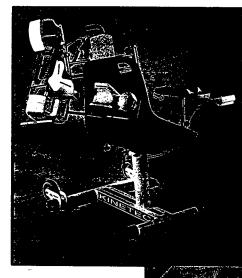
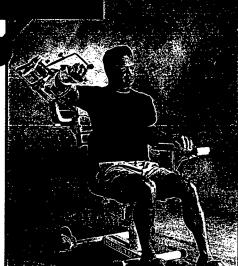
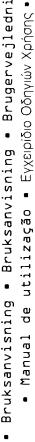
# **Shoulder C.P.M Machine**

# Centura







Smith⊕Nephew

First Choice in Rehabilitation

## Manuel d'utilisation • EPAULE

Avant toute utilisation lire ce document.

Smith & Nephew Kinetec se réserve le droit de toutes modifications techniques

### User manual SHOULDER

Before use, please read this document.

Smith & Nephew Kinetec reserves the right to effect technical modifications.

# • Bedienungsanleitung • SCHULTER

Vor Benutzung unbedingt dieses Dokument lesen.

Smith & Nephew Kinetec behält sich das Recht vor, jegliche technische Änderung durchzuführen.

# • Istruzioni per l'uso • SPALLA

Prima di mettere in funzione l'apparecchio leggere con attenzione il presente documento.

La Smith & Nephew Kinetec si riserva il diritto di apportare modifiche tecniche.

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# • Bruksanvisning • SHULDRA

Läs denna bruksanvisning noga innan Du använder apparaten.

Smith & Nephew Kinetec förbehåller sig rätten att göra tekniska ändringar på produkten.

# Bruksanvisning SKULDER

Les denne bruksanvisningen før du tar apparatet i bruk.

Smith & Nephew forbeholder seg retten til å foreta tekniske modifikasjoner.

# Brugervejledning SKULDER

Inden ibrugtagning skal denne vejledning læses igennem. Smith & Nephew Kinetec forbeholder sig ret til tekniske ændringer.

# • Manual de utilização • ESPADUA

Recomenda-se a leitura deste documento antes de iniciar a utilização do aparelho. Smith & Nephew Kinetec reserva-se o direito a quaisquer alterações técnicas.

# • Εγχειρίδιο Οδηγιών Χρήσης • παθητικής

Πριν από οιαδήποτε χρήση διαβάστε αυτό το εγχειρίδιο οδηγιών χρήσης.

Η Smith & Nephew Kinetec διατήρει το δικαίωμα να προβαίνει σε σιεμιδήποτε τεχνικές τροποποιήσεις

### Smith & Nephew Kinetec S A

Z.J. de Tournes Chron - B.P. 1409 F-08090 Tournes, France Teléphone - 03,24-52-91-24 Téléfas - 03,24-52-90-34

Smith-Nephew

1.100 TO 10.10 Spt. 4.20 Land 10.50 TO 10.10 Spt. 4.20

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### SUMMARY

	Page
DESCRIPTION	2-6
ASSEMBLY & TRANSPORT	7
USE OF THE HAND CONTROL	8-18
INSTRUCTIONS FOR USE	19-29
ACCESSORIES	30
PRODUCT INFORMATION	31-33

Manual N°: 467896228 – Updated 29 June 2000 KINETEC Centura – Series 1

KINETEC and Centura are trademark of Smith & Nephew.

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# DEFINITION

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

• Extension 20°

Flexion 180°

· Adduction 20°

Abduction 160°

• Internal Rotation 60°

External Rotation 90°.

• Synchronized Abduction + Rotation

Adduction 20°

Abduction 160°.

Internal Rotation 30°

External Rotation 90°.

### Indications

- · Total shoulder replacement.
- · Repeated dislocation of the humerus.
- · Rotator cuff injury.
- · Upper humerus fractures
- · Scapula fractures.
- · Acromioplasty.
- · Capsulotomy.
- · Arthrolysis.
- · Synovectomy for Rheumatoid Arthritis.
- etc....

