

# Medical Phantoms

# CLA<sup>®</sup>



**MENTONE**  
**EDUCATIONAL**  
ANATOMICAL MODELS AND EDUCATIONAL SUPPLIES

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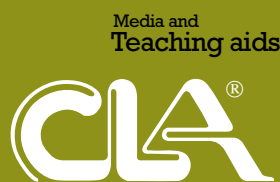
# CLA® offers high standard teaching material in three areas for health education!



The range of **nursing dolls and medical phantoms** developed by CLA®. The high technical standard attained by these models, is a result of decades of experience and intensive dialogue with doctors and teachers, and is recognised throughout the world. Both the nursing dolls and medical phantoms meet a wide range of teaching needs. Without exception these products are individually handmade by craftsmen in Coburg.



CLA® offers the complete **range of SOMSO® anatomical models**. These models have been developed according to strict scientific criteria in co-operation with leading scientists. Specialists fully appreciate these robust models, their accuracy and their aesthetic qualities. Without exception these models are individually handmade by craftsmen in Sonneberg and Coburg.



With their range of selected **overhead transparencies and slides** CLA® offers valuable basic material for theory teaching. The Working Transparencies D1 have been developed by the Federal German Central Office for Health Education, Cologne.





Nursing Dolls  
CLA

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Description of the CLA Nursing Doll

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CLA 1 Nursing Doll - Basic Nursing Doll -

CLA 2 Nursing Doll - Enhanced Version -

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Overall view of the new replacement parts and the care products for the CLA Nursing dolls

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CLA 1+8 Nursing Doll with the head of the Intubation Model CLA 8

Possible applications of the CLA Nursing Dolls

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Possible applications of the CLA Nursing Dolls

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Baby care  
CLA

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Medical Phantoms  
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CLA 15/3 Arthroscopy model of the Shoulder Joint, newly developed

# What you should know about Coburger Lehrmittelanstalt (CLA®) and its products



## Philosophy

The aim of CLA® is to make teaching aids available for health education. These teaching aids contribute to the training of nursing personnel and doctors. CLA® offers an extensive range of high quality products for this purpose.

This range of products covers the following 3 areas:

- 1** High quality nursing dolls and medical phantoms developed and produced solely by CLA®.
- 2** The complete range of anatomical models from the world renowned manufacturer - Marcus Sommer SOMSO® Modelle GmbH.
- 3** The media section for health education featuring slides and overhead transparencies.

## The history of CLA®

08.09.1971: Creation of the company Coburger Lehrmittelanstalt, Trade Register No. 2220

01.01.1975

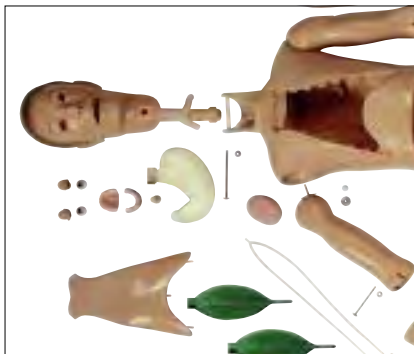
Takeover of commercial operation of the Federal Centre for Health Education in Cologne

08.06.1976

Registration of the trademark CLA® at the German Patent Office, with number 949608

08.09.2011

40<sup>th</sup> anniversary of the company




## The range of products

With the CLA 1 nursing doll, CLA® launched its range of life size dolls for training in nursing schools and instruction of first aid personnel.

The world wide success and demand inspired CLA® to develop a range of nursing dolls to meet extensive medical and teaching requirements.

This comprehensive range of dolls, which now covers premature, baby, infant and adult models, clearly shows that CLA® offers a solution to meet most requirements.

To this can be added a wide range of medical phantoms for training doctors and highly qualified medical assistants. CLA® offers realistic products for practical training in endoscopy, bronchoscopy, urology, intubation, arthroscopy and pelviscopy.

Media bearing the symbol of the Federal German Central Office for Health Education  is published by this agency or has been produced in co-operation with CLA®.



## Product development

All products are developed exclusively by CLA®. All phantoms go through complex stages of development to achieve strict scientific and practice-orientated standards set by experienced and internationally established practitioners.

Many years of intensive work and rigorous testing are behind the development of CLA® medical phantoms before they reach the degree of sophistication required for serial production. Close co-operation with practising scientists ensures a high level of expertise and as a result, creates realistic conditions for training.

It goes without saying that all models are subject to continuous improvement process which integrate all medical, therapeutic and technical innovations.

Thus CLA® customers get a product which combines function with long life. The various parts are replaceable and will incorporate the latest developments.



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### Production

All CLA® products are manufactured at the company's own factory in Coburg, Germany.

This ensures that only highly skilled specialists make these nursing dolls and phantoms in one-off handmade production. The progress of the model through to final assembly ensures both the characteristic factory finish and the highest quality in function and form. A large number of individual parts, materials and mechanical elements are integrated at each stage to create a model which meets the high standards set by the medical training profession.

### Function and warranty

CLA® nursing dolls and phantoms are designed for normal diagnostic procedures and treatment. The functional sequence for nursing or diagnosis is as realistic as possible to create exacting practical conditions.

By using high quality materials and special production methods CLA® can offer a full 2-year guarantee for its products.



### The service

Our staff can be contacted by phone for advice on CLA® models. CLA® will ensure that spare parts are always available for dolls and phantoms that have been in use for many years and also, offer a factory repair service for models.



[www.coburger-lehrmittelanstalt.de](http://www.coburger-lehrmittelanstalt.de)



# The complete range of CLA® nursing dolls, CLA® medical phantoms and SOMSO® care babies

## CLA® Nursing Dolls



CLA® Nursing Doll

## CLA® Medical Phantoms



CLA® Gastro-Bulboscopy

## SOMSO® Baby Care



SOMSO® Care Babies



CLA® Child Nursing Doll



CLA® Pelviscopy



SOMSO® Nursing Babies



CLA® Nursing Baby



CLA® Urology



SOMSO® Newborn Babies



CLA® Intubation Phantom of New-Born Baby



CLA® Catheterisation



SOMSO® Premature Infant Babies

The diversity of CLA® products can be seen just by glancing at this page. However, only a few examples of the products in each section are illustrated here, but the full range is featured in this catalogue.

In so far as a models dimensions and weights are altered, such modifications are due to the latest technical and scientific developments.

Copying models, phantoms and nursing dolls is prohibited and infringement is subject to compensation for damages.



CLA® Intubation



CLA® Bronchoscopy



CLA® Arthroscopy

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The name CLA® and the design CLA® are national and international registered Trade marks of Coburger Lehrmittelanstalt. Moreover the medical phantoms, nursing dolls and SOMSO® models are protected by copyright.



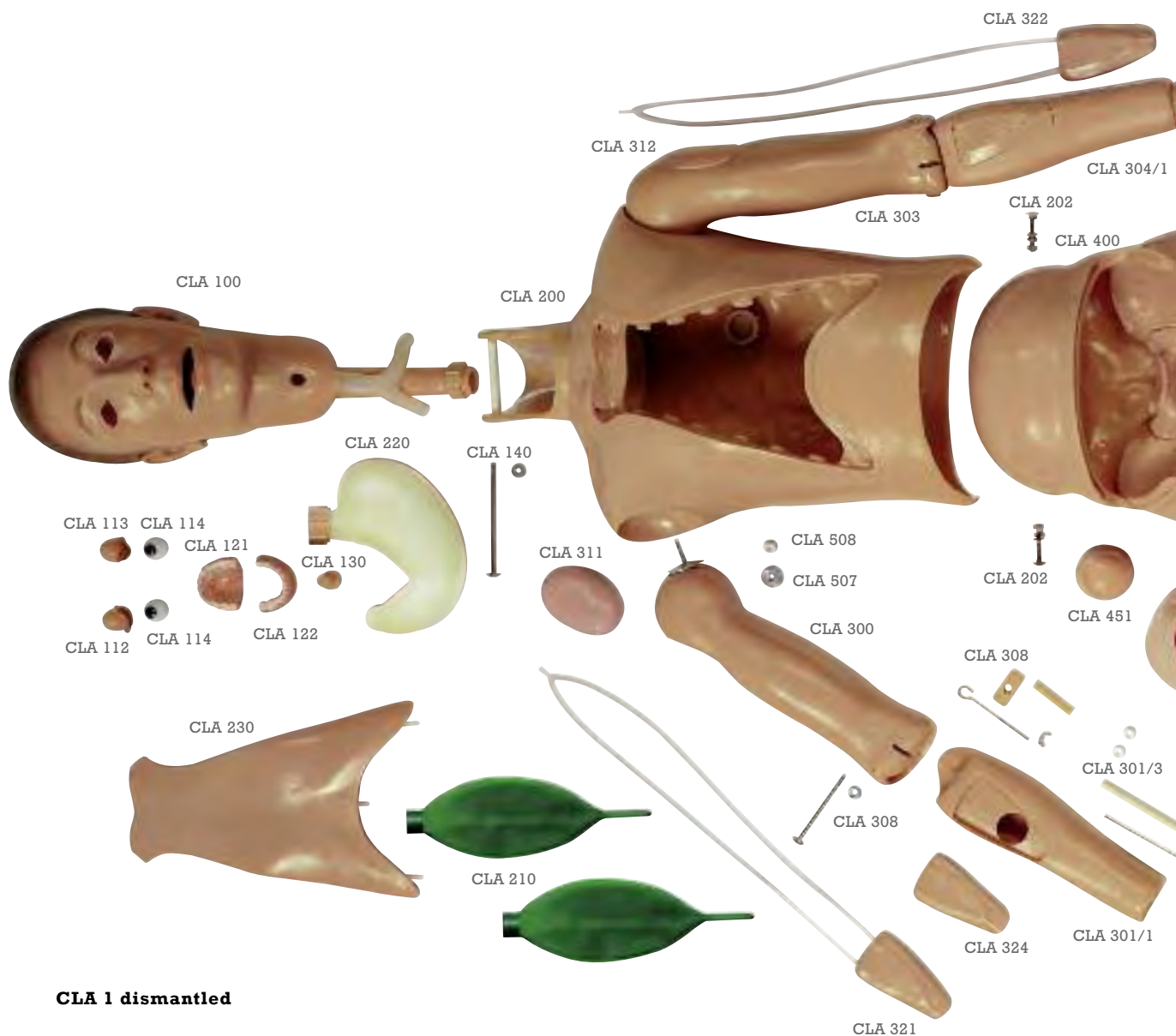
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**Nursing Dolls**

**CLA<sup>®</sup>**



**CLA 1 dismantled**

## CLA Nursing Doll Adult-Size

■ The training doll has been developed in co-operation with the Federal German Centre for Health Education in Cologne. The result is an ideal, life-like doll for all training application in nursing and also care of the elderly.

■ There is considerable emphasis on producing a life-like, functional model which is easy to maintain and is very solid.

■ The doll is 178 cm long and weighs 23 kg.

■ It has a robust joint mechanism that allows almost all natural movements.

