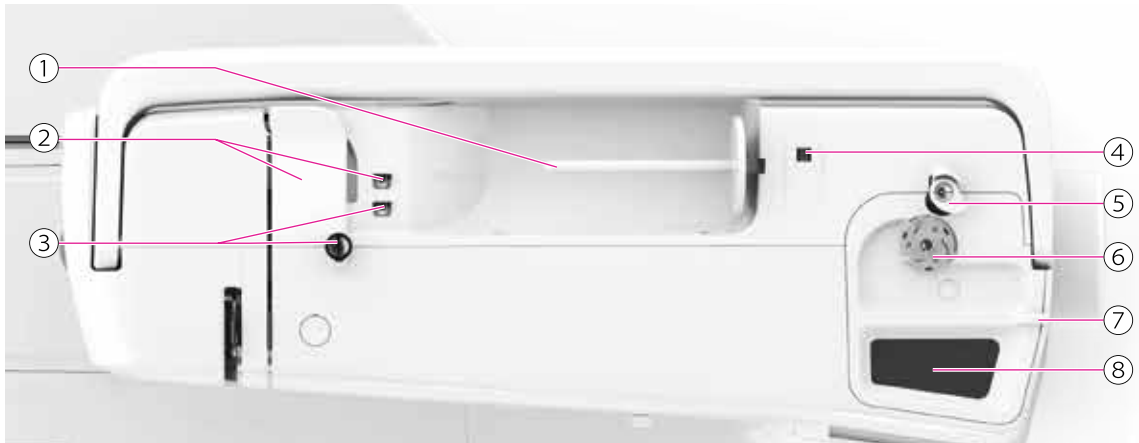
Principal parts of the machine

Front overview



- ① Take-up lever
- ② Operation buttons
- ③ Automatic needle threader lever
- ④ Thread cutter
- ⑤ Sewing light
- ⑥ Speed adjustment slider
- ⑦ LCD screen (touch panel)
- ⑧ Needle plate
- ⑨ Needle clamp screw
- ⑩ Presser foot
- ⑪ Bobbin cover
- ⑫ Embroidery unit

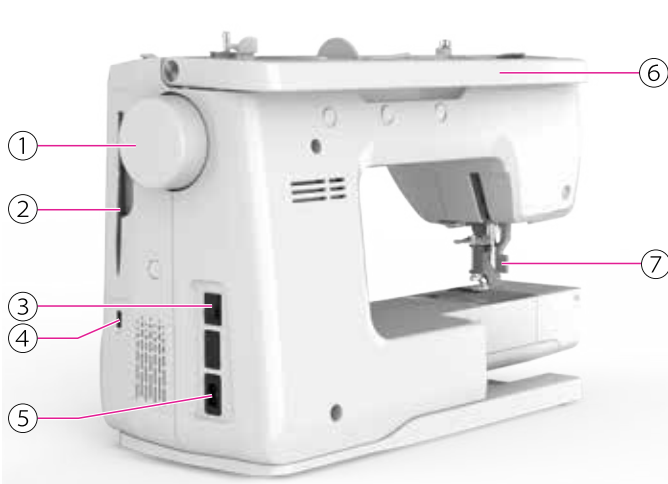
Top overview



- ① Horizontal spool pin
- ② Upper thread guide
- ③ Bobbin thread guide
- ④ Second spool pin hole
- ⑤ Bobbin winder switch

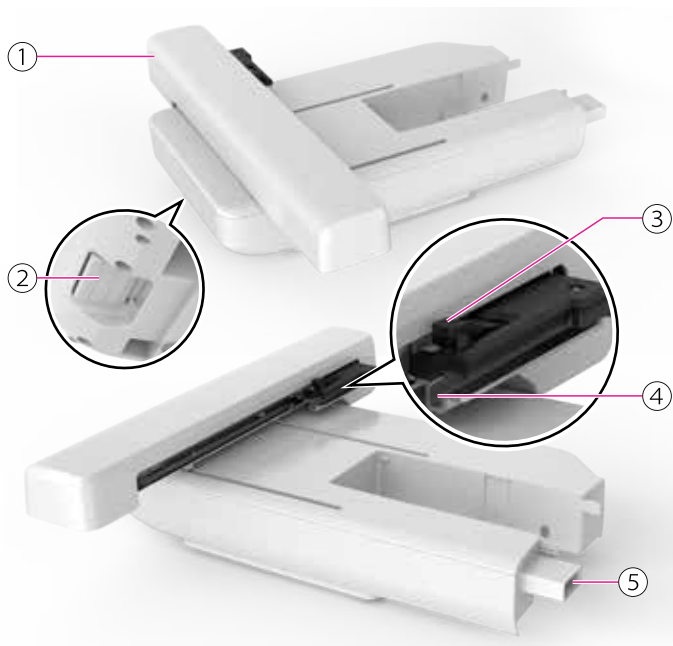
- ⑥ Bobbin winder seat
- ⑦ Bobbin thread cutter
- ⑧ Magnet

Back overview



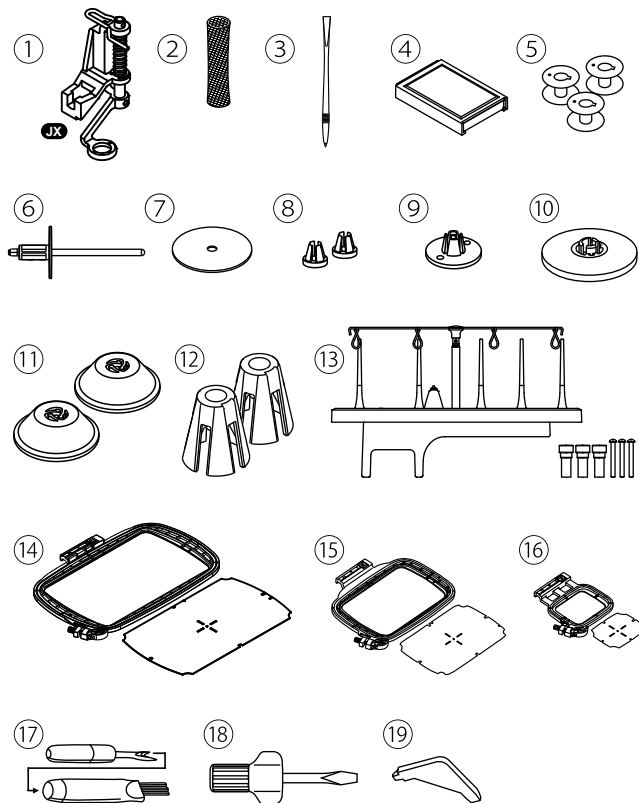
- ① Handwheel
- ② Stylus
- ③ Main power switch
- ④ USB port
- ⑤ Power cord socket
- ⑥ Handle
- ⑦ Presser foot lifter

Embroidery unit overview



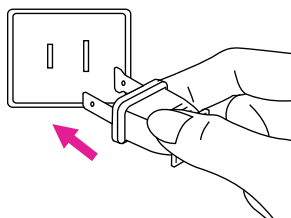
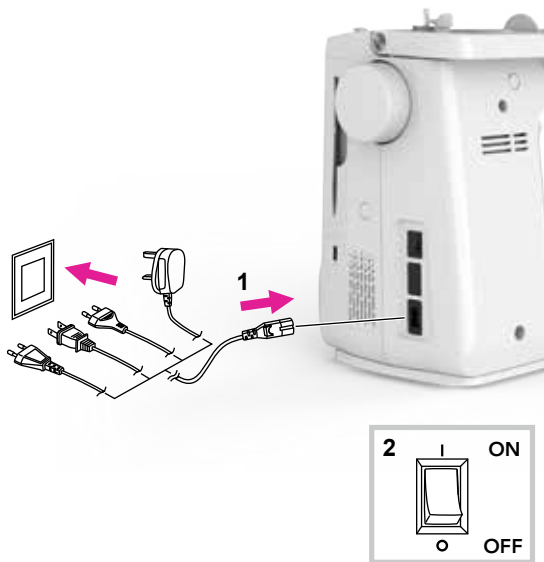
- ① Embroidery carriage
- ② Embroidery unit release button
- ③ Hoop-securing lever
- ④ Embroidery hoop holder
- ⑤ Embroidery unit detection device

Accessories



- ① Embroidery foot
- ② Thread net
- ③ Stylus
- ④ Needle set (#75/11*2, #90/14*3)
- ⑤ Bobbin (3x)
- ⑥ Second spool pin
- ⑦ Spool pin felt
- ⑧ Spool holder (S)
- ⑨ Spool holder (M)
- ⑩ Spool holder (L)
- ⑪ Spool holder (For spool stand)
- ⑫ Cone holder (For spool stand)
- ⑬ Spool stand set
- ⑭ Embroidery set (160*260mm)
- ⑮ Embroidery set (120*180mm)
- ⑯ Embroidery set (50*70mm)
- ⑰ Seam ripper/brush
- ⑱ Screwdriver
- ⑲ L-screwdriver

Connecting machine to power source



⚠ Attention

Always make sure that the machine is unplugged from power source and the main switch is off ("O"), when the machine is not in use and before inserting or removing parts.

Before connecting the power supply, make sure that the voltage shown on the rating plate is conforming with your main power.

Put the machine on a stable table.

1. Connect the machine to a power source as illustrated.
2. Turn the power switch to on ("I").

The sewing lamp will light up when the switch is turned on.

Polarized plug information

This appliance has a polarized plug (one blade is wider than the other), to reduce the risk of electrical shock; this plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install the proper outlet. Do not modify the plug in any way.

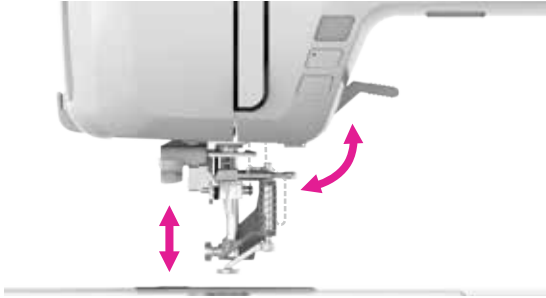
Note

Consult a qualified electrician if in doubt as to connect the machine to the power source.

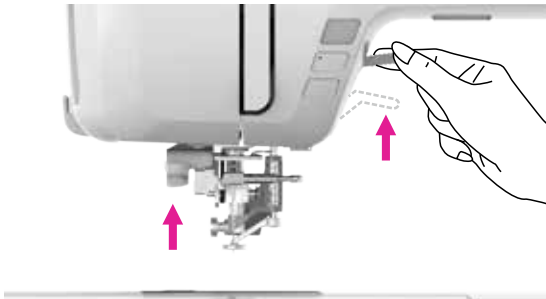


Machine Setup

Two-step presser foot lifter



The presser foot lifter is to raise or lower your presser foot.

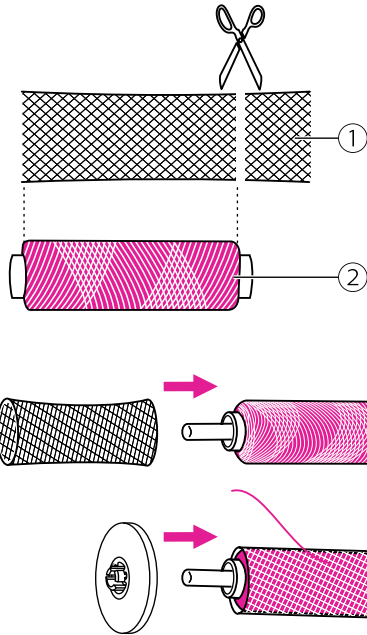


When sewing multi-layers or thick fabrics, the presser foot can be further raised up manually to allow enough space for your sewing work.

Note

The needle must always be at the highest position.

Using the thread net



Note

- In order to prevent tangling of the thread, please use a thread net. The net is especially useful when using large or loose wound spools.
- Reduce the thread tension if necessary.

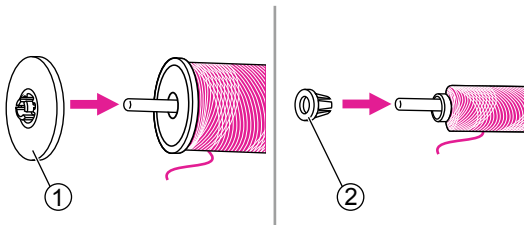
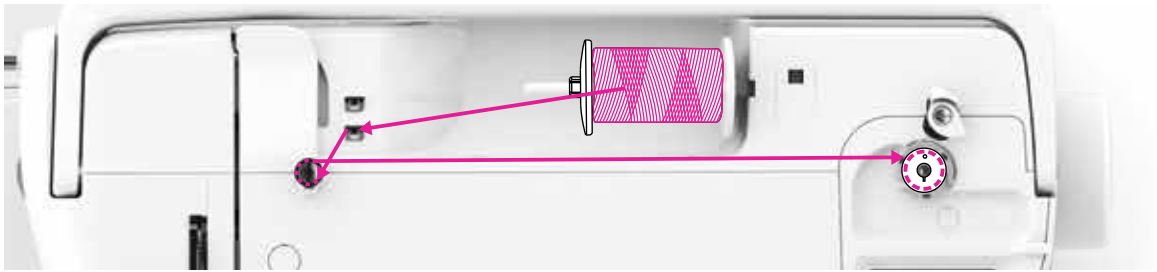
When using special threads which spin quickly off the thread spool, attach a net to the spool before using.

If the net is too long, cut the thread net to match the size of the spool.

- ① Thread net
- ② Thread

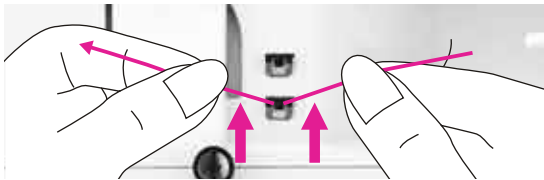
Winding the bobbin

It is important to carry out the threading correctly to get a quality sewing. Otherwise several problems will occur.

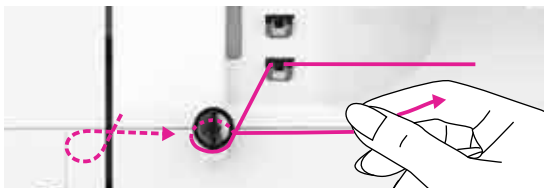


1. Place the thread and spool holder onto the spool pin. For better sewing quality, choose a proper size of the spool holder for the thread and attach it next to the spool.

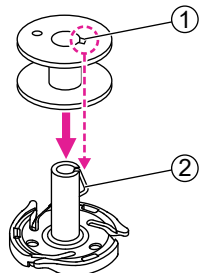
- ① Large spool holder
- ② Small spool holder



2. Draw the thread from the spool and place the thread in between the bobbin thread guide.

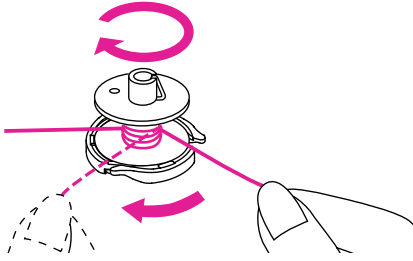


3. Wind the thread clockwise around the tension discs.

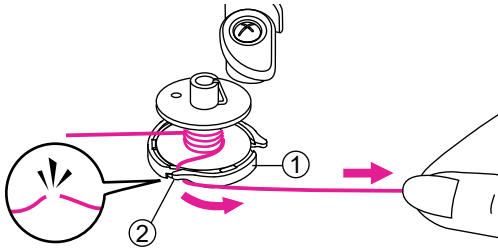


4. Place the empty bobbin on the bobbin winder spindle. Then align the notch with bobbin winder spindle spring.

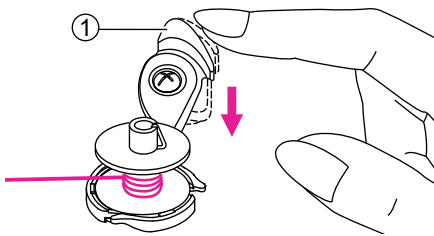
- ① Notch
- ② Bobbin winder spindle spring



- Wind the thread clockwise around the bobbin 5-6 rounds.



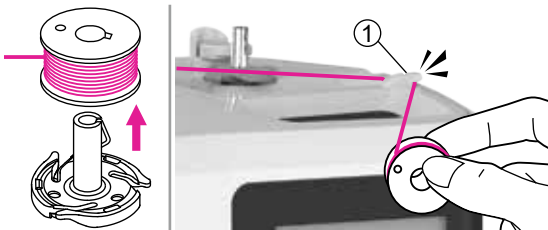
- Wind the thread into the cutter of bobbin winder base and pull the thread to the right to cut.
 - Bobbin winder seat
 - Guide slit (with built-in cutter)



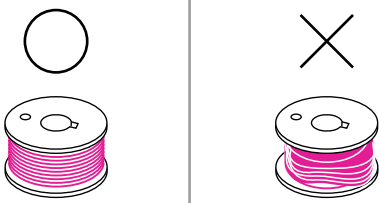
- Push the bobbin winder switch, when the bobbin winder spindle is in position, it will start winding the bobbin. When winding is finished, the bobbin winder switch will stop and automatically pop back to original position.
 - Bobbin winder switch

△ Attention

Since this machine is equipped with an independent bobbin winder, the sewing speed controller does not effect the winding speed. Keep fingers clear of the needle area while winding the bobbin.



- Remove the bobbin then use the thread cutter on the right side to cut.
 - Thread cutter



Note

Use a bobbin that has been correctly wound with thread, otherwise the needle may break or the thread tension will be incorrect.

Inserting the bobbin

⚠ Attention

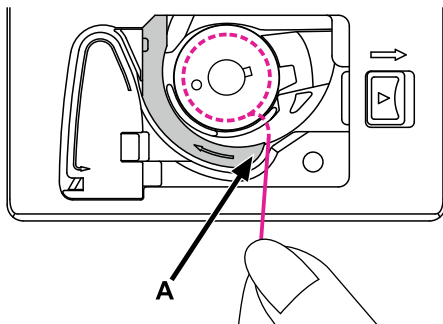
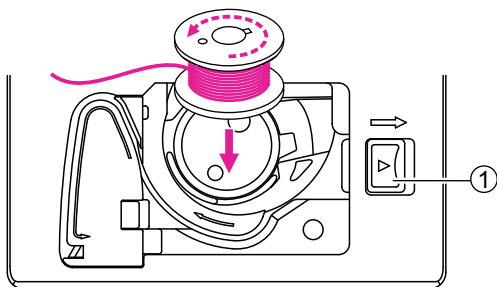
Turn the power switch to off ("O").

When inserting or removing the bobbin, the needle and the presser foot must be fully raised.

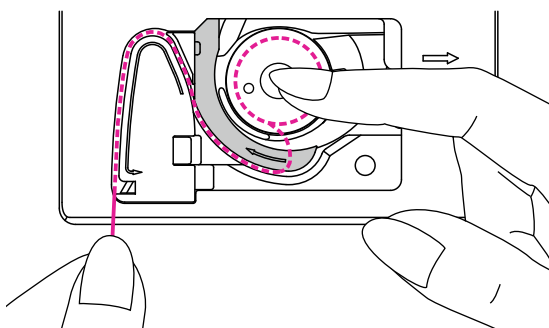
Open the bobbin cover by pushing the release button to the right.

① Release button

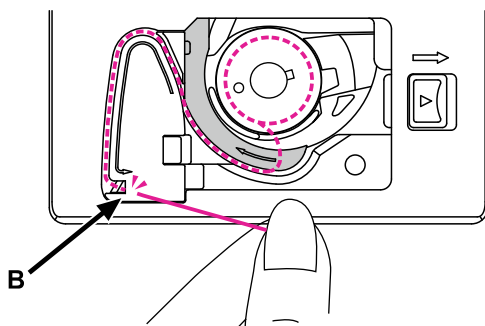
Insert the bobbin in the bobbin case with the thread running in a counter-clockwise direction (arrow).



Pull the thread through the slit (A).



With a finger hold gently on top of the bobbin, please follow the arrow markings and draw the thread into the bobbin thread guide.

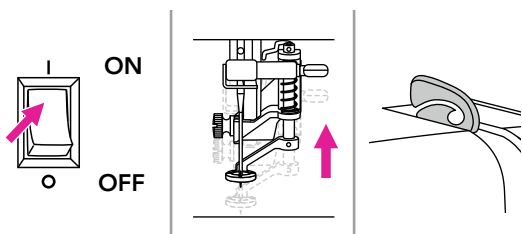
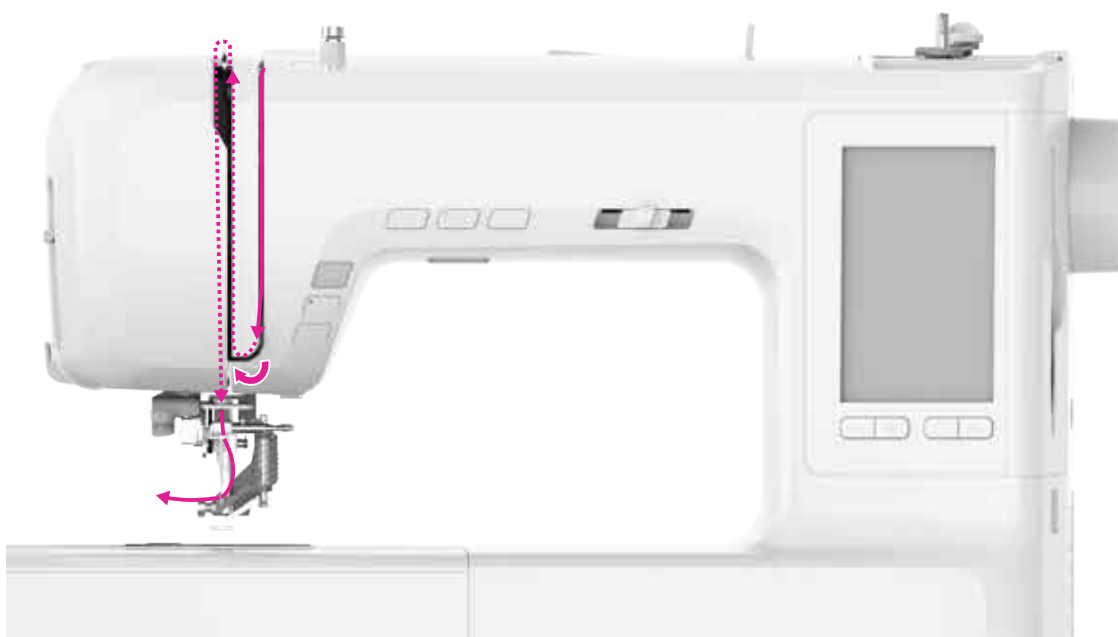
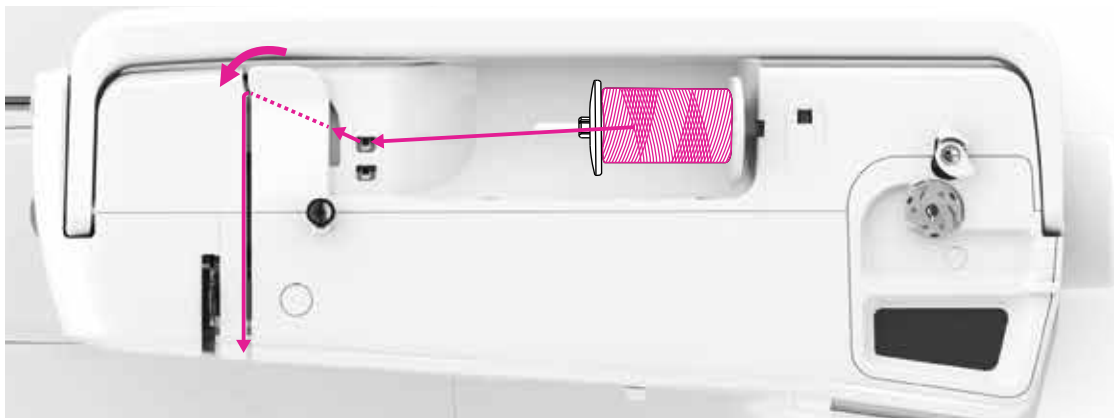


To cut off excessive thread, pull it to the cutter at point (B).

Close the bobbin cover.

Threading the upper thread

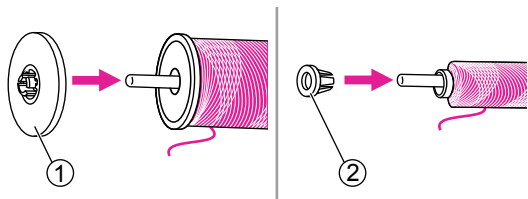
It is important to carry out the threading correctly to get a quality sewing. Otherwise several problems will occur.



△ Attention

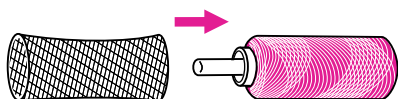
The needle threader can be with a 75/11 through 100/16 home sewing machine needle.

1. Turn the power switch to on ("I"), the needle, presser foot and take-up lever will automatically raise to the highest position.

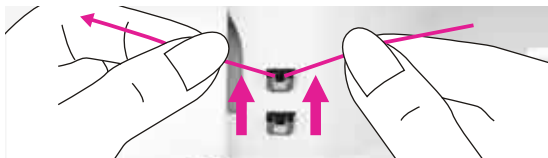


2. Place the thread and spool holder onto the spool pin. For better sewing quality, choose a proper size of the spool holder for the thread and attach it next to the thread.

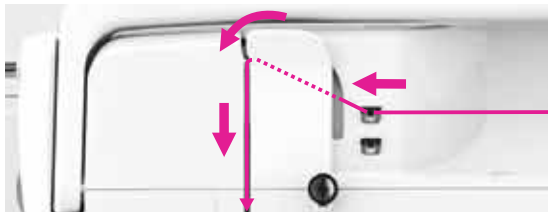
- ① Large spool holder
- ② Small spool holder



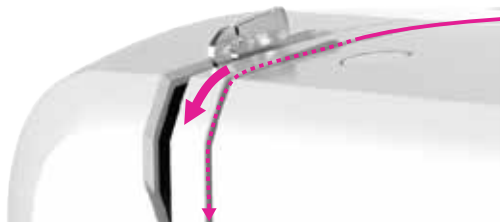
In order to prevent tangling of the thread, please use a spool net. The net is especially useful to work from large or loose wound spools.



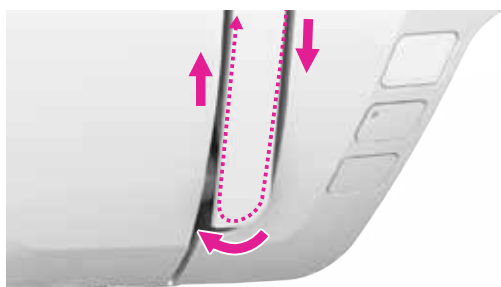
3. Draw the thread from the spool and place the thread in between the upper thread guide.



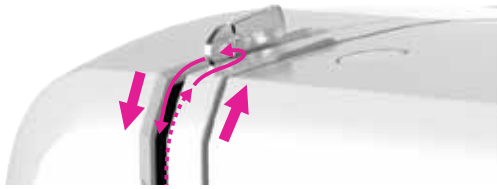
4. Guide the thread ahead and pull the thread through the pre-tension spring as illustrated.



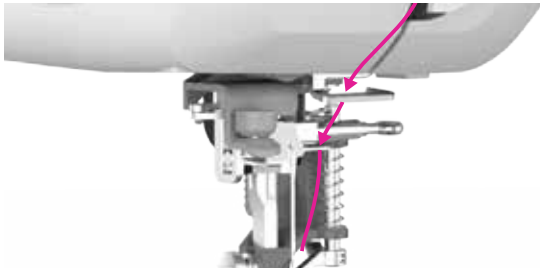
5. Continue to guide the thread into the silver discs to keep the thread in proper tension.



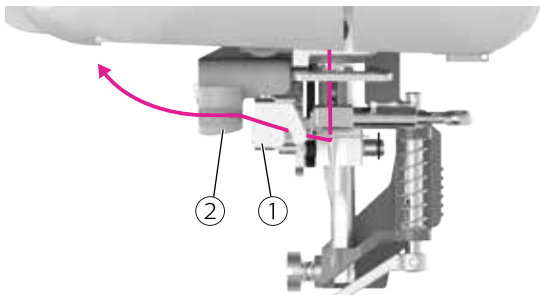
6. Pass the thread under the take-up spring then pull it upwards as arrow marks illustrated.



7. Pull the thread to the top then pass the thread through the slotted eye of the take-up lever. Guide the thread down afterwards.



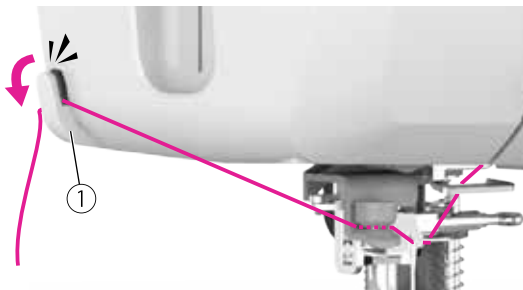
8. Pass the thread behind the flat, horizontal thread guide. Threading to the right side of the thread guide.



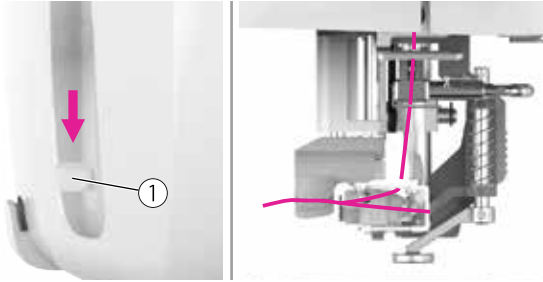
9. Pull the thread to the left, pass through the guide plate from back to the front and then through the thread guide disk.
 - ① Guide plate
 - ② Thread guide disk

Note

Please make sure the thread is actually pass through the guide plate and thread guide disk, or it might cause thread cannot threading the needle eye successfully.

