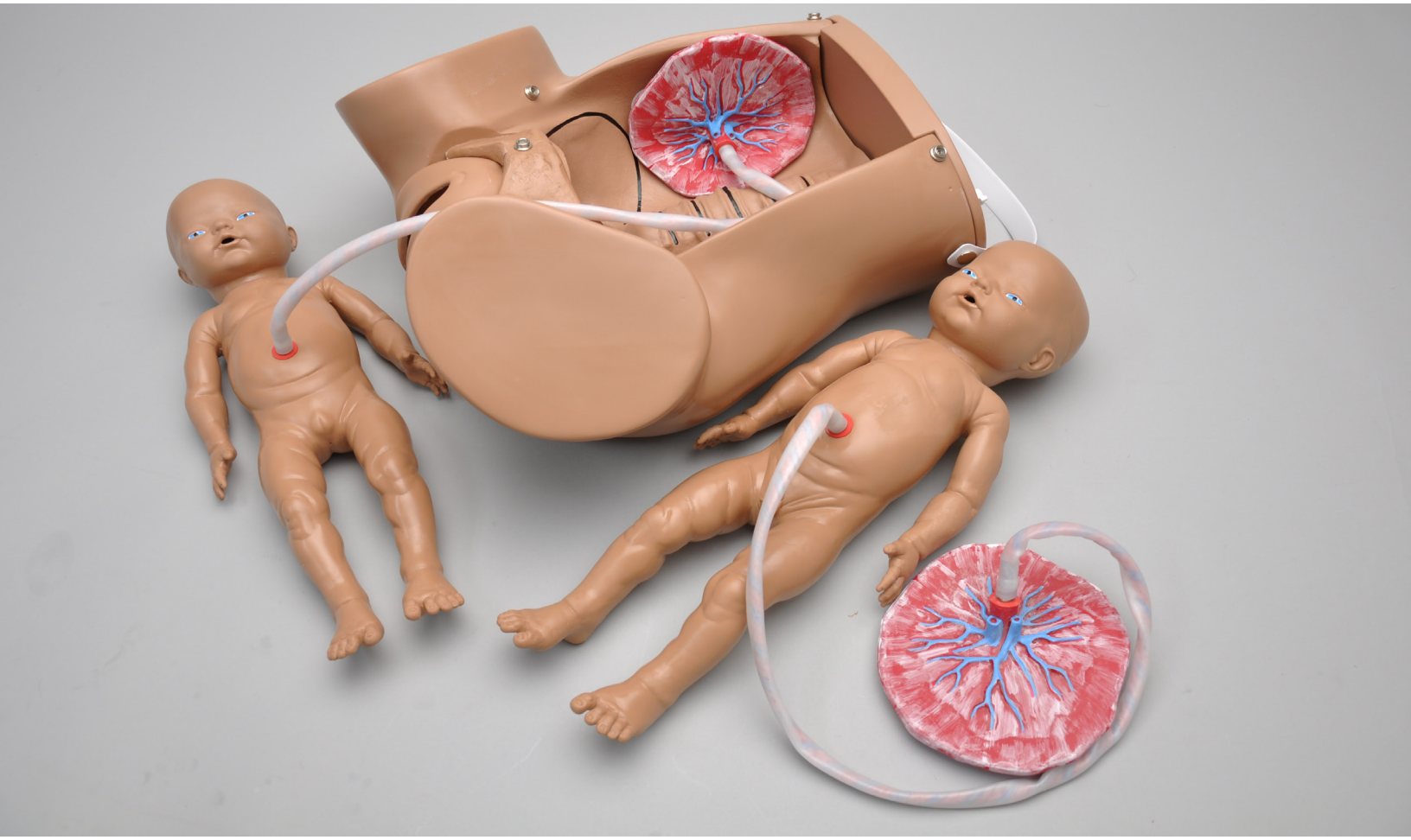
Advanced Childbirth Simulator

S500



Gaumard®
Simulators for Health Care Education

S500 Advanced Childbirth Simulator is an interactive educational system developed to assist a certified instructor. It is not a substitute for a comprehensive understanding of the subject matter and not intended for clinical decision making.

User Guide 13.12.1

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Care and Cautions

Overall Warnings

Remember that damage caused by misuse is not covered by your warranty. It is critical to understand and comply with the following guidelines:

GENERAL

- This simulator is constructed of material that approximates skin texture. Therefore, in handling the model, use the same gentle techniques as you would in working with a patient.
- Ball point pens, ink and markers permanently stain the skin.
- Do not wrap this or any other Gaumard product in newsprint.
- Do not use alcohol, acetone, Betadine® or any other antiseptic which contains iodine in this or any Gaumard® simulator. These products could damage or stain the skin of the simulator.
- Only use Gaumard's provided simulated blood. Any other simulated blood containing sugar or any additive may cause blockage and/or interruption of the vasculature system.
- Replacement parts are available from Gaumard Scientific or your Distributor.

