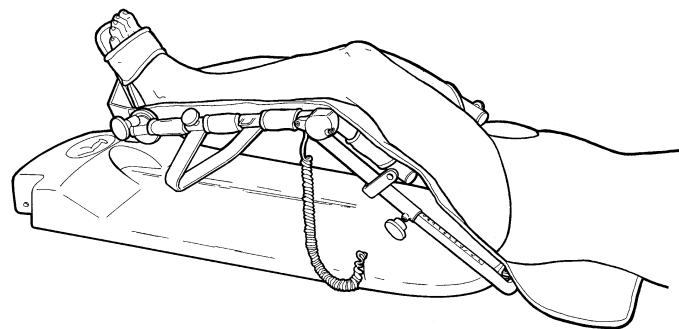
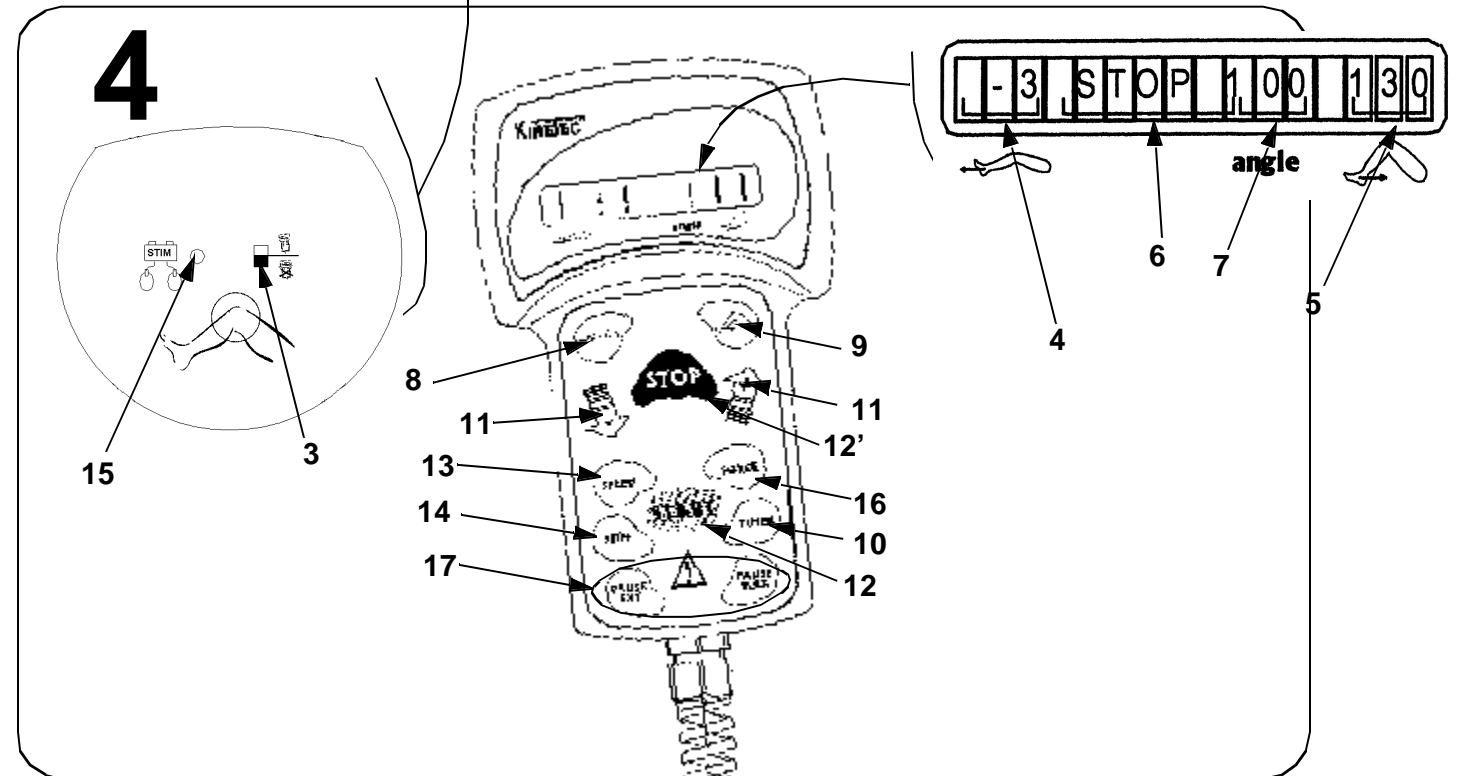
