



## Product information

Medical technology

# ARTROMOT®

CPM Continuous Passive Motion Devices



# ARTROMOT®

Therapy with motorized CPM equipment

## ARTROMOT® CPM devices made by ORMED.DJO get you and your patients going

The products of the ARTROMOT® family are used in post-operative treatment of joints, using CPM (continuous, passive motion) therapy.

ARTROMOT® CPM devices are available for

- the shoulder
- the knee and hip
- the elbow
- the ankle joint

## The benefits at a glance

CPM therapy with the devices of the ARTROMOT® family

- prevents motion-limiting adhesion and joint stiffness (arthrofibrosis)
- promotes healing of articular cartilage, tendons, ligaments and soft tissue
- improves hematoma/fluid resorption
- reduces pain
- improves metabolism
- reduces length of hospital stay and therapy duration



## Arguments not to dispute

ARTROMOT® CPM products are developed and manufactured by ORMED.DJO, the market leader in motorized CPM devices.

Take advantage of the special benefits:

- Product and service provided by the manufacturer
- Over 20 years of experience in designing CPM products
- Made in Germany

## Recommended therapy

ARTROMOT® CPM devices are normally employed either directly after surgery or in the first post-operative week.

The daily treatment schedule may vary with the injury or disease to be cured:

- 3 to 4 hours (general recommendation)
- up to 24 hours in the case of articular cartilage surgery or injury

## Home Care/Rental Service

ARTROMOT® CPM products are used in hospitals as well as in home care for out-patient treatment.

The ARTROMOT® CPM devices may be prescribed by orthopedic surgeons.

In most countries there is also the option for billing patients directly.

# Clinical Studies

## Evidence-based therapy

Excerpt from Prof. Kirschner's recently published meta-analysis\*.

"Thanks to the overall benefits conferred, CPM must today be used as an essential treatment modality (...) in an inpatient as well as an outpatient setting because clear treatment advantages have been observed (...)."

Excerpt from an open, prospective, randomized clinical multi-center study involving patients with massive rotator cuff rupture:\*\*

"Statistically significant results were obtained, attesting to the superiority of combination therapy comprising CPM and physiotherapy vs patient treatment based only on physiotherapy.

- In the CPM group 90° abduction was achieved much earlier.
- Patients in the CPM group were able to resume occupational activities more quickly.
- CPM therapy markedly reduced pain.
- There was no evidence of complications or dangers posed by CPM treatment in the domiciliary setting."

## Result: CPM therapy with ARTROMOT®

	Meta-analysis*	Multi-center study**
- reduces length of hospital stay and overall therapy duration	*	
- considerably reduces the rate of mobilization under anesthesia	*	
- improves articular cartilage healing	*	
- reduces risk of thrombosis	*	
- improves hematoma/fluid resorption	*	
- reduces pain	*	**
- improves joint functionality	*	**
- reduces length of disability		**

\* Results of the meta-analysis, Kirschner, P. (2004): "CPM-Continuous Passive Motion: Behandlung verletzter und operierter Kniegelenke mit Mitteln der passiven Bewegung. Metaanalyse der gegenwärtigen Literatur" Der Unfallchirurg, Band 107, 4/04

\*\* Results of the open, prospective, randomized clinical multi-center study study centers: Klinik und Poliklinik für Orthopädie der Universität zu Köln: P. Eysel, D.P. König, J.W.P. Michael; Stiftung Orthopädische Universitätsklinik, Heidelberg: M. Loew, M. Rickert; Klinikum Rechts der Isar, München: A. Imhoff, V. Martinek, S. Braun; DRK Klinikum Westend, Berlin; B. Dreithaler, C. Koch; Arcus Sportklinik, Pforzheim: M. Speck, L. Bös, A. Bidner; Klink am Ring, Köln: S. Preis, F. Windgasse, J. Bernholt, T. Rudolph, N. Bernards; Praxis Dr. Hübscher, Kaufbeuren: Dr. Hübscher

"Effektivität der postoperativen Behandlung mit CPM-Bewegungsschienen in Kombination mit krankengymnastischer Therapie im Vergleich zu ausschließlich krankengymnastischer Therapie bei Patienten mit vollständiger Ruptur der Rotatorenmanschette"

# ARTROMOT®-K1

for the knee and hip joint

## Making good things great!

**ARTROMOT®-K1** combines the best features of the time-tested ARTROMOT® knee machine with state-of-the-art, trend-setting technology.

