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the human empowerment company

Dynion 3R85

Technical Information
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Agenda in H3

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01

Introduction



General Information

User profile:

- Mobility Grade 3 - 4
- Max. patient weight: 100 kg / 220 lbs
- Transfemoral amputation, Knee disarticulation, Hip disarticulation, Bilateral

Product description:

- Monocentric knee joint with patented rotary hydraulic to control stance and swing phase.
- Default Stance design: Dynion progressively responds to ground reaction forces ensuring a stable stance.
- Swing is initiated upon successfully meeting the disengagement criteria.
- Stance resistance activated by foot load or interruption of swing.

What's new?



Anterior Adjustment Panel:

- Separate stance flexion resistance, swing initiation threshold, flexion and extension resistance settings.

Waterproof:

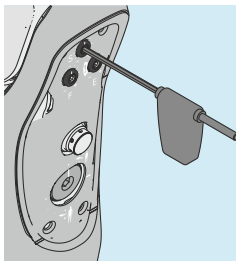
- Resistant against fresh and salt water.
- The scope of delivery includes a corrosion-resistant tube adapter 2R37 which has four water drain channels.

Manual Lock:

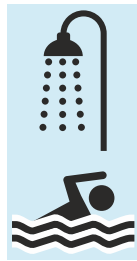
- Easy to use push tabs at proximal of knee axis.

Bicycle Mode:

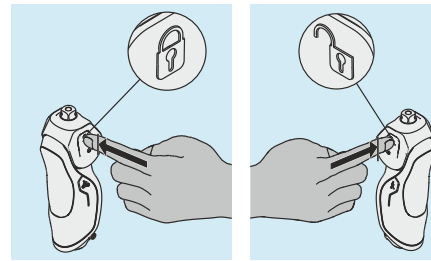
- Enables free swing mode for increased functionality.



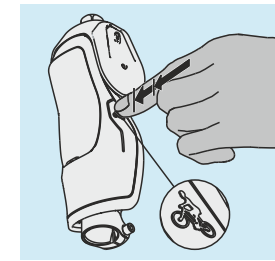
Anterior
Adjustment



Waterproof



Manual Lock



Bicycle Mode

02

Technical Data

Dynion



Article number	3R85
Material	Aluminium
Distal Connection	Tube Clamp Ø 30 mm,
Proximal Connection	Pyramid Adapter
Knee flexion angle	145°
System height	231 mm
Proximal build height to alignment reference point	44.5 mm
Distal build height to alignment reference point	172 mm
Weight	1240 gm
Scope of delivery	2R37 Tube Adapter Ø 30 mm Instructions for Use
Max. body weight	100 kg

03

Product Benefits

Manual Lock

Waterproof

Enhanced feeling
of safety

Assured Stable Yielding

Bicycle Mode

Adaptive towards
walking speed and surface



PRODUCT BENEFITS

Dynion

For Users

A new generation mechanical hydraulic knee solution suitable for active and busy individuals (MG 3-4) who navigate in varied environments and need a **reliable** partner to lead the way and go beyond on their **own terms**.

Product Benefits

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Dynion

For CPOs

- Adjustment panel in the front
- Easy to set and record
- Settings are reproduceable
- Height adjustable tube (0 – 13 mm)
- Fewers tools required to adjust
- More features to help the user



04

Component Combinations

Derick's Component Combination



Component Combinations

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Derick's components



6Y110 Skeo Sealing liner

- The Skeo Sealing liner ensures Derick a secure and reliable prosthetic connection.
- The smooth outer coating and visual and haptic orientation guide on the inside makes it easier for him to put the liner on and take it off.



4R57=WR Rotation Adapter

- The rotation adapter allows Derick to sit in a relaxing position, cross his legs or put on socks and shoes without strain.



3R85 Dynion

- Dynion is a reliable companion in Derick's daily activities, because it adapts to varying walking speeds, provides him reliable support when going downstairs and declines.
- The Bicycle Mode allows Derick to easily ride a bike.