OPERATING CONDITIONS

Operating the simulator outside these ranges may affect performance:

- Operating temperature: 50°- 95° F (10°- 35° C).
- Humidity: 5%-95% (non-condensing).

STORAGE CONDITIONS

- Improper storage may damage the simulator.
- Keep it stored in the box and/or bag provided.
- Do not stack or store heavy materials on top of the carton.
- Storage temperature: 32°- 113° F (0°- 45° C).
- Humidity: 40%-60% (non-condensing).

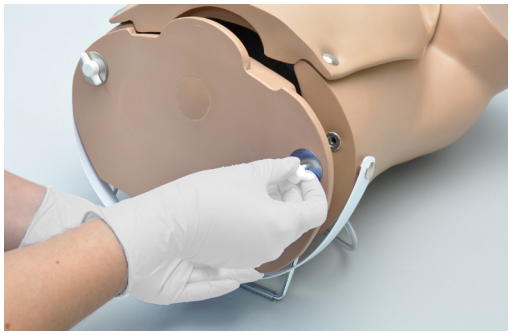
CLEANING

- Clean the skin of the simulator after every training session. The skin should be cleaned with a cloth dampened with diluted liquid dish washing soap and dried thoroughly.
- Remove all traces of any lubricant.
- Do not clean with harsh abrasives.
- Do not use povidone iodine on the simulator.
- The simulator is "splash-proof" but not waterproof. Do not submerge or allow water to enter the interior of the simulator.

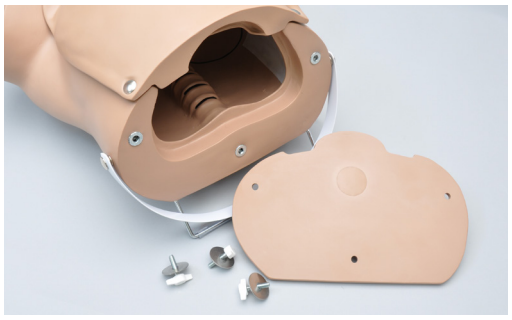
Equipment Set Up

REMOVING THE END PLATE

1. Remove the three wing nuts and washers that hold the end plate in place. The wing nuts are designed to be loosened with your fingers.

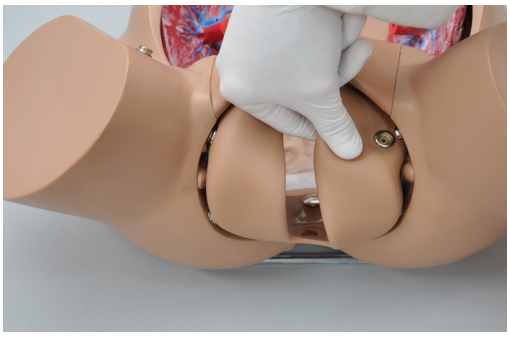


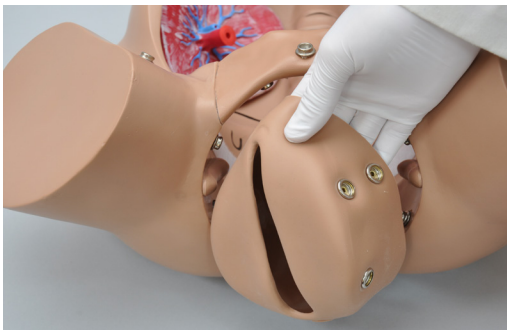
2. After removing the screws, pull out the end plate.



REPLACING THE VULVA INSERT

1. To replace the vulva, detach the insert by unplugging the metal snaps connected to the torso.





2. Place the new vulva insert into position by plugging in the metal snaps.

Working with Birthing Simulator

Obstetrics

The Advanced Childbirth Simulator offers the ability to demonstrate a variety of obstetric techniques including:

- Palpation of the head, shoulders, backbone, knees, and elbows of the fetus
- Vaginal delivery
- Shoulder dystocia
- Cesarean section delivery
- Complete footling and breech deliveries
- Pinard's maneuver
- Intrauterine manipulation
- Prolapse of umbilical cord
- Normal delivery of umbilical cord and placenta
- Placenta previa-total, partial, and marginal
- Palpation of fetal fontanelles
- Simulated suction of the nose and mouth of the neonate
- Ritgen's Maneuver
- Combinations of Vertex and Breech presentations in multiple birth

