“The sooner the joint is moved, the better.”
- R. Salter*

Continuous Passive Motion (CPM) Therapy
Experimental investigations in the 1970s provided the scientific basis for CPM treatment using motor-driven exercise equipment. Positive clinical experience, with this exciting therapeutic modality being well received by surgeons, therapists and patients, accelerated its widespread acceptance. Twenty-five years later, advances in technology and the extension of this form of post-surgical rehabilitation therapy to new indications and protocols demonstrate that CPM still plays an integral and significant role in orthopaedic recovery. For the patient, it is a valuable and well-tolerated method of rapidly restoring lost joint function, mobility and confidence.

It is important to review the key clinical outcomes from Professor Robert Salter’s pioneering animal work. He used rabbits with the following pathologies:
- Full thickness cartilage defects
- Acute septic arthritis
- Intra-articular fractures
- Partial thickness tendon lacerations

Rabbits with full thickness cartilage defects were divided into three treatment groups with therapy instituted immediately postoperatively as follows:
- Immobilisation with a cast
- Intermittent active motion (cage activity)
- Continuous passive motion

Conclusions
- The immobilised group showed healing characterised by the formation of fibrous tissue and many joint adhesions.
- The cage activity group showed imperfect healing characterised by a combination of fibrous tissue and poorly differentiated cartilage.
- The CPM group showed healing through formation of new hyaline-like cartilage occurring in one half of the defects within four weeks. CPM did not harm intact, normal living articular cartilage in rabbits.

The benefits of CPM for healing cartilage:
- Enhanced nutrition and metabolic activity
- Accelerated healing of articular tissues
- Regeneration of cartilage

The benefits of CPM for healing tendons:
- Restoration of the tendon’s gliding surface
- Greater mean breaking strength of the tendon
- Enhanced intrinsic healing through synovial diffusion
- Prevention of adhesion formation

Because CPM therapy...
- Increases joint mobility and range of motion
- Helps decrease complications such as joint stiffness and adhesions
- Reduces the length of post-operative hospitalisation, and
- Builds patient confidence, well-being and independence

...CPM therapy is cost effective.

*Salter, RB; Simmonds, DF; Malcom, BW; Rumble, EJ; MacMichael, D; Clements, ND. The biological effect of continuous passive motion on the healing of full-thickness defects in articular cartilages. An experimental investigation in the rabbit. J Bone Joint Surg. 1980; 62A: 1231-1241.
Indication for Knee & Hip
- Knee replacement surgery
- Fractures (ie patellar, tibia plateau, femoral)
- Arthrolysis
- Hip surgery, including hip replacement, hip pinning, osteotomy
- Ligament repairs
- Arthroscopic surgery (ie menisectomies, patellectomies)
- Burns, joint sepsis

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

Indication for Elbow
- Intra-articular fractures of the elbow with Open Reduction and Internal Fixation (ORIF)
- Metaphyseal fractures in elbow area with ORIF
- Arthrolysis for post-traumatic stiffness with limitation of elbow joint motion
- Release for extra-articular adhesions
- Prosthetic elbow joint replacement
- Synovectomy of the elbow
- Arthrotomy and drainage of acute septic elbow Joint

Indication for Hand & Wrist
- Flexor and extensor tendon tenolysis
- Aponeurectomies for Dupuytrens disease
- Open reduction and internal fixation of intra-articular diaphyseal, metaphyseal and epiphyseal fractures of the phalanges
- MCP arthrolysis
- Prosthetic replacement of the MCP, PIP and DIP joints
- Rheumatoidal/neurological or post-burn for stiffness
- Capsulotomies, arthrolysis and tenolysis for post-traumatic stiffness of MCP, PIP and DIP joints
- Synovectomies

Indication for Ankle
- Passive mobilisation of the following fractures after internal fixation
- Mobilisation of the joints of the foot after operative or conservative treatment of lesions of the:
  - Achilles tendon
  - Lateral collateral ligament
  - Medial collateral ligament
- Surgical lengthening of the achilles tendon for post-traumatic stiffness
- Club foot

A CD-Rom
“A clinical and Cost Effectiveness Outcomes Analysis”
Available on simple request.
Knee CPM Machine

Kinetec offers a complete range of apparatus for the lower limb. The below chart will enable you to select the optimal device according to your needs.

### Technical Datas:

<table>
<thead>
<tr>
<th></th>
<th>Prima Advance</th>
<th>Prima XL Essential</th>
<th>Spectra Essential</th>
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Simplicity combined with the famous brand name provides effective passive mobilisation of the knee.

- Easy to use
- Tactile Adjustment Marks
- Available with Comfort Plastic Support
- Light
- Compact

EASY TO USE
With simple and straightforward movement adjustments (angular limits, speed and patient sizing), the Kinetec Prima Advance is the most intuitive and quick to install device currently available.

