

M0703 DOLPHIN

Compact Hydraulic Single Axis Knee



P/N	Material	Product Weight	Weight Limit	Warranty
M0703	Aluminum	495g	100kg	2 year

Features:

- Hydraulic Single Axis knee with low resistance initial swing technology provides easy and smooth transition from stance to swing phase.
- Extremely Stable Knee Axis Position
- Extremely Light Weight, Slim and Compact
- Ideal for a patient requiring light prosthesis and for a child patient that requires more than conventional pediatric knees but not big enough for standard hydraulic knee.

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Lightweight, Slim, and Compact

The main component members use aluminum alloy for weight reduction. Slim and compact, this makes it possible to put a sporty finish on the cosmetic covering so that it can suit women, those who are slender, and children.

Extremely Stable Knee Axle Position

As compared with conventional floating single axis knees, Dolphin has set up a knee axis position backward. This provides excellent stability at an early stance phase, making it possible to use less muscle strength to be in voluntary control of the knee joint. Dolphin can be used by those who are capable of voluntary control; those who have been using it by keeping the brake sensitivity of a load brake down to a minimum, as well as current user of the floating single axis knees. The gait of users who are in voluntary control looks more natural if they can possibly go without the stance phase control.

A Hydraulic Cylinder Giving Consideration to Pre-Swing

We refer to "flexion of the knee joint which takes place at the final stage of the stance phase" as "preliminary flexion of the knee joint towards the swing phase" to imply the Pre-Swing (See Fig.1 Hatching).

