

3R85 *Dynion* Justification.

The *Dynion* is the first Ottobock hydraulic default stance, mechanical knee joint. Traditional default-stance mechanical knees only have one criterion (knee hyperextension) to release the knee from stance to swing. This can result in situations where the knee loses stance stability unexpectedly for the patient. The *Dynion* uses two criteria for stance release, thus providing additional stability and security for patients during normal activities of daily living.



Dynion also provides knee stability (resistance) in case of a stumble. If swing extension is interrupted, *Dynion* will switch back to its default stance function which could provide enough resistance to allow patients to regain their balance. The *Dynion's* patented rotary hydraulic aggressively responds to varied terrains and obstacles, ensuring a stable response for the active transfemoral amputee. Designed for all above-the-knee levels of amputation at the K3 and low-K4 Medicare functional levels, the *Dynion* will provide exceptional performance across a variety of environments for the active and moderately active user.

^{1,2,3} Fluid Swing & Stance Control (L5828)

The *Dynion* is a monocentric knee joint with a patented rotary hydraulic to control stance and swing phase. Swing and Stance resistance can be adjusted by dials located under the Adjustment Panel. Swing phase is initiated upon successfully meeting the stance disengagement criteria. Stance resistance is activated by foot load or interruption of swing. Users can walk with various speeds and cadences on most terrains.

^{1,2} Adjustable, Stance Flexion (L5845)

The *Dynion's* stance flexion resistance can be adjusted via dial. Stance Flexion is hydraulic resistance against the bending of the knee. This feature on the *Dynion* provides flexion (bending), mimicking the eccentric action of the quadriceps muscle. This controlled knee flexion occurs in early stance phase during weight bearing, and also provides shock absorption and reduced impact, thus allowing the patient to securely walk up and down slopes and ramps, negotiate uneven/ challenging terrain, and some users may be able to descend stairs step overstep. Adjustments can be made to ensure the patient is provided a high flexion resistance support when needed. High flexion resistance is necessary for when the patient needs to sit down in a chair, walking down inclines, and stairs step-over-step.

^{1,2} Knee Extension Assist (L5850)

The knee extension assist spring on the *Dynion* is used in promoting knee extension at the beginning of swing phase extension. This function allows the user to walk more efficiently at variable cadence since the spring extension assist mechanically limits the knee flexion at the end range and begins to bring the knee into extension for a more symmetrical gait at faster walking speeds. It also ensures the knee comes to full extension for the beginning of stance phase for a more secure loading condition.

^{1,2} Manual Lock (L5925)

The manual locking feature on the *Dynion* allows the user to lock the knee in full extension for safer standing or more comfortable standing due to equal weight distribution on the prosthetic and sound sides. The manual lock can be activated and deactivated by using the button located on the side of the knee axis. The knee must be fully extended to activate and deactivate the manual lock.

^{1,2,3} Stance Extension Dampening (L5848)

After the knee is flexed during initial contact in early stance phase (stance flexion), the knee will extend again to advance the body forward through mid-stance. The *Dynion* knee will apply a progressive hydraulic fluid resistance in order to provide a smooth extension of the knee. Without this function, the patient would feel a pronounced “snap back” due to terminal impact and would also present with an unnatural gait pattern. Energy is conserved by having this feature, as patients will not have to attempt to control this motion with their residual limb muscles.

^{1,2,3} Stance Extension Dampening (L5848) cont.

Dynion uses a combination of hydraulic fluid regulation, extension stop bumpers, and an extension spring to control stance and swing extension. Hydraulic fluid flows through three distinct channels: a stance flexion channel, a swing flexion channel, and the stance and swing extension channel. In the last 35 degrees of extension (both stance and swing), the adjustable extension channel narrows (via an individual valve), increasing resistance which provides a dampening effect.

¹ L-Codes apply to U.S Reimbursement only.

² The product/device “Supplier” (defined as an O&P practitioner, O&P patient care facility, or DME supplier) assumes full responsibility for accurate billing of Ottobock products. It is the Supplier’s responsibility to determine medical necessity; ensure coverage criteria is met; and submit appropriate HCPCS codes, modifiers, and charges for services/products delivered. It is also recommended that Supplier’s contact insurance payer(s) for coding and coverage guidance prior to submitting claims. Ottobock Coding Suggestions and Reimbursement Guides are based on reasonable judgment and are not recommended to replace the Supplier’s judgment. These recommendations may be subject to revision based on additional information or alpha-numeric system changes.

³ For Medicare, Patient must be functional level K3 to use this code. Please verify coverage with your payer.

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