### 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 edema.
- · Promotes articular cartilage healing.
- · Reduces hospitalization time
- Reduces the need for pain medication.

### Contraindications

- Unstable fractures.
- Spastic paralyses.
- Uncontrolled infection.

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### **ELECTRICAL CONNECTION**

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  $(100-240 \, \text{V} \sim 1.50-60 \, \text{Hz})$  below switch ON (2)

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.

The cables (motors and hand control) can be plugged in any of the connectors

# Starting the unit

Switch on (2).

While the unit begins an auto diagnostic, the display shows the following:



FLEASE URIT FLEASE

Your KINETEC Centura is ready to be used

### SAFETY

The physician defines the protocol and ensures that  $d(s) \in B(0)$  into America Laguistments, session durations and frequency of use

The patient must know the stadistophreverse function on the form of the Hand control must be accessible to patient at an times. See page  $\beta$ 

KINETEC Centura compiles with Directive 93 43 CEE and the Pro-

### **EXPLOSION HAZARD:**

KINETEC Centura is not designed for use in the presence of flammable anesthetics.

In case of electromagnetic interference with other devices move the device KINETEC Centura is in compliance with standards in force (IEC 601-1-2), electromagnetic compatibity standard for medical devices

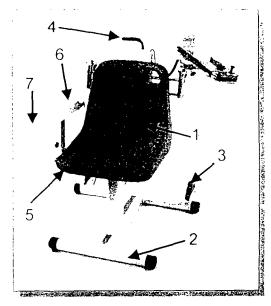
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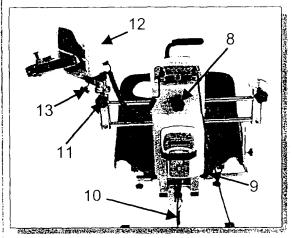
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# **DESCRIPTION • COMPONENTS**

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

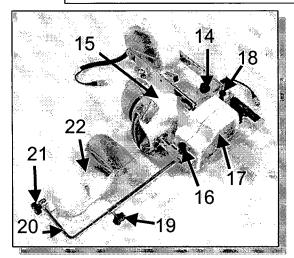




- 8 Locking of the right/left sliding 9 Locking of the up/down sliding
- 10 Chair locking lever
- 11 Locking of the abduction motor
- 12 Abduction motor
- 13 Shoulder depth sliding lock

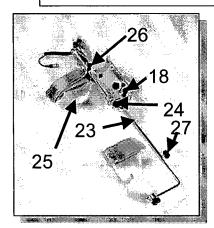
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# Abduction associated with rotation splint



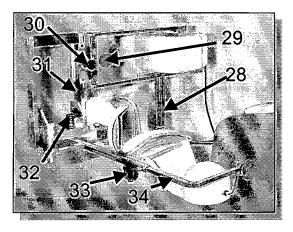
- 14 Arm length setting lock
- 15 90° elbow splint 16 90° elbow splint lock
- 17 Rotation motor
- 18 Rotation motor lock
- 19 Forearm length setting lock
- 20 Forearm slider
- 21 Right/left bean swivel lock
- 22 Forearm splint

# Abduction or flexion splint



- 18 Swiveling 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
- 29 Arm length setting lock
- 30 Elbow splint support lock
- 31 Elbow support older
- 32 90°elbow splint lock
- 33 Forearm length setting lock
- 34 Forearm slider



