

KINETEC®

USER'S MANUAL

4071

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I INTRODUCING THE KINETEC 4071

Definition

The KINETEC 4071 is a continuous passive motion machine for FLEXION-EXTENSION mobilisation of the hip, knee and ankle joints.

Description

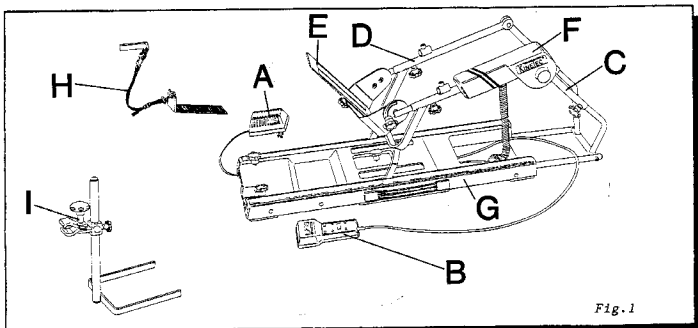


Fig.1

The KINETEC 4071 has the following parts :

- A - The mains transformer.
- B - The control box (keyboard and display).
- C - The thigh support, adjustable for length.
- D - The lower leg support, adjustable for length.
- E - The foot plate.
- F - The motor.
- G - The base plate.
It consists principally of the guidance rails and the control circuitry
- H - Home bed mount straps (OPTION)
- I - Bed frame attachment (OPTION)

II CONNECTING THE KINETEC 4071

Unpacking the KINETEC 4071

- Place the KINETEC 4071 in the working position. (see page 10)
- Check the transformer connection (A) to the socket (1).
- Connect the transformer (A) to a 240, 220 or 100 Volt ~ 50Hz or 110 Volt ~ 60Hz current outlet. (Electric power : 19 VA)

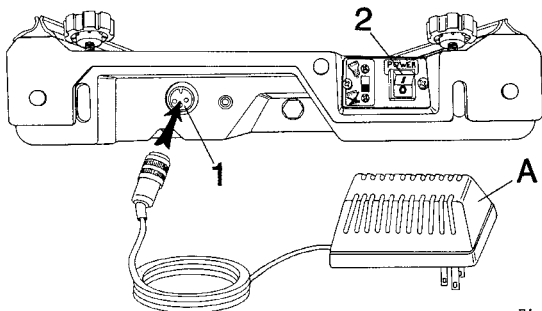


Fig.2

Safety characteristics

- The machine has now been powered with a safe voltage : 14 Volts DC.
- The machine is CLASS II, with TYPE B protection against electric shock.
- The handcontrol allows the machine to be stopped and the direction reversed with the START / STOP button.
- The KINETEC 4071 conforms to the IEC 601.1 standard.

Starting up the KINETEC 4071

- Switch on the power (2) (position )

The machine will BEEP 3 times and
the handcontrol will read

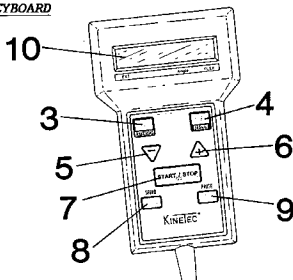
KINETEC 4071

If the machine does not beep and if the handcontrol does not give any information, see chapter VI INSTRUCTIONS IN CASE OF A BREAKDOWN.

III HOW TO USE THE HANDCONTROL

Description

KEYBOARD



- 3- EXTENSION key
- 4- FLEXION key
- 5- Decrease key
- 6- Increase key
- 7- START / STOP key
- 8- SPEED key
- 9- PAUSE key
- 10- DISPLAY

Fig.3

DISPLAY

The liquid crystal display shows up to 16 characters.