**ARTROMOT®-K1** was developed for the demanding use in clinics and home care/rental programs. Using the **ARTROMOT®-K1** is made easy by intuitive operation of the handheld programming unit with self-explanatory symbols.

## Technical Data:

### Models:

ARTROMOT®-K1 classic

ARTROMOT®-K1 Standard

ARTROMOT®-K1 Standard Chip

ARTROMOT®-K1 comfort

ARTROMOT®-K1 comfort Chip

### Range of motion:

Extension/Flexion "knee" -10° / 0° / 120°

Extension/Flexion "hip" 0° / 7° / 115°

### Functions of ARTROMOT®-K1 classic

Pauses (extension and flexion) 0 – 59 seconds / 1 – 59 minutes

Speed 5% - 100%

Key lock function to prevent accidental changes of the parameter settings

### Additional functions of ARTROMOT®-K1 Standard:

Timer 1 – 59 minutes / 1 – 24 hours / continuous operation

Pauses (extension and/or flexion) 0 – 59 seconds / 1 – 59 minutes

Reverse on load in steps 1 – 25 / patient safety feature

Warm up protocol gradual progression to the maximum range of motion

Total therapy time added sum of the therapy sessions

New patient activates the default settings for new patients

Transport setting moves the carriage to the transport position

Service menu

### Additional functions of ARTROMOT®-K1 comfort:

EROM repeat (extension or flexion) exercises are performed at a higher rate in the end range of motion

Stretching (extension or flexion) for gradual and smooth increase of the range of motion

Therapy documentation graphic representation of the overall treatment cycle

EMS control for an optimal combination of CPM treatment and electrotherapy

Workout protocol combines various functions of the comfort model in one protocol

Comfort protocol warm up in the EROM of extension and flexion

### Additional functions of ARTROMOT®-K1 models with chip card:

Patient chip card stores patient-specific therapy parameters

### Physical:

Weight: 11 kg (24.4 lb)

Dimensions 97 x 36 x 23 cm (38.1 x 14.1 x 9.0 in)

Patient height approx. 120 – 200 cm (47.2 – 78.8 in)

### Article numbers:

ARTROMOT®-K1 classic 80.00.045

ARTROMOT®-K1 Standard 80.00.040

ARTROMOT®-K1 Standard with chip card 80.00.041

ARTROMOT®-K1 comfort 80.00.042

ARTROMOT®-K1 comfort with chip card 80.00.043

Transport trolley 80.00.055

Transport box TK-001

ARTROMOT® chip card 0.0034.048

Connection cable "muscle stimulation" 2.0037.024

# ARTROMOT®-K1

for the knee and hip joint

## Indications

- Arthrotomy and arthroscopy procedures in combination with synovectomy, arthrolysis
- Treatment following mobilization of joints in anesthetized patients
- Surgical treatment of fractures and pseudoarthrosis
- Exercise-stable osteosynthesis
- Operations on soft tissue in the joint area
- Patellectomy
- Corrective osteotomy
- Meniscectomy
- Total knee/hip replacement
- ACL/PCL reconstruction
- Complex knee surgery
- Articular cartilage surgery ,  
e.g. autologous chondrocyte transplantation (ACT)



Patient chip card  
for storage of therapy data



Transport box



Transport trolley

ARTROMOT®-K1 comfort Chip



Handheld programming unit  
ARTROMOT®-K1 classic



Handheld programming unit  
ARTROMOT®-K1 Standard and  
ARTROMOT®-K1 comfort

# ARTROMOT®-K3 ARTROMOT®-K4



for the knee and hip joint

NEW, now also with the graphic display!