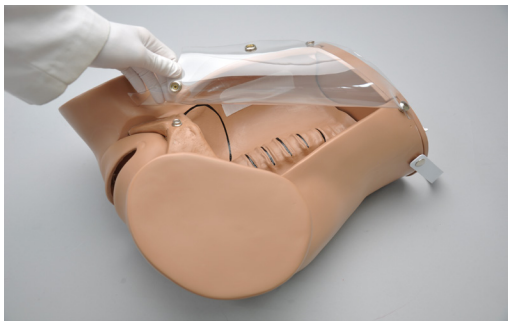
LIST OF ITEMS INCLUDED WITH SIMULATOR

- Birthing torso
- One skin-tone abdominal cover
- One clear see-through abdominal cover.
- One male newborn
- One female newborn
- Three vulva inserts
- Two placentas
- Six umbilical cords
- Two umbilical clamps
- Talcum powder
- Mineral oil
- Instruction manual
- Instructional video (CD)
- Soft carrying bag

NORMAL LABOR AND DELIVERY

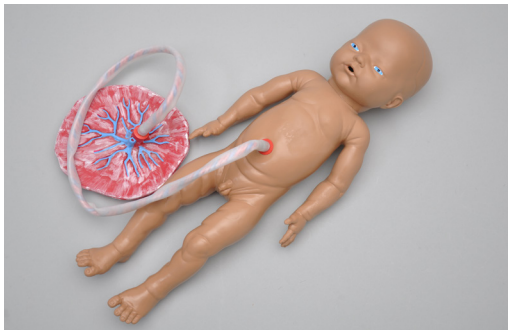
To complete a straight forward vertex delivery, follow the instructions below:

1. Select a vulval insert and snap it into place.
2. Select a birthing fetus with placenta and cord, as well as one of the two abdominal covers.
3. Remove the abdominal cover if necessary.
4. Lubricate the head and shoulders of the birthing fetus with the mineral oil provided.



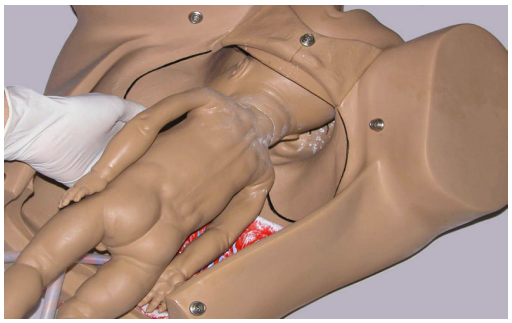
5. Attach the umbilical cord to the baby. The umbilical cord can be wrapped around the fetal neck to demonstrate a nuchal cord.
6. Attach umbilicus to placenta.

7. Remove the end plate following the instructions listed in the “Equipment Set Up” section and attach the placenta to the abdominal wall using the Velcro® fastener. The abdominal wall has two placement sites to attach the placenta.



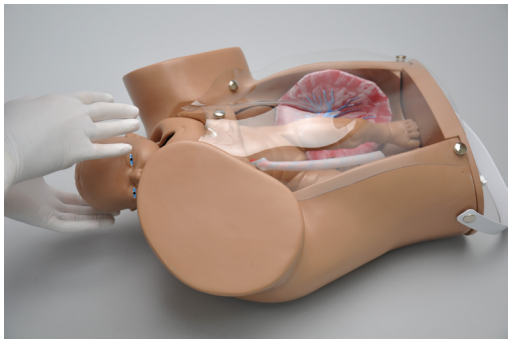
Orienting the Velcro patches in parallel causes the placenta to be retained; orienting them at right angles allows the placenta to release with modest traction.

Take care that the fetal shoulders are aligned with the long axis of the vulva insert at delivery.



Once the shoulders are delivered, the health provider can complete delivery of the baby and placenta.

Crowning of the fetal head can be seen. Mouth and nose suctioning can be simulated.



SHOULDER DYSTOCIA

The Birthing Simulator may be used to practice the resolution of shoulder dystocia using the suprapubic pressure, posterior arm sweep, or elbow-knee delivery.

1. To demonstrate shoulder dystocia, place the birthing baby in the abdominal cavity.
2. Simulate dystocia at any time during the delivery by manually locking the birthing baby inside the birthing simulator. Providers must use various maneuvers to deliver the baby.

CESAREAN DELIVERY

You may demonstrate a C-section with the birthing simulator by removing the metal snaps just above the pubic bone and birthing the baby between the abdominal cover and the pubic bone.

To complete this procedure follow the steps below.

1. Attach abdominal cover using the metal snaps except for snaps above the pubic bone.
2. Deliver the birthing baby between the abdominal cover and pubic bone.

