

# MultiMotion



*Joints for*  
**Dynamic  
Corrective  
Orthotic  
Systems**



Corrective and Free Motion Joints  
with Uprights, T-Bars, & Abduction Bars  
for **CUSTOM** Fabricated Orthoses

# MultiMotion

## Dynamic Corrective System Joint

The MultiMotion Dynamic Corrective System Joint consists of two components – the Corrective Joint and your choice of Free Motion or R.O.M. Joint. All components are available in Small and Regular sizes.

### MultiMotion Dynamic Corrective System Joint

Functionality of the MultiMotion Corrective Joint is based on the LLPS principles (Low Load Prolonged Stretch). This process of gradual, precise and evenly applied tension, stimulates the growth of the shortened tissue and increases joint mobility. Treatment of contracture can be done in either flexion or extension, based on patient needs.

- Torque output in flexion or extension by simply flipping the spring
- Range of Motion +120° to -120°
- Adjustable flexion and extension stops: Small in 14° increments, Regular in 12° increments
- Locking and unlocking possible in virtually any position
- Torque Output; from 0 Nm to 3.4 Nm (30 in-lb) for size small, 0 Nm to 10.2 Nm (90 in-lb) for size Regular
- Medial and lateral access to set screw for torque output adjustments



Corrective Joint with Bar Adapter  
69100/69200



Corrective Joint with T-Bar, 12mm Offset  
69113/69213

Refer to page 6 for an illustrative guide on how you will (1) adjust for flexion or extension based on anatomical joint to be managed, (2) adjust degree of ROM, and (3) adjust amount of force (torque).

| Corrective Joint Specifications |  |         | 1/Pkg.     |              |                  |           |
|---------------------------------|--|---------|------------|--------------|------------------|-----------|
| Item #                          | Distal Joint Connection                    | Size    | Max Torque | Joint Weight | Housing Diameter | Bar Width |
| 69200 0000                      | Bar Adapter                                | Small   | 3.4 Nm     | 100 grams    | 35 mm            | 12 mm     |
| 69100 0000                      | Bar Adapter                                | Regular | 10.2 Nm    | 240 grams    | 53 mm            | 16 mm     |
| 69213 0000                      | T-Bar 12 mm Offset                         | Small   | 3.4 Nm     | 123 grams    | 35 mm            | 12 mm     |
| 69113 0000                      | T-Bar 12 mm Offset                         | Regular | 10.2 Nm    | 284 grams    | 53 mm            | 16 mm     |
| 691220000                       | Straight Uprights                          | Small   | 3.4 Nm     | 155 grams    | 35 mm            | 12 mm     |
| 691210000                       | Straight Uprights                          | Regular | 10.2 Nm    | 395 grams    | 53 mm            | 16 mm     |
| 691250000                       | Straight Upright & T-Bar with 12 mm Offset | Small   | 3.4 Nm     | 150 grams    | 35 mm            | 12 mm     |
| 691230000                       | Straight Upright & T-Bar with 12 mm Offset | Regular | 10.2 Nm    | 360 grams    | 53 mm            | 16 mm     |

NOTE: 3.4 Nm = 30 in-lb / 10.2 Nm = 90 in-lb



Corrective Joint with Integrated Straight Bar  
69121/69122



Corrective Joint with Integrated T-Bar 12mm Offset  
69123/69125

# MultiMotion Components

## MultiMotion Free Motion Joint

The Free Motion Joint is positioned on the opposite side of the Corrective Joint and provides the desired torsional stiffness to the orthosis.

- Free Motion Joint (+135° to -135°)
- Material: aluminum, steel/stainless steel, brass, PC/ABS plastic

| Free Motion Joint Specifications |  |         | 1/Pkg.       |                  |
|----------------------------------|--|---------|--------------|------------------|
| Item #                           | Distal Joint Connection                    | Size    | Joint Weight | System Bar Width |
| 69505 0000                       | Bar Adapter                                | Small   | 33 grams     | 12 mm            |
| 69500 0000                       | Bar Adapter                                | Regular | 35 grams     | 16 mm            |
| 69518 0000                       | T-Bar 12 mm Offset                         | Small   | 41 grams     | 12 mm            |
| 69513 0000                       | T-Bar 12 mm Offset                         | Regular | 50 grams     | 16 mm            |
| 691280000                        | Straight Uprights                          | Small   | 55 grams     | 12 mm            |
| 691270000                        | Straight Uprights                          | Regular | 85 grams     | 16 mm            |
| 691310000                        | Straight Upright & T-Bar with 12 mm Offset | Small   | 50 grams     | 12 mm            |
| 691290000                        | Straight Upright & T-Bar with 12 mm Offset | Regular | 70 grams     | 16 mm            |

NOTE: Housing Diameter of all Free Motion Joints = 33mm



## MultiMotion R.O.M. Joint

The R.O.M. Joint is positioned on the opposite side of the Corrective Joint and provides the desired torsional stiffness to the orthosis.