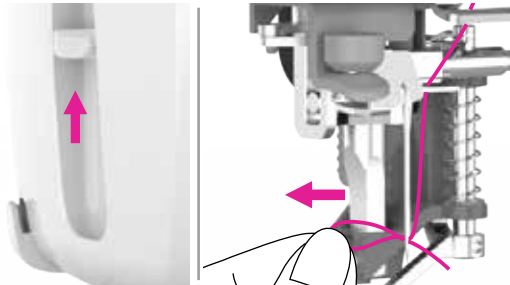


10. Guide the threads to the side of the face plate and into the thread cutter to cut them.
 - ① Thread cutter



11. Press down the automatic needle threader lever on the left side of face cover to the bottom, when you hear a "click" sound, it is the correct position and the hook pin passes through the needle eye.

① Lever



12. Raise the lever, the hook will rotate and pass the thread through the needle eye to form a loop.

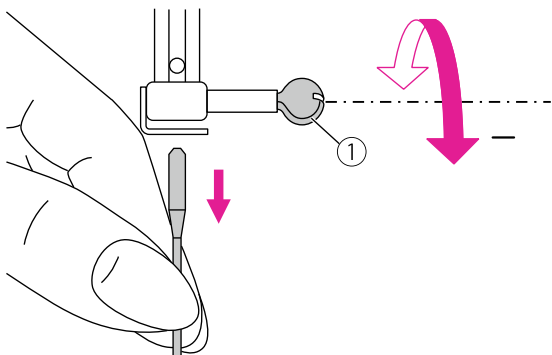
Pull the thread through the needle eye to finish threading.

Note

Your machine is threaded and ready for sewing, follow the instructions on "Starting to sew" chapter to start sewing.

Replacing the needle

Change the needle regularly, especially when it shows signs of wear or if it causes problems.

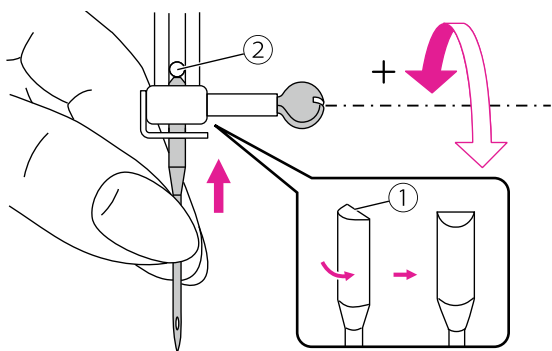


⚠ Attention

Turn the power switch to off ("O") when carrying out below operations!

Turn the handwheel toward you to raise the needle then loosen the needle clamp screw to remove the needle.

① Needle clamp screw

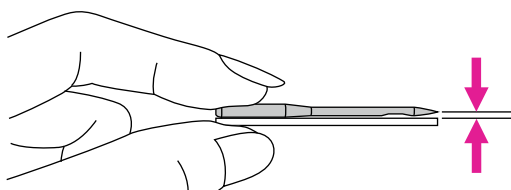


When inserting a new needle, keep the flat side of the shaft to the back.

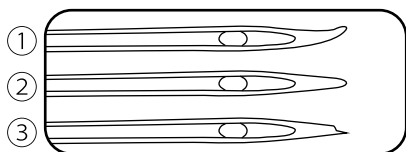
Push the needle into the clamp until it touches the pin and stops. Then secure it by tightening the needle clamp screw.

① Flat side of the shaft

② Pin



Needles must be in perfect condition.



Problems can occur with:

① Bent needles

② Blunt needles

③ Damaged points

Matching needle/fabric/thread

Needle Size	Fabrics
65/9 - 75/11 	Lightweight fabrics- thin cottons, voile, serge, silk, muslin, Qiana, interlocks, cotton knits, tricot, jerseys, crepes, woven polyester, shirt & blouse fabrics.
80/12 	Medium weight fabrics- cotton, satin, kettleclote, sailcloth, double knits, lightweight woolens.
90/14 	Medium weight fabrics- cotton duck, woolen, heavier knits, terrycloth, denims.
100/16 	Heavyweight fabrics- canvas, woolens, outdoor tent and quilted fabrics, denims, upholstery material (light to medium).

Thread Selection

Thread and fabric quality is important for sewing. We suggest choosing suitable and good quality threads to sew.

- Cotton thread has the advantage of natural fiber. It is suitable for cotton fabrics.
- Mercerized cotton thread has a silky luster. It is with high fiber strength. It's not easy to break during washing.
- Polyester thread is with high tensile strength, hard wearing and colorfast fearers. It is suitable for all type of fabrics.
- Rayon thread is a brilliant sheen. It is low fiber strength, smooth and soft. It is suitable for light and soft fabrics.

Note

- In general, fine threads and needles are used for sewing fine fabrics, thicker threads and needles are used for sewing heavy fabrics.
- Always test thread and needle size on a small piece of fabric which will be used for actual embroidering.
- Use a stabilizer or place a backing for fine or stretchy fabrics, and select the correct presser foot.
- It is recommended that a 90/14 needle should be used when embroidering on heavyweight fabrics or stabilizing products (for example, denim, puffy foam, etc.). A 75/11 needle may bend or break, which could result in injury.

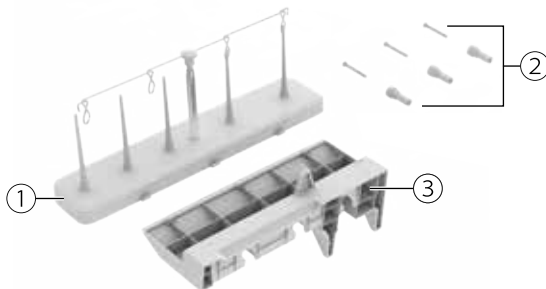
How to install multiple-spool holder stand



The spool stand has room for up to 5 spools, enabling quick access to threads of different colors.

Quick access to a wide range of spools of different colors is a real time saver when working on multicolored embroidery designs.

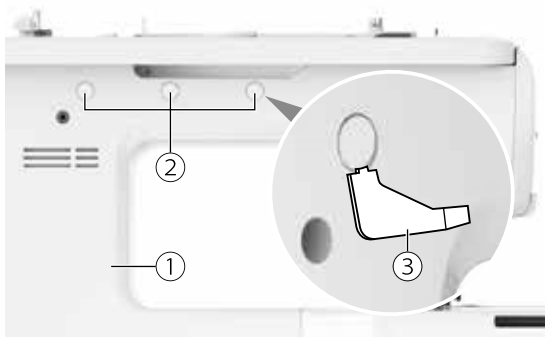
Also, the telescopic thread guide can be adjusted upwards: the thread has a longer path to the needle, allowing different kind of threads to untangle and flow freely before they reach the start of the sewing process.



Parts introduction

The spool stand set attaches easily to the handle of your machine.

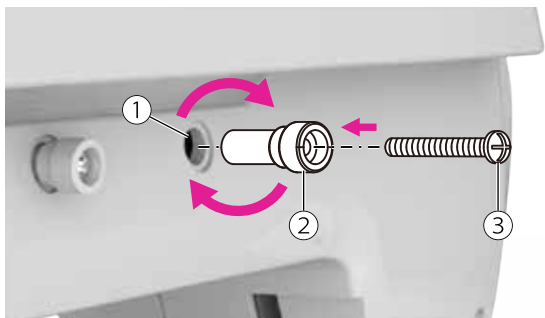
- ① Spool stand
- ② Screws/screw holder (can find it in the accessories bag)
- ③ Spool base



How to install the spool base

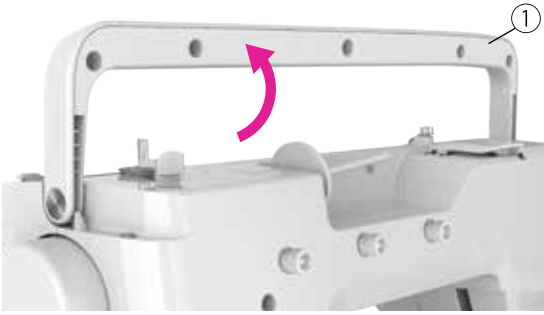
At the back of the machine, use the L-screwdriver to remove the caps.

- ① Back cover
- ② Caps
- ③ L-screwdriver



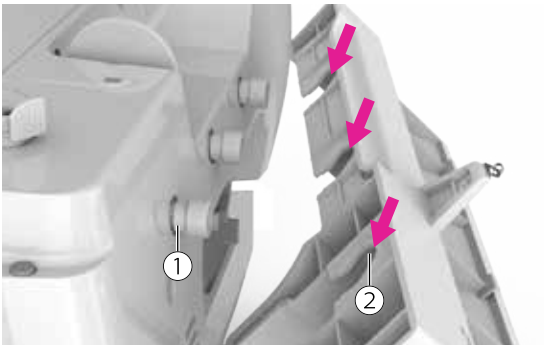
Take out the screws and screw holders from the accessories bag, screws has to be inserted through the screw holders. Then insert the 3 screw holders with screws into the holes and tight it clockwise.

- ① Hole
- ② Screw holders
- ③ Screw



Pull up the handle to fixed position

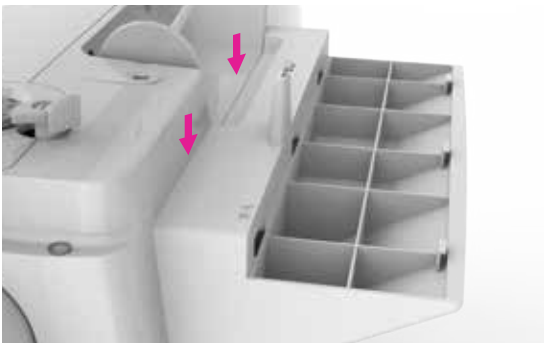
① Handle



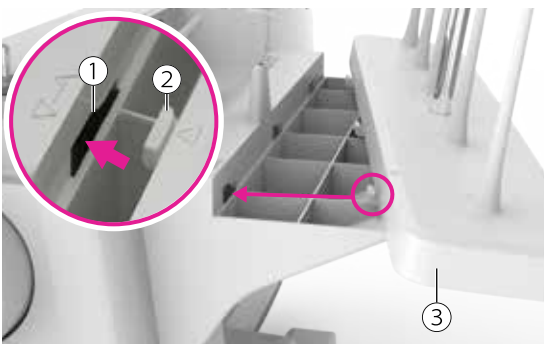
Align the three grooves of the spool base to the rear cover where the screw holders are attached.

① Screw holder

② Grooves of the spool base



Insert from top to bottom on the screw holders. Installation is completed.



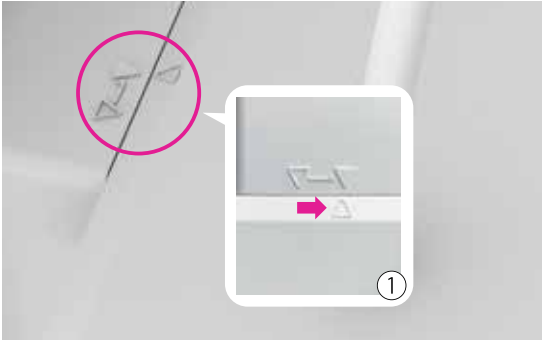
Spool holder stand installation

Align and insert the three protrusions of the spool holder stand to the grooves of the spool base.

① Spool holder stand rear protrusions

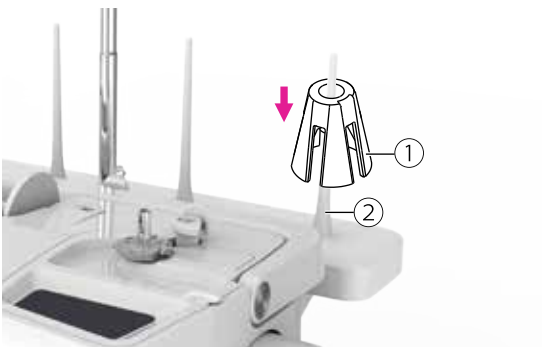
② Spool base grooves

③ Spool holder stand



Push to the right and spool holder stand will be fixed.

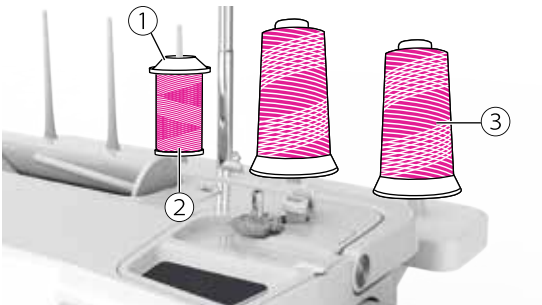
- ① Lock position



Process of threading using spool stand

Take out the cone holders from the accessory bag and insert it on the spool pin.

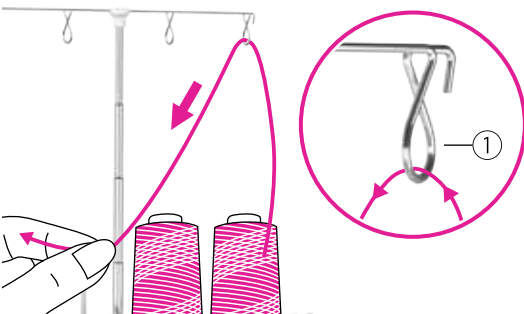
- ① Cone holders
- ② Spool pin



There are 5 spool pins. Two of the right side are for larger threads and three of the left side are for small threads.

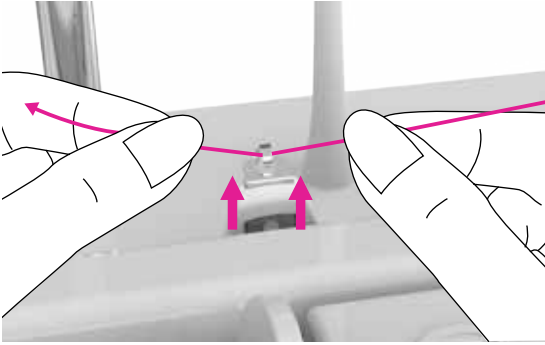
Place the threads over the spool pin and secure it with spool holder, to avoid fall off while sewing.

- ① Spool holder
- ② Small thread
- ③ Large thread

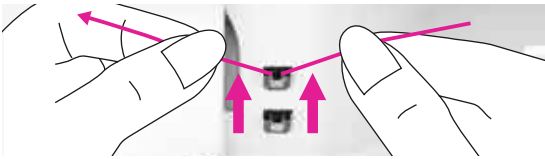


Pull the thread and pass it through the thread guide on the thread stand from back to front and pull down.

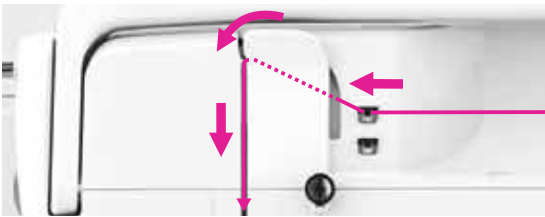
- ① Thread guide



Pass the thread through the thread guide on the spool base.



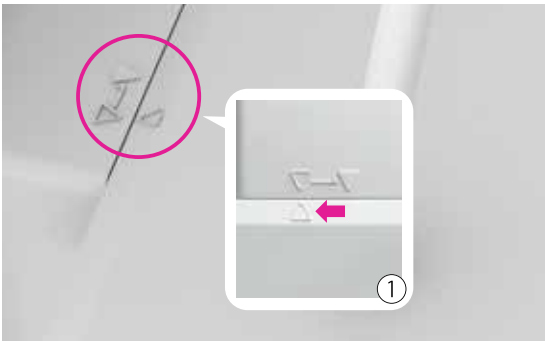
Guide the thread forward and pass through upper thread guide.



Guide the thread to the left and pass through the guide plate.

Note

For more information, please check "Threading the upper thread" chapter.



Remove spool holder stand

Push the spool holder stand to left and pull out.

- ① Remove position

Operation buttons



① Move to the center of embroidery hoop

Press this button after installed the embroidery hoop, the hoop will move to the place where hoop center and needle point align with.



② Safety lock

The machine waits for 30 minutes of inactivity or click the Safety lock button, machine will set to power save mode and locked the screen.

The sewing light will turn off and the LED light will change to Orange, all buttons are locked and cannot operate the machine. Resume working by click the unlock button on the screen.

Note

During embroidering, can not use this button.



③ Start/stop button

Press the start/stop button to start machine running. Press the start/stop button again to stop machine.

The LED light colors on the button will change according to its operation mode:

- Green light: the machine is ready or is embroidering
- Orange light: Not in conditions to embroidery
- Red light: Machine can not sew

Note

When the presser foot is up, press and hold the start/stop button, the machine will automatically lower the presser foot and start sewing.

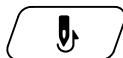


④ Presser foot up/down position button

Press presser foot up/down button, presser foot will go up and press again to lower the presser foot.

Note

During embroidering, can not use this button.



⑤ Bring up the bobbin thread button

Press the button to bring up the bobbin thread.

Note

During embroidering, can not use this button.

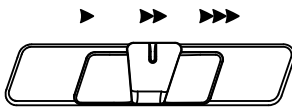


⑥ Thread cutter button

Press this button after finishing embroidering and the machine will trim the thread.

Note

During embroidering, can not use this button.



⑦ Speed adjustment slider

The speed adjustment slider can control the embroidering speed. To increase the speed, slide the lever to the right. To decrease the embroidering speed, slide the lever to the left.



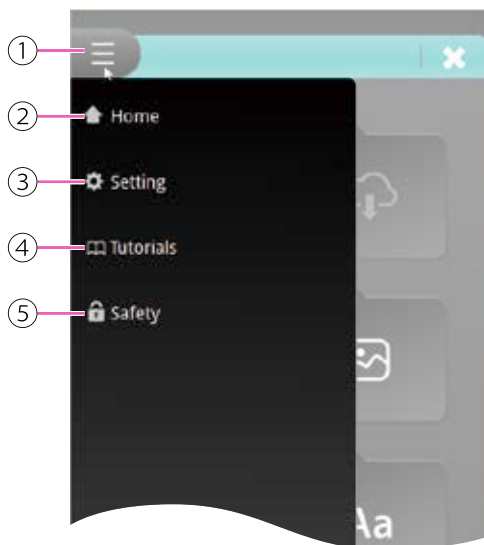
⑧ Value setting buttons (Left/Right)

Press "-" button to decrease the value; press "+" button to increase the value. This button can be used to adjust the value in each screen.



Instruction

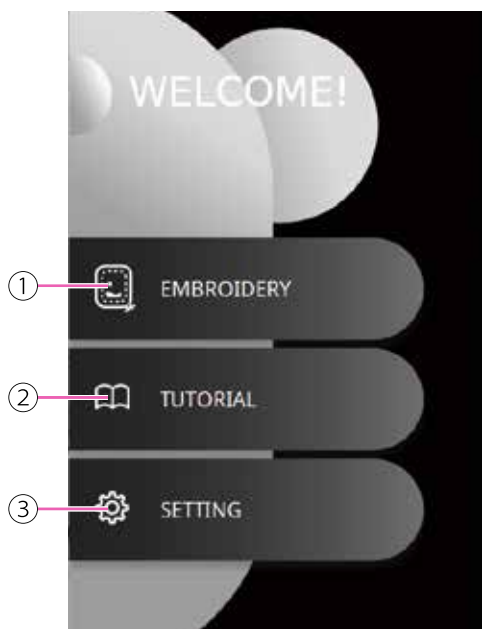
LCD screen



- ① Pop out and close the menu selection
- ② Home
- ③ Setting
- ④ Tutorials
- ⑤ Safety

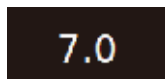
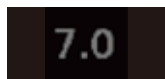
Note

Use only your finger or the included stylus to tap the screen. Please do not use a sharp pencil, screwdriver, or other stiff, sharp objects. Do not click the screen forcefully. If click hard or use a sharp objects may damage the screen.



Home page






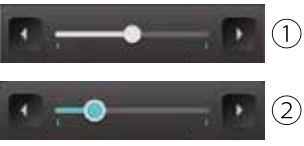







- ① Embroidery
- ② Tutorial
- ③ Setting



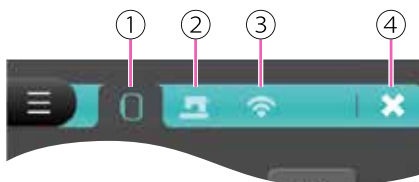
Note

- ① Function not available
- ② Function available
- ③ Function is already enabled or active
- ④ Value is not adjustable
- ⑤ Default value
- ⑥ Value is already adjusted, click on the value to go back its default value.

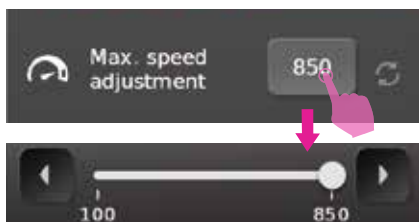
Function buttons and icon

Icon	Name	Application
	Switch pages	Switch pages up/down
		
		
	Turn on/off switch	① Turn on function ② Turn off function
	Back to default value	
	Slider	Hold the slider to increase or reduce setting values ① Default values ② Values are adjusted
	Reduce/increase	Reduce or Increase setting values
	Virtual multifunction icon	By function to adjust the position, spacing, curvature, degree of rotation, etc.
	Virtual multifunction icon	By function to adjust the position
	Layer switching	Switch up and down to view layers
	Next step	To the next screen
	Back	
	Close	Embroidery: Back to embroidery edit screen/close window

Setting



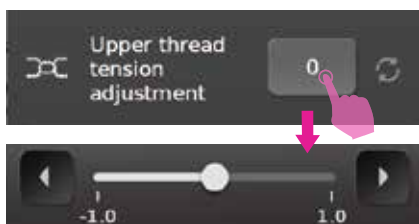
- ① Embroidery setting
- ② Machine setting
- ③ Wi-Fi setting
- ④ Close setting page



Embroidery setting

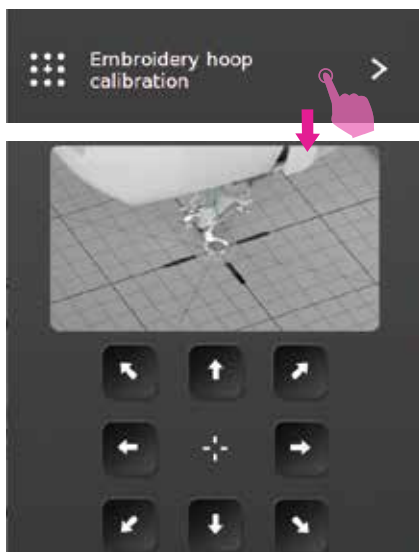
Max. speed adjustment

This function can adjust the embroidery speed.



Upper thread tension adjustment

Adjusting the upper thread tension in the Setting page will affect to all embroidery patterns.



Embroidery hoop calibration

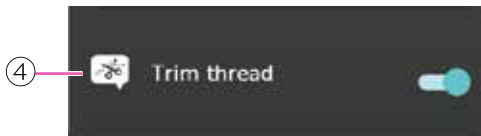
The embroidery hoop calibration is to enable the needle to be positioned in the center position.

The machine will automatically detect the size of the connected embroidery hoop, and then move to the center of the hoop.

Click the direction arrow icon on the screen to move the embroidery hoop, the center of the hoop will align to the needle position to complete the calibration.

Note

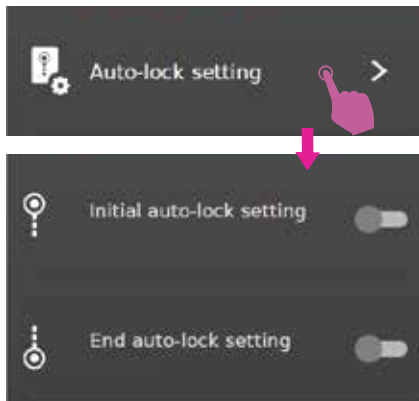
Please make sure the embroidery unit, embroidery hoop and embroidery sheet are installed before using this feature.



Trim thread

The default setting of thread trim is on, the machine will stop after 7 stitches, the message will pop out and the user can trim the thread.

When turning off this function, machine will not stop.

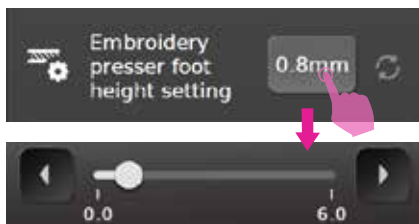


Auto-lock setting

The default setting of auto-lock is off in the embroidery mode.

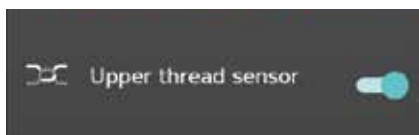
When turn on initial auto-lock setting, the machine will lock 3 stitches at the beginning.

When turn on end auto-lock setting, the machine will lock 3 stitches at the end and stop.



Embroidery presser foot height setting

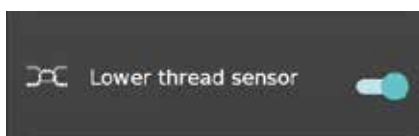
The distance between needle plate and presser foot is adjustable.



Machine setting

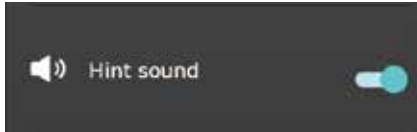
Upper thread sensor

Turn on/off upper thread sensor, when the upper thread is broken, not threaded correctly or thread is about to run out, a warning message will pop out on the screen.



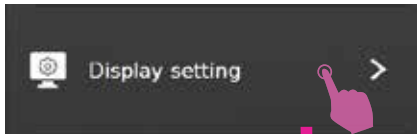
Lower thread sensor

Turn on/off lower thread sensor, when the lower thread is broken or thread is about to run out, a warning message will pop out on the screen.



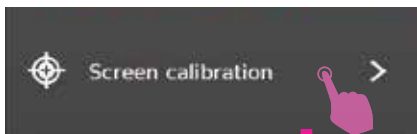
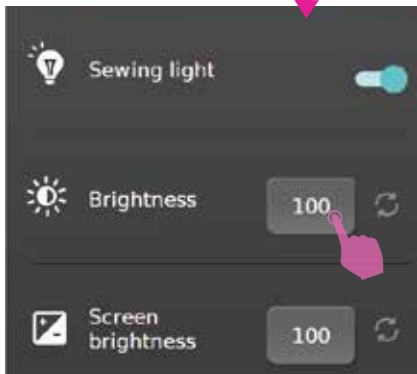
Hint sound

To turn on/off the sound. Default setting is on.



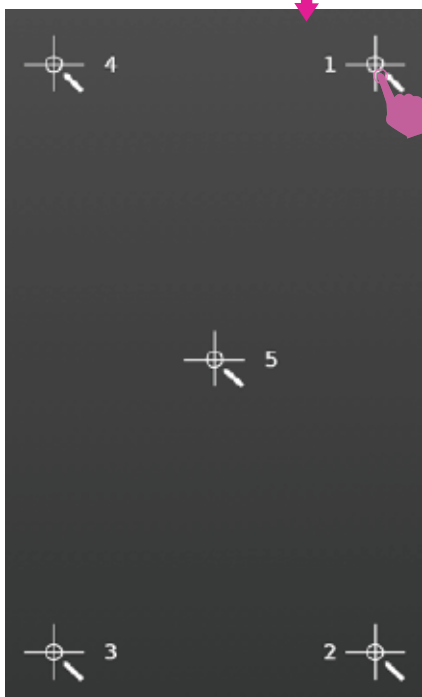
Display setting

To adjust the light brightness on the working area and display brightness.

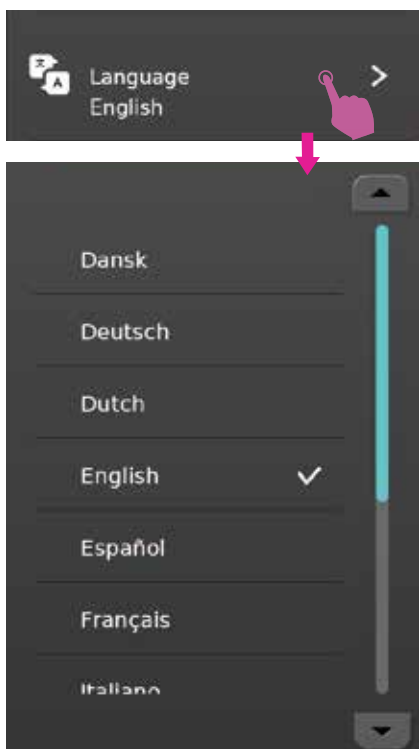


Screen calibration

Follow and click the number shown on the screen, clicked all 5 points to finish screen calibration.

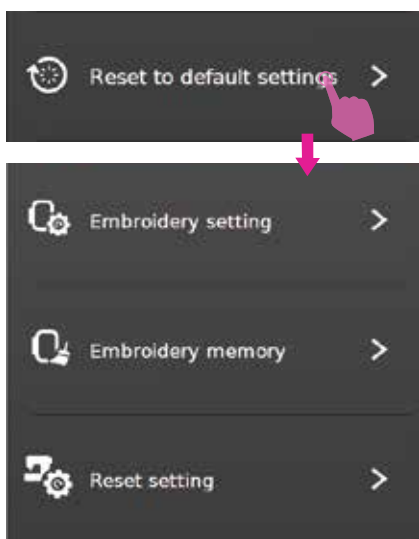


When turn on the machine, press and hold the "+" physical buttons on the right and left multi-function buttons at the same time to enter the screen calibration function.



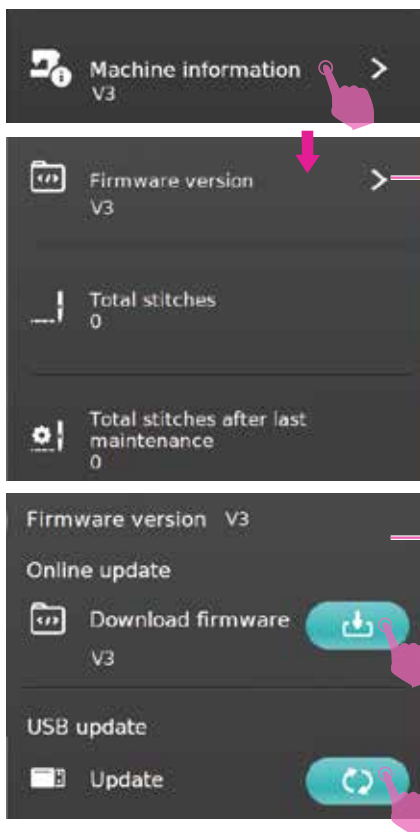
Language

To select different languages.