■ The head and limbs can be removed from the torso by means of simple nut and bolt connections.

■ The male and female genitalia are interchangeable. All internal organs (eyes, teeth, lungs, stomach and bowels) can be removed.

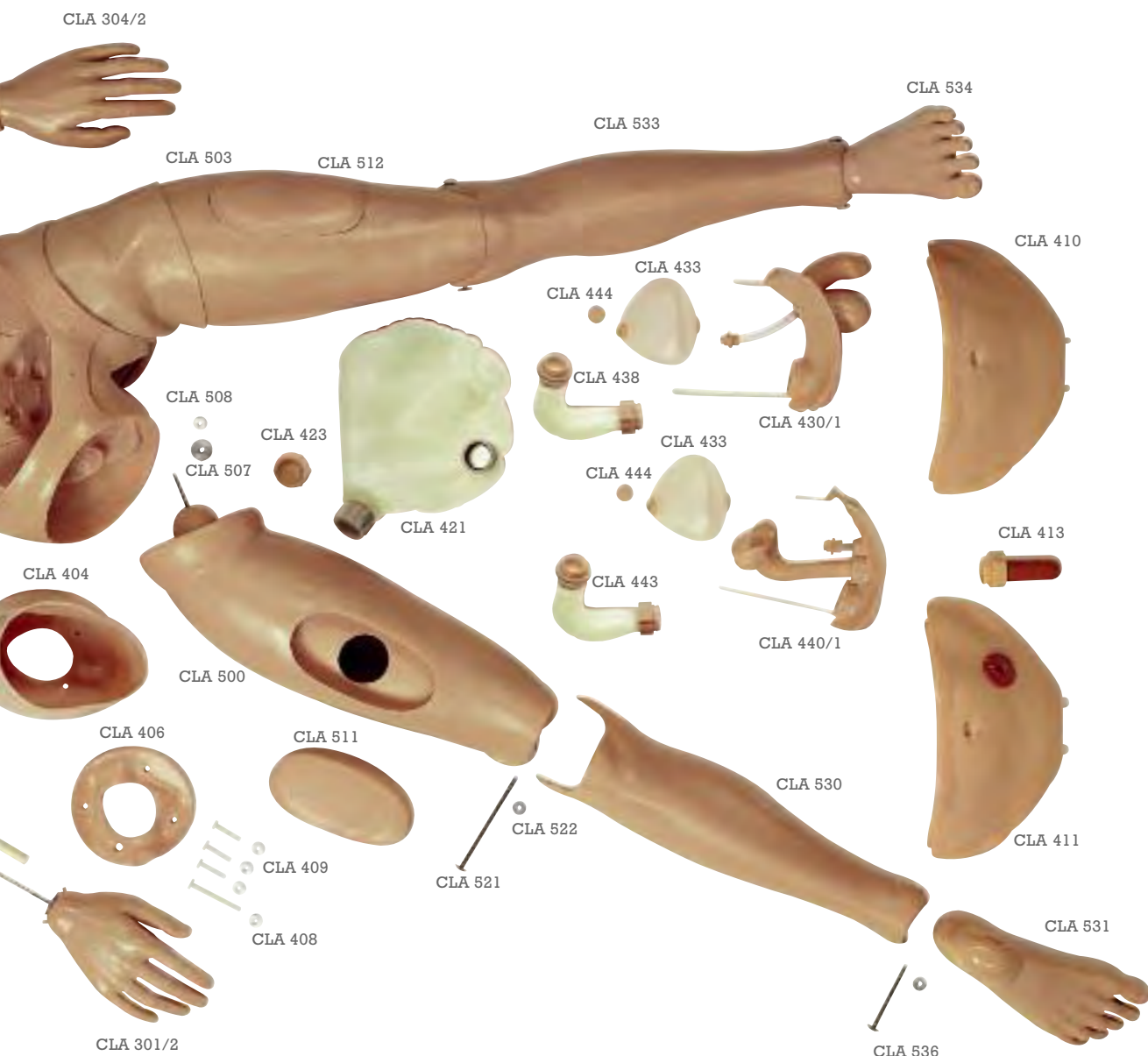
■ Improvements are continuously produced within the framework of intensive discussions with professional training and medical schools. New developments to the current state of education are taken into account.

■ All standard injection points (upper arm, buttocks and thighs) are fitted with injection pads. At the ante cubital fossa, special injection pads are fitted, each of which have two imitation veins for infusion and injection training.



**CLA 1/B, male**





■ Openings for inserting a PEG catheter and for suprapubic bladder puncture are provided.

■ The doll is produced in a special plastic using a special manufacturing technique. This gives high water resistance and a surface which is pleasant to touch.

■ Special instructions for use are provided under each application.

■ The CLA Hospital Training Doll has been successful in daily use at schools all over the world in all climates for more than 40 years.

■ Each CLA training doll is marked with a serial number on the inside right side of the chest. This number should be quoted when ordering replacements or for service enquiries. Please make sure you quote the complete number.

■ All parts or replacement parts of the Nursing Doll can be ordered individually. Please see page 9.

■ We offer a full 2 year's guarantee on all CLA Hospital Training Dolls.



■ CLA provides on-demand services to customers and guarantees the possibility of repair even after decades.



**CLA 1, female**



### CLA 3 Nursing Doll

Basic Care Doll in natural size

Comprising the following parts: Removable head, removable eyes, dentures and tracheostomy, thorax with chest wall and moving arms, injection pads in the buttocks and thighs, lower extremities (removable lower legs and feet through screw attachment), lower body with abdominal wall and external female genitalia. Length: 178 cm., weight: approx. 20 kg.



### CLA 1 Nursing Doll

Basic Nursing Doll in natural size

Comprising the following parts: Removable head, removable eyes, dentures and tracheostomy, thorax with chest wall and moving arms with infusion and injection pads, lower body with abdominal wall and stoma abdominal wall, injection pads in the buttocks, movable mounted legs with injection pads in the thigh, lung alveolus, stomach, intestines, detachable female and male genitalia with rectum and bladder. Length: 178 cm., weight: approx. 23 kg.



### CLA 2 Nursing Doll

Enhanced version, natural size

As CLA 1, but with additional male genitalia with urinary bladder with a capacity of 2ltr and lungs with closure (for cleaning). Length: 178 cm., weight: approx. 23.5 kg



## Design your own CLA Nursing Doll

New items for the CLA Nursing Doll – retrofitting or enhancement are possible for all Nursing Dolls made since 1971.

### Stomach

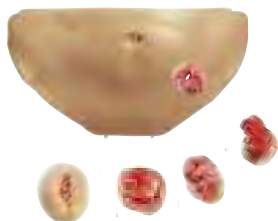
CLA 220 ASM



### Abdominal cover with set of stomas

CLA 411/5

consisting of 5 parts: oval (normal), retracted, prolapse, erythema and double barrel stoma; interchangeable using plug-in connectors



### Wound pad with suture and Redon-Drainage suitable for right thigh

CLA 511/1



### Right foot with pressure ulcer and perforating plantar ulcer

CLA 531/1



### Female chest cover

CLA 231



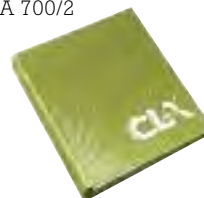
### Right leg with 4 crural ulcer inserts

CLA 530/1



### Instructions for use, English

CLA 700/2



### Lower body with pressure ulcers

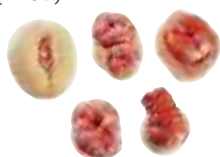
CLA 400/1



### Set of stomas

CLA 411/6

(If interested, the submission of a pre-existing abdominal wall CLA 411, CLA 411/1 or CLA 412 is required)



### Ventil set for PEG/SUP/Stomach

CLA 433/1 CLA 220/1 CLA 220/4



### Right leg with crural ulcer insert

CLA 530/2



### Pressure spray bottle, silicone oil, 125 ml net content

CLA 800/2



### Abdominal cavity cover with colostomy and subcutaneous injection pad

CLA 411/1



### Male sex organ with movable foreskin

CLA 430/5



### Talcum powder 100 ml

CLA 801



### Subcutaneous injection pad

CLA 411/2



### Lower leg stump with reddening, right

CLA 502



### Left foot with pressure ulcer

CLA 534/1



### Accessories case suitable for CLA 1 and 2

CLA 900



### Accessories case suitable for CLA 3

CLA 910







**1**

**CLA 1/B** (ill. page 6)  
**Nursing Doll**  
 natural size  
 as CLA 1, but black in colour.  
 Length: 178 cm.,  
 weight: approx. 23 kg.

**CLA 1+8** (not ill.)  
**Nursing Doll**  
 natural size  
 as CLA 1, but with the head  
 of the Intubation Model  
 CLA 8. Length: 178 cm.,  
 weight: approx. 24 kg.

**Recommended for  
 intubation training is  
 CLA 8 (see page 27) and  
 CLA 9/7 (see page 29).**

## Table of Contents for Training Applications:

### General Nursing

- Personal hygiene
- Bed, and clothing changes
- Bed sores (Decubitus)
- Handling of injured limbs
- Stoma care
- Suprapubic puncture of the bladder
- PEG catheter care
- Tracheostomy care
- Care of the eye, and the introduction of medication
- Care of the outer ear, introduction of medication
- Pressure ulcer treatment

### Training Applications

#### I. Enemas

- Purgative enema/Clysmas
- Diabetes injection

#### II. Catheterisation

- Male
- Female



**2**

### III. Physical Treatment

- Inhalation, oxygen therapy, resuscitation (with breathing tube or bag)

### IV. Injections - Infusions - Transfusions

- Injections
- Infusions/Transfusions
- Intravenous access
- Insulin injections

### V. Spülungen

- Eye wash
- Ear wash
- Stomach lavage
- Bladder irrigation
- Colonic irrigation, anus-praeter

### VI. Bandaging

#### III. 1

Suprapubic bladder puncture

#### III. 2

Stoma care

#### III. 3

Catheterisation (Detail)

#### III. 4

Stomach lavage

#### III. 5

Injections

#### III. 6

Catheterisation

#### III. 7

Personal hygiene: washing

#### III. 8

Adhesion electrodes

#### III. 9

Position



**3**



7



8



9



## CLA 23

### Child Nursing Doll

in natural size.

The doll, with a length of 90 cm and weighting 6 kg, corresponds to a small child approximately 3 years old. This realistic training doll offers the facility for numerous nursing procedures for training paediatric nurses.

This doll, made of plastic, incorporates durable, new style joint mechanisms which permit most natural movements. As a result training and nursing procedures can be carried out in most practical situations. This small child phantom is available as both a female and male model because of the interchangeable chest and abdominal wall. The abdominal walls incorporate application points for S.C. injections and treatment of wounds (female abdominal wall - OP wound after appendectomy, male abdominal wall - wound treatment after hernia). Upper arms and upper thighs are provided with injection pads. The right arm can be exchanged for an I.V. injection arm. The abdominal walls are equipped with

- anus-praeter
- openings for PEG and suprapubic bladder puncture.

