

DURASHOCK

from Fillauer LLC



**PRODUCT
MANUAL**

Fillauer
COMPANIES

TABLE OF CONTENTS

Introduction	4
Features and Benefits	5
Indications and Contraindications	5
Frequently Asked Questions	6
Product Selection	7
Selection guidelines	8-11
Installation	12-14
Maintenance and Care	15
Warranty	15
Troubleshooting	16
Instructions for Patients	17
L-Code Recommendations	17
Ordering Information	18
Pylon Clamps and Spacer Blocks	19

THE DURASHOCK FROM FILLAUER LLC

Fillauer is proud to offer the DuraShock as part of its extensive line of quality orthotic and prosthetic components.

The DuraShock is a new development in prosthetic technology. While shock/torsion reducing pylons have been available for several years, the DuraShock offers several significant improvements over previous designs.

The main benefit of a shock/torsion reducing pylon is that it simulates the rotation and shock absorption of the natural limb during stance phase. All lower limb amputees benefit from shock/rotation reduction, especially transfemoral users, who require greater motion damping at heel strike since the knee and ankle are not present. Beneficial for everyday use, shock/torsion reduction is most noticeable during activities such as gardening, hiking, tennis, or golf.

U.S. Patents 6,468,315 and 6,682,569



FEATURES

- 3 different stiffness options
- 4 configurations—Short and Long Pylon, Tube Clamp, and Shorty
- Up to 60° of axial rotation (30° in each direction)
- Shock absorption for increased socket comfort
- Maintenance free design
- Clearance as low as 3.5 in. (89 mm)
- Standard 30 mm pylon or heavy duty 34 mm pylon
- Titanium core technology

BENEFITS

- Reduction of forces to residual limb
- Requires no lubrication or bumper changes
- Smooth motion created by the dynamic elastomer
- May increase stride length
- Compact design requires minimal clearance

INDICATIONS

- Above knee amputations (transfemoral)
- Below knee amputations (transtibial)
- Activities requiring twisting, turning or uneven terrain
- Patients needing a reduction in vertical shock or torsion due to residual limb, knee, hip or back pain

CONTRAINDICATIONS

- General lack of balance and coordination
- Very high activity level such as competitive sports (K4)

FREQUENTLY ASKED QUESTIONS

Why choose the DuraShock?

The DuraShock is maintenance free and easy to use. In addition, the superior function of the DuraShock better approximates the biomechanical rotation and shock of the natural limb.

The DuraShock has a lot of rotation. Will the patient acclimate to this function?

Yes, in most cases. Although rotation in the lower extremity is natural, it is not included in many prosthetic designs. The control of this range of motion may require a few days to master. After a week or so most patients like it so much they find it hard to return to a limb without rotation.

Can the rotation and shock function be adjusted or fine-tuned?

Yes, using the dampening ring you can fine-tune the performance of the device. See instructions under “Dampening Ring” in this manual.

What is the weight limit for the DuraShock?

Currently the weight limit is 250 lbs. (113 kg) overall. However, individual weight limits for each model are outlined in the “Selection” section of this manual.

Does it matter which end of the DuraShock attaches to the socket?

No. It may be preferable to keep the heavier shock portion more proximal to reduce the “swing weight” of the overall prosthesis.

Is there a tube clamp version?

Yes, there is a tube clamp version. See all versions available under the “Selections” section of this manual.

PRODUCT SELECTION OVERVIEW

The DuraShock is available in Long and Short Pylon versions, Tube Clamp versions, and also in a pyramid/pyramid receiver version called the Shorty. Each version is available in three different levels of firmness. Pylons with the red elastomer are the softest while the black is the firmest and blue is medium firmness. Selection is based on patient weight and activity level.

Selection begins with rating the patient as “less active” (functional level K2) or “more active” (functional level K3). Using this information the practitioner can then select the appropriate level of firmness from the chart on the following page.

The long pylon may provide additional rotation and shock absorption. If sufficient clearance is not available for fitting of the long version, then the short version is indicated. The weight ratings are lower for the Short Pylon, Tube Clamp, and Shorty versions so please refer to the proper selection chart.

If a patient is on the borderline between two firmnesses, it is recommended to use the firmer pylon.