Reset to default settings

Restore factory settings. To remove all personal settings.



Machine information

Firmware version: Display current software version. A ! icon indicates any new version is detected.

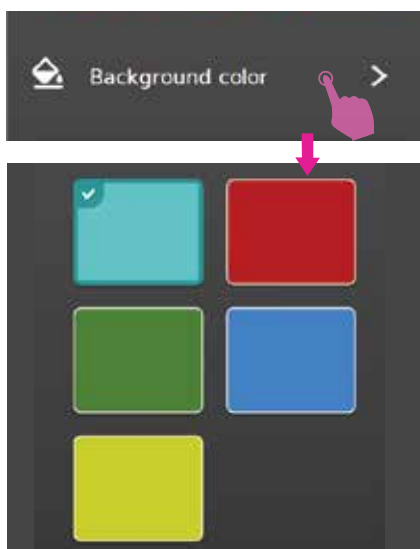
Total stitches: Will display the total number of stitches have used after the machine left the factory.

Total stitches after last maintenance: Will display the cumulative number of stitches after last maintenance.

Once machine is online, it will automatically search the latest software version. Whenever update version is available, you can click the icon to download and update the software.

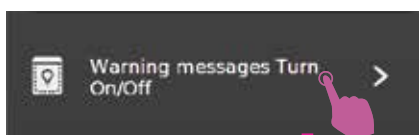
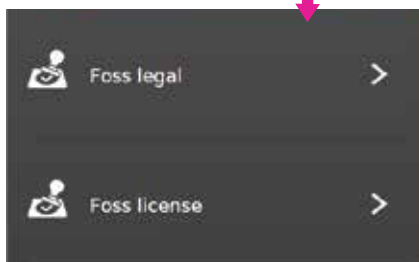
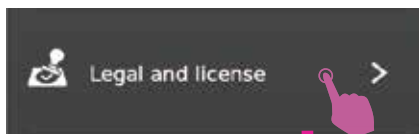
Note

When using USB flash drive to update the software, please wait until the update is completed then remove the USB. If the USB is removed during software update, the machine will be unable to use. Restart the machine after the software is update successfully.



Background color

Select the background color.



Legal and licence

Display related legal information.

Warning messages Turn On/Off

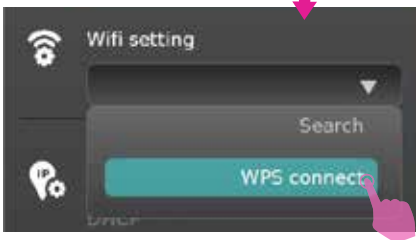
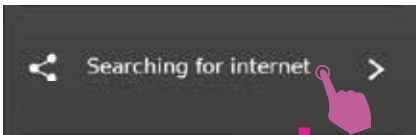
The partial warning messages can be turned on and off. The messages turned off will not display during the operation.



Wi-Fi setting

Connect to Wi-Fi

Turn on the Wi-Fi connection.



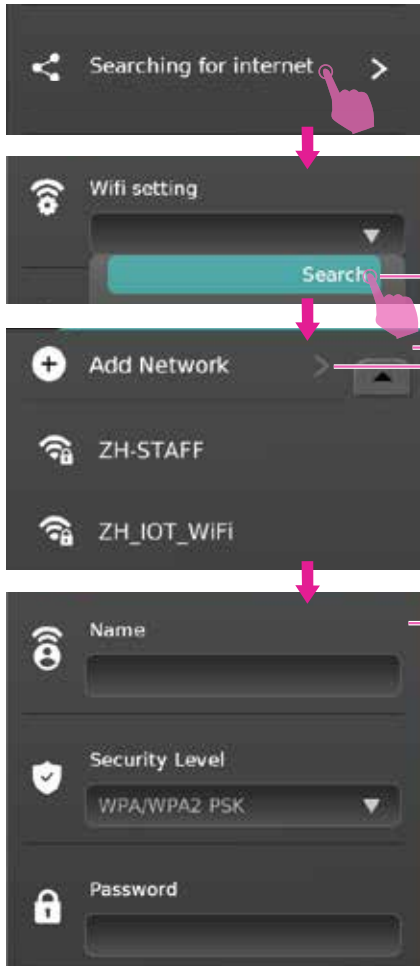
WPS Connection

Select WPS connection, and a prompt screen will appear. Press the WPS button on your home router to connect to the machine.



When the connection is completed, the prompt screen will disappear; if you press Close, the connection will be cancelled.

- ① Close WPS connection

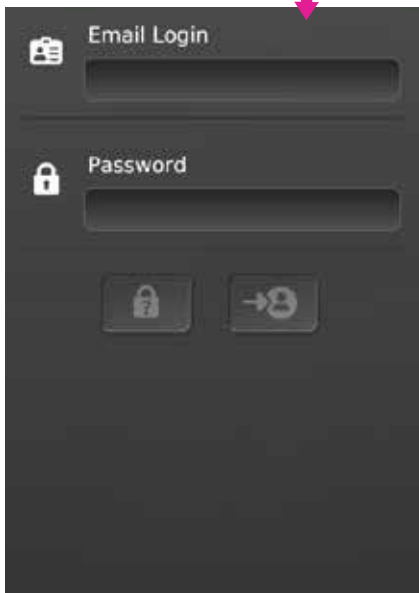
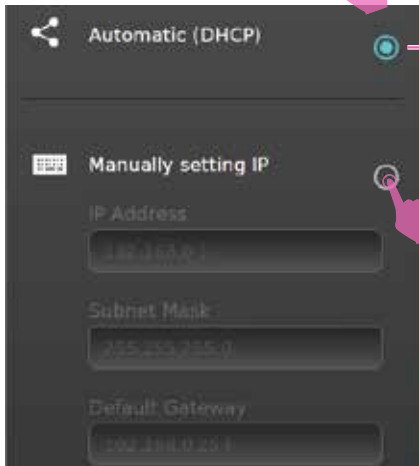


Searching for internet

Search Wi-Fi router and select Wi-Fi router.

Note

Adding a new network, please input the name and password then connect.



Note

Change IP address and machine name manually is available.

User account

When Wi-Fi have successfully been connected, please input user account.

Note

Register the account on App, it can be downloaded by scanning the QR Code.



Embroidery Preparation

Important embroidery information

Embroidery threads

A good quality thread is essential for embroidery to avoid poor stitch formation, needle break, etc.

Good embroidery performance will be effective by using 40wt glossy rayon or polyester embroidery threads as upper threads. They are available in a wide range of colors for beautiful embroidery.

Polyester threads

Polyester is a glossy thread with high tensile strength, hard wearing and colorfast features, which is suitable for all type of embroidery.

Rayon threads

Rayon is a soft viscose fiber with a brilliant sheen and suitable for fine, delicate embroidery, or items that will not receive excessive wear and tear.

Metallic threads

Metallic thread is a light to medium weight thread suitable for special effects in embroidery.

Reduce the thread tension when embroidering with metallic threads.

Embroidery needle

- Select correct thread size and needle size for embroidery.
- Replace the needle regularly.

Note

Please use the second spool pin when metallic or special material threads been used.

Bobbin threads

Bobbin Fill (special bobbin thread)

Bobbin Fill is an especially soft and light polyester thread suitable for bobbin thread. This special bobbin thread ensures a steady thread tension and best performance of pieces of the upper and bobbin thread.

Darning and embroidery thread

Fine mercerized cotton thread which is suitable for embroidering on cotton.

Note

In most cases, bobbin thread for embroidery is either white or black. Some special cases require the same for upper and bobbin thread.

Stabilizer

Tear-away stabilizers

- The excess is easily to tear away.
- One or more layers can be used.
- Available for light and thick materials.
- Before hooping, apply a little spray onto back side of fabric can bring more stability on performance.
- Carefully tear away excess stabilizer from the back of the project after completion.
- Ensure the embroidery pattern will not be deformed.
- Leaving the stabilizer under the larger embroidered areas.

Application:

- Available for all woven materials and non-stretch materials.

Cut-away stabilizers

- One or more layers can be used.
- Available for light and thick materials.
- Before hooping, apply a little spray onto back side of fabric can bring more stability on performance.
- Carefully cut away excess stabilizer from the back of the project after completion.
- Ensure the embroidery patten will not be deformed.
- Leaving the stabilizer under the larger embroidered areas.

Application:

- For all elastic materials.

Adhesive spray

Avoid using spray adhesive next to your embroidery machine.

- Keep about 25-30 cm distance while using the spray.
- Use the spray carefully.
- Spray the stabilizer and adhere to back side of material carefully and iron to prevent wrinkles.

Application:

- Keep stretch and knitted material in shape.
- Prevent layers of fabric slipping while smooth material been used.
- Appliques can be exactly positioned.
- Place cloth on stabilizer, e.g. pocket flaps.
- Do not place the napped materials(i.e. velvet) in the hoop. It may have hoop marks on the material.
- Fix the area to be embroidered.

Spray starch for additional stiffening

Spray starch is ideal for additional stiffening on fine, soft or loosely woven materials.

- Spray on the area to be embroidered
- Wait until dry; or press gently with a warm iron if necessary
- Always use an additional stabilizer such as water soluble stabilizer to be applied on the material.

Application:

- Ideal for fine, loosely woven materials, e.g. batiste, fine linen, etc.

Iron-on interfacing

Iron-on interfacings are available in a variety of weights. Iron-on interfacings should be selected to suit the material being used. Use an iron-on interfacing which is easily removable from the material.

Use the iron-on interfacing to the wrong side of material and press.

Application:

- Please use an appropriate stabilizer and cut it in a bigger shape than your embroidery pattern. Then place it onto the design for support.

Paper-backed adhesive stabilizer

- Place stabilizer in hoop with paper side up.
- Use a pointed tool (e.g. scissors) to score the paper.
- Remove the paper to reveal the sticky surface.
- Position the fabric over the sticky surface and smooth into place.

Application:

- Intended for delicate materials such as jersey or silk etc.
- For hard-to-hoop parts and materials.

Note

Make sure that the adhesive residue on needle, stitch plate and hook area are totally removed.

Water soluble stabilizer

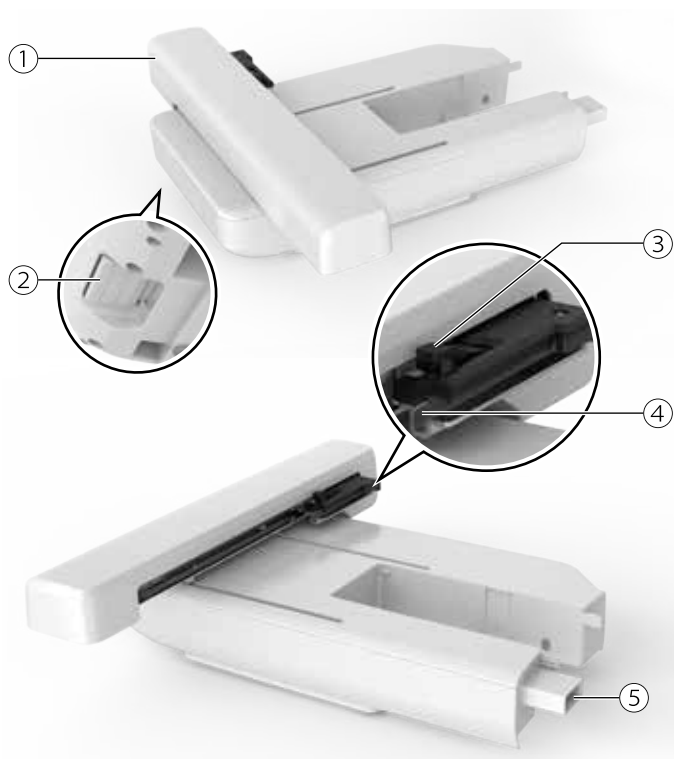
Water soluble stabilizer looks like plastic wrap. When you finish embroidery design, simply submerge project in warm water to dissolve stabilizer. Water soluble stabilizer helps keep the stitches from disappearing in high-pile fabrics (such as towels of fluffy cotton).

- Place the water-soluble stabilizer on top of the fabric.
- Place all layers together into the embroidery hoop.
- Use adhesive spray to fix stabilizer if necessary.
- For pile fabrics, an additional stabilizer on the wrong side is suggested for reinforcement.
- After finishing the sewing, dissolve it and lay the project until dry.

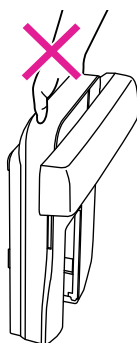
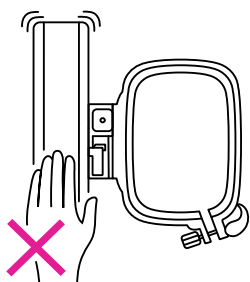
Application:

- Available for towel, velvet, bouclé and etc.
- Available for fine, sheer material such as organdy, bastiste and etc.
- Available for lace embroidery.

Embroidery unit overview



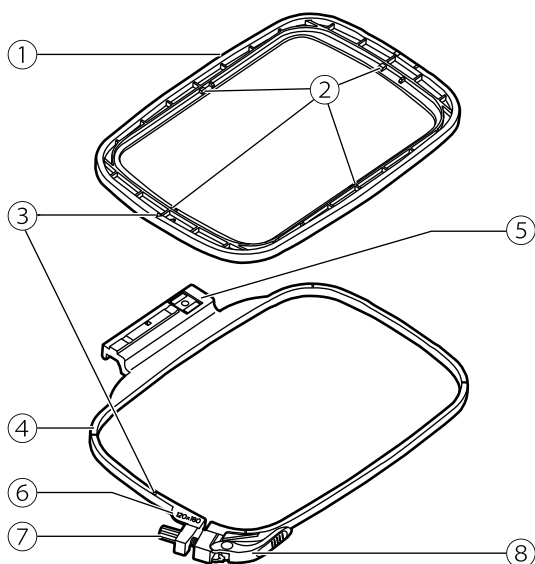
- ① Embroidery carriage
- ② Embroidery unit release button
- ③ Hoop-securing lever
- ④ Embroidery hoop holder
- ⑤ Embroidery unit detection device



Note

- Do not touch the embroidery unit detection device. The connector could be damaged, and it may cause malfunctions.
- Do not press or force on embroidery carriage, and do not lift it up. It may cause malfunctions.
- Do not carry the embroidery unit by holding the release button compartment.

Embroidery hoop overview



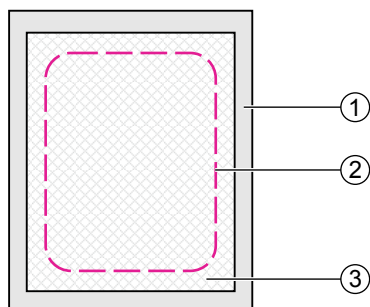
- ① Inner hoop
- ② Center marks
- ③ Triangular mark
- ④ Outer hoop
- ⑤ Embroidery hoop connector
- ⑥ Hoop size marks
- ⑦ Fastening screw
- ⑧ Quick release device

Preparing the embroidery hoop

Attaching a stabilizer to the fabric

⚠ Attention

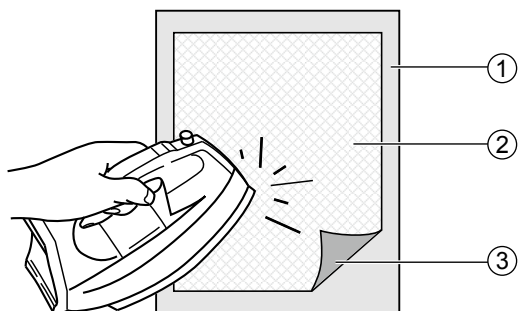
Always use stabilizer material when embroidery. The needle may break or bend without using stabilizer material for thin fabrics or stretch fabrics in embroidering works. Furthermore, the pattern may not be sewn perfectly.



To obtain the best embroidery performance, it is important to use stabilizers.

Prepare stabilizer material that is larger than the embroidery hoop being used.

- ① Wrong side
- ② Size of embroidery hoop
- ③ Stabilizer



If you are using adhesive stabilizers, place the adhesive surface of the stabilizer material against the wrong side of the fabric, and iron.

- ① Wrong side
- ② Stabilizer
- ③ Adhesive surface

Hooping the fabric

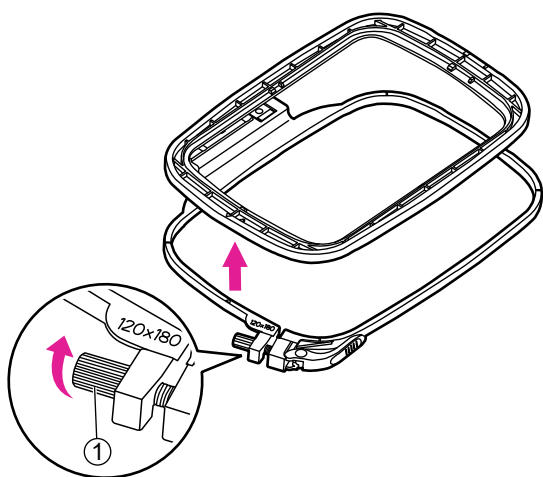
⚠ Attention

Thick layers of fabric and stabilizer may cause skipped stitches, or broken threads, needles and damage on embroidery hoops.

Loosen the fastening screw under the outer hoop.

Separate the inner hoop and outer hoop.

- ① Fastening screw

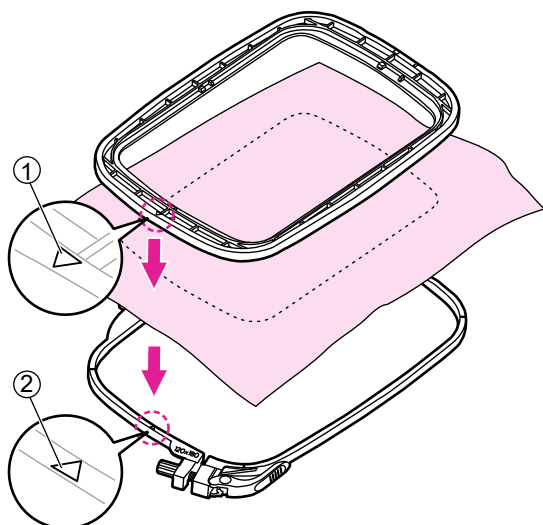


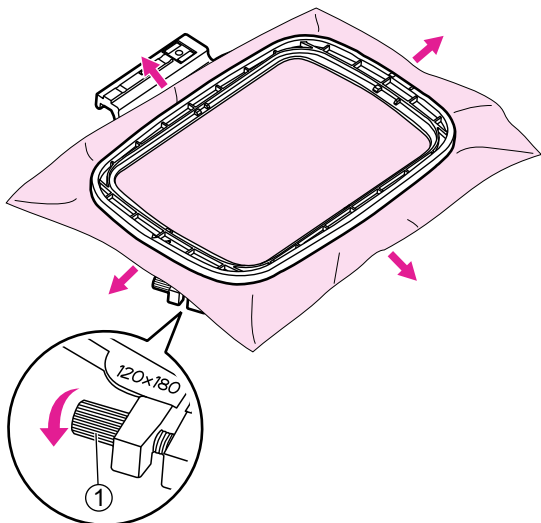
Place the outer hoop on a sturdy flat space.

Make sure the fabric with right side upwards, place the stabilizer underneath the fabric for better support, and then place the fabric and stabilizer altogether on the outer hoop. It can achieve better embroidery performance.

Align both triangular marks and fix the fabric in place.

- ① Inner hoop's triangular mark
- ② Outer hoop's triangular mark





Place the inner hoop on the fabric and press firmly until they are securely fit to outer hoop perfectly. If the inner hoop cannot fit properly, loosen the outer hoop's fastening screw and adjust until fitted.

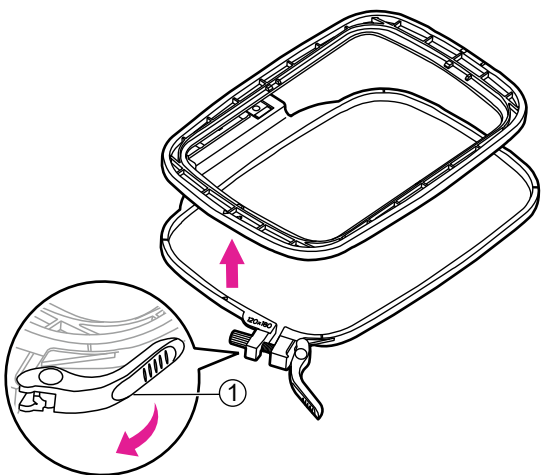
When the fabric and inner hoop are completely fit into the outer hoop, pull the fabric from the four sides marked with the arrows so that the fabric is stretched drum-tight in the hoop, and then press the inner hoop downwards so that it sinks into the outer hoop a little and tighten the fastening screw.

- ① Fastening screw

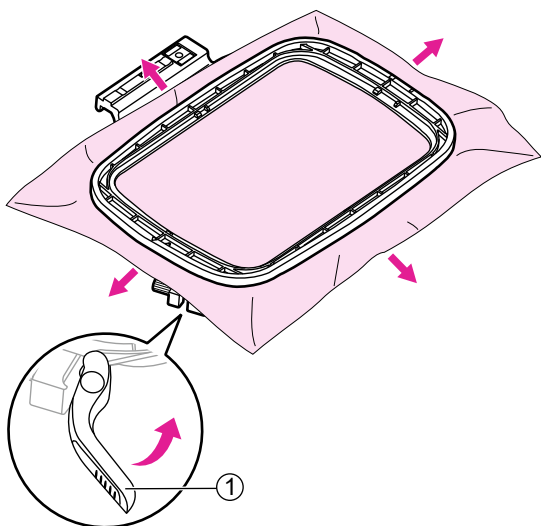
Use the quick release device

If same type of fabric is used for embroidery, open the quick release device under the outer hoop.

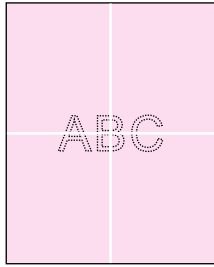
Separate the inner hoop and outer hoop.



- ① Quick release device



Place the inner hoop on the fabric and press firmly until they are securely fit to outer hoop perfectly, pull the fabric from the four sides marked with the arrows so that the fabric is stretched drum-tight in the hoop, and then press the inner hoop downwards so that it sinks into the outer hoop a little and close the quick release device.



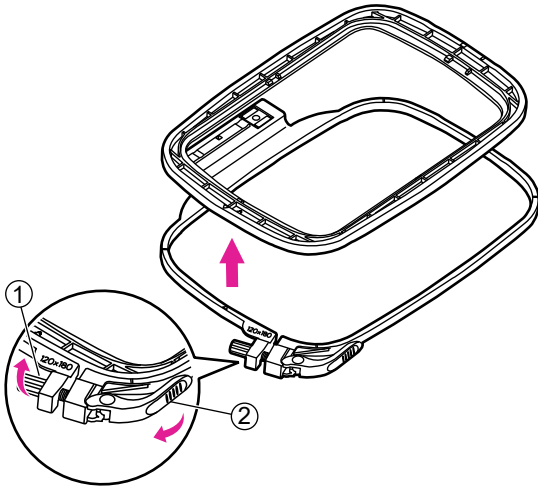
Using embroidery sheet

Make a mark with a chalk at the center of the position for the pattern to be embroidered.

Loosen the fastening screw or open the quick release device (if same type of fabric is used for embroidery).

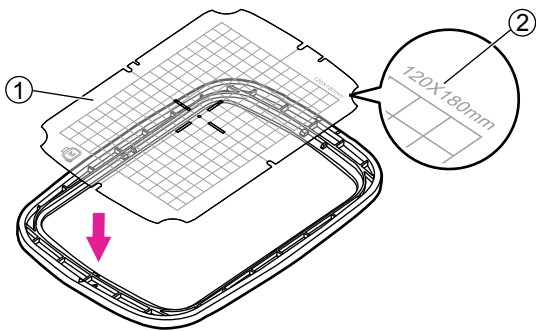
Separate the inner hoop and outer hoop.

- ① Fastening screw
- ② Quick release device



Place the embroidery sheet on the inner hoop. Make sure the hoop size printing is on top right side.

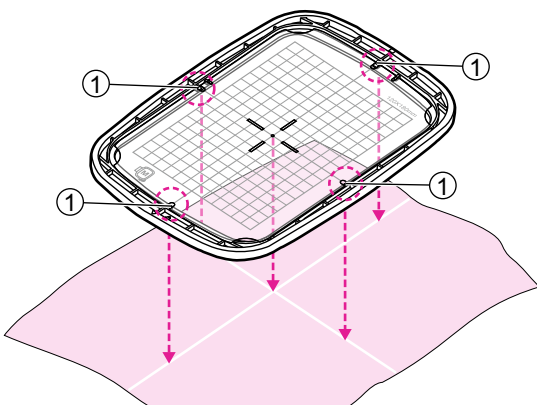
- ① Embroidery sheet
- ② Hoop size

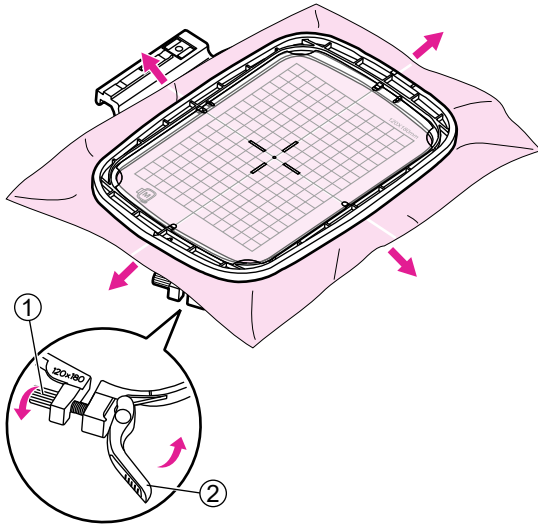


Line the mark on the fabric up with the base line on the embroidery sheet.

Also, align the cross mark of the fabric to the center marks on the four sides of the inner hoop.

- ① Center marks

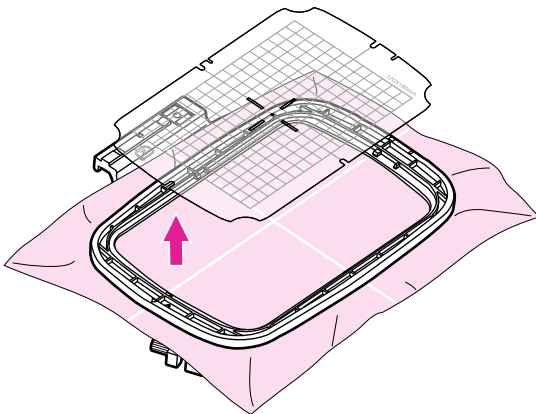




Place the inner hoop on the fabric and press firmly until they are securely fit to outer hoop perfectly. If the inner hoop cannot fit properly, loosen the outer hoop's fastening screw and adjust until fitted.

When the fabric and inner hoop are completely fit into the outer hoop, pull the fabric from the four sides marked with the arrows so that the fabric is stretched drum-tight in the hoop, and then press the inner hoop downwards so that it sinks into the outer hoop a little and tighten the fastening screw or close the quick release device (if same type of fabric is used for embroidery).

- ① Fastening screw
- ② Quick release device

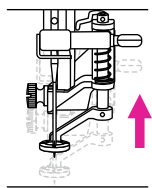
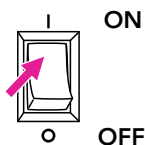


Remove the embroidery sheet.

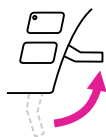
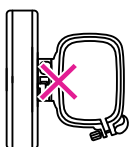


Embroidery Process

Preparation for embroidery



Turn the power switch to on ("I"), the needle, presser foot will automatically raise to the highest position.

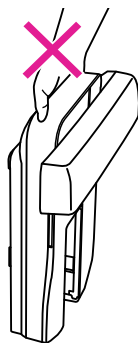
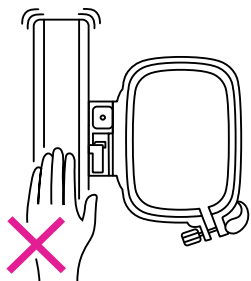


Note

Please check and make sure the presser foot is raised and remove embroidery hoop first before attaching embroidery unit onto the machine.



Slide the embroidery unit onto the machine arm. Push lightly until the unit clicks into place.

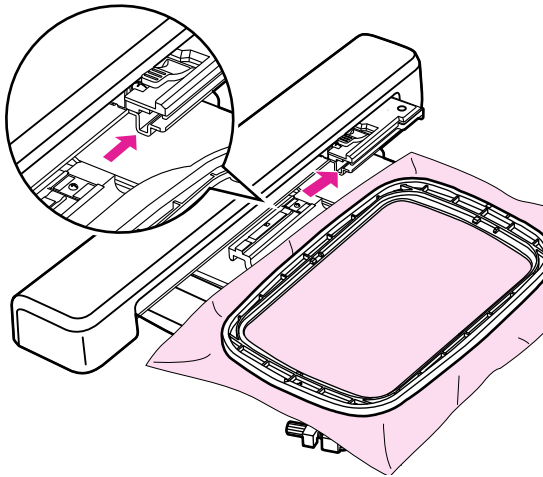


Note

- Do not touch the embroidery unit detection device. The connector could be damaged, and it may cause malfunctions.
- Do not press or force on embroidery carriage, and do not lift it up. It may cause malfunctions.
- Do not carry the embroidery unit by holding the release button compartment.

Install the embroidery hoop

After editing the embroidery image file, place the embroidery hoop with the corresponding size to perform the preparations for embroidering.



