

Centura Centura 5

User manual

Before use, please read this document.
Kinetec reserves the right to effect technical modifications.

EN



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Série 5
Notice Originale



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PATTERSON
MEDICAL

SUMMARY

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Select your language
SEE PAGE 7

Warning and Safety instructions

- Warning: The physician/physiotherapist defines the protocol and ensures that it is correctly implemented (adjustments, session time and frequency of use).
- Warning: Run a cycle with the device unloaded before installing the patient on the machine.
- Warning: For optimum safety, always give the hand control to the patient before starting the system. The patient must know the start/stop/reverse function on the hand control, see page 8.
- Warning: To avoid the parameters being changed, lock the machine's hand control before giving it to the patient.
- Warning: Danger, risk of explosion: Do not use the machine with anaesthetic gas or in an environment that is rich in oxygen.
- Warning: To avoid all risks of electric shock, the machine should only be connected to a power supply that has protective grounded pin.
- Warning: Before using this machine, always check that the electrical socket is in good condition and is suitable for the splint power supply cord. Only use the original cable supplied with the machine. Check that the cables remain free around the device so that they do not get damaged.
- Warning: Before using this machine, always check that the machine is not damaged, in particular the protective housings.
- Warning: In case of electromagnetic interference with other devices move the device.
- Warning: Please do not touch the moving parts while the unit is running, pinching risk.
- Warning: Modifying the machine in any way is strictly forbidden.
- Warning: Before each use, always check that the red knobs under the chair have been tightened (see page 6).
- Warning: Before each use, always check that the various locking knobs have been tightened (see pages 3 and 4).

DEFINITION

The KINETEC Centura is a upper extremity PASSIVE mobilisation device enabling the following movements:

- Abduction / Adduction from 20° to 160° in an exterior rotation position.
- Abduction / Adduction from 20° to 160° with the elbow in a flexed position.
- Internal rotation 60° to external rotation 90°.
- Combined movements: Abduction / Adduction from 20° to 160° and external Rotation from -30° to 90°.
- Flexion / Extension from 20° to 180°.
- Horizontal Abduction from -30° to 110° (available on Centura 5)

• Indications

- Total shoulder replacement
- Repeated dislocation of the humerus
- Rotator cuff injury
- Upper humerus fractures
- Scapula fractures
- Acromioplasty
- Capsulotomy
- Arthrolysis
- Synovectomy for Rheumatoid Arthritis
- All type of shoulder stiffness joint

• Clinical Benefits

- Breaks the cycle of trauma, inflammation and the loss of range of motion
- Prevents joint stiffness
- Speeds the recovery of post-operative range of motion
- Maintains the quality of the articular surface
- Reduces pain and oedema
- Promotes articular cartilage healing
- Reduces hospitalization time
- Reduces the need for pain medication

• Contraindications

- Unstable fractures.
- Spastic paralyses.
- Uncontrolled infection.
- The machine are not adapted for patients height more 2m(6'7") or under 1.4m(4'7").

DESCRIPTION

COMPLIANCE:

The KINETEC Centura complies with the standards of Directive 93/42/EEC, and bears the CE mark.

The KINETEC Centura complies with the standards in force (IEC 601.1.2) concerning the electromagnetic compatibility of medical devices and IEC 60601-1 concerning electrical safety. The KINETEC Centura meets the requirements of the Machinery Directive No. 2006/42/EC.

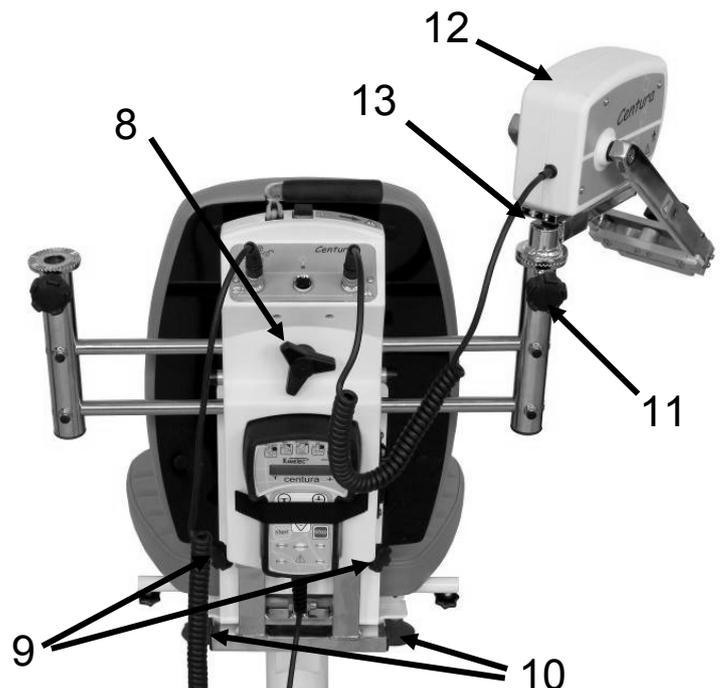
DESCRIPTION • COMPONENTS

KINETEC Centura consists of the following components:

- 1 – Chair
- 2 – Frame
- 3 – Wheels
- 4 – Transport handle
- 5 – Arm rest knobs
- 6 – Arm rest
- 7 – Hand control support

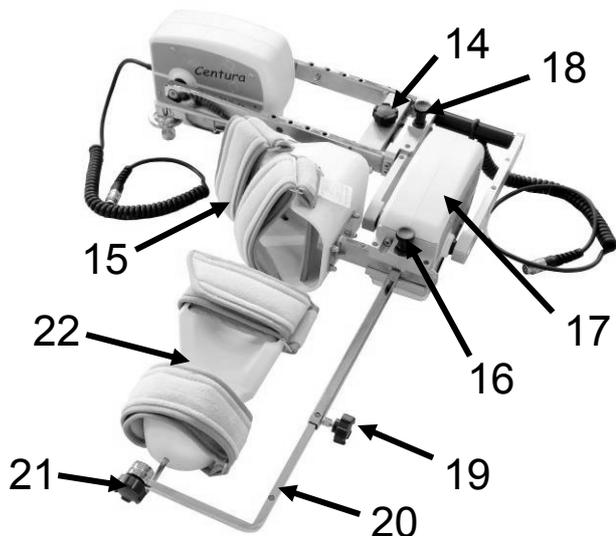


- 8 – Locking of the right/left sliding
- 9 – Locking of the up/down sliding
- 10 – Chair locking knob
- 11 – Locking of the abduction motor
- 12 – Abduction motor
- 13 – Shoulder depth sliding lock



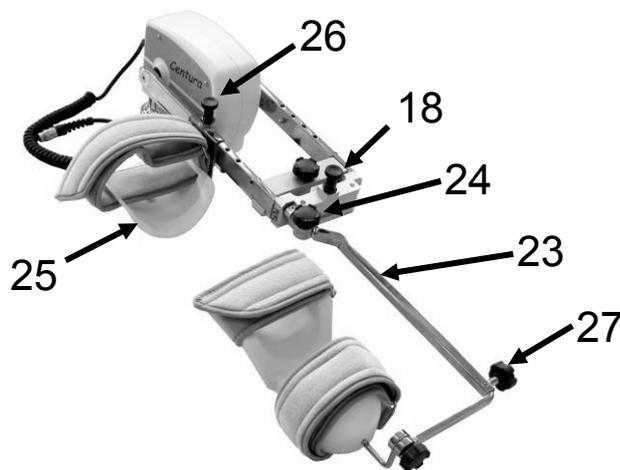
DESCRIPTION

ABDUCTION ASSOCIATED WITH ROTATION SPLINT



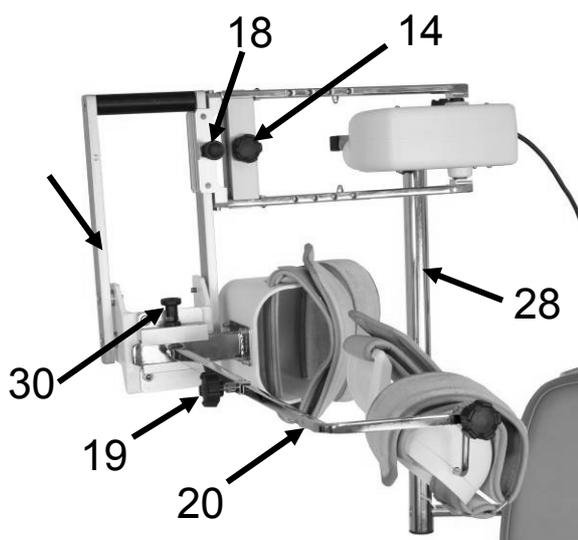
- 14 – Arm length setting lock
- 15 – 90° elbow splint
- 16 – 90°elbow splint lock
- 17 – Rotation motor
- 18 – Elbow splint support lock
- 19 – Forearm length setting lock
- 20 – Forearm slider
- 21 – Right/left bean swivel lock
- 22 – Forearm splint

