

EE 9002A

DESIGN
FOR
BETTER
LIVING

Crane



rechargeable single electric **breast pump**

Thank You

Congratulations on choosing the Crane Electric Breast Pump. The Crane Single Breast Pump is designed to mimic a baby's natural sucking. Use it to express your milk efficiently in whisper quiet comfort. The soft silicone breast cushion and easily adjustable modes help to stimulate milk let down, whilst gently massaging and squeezing the breast and nipple.

Cleaning, caring for and using your pump is a breeze with the built-in rechargeable battery, fully closed system with anti-backflow and easy to assemble 2-piece silicone soft breast shield and milk collection sets.

Design for better living.

Introduction

Functions & features

Your Crane Breast Pump has the following functions and features:

- Your pump includes everything you need for pumping to support better milk supply.
- Hospital level performance: A fully closed system with anti-backflow offers full suction, hygienic pumping.
- Suction strength controls: Different levels of suction can be set and adjusted easily with memory function.
- Ergonomic Milk Collection Kit: Silicone 3D Cushions allow for a more comfortable fit and help to apply gentle pressure, better suction and massage action to stimulate lactation while pumping.
- Letdown cycle: “Stimulation” mode massages the nipple and areola to encourage effective letdown.
- Portable, compact design: Gives you and baby more flexibility to pump whether at home or on the go. Your Crane Electric Breast Pump comes complete with a built in rechargeable li-ion polymer battery.

Intended use

This electric breast pump is used to express milk from lactating women’s breasts. The milk collection kit that comes with this pump is intended for single use only and is not intended for multiple users. If the pump is to be used by more than one user, every mother must have her own Milk Collection Kit.

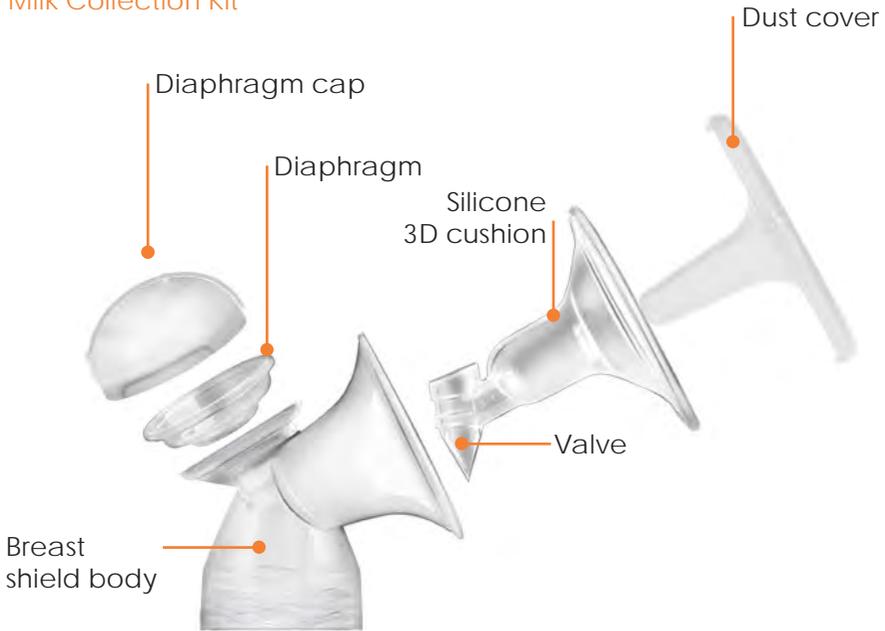
Important safety information

Carefully read this instruction manual before using your Crane Breast Pump. Failure to follow these instructions and safety guidelines can lead to harm or injury from the device and may also damage the pump and kit.