| ROM Joint Specifications |         |              | 1/Pkg.           |                  |
|--------------------------|---------|--------------|------------------|------------------|
| Item #                   | Size    | Joint Weight | Housing Diameter | System Bar Width |
| 69555 0000               | Small   | 38 grams     | 44 mm            | 12 mm            |
| 69550 0000               | Regular | 40 grams     | 44 mm            | 16 mm            |



- Flexion/Extension stops are adjustable:  
Small: in 14° increments,  
Regular: in 12° increments
- Material: aluminum, steel/stainless steel, brass, PC/ABS plastic

## Selection criteria for appropriate Joint size

The MultiMotion Corrective Joint, the Free Motion Joint and R.O.M. Joint are all available in just two sizes: Small and Regular. With these two joint sizes you can treat wrist, elbow, knee and ankle contractures - both for children and adults. When applied to the wrist, the selection criteria is: small anatomical body joint = small joint system. When applied to the elbow - knee or ankle joint, body weight is decisive.

| Joint type:        |                | Corrective |         | Free Motion |         |
|--------------------|----------------|------------|---------|-------------|---------|
| Anatomy            | Weight         | Small      | Regular | Small       | Regular |
| Wrist              | N/A            | ×          |         | ×           |         |
| Elbow, Knee, Ankle | <22 kg/50 lbs. | ×          |         | ×           |         |
| Elbow, Knee, Ankle | >22 kg/50 lbs. |            | ×       |             | ×       |

# MultiMotion Accessories

## MultiMotion Uprights

- All uprights are supplied pre-drilled for optimal attachment to the MultiMotion Joints
- High Rigidity Uprights available in Straight, Offset, & T-Bar styles
- Choice of 12mm or 16mm bar widths
- Material: Aluminum

| Upright Specifications 2/Pkg. |          |         |        |                  |           |
|-------------------------------|----------|---------|--------|------------------|-----------|
| Item #                        | Style    | Size    | Length | Width            | Thickness |
| 69701 0000                    | Straight | Small   | 200 mm | 12 mm            | 3.2 mm    |
| 69702 0000                    | Straight | Regular | 200 mm | 16 mm            | 4 mm      |
| 69705 0000                    | Offset   | Small   | 350 mm | 12 mm            | 3.2 mm    |
| 69706 0000                    | Offset   | Regular | 450 mm | 16 mm            | 4 mm      |
| 69722 0000                    | T-Bar    | Small   | 150 mm | 12 mm            | 3.2 mm    |
| 69723 0000                    | T-Bar    | Regular | 150 mm | 16 mm <td 3.2 mm |           |



## MultiMotion Alignment Tool

The Alignment Tool is used on the positive cast to properly align the joints, and can be used multiple times.

- Package contents: Round T-bar and two hinge adaptor sets with screws and washers for both joints, Small and Regular.



Item No. 69950 0000  
Alignment Tool

| Quick MultiMotion Joint and Upright Item No. Summary |            |            |                          |            |            |            |
|--|------------|------------|--------------------------|------------|------------|------------|
| MULTIMOTION JOINTS                                   | Standard   |            | W/ T-Bar<br>12 mm Offset |            |            |            |
|  | Small      | Regular    | Small                    | Regular    |            |            |
| Size:  |            |            |                          |            |            |            |
| CORRECTIVE   | 69200 0000 | 69100 0000 | 69213 0000               | 69113 0000 |            |            |
| CORRECTIVE W/ UPRIGHTS                               | 69122 0000 | 69121 0000 | 69125 0000               | 69123 0000 |            |            |
| FREE MOTION  | 69505 0000 | 69500 0000 | 69518 0000               | 69513 0000 |            |            |
| FREE MOTION W/ UPRIGHTS                              | 69128 0000 | 69127 0000 | 69131 0000               | 69129 0000 |            |            |
| ROM  | 69555 0000 | 69550 0000 | N/A                      | N/A        |            |            |
| MULTIMOTION UPRIGHTS                                 | Straight   |            | Offset                   |            | T-Bar      |            |
| Bar Width:   | Small      | Regular    | Small                    | Regular    | Small      | Regular    |
| High Rigidity  | 69701 0000 | 69702 0000 | 69705 0000               | 69706 0000 | 69722 0000 | 69723 0000 |

NOTE: All MultiMotion Corrective, Free Motion, and ROM Joints are for non-weight bearing orthoses.

# MultiMotion

## Dynamic Corrective System Joint

The Dynamic Corrective System Joint offers fast, efficient and adequate treatment of contractures resulting from neurological and orthopedic conditions. The system joint is fabricated into orthoses – for both children and adults.