ABDUCTION OR FLEXION SPLINT



- 18 – Elbow splint support lock
- 23 – Swiveling splint support
- 24 – Elbow flexion setting lock
- 25 – Arm splint
- 26 – Arm splint lock
- 27 – Forearm length setting lock

HORIZONTAL ABDUCTION SPLINT (available on Centura 5)

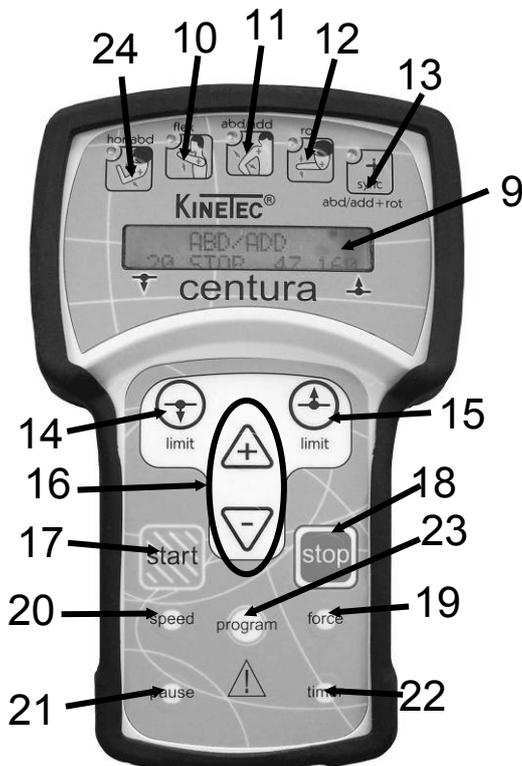
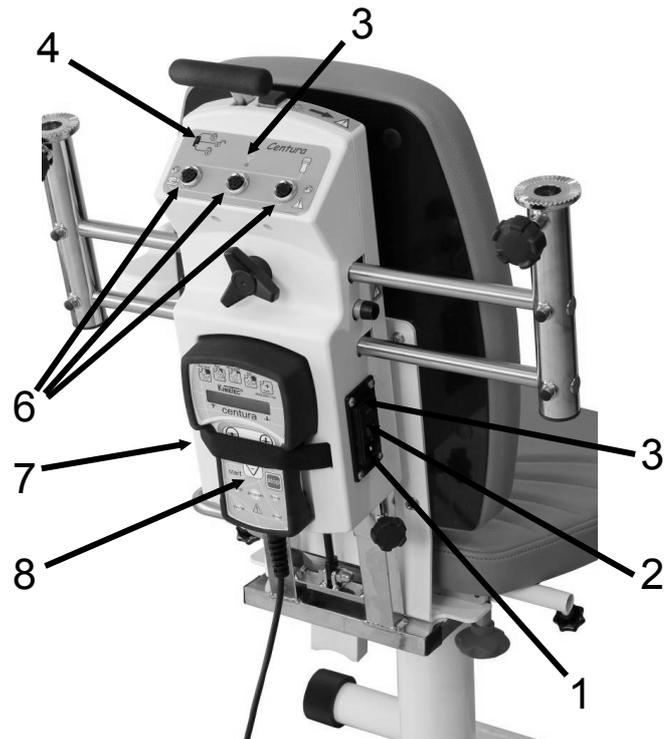


- 28 – Horizontal abduction column
- 14 – Arm length setting lock
- 18 – Elbow splint support lock
- 29 – Elbow support older
- 30 – 90°elbow splint lock
- 19 – Forearm length setting lock
- 20 – Forearm slider

DESCRIPTION

DESCRIPTION • ELECTRICAL

- 1 – Supply cable connector switch
- 2 – Fuse
- 3 – ON/OFF switch
- 4 – Hand control lock switch
- 5 – Defect or power light
- 6 – Motor or hand control connectors
- 7 – Hand control location for transport
- 8 – Hand control

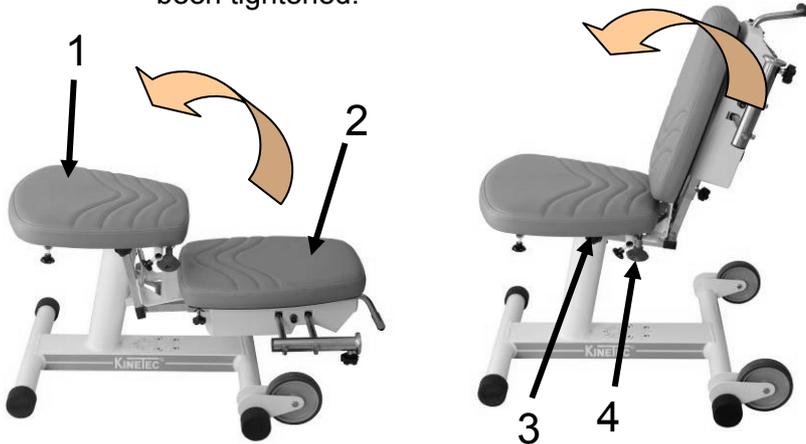


- 9 – Liquid-crystal display
- 10 – Flexion/extension
- 11 – Abduction/adduction
- 12 – Rotation
- 13 – Abduction/adduction synchronized with rotation
- 14 – Lower limits setting
- 15 – Upper limits setting
- 16 – Increase / decrease
- 17 – START
- 18 – STOP
- 19 – FORCE
- 20 – SPEED
- 21 – PAUSE
- 22 – TIMER
- 23 – PROGRAM access
- 24 – Horizontal abduction

ASSEMBLY & TRANSPORT

BASE ASSEMBLY

- Remove all the components from their packaging.
- Place the chair (1) on the floor; we recommend that two people carry out this operation. Take care not to trap your fingers.
- Straighten up the back of the chair (2).
The tilting axis (3) must always be in good condition.
Never use the splint without it.
- Lock the back of the chair by tightening the red knobs (4).
- Before using this machine, we recommend that you always check that these knobs have been tightened.



- Place the Abduction motor (5) on right or left, depending on the limb be moved.
- The other components to be used depend on the selected movement (see page 20 to 25).



UNIT TRANSPORT



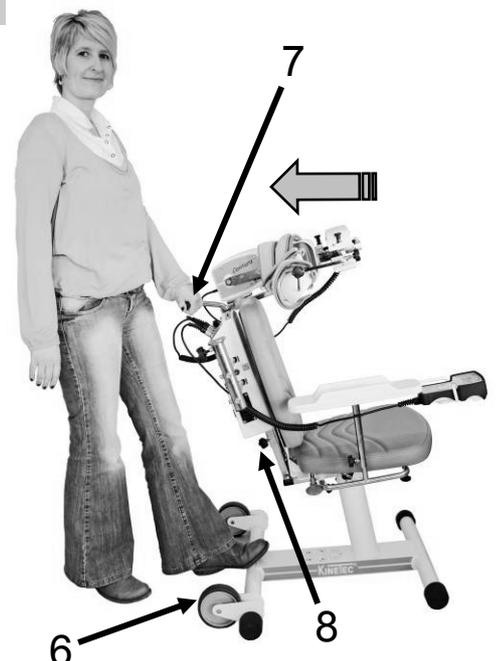
For easy transport of the unit, it features 2 wheels (6) and a handle (7).



Place the arm support as close as possible to the chair to limit the overall dimensions and help balance the unit.

Place your foot as indicated to balance the unit.

You can adjust the height of the handle with knob (8).



USE OF THE HAND CONTROL

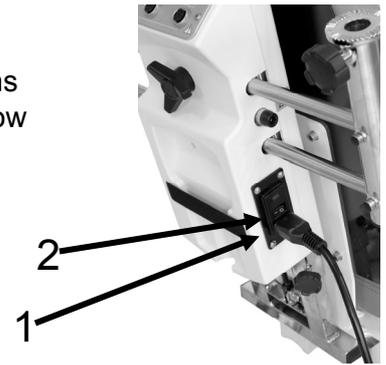
ELECTRICAL CONNECTION: SAFETY FIRST

KINETEC Centura is a type B class I device.