DURASHOCK TUBE CLAMP VERSION

The DuraShock is available with 30 mm tube clamp that may be preferred if working with a patient who has not worn a shock/rotator before and where acceptance or other component selections may be in question. A short tube adapter (as shown) or a standard 30 mm pylon may be used with this version.

ATTACHMENT OPTIONS

Short Tube Adapters for lowest clearance

60558 Ti, 100 mm

61352 Al, 200 mm

Or any standard 30 mm pylon







DURASHOCK SHORTY VERSION

The DuraShock Shorty is the lowest clearance shock absorber rotator available. With its short 3.5 in. (89 mm) build height and versatile pyramid/pyramid receiver design, it fits easily into almost any prosthesis. The DuraShock Shorty’s titanium construction also makes it strong, light, and very durable.

SELECTION GUIDELINES

DURASHOCK LONG PYLON VERSION





Selection is based on patient weight and activity level. The long pylon is preferred and should be used whenever possible.

Type	Long Pylon			
Moderate Activity Level K2	Less than 144 lbs. (65 kg)	145–179 lbs. (66–81 kg)	180–220 lbs. (82–100 kg)	220–250 lbs. (100–113 kg)
More Activity Level K3	144 lbs. (65 kg)	145–169 lbs. (66–76 kg)	170–220 lbs. (77–100 kg)	220–250 lbs. (100–113 kg)
ISO Max Weight Rating	220 lbs. (100 kg)	220 lbs. (100 kg)	220 lbs. (100 kg)	250 lbs. (113 kg)
Pylon	30 mm	30 mm	30 mm	34 mm
Minimum Build Height	5.75 in. (14.6 cm)	5.75 in. (14.6 cm)	5.75 in. (14.6 cm)	6.75 in. (17.1 cm)
				
Part Number	DS003L	DS002L	DS001L	DS004L

NOTE: Weights are a suggested guide for torque and shock performance. Individual preference and performance will vary.

DURASHOCK SHORT PYLON VERSION




Selection is based on patient weight and activity level. The long pylon is preferred and should be used whenever possible.

Type	Short Pylon			
Moderate Activity Level K2	Less than 144 lbs. (65 kg)	145–179 lbs. (66–81 kg)	180–220 lbs. (82–100 kg)	220–250 lbs. (100–113 kg)
More Activity Level K3	139 lbs. (63 kg)	140–169 lbs. (64–76 kg)	170–200 lbs. (77–91 kg)	200–250 lbs. (91–113 kg)
ISO Max Weight Rating	220 lbs. (100 kg)	220 lbs. (100 kg)	220 lbs. (100 kg)	250 lbs. (113 kg)
Pylon	30 mm	30 mm	30 mm	34 mm
Minimum Build Height	4.75 in. (121 cm)	4.75 in. (121 cm)	4.75 in. (121 cm)	5.0 in. (127 cm)
				
Part Number	DS003S	DS002S	DS001S	DS004S

NOTE: Weights are a suggested guide for torque and shock performance. Individual preference and performance will vary.

DURASHOCK TUBE CLAMP VERSION





Selection is based on patient weight and activity level. The long pylon is preferred and should be used whenever possible.

Type	Tube Clamp		
Moderate Activity Level K2	Less than 144 lbs. (65 kg)	145-179 lbs. (66-81 kg)	180-220 lbs. (82-100 kg)
More Activity Level K3	144 lbs. (65 kg)	140-169 lbs. (64-76 kg)	170-200 lbs. (77-91 kg)
ISO Max Weight Rating	220 lbs. (100 kg)	220 lbs. (100 kg)	220 lbs. (100 kg)
Pylon	30 mm	30 mm	30 mm
Minimum Build Height	6.5 in. (16.5 cm)	6.5 in. (16.5 cm)	6.5 in. (16.5 cm)
			
Part Number	DS003SC	DS002SC	DS001SC

NOTE: Weights are a suggested guide for torque and shock performance. Individual preference and performance will vary.

DURASHOCK SHORTY VERSION

Selection is based on patient weight and activity level. The long pylon is preferred and should be used whenever possible.