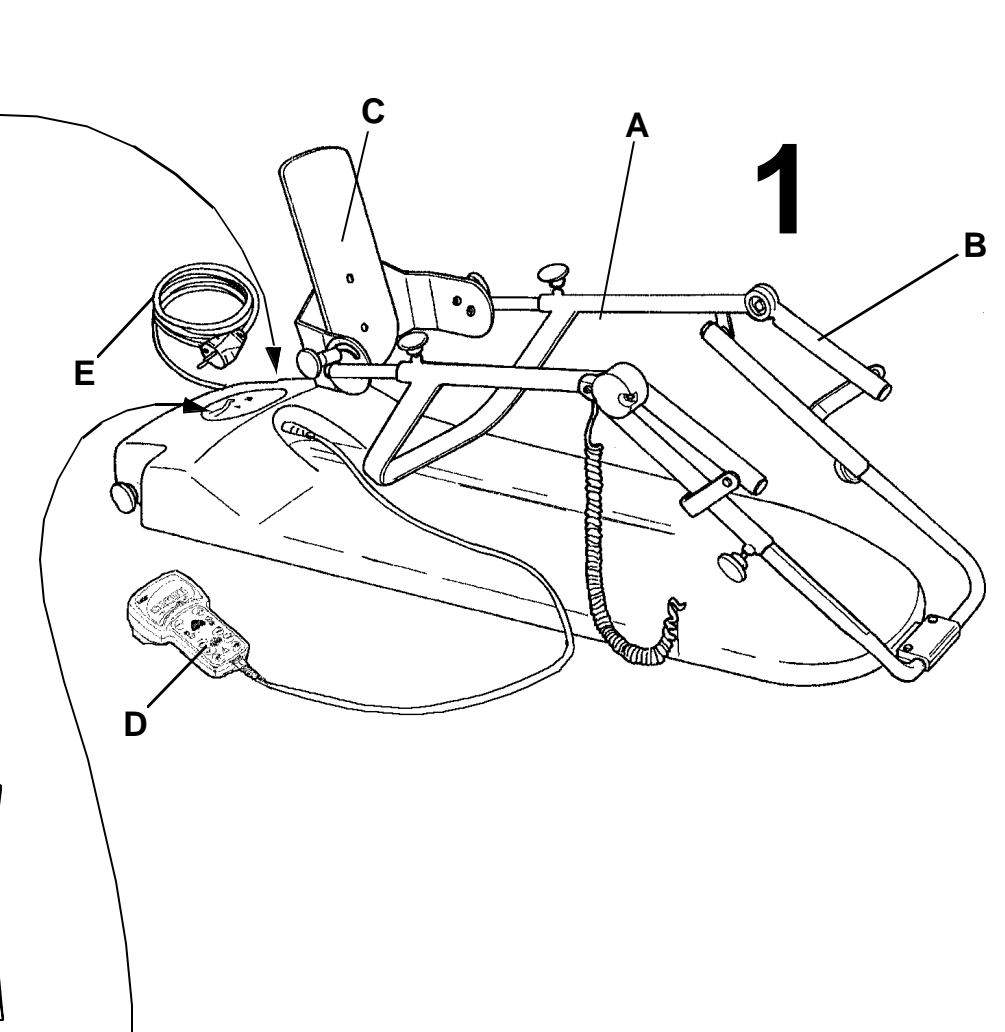
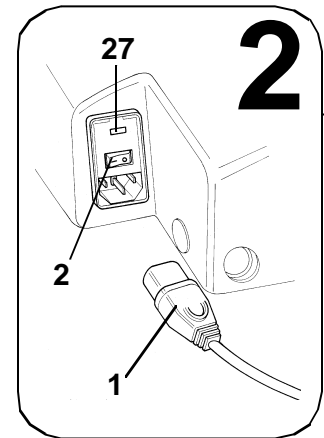