- This is a single user product. Use by more than one person may present a health risk.
- Use the electric breast pump only for its intended use as described in this manual.
- You should not experience discomfort or pain when using your Crane Breast Pump. Use the suction level and settings that are within your own comfort level. If you experience discomfort or pain, stop using the device and contact your professional lactation consultant, care provider or Crane retailer.
- Do not use the electric breast pump while sleeping or overly drowsy.
- Supervision is required when electric breast pump is used in the vicinity of children.
- Unplug the AC adapter from wall socket outlet when the pump is not in use and store out of reach of children.
- Do not leave your Crane Electric Breast Pump unattended while plugged into a power source.
- Keep the pump motor unit dry and do not immerse in water. Do not reach for an electrical device if it has fallen into water. Unplug immediately.
- This breast pump is protected against overheating; when the normal operating temperatures are exceeded the pump unit will alarm, shut down and stop charging.
- Do not operate the breast pump if it is damaged or showing signs of excessive wear. This includes the plug and power cord too.
- Do not use 3rd party accessories, attachments or fittings with your Crane pump.
- Do not place the breast pump near any appliances generating a strong magnetic field.
- Do not use near concentrated oxygen or pressurized gases.
- Crane USA reserves the right to change product design.

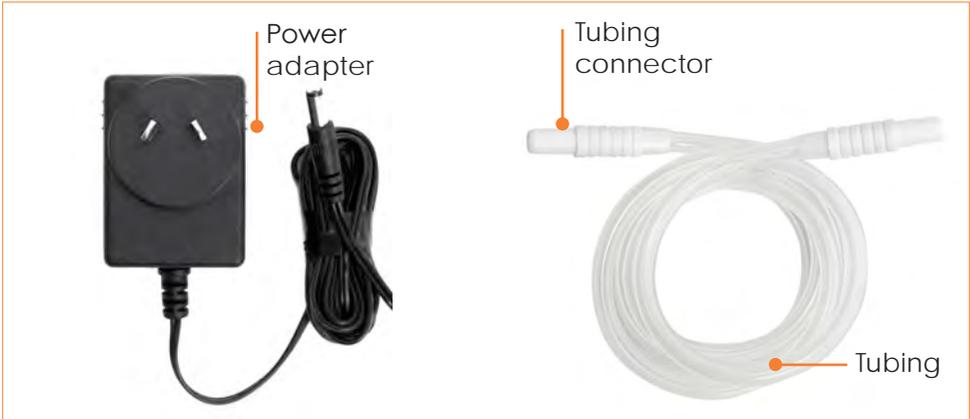
Your Pump Parts & Names

Milk Collection Kit



Bottle Kit





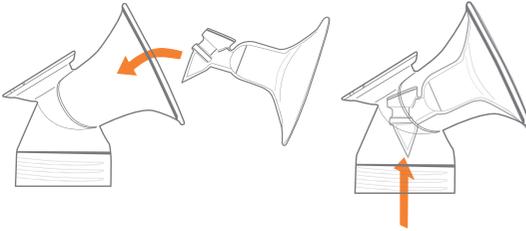
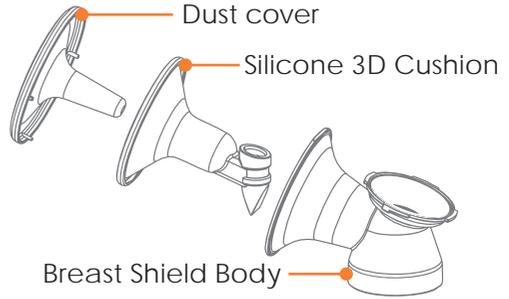
Other available parts

The Silicone 3D Cushions fit around the nipple and come in a range of sizes, you'll find the most commonly used size in your Crane Breast Pump box. Your nipple will expand while milk is being expressed. If you find the standard sized Silicone 3D cushion is too small or too large, other sizes are available from your Crane retailer. See the back pages of the instructions for information on how to measure your nipple for the correct sized cushion.

Assembling Your Crane Pump

Milk collection kit

Insert the silicone 3D Cushion into the Breast Shield Body. Make sure the 3D Cushion is flush with the Breast Shield Body. Remove the Dust Cover prior to pumping.

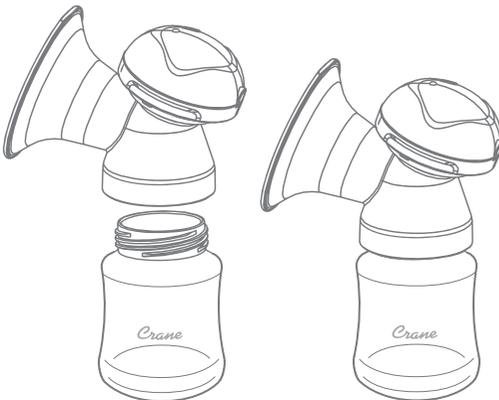
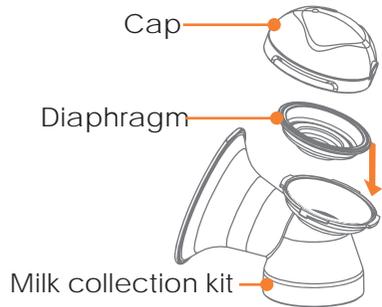


Secure valve

Once the silicone 3D cushion is inserted into the breast shield body, gently push upwards on the valve to ensure it is securely attached.