The **new graphic handheld programming unit** is now also available for the ARTROMOT®-K3 and ARTROMOT®-K4, for an easier usability.

## ARTROMOT®-K3 – on that you can rely:

**ARTROMOT®-K3** was developed for the demanding use in clinics and rental programs.

- Robust metal construction
- Frame construction for easy handling
- Easy set-up

## ARTROMOT®-K4 – anatomically precise technology:

**ARTROMOT®-K4** features a true anatomical hip axis, enabling precise adjustment of the device to the patient's hip and knee pivot.

In addition to the functions of ARTROMOT®-K3, the **ARTROMOT®-K4** offers:

- A wider range of motion
- Anatomical correct motion

## Technical Data:

### Range of motion (ROM) – ARTROMOT®-K3:

Extension/Flexion "knee"	-5° / 0° / 110°
Extension/Flexion "hip"	0° / 8° / 86°

### Range of motion (ROM) – ARTROMOT®-K4:

Extension/Flexion "knee"	-10° / 0° / 125°
Extension/Flexion "hip"	0° / 10° / 100°

### Functions ARTROMOT®-K3 and ARTROMOT®-K4:

Timer	1 – 300 minutes
Pauses (Extension and/or Flexion)	0 – 30 s
Speed	1 – 100%
Warm-up protocol	ROM increases slowly until maximum
Reverse-on-load in steps	1 – 25 / feature for patient safety
Total therapy time	added sum of the therapy sessions
New patient	activates the default setting for new patients
Transport setting	moves the carriage to the transport position
Service menu	

### Weight/Dimensions ARTROMOT®-K3:

Weight	11 kg (24.4 lb)
Dimensions	56 x 47 x 72 cm (22 x 18.5 x 28.3 in)
Patient height	approx. 135 – 195 cm (53.1 – 76.7 in)

### Weight/Dimensions ARTROMOT®-K4:

Weight	12 kg (26 lb)
Dimensions	55 x 39.5 x 115 cm (21.6 x 15.5 x 45.2 in)
Patient height	approx. 135 – 195 cm (53.1 – 76.7 in)

### Article numbers:

ARTROMOT®-K3	80.00.016
ARTROMOT®-K4	80.00.015
Transport box	TK-001



# ARTROMOT®-K3 ARTROMOT®-K4

**NEW**

for the knee and hip joint

## Indications, e.g

- Arthrotomy
- Arthroscopy
- Meniscectomy
- Stable osteosyntheses
- ACL-/PCL-reconstructions
- Total knee and hip replacement
- Joint mobilization under narcosis
- Operatively treated fractures and pseudoarthrosis
- Autologous chondrocyte transplantation (ACT)



ARTROMOT®-K3



ARTROMOT®-K4

# ARTROMOT®-S3

for the shoulder joint



## NEW, with a graphic display!

The **new graphic handheld programming unit** offers a wide display with big self-explanatory symbols and an intuitive menu navigation for easier usability.

Combined with its tested features, like the patient chip card, the easy swift conversion, the anatomically correct motion and the possibility for easy cleaning, the **ARTROMOT®-S3** is now more ergonomical in use than ever.

## Technical Data:

### Models:

ARTROMOT®-S3

ARTROMOT®-S3 comfort

### Range of motion:

Adduction/abduction	0° / 30° / 175°
Internal/external rotation	90° / 0° / 90°
Elevation	0° / 30° / 175°
Horizontal adduction/abduction (manual)	0° / 0° / 120°

### Functions of ARTROMOT®-S3:

Timer	1 – 300 min. / continuous operation
Pauses	0 – 30 seconds
Speed (ABD/ADD)	1 % – 100 %
Reverse on load in Steps (motor A and B separately)	1 – 25 / patient safety feature
Motor control	ON/OFF for isolated motion, ab-/adduction or internal-/external rotation
Synchronized motors	ON/OFF
Total therapy time	Added sum of the therapy sessions
New patient	Activates the default settings for new patients
Transport setting	Moves the motors into the transport position
Patient chip card	Stores patient-specific therapy parameters
Key lock function	Prevents accidental changes of the parameter settings
Service menu	