**The CLA Child Nursing Doll offers the following possibilities for training and instruction:**

#### General Nursing procedures

- a) Dressing and undressing
- b) Daily body care
- c) Movement, putting to bed and positioning
- d) Mouth and teeth care
- e) Eye, nose and throat care (including administration of drops)

#### Specific nursing measures under medical supervision for training and demonstration

##### I. Enema

- a) Lavage enema / clyster
- b) Intestine tube insertion

##### II. Catheterising and feeding

- a) Demonstration of catheterisation and permanent catheter insertion in female and male genitalia
- b) Stomach tube insertion through nose and mouth
- c) Nutrition through bolus administration or by nutrition pump

#### CLA 23 dismantled



#### CLA 23 complete

##### III. Injections and infusions

- a) I.M. injection (thigh, upper arm)
- b) S.C. injection (stomach)
- c) Demonstration of I.V. injection and infusion
- d) Connection of infusion equipment
- e) I.V. puncture

##### IV. Lavage

- a) Gastric lavage

##### V. Wound treatment, catheter care and other measures

- a) Wound care and suture removal
- b) PEG care
- c) Anus-praeter care
- d) Suprapubic bladder puncture with material removal and care in the case of suprapubic bladder drainage
- e) Tracheostomy care

Every child nursing doll is provided with a serial number. This is to be found on the inside in the centre of the chest. It is essential to quote this number in full when reordering.

**All parts are available individually or as spare parts.**

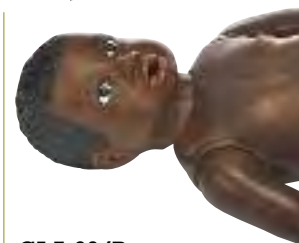


#### CLA 23/A

##### Child Nursing Doll

As CLA 23 but a 3-year-old Asian child

**2 YEARS**  
**CLA**  
**GUARANTEE**



#### CLA 23/B

##### Child Nursing Doll

As CLA 23, but black in colour.

**The following versions are in preparation:**

#### CLA 24

##### Child Care Doll

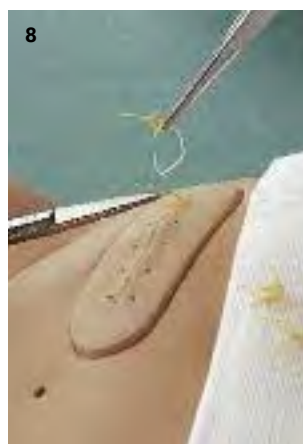
Male

#### CLA 25

##### Child Care Doll

Female





**III. 1**  
Suprapubic  
bladder puncture

**III. 2**  
Tracheostomy care  
and S.C. injection

**III. 3**  
Mouth care

**III. 4**  
PEG care

**III. 5**  
Catheterising

**III. 6**  
Personal hygiene: washing

**III. 7**  
Applying PEG probe

**III. 8**  
Suture removal, wound care

**III. 9**  
I.V. puncture

**CLA 20****Nursing Baby**

in natural size  
approximately 4-weeks-old.  
Made of plastic throughout  
comprising body with movable  
head, arms and legs.

**The following parts can be exchanged on this doll:**

- female chest and abdominal wall with umbilical vein
- male chest and abdominal wall with stoma
- temporal vein
- urinary bladder
- stomach and intestines
- injection pads in thigh and buttocks

**Training possibilities:**

- a) Puncture of temporal vein
- b) Stomach tube (nasal and oral)
- c) Catheterisation (female and male)
- d) Intestinal lavage
- e) Injection
- f) Stoma care
- g) Supply of umbilical venous catheter (possibility of demonstrating similar neonatal stage)

**Components:**

- Fitted movable head with removable temporal vein, nasal meatus, open mouth, tongue and oesophagus.
  - Trunk with soft, movable arms and legs, transparent rectum, injection pads on buttocks and thighs.
  - Transparent stomach and transparent intestinal tract with valve
  - Male chest and abdomen covers with stoma, urethra and bladder with valve
  - Female chest and abdomen covers with umbilical cord, urethra and bladder with valve
  - Venipuncture cannula, feeding tube and 2 catheters
  - 100 ml of blood liquid
  - Spray bottle with silicone oil, 125 ml
  - Talcum powder
  - Vaseline
  - Instructions for use
- Length: 54 cm., weight: 2.7 kg.

**CLA 20/A****Nursing Baby**

As CLA 20, but an Asian Baby. Length: 54 cm., weight: 2.7 kg.

**CLA 20/B****Nursing Baby**

As CLA 20, but black in colour.

**All parts are also available separately or as spare parts****CLA 20/1****Nursing Baby**

As CLA 20, but with aluminium case. Height: 22 cm., width: 50 cm., depth: 35 cm., weight: 4.9 kg.

**CLA 20 dismantled****CLA 20/A****CLA 20/B**  
(female abdominal cover not shown)





**ill. 1**  
Inserting cannula into the  
temporal vein



**ill. 2**  
Naso-gastric feeding



**ill. 3**  
Nose drop administration



**CLA 8/58****Intubation Phantom of New-Born Baby**

With the co-operation of Prof. Dr. Chr. Fusch, we have developed a life-size model for **orotracheal** and **naso-tracheal** intubation. In addition to a moveable lower jaw, great importance has been placed on faithfully copying the nasal, oral and pharyngeal cavities.

To practise **nasotracheal** intubation, a tube is carefully introduced into the nostril and carefully pushed along the inferior meatus and the back wall of the throat to the 7cm mark, to ensure that the point of the tube stops shortly before the epiglottis. Without any pressure being exerted on the upper jaw, the base of the tongue is gently raised using a laryngoscope spatula held in the left hand, until the entrance to the oesophagus and the glottis are visible. Holding the Magill forceps in the right hand, the point of the tube is then taken and inserted approximately 1.5cm into the trachea via the glottis.

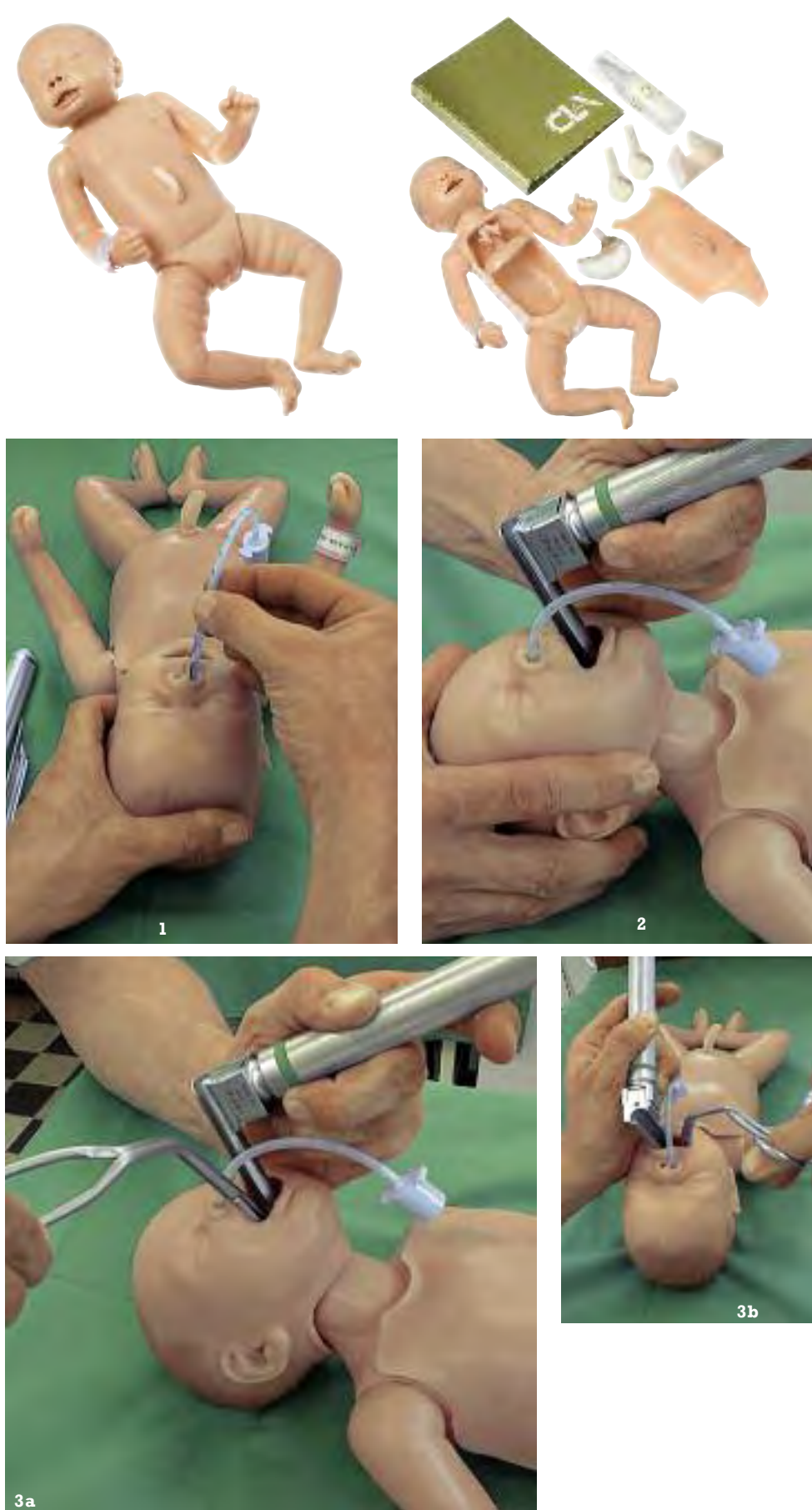
We recommend that to prevent the tube from accidentally slipping, the thumb and index finger of the left hand hold the tube at the nasal vestibule, and the remaining fingers and palm of the hand are placed on the left side of the temple and forehead of the new-born baby. The tube can then be attached to the skin as usual (e.g. using adhesive tape).

The tube can be introduced through the mouth directly into the trachea, when the trachea is visible for **orotracheal** intubation.

**Components:**

- Movable head with lifelike nasal cavity, mouth and throat, movable tongue and jaw with lifelike trunk with diaphragm and soft movable arms and legs
- Pulmonary alveoli filled with foam material
- Stomach
- Female thoracic and abdominal cover with umbilical cord
- Pressure spray bottle with silicone oil (125 ml)
- Instructions for use

Length: 45 cm.,  
weight: 1.6 kg.