Diaphragm & cap

Carefully insert the diaphragm into the top of the Breast Shield Body. Ensure the edge is flush and the seal is good. Screw the cap on tightly to prevent any air from leaking.



Attaching the bottle

Carefully screw on the bottle into the base of the breast shield body.

Connecting the pump unit to the Milk Collection Kit

Insert the tubing connector into the air vent on the Diaphragm Cap. Insert the other end of the tubing into the side of the pump unit. Ensure the tubing set is securely connected to the Milk Collection Kit and the pump unit.

Connect to the power supply. Plug the output of the power adapter into the power socket on the back of the pump motor unit, then plug the adapter into the mains socket. The pump unit enters standby mode.



Li-ion polymer battery power supply/charging

Your Crane Breast Pump can operate on the built-in battery or mains power. The built-in rechargeable battery charges fully after about four and a half hours. From a full charge your pump can work continuously for about 3 hours. To prolong the life of the battery do not leave charging for more than 6 hours at a time.

The pump motor can also be mains powered when it is connected to a power outlet through the AC power adapter. When disconnected, the pump unit automatically uses the built-in battery to supply power.

When battery power is low, the pump unit automatically stops working and will beep to notify you to connect the motor unit to the mains adapter before closing down after 10 seconds. Connect to the mains adaptor before the battery is fully drained to protect the li-ion polymer battery. When the battery is full, it will stop charging automatically to avoid damage to the battery.

Cleaning, Hygiene & Care

How to keep your pump clean

Follow the instructions for cleaning, caring for and storing your Crane Breast Pump and parts. Failure to do so may pose a health risk and void the warranty.

Your Crane Milk Collection Kit is designed for single use only, it is not intended for multiple users. If this pump is shared, every mother should have their own Milk Collection Kit. Use by multiple users risks the spread of transmissible diseases.

Make sure to wash your hands with soap and warm water prior to touching the breast pump and the breast pump parts. Avoid touching the inner parts of the Milk Collection Kit which come in to contact with breast milk. The motor unit must never be exposed or immersed into water or other liquids for cleaning. The motor unit must not be sterilized in a microwave sterilizer.

Bottle kit:

Bottles should be sterilised after every use with babies under 3 months of age. Wash and sterilize the Bottle Kit before your first use. Sterilize daily and wash after each use.

Milk collection kit:

Wash and sterilize the Milk Collection Kit before your first use. Sterilize daily and wash after each use. The breast pump Milk Collection Kit has a closed system therefore cleaning the tubing is not necessary. If you see moisture in the tubing after pumping, disconnect tubing from the diaphragm cap. Turn on the pump for a few minutes until the moisture is gone.

Pump unit:

Wipe the pump unit with a clean, damp cloth after use. Sterilize the unit with a disinfectant wipe and wipe the tubing vent jacks from time to time. Never submerge the pump unit in water or use in sterilizer.

First time using your breast pump

- Wash your hands with soap and warm water.
- Disassemble all parts that come into contact with the breast/breast milk: Breast shield body, silicone cushion, diaphragm, bottle & bottle parts.
- Sterilize these parts by boiling for 2 minutes or with another sterilization technique. See 'Sterilizing Your Pump Parts' for more information.
- Leave to dry or dry with a clean cloth or paper towel.