Type	Shorty			
Moderate Activity Level K2	Less than 144 lbs. (65 kg)	145-179 lbs. (66-81 kg)	180-275 lbs. (82-125 kg)	220-250 lbs. (100-113 kg)
More Activity Level K3	144 lbs. (65 kg)	140-169 lbs. (64-76 kg)	170-250 lbs. (77-113 kg)	200-250 lbs. (91-113 kg)
ISO Max Weight Rating	275 lbs. (125 kg)	275 lbs. (125 kg)	275 lbs. (125 kg)	300 lbs. (136 kg)
Minimum Build Height	3.5 in. (8.9 cm)	3.5 in. (8.9 cm)	3.5 in. (8.9 cm)	4.25 in. (10.8 cm)
				
Part Number	DS003SS	DS002SS	DS001SS	DS004SS

NOTE: Weights are a suggested guide for torque and shock performance. Individual preference and performance will vary.

INSTALLATION

Installation of the DuraShock pylon is much the same as a standard pylon. There are, however, a few differences to consider.

Orientation

The pylon may be installed with the pyramid receiver in the proximal or distal position (up or down) without effect on the performance.

Attachment and Alignment

The DuraShock pylon versions have a pyramid receiver on one end and a 30 mm or 34 mm pylon on the other. The DuraShock with tube clamp has a 30 mm tube clamp opposite the pyramid receiver. The Shorty version has a pyramid on the other end. Standard installation would be to attach the receiver end to a pyramid for alignment and attach a tube clamp to the other once it has been cut to the desired length. For the tube clamp version, a short tube adapter or short 30 mm pylon should be used. For the Shorty version, a pyramid receiver device is used to connect to the pyramid. Alignment screws should be tightened to 144 in.-lbs. (16N-m) and the securing bolt on the tube clamp version should be torqued to 90 in.-lbs. (10N-m).

DAMPENING RING

A dampening ring is provided with the DuraShock and is used to fine tune the performance of the unit. Use of the dampening ring increases general stiffness for vertical shock and rotation. The ring is placed around the elastomer section and tightened down with wide-jaw pliers such as Channellock® pliers. An additional ring may be ordered and used for extra shock and rotation dampening.

The more the dampening ring is tightened, the less rotation and vertical travel the unit will have. In addition, placing the ring more distal will limit vertical travel while allowing more torsion.

Ensure that the ring always has some tension on it to keep it from sliding off the shock. The dampener ring is released by sliding two grooved sections apart.

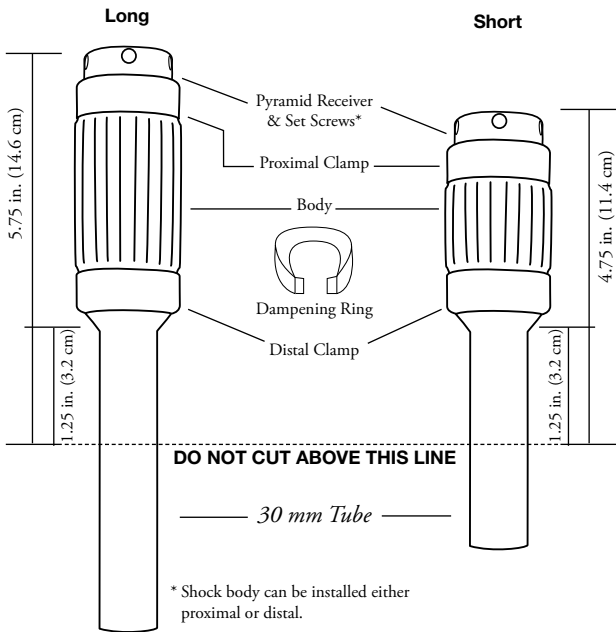
INSTALLATION FOR DURASHOCK WITH TUBE CLAMP OR SHORTY VERSION

Minimum length for installation of the tube clamp version is 6.75 in. (17 cm) when using a short tube adapter. The pylon or short tube adapter is cut to the desired length for required limb length and inserted into the clamp portion of the pylon. Please note: the pylon or short tube adapter must be fully inserted into the clamp adapter or failure may result. The Shorty version requires a pyramid receiver on one end and a pyramid device on the other. Please read the 30 mm and 34 mm pylon installation sections as they contain other information regarding installation of all DuraShocks.