⚠ Attention

Install or remove the embroidery hoop, please make sure the needle and presser foot are the highest position, so that can put in & take out smoothly. Otherwise may damage the needle and presser foot.

The embroidery hoop has three built-in sizes which are 160x260mm, 120x180mm and 50x70mm, respectively. Select the corresponding size according to the image design.

Once the power is turned on, hoop the fabric in the selected embroidery hoop and slide the embroidery hoop into the embroidery unit to assemble them. When you hear a "click", it means that the embroidery hoop installation is completed.

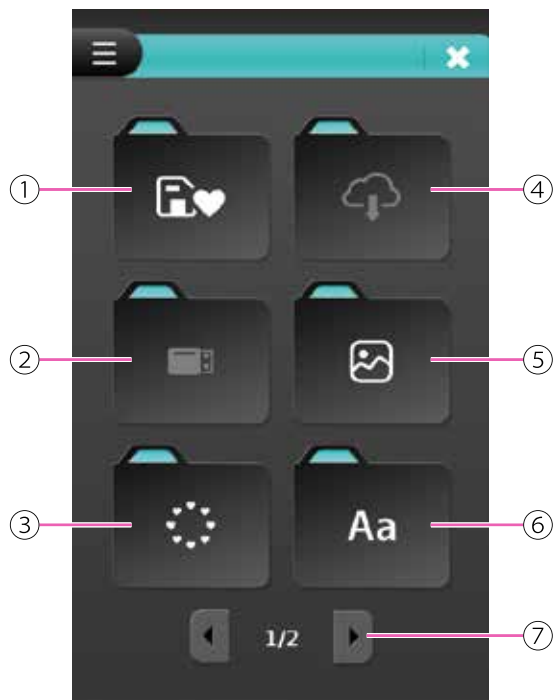
Note

- Please raise the presser foot while the embroidery hoop is resetting.
- The reset action must be performed every time when a different size embroidery hoop is re-installed.

⚠ Attention

- Please check the fabric thickness in advance, if the fabric is too thick, please don't use it for embroidery.
- If there is space between the presser foot and the fabric, the fabric can be embroidered. If there is not space, do not embroider the fabric. Otherwise, the needle may break, resulting in injury.
- Please be careful when sewing overlapping patterns as the needle might break due to the difficulty of fabric penetration.

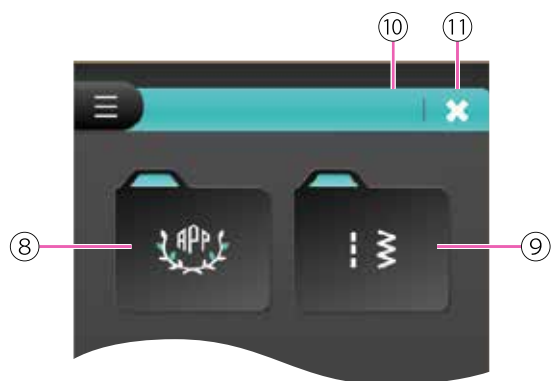
Selecting embroidery pattern



Embroidery pattern types

Turn on the power and enter embroidery mode.

- ① Personal embroidery patterns
- ② USB flash drive
- ③ Frame
- ④ Cloud file
- ⑤ Built-in embroidery pattern
- ⑥ Text
- ⑦ Page switching
- ⑧ Monogram
- ⑨ Stitches for decorative frame
- ⑩ Return to the previous page
- ⑪ Go to edit page





Built-in embroidery pattern

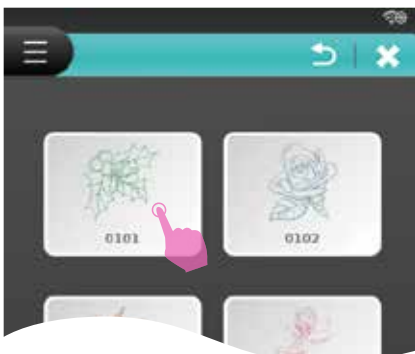
Click Built-in embroidery pattern icon and enter the category page.

- ① Built-in embroidery pattern



There are multiple groups of built-in embroidery pattern, click Page switching icon to review the category and select the desired pattern.

- ① Select the pattern
- ② Page switching



Select the desired pattern to enter editing page.

Please refer to "Editing the embroidery pattern" chapter for more information.

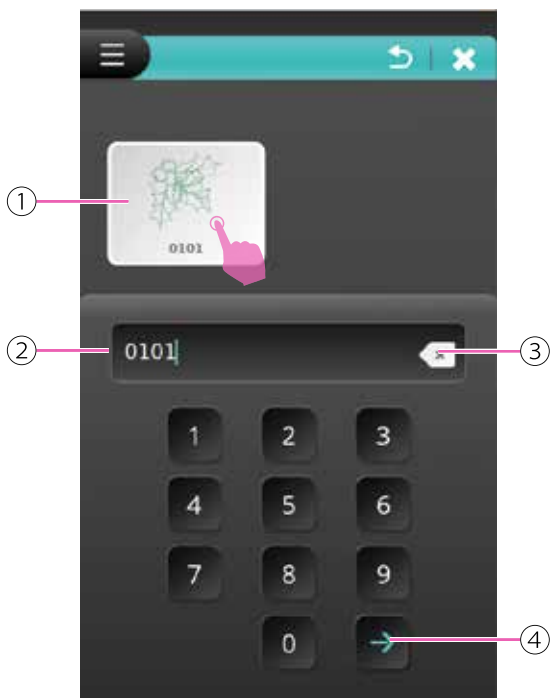


Click Search icon to enter quick pattern search page.

Click Return icon to the previous page.

Click Close icon to go to edit page.

- ① Search
- ② Return
- ③ Close



Refer the pattern number and key in to search. Click Confirm icon to display the desired pattern. If the number is not valid, it will display the warning message.

Click Delete icon to delete last digit number, long press delete icon to delete all numbers.

Select the desired pattern to enter in the embroidery editing page.

Please refer to "Editing the embroidery pattern" chapter for more information.

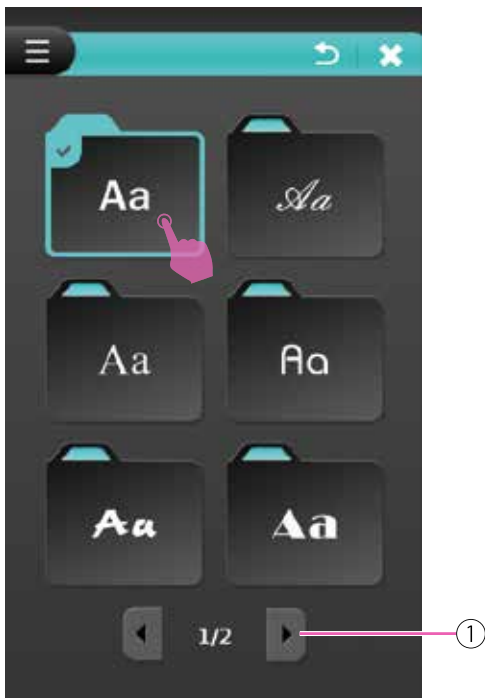
- ① Embroidery pattern
- ② Key in bar
- ③ Delete
- ④ Confirm



Built-in embroidery letter

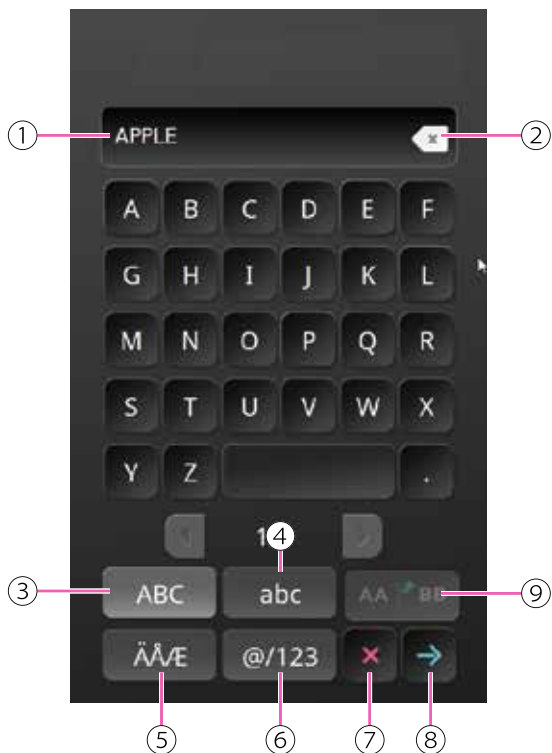
Click the Embroidery letter icon to enter selection screen.

- ① Text



There are multiple fonts of built-in embroidery text, click Page switching icon to review the category and select the desired text.

- ① Page switching



Key in the desired letter to make a combination. Click Delete icon to delete last letter, long press delete icon to delete all letters. Click Cancel icon to return to the Text category page.

- ① Key in bar
- ② Delete
- ③ Upper letters
- ④ Lower letters
- ⑤ Special characters
- ⑥ Numbers and symbols
- ⑦ Cancel
- ⑧ Confirm
- ⑨ Split letters function

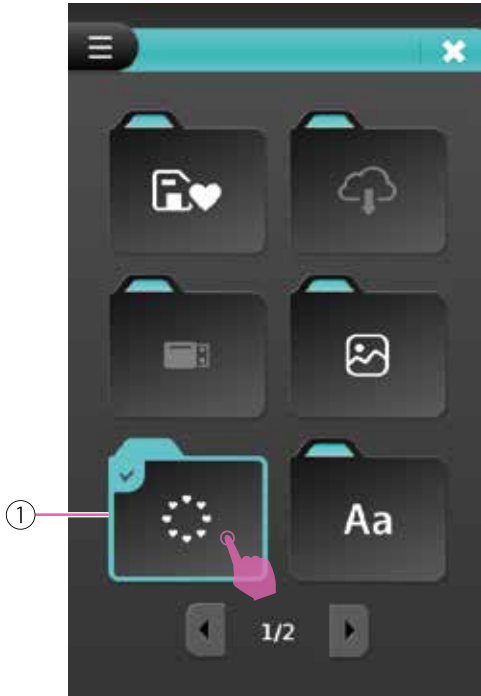


When type phrases which contains spaces in between, you can use the "split letters function", from the spaces will split into different layers, which increases the freedom when editing the phrases and prevents the phrases from exceeding the scope of the embroidery hoop.

After the input is completed, click Confirm icon to enter in the embroidery editing page.

- ① Space button
- ② Split letters function
- ③ Confirm

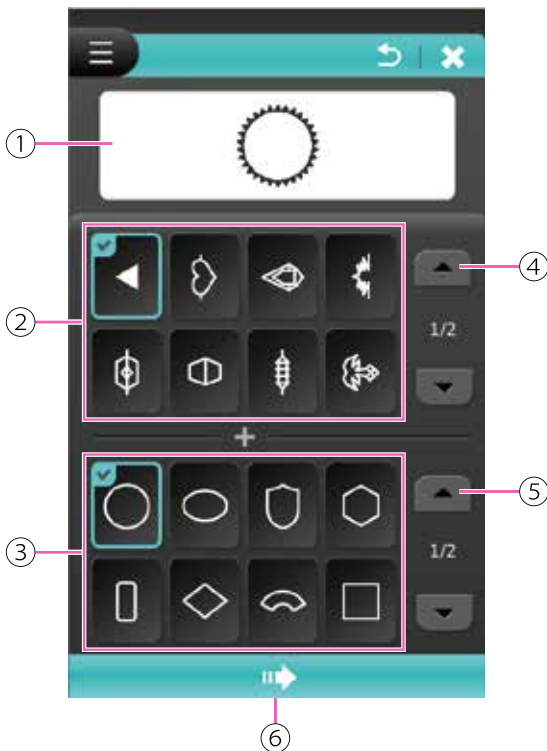
Please refer to "Editing the embroidery pattern" chapter for more information.



Built-in frame designs

Click the Frame designs icon to enter frame selection page.

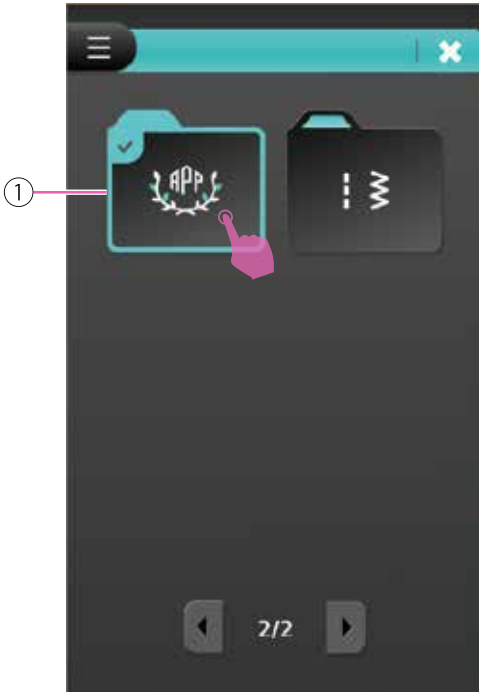
- ① Frame



Click the desired frame pattern and frame shape to combine. Click Switching icon to view other patterns and shapes. Click Next icon to enter in the embroidery editing page.

- ① Preview
- ② Frame pattern selection
- ③ Frame shape selection
- ④ Frame pattern switching
- ⑤ Frame shape switching
- ⑥ Next

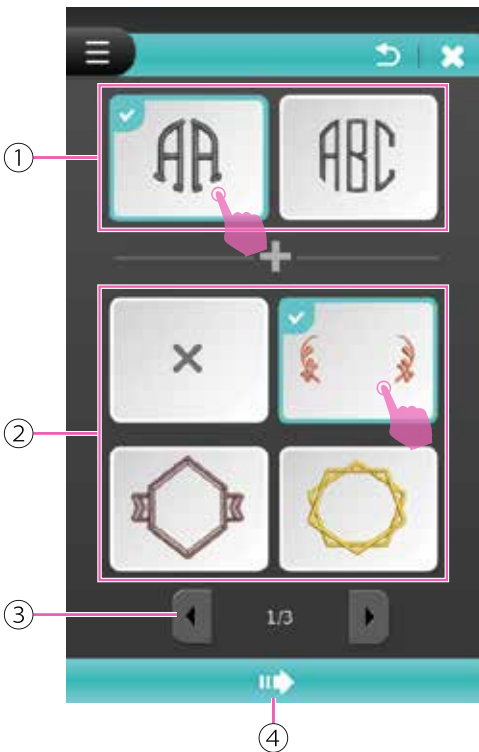
Please refer to "Editing the embroidery pattern" chapter for more information.



Built-in monogram letters

Click the Monogram letters icon to enter frame selection page.

- ① Monogram



Click two letters or three letters and combine with the frame. Click Page switching icon to view other designs. Click Next icon to enter edit page.

- ① Letters selection
- ② Frame selection
- ③ Page switching
- ④ Next



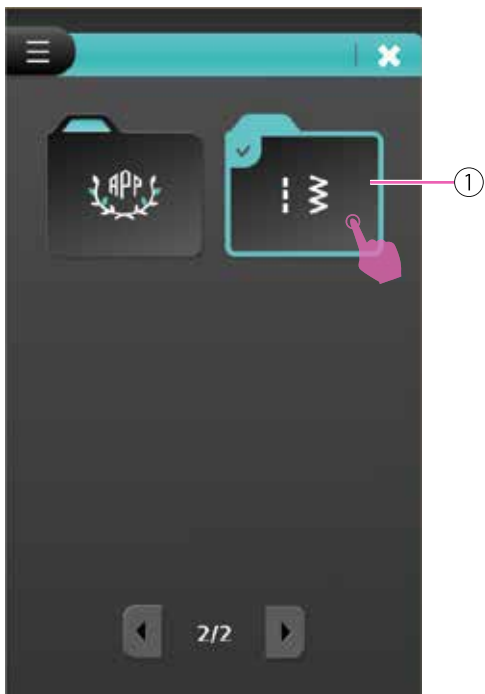
Input the desired text to finish the monogram and it will display the preview on the screen.

Click Delete icon to delete last letter, long press Delete icon to delete all letters.

After finished the editing, click Next icon to enter in the embroidery editing page.

- ① Preview screen
- ② Key in bar
- ③ Delete
- ④ Next

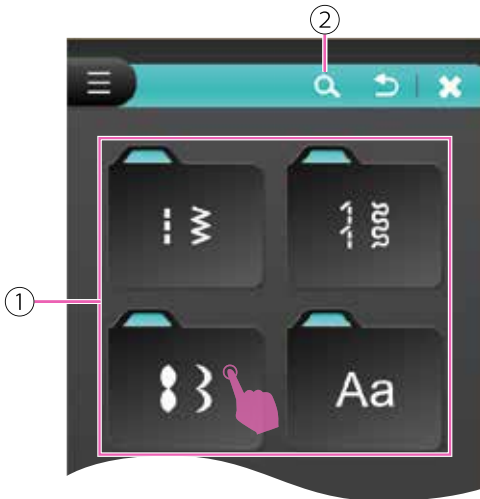
Please refer to "Editing the embroidery pattern" chapter for more information.



Built-in stitches for decorative frame

Click the Stitches for decorative frame icon to enter selection page.

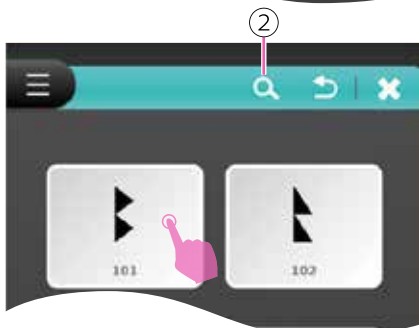
- ① Stitches for decorative frame



There are 4 groups in different folders that can choose from, then select the preferred stitch pattern.

Or click the Search icon and go to searching page.

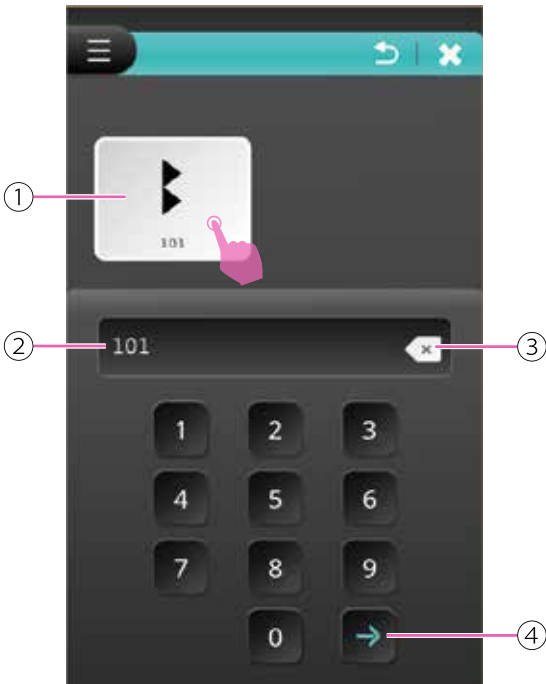
- ① Stitch patterns folders
- ② Search icon



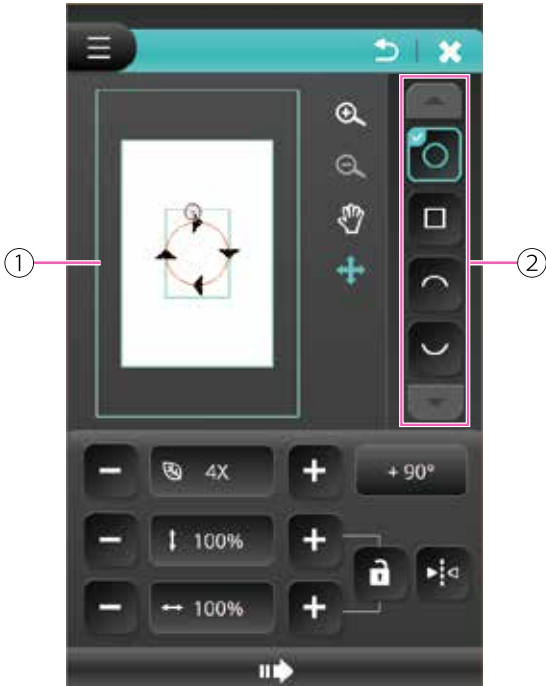
Refer the stitch chart number and key in to search. Click Confirm icon to display the desired pattern. If the number is not valid, it will display the warning message.

Click Delete icon to delete last digit number, long press delete icon to delete all numbers.

Select the desired pattern to enter editing page.



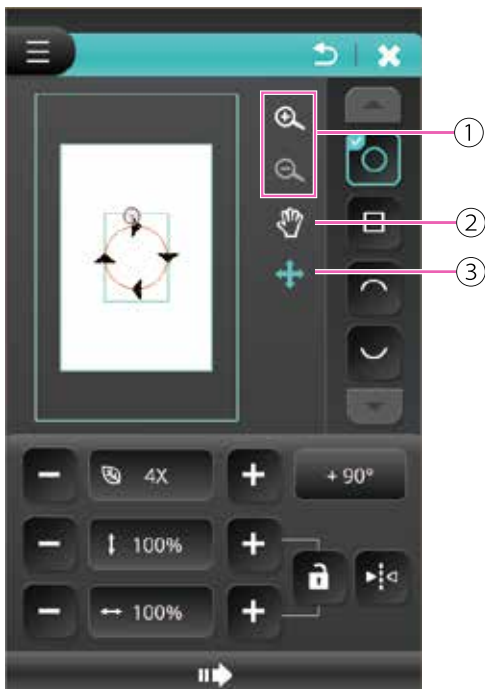
- ① Embroidery pattern
- ② Key in bar
- ③ Delete
- ④ Confirm



In the edit page, the default frame shape is round, it can be changed to preferred shape.

When you select the arc shape, the frame size is 25*50mm. The default for other frames is 50*50mm.

- ① Preview screen
- ② Frame shape selection

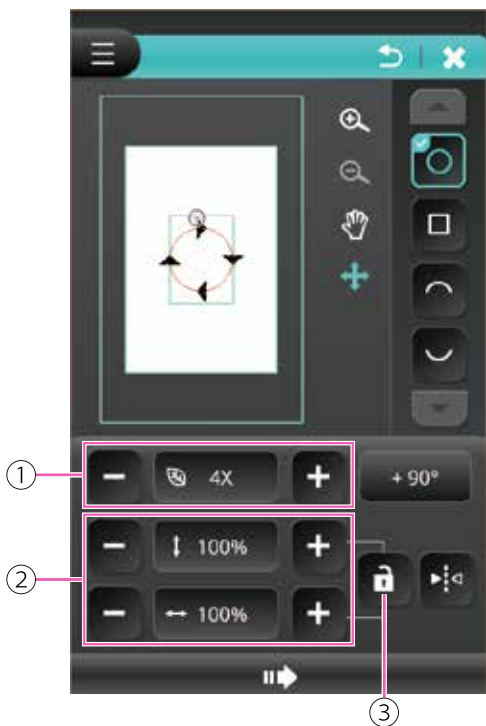


Click Zoom in/Zoom out icon can enlarge up to 1900%.

Click Drag function to move the preview area. The embroidery hoop and patterns will be moved together.

Click Move button and use stylus or fingers to move the design.

- ① Zoom in/Zoom out
- ② Drag function
- ③ Move function

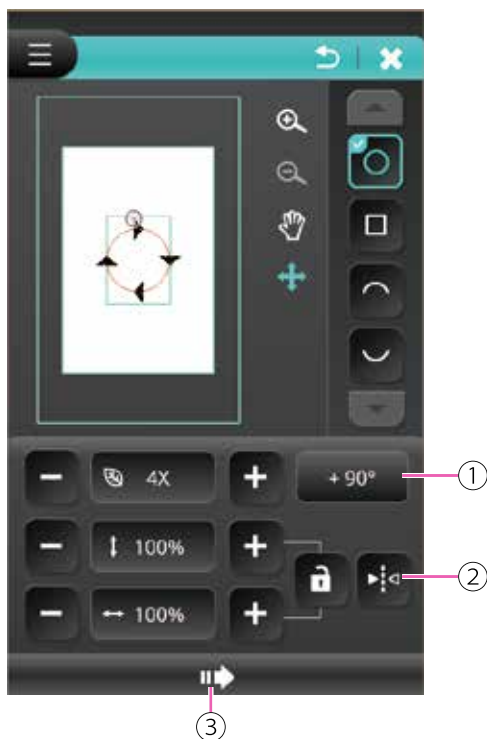


Click "+/-" for "Number of patterns" to increase or decrease the number of patterns. The default value is 4X, long press "+/-", the value will continuously increase or decrease. The maximum can add up to 50 patterns, the minimum is 1 pattern.

Click "+/-" in the "Adjust the length and width of the decorative frame" to increase or decrease the frame length or width. Long press "+/-", the value will continuously increase or decrease. Adjusting range from 10%~1000%.

Click "Lock ratio", you can adjust the decorative frame with the fixed proportion.

- ① Number of patterns
- ② Adjust the length and width of the decorative frame
- ③ Lock ratio



Click Rotate 90° icon, the pattern will base on the bottom line and rotate 90°.

Click Mirror icon, the pattern will base on the bottom line and pattern will mirror horizontally.

After finishing the configuration, click Next icon to enter in the embroidery editing page.

- ① Rotate 90°
- ② Mirror
- ③ Next

Please refer to "Editing the embroidery pattern" chapter for more information.

Designs from USB

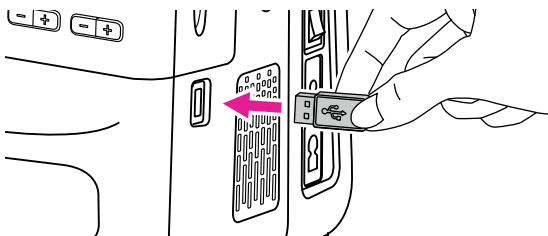
The machine has a USB port for memory stick. Through a USB, you can import patterns from the computer to the machine.

Note

- The USB storage device such as RAM disk is not included with the machine, but such kind of devices are easily available in computer shops and camera shops.
- The USB storage device must be of either FAT32 formats only.
- The USB storage device's max allowed capacity is 256GB. (256G storage capacity is tested and available.)

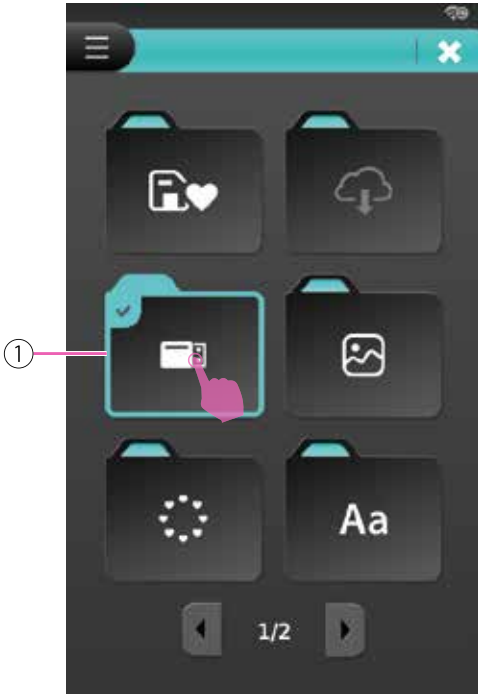
Please be aware of the following tips, otherwise malfunctioning may happen.

- This machine can read following format: .zhs, .dst, .pes, .exp, .hus, .vip, .jef, .sew, .vp3, .pcs, .xxx, .pec
- Embroidery data must be stored in root directory in USB storage device.
- The embroidery file name can be up to 256 characters and it can be letters, numbers, . (dot), _ (underline), and - (hyphen).
- If somehow the file cannot be read by the machine correctly. It could be because the file name of the file has contained irregular character(s). The valid file names need to be made of any of the 26 English letters or the numbers 0 through 9.
- The sizes of the embroidery patterns cannot exceed 160 x 260 mm (W x H).
- The color of the embroidery pattern is no limited.
- The embroidery pattern can not exceed a maximum number of 120,000 stitches.



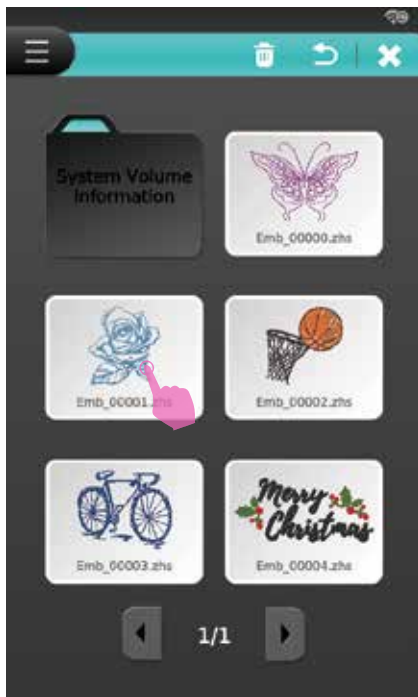
Connect to USB port

Insert the USB storage device into the USB port on the right side of the embroidery machine.



Click USB flash drive file to enter the selection page.

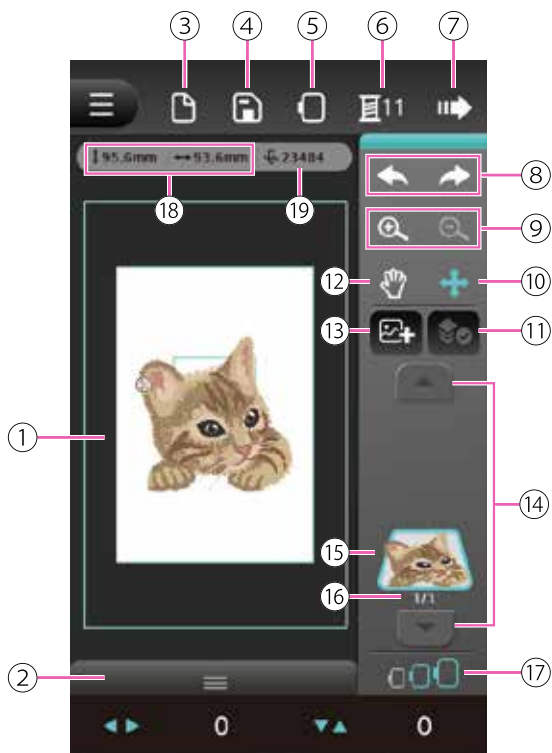
① USB flash drive



Select the desired pattern to enter edit page.