Sterilizing your pump parts

- Sterilize the pump parts that come in contact with breast/breast milk before the first time you use your breast pump. Then daily until your baby is 3 months old. These parts are the breast shield body, silicone cushion & diaphragm, bottle and bottle parts.
- Wash hands thoroughly with soap and water and dry them using a clean cloth or single-use paper towel.
- Pump parts can be sterilized by boiling, sterilizing solution, microwave or steam sterilizer or a dishwasher with sanitize setting. Follow the manufacturer's instructions carefully for all methods other than boiling.
- If you are using the boiling method, fill a large pot with water, submerge all the washed parts in the water, ensuring no air bubbles are trapped under the equipment. Cover the pot with a lid and bring the water to a rolling boil for 1 minute. Turn off the element and keep the pot covered until the equipment is needed.
- Do not worry if sterilization causes parts to discolor, they are still safe to use.
- Parts may become damaged or deformed if exposed to high temperatures for any more than 2 minutes.
- Do not boil the tubing.



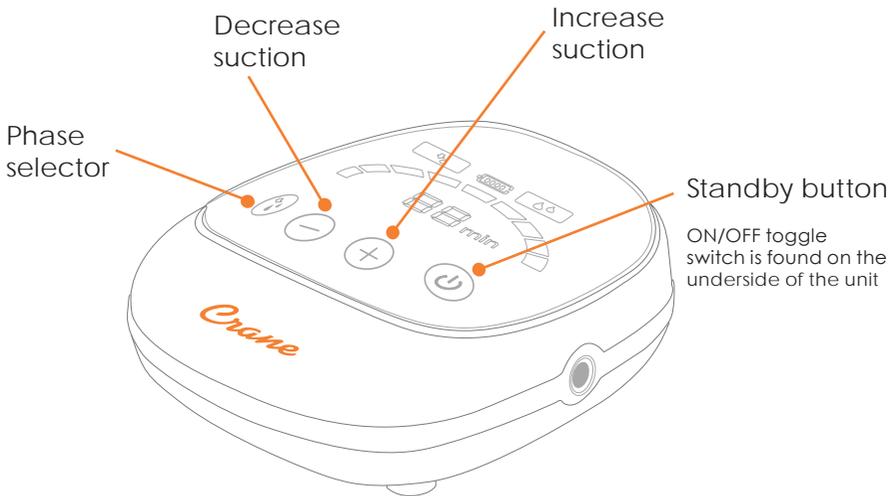
After each pumping session

- Water used for cleaning your breast pump parts must be drinking water quality.
- Rinse breast pump parts that come into contact with the breast/ breast milk immediately after use by holding them under running water to remove any remaining milk.
- Hand wash all parts carefully in warm soapy water, using a small brush to reach the tiny nooks of the collection kit parts. Use a separate sponge, brush and bowl just for washing your pump parts.
- Rinse each piece thoroughly under cold running water.
- Leave to dry or dry with a clean cloth or paper towel. Parts should be fully dry before reassembling.
- Parts may also be washed in the dishwasher using the top rack. The more delicate silicone parts such as diaphragms and teats are best washed by hand.
- The hot dry method used in the dishwasher sanitize setting may cause your parts to warp over time and food pigments may also cause parts to discolor.
- Store the clean, dry pump parts in a clean, sealed container used exclusively for this purpose.
- Wipe the pump motor unit clean only.

Before each use

- Wash your hands well with soap and water and dry thoroughly before touching any part of your pump.
- Make sure that all parts are totally dry prior to use, as wet or damp parts will cause poor suction.
- Make sure that you check for wear and tear on the tubing, plastic and silicone parts.
- Replace worn out or damaged parts immediately as this will affect suction.
- Re-assemble the totally dry, sterilized Milk Collection Kit.

Button & Display Overview



Press the standby button to begin or end your pump session. At the beginning of a session the pump unit will activate and begin a 30 minute timer. When the timer reaches 30 mins the pump unit will stop automatically and enter standby mode.

Phase selector:

Tap to cycle through the different expression phases.

 **Stimulation phase**

 **Expression phase**

You can manually toggle between the Stimulation phase and Expression phase by pressing Phase selector button at any time. You can also adjust the suction level strength by using the + and - buttons on your pump. There are 9 levels of suction you can select.

Your Crane breast pump has a memory function which recalls the suction level of the last phase used next time the pump is switched on with the standby button. When the pump is powered OFF by the toggle switch on the underside of the unit, the memory is cleared.

