

Endolite Hydraulic Knee Controls



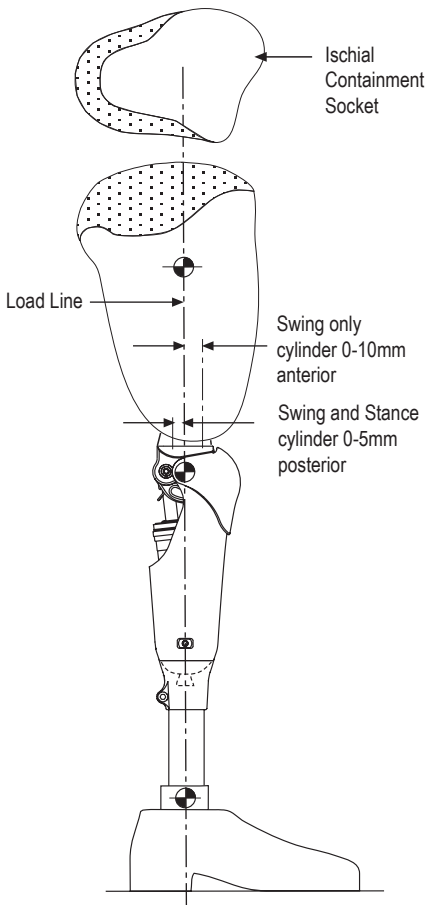
endolite
get busy living

1 – 4

- 932285 Swing & Stance Hydraulic Control
- 932281 Swing & Stance Hydraulic Control for KX06
- 932256 Long Swing & Stance Hydraulic Control

3 – 4

- 932287 Swing only Hydraulic Control
- 932262 Swing only Hydraulic Control for ESK+
- 932282 Swing only Hydraulic Control for KX06
- 932258 Long Swing only Hydraulic Control



Alignment Procedure

When aligning the prosthesis for use with the Endolite Hydraulic Knee controls, position of the load line is critical. Unlike traditional alignment procedures where the load line passes in front of the knee centre for stability, the load line should pass slightly behind the knee centre. Aligning the limb to slightly trigger position results in a more efficient gait. The patient can more easily initiate flexion while weight is still on the prosthesis.

This is also important to the function of the Endolite units. The units release from stance only after a hyperextension moment at the knee and therefore the patient must initiate flexion while weight is still on the prosthesis. You need not be concerned about the unstable alignment. The stance phase resistance will prevent the knee from buckling.

The notes above also apply to the KX06 knee - (not shown)

A distal pyramid may be fitted instead of the tube clamp to allow the addition of pyramid based components. Pyramids should however, be aligned so the shin components are vertical to maximise the function of the knee.

These notes also apply to the Mercury Hi-Activity Discontinuous shin assembly (not shown).

The wearer should be advised:

Any change in performance or function of the device must be reported to the practitioner
e.g. unusual noises, faster or slower swing or reduced stance support.

After running or periods of high activity the cylinder may become very warm, this is normal.

No specific maintenance advice is required for this device.

Storage & Handling:

When storing for prolonged periods place cylinder vertically with trunnion uppermost. Alternatively and in addition, air management may be assisted by cycling the cylinder several times with the stance resistance switched off (refer to 'Stirrup functions and features'). Use product packaging supplied.

Static Alignment

To achieve optimal function from the Endolite Hydraulic Control the knee must be aligned geometrically unstable.

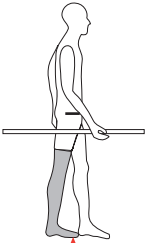
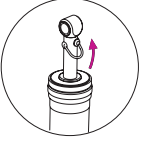
Check flexion is fully accommodated when worn by patient.

To check anterior posterior alignment

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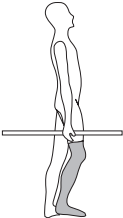
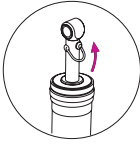
- a) Load toe of prosthesis
- b) Lift lever (stirrup) *
- c) Stand with feet side by side holding onto rails

* This will override the stance control:
the knee should now feel unstable and tend to flex on weight bearing

Knee **unstable** during weight bearing:

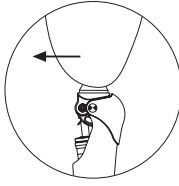
- a) Drop stirrup
- b) Proceed to dynamic alignment/ next stage

Knee **stable** during weight bearing:

Check flexion is fully accommodated.

