



Graf's Method cradles

The use of Graf's cradles is strongly recommended for scanning efficiently and delivering a correct diagnosis to patients, as mentioned in the reference manual **ESSENTIALS OF INFANT HIP SONOGRAPHY** (R. Graf, K. Lercher, S. Scott, T. Spieß) p. 25:

"To perform quick and accurate scanning, a standard position for the infant and a standard scanning technique are needed. Used in combination with the cradle, the probe guide has proved very effective and facilitates scanning the infant hip, reduces scan time and considerably raising the level of precision.

By correctly positioning the infant and using the probe guide system, tilting errors can be virtually eliminated."

Baby System[®]

Graf's cradle (Rapid-Eco and Eco-Support)

Ultrasound Positioning Device with arm guide for ultrasound probes - Medical speciality : medical sonographer/doctors (orthopedists, pediatricians)/nurses

Rapid-Eco is the ultrasound positioning device which is designed to hold and position a newborn baby quickly and efficiently for a scan. On this piece of equipment the newborn is kept firmly still and in the correct position without needing the assistance of a third person, this is because the pressure from both sides of the equipment blocks the movement of the baby with a pressure which is in proportion to the baby's weight and hence the doctor is able to carry on the medical examination in a quick and precise way. Rapid-Eco is washable and made from materials of advanced technology.

The Rapid-Eco gives doctors an easier and quicker way of working.

Eco-Support is the arm guide for ultrasound probes is made of steel and is fixed to the base of the **Rapid-Eco**. During the scan, the doctor is able to observe and analyse the data on the monitor, as the **Eco-Support** allows precise movement and hence avoids errors in the diagnosis.

Both products (**Rapid-Eco product code 5000** and **Eco-Support product code 5001**) can be purchased singularly upon request.



DESIGNED, CERTIFIED AND AUTHORIZED BY Dr. Prof. Reinhard Graf



Additional Information

- Product code 5003 - HS 94029000 - size 27x51x80 cms - weight 7.3 KGS
- Alternative product : *Portable Graf's cradle* product code 5002

[CHECK PRICE ON LINE](https://www.h-h-c.com)

Baby System[®]

Portable Graf's cradle

Ultrasound Positioning Device with arm guide for ultrasound probes - Medical speciality : medical sonographer/doctors (orthopedists, pediatricians)/nurses

The Portable Graf's Cradle is a lighter version of Graf's Cradle product code 5003. The new version of the cradle is smaller and lighter and easy to transport but still allows the scan of new born hip with the same efficiency. It includes the positioning device for holding and positioning the newborn and the arm guide for the ultrasound scan probe. The arm guide can be positioned with a magnet (and secured with screws) on the right or left side of the positioning device depending on operator requirements. The portable Graf's Cradle is made with same quality products and attention to newborn safety and operators professional requirements.



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Additional Information

- Product code 5002 - HS 94029000 - size 44x38x22 cms - weight 4.8 KGS
- Alternative product : Graf's cradle product code 5003

[CHECK PRICE ON LINE](https://www.h-h-c.com)

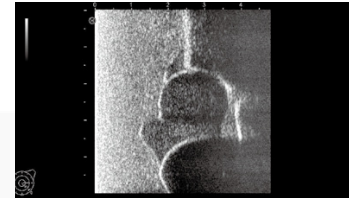
Infant Hip Sonography Training Phantom

*World's first infant hip sonography phantom
Best tool to teach Graf's method*

This phantom expands training opportunities for pediatricians, radiologists and orthopedists. Before working on real infants, trainees can repetitively practice on this phantom to become familiar with the examination procedures and key points. Using real ultrasound devices, trainees can learn key ultrasound landmarks to identify standard plane for Graf's classification. This is a foundation to acquire skills in handling and positioning of the baby as well as correct positioning of the transducer.