**ill. 1:** Insertion of endotracheal tube (Portex blue line 3.0) through the nostril (to about 7cm).

**ill. 2:** Insertion the laryngoscope with the left hand. Demonstration of rima glottides by gentle abdominal pulling.

**ill. 3a and 3b:** The tube is held with Magill forceps in the right hand and pushed into the trachea.



# Baby care





**SOMSO's range of care babies comprises:**

**Teaching baby**

**Newborn baby**

**Premature infant baby**

**Nursing baby**

**Nursing doll**

1. Size and weight commensurate with age
2. Natural body and head mobility
3. Hand-painted\* eyes and hair
4. Robust joints
5. Water-proof finish
6. 5-year guarantee

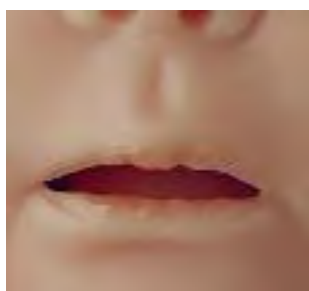
\* with the exception of MS 33/E, MS 57, MS 58, MS 59, MS 60 and MS 61







1. For the SOMSO nursing babies MS 52 and MS 53 different colour eyes are available as a special order.



2. The models MS 52 and MS 53 are available with an open or closed mouth.



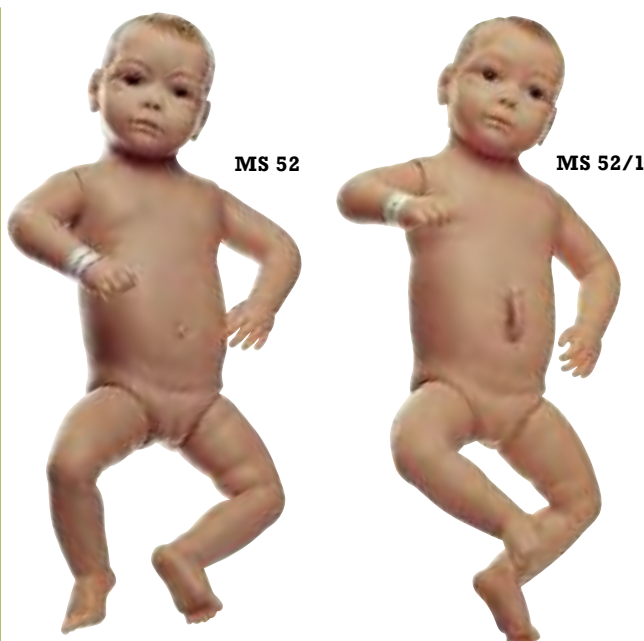
3. There is a realistic auditory canal for ear care.



4. The models MS 52, MS 53, MS 57, MS 58, MS 59, MS 60 and MS 61 have soft and movable arms and legs.



5. Each baby has its own SOMSO identification-number for queries about the model.



Detail MS 52, MS 52/A and MS 52/B



## MS 52

### Nursing Baby, Female

Corresponding to the size and weight of a 6-week-old baby. In soft SOMSO-Plast. With ball joints, head easily movable and tilts backwards. With hand-painted light brown eyes. A perfect combination doll for bathing, dressing practice and nursing exercises. Nose and ears are open, as is anus for insertion of thermometer. Undressed.

Size of the head: 35.8 cm., length: 54 cm., weight: 3.3 kg.

## MS 52/A

### Nursing Baby, Female

(detailed ill.)

As MS 52, corresponding to the size and weight of 6-week-old Asian baby. With hand-painted dark brown eyes. In soft SOMSO-Plast. Size of head: 36 cm., length: 54 cm., weight: 3.3 kg.

## MS 52/B

### Nursing Baby, Female

(detailed ill.)

As MS 52, but black in colour. In soft SOMSO-Plast. Size of head: 35.8 cm., length: 54 cm., weight: 3.3 kg.

## MS 52/1

### Nursing Baby, Female

As MS 52, but with umbilical cord. In soft SOMSO-Plast. Size of the head: 35.8 cm., length: 54 cm., weight: 3.3 kg.

## MS 53

### Nursing Baby, Female

Corresponding to the size and weight of a 6-week-old baby. In soft SOMSO-Plast. With ball joints, head easily movable and tilts backwards. With hand-painted brown eyes. A perfect combination doll for bathing, dressing practice and nursing exercises. Nose and ears are open, as is anus for insertion of thermometer. Undressed, with dust cover.

Size of the head: 35.4 cm., length: 54 cm., weight: 3.5 kg.

## MS 53/1

### Nursing Baby, Male

(not ill.)

As MS 53, but with umbilical cord. In soft SOMSO-Plast. Size of the head: 35.4 cm., length: 54 cm., weight: 3.5 kg.

## MS 53/B

### Nursing Baby, Male

As MS 53, but black in colour. In soft SOMSO-Plast. Size of the head: 35.8 cm., length: 54 cm., weight: 3.5 kg.



**MS 58 Detail**



**MS 58**



**MS 58**



**MS 59**



**MS 60**

**MS 61**  
**Premature Infant Baby, Female**  
Approximates to a baby in 27th week of pregnancy. In SOMSO-Plast. With moveable arms and legs. Undressed. Size of the head: approx. 25.5 cm., length: approx. 35.5 cm., weight: approx. 690 g.



**MS 33/E**

**MS 33/E-B**



**MS 57**



**MS 57/B**



## **MS 33/E**

### **Doll for Baby Care**

In SOMSO-Plast. With ball joints, head, arms and legs easily movable and with open anus. A perfect combination doll for bathing, dressing practice and nursing exercises. With synthetic brown eyes. Undressed. Size of the head: 36 cm., length: 49 cm., weight: 3 kg.

## **MS 33/E-B**

### **Doll for Baby Care**

As MS 33/E, but black in colour.

## **MS 57**

### **Newborn Baby, Female**

In soft SOMSO-Plast. With ball joints, head moves easily and tilts backwards. With umbilical cord and anus. For bathing, dressing practice, and nursing exercises. Undressed. Size of the head: 32.6 cm., length: 45 cm., weight: 1.9 kg.

## **MS 57/B**

### **Newborn Baby, Female**

As MS 57, but black in colour.

## **MS 58**

### **Newborn Baby, Male**

In soft SOMSO-Plast. With ball joints, head moves easily and tilts backwards. With open mouth, umbilical cord and anus. For bathing, dressing practice, and nursing exercises. Undressed. Size of the head: 34 cm., length: 46 cm., weight: 2.2 kg.

## **MS 58/B**

### **Newborn Baby, Male**

(not ill.)  
As MS 58, but black in colour.

## **MS 59**

### **Newborn Baby, Female**

In soft SOMSO-Plast. With ball joints, head moves easily and tilts backwards. With open mouth, umbilical cord and anus. For bathing, dressing practice, and nursing exercises. Undressed. Size of the head: 34 cm., length: 46 cm., weight: 2.2 kg.

## **MS 59/B**

### **Newborn Baby, Female**

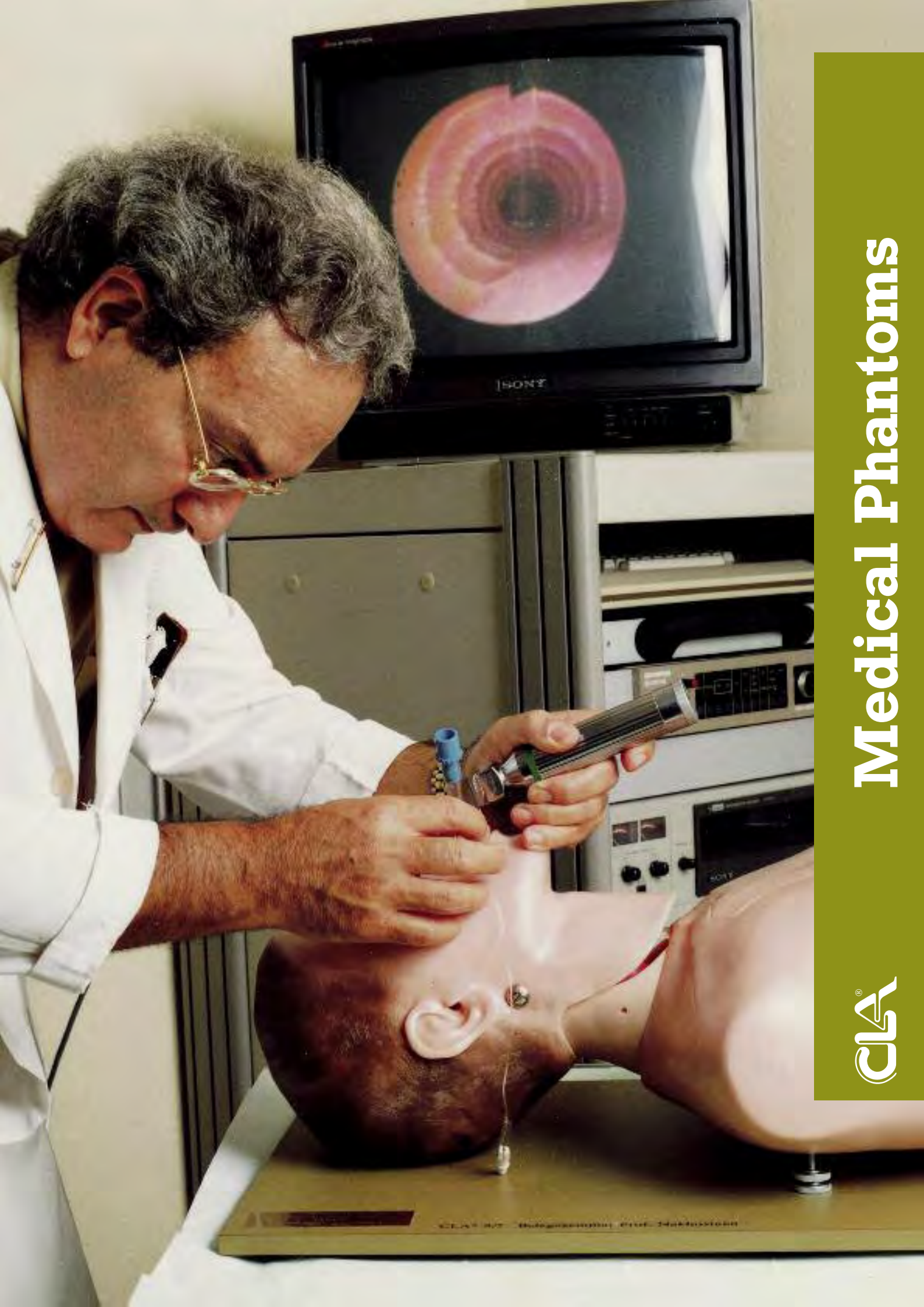
(not ill.)  
As MS 59, but black in colour.

## **MS 60**

### **Premature Infant Baby, Male**

Approximates to a baby in 27th week of pregnancy. In SOMSO-Plast. With moveable arms and legs. Undressed. Size of the head: approx. 25.5 cm., length: approx. 35.5 cm., weight: approx. 670 g.