It features tactile adjustment marks for patients with sight deficiency.

LIGHT
Only 11 Kg (24 pounds) to facilitate handling, the Kinetec Prima Advance is easy to transport making it ideal for the hospital and private physiotherapy environments.

COMPACT
Only 94 cm (37 inches) in length to facilitate installation into a hospital bed or in the client's home and to aid storage.

RANGE OF MOTION
From -5° to 115° of flexion. The Kinetec Prima Advance makes it possible to treat all pathologies of the knee.

Ordering Information
4621008002 Complete apparatus • Pads
4621008042 Complete apparatus • Clippeded Comfort Supports
46EXTGAR3G 3-Year Warranty Extension
For detail and accessories see page 10.
An **unbeatable combination** of good looks and mechanical innovation sets Spectra apart as the Knee CPM of choice.

- **Light**
- **Compact**
- **Feed Back Patient**
- **Digital adjustment.**
- **Available in 3 different versions**

**RANGE OF MOTION**
From -10° to 120° of flexion.
The Kinetec Spectra allows treating all pathologies of the knee.
The **anatomically correct** system increases the comfort of the patient and decreases the points of pressure.

**LIGHT**
Only 12 Kg (26 pounds). Provided with two handles transport board.
The Kinetec Spectra is very easy to transport for a use in the hospital or in cabinet.

**DIGITAL ADJUSTMENT**
For all versions of the Kinetec Spectra, the remote control is easy to use and intuitive, that allows a precise and quick adjustment of the movement parameters.

**PATIENT FEEDBACK**
The large **LCD screen** shows the immediate and the programmed range of motion allowing a patient stimulation.
Kinetec Spectra Essential
Operated by a simplified remote control, allowing the precise adjustment of the basic parameters of the movement:
- Range of Motion
- Speed
- Pause in movement limits, allowing rest or a posture
- Adjusted parameters locking
- Start/Stop and reverse of the movement

Kinetec Spectra
For complete movement and progressive rehabilitation, besides the basic adjustments featured in the Kinetec Spectra Essential, the Kinetec Spectra enables more advanced movement features:

**Warm Up**
The patient reaches gradually the pre-set full ROM

**Modulation**
Allows manual setting of the ROM end-point based on patient tolerance. This mode is generally used at the beginning of the session

**ROM By Pass**
Used during the session, this mode allows a manual setting based on new patient tolerance, thus offering a real progressive work of the Range of motion

**Force**
This security feature allows the patient to reverse, more or less easily, the movement by a simple muscular contraction

**Timer**
Control of the session time

**Programme**
Allows set-up of 16 customised programmes

Ordering Information
- 4621006202 Complete apparatus • Pads
- 4621006242 Complete apparatus • Clipped Comfort Supports
- 46EXTGAR3G 3-Year Warranty Extension
For detail and accessories see page 10.

Kinetec Spectra DC (Data Capture)
For even more precision. The capture and data processing of movement and the patient. The remote control is identical to the Kinetec Spectra but has a built-in memory which records the rehabilitation sessions of the patients. The unique Kinetec software and its USB interface delivered with the Kinetec Spectra DC allow:

- Management of 16 different patients
- Simplified programming of the 16 programs available with the Kinetec Spectra
- Preparation of the protocols of rehabilitation for each patient
- Precise evaluation of the patient progress throughout treatment
- Edition in graph of patient progress
- Data analysis of the movement: time, range of motion, load, speed
- Quick start up session using pre-programmed parameters and current calendar date

Ordering Information
- 4621006302 Complete apparatus • Pads
- 4621006342 Complete apparatus • Clipped Comfort Supports
- 46EXTGAR3G 3-Year Warranty Extension
For detail and accessories see page 10.

Additional technical data:
- Electrical connection by the USB plug
- Compatible Windows XP & Vista
- Disk space required: 200Mo
- Disc reader
- Printer for patient reports

For detail and accessories see page 10.
The **Ideal choice** of CPM for knee rehabilitation. Anatomical design perfectly matches natural knee movement.

- Anatomical movement
- Adjustable in length from small children to large adults
- Active movement
- Feed Back Patient
- Digital adjustment

**PATIENT SIZING**
Can be used for patients up to 2.06m (81 inch) tall.
Can be used for patients as short as 1.12m (44 inch).

**COMFORT**
No bar in the perineal area for greater patient comfort and improved compliance.

**RANGE OF MOTION**
3° of Hyperextension to 130° of Flexion.

**ANATOMICALLY DESIGNED**
The movement of the machine and the knee are perfectly aligned.

**Ordering Information**
4621001802 Complete apparatus • Pads
4621001842 Complete apparatus • Comfort Supports
46EXTGAR3G 3-Year Warranty Extension
For detail and accessories see page 10.
Kinetec Prima XL Knee CPM Machine

Simplicity, combined with an extra wide carriage provides effective passive mobilization of the knee.