1C50 Taleo

- The Taleo foot provides Derick a smooth rollover and efficient energy return at a wide range of walking speeds – with varying ground condition, which enables Derick to keep up with his family and friends

Component Combinations

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Tried and tested combinations

Liner and adapters



21Y21
Click
Valve



2R37
Tube Adapter
(included)



6Y110
Sealing
Liner



4R57=WR
Rotation
Adapter



4WR95=1
Lamination
Anchor

Feet



1C30
Trias



1C60
Triton



1C68
Triton Side Flex



1C50
Taleo



1C53
Taleo Low
Profile

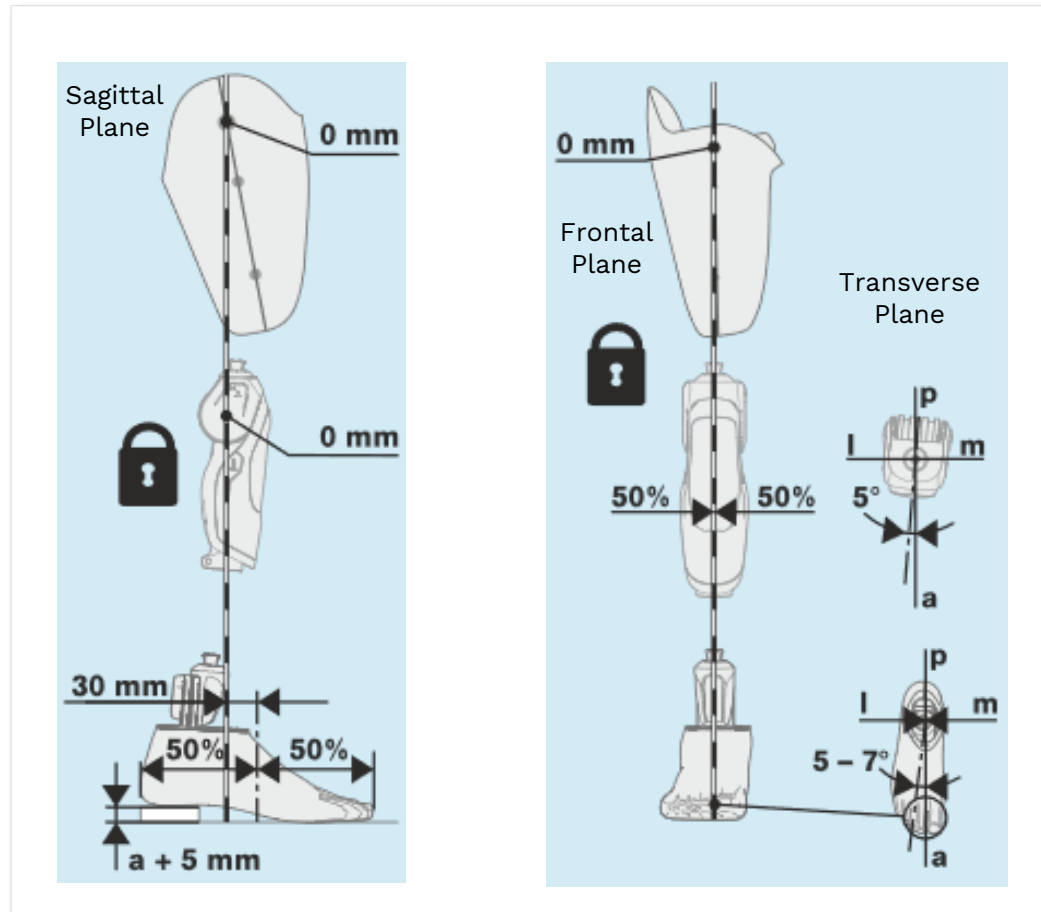
05

Alignment

Alignment

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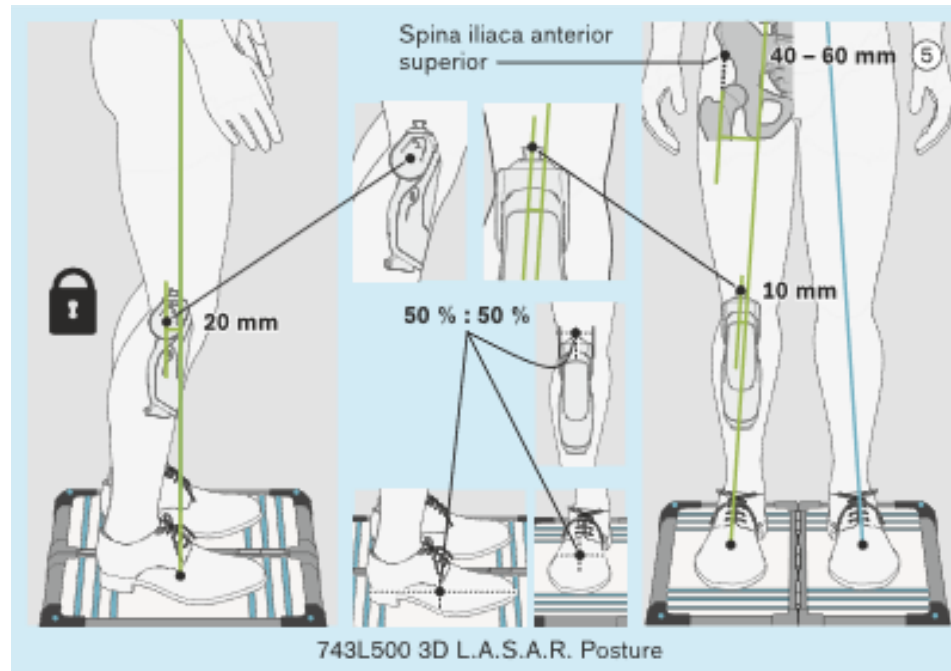
Bench Alignment*