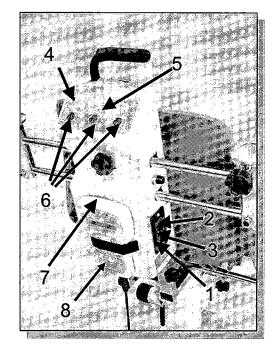


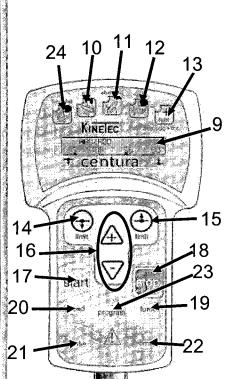
GB

# **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





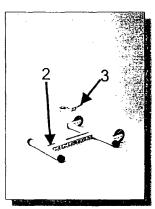
- 9 Liquid-crystal display
- 10 Flexion/extension
- 11 Abduction/adduction
- 12 Rotation
- 13 Abduction/adduction synchronized with rotation
- 14 Lower limits setting
- 15 Upper limits setting
- 16 Increase / decrease
- 17 START
- 18 STOP
- 19 FORCE
- 20 SPEED
- 21 PAUSE
- 22 TIMER
- 23 PROGRAM access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

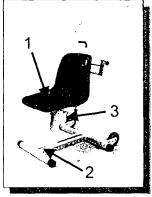
### **ASSEMBLY & TRANSPORT**

# Base assembly

Remove all the components from their packaging.
Position locking lever (3) in an extended position
Position the chair (1) on the base (2) with the back of the chair at the wheel and push down on the locking lever (3) to secure it in place §.

Place the elevation motor (4) on right or left, depending on the limb be moved.







The other components to be used depend on the selected movement.



# Unit transport

For easy transport of the unit, it features 2 wheels (5) and a handle (6).



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 (7).



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# Locking the hand control setting

The hand control allows the patient to control the machine as appropriate

The switch (4) has 3 positions



### LOCKED POSITION (1)

The operational settings can be read and the START/STOP/REVERSE function operated



### **UNLOCKED POSITION (2)**

All adjustments are possible



### HALF-LOCKED POSITION (4)

It is possible to switch the program and modify the upper and lower movement limits. The START/STOP/REVERSE function is always accessible.

### **Double locking**

Simultaneously press the



keys to lock the hand control



The display reads LOCK. To unlock the hand control, simultaneously press the same keys. The displays reads  ${\tt UNLOCK}$ 

You can not change the parameters, if you try the display reads

LOCK 1, if locked with only the switch (4)

LOCK 2: if only double locked

LOCK 12: if locked with the switch (4) and double locked

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.

When the unit is running, the display reads RUN

Press the



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

Press the

start

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.

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# Reset time function

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

	T	, , , , , , , , , , , , , , , , , , , ,	
Beginning	Keys to press	Display	Remarks
To stop the unit	stop	58 SOP 5 100	Check if the locking switch is in the following position or
Press simultaneously on the 2 keys	timit limit	<b>新生生的</b>	The display indicates the running time since the last resetting.
To reset the counter, press the key	limit	(三角塔里里) 18-86。 (三角坡点 20-96。	The counter is now reset.
Or After 5 seconds, the reset function switches off and the running time remains in the memory.		题 对影/影	

# Howito:choose a movement



First switch the machine off



stop and put the switch in the



position in

order to change the movement.

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	Abduction + Rotat	tion
• Lower limit	30°	30°	o°	30° 0°	
Upper limit	90°	100°	60°	100° 60°	•
• Speed	3	3	3	3	
• Load	3	3	3	3	
Extension pause	0	0	0	0	
Flexion pause	0	0	0	0	
• Timer	0	0	0	0	

Possible values for each parameter-

Upper limit Speed	Abduction	Flexion/Extension	Rotation	Abduction + Rotation			
Lower limit	20° to 155°	20° to 175°	-60° to 85° extern	20° to 155°	-30° to 85° extern		
Upper limit	25° to 160°	25° to 180°	-55° to 90° extern	25° to 160°	-25° to 90° extern		
• Speed		1 to 5 (from 30	o to 120° per minute)	)			
• Load			1 to 6				
· Extension pause		0 to 900 sec	conds (15 minutes)				
Flexion pause		0 to 900 sec	conds (15 minutes)				
• Timer		No time (	00H00) to 24H00				