Before connecting the device to the power supply, check that the mains voltage matches that shown on the plate (100-240 V~ / 50-60 Hz) below switch ON (2).

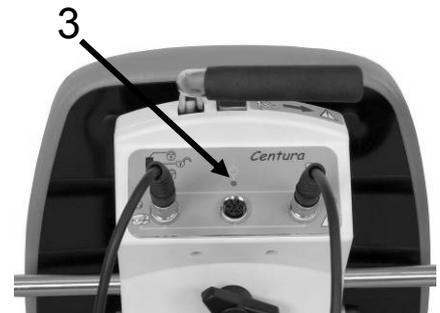
The connectors can be plugged in any one of the sockets (the sockets are not assigned to a specific connector).

Connect the power supply cable (1).



IMPORTANT

Check that the electrical socket is in good condition and is suitable for the splint power supply cord. The latter complies with current standards and has a grounding socket. The plug may be connected to any standard socket. The socket must however have a grounded pin. To connect the power supply, only use the original cable supplied with the machine. Check that the cables remain free around the device so that they do not get damaged. Check that the machine is not damaged, in particular the protective housings.



Watch out for the position of the motor cables, they must remain clear around the machine.

Wrong position



Good position



STARTING THE UNIT

Switch on the unit (2).

The indicator light (3) lights up, the machine carries out an auto-diagnostic, and then the display shows:

Your KINETEC Centura is ready to be used.

FLEX/EXT			
30	STOP	15	130

CHANGING THE DISPLAY LANGUAGE

Press the following buttons simultaneously:  and , followed by  or 

Press the  button to confirm,

then switch the machine off and then on again to apply the changed display language. Available languages: English, French, German, Italian and Spanish.

USE OF THE HAND CONTROL

LOCKING THE HAND CONTROL SETTING

This function allows the physician to authorise or block access to changing the movement parameters.

The switch (4) has 3 positions:



Fully locked position

The only functions that are possible are reading the operational settings and operating the START/STOP function.



Fully unlocked position

All the operational settings can be changed.



Semi-locked position

The program can still be changed and the lower and upper movement limits can still be modified; the START/STOP function is still accessible.

Double locking (soft locking)

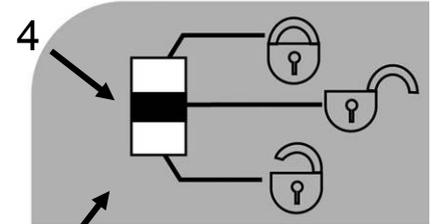


Simultaneously press the  and  keys to lock the hand control,

the display shows "LOCK". To unlock the hand control, simultaneously press

the  and  keys; the display shows "UNLOCK".

You cannot change the parameters; if you try the display shows: "LOCK SOFT».



We recommend that you lock the hand control when you give it to the patient.

START/STOP/REVERSE FUNCTION

As with all KINETEC systems, KINETEC Centura is equipped with a START/STOP/REVERSE function.

Press the  key of the hand control. The movement stops. The display reads STOP

Press the  key of the hand control. The movement starts in the opposite direction and the display reads RUN.

Caution: For optimum safety, always give the hand control to the patient before starting the system.

Procedure to stop the machine:

To stop the machine's movement: Press the  key

To switch power off: press the ON / OFF switch (see page 7)

USE OF THE HAND CONTROL

RESET TIME FUNCTION

This function allows one to read the running time since the last resetting of the counter.

Beginning	Keys to press	Display	Remarks
To stop the unit		FLEX/EXT 50 STOP 15 100	Check if the locking switch is in the following position  or 
Press simultaneously on the 2 keys	 	REST TIME 125H Reset: Limit low	The display indicates the running time since the last resetting.
To reset the counter, press the key		REST TIME 125H Reset is done	The counter is now reset.
Or After 5 seconds, the reset function switches off and the running time remains in the memory.		FLEX/EXT 50 STOP 15 100	

How to choose a movement



The movement can only be changed when the machine is stopped



and the locking switch is in the unlocked position  or 

You can select a movement by pressing the appropriate button. The LED is on.

When a movement is first selected, the system returns to the original parameters of the movement (default settings).

Default settings:

	 Abduction	 Flexion/Extension	 Rotation	 abd/add+rot Abduction + Rotation		 Horizontal Abduction*
• Lower limit	30°	30°	0°	30°	0°	30°
• Upper limit	90°	100°	60°	100°	60°	60°
• Speed	2	2	2	2		2
• Load	6	6	6	6		6
• Extension pause	0	0	0	0		0
• Flexion pause	0	0	0	0		0
• Timer	0	0	0	0		0

Possible values for each parameter:

	Abduction	Flexion/Extension	Rotation	Abduction + Rotation		Horizontal abduction*
• Lower limit	20° to 155°	20° to 175°	-60° to 85° extern	20° to 155°	-30° to 85° extern	-30° to 105°
• Upper limit	25° to 160°	25° to 180°	-55° to 90° extern	25° to 160°	-25° to 90° extern	-25° to 110°
• Speed	1 to 5 (from 50° to 140° per minute)					
• Load	1 to 6					
• Extension pause	0 to 900 seconds (15 minutes)					
• Flexion pause	0 to 900 seconds (15 minutes)					
• Timer	No time (00H00) to 24H00					

* Available on Centura 5 or in option.

USE OF THE HAND CONTROL



HOW TO ADJUST THE PARAMETERS OF SINGLE MOVEMENTS:

Beginning	Keys to press	Display	Remarks
To stop the unit		ROTATION 0 STOP 0 60	Check if the locking switch is in the following position:
To choose the movement		ABD/ADD 30 STOP 90 90	The display shows the new movement selected and the default settings of the upper and lower limits of this movement.
Or		ROTATION 0 STOP 0 60	
Or		FLEX/EXT 30 STOP 89 100	
Or (for Centura 5)		ABD HOR 30 STOP 50 60	
To display the lower limit of the movement		FLEX/EXT 30 EXT 89 100	The value blinks.
To change the lower limit if necessary	or	FLEX/EXT 50 EXT 89 100	The new value blinks.
To validate the new value, press another key or wait more than 3 seconds		FLEX/EXT 50 FLEX 89 100	While the value blinks press the or key to change if necessary.
		FLEX/EXT TIMER 00H00MIN	
		FLEX/EXT SPEED 2	
		FLEX/EXT Load : _ _ _ _	
Or to display pause		FLEX/EXT PAUSE HIGH 0S	The pause value in upper limit of movement blinks.
To change pause value in upper limit of movement if necessary	or	FLEX/EXT PAUSE HIGH 10S	The new pause value in upper limit of movement blinks.
To validate and display the pause value in lower limit of movement		FLEX/EXT PAUSE LOW 0S	The pause value in lower limit of movement blinks.
To change the pause value in lower limit of movement if necessary	or	FLEX/EXT PAUSE LOW 15S	The new pause value in lower limit of movement blinks.
To validate the new value press another key or wait more than 3 seconds. The display shows the selected movement.		FLEX/EXT 50 STOP 89 100	The unit is ready to start with the new parameters.

USE OF THE HAND CONTROL

USING PROGRAMS

program

The KINETEC Centura allows you to store up to 16 programs, including the type of movement, ROM, speed, load, pauses and timer.

The original parameter values of the program are empty.
These values can be modified and recorded at any time (see 'How to enter a program' p 14).

To select a program:

Beginning	Keys to press	Display	Remarks
To stop the unit		ROTATION 0 STOP 0 60	Check if the locking switch is in the following position: or  
To access the program mode		PROGRAM 1 EMPTY	The program number blinks.
To change the program if necessary	 or 	PROGRAM 3 0 FLEX/EXT 60	The new program number blinks.
To exit and validate the selected program		FLEX/EXT 0 STOP 0 60	The current parameters have been recorded in program 3.
To exit without validation of selected program		ROTATION 0 STOP 0 60	Back to the starting parameters.
Start the unit		FLEX/EXT 0 RUN 10 60	The value change at the speed of the movement.

Comments:

- The values show in the 'Display' column are examples. They actually depend on the stored programs.
- The current movement parameters can be changed while using that program but no data will be stored in the original program. See the programming mode (p 14) to modify programs.

USE OF THE HAND CONTROL

READING THE VALUES OF A PROGRAM: EXAMPLE SPEED



Beginning	Keys to press	Display	Remarks
To stop the unit		ROTATION 0 STOP 15 90	Check if the locking switch is in the following position: or
To access the program mode		PROGRAM 1 30 ROTATION 90	The program number blinks.
To change the program if necessary	or	PROGRAM 3 0 ROTATION 30	The new program number blinks.
To read the speed value		PROGRAM 3 SPEED : 1	Displaying the speed value.
After 15 seconds or after pressing on another key		PROGRAM 3 0 ROTATION 30	
To exit and validate the selected program		ROTATION 0 STOP 15 60	The current parameters have been recorded in program 3.
Start the unit		ROTATION 0 RUN 20 60	The value change at the speed of the movement.

Comments:

- The values showed in the 'Display' column are examples. They actually depend on the stored programs.
- The current movement parameters can be changed while using that program but no data will be stored in the original program. See the programming mode (p 14) to modify programs.

USE OF THE HAND CONTROL

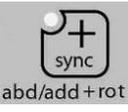
HOW TO MODIFY PROGRAMS PROGRAM MODE



Beginning	Keys to press	Display	Remarks
To switch off the unit			Check if the locking switch is in the following position:
To press the two keys at the same time to switch the unit on		KINETEC CENTURA V x.x	Welcome text during 3 seconds.
Then		PROGRAM 3 EMPTY	The program number blinks.
To change the program if necessary	or	PROGRAM 10 30 SYNC ABD 100	The new program number blinks.
To choose the movement		PROGRAM 10 30 ABD/ADD 90	The display indicates the selected movement, the program number blinks again.
Or		PROGRAM 10 0 ROTATION 60	
Or		PROGRAM 10 30 FLEX/EXT 100	
Or		PROGRAM 10 30 SYNC ABD 100	
Or (for Centura 5)		PROGRAM 10 30 ABD HOR 60	The display shows "not available" if you don't have the horizontal abduction module.
To display the lower limit of the movement		PROGRAM 10 30 SYNC ABD 100	The value blinks.
To change the lower limit of the movement if necessary	or	PROGRAM 10 40 SYNC ABD 100	The new value blinks.
To validate the new value, press another key		PROGRAM 10 40 SYNC ABD 100	The value blinks. Press the or key to change if necessary.
		PROGRAM 10 TIMER 00H01MIN	
		PROGRAM 10 SPEED : 1	
		PROGRAM 10 LOAD : _ _ _ _	
Or display pauses		PROGRAM 10 PAUSE HIGH 0S	The pause value in upper limit of movement blinks.
To change pause value in upper limit of movement if necessary	or	PROGRAM 10 PAUSE HIGH 15S	The new pause value in upper limit of movement blinks.

USE OF THE HAND CONTROL

HOW TO MODIFY PROGRAMS PROGRAM MODE (continued):

Beginning	Keys to press	Display	Remarks
To validate and display the pause lower limit of movement		PROGRAM 10 PAUSE LOW 0S	The pause value in lower limit of movement blinks.
To change the pause lower limit of movement if necessary	 or 	PROGRAM 10 PAUSE LOW 10S	The new pause value in lower limit of movement blinks.
To validate and display of the combined rotation setting	 abd/add+rot	PROGRAM 10 0 SYNC ROT 60	The program number blinks and the display indicates the rotation values combined with abduction.
To change the lower limit of the movement		PROGRAM 10 0 SYNC ROT 60	The value blinks.
To change the lower limit if necessary	 or 	PROGRAM 10 50 SYNC ROT 60	The new value blinks.
To validate and display the upper limit of the movement		PROGRAM 10 50 SYNC ROT 60	The value blinks.
To change the upper limit if necessary	 or 	PROGRAM 10 50 SYNC ROT 75	The new value blinks. (see page 11 for more information about combined movement)
To record the program 10		PROGRAM 10 SAVE: + CLEAR: -	
Then		PROGRAM 10 SAVING	The program 10 has been recorded and the display indicates the next program so you can change another program.
		PROGRAM 11 EMPTY	
OR To cancel the program		PROGRAM 10 CLEARING	The program 10 has been recorded and the display indicates the next program so you can change another program.
		PROGRAM 11 EMPTY	
To exit program mode, switch off and switch on the unit.		KINETEC CENTURA V x.x	To use the modified program see page 12.

USE OF THE HAND CONTROL

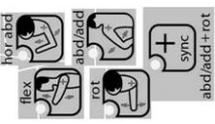
Comments:

- When a program has been deleted, the display shows

PROGRAM 11
EMPTY

- The values shown in the 'Display' column are examples. They actually depend on the stored programs.

Program table:

Program number	Movement type 	Lower limit 	Upper limit 	Speed 	Load 	Pause on upper limit 	Pause on lower limit 	Timer 
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								

USE OF THE HAND CONTROL

HOW TO DEFINE THE UPPER AND LOWER MOVEMENT LIMITS

• At the start of a session

The MANUAL MODE is a way to set within the tolerance of a patient at the beginning of a session.

Proceed as below:

Beginning	Keys to press	Display	Remarks
Switch the unit on To select the MANUAL MODE for upper limits by continually holding pressure on the key Switch the unit on		KINETEC CENTURA V x.x	Check if the locking switch is in the following position: or  
		Movement verif. Please wait	
		Movement verif. Motor: M1 M2	
		FLEX/EXT 30 STOP 89 100	
To select the MANUAL MODE for upper limits by continually holding pressure on the key	 continuous press	FLEX/EXT 30 MANUAL 89 100	The unit is moving to the upper limit of the movement.
To set the pain level when reached, immediately press	 limit	FLEX/EXT 30 MANUAL 150 150	The new upper value limit of the movement is recorded.
To select the manual mode for lower limits	 continuous press	FLEX/EXT 30 MANUAL 100 150	The unit is moving to the lower limit of the movement
To set the pain level when reached, immediately press	 limit	FLEX/EXT 25 MANUAL 25 150	The new lower value limit of the movement is recorded.
To start the session with the new movement limits		FLEX/EXT 25 RUN 30 150	The angle display changes with current movement.

Specific rules for synchronized movement:

- You can only change the upper limit of the movement through the manual mode and only beyond the synchronization point.

Comments:

- The values shown in the 'Display' column are examples. They actually depend on the stored programs.
- The movement speed is fixed and cannot be changed (default factory setting: 2).

USE OF THE HAND CONTROL

HOW TO DEFINE THE UPPER AND LOWER MOVEMENT LIMITS

• During the session

The BY-PASS MODE is a way to record the pain threshold of a patient during a session.

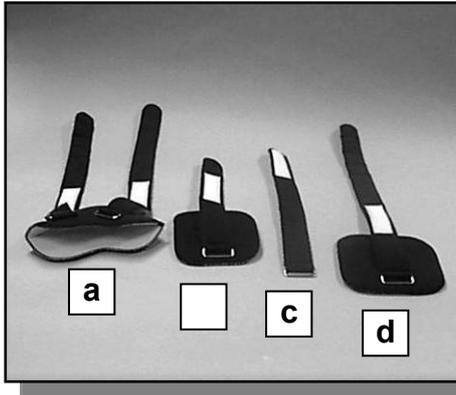
Beginning	Keys to press	Display	Remarks
The unit is running		FLEX/EXT 25 RUN 30 150	The angle display changes with current movement. Check if the locking switch is in the following position: or 
To select the BY-PASS MODE	 continuous press	FLEX/EXT 25 BYPASS 160 150	The unit exceeds the recorded upper limit.
To set the new pain level when reached, immediately press	 limit	FLEX/EXT 25 BYPASS 160 160	The new upper value limit of the movement is recorded.
To select the BY-PASS mode for lower limits	 continuous press	FLEX/EXT 25 BYPASS 20 160	The unit is moving to the lower limit of the movement.
To set the new pain level when reached, immediately press	 limit	FLEX/EXT 20 BYPASS 20 160	The new lower value limit of the movement is recorded.
Continue the session with the new movement limits.		FLEX/EXT 20 RUN 50 160	The angle display changes with current movement.

Comments:

- The values shown in the 'Display' column are examples. They actually depend on the stored programs.
- The movement speed is fixed and cannot be changed (default factory setting: 2).