Alignment

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Static Alignment*



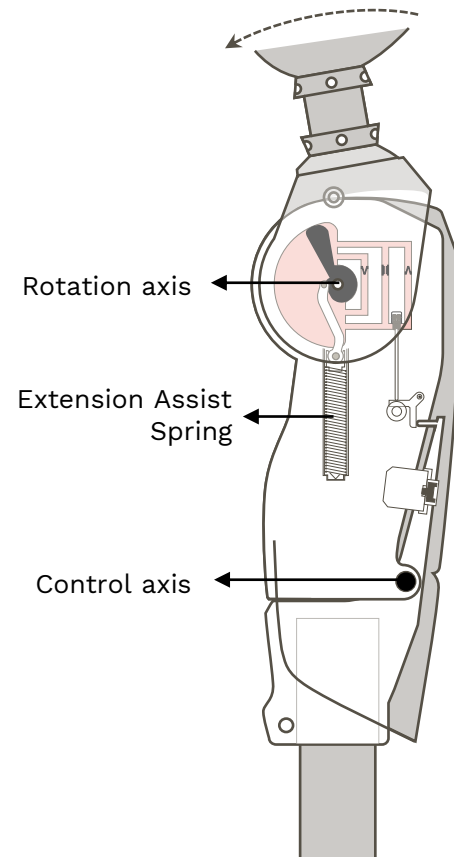
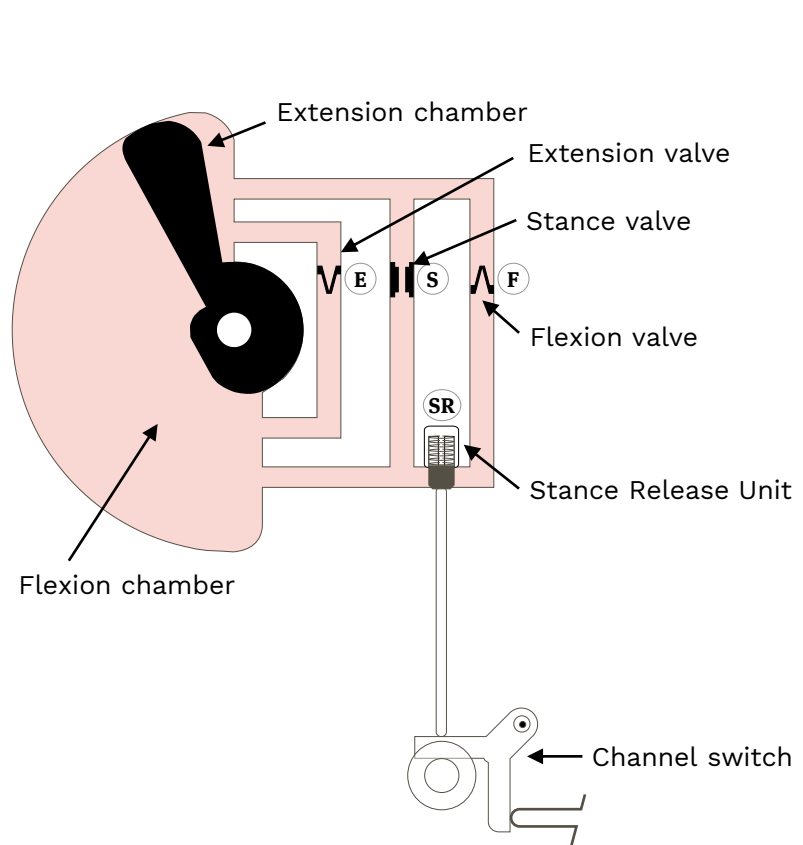
06

The Mechanism

The Mechanism

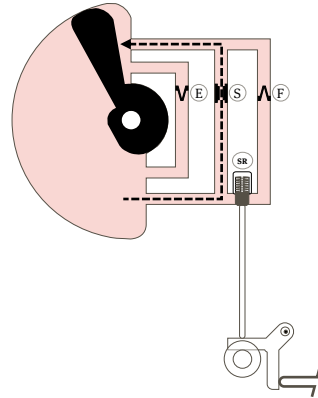
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Schematic drawing (representative)

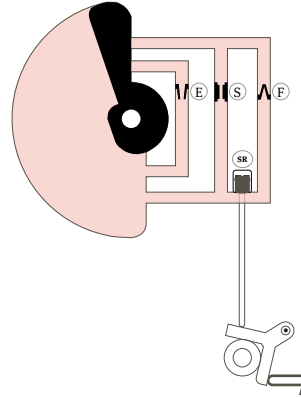


The Mechanism

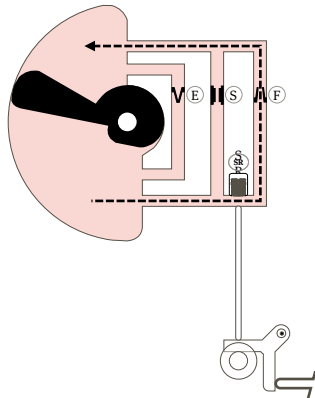
Rotary hydraulic function



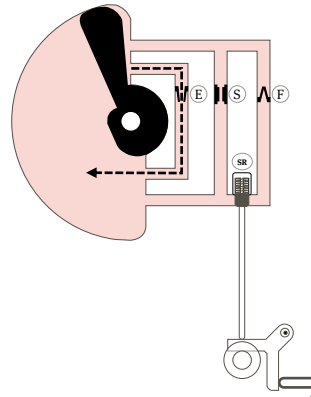
In **stance phase**, the hydraulic oil flows through the Stance Valve. The patient is benefitted with high hydraulic resistance. This value is set by the CPO by adjusting the dial.