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How to adjust the parameters of single movements							
Beginning	Keys to press	Display					





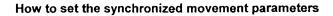


	Beginning	Keys to press	Display	Remarks
	To stop the unit	stop	POTATION TO A STORE STOR	Check if the locking switch is in the following position:
	To choose the movement	abdyadd	08 07 00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	The display shows the
-	Or	rot	306007 3 309 0 366	new movement selected and the default settings of the upper and lower limits of this movement.
	Or		FIEWERS SE STOP SELVED	
	To display the lower limit of the movement	limit		The value blinks
	To change the lower limit if necessary	<b>♣</b> or <b>▽</b>		The new value blinks
فيجيب الإسباء المكال والافال فالمسامة مساقسه المريض الجسامة السائلة فيقدا	To validate the new value, press another key or wait more than 3 seconds	imit timer speed		While the value blinks press the + or - key to change if necessary
_	Or to display pause	pause	PERATE PROFIT DE	The pause value in upper limit of movement blinks.
-	To change pause value in upper limit of movement if necessary	<b>△</b> Or ▽	PRINT NOW TO	The new pause value in upper limit of movement blinks.
	To validate and display the pause value in lower limit of movement	pause		The pause value in lower limit of movement blinks.
	To change the pause value in lower limit of movement if necessary	A or √	HALIS AND CONTRACTOR	The new pause value in lower limit of movement blinks.
Charles and the Control of the Contr	To validate the new value press another key or wait more than 3 seconds. The display shows the selected movement.		50 15(07) 89+:100	The unit is ready to start with the new parameters.

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Beginning	Keys to press	Display	Remarks			
To stop the unit	stop	\$07.4\Sf\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Check if the locking switch is in the following position:			
To select the combined movement	ebd/edd+lot		The indication "ABD" blinks and the display shows the values for the abduction movement. To change it, proceed as for a single movement.			
To press a second time on the key	Sync 2 abovadd+rot	101 106 AA 223 A	The indication "ROT" blinks and the display shows the values for the rotation movement. To change it, proceed as for a single movement.			
Synchroniza	ion rulos:		_			

### Synchronization rules:

- The degress of rotation are lower than or equal to the degrees of abduction.
- 1° of abduction means 1° of rotation.
- · When the degrees of rotation are lower than the degrees of abduction, the synchronization applies to the upper degrees of the movement. 60° start the synchronization

Example: abduction from 30° to 100° rotation from 50° to 90° 90 50

### Comments:

- Speed, load, pauses and timer are the same for both of the movement components. The setting is the same as for a single movement.
- Pauses can be set at the lower and/or the upper limits of the abduction movement.
- You will have successive displays of abduction movement limits, or associated rotation movement, by repeatedly pressing the synchronized movement button.
- You cannot change the settings while the machine is running.

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# Using Programs



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	stop		Check if the locking switch is in the following position:		
To access the program mode	ogram	REGISTRAL TO THE PROPERTY OF T	The program number blinks.		
To change the program if necessary	<b>△</b> or <b>▽</b>	了。 或如他外 近	The new program number blinks.		
To exit and validate the selected program		e see e se	The current parameters have been recorded in program 3.		
To exit without validation of selected program	stop		Back to the starting parameters.		
Start the unit			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.

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### Reading the values of a program; example SPEED

Beginning	Keys to press	Display	Remarks			
To stop the unit	stop	ABIPHEN SEL	Check if the locking switch is in the following position:			
To access the program mode	program	14000000000000000000000000000000000000	The program number blinks.			
To change the program if necessary	<b>△</b> or <i>▽</i>	The sample of the same of the	The new program number blinks.			
To read the speed value	sigee of	Prigning a company	Displaying the speed value.			
After 15 seconds or after pressing on another key		1. 公路的原本(1)				
To exit and validate the selected program		अहम् इस्सीहरू वे प्रतिष्ट हो हुन्	The current parameters have been recorded in program 3.			
Start the unit		NUMBER OF THE STATE OF THE STAT	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.