CUTTING THE 30 MM PYLON

The minimum length for the short pylon version is 4.75 in. (11.4 cm) and the minimum length for the long pylon version 5.75 in. (14.6 cm). The pylon may be cut using a standard tube cutter, hack saw, or band saw. Care should be taken to ensure this valuable pylon is not cut too short. Pylons are marked with a line indicating minimum cut length. The vertical travel of the DuraShock is designed to be close to that of the natural limb. Therefore, it is not necessary in most cases to compensate for the travel when cutting the pylon.

30 mm	Long Pylon	Short Pylon	Tube Clamp
Weight	15.1 oz. (428 g)	11.2 oz. (318 g)	11.6 oz. (330 g)
Length as Shipped	11.25 in. (28.6 cm)	7.5 in. (19.1 cm)	6 in. (15.2 cm)
Min. Length when cut	5.75 in. (14.6 cm)	4.75 in. (12.1 cm)	Min. Build Height 6.75 in. (17.1 cm)

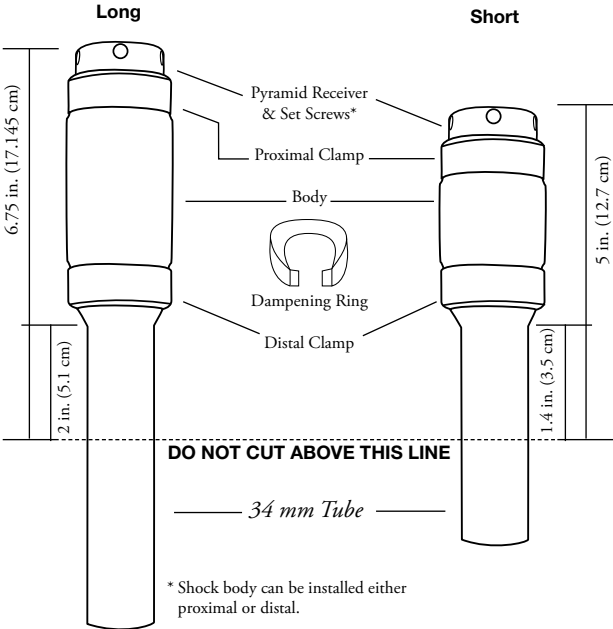


CUTTING THE 34 MM PYLON

The minimum length for the long pylon version 6.75 in. (17.145 cm) and the minimum length for the short pylon version is 5 in. (12.7 cm). The pylon may be cut using a standard tube cutter, hack saw, or band saw. Care should be taken to ensure this valuable pylon is not cut too short.

The vertical travel of the DuraShock is designed to be close to that of the natural limb. Therefore, it is not necessary in most cases to compensate for the travel when cutting the pylon.

34 mm	Long Pylon	Short Pylon
Weight	21.5 oz. (609 g)	15.0 oz. (425 g)
Length as Shipped	11.25 in. (28.6 cm)	7.5 in. (19.1 cm)
Min. Length when cut	6.75 in. (17.1 cm)	4.75 in. (12.1 cm)



MAINTENANCE AND CARE

The DuraShock is designed to be maintenance free.

LUBRICATION

The DuraShock is filled with a special permanent lubricant that will last the life of the unit. No lubricant should be used on or in the DuraShock as it may cause failure and will void the warranty.

CAP SCREW

The cap screw in the top of the DuraShock is not to be removed. It is the factory lubrication port. Turning this screw does not adjust the function in any way. Tampering with or removing this screw will void the warranty.

ADJUSTMENT

The alignment screws should be checked and torqued to the specifications of 144 in.-lbs. (16.3 Nm) once per year.

WARRANTY

Fillauer LLC will warrant the DuraShock to be free of defects in materials or workmanship for a period of One Year from the date of fitting. It is recommended that a copy of purchase invoice be marked with date of fitting and placed in patient chart as proof of purchase for warranty purposes.

The warranty will be voided if the weight rating for the pylon is exceeded or the pylon is modified in any way (other than cutting as instructed in the installation section). Evidence of obvious abuse or misuse will also void the warranty.