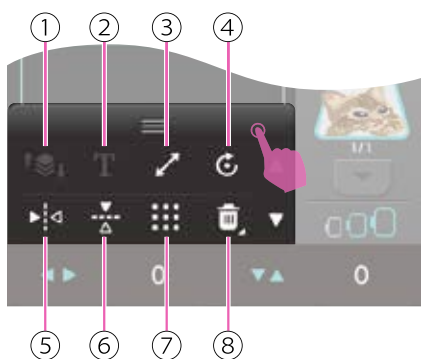
Please refer to "Editing the embroidery pattern" chapter for more information.

Editing the embroidery pattern



When the embroidery pattern is selected, you can adjust the angle, size, position and color in your preference.

- ① Preview screen
- ② Toolbox
- ③ New file
- ④ Save file
- ⑤ Embroidery hoop list
- ⑥ Color setting
- ⑦ Next
- ⑧ Undo/Redo
- ⑨ Zoom in/Zoom out
- ⑩ Move the patterns
- ⑪ Select all layers
- ⑫ Drag the object
- ⑬ Add new patterns
- ⑭ Switching layers
- ⑮ Layer
- ⑯ The current layer/Total layers
- ⑰ Suggested embroidery hoop
- ⑱ Embroidery pattern size
- ⑲ Embroidery pattern total stitches



Expand the toolbox to display the edit options. Click Page switching icon to view other edit options.

- ① Move layers
- ② Text
- ③ Lock aspect ratio
- ④ Rotate
- ⑤ Horizontal mirror function
- ⑥ Vertical mirror function
- ⑦ Check the embroidery pattern size
- ⑧ Delete
- ⑨ Duplicate
- ⑩ Page switching





Adding embroidery pattern

Select the pattern and enter edit page. Click Add new patterns icon to select the new patterns. The layer will be display in order by selecting sequence. Click Switching layers icon to display each layer.

To create a new file, click New file icon. It will display the warning message then open a new layer.

- ① New file
- ② Add new patterns
- ③ Switching layers



Move the embroidery pattern layers

Click Move layers icon, the selected layer will shown in the action color in the switching layers section. The layer sequence can be changed up by moving up or down.

Long press the Layer icon can also change layer sequence.

In the preview screen, it will display the current layer and total layer numbers.

- ① Move layer
- ② The current layer / Total layers
- ③ Switching layers
- ④ Layer



Click Move layer icon to display the multifunction list, the left and right arrow keys can move the selected layer up or down to edit.

- ① Multifunction list
- ② Move layer

Note

It also can use the physical buttons +/- to move the layers.

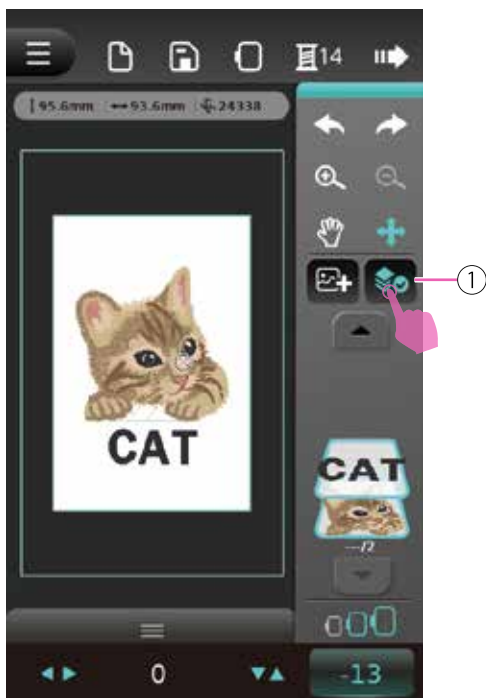


Zoom in/Zoom out function

Click Zoom in/Zoom out icon to preview the pattern. When you zoom in the pattern, the complete design will show on the left top to preview. Drag the frame to view the specific area at the same time.

Click Drag the preview icon can view the specific area after zoom in, and it will not affect the actual pattern's position.

- ① Preview screen
- ② Zoom in/Zoom out
- ③ Drag the preview



Select all layers

Click Select all layers icon to edit all layers at the same time.

- ① Select all layers

Note

Select all layers function works with two or more layers.



Undo/Redo

Click Undo icon to cancel or reverse the last steps. Click Redo icon to do last steps again.

- ① Undo
- ② Redo



Move the embroidery pattern

Move the embroidery pattern is a default function.

Click Move the patterns icon to move the patterns in the preview screen. Under the preview screen, the left and right arrow shows the X-axis position and up and down arrow shows the Y-axis position.

- ① Move the patterns
- ② X-axis position
- ③ Y-axis position



Click Direction icon to display multifunction list. The default value is 0. The left and right, up and down icon can adjust X-axis and Y-axis position.

Click X-axis or Y-axis value will reset to default value 0.

- ① Multifunction list
- ② Direction
- ③ X-axis value
- ④ Y-axis value

Note

- It also can use the physical buttons +/- to adjust value(position).
- When the embroidery pattern exceeds the hoop, the hoop frame will turn red.



Rotate the embroidery pattern

Click Rotate icon to rotate the patterns.

It can set to rotate 1° or 15° each time.

- ① Rotate
- ② Rotate 1°
- ③ Rotate 15°



Preview screen will display the rotated patterns. The default value is 0, click Angle icon to display multifunction list. The left and right icon can adjust the angle clockwise or counterclockwise.

Click 1° or 15° angle value will both reset to default value 0.

- ① Multifunction list
- ② Angle
- ③ 1° angle value adjustment
- ④ 15° angle value adjustment

Note

It also can use the physical buttons +/- to adjust value(position).

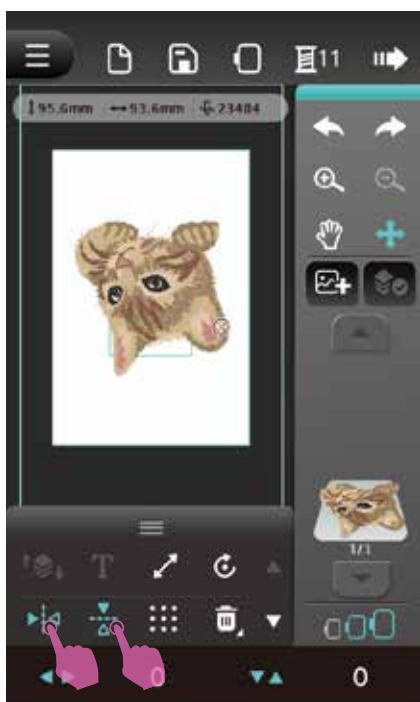


- ①
- ②

Mirror the embroidery pattern

Click Horizontal mirror function icon to flip or mirror a pattern in the horizontal direction.
Click Vertical mirror function icon to flip or mirror a pattern in the vertical direction.

- ① Horizontal mirror function
- ② Vertical mirror function



Preview screen will display the mirrored patterns.

Click the Horizontal mirror function icon or the Vertical mirror function icon again to cancel mirror function, the pattern will restore to last steps.



Resize the embroidery pattern

Click Lock aspect ratio icon to adjust the pattern size with the fixed proportion.

- ① Lock aspect ratio



Preview screen will display the adjusted patterns. The default value is 100%. Click Lock aspect ratio icon to display multifunction list. The left and right arrow icon can scaling the pattern size with the fixed proportion.

- ① Multifunction list
- ② Lock aspect ratio



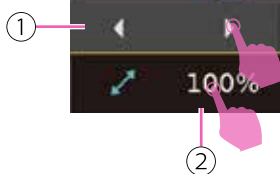
Click the Left and Right arrow icon to adjust 1% proportion each time. The scaling size range is 80%~120%.

Click Lock aspect ratio value icon again to restore to default value.

- ① Multifunction list
- ② Lock aspect ratio value

Note

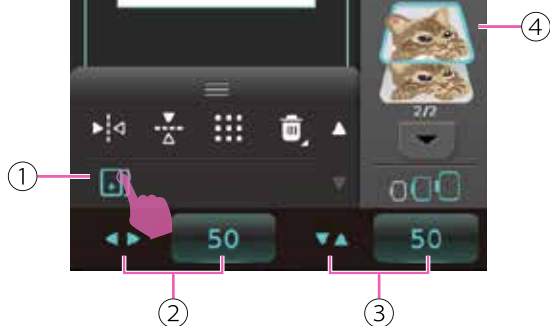
- It also can use the physical buttons +/- to adjust value.
- When the embroidery pattern is exceed the hoop, the hoop will turn red.



Duplicate the embroidery pattern

Click Duplicate icon to copy the current pattern with all adjusted value to the last layer. The duplicate layer will overlap on the original pattern.

- ① Duplicate
- ② X-axis value
- ③ Y-axis value
- ④ Duplicated layer

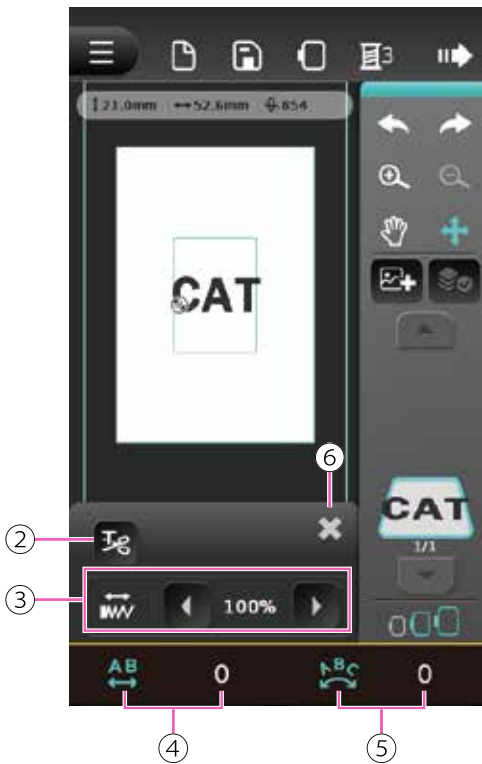


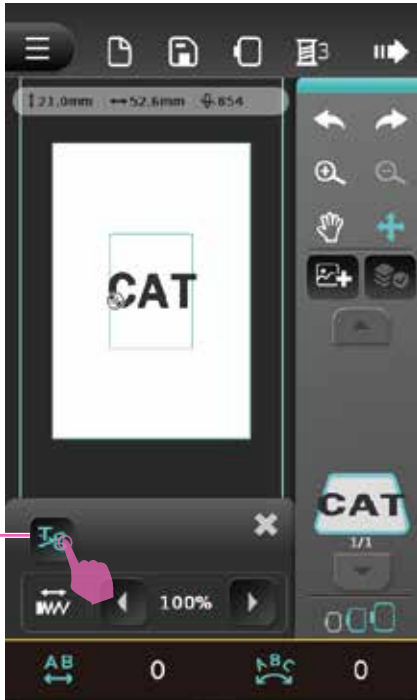


Edit text

Key in the text and click Text icon to enter edit page to adjust spacing or radian.

- ① Text
- ② Split text
- ③ Adjust stitch density
- ④ Adjust text spacing
- ⑤ Adjust radian
- ⑥ Close





Split text

Click Split text icon to break up the text and the layer will split according to the letter numbers.

- ① Split text
- ② The current selected layer
- ③ The current layer / Total layers

Note

Split text function works with two or more letters.



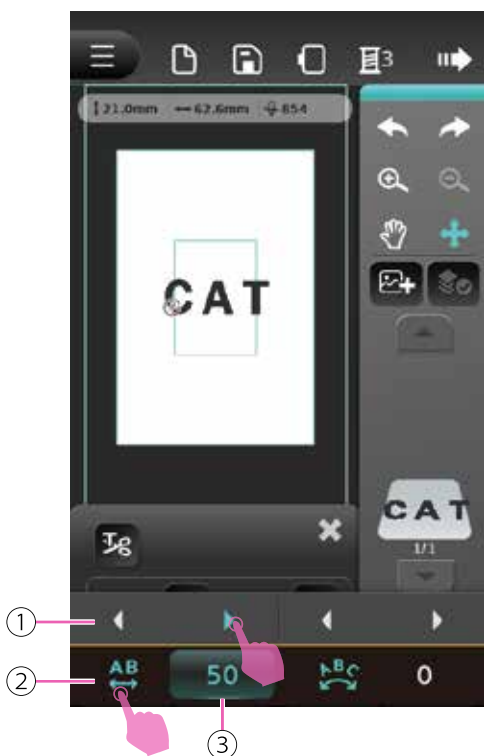


Stitch density adjustment

Click the left and right arrow icon to adjust stitch density. The default value is 100%, the adjust range for each increment is 20%, the adjustment range is 60%~140%.

Click Stitch density value to restore to default value.

- ① Adjust stitch density
- ② Density proportion



Text spacing adjustment

Click Adjust spacing icon to display multifunction list. The left and right arrow icon can adjust the text spacing. The default value is 0, and the adjust range for each increment is 1, the adjustment range is 0~500.

Click Adjust spacing value icon to restore to default value 0.

- ① Multifunction list
- ② Adjust text spacing
- ③ Adjust text spacing value

Note

- Adjust text spacing function works with two or more letters.
- It also can use the physical buttons +/- to adjust value.



Text radian adjustment

Click Adjust radian icon to display multifunction list. The left and right arrow icon can adjust the text radian. The default value is 0, and the adjust range for each click is 1, the adjustment range is -100~100.

Click Adjust radian value icon to restore to default value 0.

- ① Multifunction list
- ② Adjust text radian
- ③ Adjust text radian value

Note

- Adjust text radian function works with two or more letters.
- It also can use the physical buttons +/- to adjust value.



Check the embroidery pattern size

Click Check the embroidery pattern size icon to display the edit page. It can view the actual position in the embroidery hoop.

- ① Check the embroidery pattern size

Note

- Please check the embroidery unit and hoop is installed.



Use the center of the pattern as the alignment reference point.

Accordingly to the selected icons, the embroidery hoop will move simultaneously to the position where your needle will align to: center, four corners of pattern, or encircle around the pattern.

Click Close icon to save current setting and close multifunction list and return to the last edit page.

- ① The upper left corner of the pattern
- ② The center of the pattern
- ③ The upper right corner of the pattern
- ④ Close
- ⑤ The lower left corner of the pattern
- ⑥ The lower right corner of the pattern
- ⑦ The embroidery hoop will surround four directions

Note

- When the embroidery pattern exceeds the hoop, it cannot check the pattern's size.
- When the embroidery pattern exceeds the hoop, the hoop will turn red.



Delete the embroidery pattern

Select the desired embroidery pattern layer to delete, the layer will shown in the action color. Click Delete icon, the screen will display the warning message to confirm delete the selected layer.

Long press Delete icon, the screen will display the warning message to confirm delete all layers.

- ① Delete
- ② The selected embroidery pattern layer



Once deletion completed, the preview screen will display the remaining embroidery layer.

Changing the colors of the embroidery motif

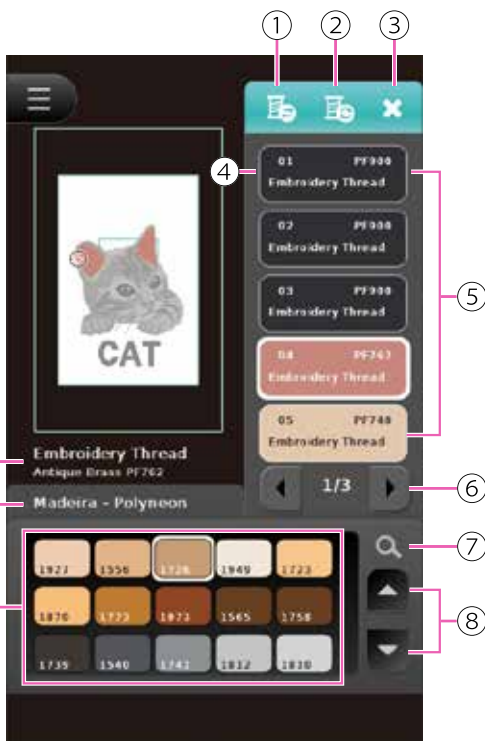


Click Color setting icon to enter edit page.

① Color setting

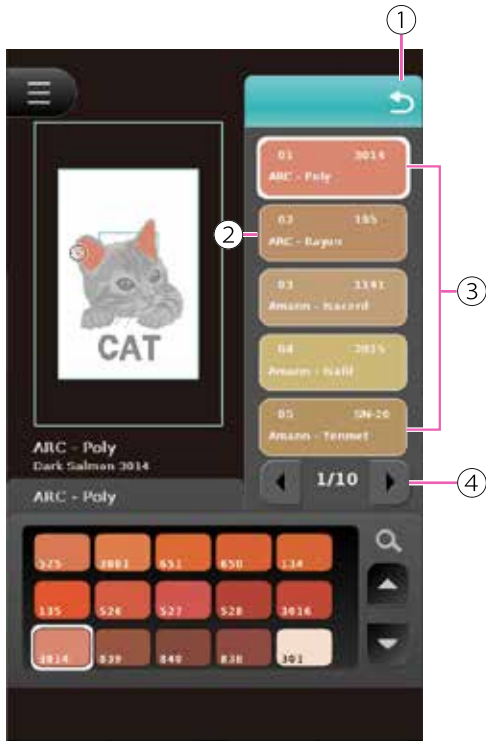
Note

The number means how many thread colors will be used in this layer.



In the color setting edit page, you can change the embroidery thread color.

- ① Change thread brand
- ② Sync to change all thread brand
- ③ Close
- ④ Selected color
- ⑤ Color list layer
- ⑥ Switch color
- ⑦ Search pantone number
- ⑧ Switch pantone chart list
- ⑨ Selected color's information
- ⑩ Thread brand
- ⑪ Color list



Change the thread brand

Click Change the thread brand icon to display other brands selection. It will suggest the similar color's brands on the right side. The left and right arrow icon can switch and view the brand options and details.

Select the desired thread brand to change and the preview screen will change to selected brand's correspond colors.

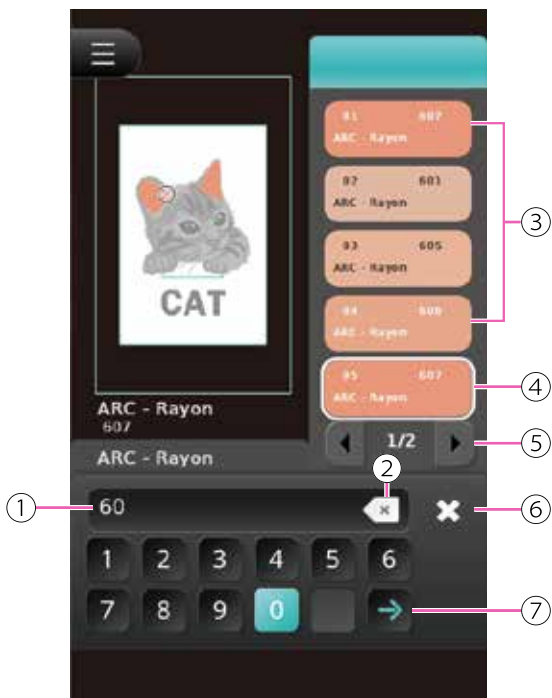
- ① Return to last steps
- ② Select the desired thread brand
- ③ Thread brand selection
- ④ Page switching



Sync to change all thread brand

Click Sync to change all thread brand icon to change all thread to the selected brand.

- ① Sync to change all thread brand
- ② Selected color layer



Search color list numbers

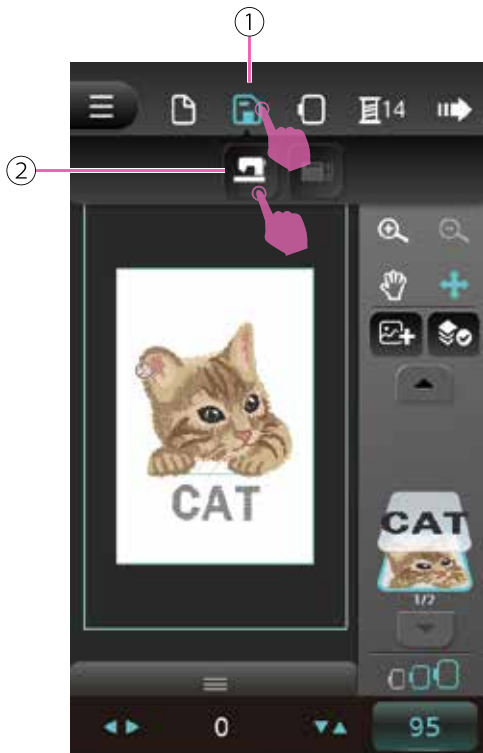
Click Search color list numbers icon to enter the searching page. Input the numbers in color chart, can input up to 12 letters. After input two or more letters and click Confirm icon, the correspond colors will display on the right side.

- ① Input bar
- ② Clear
- ③ Color list
- ④ Selected color
- ⑤ Page switching
- ⑥ Close
- ⑦ Confirm

Note

Searching function is under the same thread brand.

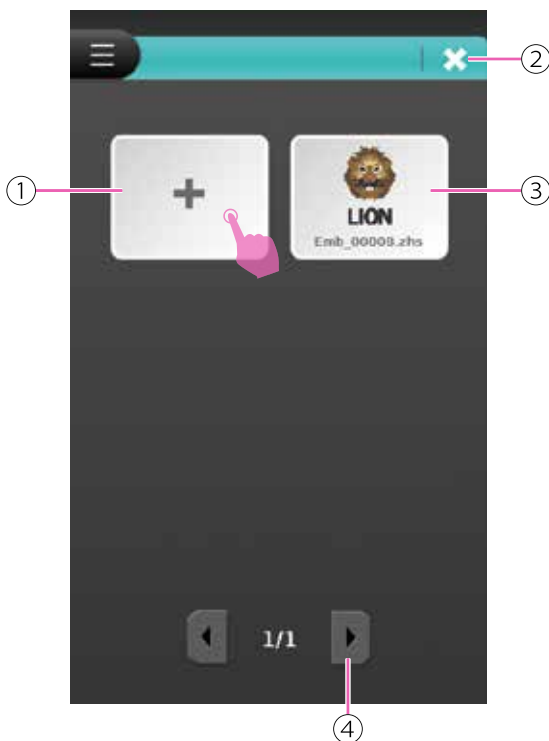
Saving embroidery motifs



Save embroidery pattern

Click Save icon to display the saving options. Click Machine icon to save the embroidery pattern in My favorite folder in the machine.

- ① Save
- ② Save patterns in My favorite folder



Click Add icon to save the pattern, after saved the pattern, the screen will go back to the edit page. The saved pattern will save in order. If you want to save the new pattern by replacing the existing file, click the existing pattern and confirm the warning message.

The folder can save up to 50 patterns. After the memory is full, you can save patterns by replacing the existing files. Click Page switch icon to view other patterns.

Click Close icon to return back to edit page without saving pattern.

- ① Add and save pattern
- ② Close
- ③ The newest saved pattern
- ④ Page switching



Delete saved patterns

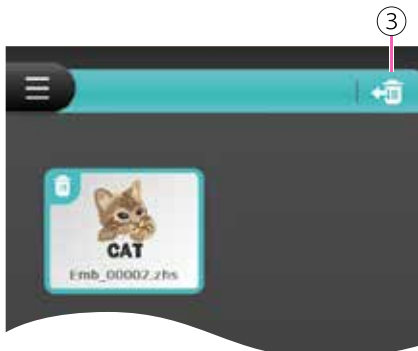
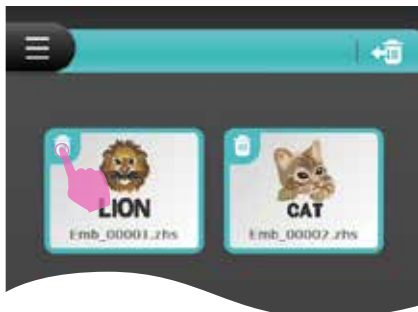
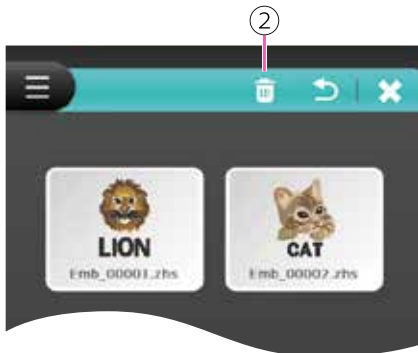
Click My favorite icon to enter saved patterns folder. Click Delete icon, saved pattern will be shown in action color, then select the desired pattern to delete. Confirm the warning message to delete the pattern.

Click Return icon to back to My favorite folder.

① My favorite

② Delete

③ Return

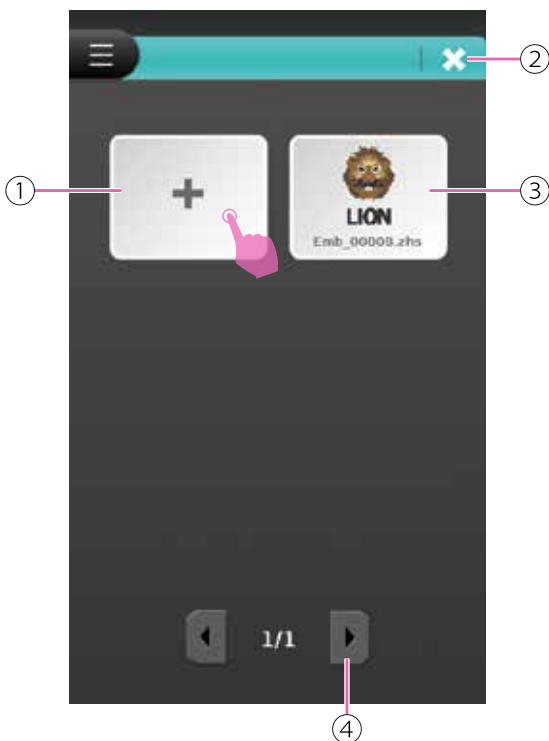




Save embroidery pattern in USB flash drive

Click Save icon to display the saving options. Click USB flash drive icon to save the embroidery pattern in the USB flash drive.

- ① Save
- ② Save patterns in USB flash drive

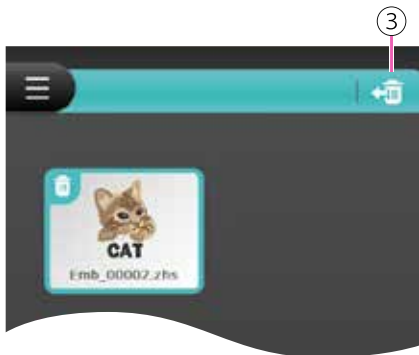
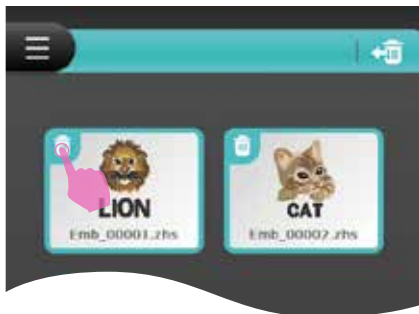


Click Add and save pattern icon to save the pattern, after the pattern saved, the screen will go back to the edit page. The saved pattern will be shown in order. If you want to save the new pattern by replacing the existing file, click the existing pattern and confirm the warning message.

After the USB flash drive's memory is full, you can save patterns by replacing the existing files. Click page switch icon to view other patterns.

Click Close icon to return back to edit page without saving pattern.

- ① Add and save pattern
- ② Close
- ③ The newest saved pattern
- ④ Page switching



Delete the saved pattern in USB flash drive

Click USB flash drive icon to enter the folder. Click Delete icon, the saved patterns will shown in the action color. Select the desired pattern and confirm warning message to delete.

Click Return icon to back to USB flash drive folder.

- ① USB flash drive
- ② Delete
- ③ Return

Edit frame



Move to the center of embroidery hoop

Click the Hoop center icon, the embroidery hoop will move to the place where hoop center and needle point align with.

- ① Move to center of the hoop



Grid

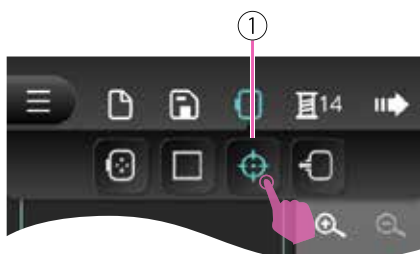
Turning on the grid function can position the embroidery pattern more accurately.

Click the Grid icon one time, the icon displays the cross mark.

Click the Grid icon second time, the icon displays the grid mark.

Click the Grid icon third time, the cross mark and grid mark will disappear and icon shows blank.

- ① Grid



The center point of the pattern

To position the embroidery hoop to ensure the needle will be aligned with embroidery pattern's center.

Click The centerpoint of the pattern icon, the embroidery hoop will use the pattern's centerpoint as the position point. Click the icon again, the position point will return to last position.

- ① The centerpoint of the pattern



Hoop relocater

Click the Hoop relocater icon, the embroidery unit will return to the starting position in order to stored correctly.

- ① Hoop relocater

Embroidery

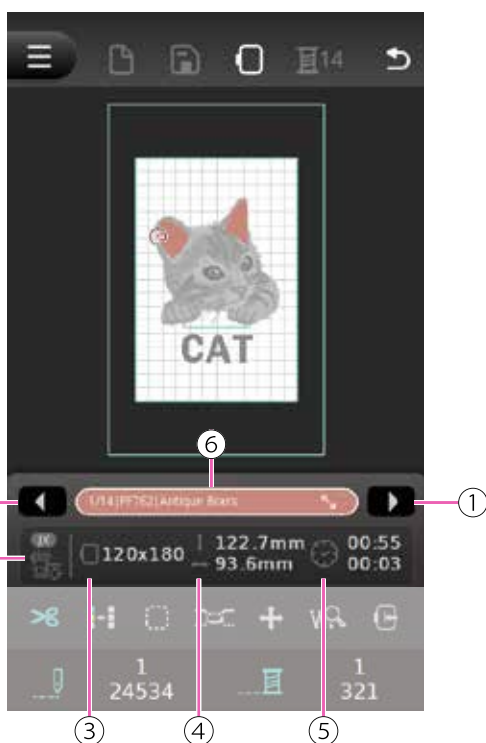


After finish editing the embroidery patterns, click Next icon to enter setting page.