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# 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	$\triangle \nabla$	के भारताशहरहर (हासक्ष्म सहस्रो	Welcome text during 3 seconds.
Then		PREFOREN	The program number blinks.
To change the program if necessary	<b>₹</b> or <b>√</b>		The new program number blinks.
To choose the movement	800/800 (4)	(A) PERMANEN	
Or		PROTEIN A TO	The display indicates the selected movement,
Or		AST TO A ST THE	the program number blinks again.
Or	6 ) (243) (543)	A SHE ARE THE	
To display the lower limit of the movement	imit .	(1) (2) (2) (2) (3) (4) (4) (5) (4) (5) (4) (5) (5) (5) (5) (5) (5) (5) (5) (5) (5	The value blinks.
To change the lower limit of the movement if necessary	<b>⊕</b> ∘ <b>□</b>		The new value blinks.
To validate the new value, press another key	<b>(</b>	THE PROPERTY OF THE PARTY OF TH	
	limit ilmer	20年1月月2日 (日本) 日本日本(第二年日本)	The value blinks. Press
	oeec	PROBLEM TO	to change if necessary.
	Torce:		
Or display pauses	pause	PROGRAM TO A TO	The pause value in upper limit of movement blinks.
To change pause value in upper limit of movement if necessary	<b>△</b> •• ▽	PROBLEM AND AND ADDRESS OF THE PARTY OF THE	The new pause value in upper limit of movement blinks.

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# How to modify programs PROGRAM MODE (continued)

Beginning	Keys to press	Display	Remarks
To validate and display the pause lower limit of movement	pause	PROBRÍA E PROBLOM	The pause value in lower limit of movement blinks.
To change the pause lower limit of movement if necessary	<b>△</b> or ▽		The new pause value in lower limit of movement blinks.
To validate and display of the combined rotation setting	abdiadd+rol	PROGRAM (E)	The program number blinks and the display indicates the rotation values combined with abduction.
To change the upper limit of the movement	limit		The value blinks.
To change the upper limit if necessary	<b>♦</b> or <b>□</b>	(1) 中央市公司 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	The new value blinks.
To validate and display the lower limit of the movement	limit	·	The value blinks.
To change the lower limit if necessary	<b>△</b> or <b>▽</b>	PREFIRE E	The new value blinks. (see page 11 for more information about combined movement)
To record the program 10	pogram	PRODUKK ID LEARN LEARN	
Then	<b>A</b>	PROBLEM (I) PROBLEM (I) PROBLEM (II)	The program 10 has been recorded and the display indicates the next program so you can change another program.
OR To cancel the program	$\nabla$	日本日本日本日本日本日本日本日本日本日本日本日本日本日本日本日本日本日本日本	The program 10 has been cancelled and the display indicates the next program so you can change
To exit program mode, switch off and switch on the unit.	01	FREE TO THE TELESCOPE OF THE TELESCOPE O	To use the modified program see page 12.

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### Comments:

· When a program has been deleted, the display shows



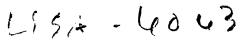
• The values shown in the 'Display' column are examples. They actually depend on the stored programs.

### Program table:

Timer	a man																
Pause on lower limit	esned)																
Pause on upper limit	in the second of																
Load	Moroe																
Speed	speed.																
Upper limit	limit																
Lower	limit									-							
Movement type																	
Program number		1	2	က	4	5	9	7	8	6	10	11	12	13	14	15	16

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### 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	01	Services  Servic	Check if the locking switch is in the following position or
To select the MANUAL MODE for upper limits by continually holding pressure on the key	continuous press	THE PRINCE OF THE	The unit is moving to the upper limit of the movement.
To set the pain level when reached, immediately press	limit	(24) (24) (24) (24) (24) (24) (24)	The new upper value limit of the movement is recorded.
To select the manual mode for lower limits	continuous press	新生物 (基本) (基本) (基本) (基本) (基本) (基本) (基本) (基本)	The unit is moving to the lower limit of the movement
To set the pain level when reached, immediately press	limit		The new lower value limit of the movement is recorded.
To start the session with the new movement limits			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.

