The Bartlett Tendon Universal Knee BTK is a uniquely designed and patented prosthetic knee system that performs in the widest range of environments, from the highest activity sports to low activity patient rehabilitation.

Natural ergonomics, proven performance and everyday reliability.

The Bartlett Knee is perfect for anybody, for just about any activity you want to do. Designed by professional downhill mountain biker, Brian Bartlett, this knee has years of proven performance in the most demanding and extreme applications.

The Most Natural and Adaptable Knee Available.

The BTK is unlike any knee addressing amputee sports and rehabilitation activities.

By incorporating a unique and creative design the BTK mimics the smooth fluid function of a natural knee.

This action is accomplished by the combination of the newest generation 4.2 Monarch air/oil Rock Shox unit and a patented multi-durometer elastic tendon configuration.

This technology works together to provide a muscle driven system that delivers smooth consistent energy return and unique user feedback.

Features & Benefits:

- Mimics natural muscle function
- Adjustable tendon durometers
- Adjustable extension stops
- Adjustable dampening and rebound
- 350lbs K4+ activity
- Use in any environment
- Light and strong
- Military approved

Bartlett Univeral Tendon Knee (BTK) System by By Leftside Industries, Inc
Fabtech Systems doc#: 001 date: 09.27.11

Phone: 800.FABTECH | Fax: 425.349.9559

Bartlett Tendon Universal Knee System

PRODUCT INFORMATION SHEET

fabtech systems

Technical Data

Measurements:

1. Uppermost top base to bottom of knee– 9.5”
2. Center axis to bottom of knee-8.375” Weight 1.8lbs

Weight Limit

350lbs

Adjust shock pressure with included shock pump.

Fabtech PLUSeries Composite 1 adhesive included.

All aluminum parts are anodized to military spec.

The proprietary urethane compounds used in the tendons construction are incredibly strong and provide smooth life-like function when combined with the air/oil shock.

Photo: Adrian Hair

“I guarantee you will be amazed at what you can do with this knee! The BTK knee can and will allow you to take your sport to the next level. This unique knee will actually allow you to not only stand up out of the saddle and take in drops and jumps, but will also allow you to stand up and sprint!”

Satisfied Customer Glenn—UK

Compatible Sports and Rehabilitation:

Winter Sports

- Snowboarding
- