

# Obstetric Assistant Model Set type II, Hiroko

LM-114

# Instruction Manual

Thank you for purchasing Hiroko, the LM-114 Obstetric Assistant Model Set type II, Hiroko. Please read this instruction manual carefully to ensure correct use of the product, and store it in a safe place for easy access.

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# **Handling and Safety Precautions**

These precautions should be strictly observed in order to ensure safe, long-term use of the product.

#### The following precautions should be observed particularly strictly:

#### Main body

- 1. Please handle this model with the same care as when working with a human body. Excessive force may damage it.
- 2. Placing objects directly on top of the model or placing it on uneven surfaces may cause deformation.
- 3. This model uses urethane foam for some of its parts, and may be susceptible to damage from pests that are attracted to urethane foam (such as insects in the ant family).
  When storing this model, ensure that thorough measures are taken to prevent pest damage before storing. The company will not be involved with or held liable for pest damage that occurs during storage.

#### Obstetric model - vulva II and the Replacement Umbilical cord for Placenta model

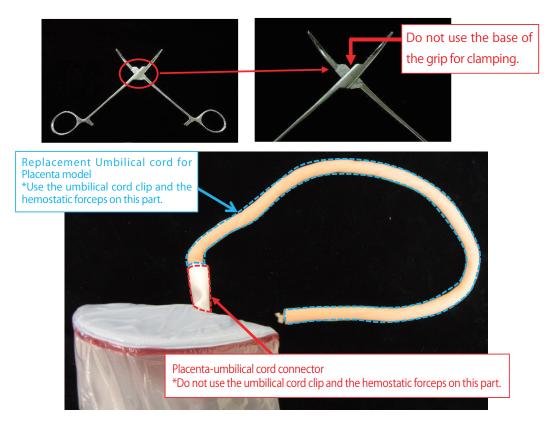
- 1. This model is made using a special material to simulate the texture of human skin. Please handle it with the same care as when working with a human body. Pulling it with excessive force or subjecting it to a strong impact, such as by dropping it, may damage it.
- 2. The material of this model has a distinct odor, which fades with time. This odor is not harmful to the human body and does not indicate poor quality. There may also be a baby powder smell remaining on the product, as baby powder is applied to the models during fabrication.
- 3. Wear disposable gloves when handling the model.
- 4. Use glycerin to lubricate the models. Be sure to apply a sufficient amount of lubricant (glycerin) to the model before use. Koken is not responsible for any deterioration or damage occurring from the use of lubricants other than glycerin. Use commercially available glycerin if you run out of the glycerin provided with the model.
- 5. Please do not use an oily lubricant (baby oil, olive oil, etc.), an alcohol lubricant, or a lubricant containing organic solvent. They may cause the model to break.

- 6. When caring for the model, do not use rubbing alcohol, thinners, benzine or other organic solvents on the model, as doing so may damage it.
- 7. Do not use oil-based inks, pencil, chalk, or paints on the model, as they will soak into the material and cannot be removed.
- 8. Placing objects directly on top of the model or placing it on uneven surfaces may cause deformation.
- 9. If the surfaces become sticky after washing the model, generously apply baby powder to the model to reduce friction.
- 10. The model may lose its shape after a long period of time. Check the shape of the model around three years after purchase. If it has become deformed to the extent that its functioning is affected, please consider ordering a replacement.
- 11. Air bubbles or impressions in the model that may remain from the fabrication process do not affect the strength of the material, as the material used is highly tear-resistant.
- 12. Wash smudges or marks off the model with water. To clean stubborn smudges or marks, wash with a neutral solvent diluted with water. After washing, wipe off the remaining water with a soft, dry gauze or cloth, and pat baby powder all over the model. (Do not clean the model with rubbing alcohol, thinners, benzine or other similar organic solvents.)
- 13. Storing the model for an extended time in a high or low temperature environment may cause deformation. Exposure to direct sunlight or UV rays may also alter its shape or color. Store the model in a 0–50° C environment, in a place where it will not be exposed to direct sunlight or UV rays.
- 14. Oil may leak from the model. For proper storage, wrap the model in paper towels, gauze, or another type of cloth, and place it in the re-sealable plastic bag that came with the kit.

#### Fetal model and placenta model

- 1. Please handle this model with the same care as when working with a human body. Excessive force may damage it.
- 2. When delivering the placenta, avoid pulling too strongly on the umbilical cord.
- 3. Using the umbilical cord clip and/or the hemostatic forceps on the placenta-umbilical cord connector may cause it to tear. Use the umbilical cord clip, etc., on the Replacement Umbilical cord for Placenta model.

4. Clamping with the base of the grip may tear the model. Avoid using the base of the grip.



- 5. Wash smudges or marks off the model with water. To clean stubborn smudges or marks, wash with a neutral solvent diluted with water. After washing, wipe off the remaining water with a soft, dry gauze or cloth.
  - \*Do not clean the model with rubbing alcohol, thinners, benzine or other similar solvents.
- 6. Dropping the model or subjecting it to a strong impact could damage it.
- 7. Store the model in a place where it will not be exposed to direct sunlight or UV rays.
  - 1. The contents of this instruction manual are subject to change without notice.
  - 2. This instruction manual may not be reproduced in part or in its entirety without permission.
  - 3. Please contact the manufacturer in the event that any errors or omissions are found in the contents of this instruction manual.
  - 4. This product should be used only as described in this instruction manual. In particular, the product should not be used in any way that contravenes the precautions noted in the instruction manual.

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#### 1. Outline and Features

#### **Outline**

This set allows trainees to practice a series of obstetric assistance techniques in the supine, side-lying and hands-and-knees positions.

Each part is compatible with the previous model.

#### **Features**

- This model is compatible with Koken's previous models (e.g., LM-101J). It can be used with the parts that you are currently using, such as the improved vulva using a highly elastic material (for delivery and for vaginal examination).
- The presence of legs enables the practice to be conducted in a nearly clinical setting (e.g., assuming a standing position and assistance posture considering the leg position). In addition, obstetric assistance, including for free-style delivery (side-lying and hands-and-knees positions), can be practiced.
- It is possible to practice adjusting the leg supports, etc., of the delivery table to obtain a position that facilitates the parturient to bear down.
- The fetal model has been improved to have a more realistic shape and tactile sensation of the fetal head. The risk of breakage has been reduced by making elastic the neck movement so that it can be observed from the posterior fontanel during crowning and delivery of the head, as well as by improving the structure and shape of the neck, the corners of the mouth and the umbilical region, which were particularly susceptible to breakage.
- A suction cup (soft type) can be attached onto the fetal head. This also enables practicing assistance techniques during vacuum extraction and forceps delivery.
- The umbilical cord of the placenta model is more durable than the previous model, and it can be manipulated with Kocher forceps and an umbilical clip. It is also possible to reproduce the nuchal cord.
- The structure and material of the placenta part have been improved to facilitate extraction of the placenta during delivery and to reduce the risk of breakage.

# 2. Parts of the Obstetric Assistant Model Set



Main body



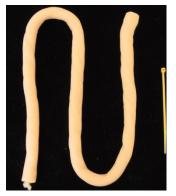
Free-style base for fixing in place the main body



Fetal model Umbilical cover



Placenta model



Replacement Umbilical cord for Placenta model Binding band x 2



Obstetric model - vulva II LM-101P Fixing screw x 2



Cloth cover for main body

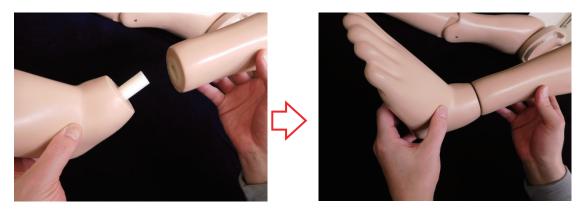


Glycerin (lubricant)

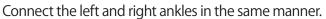
# 3. Using the Set

# 3-1. Attaching the ankle

Attach the ankle below the knee of the main body.



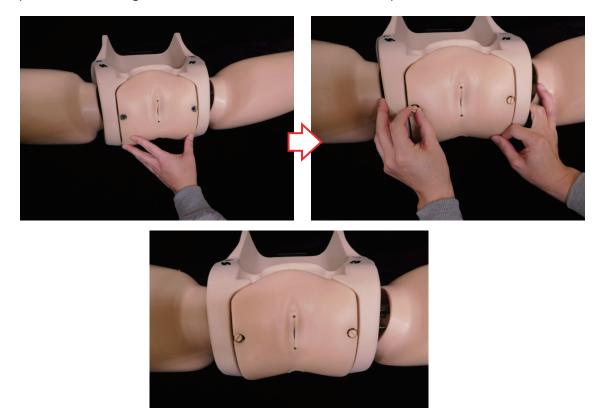
Thanks to the magnet system, the ankle can be connected only by inserting it into the knee.





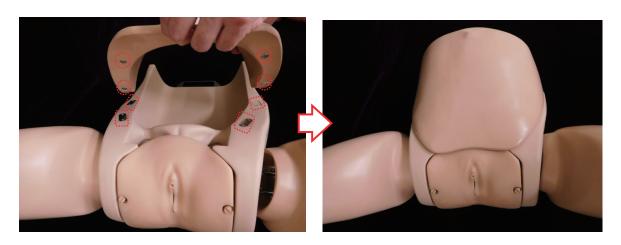
## 3-2. Attaching the obstetric model - vulva II

Place the obstetric model - vulva II on the main body, align the threaded screw holes, and fix it in place with the fixing screws. (A flat-head screwdriver, etc., is required.)



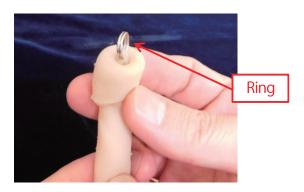
# 3-3. Attaching the abdominal wall

Attach the abdominal wall so that the magnet of the abdominal wall is aligned with the washer of the main body. Thanks to the magnet system, it can be attached only by bringing it into contact with the body.

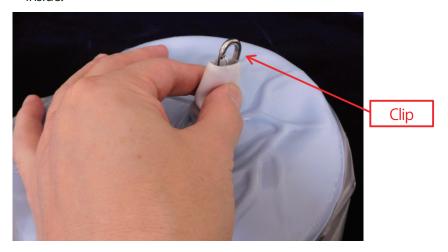


# 3-4. Attaching the fetal model, the Replacement Umbilical cord for Placenta model, and the placenta model

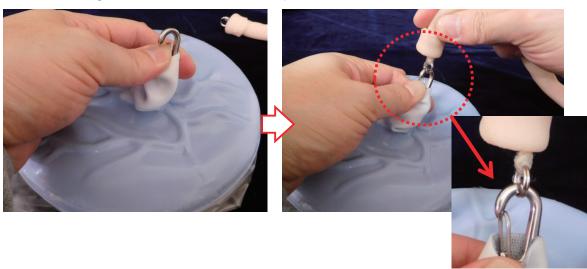
1. Hold the umbilical cord and roll down the end with a hole until a ring appears.



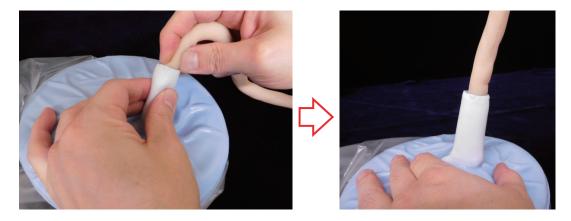
2. Pull down the placenta-umbilical cord connector with your fingers until a clip appears from the inside.



3. Attach the ring of the umbilical cord to the clip.

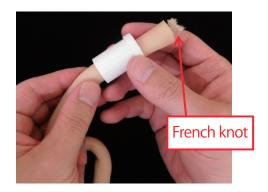


4. Unfold the umbilical cord and cover the umbilical cord with the placenta-umbilical cord connector.

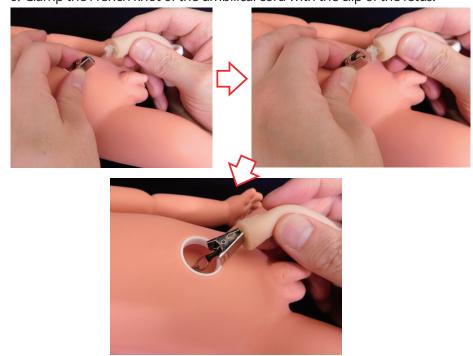


5. Detach the umbilical cover from the fetus and pass the umbilical cover through the French knot side of the umbilical cord.

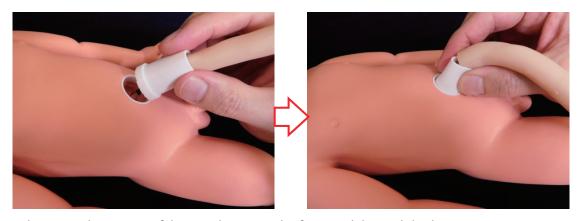




6. Clamp the French knot of the umbilical cord with the clip of the fetus.



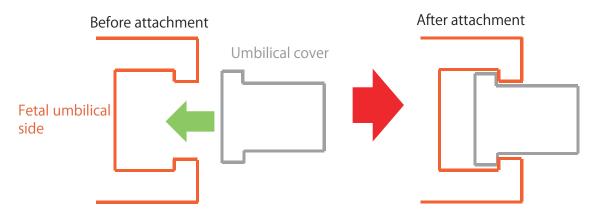
7. Attach the umbilical cover onto the fetus.



\*The internal structure of the joint between the fetus and the umbilical cover

There is a groove on the inside of the umbilical part of the fetus, as shown in the figure below.

Attach the umbilical cover so that its flange fits into the groove.



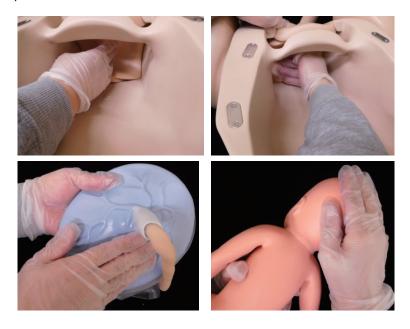
8. The assembly of the fetus, placenta and umbilical cord is now complete.



\* Apply a sufficient amount of glycerin to the fetal model, the placenta model and the inside of the vulva when practicing delivery.

## 3-5. Applying lubricant

Apply a generous amount of glycerin to the inside of the obstetric model - vulva II, the entire body (especially the head and shoulders) of the fetal model, and the entire fetal-side surface of the placenta model.



# 3-6. Holding the fetal model and placenta model

Hold down the back of the head of the fetal model with your index finger to keep it from facing upwards. The head can be easily bent forward by keeping your middle finger hung on the shoulder of the fetus. The figures below show one way to hold the model.



To facilitate delivery of the placenta, push it out while holding the placenta model so as to make round the entire placenta. The figures below show one way to hold the model.





### 3-7. Delivery

1. The main body has a handle. Please use it to fix in place the main body during delivery.



2. Please use the free-style base for fixing in place the main body when practicing obstetric assistance in the side-lying or hands-and-knees position. Since this does not fix in place the main body itself, please also use the main body's handle during the delivery.