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### 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	şiğir Şiğiri		The angle display changes with current movement. Check if the locking switch is in the following position:
To select the BY-PASS MODE	continuous press	250892858 20 2150	The unit exceeds the recorded upper limit.
To set the new pain level when reached, immediately press	limit		The new upper value limit of the movement is recorded.
To select the BY-PASS mode for lower limits	continuous press	25 BH 55 20 100	The unit is moving to the lower limit of the movement.
To set the new pain level when reached, immediately press	limit		The new lower value limit of the movement is recorded.
Continue the session with the new movement limits.		28 RUN < 29 150	The angle display changes with current movement.

Specific rules for synchronized movement:

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

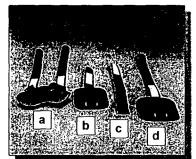
### Comments:

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

Page 18

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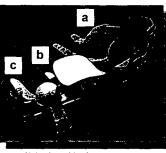
### How to use the pads



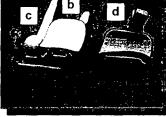
### COMPONENTS

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

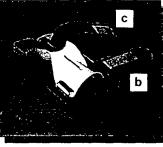
- a elbow pad
- b. wrist pad
- c hand strap
- d biceps pad



Abduction/adduction



· Flexion/extension



· Hand strap and wrist pad attachment

- · Synchronized abduction/adduction with rotation

### 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

Smith⊕Nephew

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### Adjustments for ABDUCTION/ADDUCTION with fixed EXTERNAL ROTATION

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

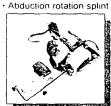
The rotation position can be adjusted between 60° and 90°

### Parts needed

Chair



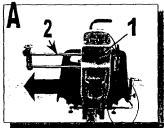
Assembling the parts



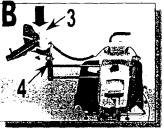


· Hand control

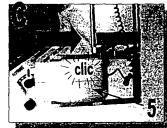




Loosen the knob (1) and slide the motor support (2) to the right or the left. Plug in the hand control.

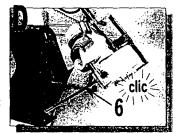


Assemble the abduction motor (3) and tighten the screw (4). Plug in the motor



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 mobilization

**Smith** Phephew



### 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.



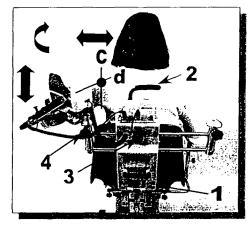
Adjust the lengths:

### 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:
- Stoe 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).

  Adjust the arm rest
- · Adjust the arm rest.



### Starting the unit

- · Adjustment of the rotation position:
  - - and find the right position with the MANUAL MODE (see page 17)
- · Choice of the abduction/adduction motion:

and adjust your parameters (see page 10).

- Or select a program

program (see page 12).

Smith⊕Nephew \_\_\_\_

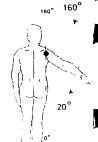




# Adjustments for ABDUCTION/ADDUCTION with fixed ELBOW EXTENSION / FLEXION

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

During this motion the elbow flexion settings are fixed



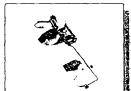
Name of the last

### Parts needed

• Chair



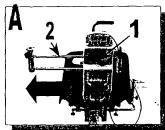
Abduction or flexion splint



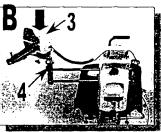
· Hand control



Assembling the parts



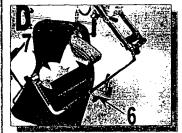
Loosen the knob (1) and slide the motor support(2) to the right or the left. Plug in the hand control.



