

MotionFoot[®] MX

Prosthetist Manual

Fillauer[®]
Motion Control

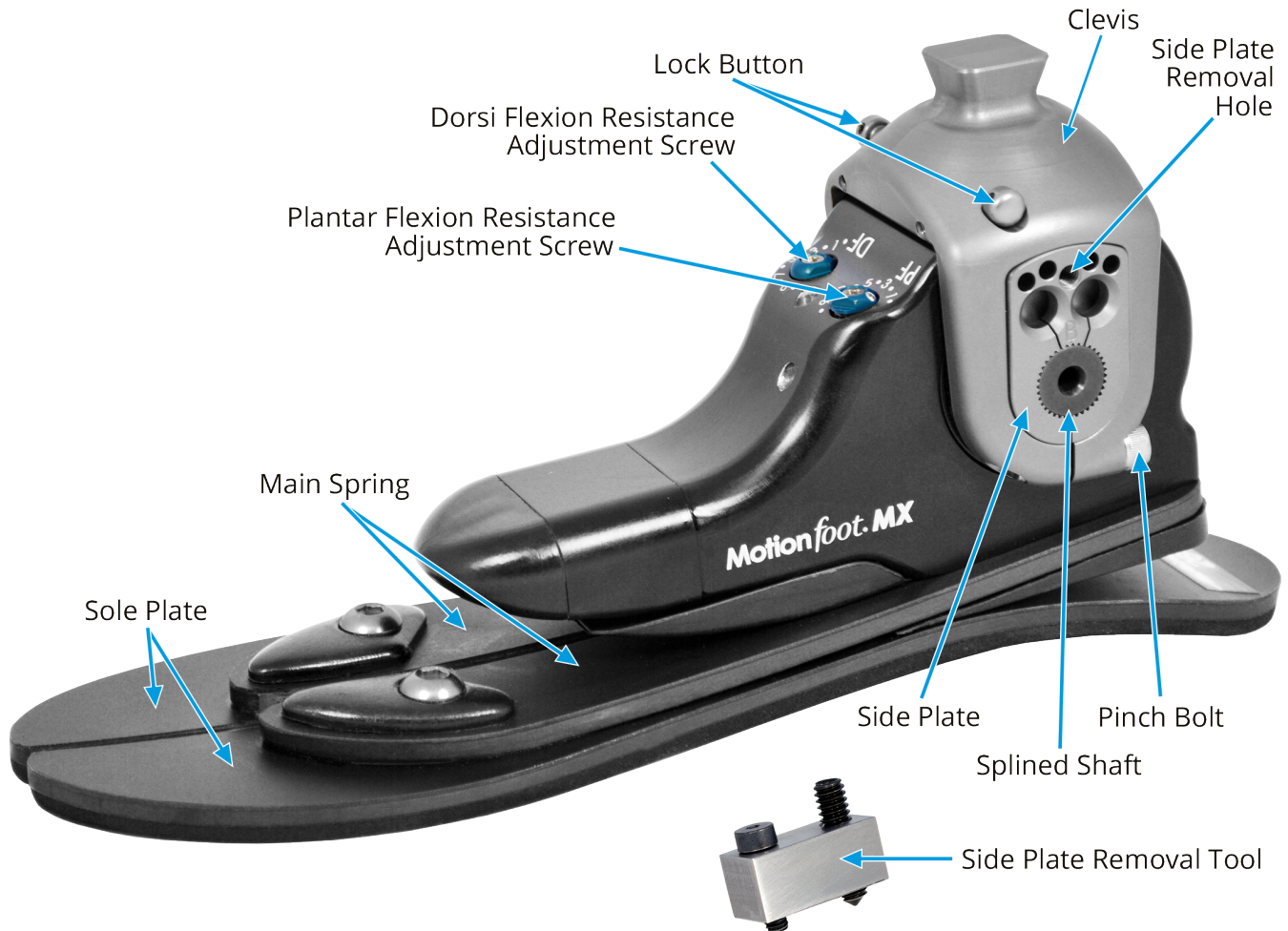
MotionFoot[®] MX

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Introduction

The MotionFoot[®] MX is a hydraulic ankle with carbon fiber foot system that provides a full 50 degrees range of motion (ROM). Plantar flexion and dorsi flexion resistance are independently adjustable by the prosthetist or the patient. Dynamic response of the toe lever arm progressively increases during the gait cycle due to the unique, moving fulcrum design acting on the main spring element of the foot.