**Medical Phantoms**

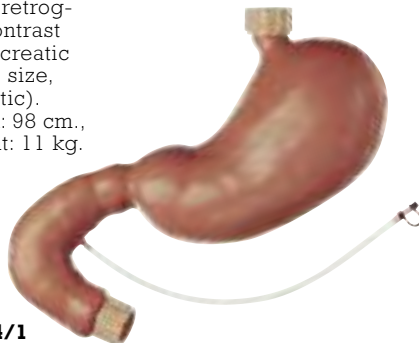
**CLA®**



#### CLA 4

##### OGI Phantom

Esophagoscopy, gastroscopy, bulboscopy as well as endoscopic-retrograde cholangiography-pancreaticography (ERCP) produced in co-operation with Prof. Dr. M. Classen, and H. Rupp M.D. For training of endoscopy of the upper gastrointestinal tract, for catheterisation of the papilla Vateri by retrograde instillation of contrast medium into the pancreatic duct system (Natural size, made of special plastic). Height: 35 cm., width: 98 cm., depth: 32 cm., weight: 11 kg.



CLA 4/1

#### CLA 4/1

##### Stomach and Duodenum

In natural size, made of special plastic. For training of endoscopy produced in co-operation with Prof. Dr. M. Classen and H. Rupp M.D. Height: 12 cm., width: 36 cm., depth: 27 cm., weight: 1.3 kg..



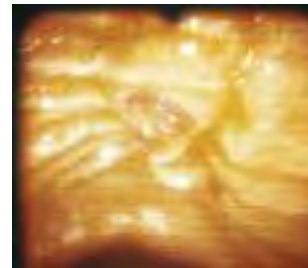
Stomach cardia view after inversion of the instrument.



Endoscopic gastric angle, antrum and pylorus.



Kerckring folds in the descending portion of the duodenum.



Ampulla of Vater and major duodenal circular fold and longitudinal folds.



CLA 4

#### CLA 14

##### Model for Pelviscopic Operations

using the Dr. Simon method  
The model consists of a rigid plastic mass and corresponds to the actual size of a normal woman. The model has been designed mainly for the simulation of all pelviscopic operations. Many operations are made possible by the number of openings. Height: 22 cm., width: 43 cm., depth: 45 cm., weight: 6.5 kg.

#### CLA 14/1(not Ill.)

##### Model for Pelviscopic Operations

using the Dr. Simon method  
As CLA 14, but with stand.  
When using the stand team operations can also be practised with ease using three apertures.  
Height: 97 cm., width: 55 cm., depth: 55 cm., weight: 8.5 kg.



CLA 14



**CLA 6 Front view**

**CLA 6  
Urological Practise Model**

Produced in co-operation with Prof. Dr. J. Sökeland. Made of special plastic. A urological practise model that allows rectal examinations such palpation of the testicles to be learned under true-to-life conditions.

5 different changes in the prostate can be felt in the anus after insertion of the fingers.

1. A normal prostate
2. The beginning of carcinoma
3. Widespread carcinoma
4. Adenoma of the prostate
5. Congestion of the prostate

The different prostate models are mounted on a swivel plate so that the person investigating can feel five different prostate changes in one operation.

In testicle palpation, the testicles themselves, the epididymis and the spermatic cord can be felt. On one testicle, a hardening can be felt as in carcinoma of the testicle. Feeling of the testicles can also be demonstrated to the layman for early detection of cancer of the testicles.



**CLA 6 Back view**



Detail - 5 different representations of the prostate on swivel plate



**CLA 6430**

The urological model can greatly facilitate teaching the technique of rectal palpation and allows the comparison of different findings. The student and trainee doctor become familiar with the main rectal palpation findings.  
Height: 34 cm., width: 52 cm., depth 30 cm., weight: 5.5 kg.

**CLA 6/1  
Prostate-Palpatin-Model**

Produced in co-operation with Prof. Dr. J. Sökeland. Disk with 5 different changes in the prostate. Natural size ø 13 cm, made of special plastic.  
Height: 4 cm., width: 13 cm., depth: 13 cm., weight: 0.18 kg.



**CLA 6/1**

**CLA 6430  
Sex organ, with pathological and healthy testicles, rectum and fastening tabs**  
The testicles and the rectum are interchangeable.



# CLA 6/4

## Urological Examination Phantom for Endoscopic Operations

Produced in co-operation with Prof. Dr. J. Sökeland. Transurethral operation techniques require extensive training. A practice phantom can support the learning process to a great extent.

The phantom comprises a natural size trunk, made of special plastic with interchangeable genitalia, on a base with a water tray:

1. Male genitalia with urethra and interchangeable prostate and connection to the bladder.
2. External female genitalia with urethra and connection to the bladder.

The prostate capsule can be filled with natural or synthetic materials. The bladder is split and joined together with a sealing ring.

The bladder incorporates four openings:

1. The front connection to either the prostate or urethra.

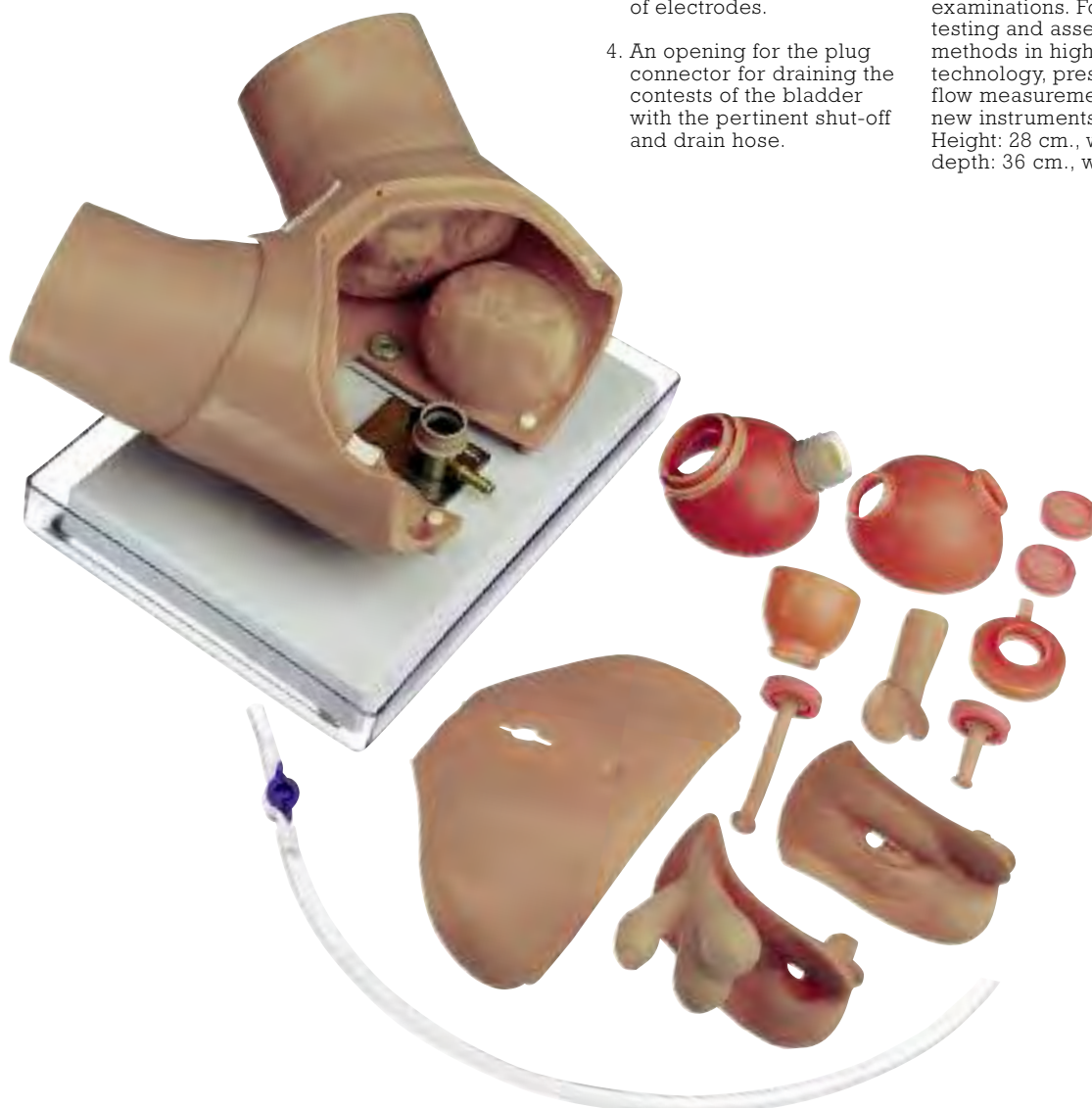
2. The top to take a bladder trocar or for drainage.

3. The back wall for providing tissue, if necessary, for measuring pressure or the insertion of electrodes.

4. An opening for the plug connector for draining the contents of the bladder with the pertinent shut-off and drain hose.

All endoscopic operations can be practised on the phantom using Ultrasound or Lasers.

The phantom is also suitable for various experimental examinations. For example: testing and assessing new methods in high frequency technology, pressure and flow measurements, testing new instruments etc. Height: 28 cm., width: 45 cm., depth: 36 cm., weight: 6.3 kg.



**CLA 6/6****Bladder Phantom for Endoscopy**

Produced in co-operation with Prof. Dr. Guddat, Charité Berlin and Prof. Dr. J. Sökeland, Dortmund. Natural size made of plastic.

The model comprises trunk on a base, external female genitalia with urethra and elastic fastening closure for the bladder (removable inspection window and screw-fit closure cap).

Six exchangeable parts demonstrating characteristic bladder diseases can be used to assess the changes to the bladder.

For examination the endoscope is inserted through the urethra via an elastic valve opening in the bladder. By changing the lens -pro-grade optic or bladder optic- the shaft can remain in the urethra and bladder.

After fitting an insert with Albarran lever, the osseine can be located with the urethra catheter CH 4.

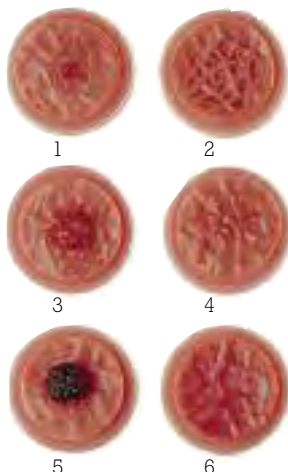
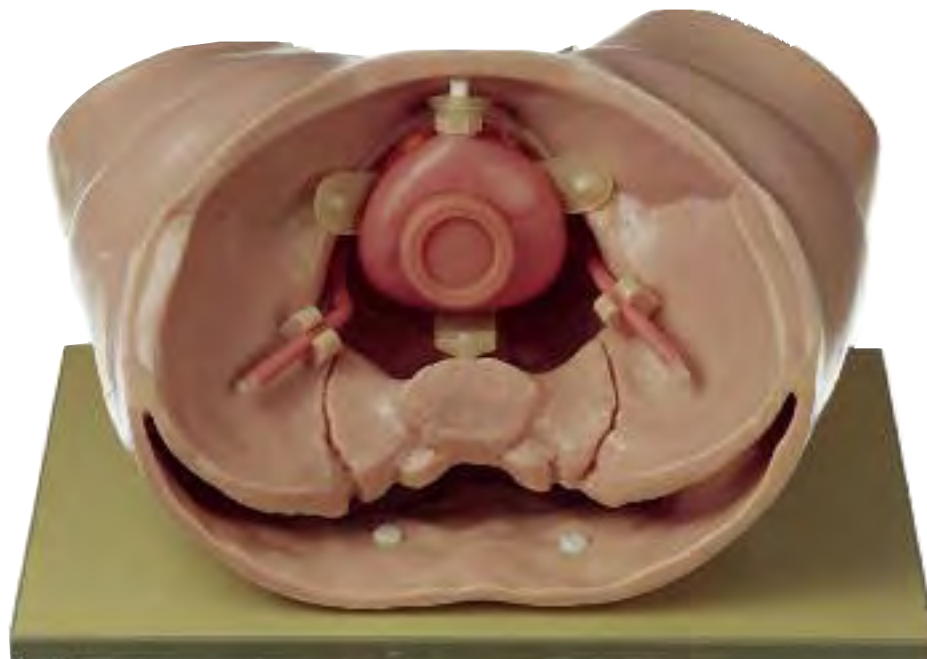
The pathological changes listed below can be diagnosed. The examination routine can be checked by a second person through the inspection window.