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



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



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



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



The KINETEC Centura is shown assembled for left shoulder mobilization

Smith**⊕Nephew** 



### 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



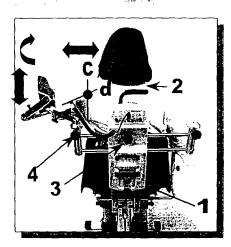
Slide the arm supports toward the patient and put the arm in the supports. Secure pads.



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).
- · Adjust the arm rest.



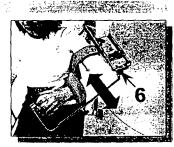
### Starting the unit

- · Adjustment of the elbow flexion position
  - Unscrew the knob (6) and adjust the flexion as appropriate.
- · Choice of the abduction/adduction motion:



and adjust your parameters (see page 10)

- Or select a program program (see page 12).



Smith⊕Nephew ......





# 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.



NAME OF THE PERSON.

### Parts needed

• Chair



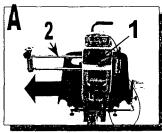
· Abduction with associated rotation splint



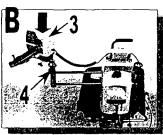
· Hand control



Assembling the parts



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

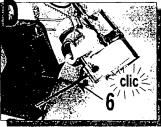


Assemble the abduction motor (3) and tighten the screw (4) Plug in the motor.

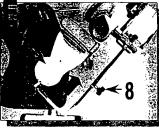


Use the color code to assemble the rotation motor (red for right, blue for left). The assembly is secure when you hear a click.

Plug in the motor



Use the color code to assemble the elbow splint (6). 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 left shoulder mobilization

**Smith** ⊕ Nephew

KINElec

### Patient set up

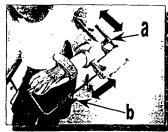
Make sure the straps are clean Put the unit in the position that is the most comfortable for the patient



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.

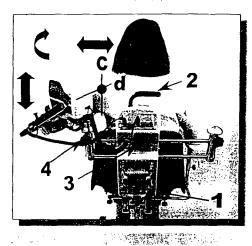


Adjust the lengths: a - arm b - forearm.

### 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).
- · Adjust the arm rest.



### Starting the unit

- · Choice of the abduction/adduction associated with rotation motion:



and adjust your parameters (see page 11).

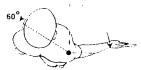
- Or select a program program (see page 12).

Smith⊕Nephew \_\_\_\_\_





### Adjustments for EXTERNAL 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



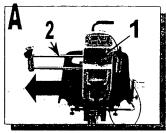
Assembling the parts



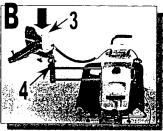


· Abduction rotation splint





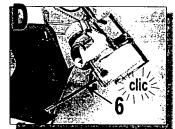
Loosen the knob (1) and slide the motor support (2) to the right or the left. Plug in the hand control.



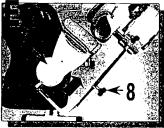
Assemble the abduction motor (3) and tighten the screw (4) Plug in the motor



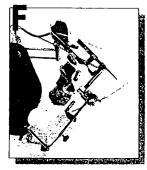
Use the color code to assemble the rotation motor (red for right, blue for left).
The assembly is secure when you hear a 'click' Plug in the motor



splint (6). 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 assemblefor left shoulder mobilization

**Smith⊕Nephew** 



### Patient set up

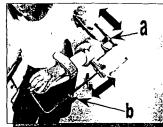
Make sure the straps are clean Put the unit in the position that is the most comfortable for the patient.



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.