Foot Components



Patient Selection

Available sizes: 22-30 cm

Weight limit: 220 lbs (100 kg)

Functional patient category: K2-K4

Build height: 3-11/16 inches (9.4 cm) for 22 cm foot, to 4 inches (10.15 cm) for 30 cm foot

Special Precautions



Adjusting the Side Plates

When adjusting the Side Plates, the Clevis should be in a position so that the “STOP!” warning is *not* visible on the foot. Otherwise the Clevis will hit the housing, causing damage to the Ankle Housing, Clevis, Side Plates, and Splined Shaft. This adjustment should be made by a qualified practitioner.



Adjusting the Heel Height/Dorsi Flexion angle

Ensure the Clevis is *not* in contact with the Ankle Housing at either full dorsi flexion or full plantar flexion.



Ankle Lock set screws

Do not make any adjustments to the small set screws on the anterior side of the Lock/Unlock button. This may result in a malfunction of the locking mechanism.



Ankle Lock

Do not use the Ankle Lock mechanism for walking or running. It should be used for driving, donning/doffing shoes, and other light, non-ambulatory activities.



Driving

The foot should be in the locked position whenever being used for driving.



Kneeling and sitting

The foot will go into plantar flexion when sitting and kneeling. Upon standing, care must be taken to return the foot to a neutral position to prevent knee hyperextension or tripping on the plantar-flexed foot.



Stairs/Ladders

Care must be taken while climbing stairs and ladders so the weight line remains anterior to the center of rotation of the ankle, to prevent the foot from going into plantar flexion when ascending or descending stairs, ladders, etc. **This must be explained to the patient.**



Declines

When switching direction on a descent, the foot must return to a neutral position before level or uphill ambulation.



Dust, Dirt, and Water

Prevent dust, dirt and water from entering the foot shell. Always keep a Spectra Sock between the foot shell and the foot. If the inside of the foot shell becomes contaminated, remove the foot shell, thoroughly clean the foot and inside of the shell, and replace the Spectra Sock if necessary.

MotionFoot® MX Set-Up

From the factory, the MotionFoot® MX is set for a 3/8 inch heel, allowing 7 degrees of dorsi flexion and 43 degrees of plantar flexion. This can be changed by the heel height adjustment.

Since the MotionFoot® MX has 50 degrees ROM, this range can be shared between dorsi flexion and plantar flexion. This is done in 5 or 10 degree increments by changes to the side plates. Fine adjustment is accomplished by pyramid adjustment. Many patients prefer the dorsi flexion stop to be at 90 degrees much like the foot they previously wore. Others prefer 5-10 degrees of dorsi flexion for toe clearance during swing phase.

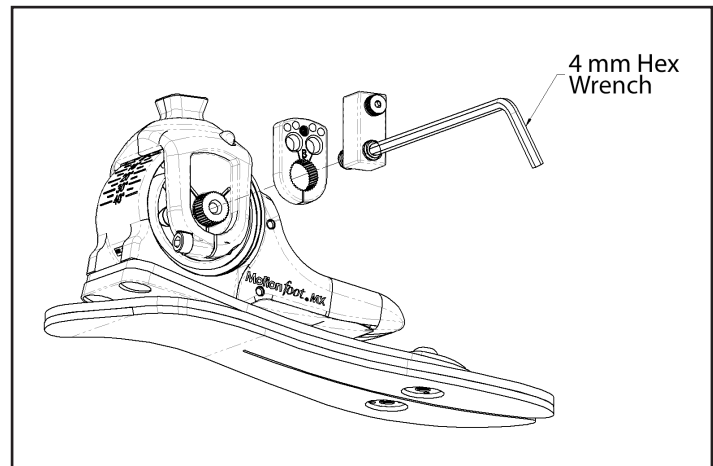
To Change Heel Height/Dorsi Flexion range

Factory Setting

The MotionFoot® MX is set for 7 degrees of free dorsi flexion in a shoe with a 3/8 inch heel. This is marked at "0" on the Ankle Housing. Small adjustments (< 5 degrees) are made at the adjustment pyramid. When Side Plate adjustments are made, the zero reference mark is no longer valid.