During **switching** from stance to swing, the knee hyper-extend from the Control Axis and opens the Stance Release valve. With subsequent flexion moment the sustained flow in the channels allows continued swing flexion.



In **swing flexion**, the hydraulic oil flows through the swing Flexion valve. The resistance can be individually adjusted through the Flexion dial.



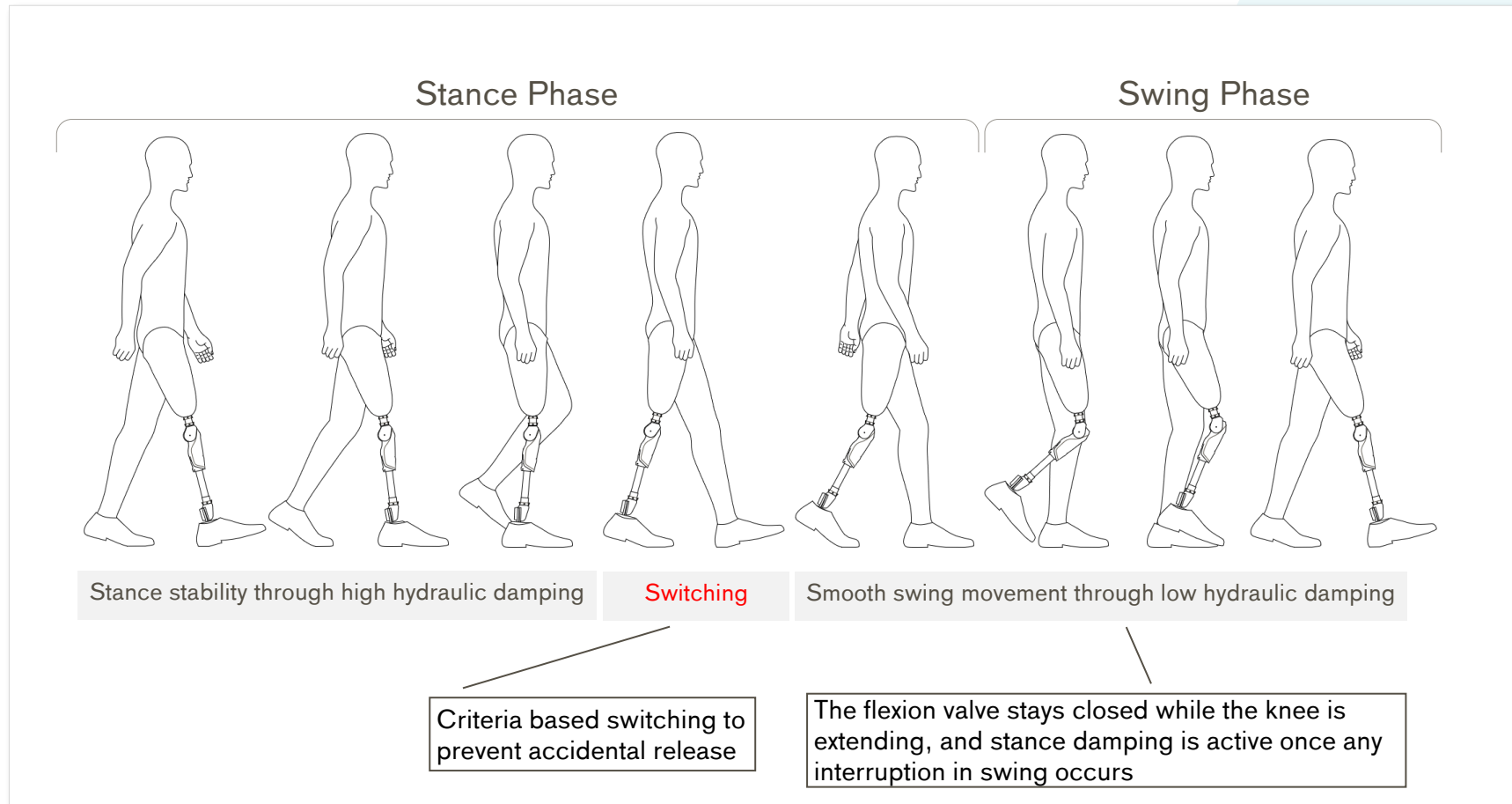
In **swing extension**, the hydraulic oil flows through the Extension valve. The resistance can be individually adjusted through the Extension dial.