### Additional functions of the ARTROMOT®-S3 Comfort:

Head rest	For comfortable, optimal patient positioning
Shoulder positioning	Prevents evading movements
Oscillation	Higher rate of motion in the EROM
Stretching (ABD or I-ROT or E-ROT)	Careful and smooth increase of the ROM
ISO ABD ROT protocol	For separate exercising in both directions
Warm-up protocol	Gradual progression to the maximum ROM
Therapy documentation	Graphic presentation of the overall treatment cycle

### Physical:

Weight:	25 kg (55.1 lb)
Dimensions	87.5 x 57.5 x 58 cm (34.4 x 22.6 x 22.8 in)
Transport dimensions	37 x 57,5 x 58 cm (14.5 x 22.6 x 22.8 in)

### Article numbers:

ARTROMOT®-S3	80.00.023
ARTROMOT®-S3 comfort	80.00.024
ARTROMOT® chip card	0.0034.048



# ARTROMOT®-S3

for the shoulder joint

**NEW**

## Indications

- Arthrotomy and arthroscopy procedures in combination with synovectomy, arthrolysis
- Treatment following mobilization of joints in anesthetized patients
- Surgical treatment of fractures and pseudoarthrosis
- Exercise-stable osteosynthesis
- Endoprosthetic implants
- Impingement syndrome after surgical intervention
- Acromioplasty
- Decompression surgery
- Rotator cuff reconstruction



ARTROMOT®-S3 comfort



Patient chip card  
for storage of therapy data



Adduction/abduction



Elevation



Internal/external rotation



Physiological motion

# ARTROMOT®-E2

for the elbow joint



## NEW, with a graphic display!

The new **graphic handheld programming unit** offers a wide display with big self-explanatory symbols and an intuitive menu navigation for easier usability.

Combined with its tested features, like the patient chip card, the easy swift conversion, the anatomically correct motion (PNF pattern), the forearm placement on a carriage with automatic length adjustment and sandwich straps (to prevent muscle contractions), and the possibility for easy cleaning, the **ARTROMOT®-E2** is now more ergonomically in use than ever.

## Technical Data:

### Models:

ARTROMOT®-E2 (chair model)

ARTROMOT®-E2 compact (pole-mount model)

### Range of motion:

Extension/flexion	-5° / 0° / 140°
Pronation/supination	90° / 0° / 90°

### Functions:

Motor control	ON/OFF for isolated motion extension/flexion or pronation/supination
Synchronized motors	ON/OFF
Speed	1% – 100%
Timer	1 minute – 24 hours / continuous operation
Pauses	0 – 60 minutes
Reverse on load in steps (motor A and B separately)	1 – 25/patient safety feature
Total therapy time	added sum of the therapy sessions
Warm up protocol	for gradual progression to the maximum range of motion
Patient chip card	for storage of the therapy parameters
New patient	activates the default settings for new patients
ISO Motion protocol	for separate exercising in both directions
EROM Repeat (EX/PRO – FLEX/SUP)	higher rate of motion in the EROM
Stretching (EX – FLEX – PRO – SUP)	careful and smooth increase of the range of motion
Therapy documentation	Graphic presentation of the overall treatment cycle
Key lock function	Prevents accidental changes of the parameter settings
Transport setting	Moves the motors into the transport position
Service menu	

### Physical – ARTROMOT®-E2:

Weight:	28.7 kg (63.2 lb)
Dimensions	87.5 x 57.5 x 58 cm (34.4 x 22.6 x 22.8 in)

### Physical – ARTROMOT®-E2 compact:

Weight:	17 kg (37.4 lb)
Dimensions	87.5 x 57.5 x 29 cm (34.4 x 22.6 x 11.4 in)

### Article numbers:

ARTROMOT®-E2	80.00.031
ARTROMOT®-E2 compact	80.00.033
ARTROMOT® chip card	0.0034.048