PROLAPSE OF THE UMBILICAL CORD

You may simulate a prolapse of the umbilical cord by positioning the umbilical cord in a critical position.

PLACENTA PREVIA

To simulate placenta previa with the birthing simulator, place the placenta in the desired position to simulate the condition, with the maternal side against the uterine wall or the cervical os. Then place the fetus within the uterine cavity with the presenting part closest to the placenta.

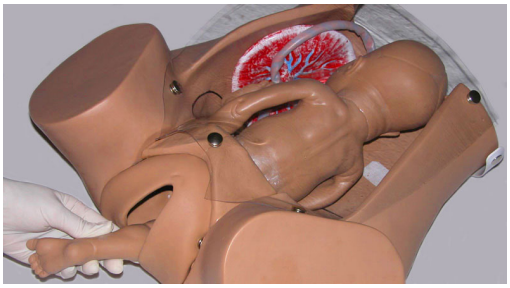
EXTERNAL VERSION

Version may be attempted to rotate the fetus from a breech position into one permitting normal vertex presentation.

1. To practice external version, remove the abdominal cover and the fetus.
2. Insert the inflatable cushion.
3. Thoroughly lubricate the inside surface of the abdominal cover, the fetus, and the inflatable cushion.
4. Place the lubricated fetus onto the lubricated inflatable cushion and snap the lubricated abdominal cover into place.
5. Confirm the breech position and attempt to turn the fetus manually within the uterus by transabdominal manipulation.

BREECH BIRTH

1. Place the fetal legs in an extended position to simulate “footling”.
2. Lubricate the lower torso and legs of the fetus.



DELIVERY OF THE PLACENTA

The placenta supplied with the birthing simulator may be positioned so that it births spontaneously or requires either modest cord traction or manual removal.

In addition, the placenta is designed with two removable placental fragments. These fragments are attached to the body of the placenta with Velcro. You may reverse one or both fragments causing one or both to birth with the placenta or remain affixed to the uterine wall.

Providers should carefully inspect the birthed placenta to make sure it is complete and that no fragments remain internally.

Optional Modules

Vacuum Assisted Delivery (S500.1 Module)

INTRODUCTION

The Vacuum Assisted Delivery Module allows you to perform vacuum assisted deliveries with most hand-powered cup vacuum models. The module features a fetus with a soft, smooth scalp to facilitate the use of a vacuum cup.

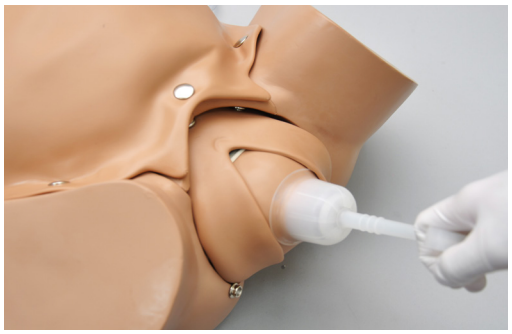
It may be necessary to apply a small amount of lubricant to the soft tissue of the scalp to improve vacuum seal

This module comes with:

- 1 fetus with smooth soft scalp with fontanelles for realistic vacuum delivery

DESCRIPTION

Vacuum assisted delivery may be practiced using a vacuum cup.



Placing the soft scalp over the skull improves the vacuum seal between the fetal head and the vacuum.

INSTRUCTIONS FOR USE

1. Lubricate the fetus supplied with the birthing simulator and, place it into the delivery system in the normal ROA position.
2. Advance the fetus down the birth canal.
3. Pause as soon as you can see the fetus' head beginning to protrude from the vulva insert.
4. Insert a lubricated vacuum cup into the vagina and place the cup onto the flexion point of the skull located between the fontanelles. Use the vacuum pump with such devices to cause the attachment of the cup to the skull. Wait a few minutes for the "chignon" to form.
5. Have the provider apply a steady traction, perpendicular to the plane of the cup while sustaining the fetus in the birthing simulator.

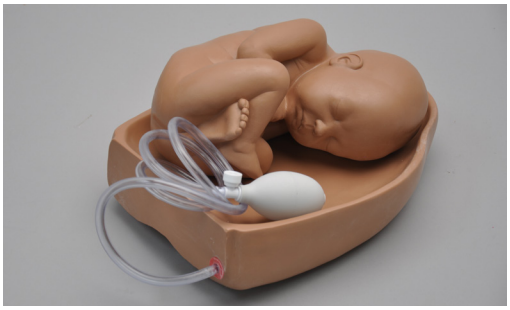
Palpation Module for Leopold Maneuvers (S500.3 Module)

INTRODUCTION

This module features a fetal baby with palpable fontanelles, spine, shoulders, elbows and knees. The fetal baby may be placed in normal, breech, or transverse position.