INSTRUCTIONS FOR USE

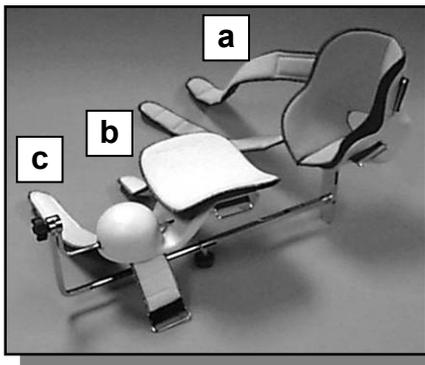
HOW TO USE THE PADS



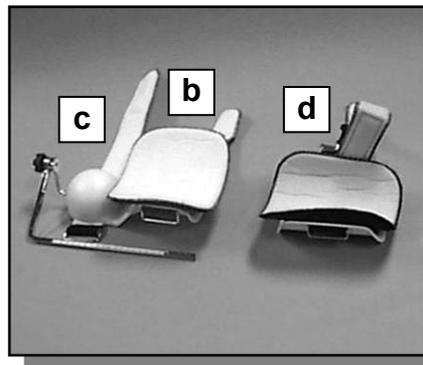
COMPONENTS

The following pads and straps (labeled at left) are included in the pad kit:

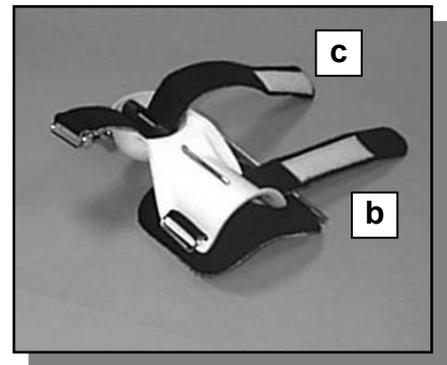
- a. elbow pad
- b. wrist pad
- c. hand strap
- d. biceps pad



- Abduction/adduction
- Rotation
- Synchronized abduction/adduction with rotation



- Flexion/extension



- Hand strap and wrist pad attachment

SETTING UP THE MACHINE

Each set-up requires only some of the pads, as follows:

- Set-up for abduction/adduction requires pads **a**, **b**, and **c**.
- Set-up for rotation requires **a**, **b**, and **c**.
- Set-up for synchronized abduction/adduction with rotation requires **a**, **b**, and **c**.
- Set-up for flexion/extension requires **b**, **c**, and **d**.

Attach the pads and straps to the CPM machine as follows:

- a. Elbow pad**—Position it in the elbow support with the seam distal and the straps and D-rings toward the elbow support. Thread the straps and D-rings through the slots in the elbow support.
- b. Wrist pad**—Position it on the wrist support with the strap and D-ring toward the wrist support. Thread the strap and D-ring through the slots in the wrist support.
- c. Hand strap**—Turn the hand support so the rod is up. With the hook material on the strap facing up, thread the D-ring end of the strap under the rod.
- d. Biceps pad**—Position it on the biceps support with the strap and D-ring toward the biceps support. Thread the strap and D-ring through the slots in the biceps support.

After patient has been placed in the supports, secure straps by threading them through the D-rings and securing the hook closures. **Be sure the straps are snug but not so tight that they impair circulation.**

The pads are intended for single-patient use only.

Pads for Kinetec* Centura* Shoulder CPM Machine:

5315-0130

INSTRUCTIONS FOR USE

STANDARD SETTINGS FOR A MOVEMENT USING BOTH MOTORS.

Possible movement:

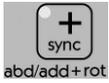


- Adjustments for ABDUCTION/ADDUCTION with fixed EXTERNAL ROTATION.

The KINETEC Centura provides motion from 20° to 160° of abduction. The rotation position can be adjusted between 60° and 90°.

- Adjustments for ABDUCTION/ADDUCTION with ASSOCIATED ROTATION.

The KINETEC Centura provides motion from 20° to 160° of abduction associated with 120° of rotation in maximum.



- Adjustments for ROTATION motion.

The KINETEC Centura provides motion from 60° of internal rotation to 90° of external rotation. During this motion the abduction settings are fixed.



PARTS NEEDED

• Chair



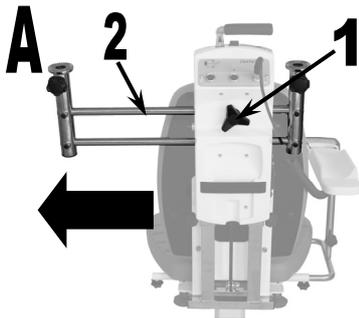
• Abduction rotation splint



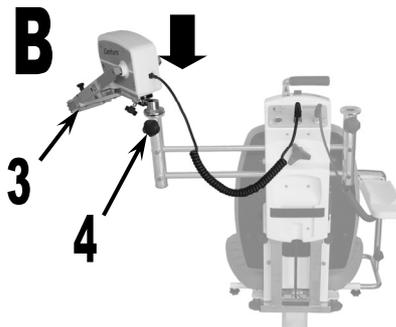
• Hand control



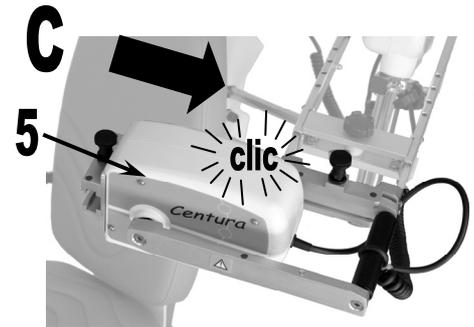
ASSEMBLING THE PARTS



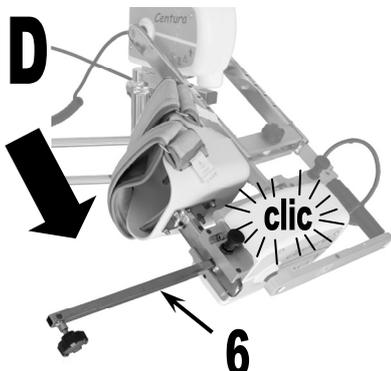
Loosen the knob (1) and slide the motor support (2) to the right or the left. Plug in the hand control.



Assemble the abduction motor (3) and tighten the screw (4). Plug in the motor.



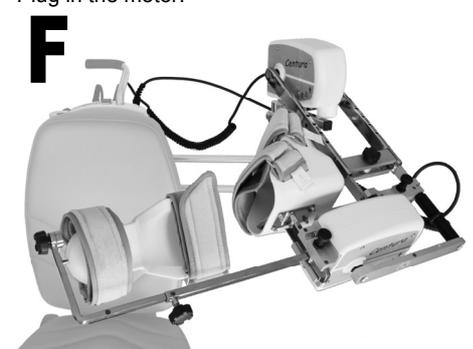
Use the color code to assemble the rotation motor (red for right, blue for left). The assembly is secure when you hear a 'click'. Plug in the motor.



Use the color code to assemble the elbow splint (6) (red for right, blue for left). The assembly is secure when you hear a 'click'



Use the color code to assemble the forearm splint (7). Tighten the knob (8)



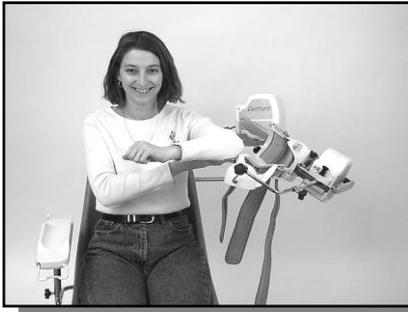
The KINETEC Centura is shown assembled for a left shoulder mobilisation.

INSTRUCTIONS FOR USE

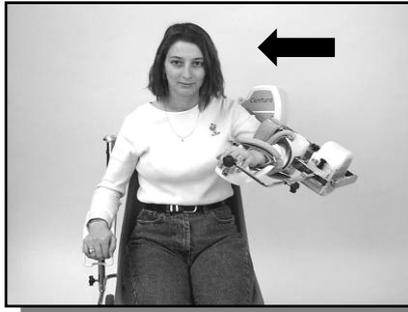
PATIENT SET UP

Make sure the straps are clean.

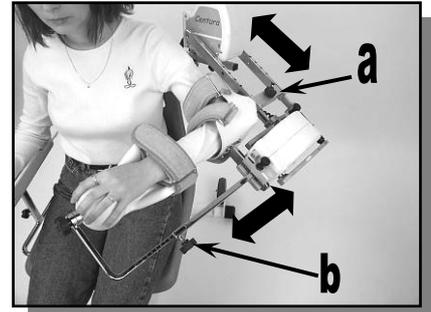
Put the unit in the position that is the most comfortable for the patient.



Position the patient in the chair in a comfortable position and supporting the affected arm.



Slide the arm supports toward the patient and put the arm in the supports. Secure pads.



Adjust the lengths:
a - arm
b - forearm.