**Intended use:** Treatment of correctable contractures

Functional restrictions according to ICF

Joint mobility

Joint stability

Muscle strength

Muscle tone

Movement pattern while walking



### Product function

- Continuously adjustable dynamic extension or flexion of the joint

### Benefits for achieving therapy objectives

- Improvement/rehabilitation of joint mobility
- Safe and step-wise joint mobilization
- Extension/mobilization of spastic musculature
- Strengthening of musculature
- Improvement of the resting posture
- Prevention of cartilage damage and ulcers



# MultiMotion

## Dynamic Hip Abduction System

**For safe treatment of correctable pediatric hip contractures.**

- Positions the child's leg in an optimal position and stabilizes the hip joint
- Adductors are stretched by slow elongation
- Can be locked and un-locked in desired position
- Adjustable flexion and extension stops; Small 14° intervals, Regular 12° intervals

### Features

- Improved/regained joint movement
- Safe and gradual joint mobilization
- Stretch/mobilization of spastic muscles
- Prevents cartilage damage

### Intended use

#### Neurological

- Spastic diplegia
- Spastic tetraplegia
- Spastic triplegia

#### Orthopedic

- Congenital subluxation of the hip joint

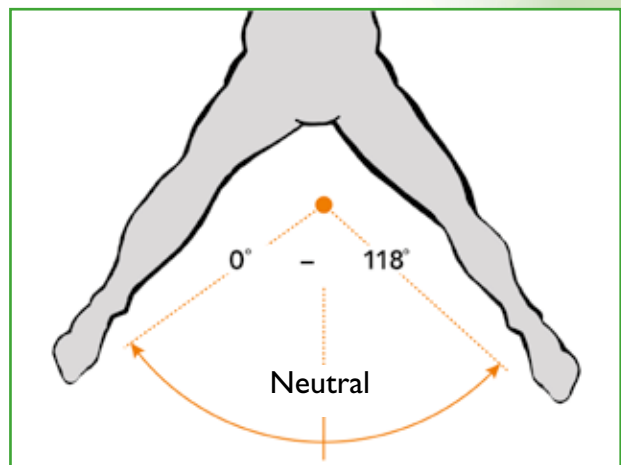
The Hip Abduction System consists of two components: The MultiMotion Corrective Joint and the Abduction Bars. These two components are mounted to a custom fabricated orthosis.

### Abduction Bars, Aluminium

| Item No.   | Size              | Measure             |
|------------|-------------------|---------------------|
| 69721 0000 | Small, Set of 2   | <105 cm (41 inches) |
| 69720 0000 | Regular, Set of 2 | >105 cm (41 inches) |

### MultiMotion Corrective Joint

| Item No.   | Size    | Max. Rotation Torque | Joint Housing Diameter | Joint Weight | Age     |
|------------|---------|----------------------|------------------------|--------------|---------|
| 69200 0000 | Small   | 3.4 Nm               | 35 mm                  | 77 g         | < 4 yrs |
| 69100 0000 | Regular | 10.2 Nm              | 53 mm                  | 180 g        | > 4 yrs |



*NOTE! This product must be fitted by a medical professional. Patient and caregiver must be instructed how to don and doff, and about how the system works. Please inform the patient and caregiver that settings must not be changed. This MultiMotion Hip Abduction System is only intended as a hip orthosis and is not weight bearing.*

# MultiSTATIC

## TREATMENT OF CORRECTABLE CONTRACTURES

The MultiStatic Joint enables fast, efficient, and effective static treatment of contractures due primarily to orthopedic injuries or diseases, utilizing the HLBS (High Load Brief Stretch) principles. The angle of the joint is set by an eccentric axis. The joint is used in orthoses for both children and adults.

### Benefits in achieving therapy objectives

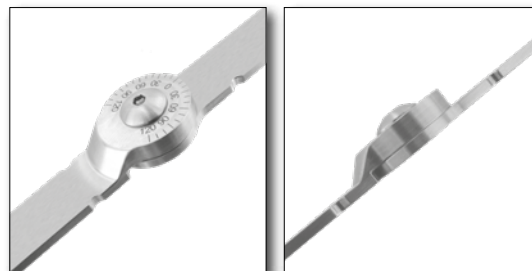
- Improvement/rehabilitation of joint mobility
- Improvement of the resting posture

### Product function

- Continuously adjustable static Extension or Flexion of the joint

### Features

- Easy angle adjustment due to optimally positioned joint axis
- Can be used in flexion and extension
- Continuous angle adjustment of +120° to -120°
- Integrated bars
- Can be used left and right
- Stainless steel



| Item No.   | Length | Width | Height | Thickness | Weight    | Diameter |
|------------|--------|-------|--------|-----------|-----------|----------|
| 69690 0000 | 400 mm | 12 mm | 8.5 mm | 2 mm      | 83 grams  | 19 mm    |
| 69691 0000 | 400 mm | 16 mm | 9.5 mm | 2 mm      | 122 grams | 24 mm    |
| 69692 0000 | 400 mm | 19 mm | 10 mm  | 2 mm      | 153 grams | 30 mm    |



## MultiStatic Free Motion Joint (single axis)

The MultiStatic Free Motion Joint may be positioned on opposite side of the corrective joint if no movement limitation (ROM) is necessary on that side.

### Features

- Free motion
- Single axis
- Stainless steel



| Item No.   | Length | Width | Height | Thickness | Weight    | Diameter |
|------------|--------|-------|--------|-----------|-----------|----------|
| 69693 0000 | 400 mm | 12 mm | 8 mm   | 2 mm      | 78 grams  | 19 mm    |
| 69694 0000 | 400 mm | 16 mm | 8 mm   | 2 mm      | 114 grams | 24 mm    |

The MultiStatic joints are to be used exclusively in non-weight bearing upper or lower extremity orthoses.