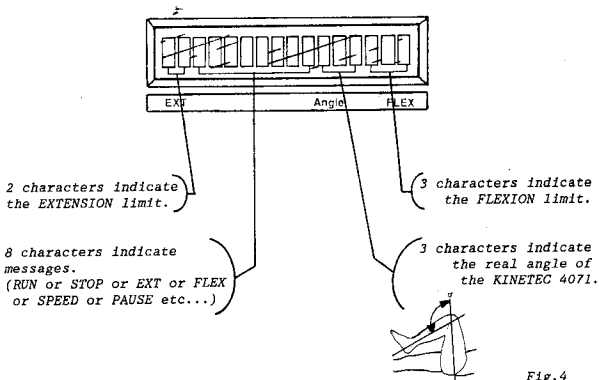


Fig.4

Locking the handset

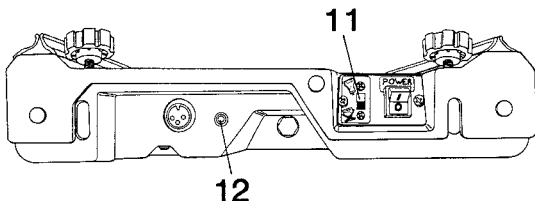





Fig.5

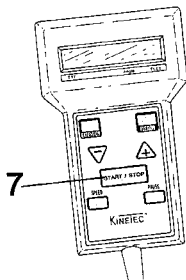
The sliding switch (11) determines whether the operational settings of the KINETEC 4071 can be changed.

- POSITION  adjustments are possible to the operational settings.


- POSITION  the operational settings can only be read as well as the START / STOP function operating.

ADVICE : we recommended that the switch is kept in position  when the handcontrol is given to the patient

START / STOP function



The KINETEC 4071 is fitted, like all KINETEC, with START / STOP function, which can always be used, even if the switch (11)

is in the position .

With the machine moving.

- First press on the **START / STOP** key stops the movement and the display will show

15	STOP	25	120
----	------	----	-----

*

- The second press on the **START / STOP** key start the movement in the reverse direction and the display shows

15	RUN	35	120
----	-----	----	-----

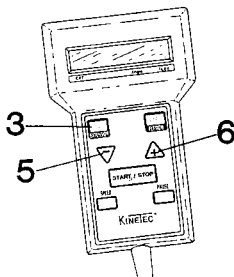
IMPORTANT
FOR MAXIMUM SAFETY.

THE HANDCONTROL SHOULD ALWAYS BE GIVEN TO THE PATIENT.

* The limits and the actual angle are given for demonstration purposes.

Adjusting the EXTENSION limit

Check that the switch (11) is in position



Modification of the EXTENSION limit can be done in either the running or stopped position.

- Press the key



The display indicates

15 EXT 35 120

- Press  or 

until the display indicates the desired EXTENSION limit. *

- MINI : -9°
- MAXI : 99°

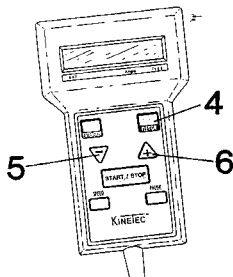
Adjusted in 1° increments.

NOTE

After 3 seconds the KINETEC 4071 will beep and the display will flash once to confirm that one of the operation settings has been modified.

Adjusting the FLEXION limit

Check that the switch (11) is in position



Modification of the FLEXION limit can be done in either the running or stopped position.

- Press the key



The display indicates

10 FLEX 32 120

- Press  or 

until the display indicates the desired FLEXION limit. *

- MINI : -4°
- MAXI : 120°

Adjusted in 1° increments.

NOTE

After 3 seconds the KINETEC 4071 will beep and the display will flash once to confirm that one of the operation settings has been modified.

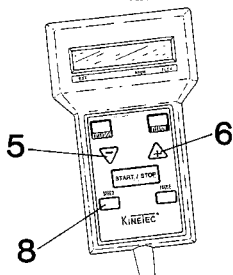
* The legend "5° LIMIT" will appear to indicate that the flexion limit is always 5° greater than the extension limit.

Adjusting the SPEED


Check that the switch (11) is in position



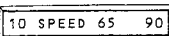
n position



Modification of the SPEED can be done in either the running or stopped position.