ADJUSTING THE SHOULDER JOINT AXIS:

c – Vertical adjustment:

- Loosen the 2 knobs (1).
- With the handle (2), adjust the height of the entire mechanism.
- Tighten the 2 knobs (1).

d – Side to side adjustment:

- Loosen the knob (3)
- Slide the entire mechanism
- Tighten the knob (3)

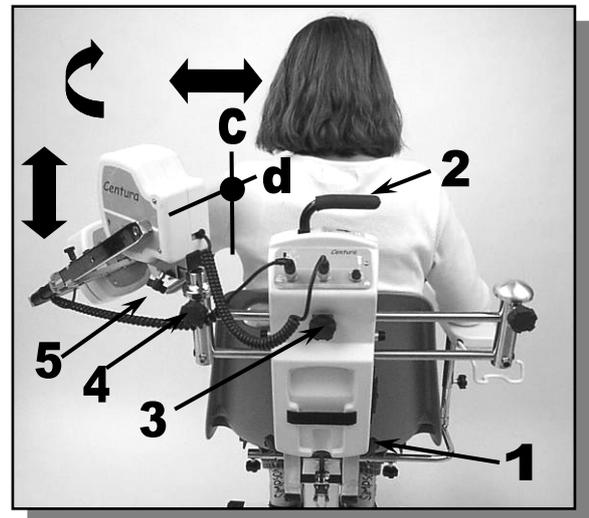
e – Scapula plan choice

- Loosen the knob (4)
- Rotate the arm support
- Tighten the knob (4).

f – Shoulder depth adjustment:

- Loosen the knob (5).
- Slide the entire mechanism.
- Tighten the knob (5).

- Adjust the arm rest.



STARTING THE UNIT

Adjustments for ABDUCTION/ADDUCTION with fixed EXTERNAL ROTATION.

1. Adjustment of the rotation position: Press  and find the right position with the MANUAL MODE (see page 17)
2. Choice of the abduction/adduction motion: Press  and adjust your parameters (see page 10).
3. Or select a program (see page 12).

Adjustments for ABDUCTION/ADDUCTION with ASSOCIATED ROTATION.

1. Choice of the abduction/adduction associated with rotation motion: Press  and adjust your parameters (see page 11).
2. Or select a program (see page 12).

Adjustments for ROTATION.

1. Adjustment of the abduction position: Press  and find the right position with the MANUAL MODE (see page 17)
2. Choice of the rotation motion: Press  and adjust your parameters (see page 11).
3. Or select a program (see page 12).

INSTRUCTIONS FOR USE

STANDARD SETTINGS FOR A MOVEMENT USING ONE MOTOR.

Possible movement:



- **Adjustments for ABDUCTION/ADDUCTION with fixed ELBOW EXTENSION / FLEXION.**

The KINETEC Centura provides motion from 20° to 160° of abduction.

During this motion the elbow flexion settings are fixed.

- **Adjustments for EXTENSION / FLEXION.**

The KINETEC Centura provides motion from 20° to 180° of flexion.

During this motion the elbow flexion settings are fixed.

PARTS NEEDED

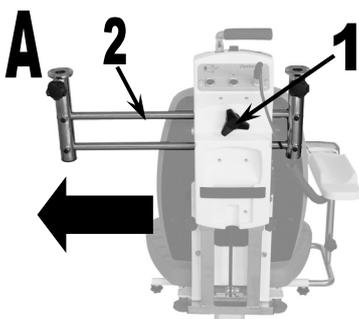
• Chair

• Abduction or flexion splint

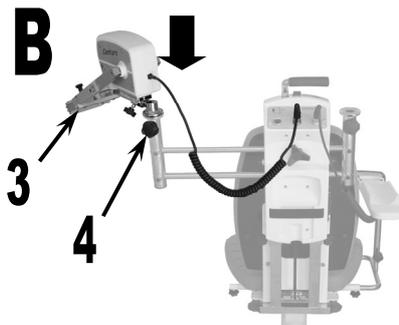
• Hand control



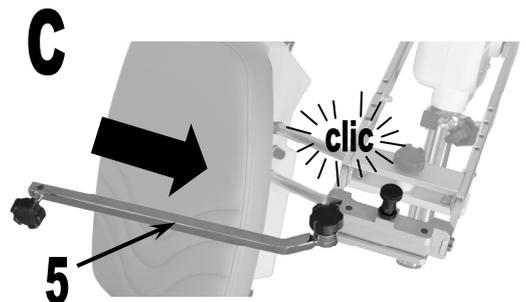
ASSEMBLING THE PARTS



Loosen the knob (1) and slide the motor support (2) to the right or the left. Plug in the hand control.



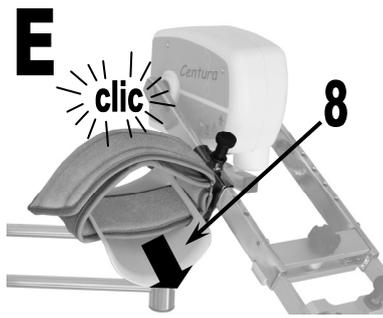
Assemble the abduction motor (3) and tighten the screw (4). Plug in the motor.



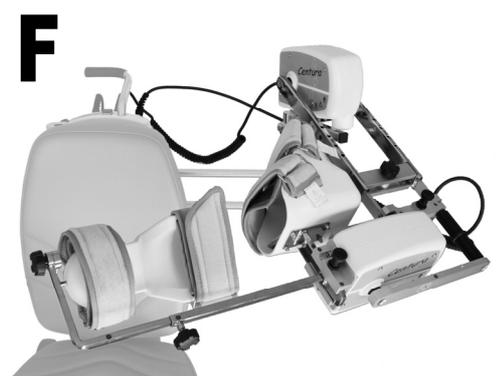
Use the color code to assemble the forearm support (red for right, blue for left). The assembly is secure when you hear a 'click'.



Use the color code to assemble the forearm splint (7). Tighten the knob (6).



Position arm splint (8). The assembly is secure when you hear a 'click'.



The KINETEC Centura is shown assembled for left shoulder mobilisation.

INSTRUCTIONS FOR USE

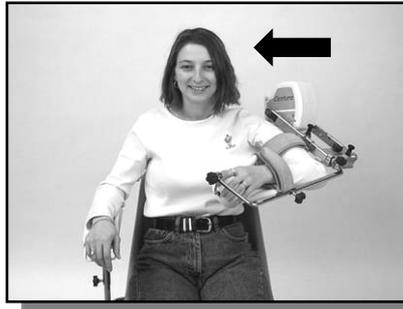
PATIENT SET UP

Make sure the straps are clean.

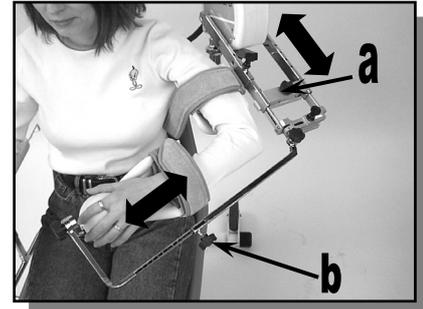
Put the unit in the position that is the most comfortable for the patient.



Position the patient in the chair in a comfortable position and supporting the affected arm.



Slide the arm supports toward the patient and put the arm in the supports. Secure pads.



Adjust the lengths:
a - arm
b - forearm.

ADJUSTING THE SHOULDER JOINT AXIS:

c – Vertical adjustment:

- Loosen the 2 knobs (1).
- With the handle (2), adjust the height of the entire mechanism.
- Tighten the 2 knobs (1).

d – Side to side adjustment:

- Loosen the knob (3)
- Slide the entire mechanism
- Tighten the knob (3)

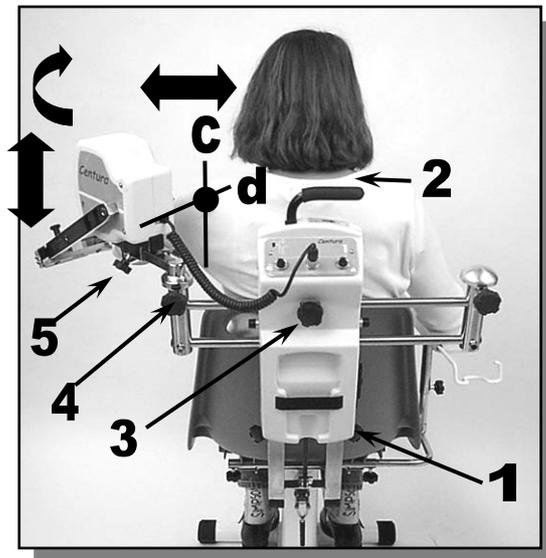
e – Scapula plan choice

- Loosen the knob (4)
- Rotate the arm support
- Tighten the knob (4).

f – Shoulder depth adjustment:

- Loosen the knob (5).
- Slide the entire mechanism.
- Tighten the knob (5).