*Product
Supervision
Univ. Prof., h.c.,
Reinhard Graf, M.D.*



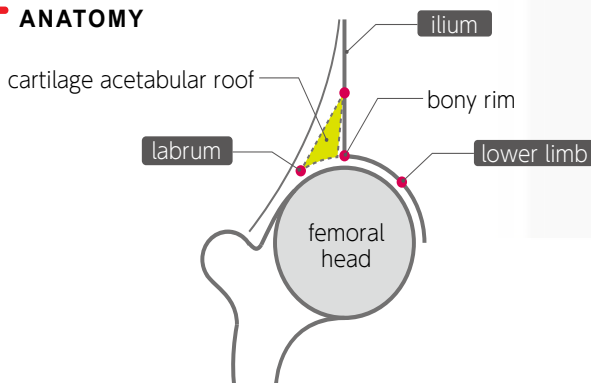
FEATURES

- 1 | The market's only training phantom for hip sonography on a full body manikin of 6-week-old infant
- 2 | Bilateral hips for examination
- 3 | Facilitate anatomical understanding
- 4 | Movable arms to practice supporting and repositioning of the infant

SKILLS

- | Setting and preparation for hip sonography
- | Changing the position of the infant
- | Communication and interaction with infant's guardian
- | Correct use and positioning of the transducer
- | Recognition of landmarks for hip sonography
- | Visualization of standard, anterior and posterior planes
- | Interpretation and morphological classification of the sonogram

ANATOMY



KEY LANDMARKS

- | chondro-osseous junction
- | femoral head
- | synovial membrane
- | joint capsule
- | acetabular labrum
- | cartilaginous portion of the acetabular roof
- | bony promontory of the superior bony acetabular rim
- | lower margin of the ilium
- | standard plane

Additional Information

- Size: W55 x D25 x H13 cm / W21.6 x D9.8 x H5.1 in - Weight: 3kg / 6.6lbs
- Materials: Polyurethane elastomer Latex free
- Set includes: 1x ultrasound infant phantom, 1x talcum powder, 1x storage case, 1x instruction manual

[CHECK PRICE ONLINE](#)

DEVELOPMENTAL DYSPLASIA OF THE HIP (DDH) - Graf's Method

GRAF'S TYPES AND DESCRIPTION DEVELOPMENTAL DYSPLASIA AND DISLOCATION OF THE HIP



Classification according to Graf	Bony roof Alpha Angle	Bony Rim area	Cartilaginous roof Beta Angle	Age	Treatment
TYPE I normal hip	good $\alpha \geq 60^\circ$	angular or blunt	covering $Ia \beta < 55^\circ$, $Ib \beta > 55^\circ$	any age	reassurance and discharge
TYPE IIa (+) developmentally immature, adequate according to age	adequate according to age $\alpha = 50-59^\circ$ (sufficiently developed according to age – see sonometer)	rounded	covering	0-12 weeks	follow up until Type I (or treatment if develops into Type IIa- or Type IIb)
TYPE IIa (-) developmentally immature, maturation deficit	deficient $\alpha = 50-59^\circ$ (insufficiently developed according to age – see sonometer)	rounded	covering	> 6-12 weeks	Treatment until Type I
TYPE IIb dysplasia, late ossification	deficient $\alpha = 50-59^\circ$	rounded	covering	> 12 weeks	Treatment
Exception: TYPE II in case of remodeling or late ossification	deficient $\alpha = 50-59^\circ$	angular (exogenous because of late ossification)	covering	any age	
TYPE IIc (critical hip) IIc stable/IIc unstable	deficient $\alpha = 43-49^\circ$	rounded	covering $\beta < 77^\circ$ (unstable: if β increases to > 77° with stress test)	any age	Treatment
TYPE D hip decentered $\beta > 77^\circ$	deficient $\alpha = 43-49^\circ$	rounded/ flat	just covering/ beginning to displace cranially $\beta > 77^\circ$ (without stress test)	any age	Treatment
TYPE IIIa dislocated hip	poor $\alpha < 43^\circ$ (angle measurement not possible if femoral head not in the standard plane)	flat	cartilage roof cranially displaced, (absence of echogenicity)	any age	Treatment
TYPE IIIb dislocated hip	poor (angle measurement not possible if femoral head not in the standard plane)	flat	cartilage roof cranially displaced, with echogenicity within the cartilaginous roof (proximal perichondrium going upwards)	any age	Treatment
TYPE IV dislocated hip	poor (angle measurement not possible if femoral head not in the standard plane)	flat	cartilage roof caudally displaced (proximal perichondrium horizontal or going downwards)	any age	Treatment