- Press the key 

The display indicates



- Press  or 

until the display indicates the desired SPEED. *

- MINI : 20° per minute (°/m)
- MAXI : 140° per minute (°/m)

Adjusted in 15° increments.

NOTE

After 3 seconds the KINETEC 4071 will beep and the display will flash once to confirm that one of the operation settings has been modified.


Adjusting the PAUSE

This function allows the KINETEC 4071 to stop at the extension limit and indicates to the stimulator (not included) via the connection (12) (Fig.5 page 5) that it can operate.

Check that the switch (11) is in position



Modification of the PAUSE can be done in either the running or stopped position.

- Press the key 

The display indicates



- Press  or 

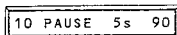
until the display indicates the desired PAUSE. *

- MINI : 5 seconds
- MAXI : 900 seconds

Adjusted in 5 seconds increments.

NOTE

When the PAUSE is activated, the display indicates
The time of the PAUSE counts in seconds.



After 3 seconds the KINETEC 4071 will beep and the display will flash once to confirm that one of the operation settings has been modified.

MANUAL use

This function allows the limits of movement tolerated by the patient to be measured, and possibly stored.

Check that the switch (11) is in position



Stop the KINETEC 4071

10 STOP 15 100

Hold the key for at least 3 seconds :

- on the key for EXTENSION movement

- on the key for FLEXION movement

The display indicates

10 MANUAL 15 100

On releasing the key the movement stops.

If there is no further use of the

or keys for 3 seconds the manual mode switches off

10 STOP 20 100

NOTE

The use of the manual function does not change the movement limits which had already been selected. To record one of the limits, press within the 3 seconds,

on the key for the direction concerned, EXTENSION or FLEXION.

The speed in manual mode is constant at 70°/minute.

BY-PASSING use

This function allows the pre-selected FLEXION/EXTENSION limits to be over-riden, which allows the KINETEC 4071 to be adjusted to the maximum ranges tolerated by the patient, without having stopped the machine, but with complete safety.

Check the switch (11) is in position



Start the KINETEC 4071

10 RUN 20 100

Maintain the hold for 3 seconds :

- on the key to exceed the EXTENSION limit seen on the display.

- on the switch to exceed the FLEXION limit seen on the display.

The display shows

10 ByPass 2 90

On releasing the switch the movement reverses.

When the angle of the patient's leg exceeds the pre-selected EXTENSION or FLEXION limit, the displays flashes

7 ByPass 7 90

or

10 ByPass101 101

Release the hold on the or keys when the patient doesn't tolerate greater FLEXION or EXTENSION and the movement reverses.

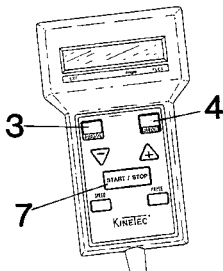
To record the limits defined by the BY-PASS mode, press within the 3 seconds on the switch for the direction concerned. If not, after 3 seconds the BY-PASS mode switches off without changing the limits of movements.

TIMER

1 - READING

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

Check that the switch (11) is in position



Stop the KINETEC 4071

10 STOP 20 100

Press simultaneously on the



and keys.

The display indicates for 3 seconds.

10 ResetTime 100

The running time since the last resetting then shows

10 RT 369.0H 100

After 3 seconds, the running time disappears, but stays in the memory.

2 - READING AND RESETTING

Check that the switch (11) is in position



Stop the KINETEC 4071

10 STOP 20 100

Press simultaneously on the



and



keys.

The display indicates

10 ResetTime 100

for 3 seconds.

The running time

10 RT 369.0H 100

for 3 seconds.

The display will then indicate alternately

10 RESET ?? 100

and

PRESS START *

To reset the counter, press

START / STOP

key.

The display will then show

CONFIRM START *

Press once again on the

START / STOP

key.