#### Fixing in place in the side-lying position





Fixing in place in the hands-and-knees position

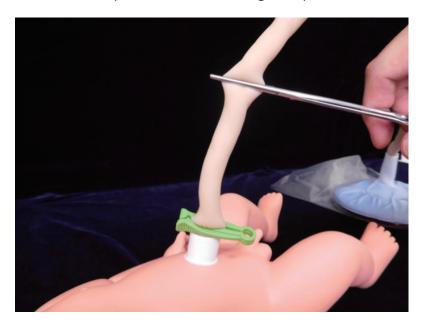
\*Remove the abdominal wall when using the hands-and-knees position. Trainees will not be able to see the condition of the fetus even if the abdominal wall is removed.





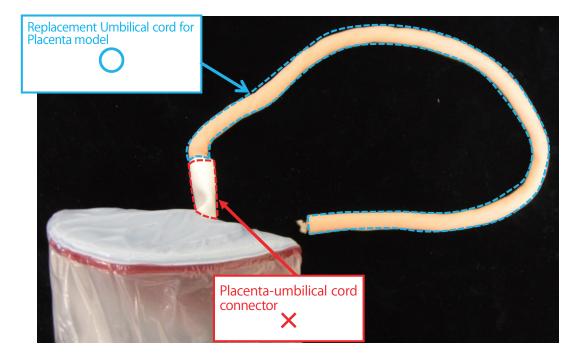
## 3-8. Tying and cutting the umbilical cord

The Replacement Umbilical cord for Placenta model can be manipulated with the umbilical clip and hemostatic forceps, which enables cutting to be practiced.



Make sure to use the Replacement Umbilical cord for Placenta model to practice tying and cutting the umbilical cord.

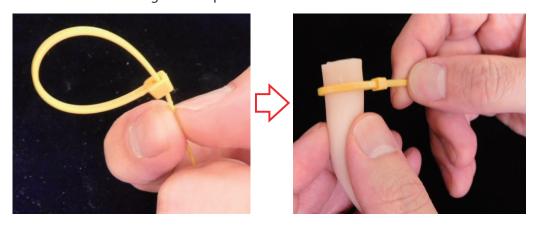
Practicing it on the placenta-umbilical cord connector will damage the model.



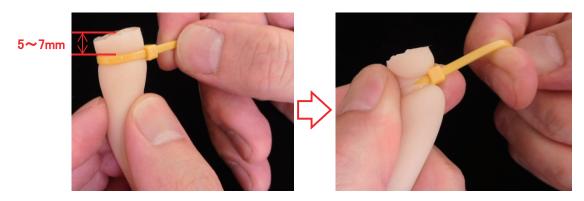
#### 3-9. How to connect the fetus and the umbilical cord after cutting the umbilical cord

Tie the end of the umbilical cord with the binding band and clip the binding band with the clip of the fetus, because cutting the umbilical cord will remove the French knot.

1. Make a loop with the binding band and pass the end of the Replacement Umbilical cord for Placenta model through this loop.



#### 2. Tighten the binding band.



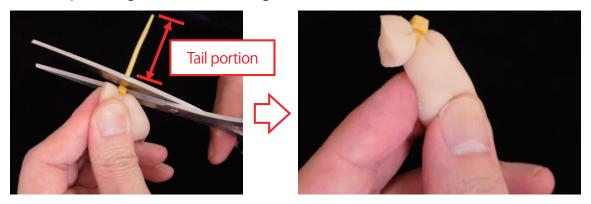
\*If the tightened binding band is placed too close to the end of the umbilical cord, the binding band may detach from the umbilical cord. Make sure to leave a margin of 5 mm to 7 mm from the end when tying with the binding band.

\*Make sure that the glycerin or other lubricant has been wiped off before attaching, as the binding band will become slippery and it will not be possible to attach it to the umbilical cord if it is lubricated during this step.

#### \* Size of the binding band

To connect the umbilical cord, please use binding bands with a width of about 2 mm to 3 mm. The use of an inappropriately sized band may make it difficult to tie the umbilical cord or impossible to clip the head with the clip of the fetus.