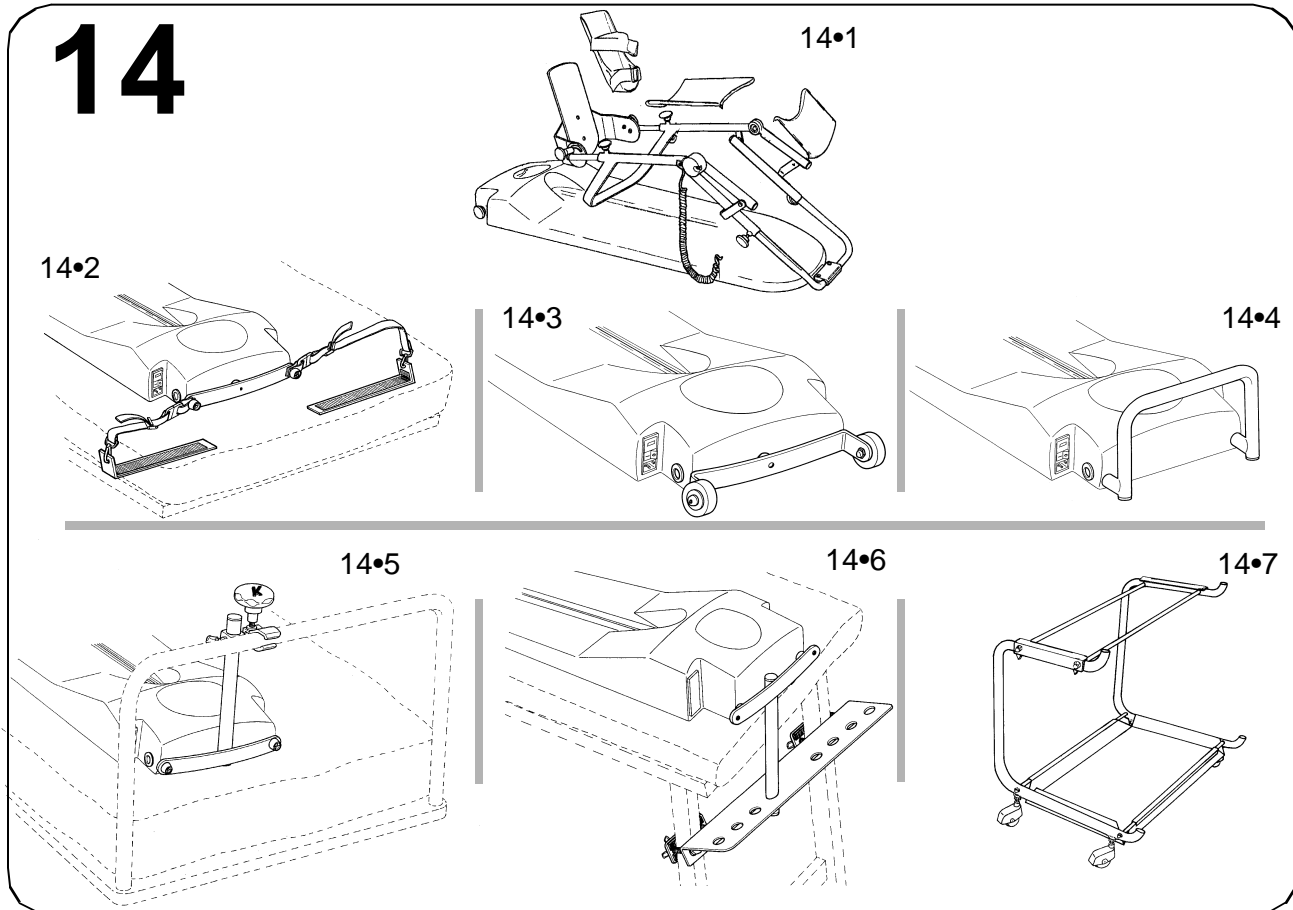
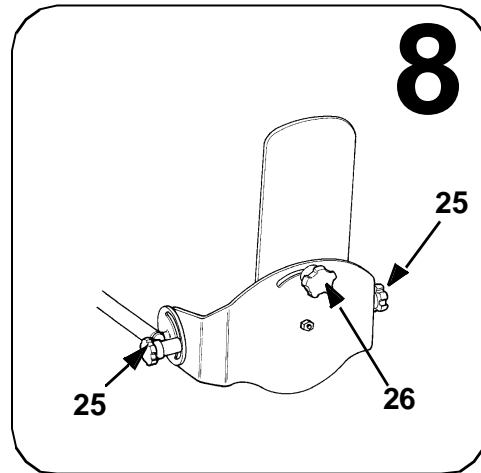