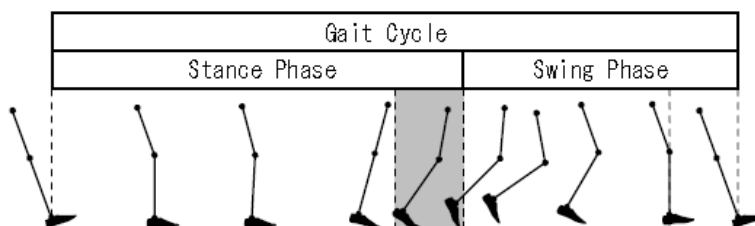


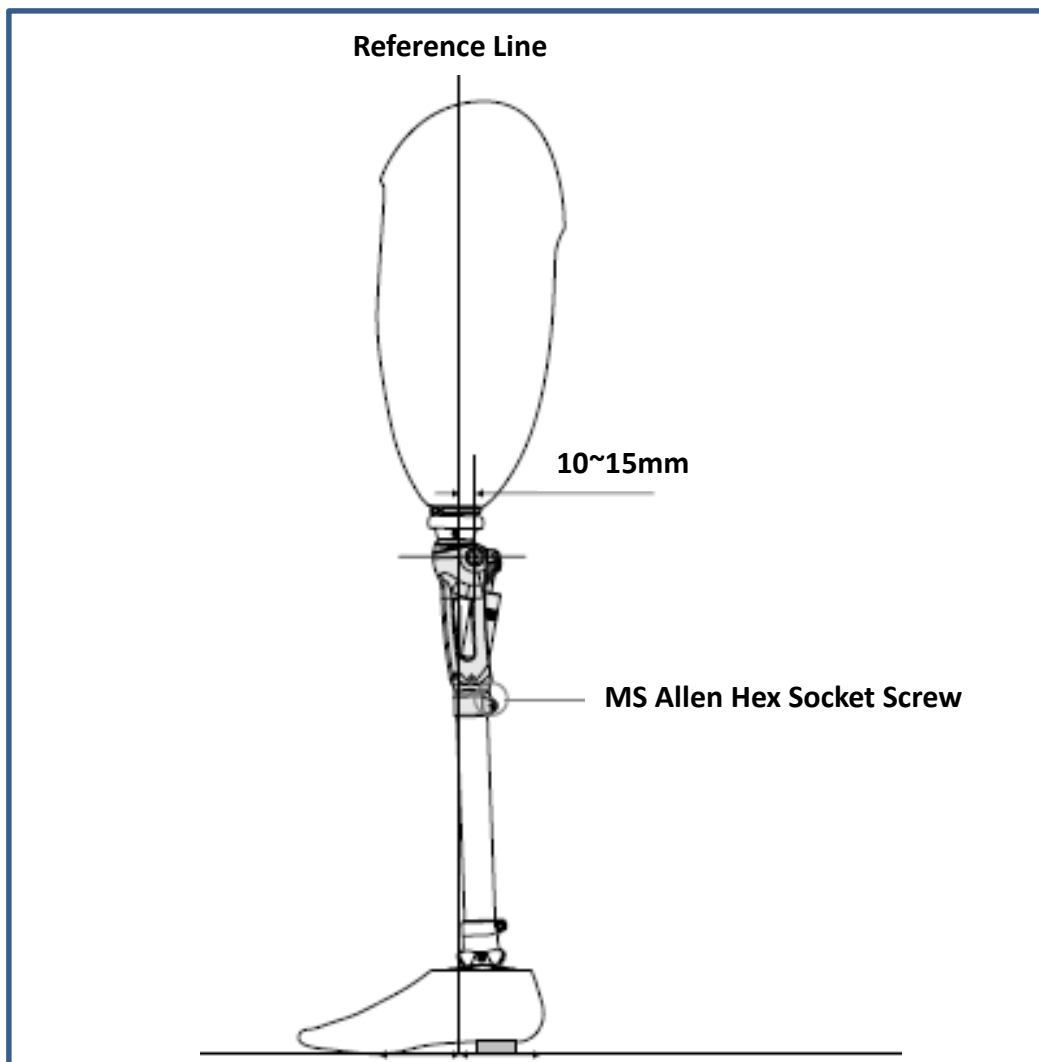
Fig.1 Pre-Swing

The ease of Pre-Swing performance influences the smoothness of the gait.

The knee joint that provides an easy pre-swing allows a smooth transition to be made to the swing phase where the start of the movement feels light. On the contrary, the difficulty of the pre-swing makes the start feel heavy, making it impossible for a smooth transition to be made to the swing phase. The characteristics of the hydraulic cylinder for the knee joint have an effect on the pre-swing. For hydraulic cylinders which generate strong oils piezoresistance simultaneously with a flex initiation, interference of this oil piezoresistance makes the pre-swing difficult. Since conventional oil pressure knees had a large majority of difficulties in the pre-swing, many amputees poorly evaluated them ("oil pressure knees are heavy in knee swing"), the result being that they were avoided.

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Tightening Torque

	Tightening Torque	Hexagon Wrench Used
M5 Allen Hex Socket Screw	7~8.0Nm	4 mm Hexagon Wrench

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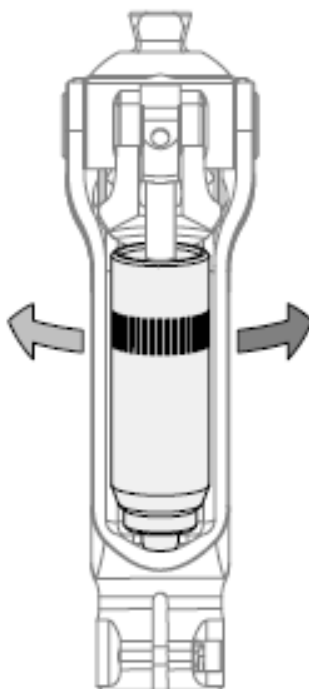
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Adjustment of Hydraulic Cylinder for Flexion Resistance

- Turn the hydraulic cylinder right and left from backward for adjustment.
- The range of adjustment is approximately 2 rotations from the minimum oil piezoresistance to the maximum.
- Flexion resistance is in the intermediate state in the product's default setting.

Clockwise rotation

- decrease Flexion Resistance



Counter clockwise rotation

- increase Flexion Resistance

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Adjustment of Hydraulic Cylinder for Flexion Resistance

- Turn an adjustment screw using a hexagon wrench for adjustment.
- The range of adjustment is approximately 2 rotations from the condition where the adjustment screw is loosened completely (minimum resistance to the extension: in the product's default setting).
- Resistance to the extension is in the intermediate state in the products default.