Height: 25 cm., width: 44 cm., depth: 32 cm., weight: 4.5 kg.

**CLA 6/8****Different Pathological Changes**

Produced in co-operation with Prof. Dr. J. Sökeland. Made of special plastic, suitable for CLA 6/4 and CLA 6/6. Full details in CLA 6/6.

1. Papillary bladder tumor
2. Trabeculated bladder
3. Broad-base bladder tumor
4. Fibrinous cystitis
5. Urinary calculus
6. Radiation cystitis

**CLA 6/6****CLA 6/7****Bladder Phantom for Endoscopy**

Produced in co-operation with Prof. Dr. Guddat, Charité Berlin and Prof. Dr. J. Sökeland, Dortmund.

As CLA 6/6, but without different pathological changes.





## CLA 7

### Catheterisation Model

With interchangeable male and female genital organs as well as interchangeable bladder, in natural size, made of special plastic. Height: 23 cm., width: 43 cm., depth: 46 cm., weight: 6 kg.



CLA 7 dismantled



CLA 7 complete

## CLA 7/10

### Male Catheterisation Model

According to Prof. Dr. J. Sökeland. Ideal for demonstrating disposable and balloon catheters as well as suprapubic aspiration. Can be dismantled into two parts. In natural size. On a stand with base. Height: 30 cm., width: 18 cm., depth: 18 cm., weight: 0.9 kg.



CLA 7/10 (Demo-ill.)



CLA 7/14 (Demo-ill.)

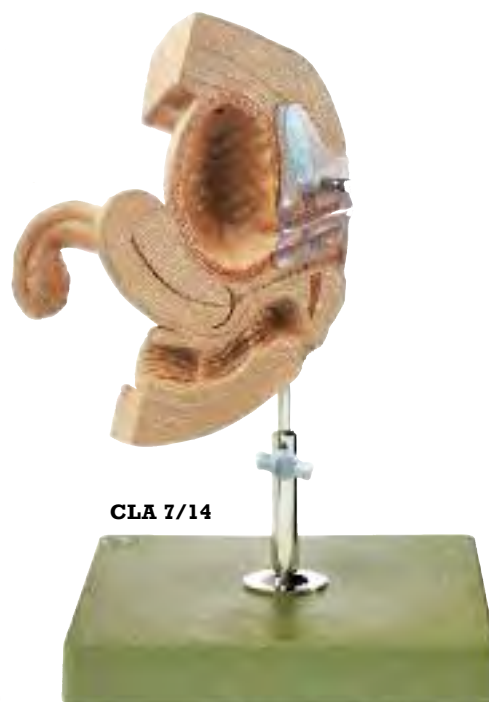
## CLA 7/14

### Female Catheterisation Model

According to Prof. Dr. J. Sökeland. Particularly suitable for the demonstration of balloon catheter and suprapubic aspiration of the bladder. The model shows the ureters, bladder, internal female sexual organs and rectum. Can be dismantled in two parts. Life-sized, on a stand with base. Height 20 cm, width 18 cm, depth 18 cm, weight 0.9 kg.



CLA 7/10



CLA 7/14

## CLA 8

### Intubation Models

in natural size  
Produced in co-operation with the Federal Centre for Health Education in Cologne, a practice model has been developed which makes it possible to learn how to intubate under realistic conditions. In its design and construction special importance has been attached to natural size relations and anatomical features to develop a functional model. If intubation is performed incorrectly, that is to say, too great a pressure is exerted through the laryngoscope on the upper incisors, an acoustic signal sounds. Upon completion of intubation the correct position of the tube can be checked by listening to the respiratory sounds with a stethoscope lateral to the left and right wall of the thorax.

Height: 25 cm., width: 71 cm., depth: 42 cm., weight: 15.2 kg.

#### Components of CLA 8:

1. Head with thoracic spine, nasal cavity, mouth and throat, upper jaw with teeth with warning signal emitter, larynx, trachea, lung alveoli, movable assembly.
2. Trunk with chest cover, auscultation membranes and alarm tone generator, mounted on baseboard.
3. Larynx model on folding stand with transport lock
4. Transport and storage case (aluminium)
5. Silicone oil, 250 ml pressure spray bottle
6. Intubation tube
7. Small and large screwdrivers
8. Instructions for use

#### Classification of the Various Models of the CLA Intubation Model.

##### CLA 8

##### CLA Intubation Model

(basic model with larynx and aluminium case).

##### CLA 8/1

##### CLA Intubation Model

(basic model with larynx). Same as CLA 8, but without transport and storage case.

##### CLA 8/2

##### Aluminium Transport Case

##### CLA 8/3

##### Larynx model

with removable tongue (in two parts) and one part of lower jaw, in SOMSO-Plast®. Separates into 5 parts, made of special plastic, with a swivel stand.



CLA 8 - CLA 8/1



CLA 8/2



CLA 8/3



CLA 8 - CLA 8/1 dismantled



**CLA 9****SCOPIN Bronchoscopy Model »Broncho Boy«**

The Nakhosteen Bronchoscopy Model, Broncho Boy, was designed initially to facilitate learning transoral and trans-nasal flexible fibreoptic bronchoscopy. It may, however, be used for intubation with a rigid bronchoscope. It was conceived and developed by Prof. Dr. John A. Nakhosteen.

**The CLA 9 unit consists of the following components:**

1. Broncho Boy model by Nakhosteen (complete model with naso-pharynx and tracheo-bronchial tree with head and thorax).
2. Aluminium transport and storage suitcase.
3. Adjustable mounting base.
4. Lubricant spray, 250 ml pressure spray bottle.
5. Instructions for use.

Height: 25 cm., width: 71 cm., depth: 42 cm., weight: 14.8 kg.

**CLA 9/6****SCOPIN Bronchoscopy Model »SICK BOY«**

As the name implies, the Sick Boy offers the trainee bronchoscopist the opportunity of visualizing some typical endoscopic pathology, as well as doing forceps biopsies of a right upper lobe lesion. It includes an adenoma and a tumor, and a mucous plug, which also presents the differential diagnosis of a perforated lymph node. As a training aid, it is meant to be used in conjunction with the Broncho Boy Model. A simple, but effective, locking device at the lower end of the trachea in all new Broncho Boy Models allows quick interchange of the normal tracheo-bronchial tree with the "SICK" system.

**CLA 9****Construction**

A specially developed casting process has enabled exact reproduction of internal structures and contours of mucous membranes. Anatomical landmarks aid the trainee bronchoscopist in mastering problems of endoscopic orientation. For those experienced with the rigid bronchoscope and wishing to learn flexible endoscopy, practicing with the Broncho Boy model will greatly ease the change. It is recommended that beginners spend 10 hours practicing with the Nakhosteen Bronchoscopy Model. The following characteristics typify this unique training model:

1. Integrated naso-pharynx with tracheo-bronchial tree;

2. Precise reproduction of internal structures in nasal passages, pharynx and tracheo-bronchial system;

3. Extremely durable yet soft and pliable due to specialized synthetic substance used in moulds - no risk of damage to endoscope;

4. Removable sternum enables trainee to check position of endoscope (tracheo-bronchial tree allows penetration of light from tip of bronchoscope).

**The CLA 9/6 unit consists of the following components:**

1. "Broncho Boy" bronchoscopy model (naso-pharynx with interchangeable healthy and sick tracheo-bronchial tree integrated into head and thorax)
2. Transport and storage suitcase
3. Adjustable mounting base
4. Pressure spray bottle with silicone oil (250 ml)
5. Instructions for use

Height: 25 cm., width: 71 cm., depth: 42 cm., weight: 15 kg.

**CLA 9/8****Fluorescing Tracheo-Bronchial Tree with regions of reduced fluorescence**

Produced in co-operation with Prof. Dr. J. A. Nakhosteen, In keeping with the 20-year-old tradition of up-dating the Nakhosteen Broncho Boy Bronchoscopy Teaching Model, the latest innovation is the auto-fluorescing endoscopic systems for use with the Light Imaging Fluorescence Endoscope (LIFE © Xillix/Olympus), or SAFE (1000 Pentax). The bronchial mucosa appears normal with conventional (white light) bronchoscopy, but on being illuminated in the fluorescent mode, emits a green image identical to that of normal mucosa. The trachea and left-sided bronchial branches appear normal in the fluorescence mode, but distinct areas of reduced fluorescence can be observed on the right-sided bronchial tree (upper lobe spur, middle lobe spur, right main bronchus and RB 9/10 spur). Endoscopists using to the LIFE-System or SAFE 1000 for the first time can practice switching from white light to fluorescent mode, and in the latter mode, learn <gain> (light intensity) adjustment, in addition to recognizing areas of reduced fluorescence.

The Fluorescent Tracheo-Bronchial Tree can be added to each CLA Broncho Boy with the order numbers CLA 9 to CLA 9/7 or can be supplied additionally as the interchangeable lower part of the tracheo-bronchial tree.

Height: 17 cm., width: 15 cm., depth: 4 cm., weight: 0.2 kg.



**CLA 9/6 opened**



**ill. 1 CLA 9/6**

Tumor occluding bronchus intermedium; right upper lobe displays substance for biopsy (not shown).



**ill. 2 CLA 9/6**

Adenoma occluding left lower lobe bronchus. Left upper lobe bronchus partially, LB 6 wholly, visible.

## CLA 9/7

### SCOPIN Broncho-Boy II

Universal Bronchoscopy and Anesthesiology Trainer produced in co-operation with Prof. Dr. J. A. Nakhosteen. Life-sized, in plastic.