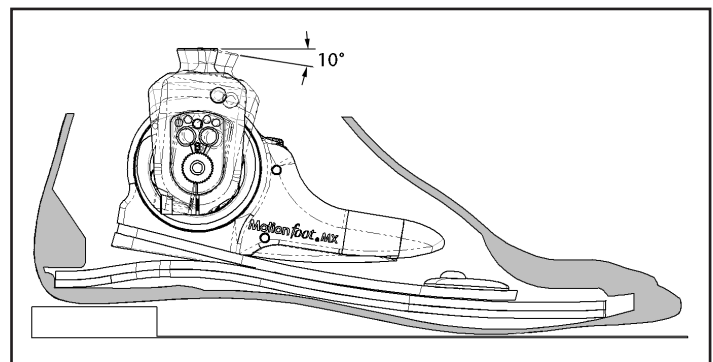
Removing the Side Plate

1. Place the ankle in full dorsi flexion.
2. Loosen the pinch bolt on the Clevis of both Side Plates.
3. Screw the Shoulder Bolt of the Side Plate Removal Tool (part # 3020020, included with each foot) into the Side Plate Removal Hole.
4. Key the pointed end of the Side Plate Removal Screw into the Splined Shaft.
5. Gently turn the Side Plate Removal Screw clockwise and the Side Plate will slide off.
6. Remove the Side Plate Removal Tool.



Adjusting the Heel Height/Dorsi flexion angle

1. With the foot in the shoe (or approximating the heel height) place the Clevis at the point you would like full dorsi flexion.
 - a. If you would like the dorsi flexion stop at 0 degrees, place the pyramid parallel to the floor.
 - b. If you would like 10 degrees of dorsi flexion, place the pyramid leaning anterior at 10 degrees.
2. Install one side plate; if the angle changes excessively (>5 degrees) reverse the Side Plate.
 - a. Note that the Side Plate is marked one side A, the other side B.
 - b. 10 degree adjustments can be made by leaving each Side Plate as it is.
 - c. 5 degree adjustments can be made by reversing both Side Plates.
 - d. One Side Plate will always say A, the other B; you cannot have A-A or B-B combination.
3. Install the opposite Side Plate.
 - a. Gentle tapping with a plastic head hammer may be required.
 - b. If the splines do not engage, check to make sure the plates are in an A-B configuration.
5. With both Side Plates flush with the Clevis, tighten the Pinch Bolt to 60 lb-in (6.8 N.m).
6. Check the dorsi/plantar flexion range-of-motion.



Multiple Heel Height Shoes

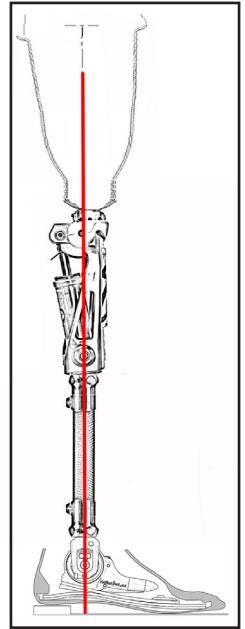
- If your patient plans to wear multiple heel height shoes, perform the above exercise with the lowest heel height shoe
- When your patient moves to a higher heel height, note that the dorsi flexion stop has now changed
- This also results in a decrease in plantar flexion range

Bench Alignment

Bench alignment should be performed with the foot shell installed, and the shoe on if possible. If the shoe is not available, approximate the heel height of the shoe.