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The Mechanism

Gait Cycle

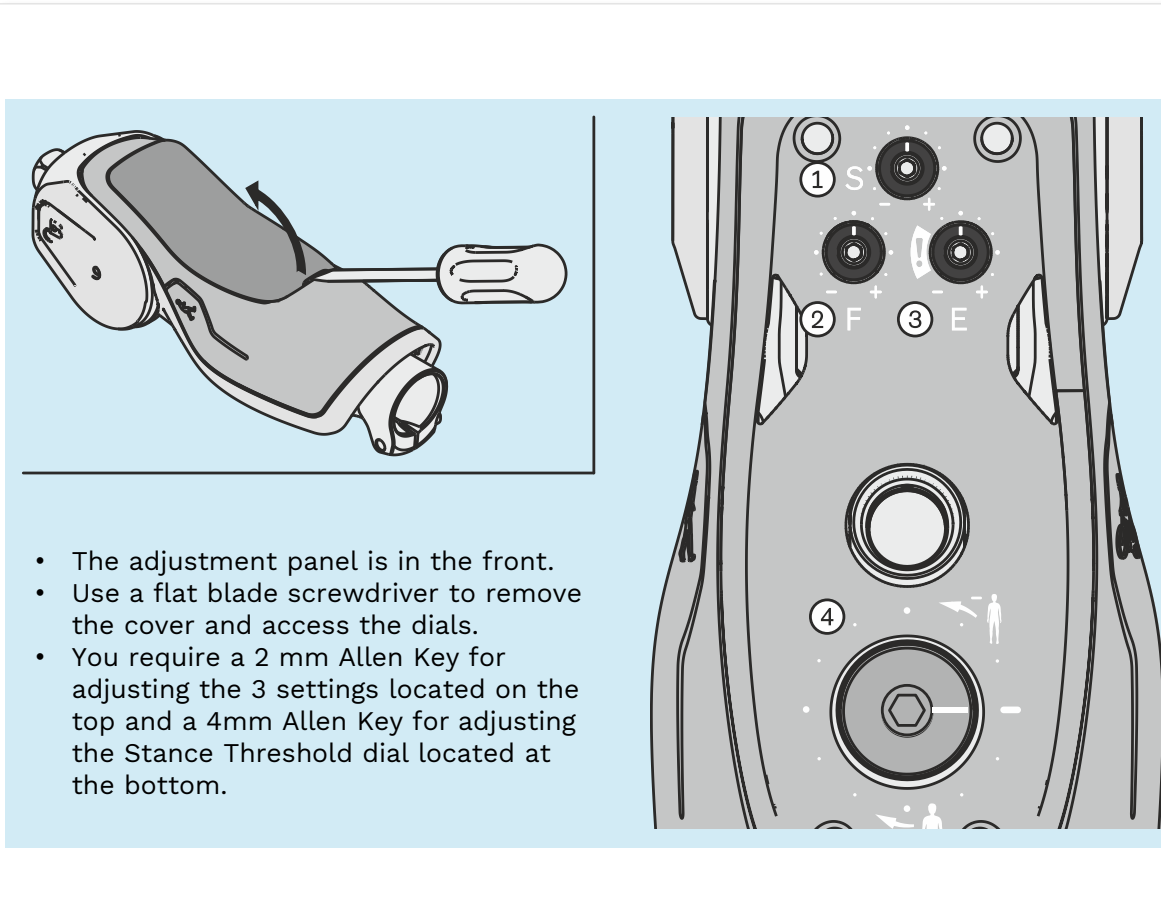


07

Adjustments

Adjustments

Adjustment Panel



Adjustments

Stance phase adjustments

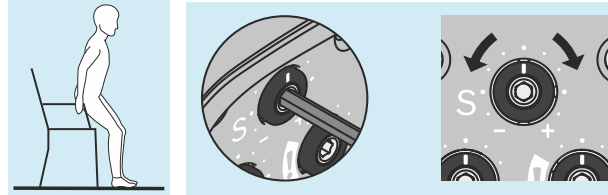
- (1) Stance Flexion Resistance
- (4) Stance Threshold

Swing phase adjustments

- (2) Flexion Resistance
- (3) Extension Resistance

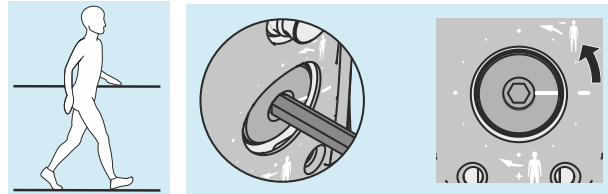
Stance Adjustment

1. Stance Flexion Resistance



- The dial can be identified with a symbol (S)
- Check the setting during sitting down
- Turn to the dial clockwise to increase the resistance and anti-clockwise to reduce

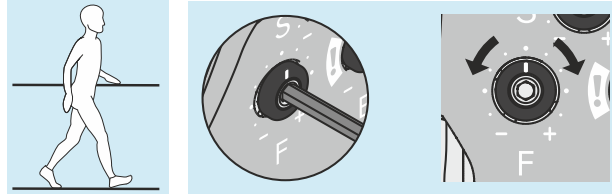
2. Stance ReleaseThreshold