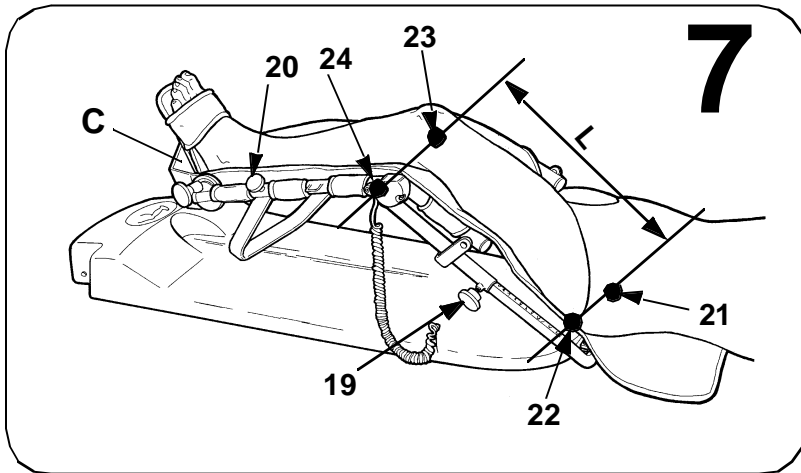
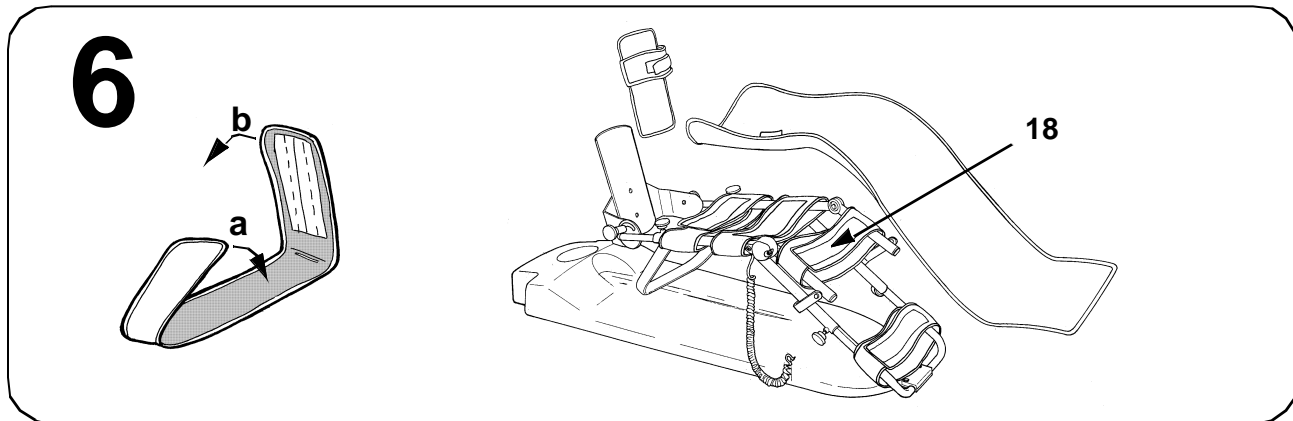