Ready to Pump

Before baby arrives

If you're reading this before your baby arrives and if you're planning on breastfeeding or using a pump it's a good idea to get used to touching your breasts, particularly if you are sensitive in that area. If you have sensitive nipples it can also help to ditch the bra sometimes and just wear a t-shirt. This can help 'toughen up' your nipples so they aren't as sensitive when your baby arrives. Breastfeeding and expressing aren't always difficult to begin with, but they can be. You may have sore breasts and you may worry if your baby is getting enough milk. But your nipples will heal, your baby will gain weight and you will get there and your Crane pump will be there with you.

Preparing to pump

So, your pump is clean, sterilized, assembled and you've familiarized yourself with the controls. Now it's time for our tips to help you be confident and successful with your pumping.

Be prepared - Make sure you have everything you need for the next 30 minutes or so. Have a glass of water and a snack in arms reach and a cloth for any spills. Do you have your phone charged, or something else to read, watch or listen to?

You can do this! Take a breath and relax. Whether this is your first time using your pump or you've done it many times... just take a moment to relax, think about your baby and know you've got this.

See & hear your baby - Many mums find that pumping is more successful if they have the right sensory cues. Watching a video or seeing a picture of your baby may be enough to help your milk let down. Listening to a recording of your baby crying or having an item of clothing that has their smell may also help to get your milk flowing.

The power of routine - Your body will also respond to the familiarities of how and where you pump, so expressing at the same times of day helps your body know what is expected. The schedule reminder alarm on your Crane pump can be useful here.

Get comfortable - Pumping where you normally feed your baby can be a good cue for your body. Try to choose a chair or position that takes care of your neck and back. Supporting your breast with a cushion may help too,

particularly if you are expressing from both breasts at once and need a hand free.

Using your Crane pump

Position the breast shield - Massage around your breast, then position your nipple in the center of the Silicone 3D Cushion.

Finding the right settings for you:

- When you use your pump for the first few times, experiment with the different expression settings to find the one that works well for you.
- You may find it helpful to switch between the modes.
- If your milk flow begins to drop, you may find it helpful to gently massage your breast again for a few minutes.
- Adjust the suction level gradually to one that is effective but still comfortable. Don't choose a level that is too high, which is uncomfortable or painful.

How long to pump - Use your pump to express your milk until the breast is empty, which is usually between 15-30 minutes. If you want to encourage your body to produce more milk then express for 5 mins longer.

Finishing your pumping session - When you are ready to stop expressing, switch your Crane pump off with the standby button and it will remember the settings you were on when you stopped. This is a handy feature if you need to pause during a pumping session and resume where you left off. To start expressing on different settings to how you finished previously, simply press the phase selector and suction level buttons to your desired setting next time you switch the pump unit on, alternatively use the toggle switch on the underside of the unit to reset the settings memory.

Make sure the pump motor is off before removing the Milk Collection Kit from your breasts.

Time to clean - Please see the instructions for rinsing and washing or sterilizing your pump parts that have come in contact with your breast or breast milk. Wipe your pump unit.

Milk Storage

Storing & using breast milk

Please check the latest advice on storing and using thawed breast milk with your local health provider or child health organization. The following are general guidelines based on information from the NZ Ministry of Health.

Always keep your stored breast milk in a sterilized bottle or sterile milk storage bag, adding the date if you are planning to freeze it.

Breast milk can be kept at room temperature for 4 hours.

You can store your breast milk in the fridge for up to 48 hours at 2 - 4°C. Choose the coldest part of the fridge, such as above the vegetable drawer, not in the door.

Your breast milk can be stored for up to 3 to 6 months in a freezer. Fill your storage bag or bottle no more than $\frac{3}{4}$ full, as the frozen milk will expand.

Allow your frozen breast milk to defrost itself in the fridge. When it is thawed, use it straight away.

Your baby might like warm milk. Stand the bottle in a container of hot water and let it heat to body temperature before feeding. Microwaving bottles is not recommended because the uneven heating can burn your baby's mouth, and the heat can damage the food value and health protecting qualities of breast milk. Once warmed, and before feeding always swirl the container of milk to mix well and test the temperature by shaking a few drops of milk on the inside of your wrist. The milk should feel just warm on your skin.