- Adjust the arm rest.



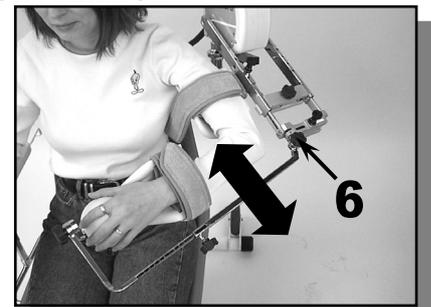
STARTING THE UNIT

Adjustments for ABDUCTION/ADDUCTION with fixed ELBOW EXTENSION / FLEXION.

1. Adjustment of the elbow flexion position: Unscrew the knob (6) and adjust the flexion as appropriate.
2. Choice of the abduction/adduction motion: Press  and adjust your parameters (see page 10)
3. Or select a program (see page 12).

Adjustments for EXTENSION / FLEXION with fixed ELBOW EXTENSION / FLEXION.

1. Adjustment of the elbow flexion position: Unscrew the knob (6) and adjust the flexion as appropriate.
2. Choice of flexion/extension motion: Press  and adjust your parameters (see page 10)
3. Or select a program (see page 12).



INSTRUCTIONS FOR USE

ADJUSTMENTS FOR HORIZONTAL ABDUCTION.

Possible movement:



- Horizontal Abduction

Available on Centura 5 or in option, Contact your nearest KINETEC distributor.

The KINETEC Centura provides motion from -30° to 110° of horizontal abduction.

PARTS NEEDED

• Chair



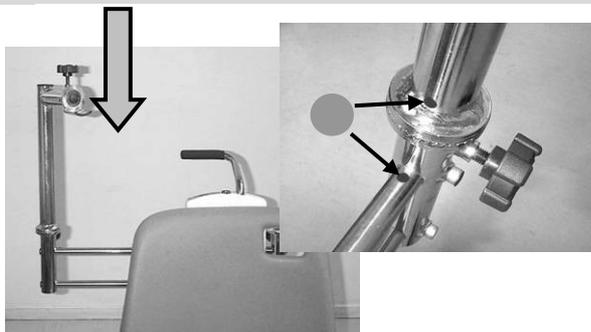
• Horizontal abduction splint



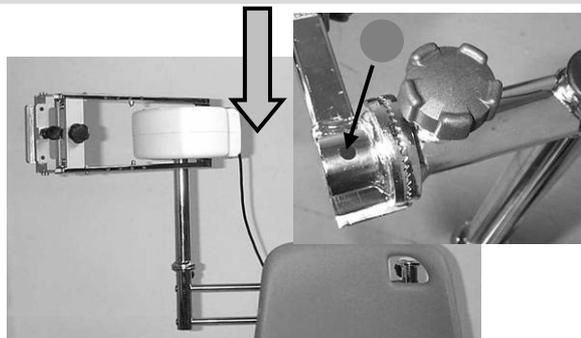
• Hand control



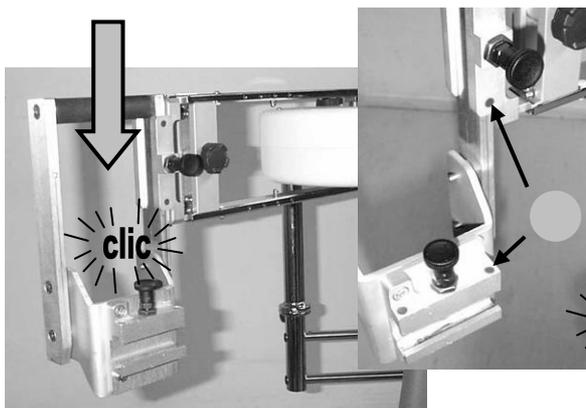
ASSEMBLING THE PARTS



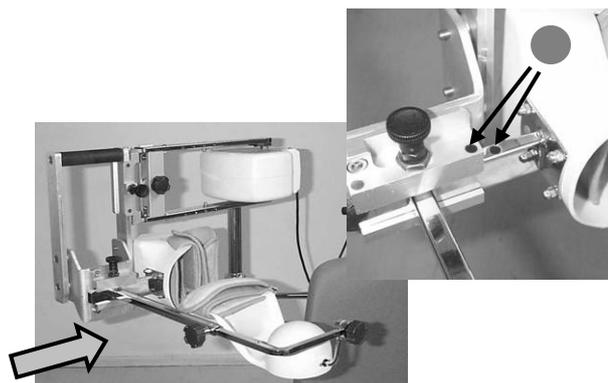
Assemble the horizontal abduction column to the unit. Use the colour code to turn the column in the right position. Fasten the screw.



Assemble the motor M1 to the column. You need to see the red point on the M1 part for a right side set up (blue for left). Several positions are possible to adjust the plan of the motion (horizontal to more or less inclined).



Insert the elbow support holder into the extremity of the M1 part. The required colour point (red for right and blue for left) needs to be positioned internally. For safety reason, this part cannot be removed from the lower part and must be so lifted when removed.



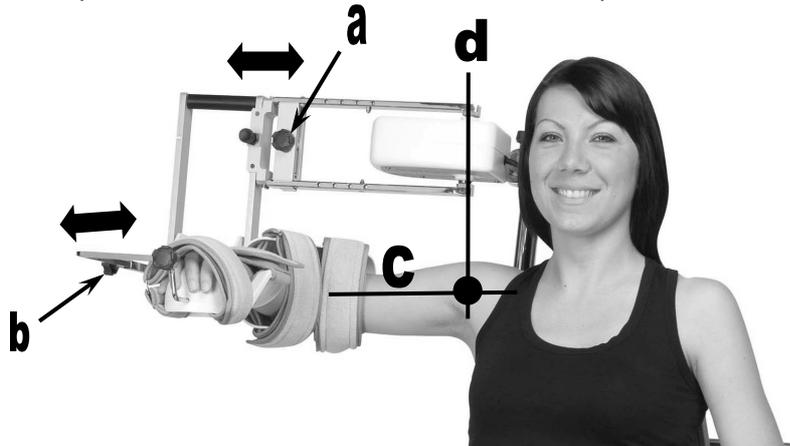
Insert the elbow splint into the elbow support holder respecting the colour code.

INSTRUCTIONS FOR USE

PATIENT SET UP

Make sure the straps are clean.

Put the unit in the position that is the most comfortable for the patient.



Position the patient in the chair in a comfortable position and supporting the affected arm.

Slide the arm supports toward the patient and put the arm in the supports.
Secure pads.

Adjust the lengths:
a - arm
b - forearm.

ADJUSTING THE SHOULDER JOINT AXIS:

c – Vertical adjustment:

- Loosen the 2 knobs (1).
- With the handle (2), adjust the height of the entire mechanism.
- Tighten the 2 knobs (1).

d – Side to side adjustment:

- Loosen the knob (3)
- Slide the entire mechanism
- Tighten the knob (3).

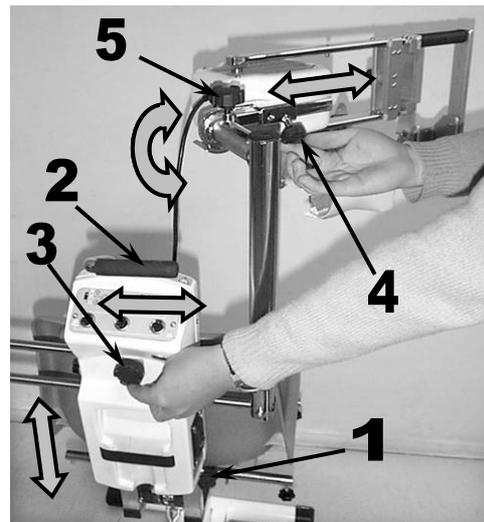
e – Shoulder depth adjustment:

- Loosen the knob (4).
- Slide the entire mechanism.
- Tighten the knob (4).

f – Plan of the motion: from horizontal to inclined

- Loosen the knob (5)
- Rotate the arm support
- Tighten the knob (5).

• Adjust the arm rest.



STARTING THE UNIT

• Choice of Horizontal abduction:

- Press  and adjust your parameters (see page 10).
- Or select a program (see page 12).