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- **User manual • KNEE**  
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# USER MANUAL

## 1 • DESCRIPTION

The KINETEC *Optima* is a Continuous Passive Motion exerciser for EXTENSION-FLEXION mobilization of the HIP and KNEE joints.

A - Lower limb support • B-Thigh support • C-Foot plate • D - Hand control • E - Power cord

## 2 • ELECTRICAL CONNECTION: SAFETY FIRST.

The KINETEC *Optima* is a Type B Class I machine.

Plug the power cord (1) on the KINETEC *Optima* unit into a receptacle (Voltage between 100 to 240 Vac 50/60 Hz).

### IMPORTANT:

Check to be sure that the plug fits the socket being used.

The socket must be grounded.

Use only the power cord delivered with the unit.

Ensure that the power cords are not entangled in the machine during operation.

### Fuse change:

Warning: Replace the fuse with one of the same type and value.



- on main socket, 2 fuses T 300 mA 250V (6,3x32)
- on power supply PCB, 1 fuse F 2 A 250V (5x20)
- on PCB, 1 fuse T 1.25 A (TR5)

## 3 • SAFETY

The healthcare professional determines the CPM protocol to be used (set up, duration and frequency of each session).

The patient must understand the Start/Stop/Reverse function of the hand control.

The KINETEC *Optima* unit is CE marked (Directive 89/336/CEE)

**DANGER:** Explosion risk if used with flammable anesthetics.

## 4 • START UP

Turn on the power switch (2). The hand control will read .

KINETEC OPTIMA

### Locking the hand control settings: switch (3)



UNLOCKED POSITION  
adjustments are possible.



LOCKED POSITION  
the OPERATIONAL settings can be read and  
the Start/Stop/Reverse function operated.

**Double locking:** simultaneously press keys PAUSE EXT and PAUSE FLEX for blocked the hand control, the display reads "LOCK", for unblocked the hand control, simultaneously press the same keys, the display reads "UNLOCK".

We recommend that the switch be kept in the locked position when the hand control is given to the patient.

### Display

4 - 3 characters indicate the EXTENSION limit.

5 - 3 characters indicate the FLEXION limit.

6 - 8 characters indicate messages. (RUN, STOP, EXT, FLEX, SPEED, FORCE, PAUSE, etc.).

7 - 3 characters indicate the real angle of the KINETEC *Optima*.

### Key functions

8 - Reading or selecting EXTENSION limit from - 5° to 110°.

9 - Reading or selecting FLEXION limit from 115° to 0°.

10 - Reading or selecting TIME COUNTER from 24H00MIN to 00H00MIN

At the end of the session, the display reads

TIMER 00H00MIN

and the unit stops at an average angle use.

Depress + or - to select a new session time.

11 - These keys enable you:

- while selecting, to reduce or increase the operating values (blink value),
- while moving, to exceed the EXTENSION or FLEXION limits (BY-PASS MODE).
- while stopped, to manually move to EXTENSION or FLEXION (MANUAL MODE).

To activate BY-PASS MODE or MANUAL MODE, press the key for at least 3 seconds  
Press the EXTENSION or FLEXION key to memorize the true angle reached, if necessary.

12 - This key enables you to start.

12' - This key enables you stop movement, press START again to reverse movement.



**IMPORTANT:** for maximum safety, the hand control should always be given to the patient.

13 - Reading or selecting SPEED from 5 to 1.

14 - Reading or selecting SYNCHRO-STIMULATOR (please request the instruction sheet from your KINETEC distributor).

15 - Plug for SYNCHRO-STIMULATOR

(use only approved stimulators to EN 601.2.10 / 1987 standard and/or with EC marked).

16 - Reading or selecting movement inversion LOAD from:  = maxi load to  = mini load.

17 - Reading or selecting PAUSE in EXTENSION or FLEXION limit from 900 seconds (15 minutes) to 0 second.

- RESET TIME function

The machine is at rest. Simultaneously press keys EXTENSION and FLEXION.

This function enables you to read the operation time since the last reset.

Press the key START twice to reset the counter.

## 5 • SPECIFICATIONS

### Product

Weight: 13 Kg (28.6 lbs)

Dimensions: 101cm x 33cm x 33cm  
(39.7 x 13 x 13 inches)

Range of motion: from -5° to 115°

Speed: from 30 to 160°/minute for average femur length

Patient sizing: from 1.40m to 1.90m  
(4.5 to 6.25 feet)

### Electrical

Power supply: from 100 to 240 V~

Frequency: 50/60Hz

Electrical power: 50VA

Current consumption: 150 mA (under 230 V~)

300 mA (under 120 V~)

Type B Class I device

### Environmental

- Storage / shipping conditions:

Ambient temperature: -40°C to +70°C.

(-40°F to +160°F)

Relative humidity up to 90%.

- Operating conditions:

Ambient temperature: +10°C to +40°C.

(+50°F to +105°F)

Relative humidity 80%.



## 6 • USE OF THE KINETEC HYGIENIC PADS

The KINETEC HYGIENIC pads are designed for rapid fitting, optimal hygiene and maximum patient comfort.  
 - For using and positioning the straps, please refer to drawing number 6. Make sure that the self-adhesive parts (18) are visible.  
 - Place the sponge side next to the skin.