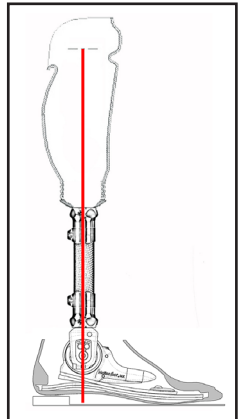
Trans-femoral

- Set up initial socket flexion and TKA (Trochanter, Knee, Ankle) to standard prosthetic principles
- A sagittal plumb line should drop from knee center (not center of rotation of polycentric knees) through the ankle joint



Trans-tibial

- Set up initial socket flexion according to standard prosthetic principles
- A sagittal plumb line should bisect the socket and pass through the center of rotation of the ankle



Dynamic Alignment

Have the patient ambulate safely. All prosthetic principles for dynamic alignment remain the same.

1. Begin with the Dorsi Flexion and Plantar Flexion Resistance Adjustment Screws set at 1.
2. Increase the planter flexion resistance level to decrease or eliminate foot slap. Increasing planter flexion resistance too much and the transition from initial contact to loading response will feel stiff to the patient and could make the knee less stable.
3. Increase the dorsi flexion resistance to provide smooth transition though mid-stance. Increasing dorsi flexion resistance too much will result in excessive hyperextension forces on the knee.

Ankle Lock

The Ankle Lock is a feature to be used for driving, donning and doffing shoes and socks.

- To lock the ankle, push the lock button on the right side of the ankle
- The ankle will dorsi flex to its maximum dorsi flexion angle, then lock
- To unlock the ankle, push the lock button on the left side of the ankle

Foot shell Installation and removal

Foot shell Installation

1. Place a Spectra Sock over the MotionFoot® MX system assembly.
2. Lock the ankle mechanism.
3. Press the toe plate into the foot shell as far as possible.
4. Place the foot shell tool into the posterior aspect of the foot shell completely.
5. Press the MotionFoot® MX system firmly into the foot shell until the posterior part of the foot plate is securely positioned under the retaining lip in the foot shell.

Foot shell Removal

1. Insert the foot shell tool in the posterior corner of the foot shell to pry the retaining wedge off of the foot plate.
2. Remove MotionFoot® MX from the foot shell.

Suggested LCodes

Code	Description
L5968	Multiaxial Ankle w/swing phase dorsiflexion
L5981	Flex-Walk System, or equal
L5990	User Adjustable Heel Height
L5999*	Manual Lock, Ankle
L5999*	Natural Ankle Range-of-Motion

*Contact Motion Control for MSRP regarding L5999 codes

Limited Warranty

The MotionFoot® MX is provided with a 2 year warranty, with the exception of the foot shell, which has a 6-month warranty. After the warranty period, repairs are guaranteed for a period of 90 days. Determination of the damages or defects to be covered under the Limited Warranty shall be made by Motion Control personnel.

Warranty does *not* include:

1. Prosthetic services for fitting and maintaining the prosthesis.
2. Damage caused by neglect, misuse or improper operation.
3. Damage due to accident, fire, water, vandalism, unsuitable environmental conditions.
4. Replacement parts not approved or recommended by Motion Control.
5. Modifications to the equipment which occur during the period of the Agreement except by mutual consent of the parties in writing, including payment of additional charges as specified by the Seller.

Return Policy

Returns are accepted for a full refund (not including any repairs that may be required, including replacement of the foot shell to return the foot to new condition) for 60 days from date of shipment.

Returns 61-90 days from date of shipment will be accepted, subject to a 15% restocking fee. This does not include any repair costs, including replacement of the foot shell to return the foot to new condition.

Beyond 90 days, returns are not accepted.

Ordering Information

Locate on the selection chart the patient's weight and foot size. A High Activity (HA) patient may require a higher weight range for increased stiffness.

Weight		22 cm	23 cm	24 cm	25 cm	26 cm	27 cm	28 cm	29 cm	30 cm
100-130 lbs	45-59 kg	5020020	5020022	5020024	5020026	5020030	--	--	--	--
131-161 lbs	59-73 kg	5020020	5020022	5020024	5020026	5020030	5020034	5020038	--	--
162-192 lbs	73-87 kg	5020021	5020023	5020025	5020027	5020031	5020035	5020039	5020042	5020046
193-220 lbs	87-100 kg	5020021	5020023	5020025	5020028	5020032	5020036	5020040	5020043	5020047
193-220 lbs HA	87-100 kg HA	--	--	--	5020029	5020033	5020037	5020041	5020044	5020048





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