① Next

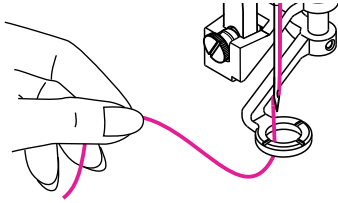
Note

If click Next icon without saving patterns, it will pop out the warning message and enter the save pattern page.



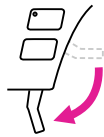
Prepare the embroidery thread, the required thread information will display on the edit page.

- ① The left and right arrow icon to switch the layer
- ② Required presser foot icon
- ③ The current selected embroidery hoop size
- ④ Embroidery pattern size
- ⑤ Required embroidery time
- ⑥ Thread color information



Note

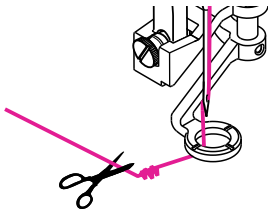
Please refer to page "Threading the upper thread" chapter for more information.



Lower the presser foot lifter and the status light will change from orange to green, which means that everything is ready.



Press the start/stop button to start embroidering.



Note

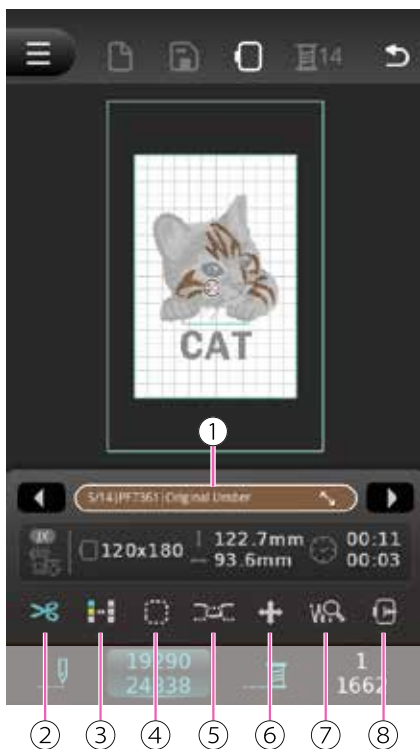
After sewing 5 to 6 stitches, the warning message will pop out, cut the thread at the beginning of the stitching, then press the start/stop button to continue embroidering.



Once all the color threads have been embroidered, your exclusive embroidery pattern has completed.

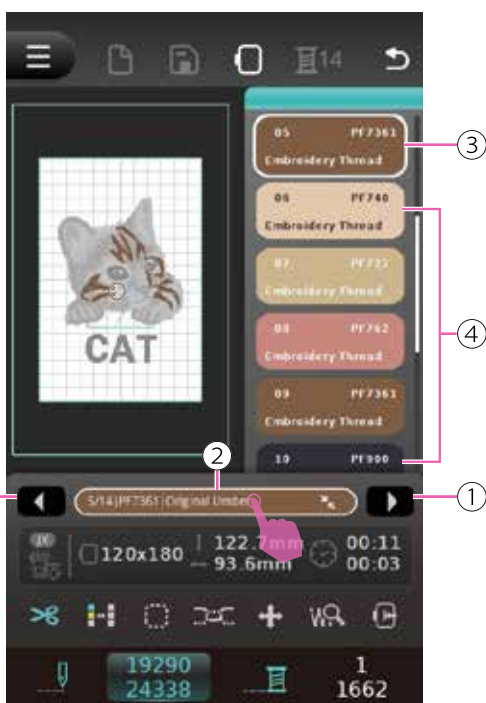
The prompt message pop out then click "check" to return to embroidery pattern types selection screen.

Embroidery setting adjustment



The embroidery setting can adjust with the following options:

- ① Thread color information
- ② Thread cutter
- ③ Single color / multiple colors
- ④ Basting stitch
- ⑤ Thread tension
- ⑥ Move the patterns
- ⑦ Enlarge stitch position
- ⑧ Switch hoop position for threading



Thread color information

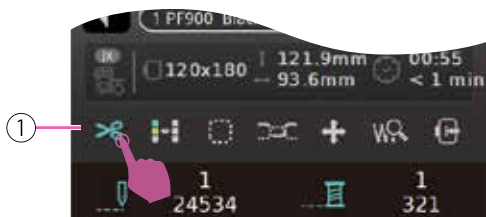
Click Thread color information to display the color name and number, pantone number, thread brand name.

Click the left and right arrow icon or move color layer's slider to view information.

- ① The left and right arrow icon to switch the layer
- ② Color information
- ③ The current thread color
- ④ Thread color layers

Note

If switch the layer, the needle position will change to that layer's first stitch.



Thread cutter setting

Click Thread cutter icon to display the setting. Click Spacing distance setting icon and the left and right arrow icon can adjust the spacing value. The default value is 2mm, and the adjust range for each click is 1mm, the adjustment range is 1mm~15mm.



Click Color lump setting icon can turn on/off the function to trim the thread after each color lump is finish embroidering. The color lump default setting is on and will trim the thread automatically after each color is finish embroidering.

Click Finished cut setting icon can turn on/off the function to trim the thread after finish embroidering. The finished cut default setting is on.

After finished the setting and saved, click Close icon to return to last page.

- ① Thread cutter
- ② Spacing distance setting
- ③ Spacing distance value
- ④ Color lump setting
- ⑤ Finished cut setting
- ⑥ Close

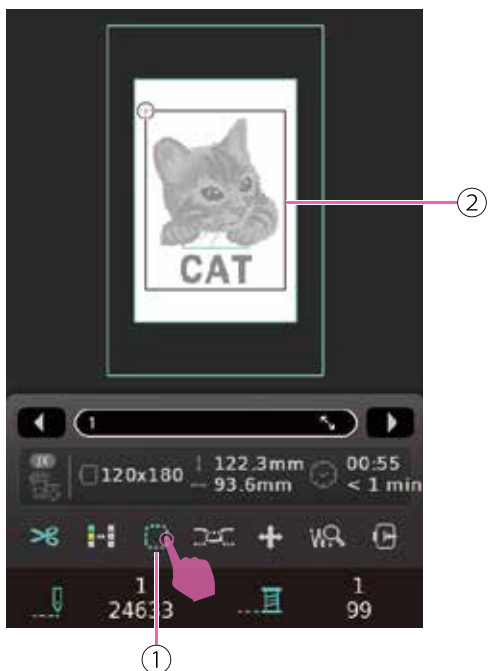


Single color/multiple colors

Click Single color/multiple colors icon to turn on the single color function. It will regard all different colors as single color and embroidering. The color lump cut will be the connect stitch cut, after cut the thread, no need to trim the beginning of the stitching.

Click Single color/multiple colors icon again to switch back to multiple colors.

- ① Single color/multiple colors



Basting

Click Basting icon to baste around the patterns. It can strengthen and fixed the fabric and the lining to prevent them from slipping or shifting.

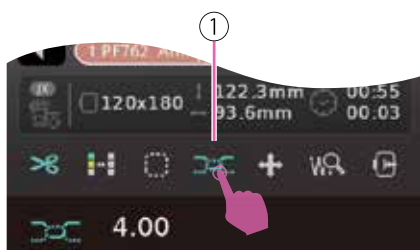
The square frame will display in the preview screen around the pattern. Baste stitches will not have auto lock stitches at the beginning and at the end.

Click Basting icon again to close baste function.

- ① Basting
- ② Square frame

Note

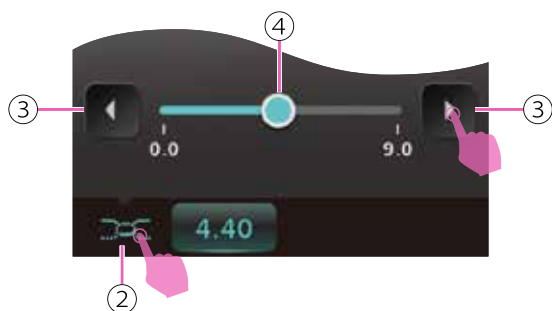
After embroidering with basting function, the preview screen will have the warning message to return back to the first stitch.



Adjusting the embroidery thread tension

Click Thread tension icon to display the thread tension value, click The thread tension icon to display the slider and the left and right arrow icon.

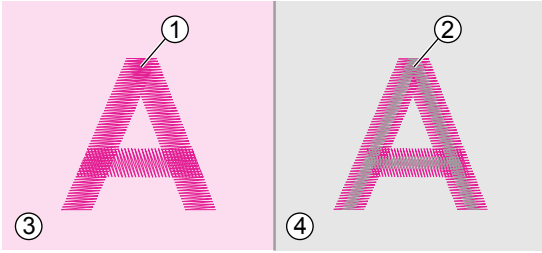
Move the slider or click The left and right arrow icon to adjust the tension value. The default value is 4, and the adjust range for each click is 0.2, the adjustment range is 0.0~9.0.



- ① Thread tension
- ② Thread tension
- ③ The left and right arrow icon
- ④ Tension slider

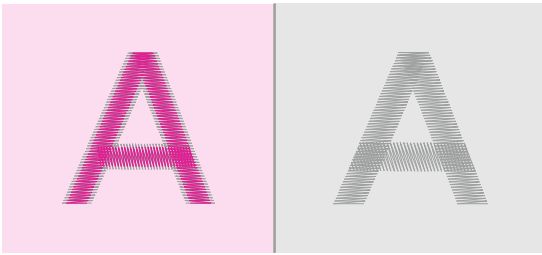
Note

It also can use the physical buttons +/- to adjust value.



The thread tension is correct when upper thread is just visible on back of the fabric.

- ① Upper thread
- ② Bobbin thread
- ③ Right side
- ④ Wrong side



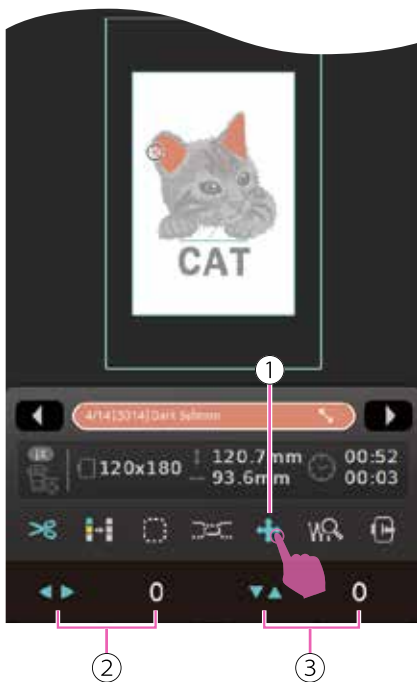
When the bobbin thread is visible on the front of the fabric, the thread tension is too tight for embroidering. To reduce the tension, press the "-" button.



When the upper thread has slack, the thread tension is too loose for embroidering. To increase the tension, press the "+" button.

Note

Please use the same fabric of the project and do a sewing test in advance.



Move the patterns

Click Move the patterns icon to display the multifunction list and move the patterns position.

It will display X-axis and Y-axis position under the preview screen.

- ① Move the patterns
- ② X-axis position
- ③ Y-axis position



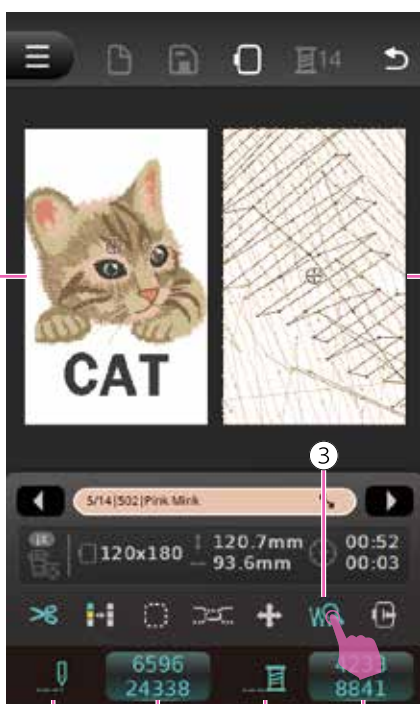
- ④
- ①
- ②
- ①
- ③

Click Direction icon to display the multifunction list. The default value is 0, The left and right or up and down arrow icon in the multifunction list can adjust the X-axis and Y-axis position.

- ① Direction icon
- ② X-axis value
- ③ Y-axis value
- ④ Multifunction list

Note

It also can use the physical buttons +/- to adjust value.



- ①
- ②
- ③
- ④
- ⑤

Enlarge stitch position

Click Enlarge stitch position icon to display the pattern preview screen and the stitch preview screen. It can display all patterns preview and zoom in to view the current stitch position.

Click anywhere in the pattern preview screen, the stitch preview screen will corresponding to show the enlarge stitch. It will display the current stitch number / total stitch numbers and the current stitch number of the layer / total stitch numbers of all layers under the preview screen.

- ① Pattern preview screen
- ② Stitch preview screen
- ③ Enlarge stitch position
- ④ Current stitch number/Total stitch numbers
- ⑤ Current stitch number of the layer/Total stitch numbers of all layers



Adjust stitch position

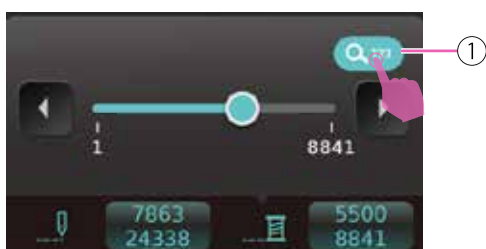
Click Current stitch number/Total stitch numbers or Current stitch number of the layer/Total stitch numbers of all layers icon to display the needle position slider and multifunction list.

Move the needle position slider or click the left and right arrow icon in the multifunction list to adjust the stitch position. The adjust range is 1 stitch to increase or decrease for each click. The stitch position can adjust to the reciprocal 3 stitches of the total stitch numbers.

- ① Needle position slider
- ② The left and right arrow
- ③ Current stitch number/Total stitch numbers
- ④ Current stitch number of the layer/Total stitch numbers of all layers

Note

- If the thread breaks, adjust the stitch number to the first few stitch where the thread broken. It can prevent the obviously seam or segment difference.
- It also can use the physical buttons +/- to adjust value.



Search stitch position

Click Search stitch position icon to enter the next page. Click input bar to enter the numbers to search.

Click Delete icon to delete last number, long press Delete icon to delete all numbers.

Click Confirm or Close icon to return back to the adjust stitch position page.



- ① Search stitch position
- ② Key in bar
- ③ Confirm
- ④ Close
- ⑤ Delete



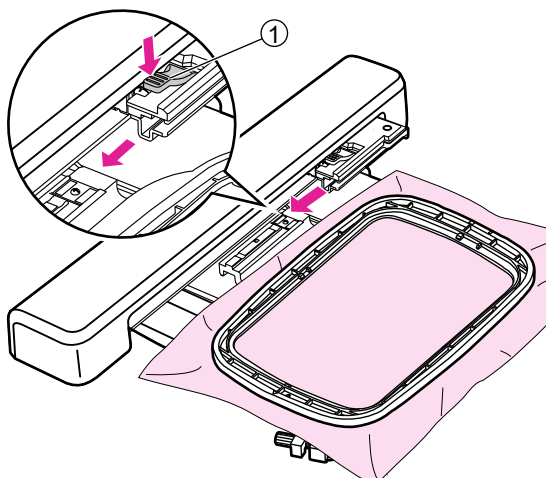
Switch hoop position for threading

When the embroidery need to change the thread and the hoop is too close to the needle, use switch hoop position function to move the hoop and it's easier for threading.

Click Switch hoop position for threading icon and it will display the warning message. Click confirm, the center of the hoop will align to the needle position.

- ① Switch hoop position for threading

Finish the embroidery



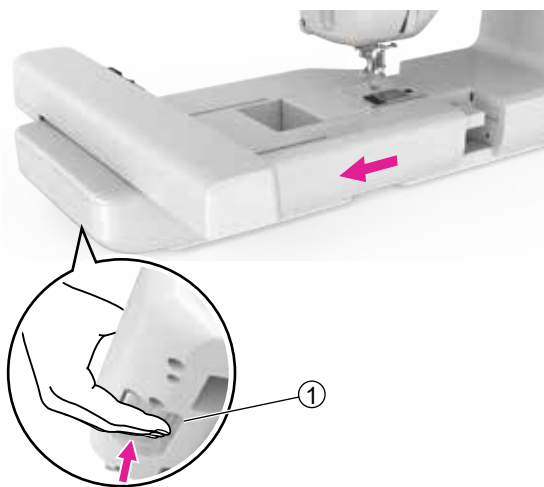
Remove embroidery hoop

⚠ Attention

Install or remove the embroidery hoop, please make sure the needle and presser foot are the highest position, so that can put in & take out smoothly. Otherwise may damage the needle and presser foot.

Press the hoop-securing lever to pull the embroidery hoop backward to remove the embroidery hoop.

- ① Hoop-securing lever



Remove embroidery unit

Hold the embroidery unit and press the release button, then slide the embroidery unit to the left to move out it.

- ① Release button

Note

Please firstly remove the embroidery hoop before removing the embroidery unit.



Maintenance and Trouble Shooting

Maintenance

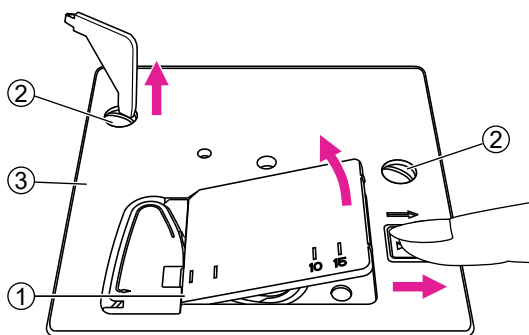
⚠ Attention

Disconnect the power cord from the wall socket before carrying out any maintenance, otherwise injury or electrical shock may result.

Clean the machine surface

If the surface of the sewing machine is dirty, lightly soak a cloth in mild detergent, squeeze it out firmly and then wipe the surface. After cleaning it once in this way, wipe the surface again with a dry cloth.

Do not use any organic solvents or detergents.



Clean the hook

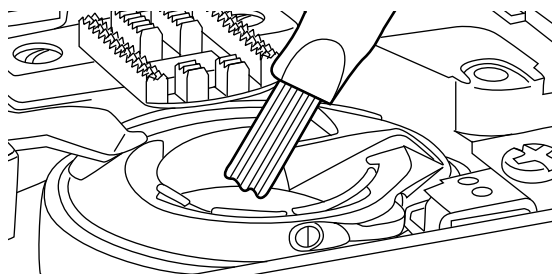
If lint and bits of thread accumulate in the hook, this will interfere with the smooth operation of the machine. Check regularly and clean the stitching mechanism when necessary.

Remove the needle, presser foot and presser foot holder.

Remove the bobbin cover and bobbin.

Remove the screws on the needle plate then remove the needle plate.

- ① Bobbin cover
- ② Screws
- ③ Needle plate



Clean the feed dogs and bobbin case with a brush. And also use a soft and dry cloth to clean them.

Warning Function



Warning beeping sound

- Operate correctly: 1 beep.
- Operate incorrectly: 3-short beeps.
- When the machine is in trouble and can't sew: 1-long beep.

It means that the thread may be twisted or jammed and the handwheel axle can't move. Please look through the "Trouble shooting guide" to find the solution. After the problem has been solved, the machine will be able to sew.

Note

If the problem is still not solved, please contact your local dealer.

⚠ Attention

During sewing, if the thread has been jammed inside the hook and needle movement stops. If you continue to sew, the machine will stop automatically due to safety. If machine stops, please turn off the machine firstly then turn on again.

Trouble shooting guide

Before calling for service, check below trouble shooting guides in advance, if problem still exist, please contact nearest dealer or local service center.

Problem	Cause	Correction
Upper thread breaks	1. The machine is not threaded correctly.	1. Rethread the upper thread.
	2. The thread tension is too tight.	2. Reduce the thread tension (to lower number).
	3. The thread is too thick for the needle.	3. Select a larger needle size.
	4. The needle is not inserted correctly.	4. Remove and reinsert the needle (flat side towards the back).
	5. The thread is wound around the spool holder pin.	5. Remove the reel and wind up the thread onto the reel.
	6. The needle is damaged.	6. Insert a new needle.
Bobbin thread breaks	1. The bobbin case is not inserted correctly.	1. Remove and reinsert the bobbin case and pull on the thread.
	2. The bobbin case is threaded wrong.	2. Check both bobbin and bobbin case if on the correct position.
Skipped stitches	1. The needle is not inserted correctly.	1. Remove and reinsert the needle (flat side towards the back).
	2. The needle is damaged.	2. Insert a new needle.
	3. The wrong size needle has been used.	3. Choose a needle to suit the thread.
	4. The presser foot is not attached correctly.	4. Check and attach it correctly.
	5. The machine is not threaded correctly.	5. Rethread the upper thread.
Needle breaks	1. The needle is damaged.	1. Insert a new needle.
	2. The needle is not correctly inserted.	2. Insert the needle correctly (flat side towards the back).
	3. Wrong needle size for the fabric.	3. Choose a needle to suit the thread and fabric.
	4. The needle clamp screw is loose.	4. Use the screwdriver to tighten the screw.
	5. The upper thread tension too tight.	5. Loosen the upper thread tension.

Problem	Cause	Correction
Loose stitches	1. The machine is not correctly threaded.	1. Check the threading and rethread.
	2. The bobbin case is not threaded correctly.	2. Thread the bobbin case as illustrated.
	3. Needle/fabric/thread combination is wrong.	3. The needle size must suit the fabric and thread.
	4. The thread tension is wrong.	4. Correct the thread tension.
The machine is noisy	1. Fluff or oil have collected on the hook or needle bar.	1. Clean the hook and feed dog.
	2. The needle is damaged.	2. Insert a new needle.
	3. Thread is caught in the hook.	3. Remove the upper thread and bobbin case, clean the bobbin case with a brush.
Uneven stitches	1. Poor quality thread.	1. Select a better quality thread.
	2. The bobbin case is threaded uncorrect.	2. Remove the bobbin case and the thread and reinsert them correctly.
	3. Fabric has been pulled on.	3. Do not pull on the fabric. Lets it be taken by the machine.
The machine doesn't operate	1. The machine is not turned on.	1. Turn on the machine.
	2. The presser foot lifter is raised.	2. Lower the presser foot lifter.
	3. The machine is not plugged in.	3. Connect the power cord to the electric outlet.
Embroidery unit does not move	1.The embroidery unit is not set up correctly.	1. Reset the embroidery unit up correctly.
	2. The machine isn't turned on.	2. Turn on the machine.
	3. No embroidery pattern selected.	3. Select a embroidery pattern.
	4. Install embroidery hoop but without initializing in advance.	4. Remove the embroidery hoop.
The embroidery result is not good enough	1. The thread tension is not right.	1. Adjust to proper thread tension setting.
	2. Poor quality thread.	2. Select a better quality thread and attach spool net to thread.
	3. The thread tends to break and out the thread spool easily while using particular thread type.	3. Attach spool net on the thread.
	4. The wrong size needle has been used.	4. Choose a proper needle according to the fabric.
	5. No enough support due to lack of stabilizer.	5. Use a proper stabilizer according to fabric type.

Problem	Cause	Correction
Embroidery is not neatly completed	1. The thread is tangled and the bobbin case, etc., is plugged up.	1. Remove the tangled thread. When the bobbin case is plugged up, clean the race.
	2. The thread tension is incorrect.	2. Adjust the tension of the upper thread.
	3. The fabric is not fully stretched on the embroidery hoop. The fabric is loose.	3. Stretch the fabric properly on the embroidery hoop.
	4. No stabilizer material is attached.	4. Always use stabilizer material for embroidery with stretch fabrics, thin fabrics, fabrics with a loose weave and fabrics where stitches easily contract.
	5. Objects are placed near the carriage or embroidery hoop.	5. If the embroidery unit carriage or embroidery hoop bumps into objects, the pattern will be misaligned. Do not place objects within the range of embroidery hoop motion.
	6. Material coming out of the embroidery hoop is causing problems.	6. Stretch the fabric on the hoop once again so that the material coming out of the embroidery hoop does not cause problems, rotate the pattern and embroider.
	7. Embroider with a heavy fabric or the fabric material is hanging on the table.	7. During embroidery, if the fabric is hanging on the table will affect the embroidery unit movement, please hold the fabric gently in this case.
	8. The fabric is catching. It is pinched.	8. Stop the machine and set the fabric up correctly.
	9. The embroidery carriage was moved while the embroidery hoop was being removed or attached during embroidery.	9. If the embroidery carriage is moved during the process, the pattern may be misaligned. Be careful when removing or attaching the embroidery hoop.
	10.The needle thread is not threaded correctly.	10.Rethread the machine.
	11.Thread is caught in the hook.	11.Remove the upper thread and bobbin case, turn the handwheel backwards and forwards and remove the thread remnants.

Problem	Cause	Correction
The embroidery result is not good while sewing thin fabric	1. The thread tension is not right.	1. Set a smaller thread tension.
	2. Poor quality thread.	2. Select a better quality thread.
	3. The wrong size needle has been used.	3. Choose a needle size between 9-11 by your fabric type.
	4. No enough support due to lack of stabilizer.	4. Use a proper stabilizer according to fabric type.
Poor quality for cotton batting	1. The thread tension is wrong.	1. Adjust to proper tension setting. (number between 3-5)
	2. The stitch length is wrong.	2. Adjust to proper stitch length. (number between 3.0-4.0)
Embroidery unit doesn't work	1. The machine isn't turned on.	1. Turn on the machine.
	2. No embroidery pattern selected.	2. Select a embroidery pattern.
	3. Install embroidery hoop but without initializing in advance.	3. Remove the embroidery hoop.
Touch screen isn't accurate	1. Touch screen isn't accurate.	1. Re-calibrate the touch screen function.