The fetal baby is to be cradled between two “cushions”. This module comes with:

- 1 Fetal Baby
- 1 Lower cushion with squeeze bulb
- 1 Upper cushion with squeeze bulb



DESCRIPTION

The cushions may be inflated independently of each other; inflation of the lower cushion raises the fetus to the desired position; inflation of the upper cushion creates a firm abdomen similar to a ninth month pregnancy.

INSTRUCTIONS FOR USE

To prepare the simulator for practicing Leopold Maneuvers:

1. Remove the abdominal cover, birthing baby, umbilical cord and placenta. Leave only the torso, end plate and vulval insert.
2. Place lower inflatable cushion within simulator and place the fetal baby in a normal, breech, or transverse lie position.
3. Inflate the lower cushion using the squeeze bulb attached. This raises the fetal baby anteriorly.
4. Snap the upper cushion into place and inflate it using the second squeeze bulb. The upper cushion increases the firmness of the abdomen.
5. Normally, the lower cushion will be inflated to a greater degree; the upper cushion will require only moderate inflation.
6. Conduct the four Leopold Maneuvers.
7. To deflate either of the cushions, release air using the appropriate thumb screw.

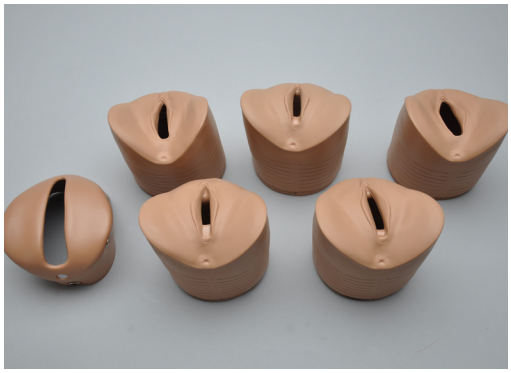
Labor Delivery Module (S500.4 Module)

INTRODUCTION

This Module contains six labor stations selected to represent conditions of the cervix and vagina prior to labor, during labor, and at birth in a primigravid woman. These stations may be placed in birth canal of the S500.

This module comes with:

- The six labor stations mentioned above
- A carrying case



DESCRIPTION

STA	Condition of Cervix
-5	Prior to onset of labor
-4	Cervix partially effaced
-3	Cervix fully effaced
0	Fetal head at plane of ischial spine
+2	Cervix nearing full dilation
+5	Crowning of fetal head

INSTRUCTIONS FOR USE

1. Select one of the six labor stations provided and insert the station into the S500 Childbirth Simulator. Labor starts with STA-5 and progresses to STA+5.
2. Insert a birthing baby into the simulator and place its head against the labor station. A transparent abdominal cover has been snapped into place.
3. Carefully conduct a vaginal exam noting the position of the fetal head relative to the ischial spine as well as the dilation of the cervix which is expressed in centimeters.
4. Exchange birthing stations to illustrate labor progression.

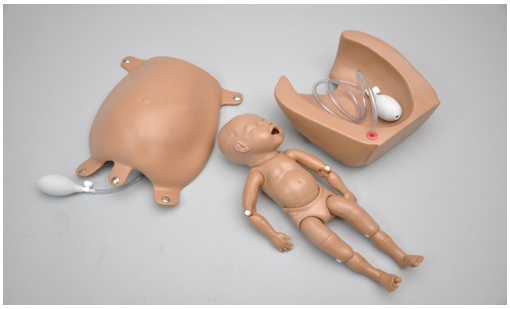
Susie Articulating Newborn for Leopold Maneuvers (S500.5 Module)

INTRODUCTION

This 19 part simulator includes articulating head and neck, shoulders, elbows, hips, and knees. A realistic mouth and nostrils for simulated suctioning. Palpable fontanelles, spine, shoulders, buttocks, elbows, and knees

Providers may adjust the position of the newborn by increasing or decreasing air pressure in lower “cushion”. Providers may facilitate ease of newborn palpation by adjusting the air pressure in upper “cushion”

To use this module, follow the instructions described in the Module S500.3



DESCRIPTION

This module comes with:

- 1 newborn with articulated joints
- An “upper” and “lower’ inflatable cushions
- A soft carrying bag

Postpartum Suturing Trainer (S500.6 Module)

INTRODUCTION

The S500.6 Trainer includes three postpartum suturing modules. The soft vinyl material of these modules enables the use of standard needle holders with “00” or “000” chromic sutures.