# ARTROMOT®-E2

for the elbow joint

**NEW**

## Indications

- Arthrotomy and arthroscopy procedures in combination with synovectomy, arthrolysis
- Surgical treatment of fractures and pseudoarthrosis
- Exercise-stable osteosynthesis
- Endoprosthetic implants
- Treatment following mobilization of joints in anesthetized patients
- Reconstructive surgery of biceps tendons
- Operations on soft tissue in the joint area



ARTROMOT®-E2 compact



Patient chip card  
for storage of therapy data



ARTROMOT®-E2



Extension



Flexion



Pronation



Supination

# ARTROMOT®-SP3

for the ankle joint



## The new dimension in ankle CPM therapy!

**ARTROMOT®-SP3** offers anatomically correct motions (PNF pattern).

Using the **ARTROMOT®-SP3** is made easy by intuitive operation of the handheld programming unit with self-explanatory symbols.

**ARTROMOT®-SP3** optimizes ease-of-use and hygiene through easy mechanical settings and easy to disinfect leg support and footrest.

## Technical Data:

### Models

ARTROMOT®-SP3 Standard
ARTROMOT®-SP3 Standard Chip
ARTROMOT®-SP3 Comfort
ARTROMOT®-SP3 Comfort Chip

### Range of motion

Plantar flexion / Dorsal extension	50° / 0° / 40°
Inversion / Eversion	40° / 0° / 20°

### Functions of ARTROMOT®-SP3 Standard

Timer	1 – 59 minutes / 1 – 24 hours / continuous operation
Pauses	0 – 59 seconds
Speed	5 % – 100 %
Reverse on load in steps (motor A and B separately)	1 – 25 / patient safety feature
Motor control	ON/OFF for isolated motion, plantar flexion/dorsal extension or inversion/eversion
Synchronized motors	ON/OFF
Total therapy time	added sum of the therapy sessions
New patient	activates the default settings for new patients
Transport setting	moves the motors into the transport position
Key lock function	prevents accidental changes of the parameter settings
Service menu	

### Additional functions of ARTROMOT®-SP3 Comfort

Stretching modes	for gradual and smooth increase of the range of motion
Therapy documentation	graphic presentation of the overall treatment cycle
Warm-up protocol	gradual progression to the maximum range of motion
ISO protocol	for separate exercising in both directions

### Additional functions of ARTROMOT®-SP3 models with Chip card

Patient chip card	stores patient-specific therapy parameters
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### Physical

Weight	11 Kg (24.4 lb)
Dimensions	78 x 42 x 39,5 cm (30.7 x 16.5 x 15.5 in)
Patient height	approx. 120 – 200 cm (47.2 – 78.8 in)

### Article numbers:

ARTROMOT®-SP3 Standard	80.00.035
ARTROMOT®-SP3 Standard Chip	80.00.036
ARTROMOT®-SP3 Comfort	80.00.037
ARTROMOT®-SP3 Comfort Chip	80.00.038
Transport trolley	80.00.056

# ARTROMOT®-SP3

for the ankle joint

**NEW**

## Indications

- Arthrotomy and arthroscopy procedures in combination with synovectomy, arthrolysis
- Surgical treatment of fractures and pseudoarthrosis
- Exercise-stable osteosynthesis
- Operations on soft tissue in the joint area
- Reconstructive ligament and tendon surgery
- Operations on cartilage lesions
- Achilles tendon reconstruction



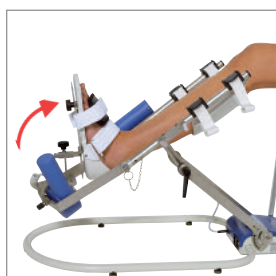
Patient chip card  
for storage of therapy data



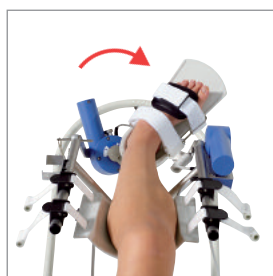
ARTROMOT®-SP3



Plantar flexion



Dorsal extension



Inversion



Eversion



## Notes

## Notes

Your specialist dealer

MOT-100-E-9/08



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