3. Cut the protruding tail of the tied binding band.



4. Pass the fetal umbilical cover over the umbilical cord with the binding band attached to it.



5. Clip the head part of the binding band with the clip of the fetus.



 $\,$  6. The connection is completed by attaching the umbilical cover to the fetus.



#### 3-10. Use of the existing products

The existing models, including "Vaginal Examination Model-Vulva II LM-101F," "Obstetric Model-Vulva II Primipara Type/Multipara Type LM-101P/LM-101M" and "Perineal Suture Model - Vulva LM-0635," can be attached to the main body.

It is also possible to practice delivery using the existing models: "Fetal model LM-0633," "Placenta model LM-0634" and "Umbilical cord kit (for tying and cutting) LM-101D."

When using the existing models in combination with the main body, please read the instruction manuals of the existing models.

# 4. Caring for the Model

### 4-1. Cleaning the main body

To clean smudges or marks off the main body, wipe with a towel or a cloth dampened with water.

\*Do not wash the main body with water, as it may cause rusting of the metal parts.

# 4-2. Cleaning the fetal model, placenta model and free-style base for fixing in place the main body

- 1. Wash smudges or marks off the model with water. To clean stubborn smudges or marks, wash with a neutral solvent diluted with water. After washing, wipe off the remaining water with a soft, dry gauze or cloth.
  - \*Do not dig your nails into the surface or apply a strong force, as this may cause damage.
  - \*Water remaining on the model after washing may cause mold, rust, etc., to develop. Make sure to thoroughly wipe off all the water.
- 2. Store the model in a place where it will not be exposed to direct sunlight or UV rays.

# 4-3. Cleaning the obstetric model - vulva II and the Replacement Umbilical cord for Placenta model

- 1. Wash smudges or marks off the model with water. To clean stubborn smudges or marks, wash with a neutral solvent diluted with water. After washing, wipe off the remaining water with a soft, dry gauze or cloth, and pat baby powder all over the model.
  - \*Do not dig your nails into the surface or apply a strong force, as this may cause damage.
  - \*Water remaining on the model after washing may cause mold, etc., to develop. Make sure to thoroughly wipe off all the water.
  - \*Do not clean the model with rubbing alcohol, thinners, benzine or other similar solvents.

2.Wrap the model in the included paper towels, or in a gauze or another type of cloth, and place it in the re-sealable plastic bag that came with the kit. Store it in a  $0-50^{\circ}$  C environment, in a place where it will not be exposed to direct sunlight or UV rays.

# 5. Specifications

Product name	Quantity	Length		Width		Height	Weight
Main body	1	Approx. 1	16cm	Approx. 50cr	m	Approx. 28cm	Approx. 6kg
Obstetric model - vulva II (primipara type)	1	Approx. 1	7cm	Approx. 17cn	n	Approx. 8cm	Approx. 600g
Product name	Qu	antity	Width		Heig	ht	Weight
Fetal model (with umbilical c	over)	1	Appro	x. 40cm	Appr	ox. 32cm	Approx. 2200g
Product name	Qu	antity	Diame	eter	Heig	ht	Weight
Placenta model		1	Appro	x. 19cm	Appr	ox. 10cm	Approx. 600g
Product name	Qu	antity	Umbilio	cal cord length	Diam	neter	Weight
Replacement Umbilical cord for Placenta model		1	Appro	x. 65cm	Appr	ox. 1.4cm	Approx. 80g
Product name	Quantity	Length		Width		Height	Weight
Free-style base for fixing in place the main body	1	Approx. 3	1cm	Approx. 44cr	m	Approx. 39cm	Approx. 800g
Fixing screw	2						

# **6. Accessories and Optional Items**

#### Accessories

Product name	Quantity
Cloth cover for main body	1
Glycerin	1
Binding band (for the umbilical cord)	2
Instruction manual	1

# **Optional items**

Product name	Product No.	
Fetal model	LM-114A	
Placenta model	LM-114B	
Main body	LM-114C	
Replacement Umbilical cord for Placenta model	LM-114D	