The counter is now zeroed and the display indicates

10 RT 0.0H 100

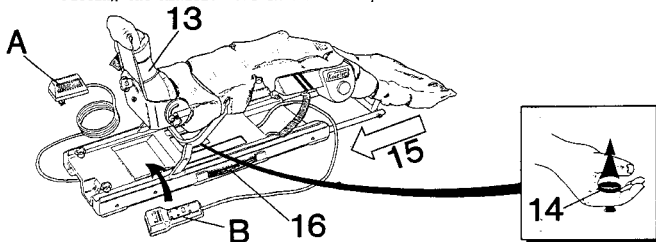
* If you wait more than 3 seconds at the points (*) the reset function switches off and the running time remains in the memory.

IV USING THE KINETEC 4071

TRANSPORT position

The KINETEC 4071 is "TELESCOPIC"? which allows it to be shortened for transport.

- Putting the KINETEC 4071 in TRANSPORT position.



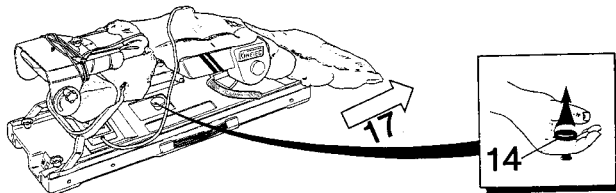
- Adjust the KINETEC 4071 to its smallest size. (mimi femur)
- Stop the machine at 40° of flexion.
- Switch off and unplug the transformer (A).
- Put the transformer (A) within the footpad (13) and wrap the cable around the footplate.
- Fold the footplate flat.
- Pull button (14).
- Slide the leg support (15) in the direction of arrow.
- Attach the handcontrol (B). (Velcro)
- Always use the carrying handle (16) for lifting the KINETEC 4071.

IMPORTANT

DO NOT START THE KINETEC 4071 IN THE TRANSPORT POSITION.

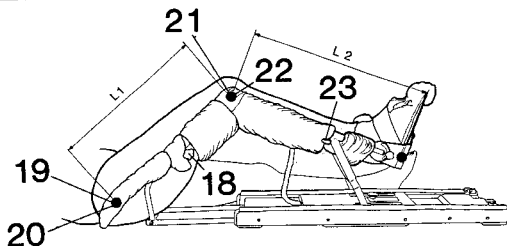
WORKING position

- Putting the KINETEC 4071 in the WORKING position.



- Pull button (14).
- Slide the leg supports (17) out in the direction of the arrow.

Setting up for an adult



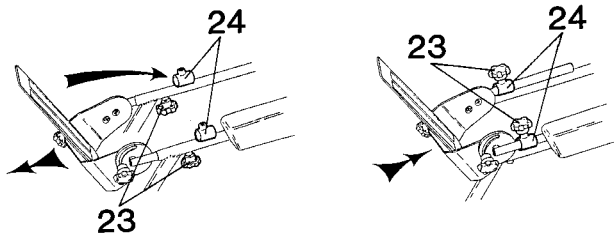
- Place the KINETEC 4071 between 40° and 90° of FLEXION.

IMPORTANT

ADJUST THE AXIS THE KNEE (21) WITH THE 4071 CPM
AXIS OF ROTATION (20) AND (22).

- Measure the length of the patient's femur (L1).
- Loosen the 2 knobs (18).
- Adjust the length (L1) on the unit (MINI : 30 cm, 11,8 inch)
(MAXI : 55 cm, 21,7 inch)
- Tighten the 2 knobs (18).
- Measure the length of the patient's tibia (L2).
- Loosen the 2 knobs (23).
- Adjust the length (L2) on the unit (MINI : 32 cm, 12,6 inch)
(MAXI : 50 cm, 19,7 inch)
- Tighten the 2 knobs (23).