Embroidery Pattern Chart

Embroidery pattern chart

01

0101

1 PF233



↓ 114.4mm
↔ 110.0mm
⊥ 2878

0102

1 PF304



↓ 165.2mm
↔ 147.4mm
⊥ 6778

0103

1 PF754



↓ 99.0mm
↔ 86.0mm
⊥ 2378

0104

1 PF108



↓ 217.4mm
↔ 159.0mm
⊥ 4575

0105

1 PF489



↓ 189.6mm
↔ 135.8mm
⊥ 4543

0106

1 PF489



↓ 225.2mm
↔ 156.0mm
⊥ 5059

0107

1 PF900



↓ 238.2mm
↔ 158.6mm
⊥ 5493

0108

1 PF157

2 PF256



↓ 115.2mm
↔ 54.4mm
⊥ 1949

0109

1 PF785

2 PF563

3 PF501

4 PF715



↓ 98.0mm
↔ 143.2mm
⊥ 17193

0110

1 PF275

2 PF672

3 PF674

4 PF676



↓ 100.0mm
↔ 33.6mm
⊥ 3409

0111

1 PF182

2 PF1037

3 PF1083

4 PF1011

5 PF182



↓ 96.6mm
↔ 106.0mm
⊥ 10513

0112

1 PF521

2 PF523

3 PF261

4 PF254

5 PF466



↓ 154.0mm
↔ 118.4mm
⊥ 10043

0113

1 PF275

2 PF282

3 PF256

4 PF105

5 PF1011



↓ 72.4mm
↔ 42.8mm
⊥ 4604

0114

1 PF254

2 PF132

3 PF134

4 PF130

5 PF715

6 PF548



↓ 96.2mm
↔ 88.8mm
⊥ 12552

0115

1 PF1085

2 PF231

3 PF108

4 PF192

5 PF523

6 PF1085



↓ 150.0mm
↔ 109.6mm
⊥ 7702

0116

1 PF244

2 PF257

3 PF136

4 PF134

5 PF133

6 PF502



↓ 134.8mm
↔ 48.6mm
⊥ 6704

0117

1 PF276

7 PF578

2 PF273

3 PF277

4 PF578

5 PF576

6 PF574



↓ 87.6mm
↔ 115.2mm
⊥ 14457

0118

1 PF257

7 PF2335

2 PF730

3 PF5205

4 PF542

5 PF531

6 PF561



↓ 99.6mm
↔ 99.2mm
⊥ 11830

0119

1 PF1602

7 PF244

2 PF1600

3 PF2412

4 PF249

5 PF1182

6 PF208



↓ 75.4mm
↔ 42.8mm
⊥ 5591

0120

1 PF229

7 PF198

2 PF232

8 PF546

3 PF256

4 PF1513

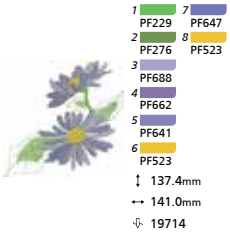
5 PF703

6 PF1511

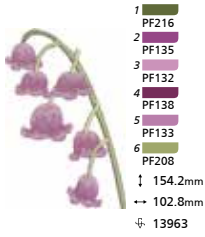


↓ 46.6mm
↔ 67.6mm
⊥ 3332

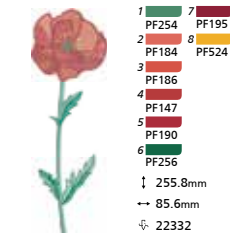
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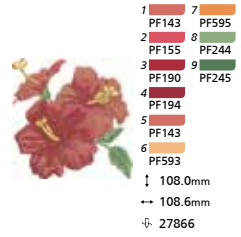
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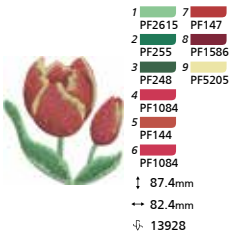
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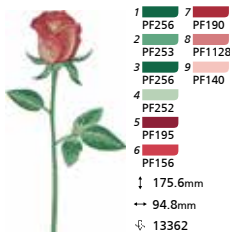
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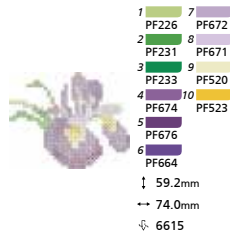
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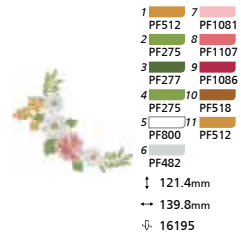
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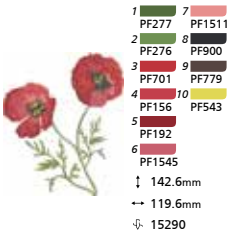
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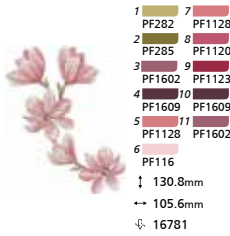
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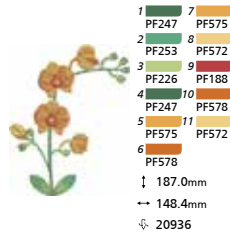
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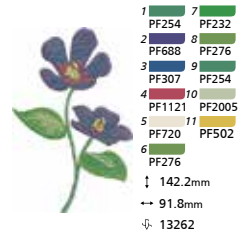
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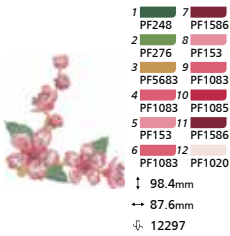
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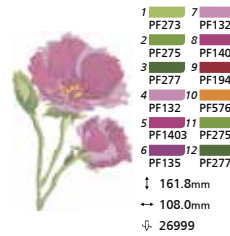
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0133



0134



02

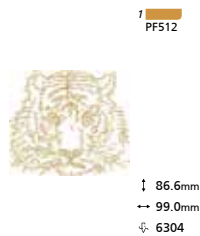
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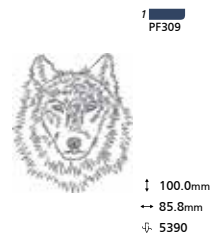
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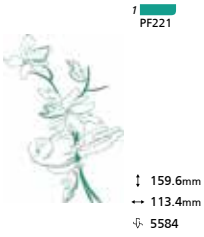
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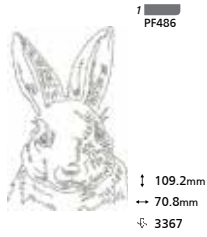
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0205



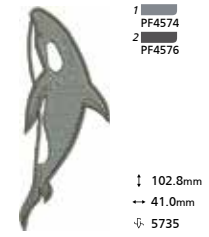
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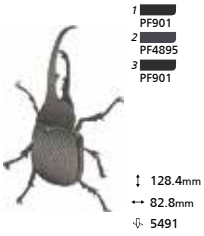
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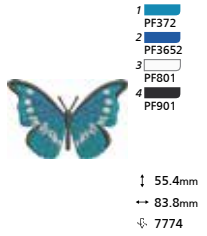
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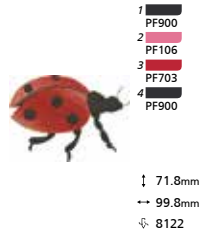
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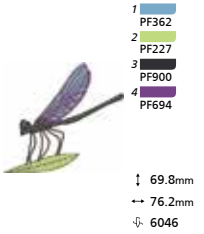
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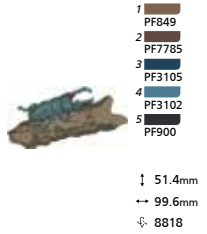
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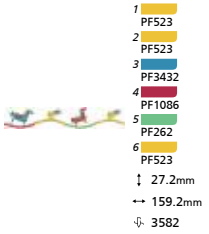
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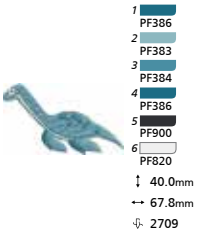
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0216



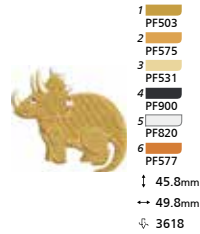
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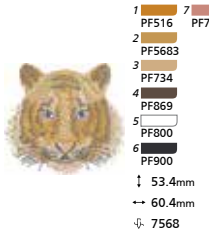
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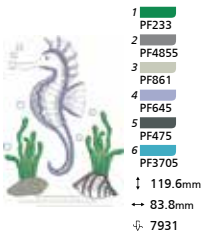
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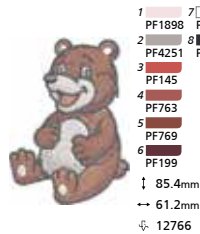
0221



0222



0223



0224



0225



- 1 PF778 PF778
- 2 PF1128 PF900
- 3 PF745
- 4 PF737
- 5 PF744
- 6 PF820
- ↓ 46.46mm
- ↔ 49.6mm
- ⊕ 3945

0226



- 1 PF255 PF438
- 2 PF4571 PF157
- 3 PF4611 PF192
- 4 PF4323
- 5 PF4324
- 6 PF4325
- ↓ 90.4mm
- ↔ 84.4mm
- ⊕ 15210

0227



- 1 PF560 PF7362
- 2 PF563 PF900
- 3 PF565 PF767
- 4 PF7362
- 5 PF730
- 6 PF565
- ↓ 60.6mm
- ↔ 56.4mm
- ⊕ 6638

0228



- 1 PF254 PF196
- 2 PF502 PF701
- 3 PF502 PF701
- 4 PF2814 PF196
- 5 PF720 PF720
- 6 PF502 PF256
- ↓ 91.8mm
- ↔ 118.0mm
- ⊕ 14911

0229



- 1 PF762 PF721
- 2 PF740 PF762
- 3 PF721 PF7361
- 4 PF839 PF900
- 5 PF7361 PF730
- 6 PF740
- ↓ 95.6mm
- ↔ 93.6mm
- ⊕ 23484

0230



- 1 PF140 PF192
- 2 PF140 PF900
- 3 PF185 PF232
- 4 PF306 PF503
- 5 PF306 PF514
- 6 PF185 PF730
- ↓ 24.6mm
- ↔ 130.8mm
- ⊕ 3950

0231



- 1 PF4252 PF4353 PF900
- 2 PF900 PF4252
- 3 PF4353 PF821
- 4 PF7982 PF420
- 5 PF4353 PF7982
- 6 PF4252 PF185
- ↓ 90.0mm
- ↔ 97.0 mm
- ⊕ 13637

0232



- 1 PF731 PF859
- 2 PF779 PF813
- 3 PF813
- 4 PF453
- 5 PF859
- 6 PF779
- ↓ 98.6 mm
- ↔ 97.6mm
- ⊕ 10173

0233



- 1 PF901 PF541 PF2016
- 2 PF453 PF466 PF450
- 3 PF450 PF901 PF901
- 4 PF801 PF4572 PF466
- 5 PF283 PF2014 PF493
- 6 PF282 PF210 PF801
- ↓ 69.2mm
- ↔ 95.4mm
- ⊕ 9700

03

0301



- 1 PF900
- ↓ 40.0mm
- ↔ 139.2mm
- ⊕ 5649

0302



- 1 PF192
- ↓ 104.2mm
- ↔ 120.2mm
- ⊕ 4238

0303



- 1 PF301
- ↓ 37.4mm
- ↔ 37.4mm
- ⊕ 2372

0304



- 1 PF3433
- ↓ 120.0mm
- ↔ 120.0mm
- ⊕ 4095

0305



- 1 PF138
- ↓ 119.8mm
- ↔ 119.8mm
- ⊕ 3733

0306



- 1 PF1729
- ↓ 119.8mm
- ↔ 119.8mm
- ⊕ 4274

0307



- 1 PF192
- ↓ 117.0mm
- ↔ 111.8mm
- ⊕ 3776

0308



- 1 PF192
- ↓ 175.4mm
- ↔ 160.0mm
- ⊕ 11948

0309

1
PF7371



↓ 120.0mm
↔ 104.0mm
⊘ 2257

0310

1
PF602



↓ 199.4mm
↔ 89.4mm
⊘ 12496

0311

1
PF1123



↓ 167.4mm
↔ 68.0mm
⊘ 7206

0312

1
PF1545



↓ 219.4mm
↔ 83.4mm
⊘ 14186

0313

1
PF561



↓ 157.2mm
↔ 55.6mm
⊘ 6177

0314

1
PF3214



↓ 220.0mm
↔ 76.4mm
⊘ 14225

0315

1
PF192



↓ 259.4mm
↔ 31.8mm
⊘ 4592

0316

1
PF140
2
PF140



↓ 28.8mm
↔ 114.0mm
⊘ 4426

0317

1
PF186
2
PF186



↓ 30.6mm
↔ 119.0mm
⊘ 2221

0318

1
PF3218
2
PF3218



↓ 38.6mm
↔ 139.4mm
⊘ 5871

0319

1
PF563
2
PF563



↓ 39.0mm
↔ 140.4mm
⊘ 8341

0320

1
PF2812
2
PF2812



↓ 45.6mm
↔ 156.6mm
⊘ 2922

0321

1
PF190
2
PF190



↓ 39.8mm
↔ 126.8mm
⊘ 1732

0322

1
PF602
2
PF602



↓ 25.6mm
↔ 78.6mm
⊘ 1403

0323

1
PF1032
2
PF1032



↓ 39.0mm
↔ 119.6mm
⊘ 5631

0324

1
PF1900
2
PF1904



↓ 40.2mm
↔ 80.8mm
⊘ 2925

0325

1
PF237
2
PF1120



↓ 67.4mm
↔ 69.6mm
⊘ 3112

0326

1
PF244
2
PF136



↓ 137.4mm
↔ 139.0mm
⊘ 13168

0327

1
PF1900
2
PF165



↓ 50.0mm
↔ 49.0mm
⊘ 1843

0328

1
PF334
2
PF674



↓ 96.2mm
↔ 45.6mm
⊘ 4450

0329



- 1 PF153
- 2 PF153

↓ 162.6mm
 ↔ 43.4mm
 ⚭ 3383

0330



- 1 PF2042
- 2 PF2042
- 3 PF294

↓ 19.0mm
 ↔ 119.8mm
 ⚭ 2435

0331



- 1 PF255
- 2 PF255
- 3 PF1123

↓ 46.6mm
 ↔ 131.2mm
 ⚭ 8151

0332



- 1 PF646
- 2 PF646
- 3 PF201

↓ 32.2mm
 ↔ 87.8mm
 ⚭ 8066

0333



- 1 PF135
- 2 PF2411
- 3 PF135

↓ 99.8mm
 ↔ 60.4mm
 ⚭ 5981

0334



- 1 PF141
- 2 PF141
- 3 PF145
- 4 PF291

↓ 29.0mm
 ↔ 119.8mm
 ⚭ 4006

0335



- 1 PF700
- 2 PF700
- 3 PF525
- 4 PF2215

↓ 64.2mm
 ↔ 80.0mm
 ⚭ 4179

0336



- 1 PF523
- 2 PF107
- 3 PF523
- 4 PF107

↓ 89.6mm
 ↔ 87.0mm
 ⚭ 8590

0337



- 1 PF3875
- 2 PF3875
- 3 PF3873
- 4 PF3874

↓ 131.2mm
 ↔ 115.0mm
 ⚭ 10942

0338



- 1 PF2615
- 2 PF155
- 3 PF180
- 4 PF2635
- 5 PF155

↓ 152.0mm
 ↔ 109.4mm
 ⚭ 11737

0339



- 1 PF800
- 2 PF800
- 3 PF700
- 4 PF3211
- 5 PF525
- 6 PF2215

↓ 81.2mm
 ↔ 100.2mm
 ⚭ 7535

0340



- 1 PF142
- 2 PF621
- 3 PF173
- 4 PF142
- 5 PF800
- 6 PF621
- 7 PF643

↓ 97.0mm
 ↔ 108.8mm
 ⚭ 13113

0341



- 1 PF675
- 2 PF689
- 3 PF10
- 4 PF675
- 5 PF689
- 6 PF6001
- 7 PF10

↓ 90.6mm
 ↔ 87.0mm
 ⚭ 6501

0342



- 1 PF220
- 2 PF1513
- 3 PF593
- 4 PF800
- 5 PF1513
- 6 PF593
- 7 PF220

↓ 114.2mm
 ↔ 92.6mm
 ⚭ 18358

04

0401



- 1 PF172
- 2 PF800
- 3 PF3878

↓ 47.4mm
 ↔ 74.0mm
 ⚭ 4546

0402



- 1 PF4573
- 2 PF4574
- 3 PF4571
- 4 PF4576

↓ 68.8mm
 ↔ 79.8mm
 ⚭ 5257

0403



- 1 PF820
- 2 PF4321
- 3 PF192
- 4 PF4255
- 5 PF416

↓ 60.0mm
 ↔ 84.6mm
 ⚭ 5514

0404



- 1 PF800
- 2 PF483
- 3 PF779
- 4 PF900
- 5 PF503


↓ 55.2mm
 ↔ 55.2mm
 ⚭ 7895

0405



1 PF303
2 PF305
3 PF301
4 PF306
5 PF359
6 PF800
↓ 48.0mm
↔ 101.8mm
⊥ 9653

0406




1 PF754
2 PF784
3 PF753
4 PF752
5 PF4613
6 PF900
↓ 75.6mm
↔ 74.4mm
⊥ 5020

0407




1 PF800 PF245
2 PF483
3 PF4252
4 PF416
5 PF900
6 PF244
↓ 60.6mm
↔ 79.6mm
⊥ 10489

0408




1 PF720 PF188
2 PF733 PF900
3 PF735
4 PF800
5 PF4571
6 PF4574
↓ 47.0mm
↔ 94.8mm
⊥ 4046

0409




1 PF745 PF244
2 PF778 PF243
3 PF779
4 PF800
5 PF779
6 PF245
↓ 49.6mm
↔ 95.4mm
⊥ 8489

0410




1 PF117 PF1123
2 PF1083 PF4576
3 PF391
4 PF393
5 PF117
6 PF1083
↓ 50.0mm
↔ 60.6mm
⊥ 6783

0411



1 PF315 PF4855
2 PF332 PF483
3 PF333 PF245
4 PF900 PF244
5 PF483
6 PF485
↓ 63.4mm
↔ 95.6mm
⊥ 6876


0412



1 PF800 PF154
2 PF483 PF369
3 PF520 PF370
4 PF522 PF483
5 PF102
6 PF104
↓ 55.6mm
↔ 80.2mm
⊥ 8216

05

0501




1 PF356
↓ 56.8mm
↔ 74.8mm
⊥ 2679

0502




1 PF334
↓ 66.4mm
↔ 80.0mm
⊥ 3950

0503




1 PF730 PF900
2 PF3101
3 PF7981
4 PF195
5 PF438
6 PF730
↓ 35.4mm
↔ 109.8mm
⊥ 5645

0504




1 PF578 PF900
2 PF593
3 PF720
4 PF593
5 PF302
6 PF304
↓ 66.2mm
↔ 89.8mm
⊥ 12390

0505




1 PF739 PF900
2 PF739
3 PF275
4 PF155
5 PF532
6 PF800
↓ 150.0mm
↔ 36.8mm
⊥ 4834

0506




1 PF368 PF4895 PF525
2 PF820 PF4256 PF900
3 PF900 PF4251 PF820
4 PF820 PF368 PF703
5 PF4895 PF356 PF900
6 PF900 PF20
↓ 57.4mm
↔ 96.0mm
⊥ 14236

0507




1 PF703 PF486
2 PF730 PF643
3 PF526
4 PF3431
5 PF502
6 PF434
↓ 50.2mm
↔ 25.8mm
⊥ 2562

0508



1 PF730 PF489
2 PF7981 PF199
3 PF703 PF900
4 PF502
5 PF753
6 PF4253
↓ 110.0mm
↔ 65.4mm
⊥ 7848

0509



1 PF900 PF275
2 PF900 PF3761
3 PF900 PF543
4 PF737
5 PF701
6 PF253
↓ 164.8mm
↔ 54.4mm
⊥ 5520

0601

- 1  PF700



↓ 54.6mm
 → 75.6mm
 ⚡ 1439

0602

- 1  PF700



↓ 88.6mm
 → 89.6mm
 ⚡ 6699


0603

- 1  PF700



↓ 71.2mm
 → 60.2mm
 ⚡ 1567







0604

- 1  PF900
- 2  PF703
- 3  PF277
- 4  PF703









↓ 46.6mm
 → 101.0mm
 ⚡ 5061

0605

- 1  PF256
 - 2  PF256
 - 3  PF259
 - 4  PF702
 - 5  PF190
 - 6  PF526
- ↓ 20.0mm
 → 89.6mm
 ⚡ 3226



0606

- 1  PF259
 - 2  PF259
 - 3  PF256
 - 4  PF526
 - 5  PF532
 - 6  PF702
- ↓ 29.6mm
 → 99.6mm
 ⚡ 3175









0607

- 1  PF248
 - 2  PF703
 - 3  PF192
 - 4  PF730
 - 5  PF4323
 - 6  PF522
- ↓ 43.6mm
 → 108.2mm
 ⚡ 13104









0608

- 1  PF256
 - 2  PF256
 - 3  PF259
 - 4  PF730
 - 5  PF900
 - 6  PF702
- ↓ 34.0mm
 → 119.0mm
 ⚡ 3871





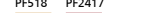



0609

- 1  PF738
 - 2  PF820
 - 3  PF744
 - 4  PF433
 - 5  PF188
 - 6  PF900
- ↓ 55.4mm
 → 54.6mm
 ⚡ 6029





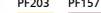



0610

- 1  PF7371
 - 2  PF518
 - 3  PF512
 - 4  PF518
 - 5  PF7371
 - 6  PF249
- ↓ 43.8mm
 → 51.0mm
 ⚡ 5882





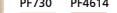



0611

- 1  PF206
 - 2  PF203
 - 3  PF522
 - 4  PF206
 - 5  PF277
 - 6  PF820
- ↓ 119.2mm
 → 85.0mm
 ⚡ 15911









0612

- 1  PF4895
 - 2  PF730
 - 3  PF767
 - 4  PF4895
 - 5  PF4574
 - 6  PF900
- ↓ 202.6mm
 → 159.2mm
 ⚡ 4020









0613

- 1  PF703
 - 2  PF1609
 - 3  PF800
 - 4  PF720
 - 5  PF249
 - 6  PF276
- ↓ 112.4mm
 → 106.6mm
 ⚡ 20090









0614

- 1  PF738
 - 2  PF778
 - 3  PF277
 - 4  PF246
 - 5  PF276
 - 6  PF730
- ↓ 60.0mm
 → 49.6mm
 ⚡ 6699



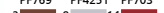





0615

- 1  PF701
 - 2  PF1082
 - 3  PF190
 - 4  PF2014
 - 5  PF214
 - 6  PF234
- ↓ 194.6mm
 → 156.8mm
 ⚡ 25125



0616

- 1  PF769
 - 2  PF719
 - 3  PF255
 - 4  PF222
 - 5  PF2411
 - 6  PF369
- ↓ 239.6mm
 → 150.8mm
 ⚡ 26964



0701

- 1  PF193
- 2  PF900



↓ 72.2mm
 → 101.2mm
 ⚡ 5038

0702

- 1  PF4571
- 2  PF383



↓ 150.8mm
 → 125.0mm
 ⚡ 22262

0703

- 1  PF521
- 2  PF484



↓ 156.0mm
 → 100.0mm
 ⚡ 10703

0704

- 1  PF900
- 2  PF548
- 3  PF190



↓ 71.6mm
 → 101.4mm
 ⚡ 5385

0705



- 1 PF548
- 2 PF703
- 3 PF900

↓ 75.2mm
 ↔ 102.2mm
 ↕ 7519

0706



- 1 PF172
- 2 PF228
- 3 PF703

↓ 93.8mm
 ↔ 70.0mm
 ↕ 7558

0707



- 1 PF565
- 2 PF152
- 3 PF720
- 4 PF523

↓ 98.2mm
 ↔ 56.8mm
 ↕ 6919

0708



- 1 PF1086
- 2 PF1086
- 3 PF523
- 4 PF117
- 5 PF160
- 6 PF3432

↓ 30.8mm
 ↔ 140.8mm
 ↕ 4266

0709



- 1 PF779
- 2 PF744
- 3 PF537
- 4 PF1051
- 5 PF523
- 6 PF239

↓ 98.6mm
 ↔ 82.0mm
 ↕ 10251

0710



- 1 PF643
- 2 PF641
- 3 PF643
- 4 PF644
- 5 PF512
- 6 PF503

↓ 60.8mm
 ↔ 158.8mm
 ↕ 15148

0711



- 1 PF743
- 2 PF703
- 3 PF172
- 4 PF502
- 5 PF3715
- 6 PF2814

↓ 79.6mm
 ↔ 99.8mm
 ↕ 7557

0712



- 1 PF173
- 2 PF712
- 3 PF596
- 4 PF173
- 5 PF592
- 6 PF273

↓ 95.8mm
 ↔ 117.4mm
 ↕ 10487

0713



- 1 PF148
- 2 PF769
- 3 PF4575
- 4 PF900
- 5 PF4571
- 6 PF471

↓ 65.6mm
 ↔ 45.8mm
 ↕ 4982

0714



- 1 PF701
- 2 PF701
- 3 PF371
- 4 PF172
- 5 PF501
- 6 PF200

↓ 248.0mm
 ↔ 61.0mm
 ↕ 6488

0715



- 1 PF277
- 2 PF257
- 3 PF186
- 4 PF785
- 5 PF172
- 6 PF560

↓ 162.8mm
 ↔ 158.4mm
 ↕ 18327

0716



- 1 PF172
- 2 PF170
- 3 PF900
- 4 PF4351
- 5 PF4575
- 6 PF700

↓ 65.2mm
 ↔ 46.8mm
 ↕ 4753

0717



- 1 PF779
- 2 PF503
- 3 PF779
- 4 PF767
- 5 PF800
- 6 PF900

↓ 203.8mm
 ↔ 155.8mm
 ↕ 19831

0718



- 1 PF635
- 2 PF655
- 3 PF634
- 4 PF635
- 5 PF503
- 6 PF475

↓ 190.0mm
 ↔ 159.6mm
 ↕ 17293

0719



- 1 PF544
- 2 PF154
- 3 PF604
- 4 PF365
- 5 PF532
- 6 PF512

↓ 98.8mm
 ↔ 71.6mm
 ↕ 15503

08

0801



- 1 PF454

↓ 46.2mm
 ↔ 59.8mm
 ↕ 855

0802



- 1 PF735
- 2 PF779

↓ 110.0mm
 ↔ 69.4mm
 ↕ 3685

0803



- 1 PF7125
- 2 PF712
- 3 PF7369

↓ 65.0mm
 ↔ 62.2mm
 ↕ 4098

0804



- 1 PF454
- 2 PF3325
- 3 PF489

↓ 104.0mm
 ↔ 95.8mm
 ↕ 4251

0805



- 1 PF309
 - 2 PF304
 - 3 PF301
- ↓ 60.2mm
↔ 43.8mm
⊘ 3090

0806



- 1 PF592
 - 2 PF4352
 - 3 PF1084
 - 4 PF370
- ↓ 51.0mm
↔ 47.4mm
⊘ 3310

0807



- 1 PF521
 - 2 PF700
 - 3 PF106
 - 4 PF523
- ↓ 62.8mm
↔ 50.0mm
⊘ 3880

0808



- 1 PF501
 - 2 PF501
 - 3 PF155
 - 4 PF170
 - 5 PF501
- ↓ 142.2mm
↔ 26.8mm
⊘ 4038

0809



- 1 PF145
 - 2 PF523
 - 3 PF7371
 - 4 PF487
 - 5 PF7371
- ↓ 48.0mm
↔ 101.2mm
⊘ 5372

0810



- 1 PF486
 - 2 PF102
 - 3 PF673
 - 4 PF900
 - 5 PF4835
- ↓ 41.6mm
↔ 52.6mm
⊘ 2117

0811



- 1 PF900
 - 2 PF778
 - 3 PF751
 - 4 PF720
 - 5 PF502
- ↓ 72.0mm
↔ 78.0mm
⊘ 6551

0812



- 1 PF5681
 - 2 PF744
 - 3 PF4256
 - 4 PF781
 - 5 PF489
- ↓ 84.8mm
↔ 80.0mm
⊘ 5304

0813



- 1 PF800
 - 2 PF4571
 - 3 PF190
 - 4 PF197
 - 5 PF900
- ↓ 68.2mm
↔ 61.2mm
⊘ 6074

0814



- 1 PF720
 - 2 PF523
 - 3 PF152
 - 4 PF3431
 - 5 PF523
- ↓ 47.2mm
↔ 38.4mm
⊘ 3421

0815



- 1 PF5681
 - 2 PF744
 - 3 PF1512
 - 4 PF4256
 - 5 PF489
- ↓ 69.2mm
↔ 32.2mm
⊘ 2636

0816



- 1 PF283
 - 2 PF735
 - 3 PF820
 - 4 PF163
 - 5 PF700
 - 6 PF546
- ↓ 76.8mm
↔ 70.4mm
⊘ 6661

0817



- 1 PF1512
 - 2 PF291
 - 3 PF522
 - 4 PF233
 - 5 PF3705
 - 6 PF489
- ↓ 93.6mm
↔ 77.8mm
⊘ 6536

0818



- 1 PF592 PF306
 - 2 PF730
 - 3 PF265
 - 4 PF533
 - 5 PF306
 - 6 PF6655
- ↓ 56.4mm
↔ 43.6mm
⊘ 4835

0819



- 1 PF171 PF106
 - 2 PF142
 - 3 PF676
 - 4 PF673
 - 5 PF3433
 - 6 PF3431
- ↓ 65.6mm
↔ 33.4mm
⊘ 3810

0820



- 1 PF753 PF753
 - 2 PF421 PF573
 - 3 PF100
 - 4 PF282
 - 5 PF573
 - 6 PF769
- ↓ 46.8mm
↔ 45.8mm
⊘ 5004

0821



- 1 PF305 PF305
 - 2 PF188 PF721
 - 3 PF198 PF720
 - 4 PF302
 - 5 PF304
 - 6 PF4576
- ↓ 103.8mm
↔ 57.4mm
⊘ 5071

0822



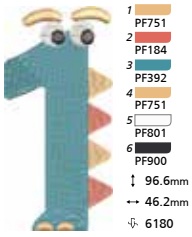
- 1 PF386 PF561
 - 2 PF384 PF4573
 - 3 PF465 PF482
 - 4 PF565 PF721
 - 5 PF2041
 - 6 PF219
- ↓ 80.0mm
↔ 96.0mm
⊘ 6259

0823



- 1 PF711 PF1512
 - 2 PF712 PF369
 - 3 PF713 PF3705
 - 4 PF111 PF1511
 - 5 PF1510 PF1512
 - 6 PF1511 PF1510
- ↓ 98.2mm
↔ 44.6mm
⊘ 13450

0901



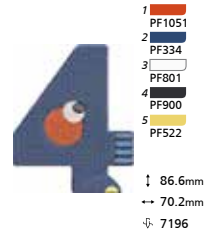
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0903



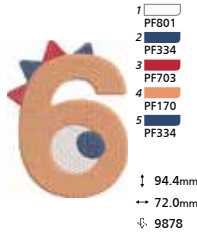
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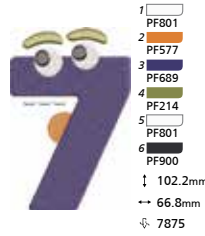
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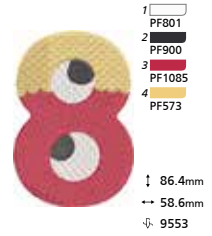
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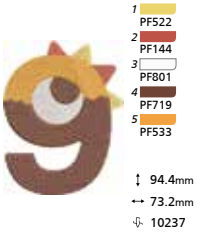
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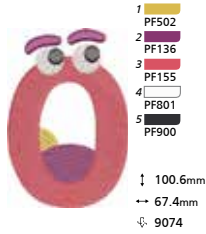
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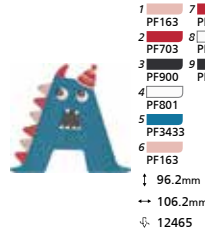
0909