- The dial is located at the bottom of the panel
- Check the setting during walking for stance to swing switching
- Turn to the dial clockwise to increase security and anti-clockwise to make it easy to initiate swing

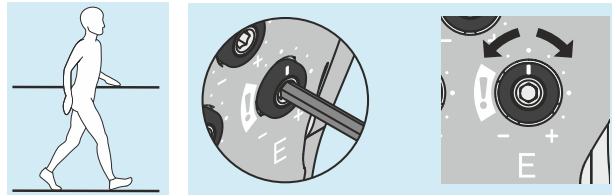
Swing Adjustment

3. Flexion Resistance



- The dial can be identified with a symbol (F)
- Check the setting during walking at Initial Swing sub-stage
- Turn to the dial clockwise to increase the resistance and anti-clockwise to reduce

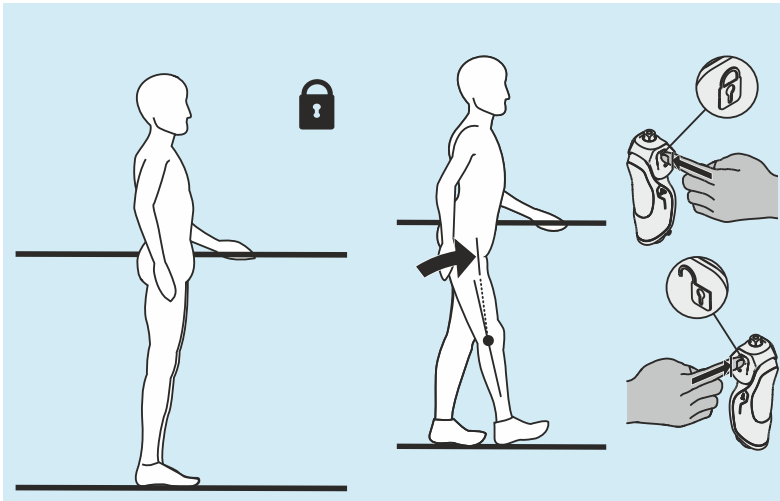
4. Extension Damping



- The dial can be identified with a symbol (E)
- Check the setting during walking at Terminal Swing sub-stage
- Turn to the dial clockwise to increase the resistance and anti-clockwise to reduce