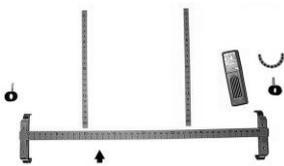
ACCESSORIES



Horizontal Abduction Kit (Except for Centura 5)
Part number to order: 4670020020



Head and shoulder rests
Part number to order: 4670024551



Scales kit
Part number to order: 4670019726



Transport bag
Part number to order: 4640001464



CEM kit (elbow module)
Part number to order: 4621007002

PRODUCT INFORMATION

MAINTENANCE

After 2,000 hours of operation, KINETEC Centura requires a few lubrication and maintenance operations (lubrication of the joints, pointer stops and ball screws). The need for maintenance is indicated by display of the message «SERVICE TIME Mx » when the system is switched on.

Despite that warning, you can continue to use your KINETEC by pressing START, but you should contact your nearest KINETEC technician to have the maintenance operations conducted as soon as possible.

When the system is no longer in operating order, kindly return it to us with the accessories for destruction.

TROUBLE SHOOTING

A spare parts list and technical catalogue are available to you on request from your KINETEC distributor.

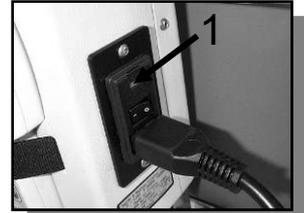
If, after connecting the power supply cable to the power supply and switching on KINETEC Centura:

- The display does not indicate any information:
 - Check that the electrical socket is live using another device.
 - Replace the fuse(s) of the connector with fuses of the same type and calibre: 2 fuses T 750 mA 250V (6.3 x 32) (KINETEC order: 4610007434).
 - If the display still does not indicate any information, contact your nearest KINETEC technician.

If, after switching on your KINETEC:

- Your KINETEC does not work and the display indicates 50 STOP 25 115, Press START again.
- Your KINETEC still does not function:
 - Contact your nearest KINETEC technician.
- Your KINETEC does not function and the display indicates:
 - «SERVICE D1» : angle measurement function failure,
 - ou «SERVICE D2» : no movement,
 - ou «SERVICE D3» : motor rotation failure,
 - ou «SERVICE D4» : abnormal consumption;

Contact your nearest KINETEC technician if the same message is displayed after having switched the device off, then on, and started it by pressing START.



CLEANING

Before conducting any cleaning operation, SWITCH OFF the unit and disconnect the power supply.

In order to ensure optimal hygiene, you are advised to clean the machine for each new patient.

Cleaning should be carried out in the environmental conditions specified in the "Technical Specifications" section below.

Use a DISINFECTANT product (alcohol-free or <5% alcohol solution) in spray (plastic cases and metal components).

In order to ensure optimal hygiene,
you are advised to clean the covers for each new patient.

All the consumables enable hazard-free disposal.

Recommendations to obtain a maximum hygiene of the pads.

- Sterilization of the pads (if necessary) :
 - Sterilizer at 134 °C during 18 minutes.
- Desinfection of the pads:
 - Washing at 30 ° C with use of a disinfection solution during the rising cycle.
- Example of product which can be used :
 - Solution " Baclinge" at 0.125 % or "Souplanios" at 0,125% from ANIOS Laboratory.
 - A complete list of distributors in your country is available on request.

ELIMINATION AND RECYCLING

- a • Packing:** Packing must be separated from the components plastic and paper/cardboard and given to the specific sites from recycling.
- b • Kinetec patient pad kit:** To clean with a product of disinfection then to give it to the specific sites of recycling.
- c • Unit:** It contains electronic components, cables, aluminium, steel and plastic parts. When the splint is not operational any more, to dismount and separate in groups from materials and to give them to correct unit of recycling or to turn over the machine to Kinetec for destruction.

PRODUCT INFORMATION

TECHNICAL SPECIFICATIONS

Product

Weight: 22 Kg /48lb
 Splint dimensions:
 56x100x76cm / 22"x39"x30"
 Angular limits: see page 2
 Speeds: from 50 to 140°/min
 Patient height: from 1,40 to 2m
 4'7" to 6'7"
 Acoustic pressure: <70dB

Electricity

Power supply: 100-240 V~
 Frequency: 50-60 Hz
 Power consumption: 50 VA
 Device of type B class I
 IP 20.
 Fuse T 750mA 250V 6.3x32mm
 KINETEC order: 4610007434

Environment

- Storage/transport conditions:
 Temperature: -40 to 70°C / -40 to 160°F
 Relative humidity: up to 90%
 - Operating conditions:
 Room temperature: 10 to 40°C / 50 to 105°F
 Relative humidity: up to 80%

SYMBOLS USED

	TYPE B device (protection against electric shocks)		Lower limit
	Caution (consult the accompanying documents)		Upper limit
	STOP (power off)		Flexion movement
	ON (power on)		Rotation movement
	TYPE B device (protection against electric shocks)		Abduction movement
	Start movement		Combined movement
	Stop movement		Horizontal abduction movement
	Program access		Hand control locked
	Speed		Hand control unlocked
	Timer		Hand control half locked
	Force		Switch on LED and defect signal when the LED blinks
	Pause		Alternative current
	Increase		Contains electric and electronic components; not to throw in the dustbins of household refuse
	Decrease		Temperature Limit during storage or transport
	Right way up when box is stored		Keep dry during storage or transport

WARRANTY

The KINETEC warranty is strictly limited to the replacement free of charge or repair in the plant of the component or components found to be defective.

KINETEC guarantees its joint passive mobilization systems for 1 year against all defects of manufacture from the date of purchase by the consumer.

KINETEC is the only organization able to assess the application of the warranty to its systems.

The warranty will be considered null and void if the device has been used abnormally or under conditions of use other than those indicated in the user's manual.

The warranty will also be considered null and void in the event of deterioration or an accident due to negligence, inappropriate surveillance or inappropriate maintenance, or due to transformation of the equipment or an attempt to repair the equipment.

PRODUCT INFORMATION

GUIDANCE AND MANUFACTURER'S DECLARATION

Electromagnetic emissions

The « KINETEC Centura » is intended for use in the electromagnetic environment specified below. The customer or the user of the « KINETEC Centura » should ensure that it is used in such an environment.

Emissions test	Compliance	Electromagnetic environment – guidance
Radio electric-Frequency emissions CISPR 11	Group 1	The « KINETEC Centura » uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment
Radio electric-Frequency emissions CISPR 11	Class B	The « KINETEC Centura » is suitable for use in all establishments including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2	Class A	
Voltage fluctuations / Flicker emissions IEC 61000-3-3	Complies	

Electromagnetic immunity

The « KINETEC Centura » is intended for use in the electromagnetic environment specified below. The customer or the user of the « KINETEC Centura » should ensure that it is used in such an environment.

Immunity test	IEC 60601 Test level	Compliance level	Electromagnetic environment – guidance
Electrostatic discharge (ESD) IEC 61000-4-2	±2 kV, ±4 kV, ±6 kV contact	±2 kV contact	At the interruption, there is a reset of the « KINETEC Centura ». After turning on, push START to begin the session.
	±2 kV, ±4 kV, ±8 kV air	±2 kV, ±4 kV, ±8 kV air	
Electrical fast transient / burst IEC 61000-4-4	±2 kV for power supply lines	±2 kV for power supply lines	Mains power quality should be that of a typical commercial or hospital environment.
	±1 kV for input/output	±1 kV for input/output	
Surge IEC 61000-4-5	±0,5 kV, ±1 kV between lines	±0,5 kV, ±1 kV between lines	Mains power quality should be that of a typical commercial or hospital environment.
	±0,5 kV, ±1 kV, ±2 kV between line and earth	±0,5 kV, ±1 kV, ±2 kV between line and earth	
Voltage interruptions CEI 61000-4-11	< 5% U_T (>95% dip in U_T) for 5 seconds	< 5% U_T (>95% dip in U_T) for 5 seconds	At the interruption, there is a reset of the « KINETEC Centura ». After turning on, push START to begin the session.
Voltage dips and voltage variations on power supply input lines CEI 61000-4-11	< 5% U_T (>95% dip in U_T) for 0,5 cycle	< 5% U_T (>95% dip in U_T) for 0,5 cycle	Mains power quality should be that of a typical commercial or hospital environment.
	40% U_T (60% dip in U_T) for 5 cycles	40% U_T (60% dip in U_T) for 5 cycles	
	70% U_T (30% dip in U_T) for 25 cycles	70% U_T (30% dip in U_T) for 25 cycles	
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3A/m	3A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.

NOTE : U_T is the a.c. mains voltage prior to application of the test level.



Sammons Preston Rolyan
A Patterson Medical Company
W68 N158 Evergreen Blvd.
Cedarburg, WI 53012
Phone: 800-228-3693
Fax: 262-387-8748