Quick Troubleshooting Guide

Cause	Solution
Low Suction	
<ol style="list-style-type: none"> Air leakage at connecting parts (valve, cushion, tubing or connector). Pump unit's air circuit is blocked, tubing is bent or residue in tubing. 	<p>Check connecting parts, reinstall and clean.</p> <p>Replace tubing.</p>
No Suction	
<p>Valve is not assembled in correct place or the valve is deformed and damaged.</p>	<p>Install valve correctly or replace Silicone 3D Cushion.</p>
Unable to Start	
<ol style="list-style-type: none"> The AC adapter is not plugged into the main socket or the DC socket on the pump unit. The rechargeable battery is flat. 	<p>Plug in the adapter or charge the battery. Make sure the on/off toggle switch on the underside of the unit is set to "ON".</p>
Milk or Water in Tubing	
<p>Diaphragm is not correctly positioned or is damaged.</p>	<p>Stop immediately. Clean, reposition, or replace the diaphragm before pumping.</p> <p>Dry or replace tubing before pumping.</p>
Display Shows E1 or E2 Alarm	
<p>E1: Open Circuit. E2: Short Circuit.</p>	<p>Please contact your Crane Breast Pump retailer.</p>
Display Shows E3 Alarm	
<p>The internal temperature of the pump exceeds the normal operating temperature range (less than 0° or higher than 60°C).</p>	<p>Temperature is too low: Place pump unit within normal working temperature range.</p> <p>Temperature is too high: Turn off the pump and wait for the temperature to fall within normal temperature range.</p>

Weak suction or no suction

- All parts must be totally dry and not damp for effective suction.
- Parts that are damaged or worn out can cause low or no suction. In particular check all the silicone parts for damage – 3D Cushion including the attached valve, diaphragm and tubing.
- Replace any damaged or worn out parts.
- Worn out tubing with holes will cause a reduction in suction. Replace immediately when worn out.
- Tubing must always be dry and checked prior to each use. Wet or damp tubing will cause poor suction.
- If you notice any water condensation, milk or milk residue inside the tubing. Clean and air dry before use. Replace if it is cannot be completely clean and dry.
- Tubing must be straightened and uncoiled to ensure proper air flow.
- Frequent use or improper sterilization method can cause aging on Silicone 3D Cushions. If the Silicone 3D Cushions have aged and are worn out, replace immediately.
- Make sure that the Silicone 3D Cushions on each Milk Collection Kit fits tightly onto the Breast Shield Body attached above the valve. The Silicone 3D Cushions have edges that should fit perfectly across the cushion edges.
- If the Silicone 3D cushion is not snugly attached to the Breast Shield Body this will result in poor suction.
- Make sure that the silicone Diaphragm is properly attached to the Breast Shield Body.
- Check that all connections are tight so as not to cause any air to leak.
- Check to make sure that the Milk Collection Kit is well secured and tightly fastened to the tubing connector.
- Check that tubing connector ends are tight and well connected to the tubing, the Pump Motor Unit and the Milk Collection Kit.

All the above instructions must be followed. Failure to follow any of these instructions will lead to weak suction or no suction vacuum at all.

Breast pump is working but not able to express milk

- Consult with your midwife, post-natal health professional or lactation consultant.
- You might be experiencing breast engorgement. Place a warm towel on the engorged breast.
- Use alternating hand expression and gentle breast massage to help decrease swelling and improve breast drainage. Try doing this before starting a pumping session.
- You may find a battery powered lactation massager helpful.
- It is recommended to pump every 2 to 3 hours, including breastfeeding hours.
- Do not pump more than 30 minutes to avoid hurting your breast.
- If you have large breasts, hold and massage gently while pumping milk to help with the milk flow.

Breast pump motor unit not powering on

- Check your mains power outlet by plugging in another electrical device.
- Make sure the power outlet source and ON/OFF toggle on the underside of the unit is switched on..
- Make sure that your power adaptor is connected properly to the breast pump unit.
- If you are using a power adaptor and your breast pump is not turning on, try using the battery power and not the AC Adaptor.
- Make sure battery is fully charged. If the pump works on the battery power, you might have a defective AC adaptor.

Milk overflow prevention

Your Crane Breast Pump is a closed system breast pump, designed with a barrier so that milk will not enter the tubing. Below are some measures you can take to help avoid milk backflow:

- Adjust the pumping power to a lesser suction level if your breast milk is relatively abundant.
- Try releasing pressure between your breast and the Silicone 3D cushions if you notice that the milk is gathering inside the tubing and is not streaming down to the collection bottle.
- Do not overfill the collection bottle.
- Clean and degrease the valves of the collection kit.