DESCRIPTION

- 1 module with a medial episiotomy with tears in the labia minora
- 1 module with a mediolateral episiotomy with peri-urethral tears
- 1 module with a standard mediolateral episiotomy

Postpartum Hemorrhage Package (S500.8 Module)

INTRODUCTION

After delivery the uterus normally contracts reducing postpartum bleeding. Inadequate uterine contraction may present as a “boggy” or soft uterus assessed through abdominal palpation. Uterine contraction may be augmented using uterine massage.

DESCRIPTION

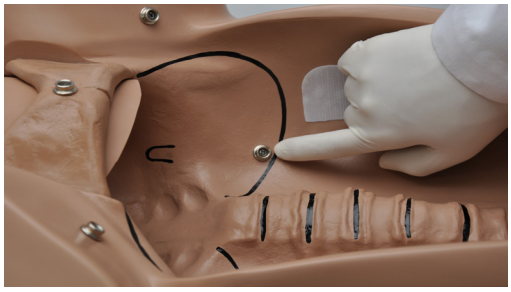
The S500.8 Postpartum Hemorrhage module simulates postpartum bleeding and allows providers to practice fundal massage techniques.

This module comes with:

- 1 elevating cushion
- 2 cervixes
- 1 postpartum uterus with air and fluid lines, and filling syringe
- 1 bottle of Gaumard simulated blood concentrate
- 1 funnel
- A simulated blood reservoir kit with stand
- A set of base-snaps
- Instruction Manual
- Carrying Case

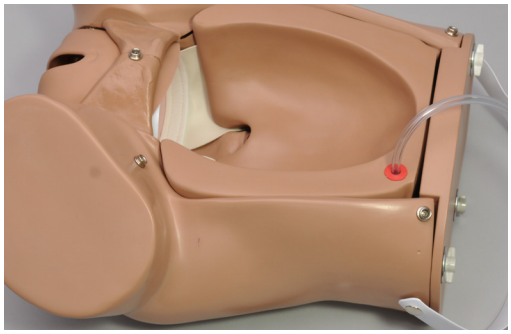
INSTRUCTIONS FOR USE

1. Locate the two markers designated for the base-snaps In the pelvic cavity. Fasten both base-snaps into their designated points.



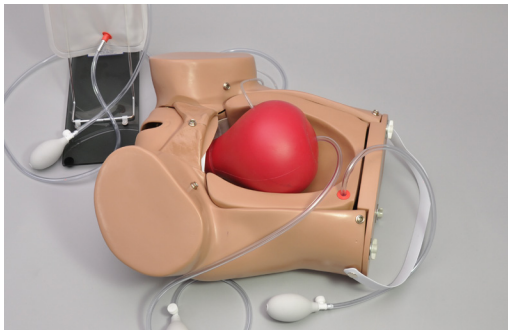
2. Select one of the two dilating cervices provided and place it at the entrance of the birth canal with the “ears” facing into the pelvic cavity. Note that the dilating cervix is secured to the floor of the pelvic cavity with two snaps.

3. Place the elevating cushion inside the abdominal cavity.



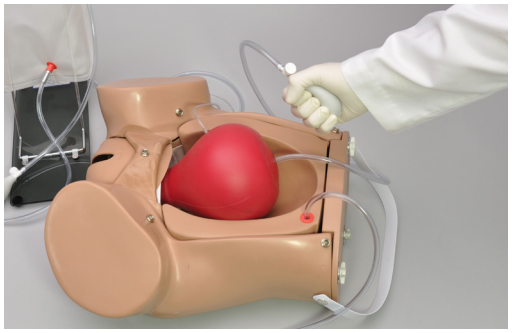
4. Place the postpartum uterus in the seat of the elevating cushion.

5. Slide the duck-billed portion of the postpartum uterus into the dilating cervix.

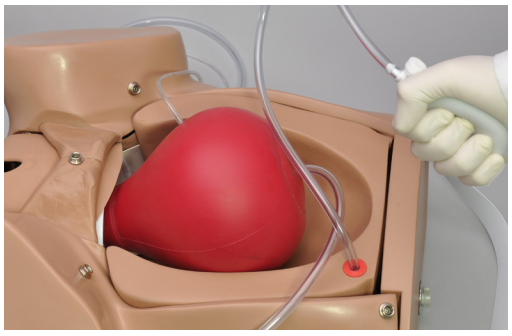


The postpartum uterine assembly consists of a thin outer uterine skin and a smaller, harder inner uterus.

6. If you wish to simulate a uterine condition, tighten the thumbscrew and use the squeeze bulb attached to the postpartum uterine assembly. Inflate the uterus to the desired condition.