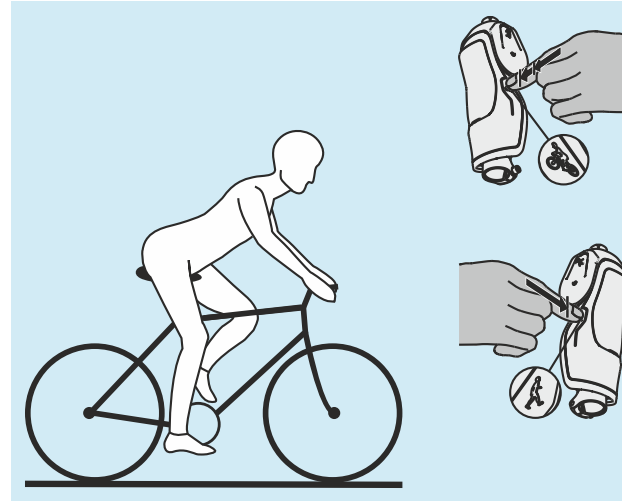
Buttons for additional functions

Manual Lock



- The manual lock can be activated and deactivated by using the buttons located on sides of the knee axis.
- The symbol on each button guide the patient to use the correct one for locking and unlocking the knee.
- A click sound confirm successful operation.
- The knee must be fully extended to activate and deactivate the manual lock.

Bicycle Mode



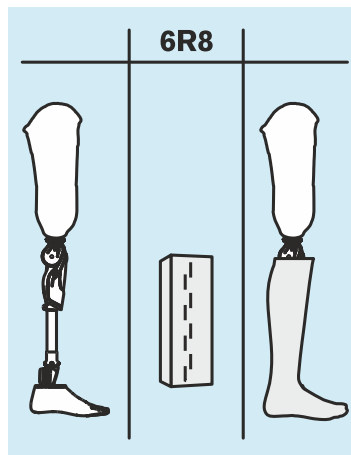
- The Bicycling Mode can be activated and deactivated by using the buttons located on lower sides of the knee.
- The symbol on each button guide the patient to use the correct one for enabling Bicycle Mode and Walking Mode.
- A click sound confirm successful operation.
- The knee need not be in any specific angle to activate and deactivate these two modes.

08

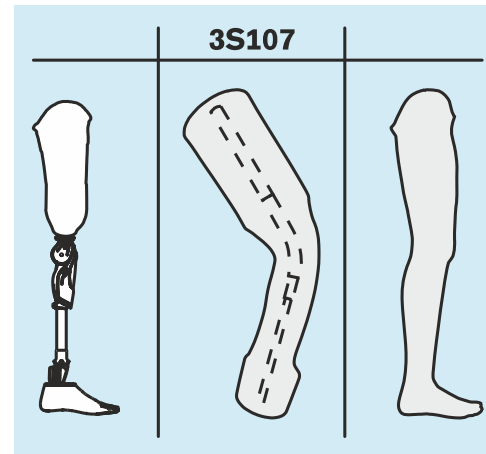
Foam cosmesis

Options / Button Extenders

Select one of the following two options that best suits your patient's requirement.
The knee can also be used without a foam cosmesis.



- Use 3S107 Foam Cosmesis for full cover finish.
- Apply 99B14 to complement the finish.



- Use 6R8 Foam Cosmesis for half cover finish
- Apply 99B14 to complement the finish

4 button extenders are included in the scope of delivery of 4D34. These extenders help the patient identify and access the knee buttons under the foam.

- Clean the button surfaces with 634A58 isopropyl alcohol
- Attach the extenders to the knee button using 636K44 Loctite 3090