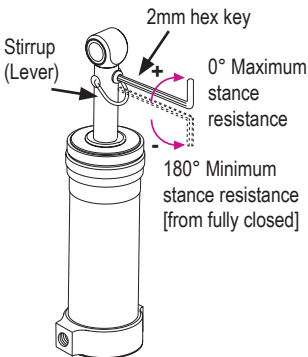
If it is:
 Slide socket posteriorly to make knee just unstable.
 Try again




Stance Resistance (Yield)

Do not turn the stance adjustment screw anticlockwise beyond 180° position as this will cause the control unit to become more difficult to release from stance.

Adjusting yield/stance resistance



2mm hex key

Stirrup (Lever)

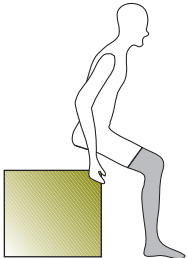
0° Maximum stance resistance

180° Minimum stance resistance [from fully closed]

Having first checked A-P alignment as above (*initial adjustment position is factory set*)

- a) Ensure stirrup in Down position
- b) Standing with feet side by side try to sit (do not hyperextend limb)

If excessive resistance reduce resistance by turning the hex anticlockwise until correct resistance is felt to sitting naturally

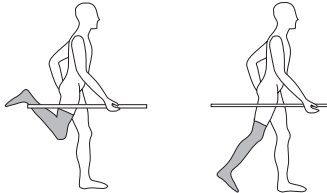


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Dynamic Alignment: Swing Resistance

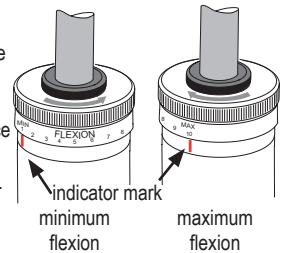
Flexion Resistance:

- Initial adjustments are factory set (Extension 2, Flexion 4)
- Observe the amputee walking
- If there is excessive heel rise: Increase resistance
- If there is insufficient heel rise: Decrease resistance



3

The flexion adjustment cap is numbered from left to right MIN to 10. Directly below the flexion adjustment cap is a red mark. When the flexion adjustment cap is turned counterclockwise until the MIN is over the red mark, flexion resistance is at minimum. By turning the cap clockwise the resistance is increased to a maximum setting at 10.

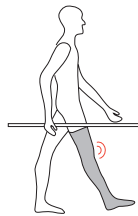


Warning! If adjusting the flexion resistance has no effect on heel rise, check stirrup is in down position and ensure that the amputee is initiating flexion whilst still loading the toe. Remember a hyperextension moment is needed about the knee to initiate flexion.

Extension Resistance:

- Observe the amputee walking
- If there is excessive terminal impact on knee extension: Increase resistance
- If the knee does not extend satisfactorily: Decrease resistance

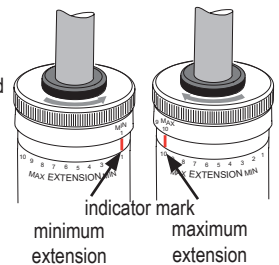
NB: As a 'rule of thumb' flexion resistance should exceed extension resistance



4

To adjust extension resistance use the same flexion adjustment cap. By turning the adjustment cap in the clockwise direction until it reaches maximum and then continuing, the indicator mark will begin moving from right to left.

The indicator mark will move clockwise from 1 to 10 on the extension marker which is located directly below the red indicator mark. The flexion adjuster cap should then be readjusted to the desired flexion resistance.



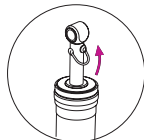
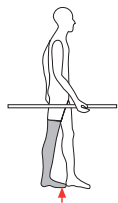
N.B, to reduce extension resistance turn the adjuster cap to minimum and continue turning until the desired extension resistance is reached. Readjust the flexion adjustment cap accordingly.

N.B. If there is any doubt over the position of the indicator ring in relation to the settings, its position can be reset by turning the adjustment cap to maximum flexion, then maximum extension prior to making any adjustments.