7. Lift the uterus anteriorly using the squeeze bulb of the elevating cushion.



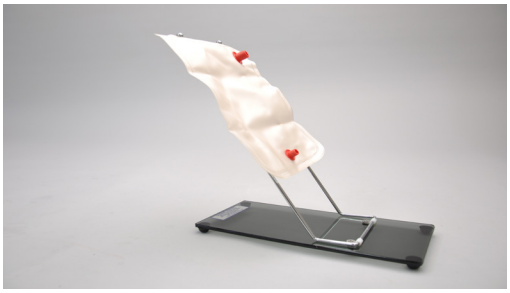
8. If you wish to use simulated blood, mix the solution in a separate container. Use the syringe to insert pre-mixed simulated blood or water into the postpartum uterine assembly.

When the thumbscrew is loosened, bimanual massage will cause air to leak from the thumbscrew. This causes the outer skin to contract. When sufficient air has been released the student will begin to feel the harder inner uterus which simulates the contracted postpartum state.

Additionally, the postpartum uterine assembly permits the continuous infusion of fluid using an external reservoir. Follow the instructions listed below to set up the external postpartum reservoir.

1. Lift the hinged metal stand that supports the external reservoir.

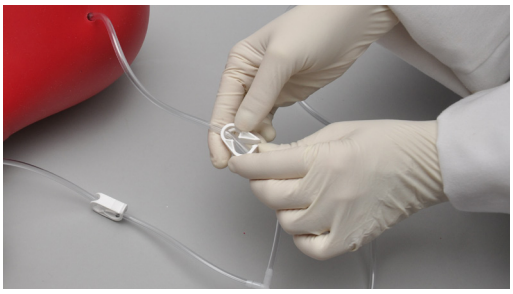
2. Hang the external reservoir on the stand.



3. Attach the filling tube to the bottom port of the external reservoir.

4. Connect the hose coming from the uterus to the external reservoir.

5. Close the adjustable clamp on the tube connected to the uterus.



6. Add water or artificial blood to the external reservoir using the syringe provided.

7. Open the adjustable clamps to allow hemorrhage fluid to flow out of the uterus.

To vary the postpartum bleeding, attach the tube with squeeze bulb to the upper port of the external reservoir and depress the squeeze bulb.

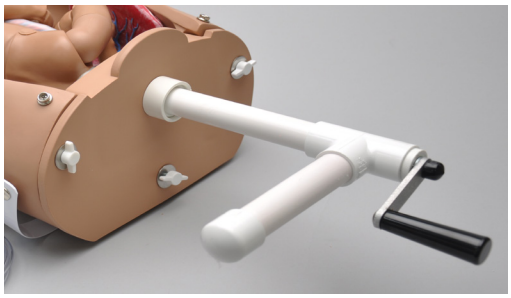
Birthing Mechanism (S500.10 Module)

INTRODUCTION

The S500.10 module introduces an endplate and crank which allows the provider to deliver the fetus with mechanical smoothness.

This module comes with:

- Removable end-plate for insertion of birthing mechanism
- Birthing fetus
- Two dilating cervices
- Two base-screws
- One bottle of mineral oil
- Soft carrying bag



DESCRIPTION

The mechanical arm rotates the birthing fetus as it travels through the birth canal. The removable cervices automatically dilate as labor progresses. The facilitator may manipulate the vulva to allow passage of forehead, nose, and ears.

Other features include the ability to crown the fetal head, rotation to enable shoulder presentation, and syringing the nose and mouth.

INSTRUCTIONS FOR USE.

1. In the pelvic cavity locate the two markers designated for the base-snaps. Fasten both base-snaps into their designated points.
2. Select one of the two dilating cervices provided and place it at the entrance of the birth canal with the “ears” facing into the pelvic cavity, not into the birthing canal. Note that the dilating cervix is secured to the floor of the pelvic cavity with two snaps.

3. Remove the endplate on your S500 Birthing Simulator and replace it with the new birthing mechanism endplate. (Please refer to “Equipment Set up” for further instruction)

Please note that the mechanical crank advances the drive by turning the crank clockwise. Also note that the “tee” handle on the crank provides any desired amount of rotation of the fetus at any point during the birthing process. The mechanical birthing device can be removed from the new endplate and secured with the large locking “C” insert provided.

4. Lubricate the fetal head, shoulders and the inside of the vulva using the mineral oil provided. Attach the umbilical cord and placenta as desired.
5. Place the birthing fetus on the mechanical birthing device using the receptacle located between the legs of the fetus.
6. Position the birthing fetus in the childbirth simulator in the normal vertex position with the fetal head contacting the dilating cervix. Note the initial cervical dilation is about two centimeters.
7. Manually advance the fetus by turning the crank clockwise. Watch the fetus move down the birth canal and watch the cervix dilate.
8. Demonstrate internal rotation as well as translation down the birth canal.
9. Demonstrate intrapartum suctioning/ syringing as needed.
10. Once the shoulders are delivered ask the provider to carefully deliver the baby from the birth canal in a normal manner. Remove the placenta in a normal manner and return the mechanical birthing device to its original position by turning the crank counterclockwise.