While retaining the life-like anatomical features of the original, the Broncho-Boy II incorporates a number of innovations enabling its use in a variety of training settings, including:

1. Retroflexion and left-right rotation of the head for laryngoscopic, oro-tracheal and bronchoscopic intubation.
2. Acoustic warning signal if excessive pressure exerted on upper teeth by rigid tube or laryngoscope
3. Slightly widened and softer nasal passages for fibre-optic guided, naso-tracheal intubation; reduced danger of damage to sheath.
4. Interchangeable, membrane-connected bladders (Broncho-Boy II AN) enabling stethoscopic confirmation of ET-tube placement.
5. New, spring-based supports for tracheo-bronchial tree, increasing pliability, reducing likelihood of bronchoscope damage.
6. Exchangeable fluorescent tracheo-bronchial system with »cold« areas of reduced fluorescence for practising autofluorescent bronchoscopy.

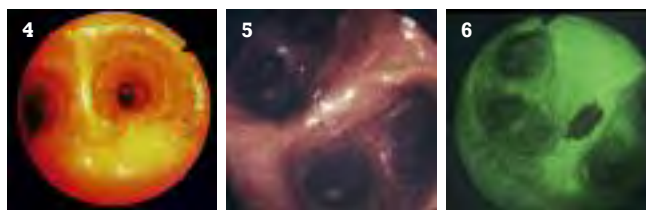
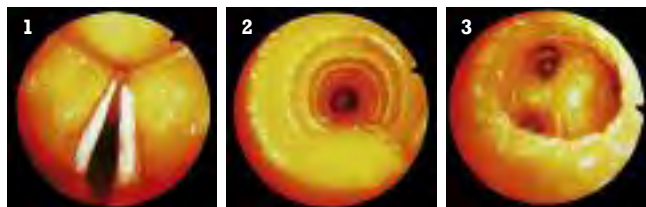
#### Components:

1. SCOPIN Broncho Boy II CLA 9/7 with head in movable assembly.
2. Warning signal emitter in upper jaw, nasopharynx, tracheobronchial tree with twist lock.
3. Trunk with elastic supports and auscultation membranes, mounted on wooden base with folding hinge.
4. Removable healthy and fluorescent bronchial tree, with twist lock.
5. Removable pulmonary alveoli with membrane connection with twist lock.
6. Alarm tone generator.
7. Intubation tube
8. Silicone oil, 250 ml pressure spray bottle
9. Instructions for use

Height: 25 cm, width: 70 cm, depth: 38 cm, weight: 11.5 kg.

#### Special equipment on request:

Aluminium transport and storage case CLA 9/2



CLA 9/7



CLA 9/2 (Special equipment for CLA 9/7)



CLA 9/7 dismantled

#### ill. 1

Vocal cords and ventral commissure

#### ill. 2

Trachea; main bifurcation distally

#### ill. 3

Right upper lobe bronchus; subsegments of RB 3 visible

#### ill. 4

Main stem bronchi; branchings to right upper lobe and middle lobe bronchi visible

#### ill. 5

White light appearance of fluorescing bronchial tree: RB 9/10 spur with normal features

#### ill. 6

Fluorescence bronchoscopic appearance of same spur as in Fig. 5 (RB 9/10): in the middle is a cold spot corresponding to a Carcinoma in situ, visible only in fluorescence mode

Teaching Model for

- Flexible Fibre-optic Bronchoscopy
- Rigid Bronchoscopy
- Fibre-optic-guided Naso- and Orotracheal Intubation
- Laryngoscopic Intubation
- Auto-fluorescent-Bronchoscopy



#### ill. 1

Laryngoscope is used to visualize the vocal cords, then the bronchoscope is intubated.



#### ill. 2

Laryngoscopic intubation of endotracheal tube.



#### ill. 3

Trans-nasal flexible Fibre-optic Bronchoscopy.



#### ill. 4

Auscultation following laryngoscopic intubation.



## Intubation trainers for pediatric and adult bronchoscopy, ICU and anesthesiology

The following text is translated and abridged from Nakhosteen JA: "A new intubation model for training in paediatrics. Lung and respiratory diseases. 31/11 (2005) 543-546"

The number of pediatric bronchoscopy procedures grew steadily in the 1990s, leading to increased demand for a child intubation mannequin. Four years of collaboration between CLA and Professor Nakhosteen resulted in the final prototype, Broncho Junior.

New designs and materials had to be conceived and developed for construction of upper airway anatomy. The guiding principle was to meet requirements for teaching rigid and flexible bronchoscopy, manipulating instruments within the confines of pediatric anatomy, and using the laryngoscope and flexible fiberoptic bronchoscope (FFB) as intubation aids.



Tracheal tube position can also be ascertained through auscultation.

The result of this undertaking is Broncho Junior, a multi-functional trainer with normal head movement, nasal passages wide enough to admit a 4.5 mm naso-tracheal tube, tracheo-bronchial anatomy with tracheal lumen able to accommodate a 5 mm rigid bronchoscope, and acoustical membranes in the thoracic walls for auscultation. For oral intubation the vocal cords can be visualized laryngoscopically.

Broncho Junior is the first dedicated intubation trainer designed specifically for pediatric bronchology. It is essential for teaching the eye to recognize upper airway anatomy, and the hand to manoeuvre thin FFBs and rigid tubes and instruments in a confined space. Its use can be enhanced by following recommendations given below.



Direct intubation of rigid scope in BRONCHO-JUNIOR:



Positioning of endotracheal tube in relation to FFB in nasotracheal Intubation



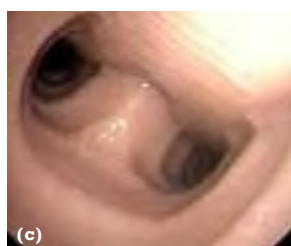
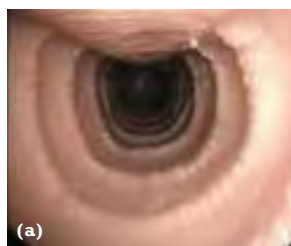
CLA 9/23



CLA 9/23  
Removal of  
chest cover



CLA 9/23 dismantled



## CLA 9/23

### Broncho-Junior

According to Prof. Dr. med. John A. Nakhosteen. Life-sized, in plastic.

Intubation trainers for pediatric and adult bronchoscopy, ICU and anesthesiology. The Broncho Boy family of mannequins presents specific solutions for learning and improving intubation skills in a wide range of hands-on teaching situations. The most recent addition to the group is Broncho Junior, a pediatric trainer with physical characteristics of a three-to five-year-old child (CLA 9/23).

Broncho Junior was designed and constructed with the following teaching goals in mind:

- Facilitate Introduction to flexible and rigid pediatric bronchoscopy ;
- Provide help in learning more advanced procedures, such as foreign body extraction and stent placement
- Help pediatric anesthesiology and ICU trainees to master naso- and oro-tracheal intubation while using the flexible bronchoscope as a guide.

Other members of this group of endoscopy trainers include the standard Broncho Boy adult trainer (CLA 9/7), the Sick Broncho Boy with various typical pathologies and biopsy capability, the fluorescent model, and the dedicated anesthesiology trainer for CPR intubation

## Components

### CLA 9/23:

1. Head with ribcage,
2. Movable fitted head with nasal cavity, mouth and throat
3. Larynx with removable bronchial tree
4. Chest cover
5. Sternum with auscultation membranes on right and left
6. Trunk with folding hinge mounted on baseboard
7. Silicone oil, 125 ml pressure spray bottle
8. Instructions for use

Height 20 cm, width 46 cm, depth 30 cm, weight 3.9 kg.

(a) Trachea approx. 2 cm below vocal cords.

(b) Tracheal tube in proximal trachea, seen endoscopically.

(c) Main bifurcation.

(d1) Left upper lobe division with upper and lower lobe bronchi.

(d2) Right upper lobe bronchus with segments

**CLA 10****Arthroscopy Model of the Knee-Joint**

Produced in co-operation with Prof. Dr. med. H. R. Henche, natural size, in synthetic material.

The model is made of a smooth cutaneous and muscular cover in which the bones of the knee-joint are embedded. The anterior outer cover has four access points to the articular internal area, two lateral, one central and one medial opening. Moreover the arthroscopy model has one lateral and one medial access to the posterior recess. The Hoffa's fat body is shown and can be taken off and replaced by an adhesive catch. The internal and external menisci are anchored by plug-in threads and can be easily exchanged and replaced. The ligamentous apparatus i.e. the lateral ligaments and the cruciate ligaments are represented nearly true-to-nature. Easy exchange of the ligaments is possible because of the provided screw and plug-in joints. The patellar ligament is shown and the patella can be exchanged. After removal of the cutaneous-muscular covers one can use the bones with the ligaments as a functional knee-joint model. The mounting support at the thigh is suitable for mounting in an operation vice. The cutaneous and muscular covers are kept in place by four synthetic screws.

Height: 16 cm., width: 17 cm., depth: 53 cm., weight: 2.5 kg.

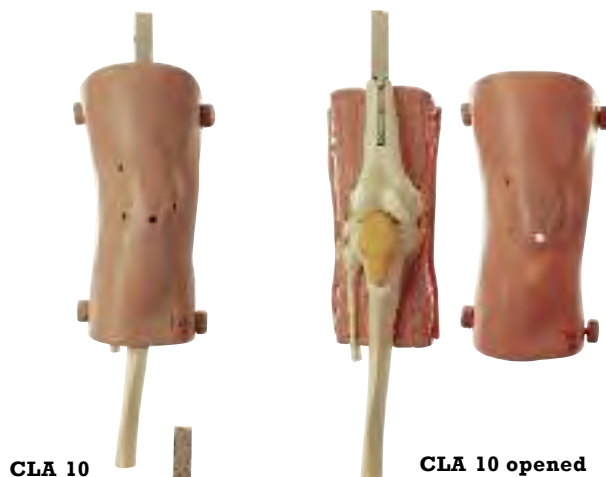
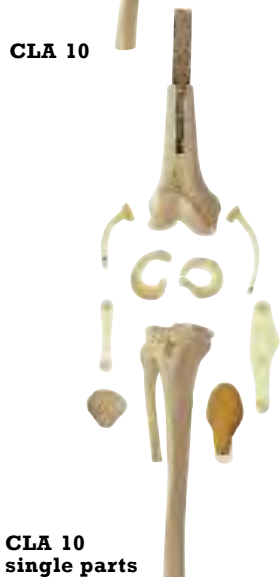
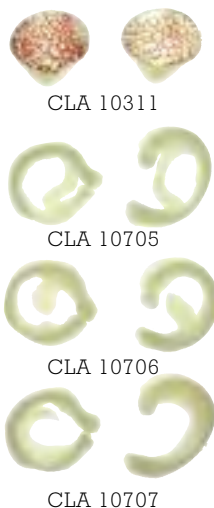
**CLA 15****Arthroscopy Model of the Shoulder Joint**

Produced in co-operation with Prof. Dr. med. H. R. Henche. The model comprises a soft skin and muscle covering in which the joint is embedded complete with its ligamental connections and capsule.

This makes it possible to practise operations in many ways. Operations can be simulated on the shoulder joint, biceps tendon and on the joint capsule, including the rotator cuff. The shoulder joint can be used as a functional joint in lectures after the skin and muscle covering has been removed. Height: 42 cm., width: 32 cm., depth: 26 cm., weight: 4.1 kg.