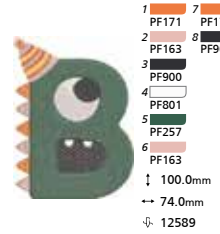
0910



0911



0912



0913



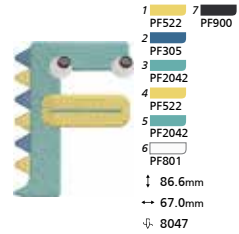
0914



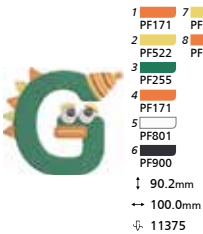
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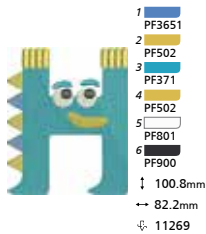
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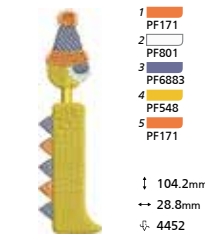
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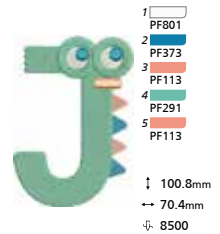
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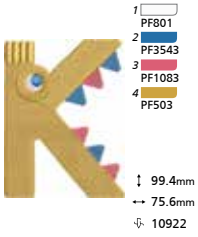
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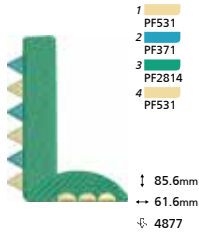
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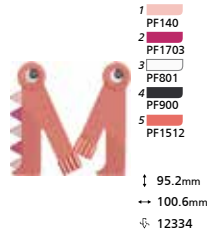
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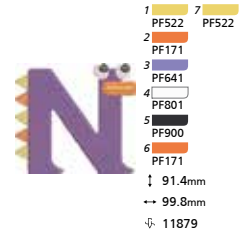
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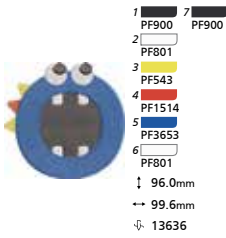
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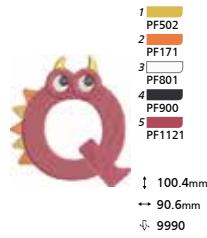
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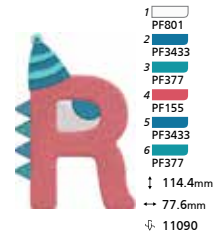
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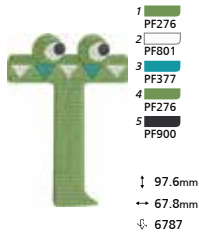
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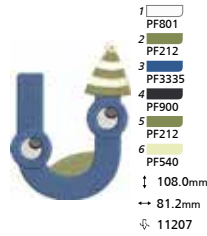
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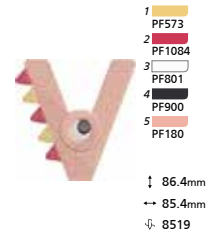
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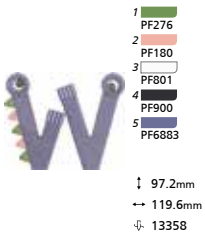
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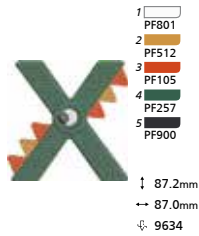
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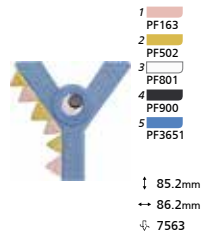
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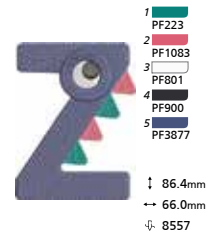
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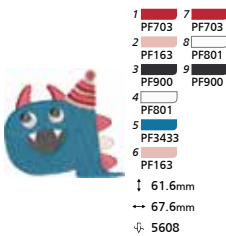
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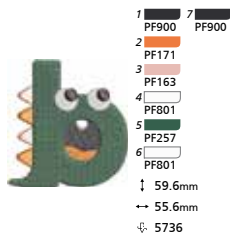
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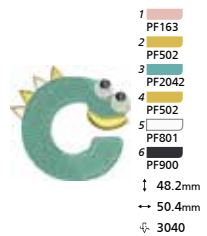
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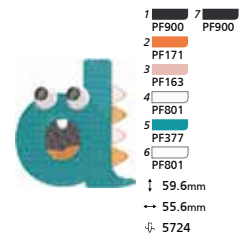
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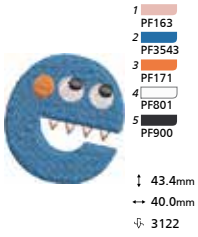
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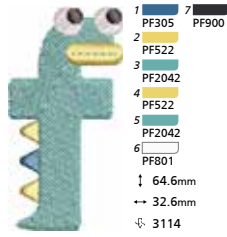
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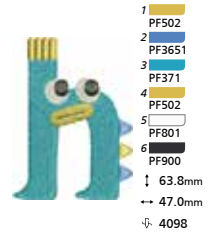
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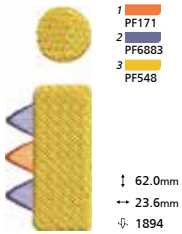
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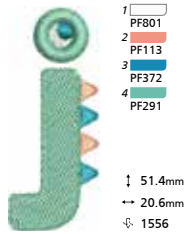
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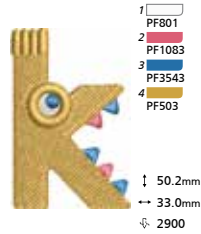
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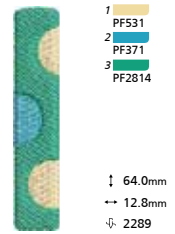
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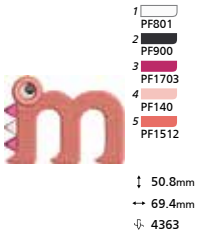
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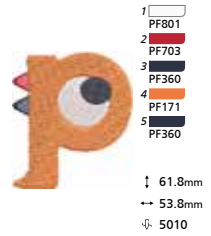
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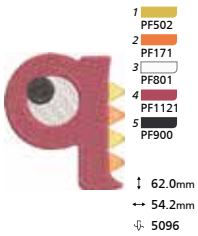
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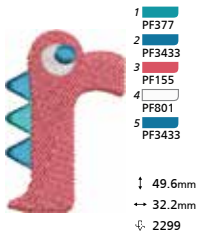
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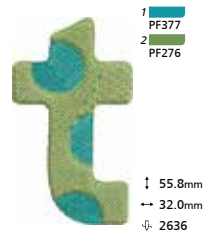
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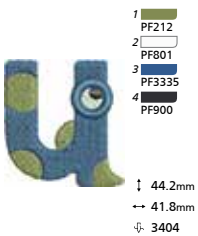
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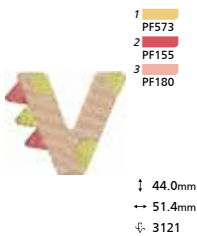
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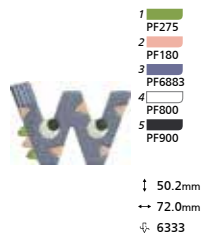
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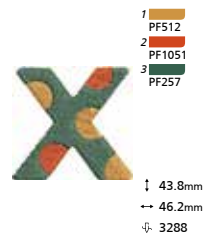
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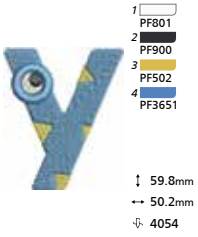
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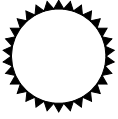
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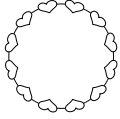
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01



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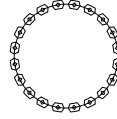
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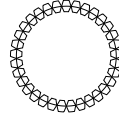
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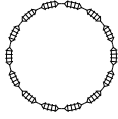
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06



07



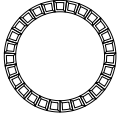
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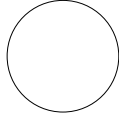
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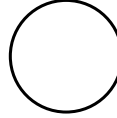
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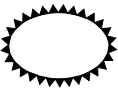
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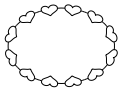
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01



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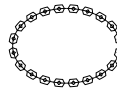
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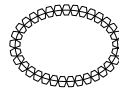
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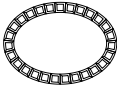
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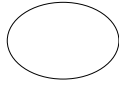
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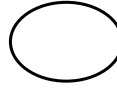
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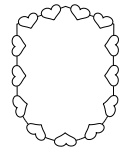
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01



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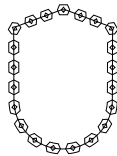
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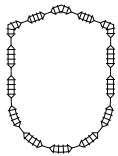
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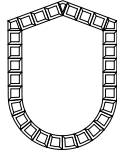
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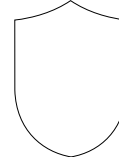
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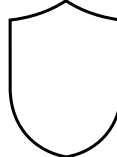
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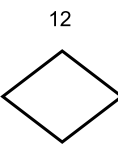
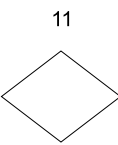
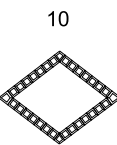
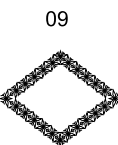
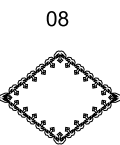
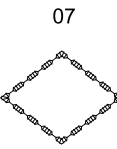
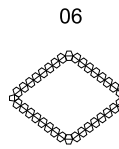
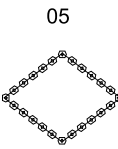
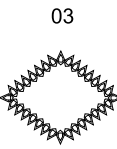
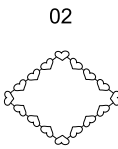
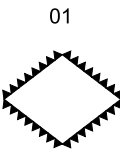
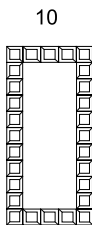
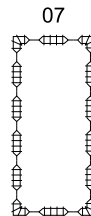
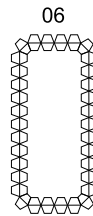
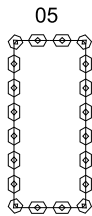
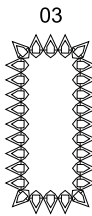
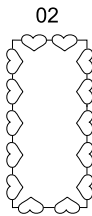
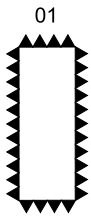
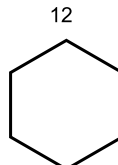
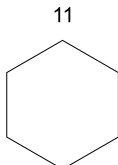
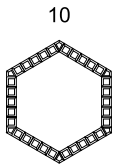
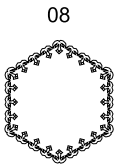
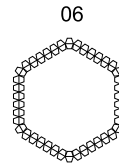
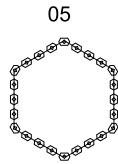
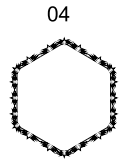
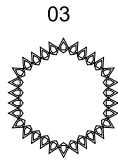
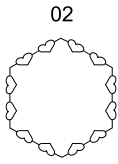
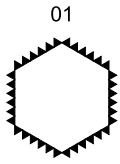


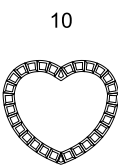
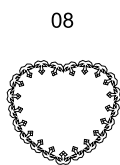
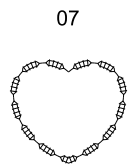
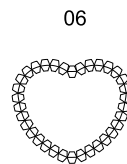
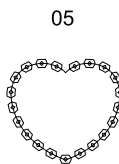
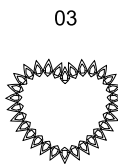
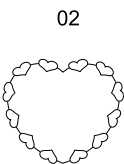
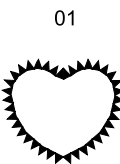
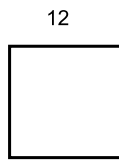
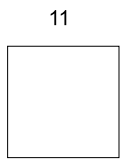
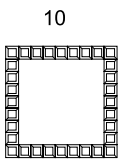
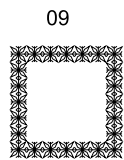
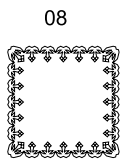
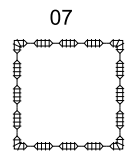
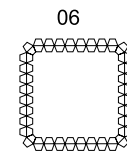
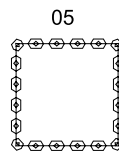
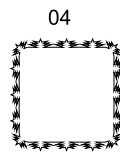
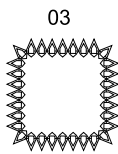
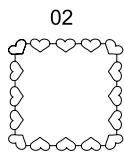
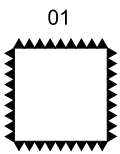
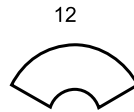
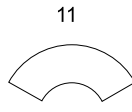
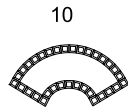
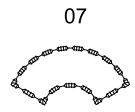
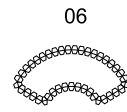
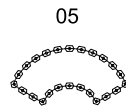
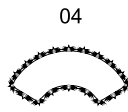
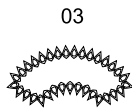
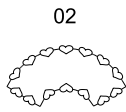
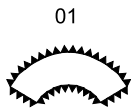
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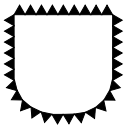
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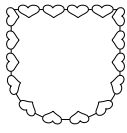




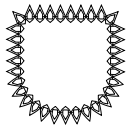
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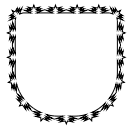
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03



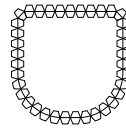
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05



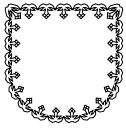
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07



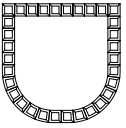
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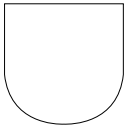
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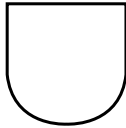
10



11



12



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A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

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01	02	03	04	05	06	07	08	09	10	11	12	13
A	B	C	D	E	F	G	H	I	J	K	L	M

14	15	16	17	18	19	20	21	22	23	24	25	26
N	O	P	Q	R	S	T	U	V	W	X	Y	Z



01	02	03	04	05	06	07	08	09	10	11	12	13
A	B	C	D	E	F	G	H	I	J	K	L	M

14	15	16	17	18	19	20	21	22	23	24	25	26
N	O	P	Q	R	S	T	U	V	W	X	Y	Z

2001

1 PF185



↓ 34.0mm
↔ 81.2mm
⊘ 1346

2002

1 PF199



↓ 94.8mm
↔ 102.4mm
⊘ 3974

2003

1 PF524



↓ 77.8mm
↔ 80.8mm
⊘ 2929

2004

1 PF564
2 PF544



↓ 29.4mm
↔ 95.6mm
⊘ 1033

2005

1 PF130
2 PF132



↓ 79.8mm
↔ 78.4mm
⊘ 2729

2006

1 PF243
2 PF163



↓ 99.0mm
↔ 94.0mm
⊘ 7224

2007

1 PF102
2 PF103



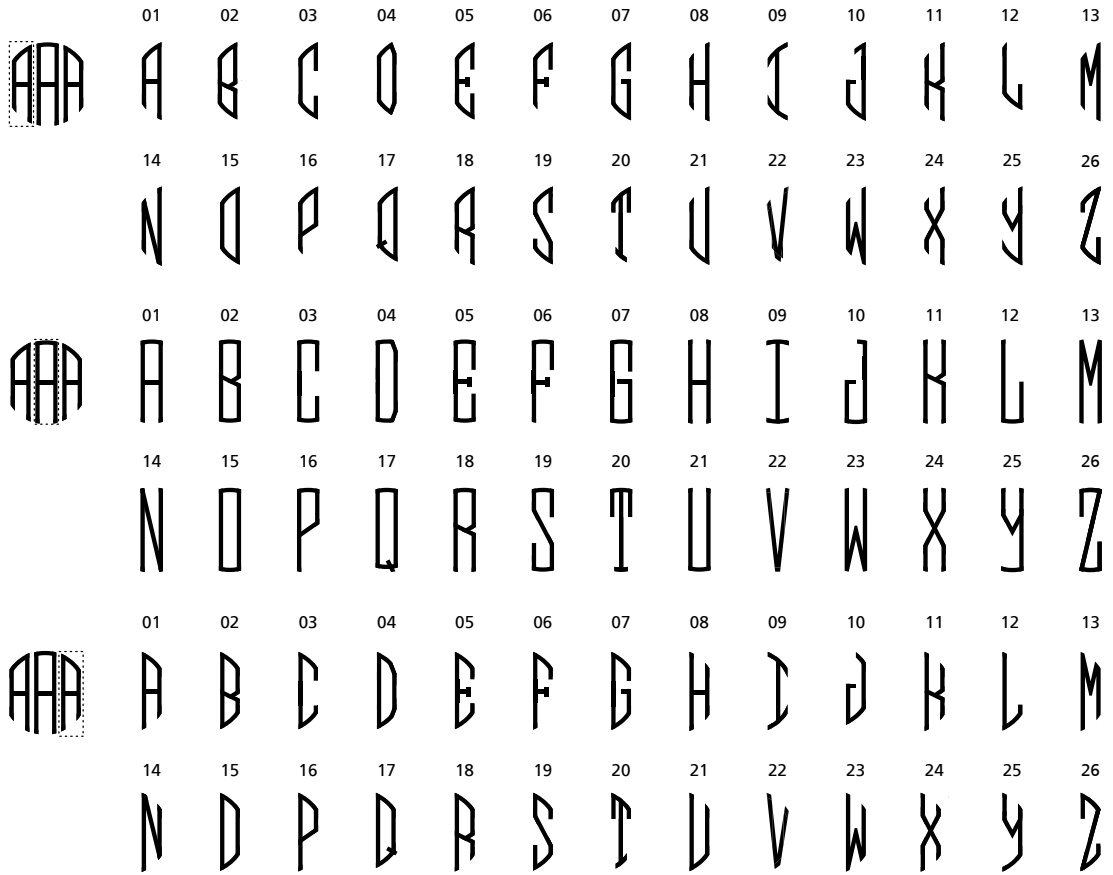
↓ 84.8mm
↔ 76.8mm
⊘ 2045

2008

1 PF561
2 PF564



↓ 77.2mm
↔ 50.4mm
⊘ 2573



3001

1 PF512



↓ 40.2mm
→ 70.0mm
⊕ 3117

3002

1 PF200



↓ 69.0mm
→ 110.2mm
⊕ 3652

3003

1 PF601



↓ 113.4mm
→ 113.6mm
⊕ 7223

3004

1 PF332



↓ 111.0mm
→ 88.4mm
⊕ 8162

3005

1 PF305



↓ 94.0mm
→ 41.2mm
⊕ 1479

3006

1 PF103

2 PF310



↓ 105.0mm
→ 93.6mm
⊕ 2478

3007

1 PF147

2 PF737



↓ 128.0mm
→ 90.4mm
⊕ 5889

3008

1 PF564

2 PF525

3 PF544



↓ 103.0mm
→ 104.2mm
⊕ 1960



Creative Patterns

Creative patterns chart

10



1001

- 1 PF742
- 2 PF591
- 3 PF7785
- 4 PF522
- 5 PF3211
- 6 PF742

↑ 69.8mm
→ 57.4mm
⌵ 5036



1002

- 1 PF273
- 2 PF275
- 3 PF277
- 4 PF695
- 5 PF135

↑ 97.4mm
→ 98.0mm
⌵ 10509



1003









- 1 PF713
- 2 PF7367
- 3 PF355
- 4 PF1083
- 5 PF901
- 6 PF535

↑ 56.0mm
→ 70.6mm
⌵ 2453



1004

↑ 80.6mm
↔ 51.2mm
⚡ 3407

- 1  PF169
- 2  PF181
- 3  PF434
- 4  PF521
- 5  PF523
- 6  PF181
- 7  PF434
- 8  PF901



1005

↑ 83.4mm
↔ 83.2mm
⚡ 4244

- 1  PF534
- 2  PF700
Add appliqué fabric
- 3  PF3214
Trim appliqué fabric
- 4  PF700
Add appliqué fabric
- 5  PF3214
Trim appliqué fabric
- 6  PF3651
- 7  PF534
- 8  PF900



1006

↑ 87.2mm
↔ 99.6mm
⚡ 4232

- 1  PF700
Add appliqué fabric
- 2  PF3214
Trim appliqué fabric
- 3  PF561



1007

1 PF133

2 PF135

↓ 79.8mm

↔ 80.2mm

⚡ 12738



1008

1 PF206

2 PF720

Add EVA

3 PF1085

4 PF544

↓ 99.9mm

↔ 53.5mm

⚡ 3067



1009

1 PF522

2 PF142

3 PF1601

Add EVA

4 PF184

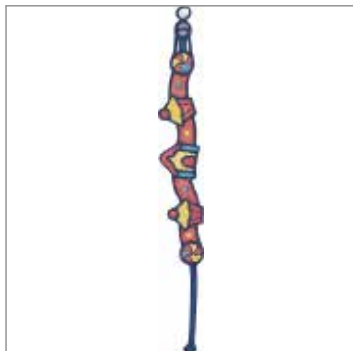
Add EVA

5 PF142

↓ 55.6mm

↔ 69.0mm

⚡ 4192



1010





- 1  PF1107
- 2  PF522
- 3  PF371
- 4  PF355

↓ 244.8mm
 ↔ 29.2mm
 ↕ 15234



1011



- 1  PF782
 - 2  PF754
 - 3  PF754
 - 4  PF754
- Add pop up design (b)

↓ 63.8mm
 ↔ 81.6mm
 ↕ 4093

1012



- 1  PF782
- 2  PF754

↓ 40.6mm
 ↔ 58.2mm
 ↕ 2057



1013



1 PF604

↓ 57.0mm
↔ 61.6mm
⚡ 1218



1014



1 PF604

↓ 53.4mm
↔ 61.4mm
⚡ 1329



1015



1 PF604

↓ 53.6mm
↔ 49.0mm
⚡ 909



1016



1 PF604

↓ 53.4mm
↔ 46.2mm
⚡ 1135



1017



1 PF604

↓ 36.8mm
↔ 42.4mm
⚡ 951



1018



1 PF604

↓ 18.6mm
↔ 18.4mm
⚡ 315



1019



1 PF218

↓ 27.2mm
↔ 28.2mm
⚡ 623



1020



1 PF218

↓ 23.0mm
↔ 38.0mm
⚡ 603



1021



1 PF218

↓ 31.8mm
↔ 29.4mm
⚡ 655



Icon illustrate



Post-processing

Additional processing is required to complete the project.

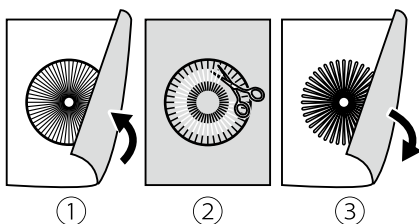


Fringe embroidery

Three processing choices available to complete the Fringe Embroidery.



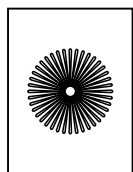
A



①

②

③



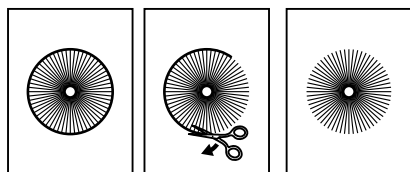
④

Method A:

- ① After finish the embroidering, turn the piece over to the backside.
- ② Cut the lower threads of embroidery patterns.
- ③ Turn the piece over to the frontside.
- ④ Completed.



B



①

②

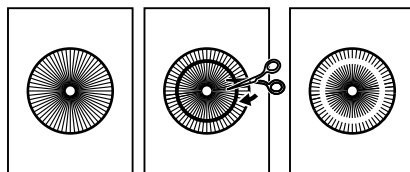
③

Method B:

- ① Finish the embroidering.
- ② Cut the outer edge threads of embroidery patterns.
- ③ Completed.



C



①

②

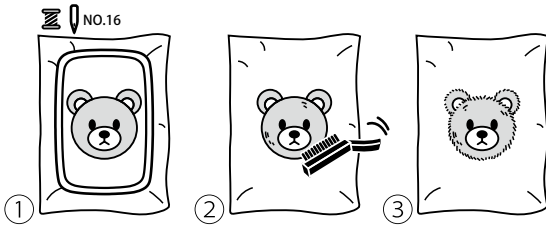
③

Method C:

- ① Finish the embroidering.
- ② Cut the upper threads of embroidery patterns.
- ③ Completed.



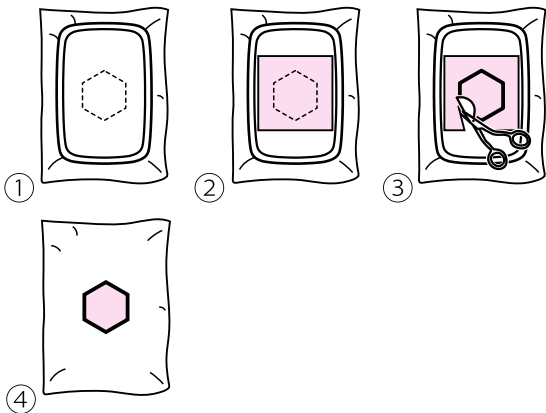
Brushed embroidery



- ① Change needle size to #16/100, use wool embroidery thread and JX presser foot.
- ② Brush the thread by iron brush or velcro.
- ③ Completed.



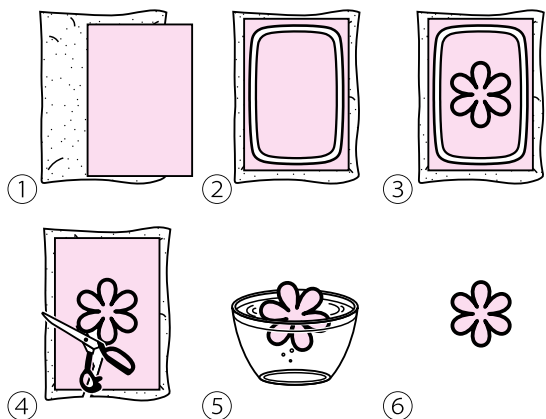
Appliqué



- ① Mark the patch position on the fabric first.
- ② Place the patch on the embroidery area and continue embroidery.
- ③ Cut the excess fabric away.
- ④ Completed.



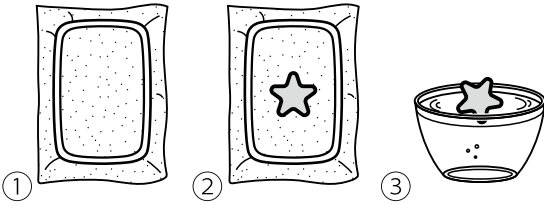
Freestanding organza



- ① Use water-soluble stabilizer and organza.
- ② Place the water-soluble stabilizer underneath the organza, and hoop them firmly.
- ③ Finished the embroidery.
- ④ Cut the excess organza and stabilizer away.
- ⑤ Soak the design until the water-soluble stabilizer has dissolved.
- ⑥ Completed.



Freestanding



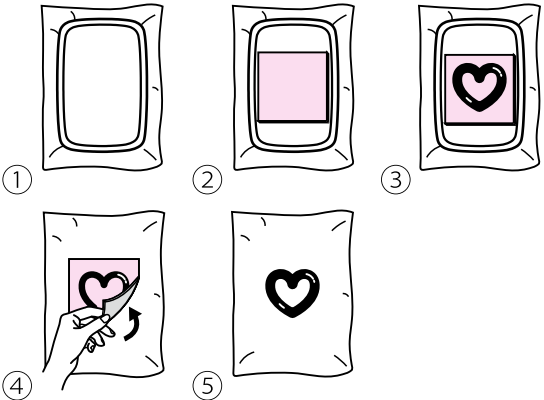
- ① Use water-soluble stabilizer.
- ② Finished the embroidery.
- ③ Soak the design until the water-soluble stabilizer has dissolved.
- ④ Completed.



④



3D foam embroidery



- ① Hooping the fabric firmly.
- ② Place EVA foam over the patterns where you want to embroidery.
- ③ Finish the embroidery.
- ④ Remove excess foam material.
- ⑤ Completed.

Post-processing tutorial - Butterfly



It will need to use the embroidery pattern 1011~1012.



Material preparation:

- ① Organza fabric
- ② Water-soluble stabilizer
- ③ Hand stitching needle and embroidery thread
- ④ Few pieces of sequins
- ⑤ Hair pin *1pc
- ⑥ Webbing 1*pc 6mm
- ⑦ Glue gun



Hooing

Place the two layers of water-soluble stabilizer underneath the organza, and hoop them firmly. Make sure it's tight with no wrinkles, to have a better embroidery performance.



Start Embroidery

Finish embroidery pattern #1012 (Use the same bobbin color thread as upper thread).

When embroidery is finished, please trim the picture according to the shape .



Start Embroidery

- Finish embroidery pattern #1011. (Use the same bobbin color thread as upper thread)
- Finish the third layer embroidery, put above of #1012 pattern at the center place.
- Finish the fourth layer embroidery. (Fix the #1012 embroidery pattern)



Cut out the shape.



Dissolved the water-soluble stabilizer

Soak the butterfly design until the water-soluble stabilizer has dissolved.



Place a fabric in between and use flatiron to dry the design.



Sequins

Place the sequins at the wings and sew (Use the same bobbin color thread as upper thread).



Fixed hairpin

Cut the webbing to hairpin length, then use a glue gun to stick the webbing on the hairpin.



Use a glue gun to stick the butterfly on the webbing.



Completed!

Post-processing tutorial - Flower



It will need to use the embroidery pattern 1013~1021.



Material preparation:

- ① Organza (purple/green)
- ② Water-soluble stabilizer
- ③ Hand stitching needle and embroidery thread
- ④ Pearl *1pc
- ⑤ Clip *1pc
- ⑥ Non-woven fabric
- ⑦ Glue gun



Hooping

Place the two layers of water-soluble stabilizer underneath the purple organza, and hoop them firmly. Make sure it's tight with no wrinkles, to have a better embroidery performance.



Start embroidery - petals (1013-1018)

Finish embroidery pattern of the petals (Use the same bobbin color thread as upper thread).



Hooping

Place the two layers of water-soluble stabilizer underneath the green organza, and hoop them firmly. Make sure it's tight with no wrinkles, to have a better embroidery performance.



Start embroidery - leafs (1019-1021)

Finish embroidery pattern of the leafs (Use the same bobbin color thread as upper thread).



Cut out the shape.



Dissolved the water-soluble stabilizer

Soak the petals and leafs design until the water-soluble stabilizer has dissolved.



Place a fabric in between and use flatiron to dry the design.



Place petals in the proper order

Stitch all pieces by hand to complete the project.



Place petals in proper order and hand stitching petals along with a bead to fit it.



Adhesive the clip

Use the glue gun to adhesive the non-woven fabric behind the clip.



Use the glue gun to adhesive the non-woven fabric in the back of the leaves.



Use the glue gun to adhesive the leaves in the back of the petals.



Completed!



Do not dispose of electrical appliances as unsorted municipal waste, use separate collection facilities.

Contact your local government for information regarding the collection systems available.

If electrical appliances are disposed of in landfills or dumps, hazardous substances can leak into the groundwater and get into the food chain, damaging your health and well-being.

When replacing old appliances with new ones, the retailer is legally obligated to take back your old appliance for disposal at least for free of charge.