FOR OPTIMAL HYGIENE, A NEW SET OF PADS SHOULD BE USED FOR EACH PATIENT.

Each cover is provided with a label to record the patient's name.

CLEANING:

- The cover can be autoclaved at 125°C (225°F).
  - The straps and the foot pad are machine-washable (30°C, 90°F) with chlorine bleach.
- Part number to order the complete set : 4650001058

## 7 • SETTING UP THE PATIENT

- Make sure all knobs are tight.
- Place the KINETEC *Optima* machine in a position that will be comfortable for the patient.
- Measure in cm or inches the length of the patient's femur (L); adjust the thigh support to this measurement using knob (19).
- To install the patient on the KINETEC *Optima* machine, push the foot plate (C) up to the patient and tighten the knob (20).

### IMPORTANT

Adjust the axis of the patient's hip (21) with the axis rotation (22) of the KINETEC *Optima* machine, and the axis of the patient's knee (23) with the axis rotation (24) of the KINETEC *Optima* machine.

## 8 • POSITIONING THE FOOT PLATE

The articulated foot plate allows the positioning of the foot from 40° of PLANTAR FLEXION to 30° of DORSIFLEXION and the leg in 30° of EXTERNAL or INTERNAL ROTATION.

- The knob (25) allows positioning the foot in plantar flexion or dorsiflexion.
- The knob (26) allows positioning the leg in external or internal rotation.

## 9 • MAINTENANCE

After 2,000 hours of working time, the KINETEC *Optima* machine needs to be lubricated (joints, ball bearing and threaded rod). The message SERVICE !! on the hand control when the power on indicates that the service interval has been reached. You can continue use your KINETEC machine by pressing the START key, but you must contact your KINETEC specialist to undertake this maintenance operation.








## 10 • BREAKDOWN

- If you need a spare parts catalogue and/or service manual, please request it from your KINETEC distributor.
- If, after connecting the power cord on the KINETEC *Optima* machine and switching the machine ON (2), the display indicates no information:
  - Try another electric device to make sure that the power supply is uninterrupted.
  - Change the fuse of the socket (27) using a fuse of the same type and value: 2 fuses T 300 mA 250V (6.3x32mm).
  - If the display does not indicate any information after following these steps, contact your KINETEC specialist.
- If, after switching on the power to the KINETEC *Optima* using the switch (2), your machine fails to operate and the display indicates 15 STOP 25 115, press the START key once again. If your machine still fails to operate, contact your KINETEC specialist.
- If any of the following messages persists after switching the machine off and pressing the START key, contact your KINETEC specialist:
  - SERVICE D1 (failure of measuring angle)
  - SERVICE D2 (failure during motion)
  - SERVICE D3 (failure of motor direction)

## 11 • CLEANING

First, switch the CPM unit OFF and disconnect the power cord from the receptacle. Spray a DISINFECTANT product (i.e., PROPANOL/ISOPROPANOL or ALDEHYDE solution) on to the SURFACES (plastic leg support, plastic covers and metal parts). To clean the KINETEC hygienic pads, please refer to paragraph 6.

## 12 • SYMBOLS

-  TYPE B EQUIPMENT  
(insulated against electric shock)
-  WARNING  
(consult accompanying documents)
-  OFF (disconnected from the mains)
-  ON (connected to the mains)
-  Hand control lock
-  Hand control unlock
-  Stimulator

## 13 • GUARANTEE LIMITS

The KINETEC guarantee is strictly limited to free replacement or to repair of the part or parts acknowledged as defective, at the Smith & Nephew factory.

Smith & Nephew Kinetic guarantees its passive motion device against any manufacturing defect for 1 year from the date of purchase by the consumer. Smith & Nephew Kinetic alone is qualified to judge whether the guarantee applies to the specific problem.

The guarantee cannot be applied if the apparatus has been subjected to abnormal use or has been used in circumstances other than those stipulated in our user manual.

The guarantee will not be applied in case of deterioration or accident due to negligence, lack of supervision or maintenance or an attempt to repair the equipment.

## 14 • ACCESSORIES

- 14.1 Plastic leg support
- 14.2 Bed straps
- 14.3 Wheels
- 14.4 Carrying handle
- 14.5 Clamp for the foot-end of the bed
- 14.6 PT table clamp attachment
- 14.7 Cart