Appendix

Warranty

EXCLUSIVE ONE-YEAR LIMITED WARRANTY

Gaumard warrants that if the accompanying Gaumard product proves to be defective in material or workmanship within one year from the date on which the product is shipped from Gaumard to the customer, Gaumard will, at Gaumard's option, repair or replace the Gaumard product.

This limited warranty covers all defects in material and workmanship in the Gaumard product, except:

Damage resulting from accident, misuse, abuse, neglect, or unintended use of the Gaumard product;

Damage resulting from failure to properly maintain the Gaumard product in accordance with Gaumard product instructions, including failure to property clean the Gaumard product; and

Damage resulting from a repair or attempted repair of the Gaumard product by anyone other than Gaumard or a Gaumard representative.

This one-year limited warranty is the sole and exclusive warranty provided by Gaumard for the accompanying Gaumard product, and Gaumard hereby explicitly disclaims the implied warranties of merchantability, satisfactory quality, and fitness for a particular purpose. Except for the limited obligations specifically set forth in this one-year limited warranty, Gaumard will not be liable for any direct, indirect, special, incidental, or consequential damages, whether based on contract, tort, or any other legal theory regardless of whether Gaumard has been advised of the possibilities of such damages. Some jurisdictions do not allow disclaimers of implied warranties or the exclusion or limitation of consequential damages, so the above disclaimers and exclusions may not apply and the first purchaser may have other legal rights.

This limited warranty applies only to the first purchaser of the product and is not transferable. Any subsequent purchasers or users of the product acquire the product "as is" and this limited warranty does not apply.

This limited warranty applies only to the products manufactured and produced by Gaumard. This limited warranty does not apply to any products provided along with the Gaumard product that are manufactured by third parties. For example, third-party products such as computers (desktop, laptop, tablet, or handheld) and monitors (standard or touch-screen) are not covered by this limited warranty. Gaumard does not provide any warranty, express or implied, with respect to any third-party products. Defects in third-party products are covered exclusively by the warranty, if any, provided by the third-party.

Any waiver or amendment of this warranty must be in writing and signed by an officer of Gaumard.

In the event of a perceived defect in material or workmanship of the Gaumard product, the first purchaser must:

Contact Gaumard and request authorization to return the Gaumard product. Do NOT return the Gaumard product to Gaumard without prior authorization.

Upon receiving authorization from Gaumard, send the Gaumard product along with copies of (1) the original bill of sale or receipt and (2) this limited warranty document to Gaumard at 14700 SW 136 Street, Miami, FL, 33196-5691 USA.

If the necessary repairs to the Gaumard product are covered by this limited warranty, then the first purchaser will pay only the incidental expenses associated with the repair, including any shipping, handling, and related costs for sending the product to Gaumard and for sending the product back to the first purchaser. However, if the repairs are not covered by this limited warranty, then the first purchaser will be liable for all repair costs in addition to costs of shipping and handling.

Extended Warranty In addition to the standard one year of coverage, the following support plans are available: Two-Year Extension (covers second and third years)

Call for pricing (USA only)

Gaumard®
Simulators for Health Care Education

Contact Us

E-mail Technical Support: support@gaumard.com

Before contacting Tech Support you must:

1. Have the simulator's Serial Number
2. Be next to the simulator if troubleshooting is needed.

E-mail Sales and Customer Service: sales@gaumard.com

Phone: Toll-free in the USA: (800) 882-6655

Worldwide: 01 (305) 971-3790

Fax: (305) 667-6085

Post: Gaumard Scientific

14700 SW 136 Street

Miami, FL 33196-5691

USA

Office hours: Monday-Friday, 8:30am - 4:30pm EST (GMT-5, -4 Summer Time)

General Information

Gaumard®, ZOE®, Michelle®, Mike®, PEDI®, Susie Simon®, Susie®, Simon® Code Blue®, SIMA Models®, SIMA GYN/AID®, Virtual Instruments®, Codemaker®, Code Blue®, NOELLE®, Simulation Made Easy™, HAL®, CPRLink™, Zack™, RITA™, Chloe™, Seatbelt Susie™, Krash Kids™, Premie™, GIGA®, Omni®, SmartSkin™ are Trademarks of

Always dispose of this product and its components in compliance with local laws and regulations.