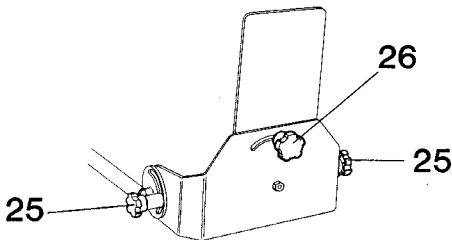
Setting up for a child



- Loosen and remove the 2 buttons (23).
 - Remove the footplate and slide it into the 2 tubes (24).
 - Put the 2 buttons (23) into the 2 tubes (24) and tighten them.
- Adjustment for the child's leg is carried out as for the adult leg.

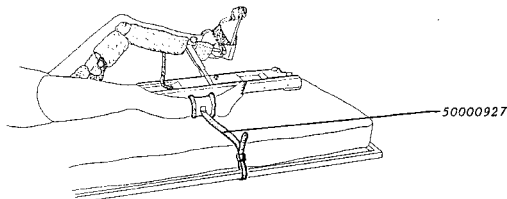
Positionning of the foot plate

The articulated footplate allows the positioning of the foot from 40° in PLANTAR FLEXION to 20° in DORSIFLEXION and 30° in EXTERNAL or INTERNAL ROTATION.



1. To get the foot in DORSIFLEXION or PLANTAR FLEXION :
 - Loosen the 2 knobs (25).
 - Set the position of the foot.
 - Tighten the 2 knobs (25).
2. To get the foot in EXTERNAL or in INTERNAL ROTATION :
 - Loosen the knob (26).
 - Set the position of the foot.
 - Tighten the knob (26).

Protection of the opposite foot



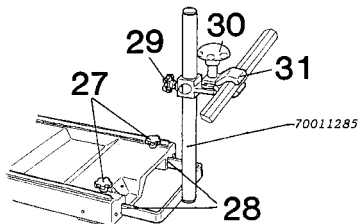
EXTRA SAFETY

When using the machine in bed it is recommended to restrain the opposite foot so that it does not impede the correct working of the KINETEC 4071. Use the strap supplied with the machine for this purpose. Order number for a replacement strap : 50000927.

Clamp for the foot-end of the bed

The clamp for the foot-end of the bed allows the KINETEC 4071 to be quickly and firmly attached to the foot of the bed.

OPTION



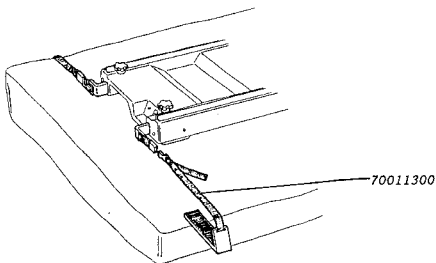
- Unscrew the 2 buttons (27).
- Slide the 2 arms of the clamp into the 2 holes (28)
- Re-tighten the 2 buttons (27).
- Unscrew the button (29) and the knob (30).
- Place the clamp (331) on the crossbar of the foot-end of the bed.
- Re-tighten the knob (30) and the button (29).

Order number for the clamp for the foot of the bed : 70011285.

Fixation straps (Home use)

The fixation straps allow the KINETEC 4071 to be fixed to a bed which does not have a transverse bar at the foot. (HOME BED)

OPTION



Order number for the fixation straps of the bed : 70011300.

VI INSTRUCTIONS IN CASE OF A BREAKDOWN

After switching on the power supply to the KINETEC 4071 using the switch (2)(cf. Page 3) :

- The KINETEC 4071 fails to operate, and if the handcontrol does not give any information :
 - Check the electrical connections.
 - Check at the mains socket that power supply is operational by using another electrical device.
- The KINETEC 4071 fails to operate, but the display indicate

15	STOP	25	120
----	------	----	-----

 - Press the START / STOP key once again.
- The KINETEC 4071 still fails to operate after that :
 - Return the machine to your nearest specialist.

GUARANTEE LIMITS

The KINETEC guarantee is strictly limited to free replacement or to repairs at the plant of the part or parts acknowledged as defective.

KINETEC guarantees is passive motion device for 1 year from the date of purchase by the consumer against any manufacturing defect.

KINETEC alone is qualified to judge as to the application of the guarantee on its device.

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

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