Silicone 3D Cushion Measuring Guide

Find Your Fit

Your Crane Breast Pump comes with the most popular sized option of Silicone 3D Cushion. This part of the Milk Collection Kit fits around the areola and nipple, using the right size is important. Pumping with the wrong size can be painful and result in less milk being expressed. Other size options of Silicone 3D Cushion to suit different sizes of nipple are available for the Crane Breast Pump. Use the guides below to help find the best option for you.

Signs your Silicone 3D Cushion may be too large

- Excess areola is drawn into the Silicone 3D Cushion or is being pulled over the nipple. A small amount is typical but it should not be painful.
- Sensation of tugging and/or pulling pain.
- Nipple is pulled to the end of the Silicone 3D Cushion.
- Silicone 3D Cushion falls from breast when pumping.

Signs the Silicone 3D Cushion may be too small

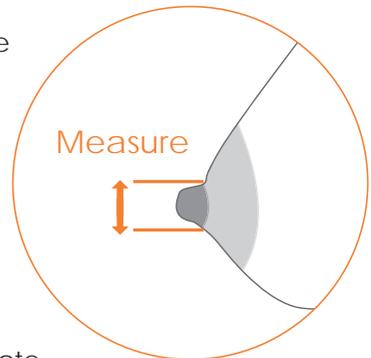
- Painful rubbing of nipple in the 3D Cushion.
- Nipple is not moving freely within the cushion.
- A small amount of milk is being expressed.

Using the sizing template below:

Carefully cut out the circles in the template on the next page.

Shortly after the end of a pumping session, when your nipple is still swollen from milk being expressed, find the hole that fits most closely around your nipple. With that measurement use the table at the top of the next page.

The template here is a guide. You should note that your measurement may change over time, particularly in the weeks and months after birth, when your milk supply has become well established. Size can also vary between nipples and at different times of day. You may also find that at the start of a pumping session your nipples are larger.



Crane Breast Pump Breast Shields and 3D Cushions

Available in 3 sizes listed below. Choose the option that best matches your nipple size using the template below. These and other spare parts are available from your Crane retailer.

15-20mm - 21mm Silicone 3D Cushion & Breast Shield

22-26mm - 25mm Silicone 3D Cushion & Breast Shield

27-30mm - 29mm Silicone 3D Cushion & Breast Shield



Technical Data

Stimulation speed	100T/min
Stimulation suction	-0.002 - -0.018MPa (9 steps)
Expression speed suction	26-60T/min
Expression vacuum	-0.013--0.036MPa {9 steps}
Timer	30 Minutes
Operating conditions Temperature	5-40°C, humidity RH < 90%
Sound power level	< 60dB (A)
Power:	Mains or Battery
AC adapter	Input 100-240V ~ 50/60Hz Output 10V 1.5A
Li-ion polymer battery power	7.4V 1750mAh
Total power	15W
Electronic equipment protection	Type II class
Country of origin:	China
Model Number:	EE 9002A

Replacing parts

Your Crane Breast Pump has been made to our highest standards. However over time and regular use, parts do need to be replaced due to normal wear. Parts may also have been damaged or degraded through regular or excessive sterilization or heat. You will know when it is time to replace parts as you will experienced reduced suction or other issues with your pump performance.

Authorized replacement parts are available through your Crane retailer. We recommend that you keep replacement tubing and other spare parts on hand if you are pumping regularly.

Pump unit battery precautions

- The lithium battery is built-in and non-removable.
- Do not disassemble.
- Only use the included power adapter as the built-in li-ion polymer battery and power supply require the specified voltage.
- Do not expose the motor unit to direct sunlight or heat.
- Recharge the pump once a month when not frequently used.
- Repairs must be conducted by Crane and authorized service agents.
- Toggle the power switch to "OFF" on the underside of the unit if you are storing your pump for extended periods of time and charge the battery once a month.

Disposal

When your Crane Breast Pump reaches the end of it's life it should not be disposed of with other household waste. It should be recycled through a designated electronic recycling location. Please contact your local council or authority for details of where you can dispose of electronic waste.

Please recycle the cardboard packaging and manual.

Breast shields and other clear plastic parts can be recycled by many local authorities, check with your local council. Clean and sterilize before placing in the recycling.

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