Stirrup function and features

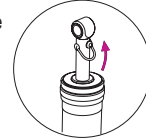
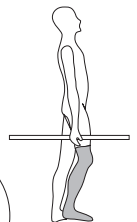
How to switch off stance resistance (for cycling etc)

- Load toe of prosthesis
- Lift lever (stirrup)
- Stance now off and knee will be unstable
- Lower stirrup to resume normal operation

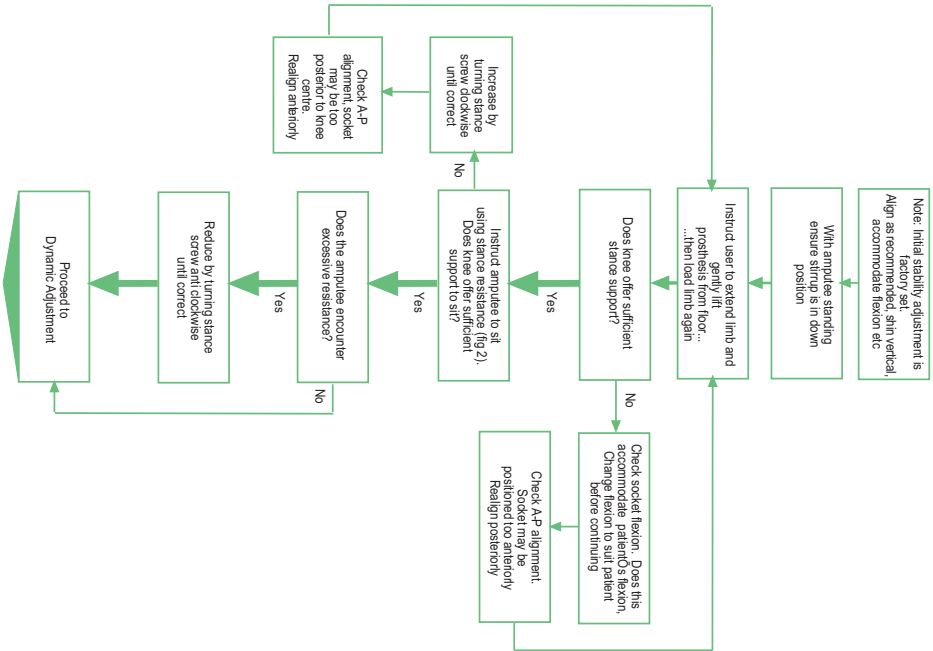


How to lock knee against flexion (for prolonged standing etc)

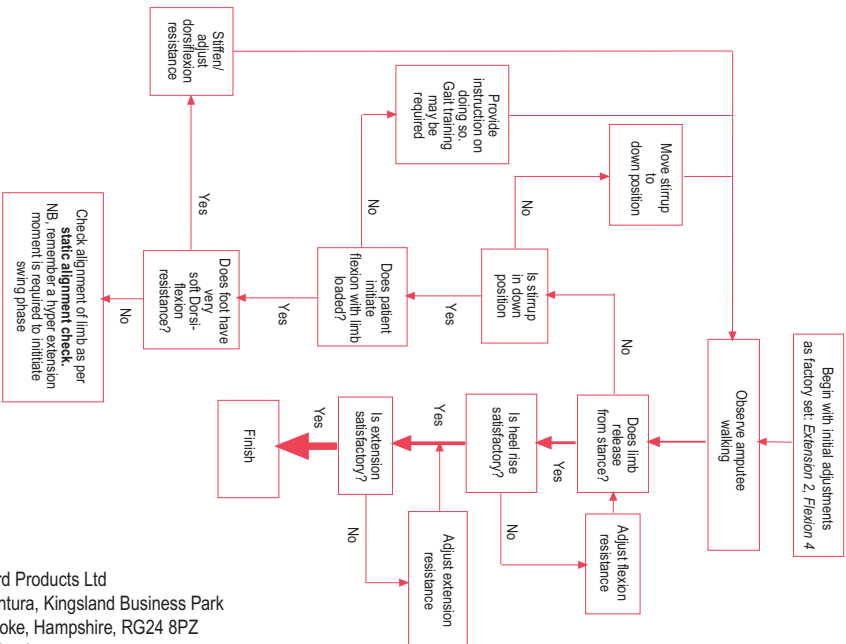
- Flex knee slightly without overriding stance resistance
- Lift stirrup
- The knee is now locked against flexion but will extend
- Lower stirrup to resume normal operation



Static Alignment Check



Dynamic Adjustment



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