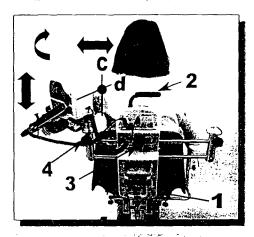
Adjust the lengths:

### 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).
- · Adjust the arm rest.



### Starting the unit

Adjustment of the abduction position:

- and find the right position with the MANUAL MODE (see page 17)
- · Choice of the rotation motion
- Press



- and adjust your parameters (see page 11).
- Or select a program program (see page 12).

Smith Nephew

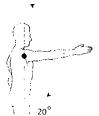




### Adjustments for EXTENSION / FLEXION

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

During this motion the elbow flexion settings are fixed

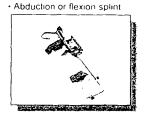


### Parts needed

Chair

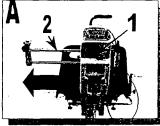


Assembling the parts

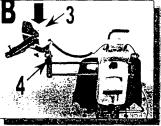


· Hand control





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



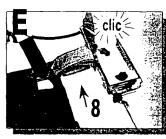
Assemble the abduction motor (3) and tighten the screw (4). Plug in the motor



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



Use the color code to assemble the elbow splint (6), Tighten the knob (7)



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



The KINETEC Centura is shown assembled for left shoulder mobilization

Smith Nephew

KINETEC

### 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.

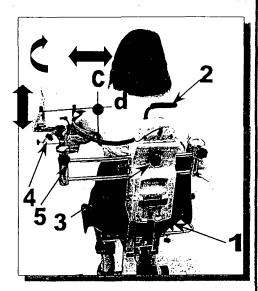
### Adjusting the shoulder joint axis

- 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 Scapula plan choice

  Loosen the knob (5)

  Rotate the arm support

  Tighten the knob (5).
- · Adjust the arm rest.



### Starting the unit

- · Choice of flexion/extension:



and adjust your parameters (see page 10)

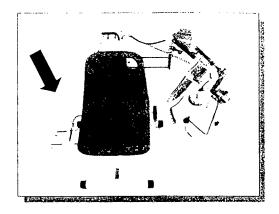
- Or select a program program (see page 12)

Smith⊕Nephew \_\_\_\_\_





Arm rest



Transport bag



Smith Nephew

KINETEC

### 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 ballscrews). The need for maintenance is indicated by display of the message SERV. MOTOR 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

# TROUBLE SHOOTING

A spare parts list and technical catalog 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 caliber:
  - 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:
  - ANGULAR POSI: angle measurement function failure,
  - or NO MOVEMENT: no movement,
  - or BAD WAY: motor rotation failure,
  - or LOAD MAXI: abnormal consumption,
  - or POWER SUPPLY: power failure;

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.

Use a DISINFECTANT (PROPANOL/ISOPROPANOL or ALDEHYDE-based solution). Spray the disinfectant on the SURFACES (plastic shells and metal components)

Smith Plephew \_\_



### PRODUCT INFORMATION

# TECHNICAL SPECIFICATIONS

Product Weight: 22 Kg /48lb Splint dimensions: 56x100x76cm / 22"x39"x30" Angular limits: see page 2 Speeds: from 30 to 120°/min Patient height: from 1,40 to 1,90m 4'7" to 6'3" 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 90% Relative humidity: up to 80%

# SYMBOLS USED

	at the continue of the second second
★	TYPE B device (protection against electric shocks)
$\triangle$	Caution (consult the accompanying documents)
0	STOP (power off)
	ON (power on)
	Start movement
stop	Stop movement
ografic	Program access
реф	Speed
timer	Timer
(SO)(0)	Force
pause	Pause
$\triangle$	Increase
$\Box$	Decrease
	,

(T)	Lower limit
(1)	Upper limit
	Flexion movement
	Rotation movement
	Abduction movement
	Combined movement
	Hand control locked
	Hand control unlocked
	Hand control half locked
	Switch on LED and defect signal when the LED blinks
~	Alternative current

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



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