- 32cm (12 1/2 Inch) wide carriage
- 227Kg (500 pounds) body weight load rating
- Easy to use
- Tactile Adjustment Marks

The Kinetec Prima XL is the same design than the Kinetec Prima Advance, having a control panel integrated into the base, making it very easy to use.

Its leg support extended to 32cm compared with 25cm for the other CPM Machine and the reinforcement of its motor enable it to mobilise the legs with extreme dimensions.

Ordering Information
4621008102  Complete apparatus • Pads
4621008142  Complete apparatus • Comfort Supports
46EXTGAR3G  3-Year Warranty Extension
For detail and accessories see page 10.
Kinetec Knee CPM Machine Accessories

A • HYGIENIC PADS
Pads for the knee CPM’s are very comfortable and easy to attach with hook and loop fasteners. The covers can be autoclaved.

Ordering Information
4650001058 Complete Set for Performa:
  3 Covers, 4 Leg Straps, 1 Foot Pad
4650001868 Complete Set for Spectra:
  1 Cover, 4 Leg Straps, 1 Foot Pad
4650001553 Complete Set for Spectra:
  1 Cover with embroidery, 4 Leg Straps, 1 Foot Pad
4650001149 Straps Set for Performa:
  4 Leg Straps, 1 Foot Pad, 1 Thigh Strap
4650001107 4 Leg Straps
4650001165 Covers - Pack of 20
4650001157 Covers - Pack of 5
4650001090 1 Cover
4650001131 Foot Pad (for Performa)
4650001420 Foot Pad (for Spectra)
4650001123 Thigh Strap
4650001826 2 Leg Straps for Prima XL
4650001834 1 Cover for Prima XL

B • COMFORT PLASTIC SUPPORT – WITHOUT CLIPS
Especially designed to provide optimum comfort and hygiene for the patient, the Kinetec Comfort Plastic Supports fit all Kinetec knee CPMs. The Comfort Plastic Supports attach to the knee CPM machine with straps, as shown.

The straps allow the supports to be adjusted to suit a range of leg sizes.

Ordering Information
4670023701 Complete Set for all Knee CPM:
  foot, leg and thigh part
4670017655 Complete Set for for Performa:
  foot, leg, thigh part and thigh bar
4670023694 Thigh support with straps
4670023686 Tibia support with straps
4670024048 Foot support with straps
4635010561 Straps for foot support
4670016657 Thigh bar for Performa

C • COMFORT PLASTIC SUPPORT – WITH CLIPS
The new Comfort Plastic Supports are equipped with clips, directly positioned on the tubes of the tibia and thigh support of the machine, those clips are available for all Kinetec Knee machine in new order except the Prima XL due the weight of the leg and the Performa due the paediatric position.

This version of the Comfort plastic support allows an easy and quick adjustment of the patient leg size, even if this one is on the unit.

Ordering Information
4670024345 Complete Set: foot, leg and thigh part
4670024337 Thigh support with straps
4670024329 Tibia support with straps
4650001876 Strap (unit)
4670024048 Foot support with straps
4635010561 Straps for foot support
Kinetec Knee CPM Machine Accessories

**D • PAEDIATRIC FOOT PLATE**
Paediatric Foot Plate adaptable on Spectra and Prima Advance. This accessory allows mobilising patients of small size, minimum full leg of 53cm (21 inch) compared with 71cm (28 inch) out of standard.

Ordering Information
4670023777 Paediatric Foot Plate

**E • SEAT ADAPTOR**
This accessory is adaptable on Spectra and Prima Advance. It can be used in a treatment centre or at home. It allows patients with minimal mobility to be seated without assistance and more important, to remain seated, which is more motivating for physical therapy.

Ordering Information
4670024098 Seat Adaptor

**F • Cart**
This easy to use cart is designed to transport and store KINETEC CPM knee units and accessories. Streamlined, durable and resistant to commonly used disinfectants.

Ordering Information
4655001053 Trolley for all Knee
4665003297 Cart for Bed use
4665003750 Cart for Bed use- version low base
4665003560 Performa adaptation for Cart for Bed use

**G • TRANSPORT BAG**
Provides secured storage and transportation of the Kinetec Prima Advance and the Kinetec Spectra.

Ordering Information
466001844 Transport Bag

**H • TRANSPORT BOX**
Provides secured storage and transportation of the Kinetec Prima Advance and the Kinetec Spectra.

Ordering Information
466001927 Transport Box

**OPTIONAL DEVICES (not illustrated)**
4670015683 Bed Frame Attachment
4670015708 Sliding Stop and Castors (Transport Wheels)
465000927 Thigh Fastener (Leg Restraint)