TROUBLESHOOTING

Description	Possible Cause	Solution
Too much rotation	Dampening ring	Ring may be loose—secure
	Wear/damage	Replace
Too much vertical displacement	Dampening ring	Ring may be loose—secure
	Weight limits	Check weight activity rating for model installed. Replace if indicated.
	Wear/damage	Replace
Noise	Dampening Ring	Ring may be loose—secure
	Wear	Inspect for malfunctioning condition
	Cover	Some semi-rigid covers may rub on pylon, socket, or foot shell in rotation
	Damage	Inspect for malfunctioning condition

INSTRUCTIONS FOR PATIENTS

CHANGES IN PERFORMANCE

Any changes in performance or noises that might develop should be reported immediately to the practitioner.

CLEANING

If the DuraShock is left uncovered, it should be rinsed with fresh water after exposure to corrosive environments. In addition the unit may be cleaned with mild soap and water.

LUBRICATION

Do not attempt to lubricate!

L-CODE RECOMMENDATIONS*

The following are suggested L-Codes for the DuraShock. The manufacturer and distributor of the DuraShock do not assume any liability for L-Code recommendations.

L-5988 Addition to lower limb prosthesis, vertical shock reducing pylon feature.

L-5984 All endoskeletal lower extremity prosthesis, axial rotation unit.

***Suggested L-Codes are provided as a reference only. It is the responsibility of the practitioner and/or patient care facility submitting this claim to determine and submit the correct coding within all established rules and guidelines.**

ORDERING INFORMATION

DURASHOCK PYLON

DS001S	30 mm, Short Pylon, Black, 220 lbs.
DS002S	30 mm, Short Pylon, Blue, 180 lbs.
DS003S	30 mm, Short Pylon, Red, 145 lbs.
DS004S	34 mm, Short Pylon, Heavy Duty, 250 lbs.
DS001L	30 mm, Long Pylon, Black, 220 lbs.
DS002L	30 mm, Long Pylon, Blue, 180 lbs.
DS003L	30 mm, Long Pylon, Red, 145 lbs.
DS004L	34 mm, Long Pylon, Heavy Duty, 250 lbs.
DS001SC	30 mm, Tube Clamp Version, Black, 220 lbs.
DS002SC	30 mm, Tube Clamp Version, Blue, 180 lbs.
DS003SC	30 mm, Tube Clamp Version, Red, 145 lbs.
DS001SS	30 mm, Shorty Version, Black, 220 lbs.
DS002SS	30 mm, Shorty Version, Blue, 180 lbs.
DS003SS	30 mm, Shorty Version, Red, 145 lbs.

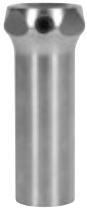
REPLACEMENT PARTS

DS009A	Align. Adjustment Screw, 5/16-24, SS
880293	Align. Adjustment Screw, M8 x 1.25 For Serial Numbers 2000 and Above (Serial Number etched in upper metal band.)
882520	Clamp Screw for DuraShock with Tube Clamp
128265	Dampening Ring for 30 mm
128268	Dampening Ring for 34 mm

PYLON CLAMPS AND SPACER BLOCKS

	<p>60247 Pylon Clamp, TI, 61 g 60400 Pylon Clamp, SS, 108 g 126100 34 mm Pylon Clamp, TI</p>
	<p>124170 Pylon Tube Clamp, AL with pyramid receiver, 93 g</p>
	<p>125106 Pylon Tube Clamp, AL Assembly, 30 g</p>
	<p>125820 1/4 in. Spacer Plates 125822 1/2 in. Spacer Plates</p>
	<p>125810 1/4 in. 4-Hole Spacer Plates 125812 1/2 in. 4-Hole Spacer Plates</p>

SHORT TUBE ADAPTERS

	<p>60558 Titanium, 100 mm 61352 Aluminum, 200 mm</p>
---	---



Hosmer

561 Division Street
Campbell, CA 95008
800.827.0070
408.379.5151
www.hosmer.com

Fillauer LLC

2710 Amnicola Hwy
Chattanooga, TN 37406
800.251.6398
423.624.0946
www.fillauer.com

Centri®

Kung Hans Väg 2
192 68 Sollentuna, Sweden
+46 8 505 332 00
Fax +46 8 505 332 05
www.centri.se