**CLA 15/1 (not ill.)****Arthroscopy Model of the Shoulder Joint**

Produced in co-operation with Prof. Dr. med. H. R. Henche. As CLA 15, but with case. Height: 22 cm., width: 50 cm., depth: 35 cm., weight: 6.3 kg.

**CLA 10****CLA 10 opened****CLA 10 single parts**

CLA 10311

CLA 10705

CLA 10706

CLA 10707

**CLA 15 complete****CLA 15 individual parts****CLA 15 opened****CLA 16 dismantled****CLA 10/1****Arthroscopy Model of the Knee-joint (not ill.)**

Produced in co-operation with Prof. Dr. med. H. R. Henche. As CLA 10 but in an aluminium suitcase.

Height: 22 cm., width: 50 cm., depth: 35 cm., weight: 5.2 kg.

**Special equipment**

for CLA 10 and CLA 10/1

**CLA 10278****Clamp**

suitable for CLA 10 and CLA 10/1. Weight 2.1 kg.


**Diseased preparations of patella and meniscus suitable for CLA 10 and CLA 10/1:**

**CLA 10311** 1 set of patellas with villus and tear formation

**CLA 10705** 1 set of menisci with handle-rupture

**CLA 10706** External meniscus with flap-rupture and internal meniscus with anterior flap-rupture

**CLA 10707** 1 set of menisci with longitudinal rupture

**CLA 16****Arthroscopy Model of the Wrist**

Produced in co-operation with Prof. Dr. med. H. Hempfling.

The model consists of a plastic hand in which the carpal bones, the radius and ulna, together with the carpal disc and intra-articularly ligaments are visible. On the extensor side of the hand, there are two points of access to the inner cavity of the joint: a radiodorsal and an ulnodorsal opening. The carpal disc can be attached to the ulna and the carpal ligaments on both the flexor and extensor sides, and can be exchanged or replaced as required.

Height: 48 cm., width: 26 cm., depth: 10 cm., weight: 1.2 kg



### CLA 10/3

#### Arthroscopy model of the knee joint

In accordance to Prof. Dr. med. H.R. Henche, in natural size, in plastic. The model comprises one soft front palpable and one cutaneous muscle sleeve in which the bone of the knee joint is embedded on the right. This is fastened to the front by means of press studs. The arthroscopy model can be supplied with or without the stipulated accesses. Lower leg bone with knee disc (healthy), mounting stand on thigh, Hoffa's fat pad, collateral and cruciate knee ligaments, part of the M. popliteus, meniscus (healthy), 1 set replacement parts, 1 screwdriver, 1 pressure spray with silicon oil and 1 set of instructions. Height: 16 cm., width: 17 cm., depth: 53 cm., weight: 2.5 kg.

#### Special equipment for arthroscopy model of knee joint CLA 10/3



### CLA 103150

#### Skin covering, front part with 4 preset accesses

(Back access is not shown in this picture)

### CLA 103278

#### Clamp

Weight 2.1 kg.  
(See model picture CLA 10/3 and Detail of removing the skin covering)

### CLA 103311/1

Kneecap with villus formation



### CLA 103311/2

Kneecap with crack formation



### CLA 103705

Menisci with bucket handle tear formation



### CLA 103706

Menisci with flap tear



### CLA 103707

Menisci with longitudinal tears



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CLA 103278  
Optional Clamp



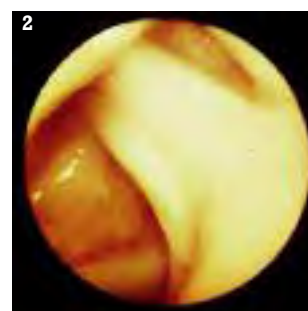
Detail of removing the skin covering



CLA 10/3 single parts



CLA 10/3 - Accessories  
(Basic equipment)



ill. 1: Anterior cruciate ligament (endoscopic picture of model)  
ill. 2: Anterior cruciate ligament (endoscopic picture of man)

### CLA 15/3

#### Arthroscopy model of the shoulder joint

according to chief physician Dr. Wolfgang Birkner  
The life-sized model, in plastic, consists of the right half of the ribcage and arm stump. Removing the soft covering of the skin reveals the shoulder joint with its ligaments, capsule and muscles. The removable shoulder joint is also suitable as a functional model for visual instruction. Operational actions can be simulated according to present medical techniques on the shoulder joint, the biceps tendon, the joint capsule, and in the rotator cuff.  
Height 50 cm, width 27 cm, depth 21 cm, weight 5.6 kg

#### Individual items for shoulder arthroscopy model CLA 15/3

- Trunk
- Skin cover with press studs
- Stand with ball joint
- Handgrip for arm function
- Scapula with coracoacromial ligament
- Clavicle
- Arm
- Apophysis of the joint with the biceps tendon
- Deltoid muscle
- Brachial biceps muscle
- Supraspinatus muscle
- Subscapularis muscle
- Infraspinatus muscle
- Supraspinatus muscle tear
- Joint capsule
- Acromioclavicular joint capsule
- Instructions for the model
- Spray bottle with silicone oil, 125 ml

#### Figure 1:

Biceps tendon, intraarticular

#### Figure 2:

Trocar in the front access

#### Figure 3:

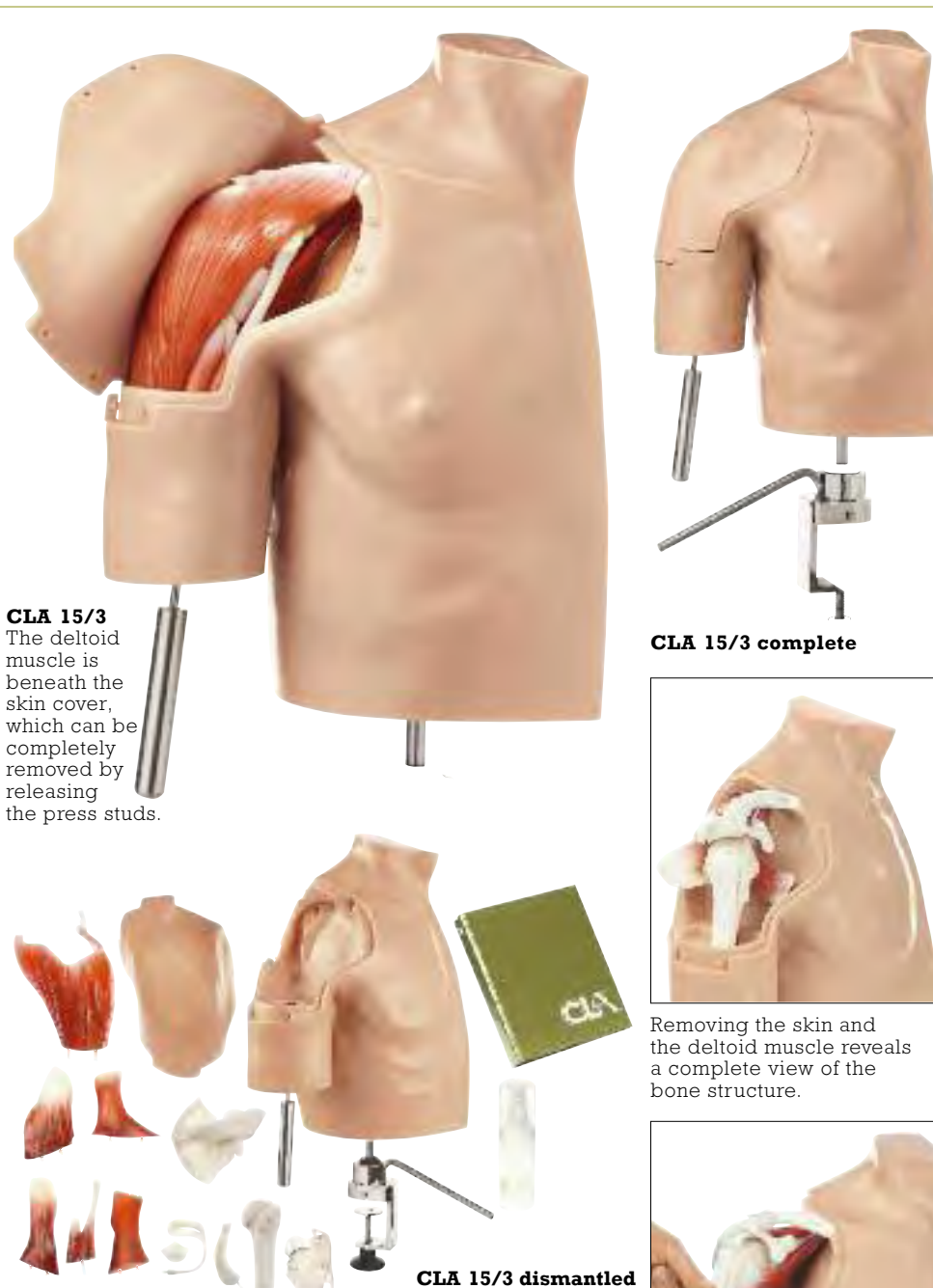
Acromion with joint capsule and acromioclavicular joint

#### Figure 4:

Supraspinatus tendon tear

### CLA 15/3

The deltoid muscle is beneath the skin cover, which can be completely removed by releasing the press studs.



CLA 15/3 complete



Removing the skin and the deltoid muscle reveals a complete view of the bone structure.



For better orientation in the spatial representation, the humeral head together with the glenoid cavity can be removed from the model.



The transparent capsule of the joint covers the humerus and the glenoid cavity and may be detached separately.

Fig. 1:

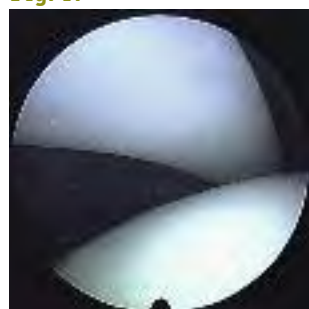


Fig. 3:

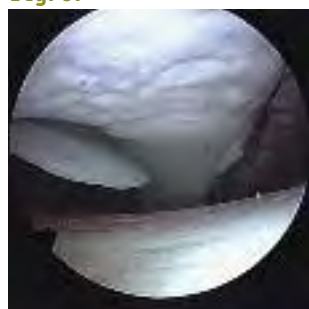


Fig. 2:

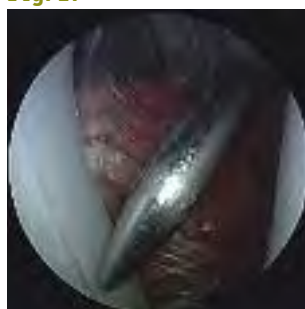
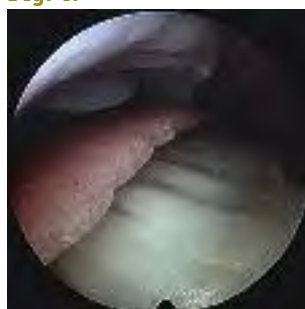


Fig. 4:







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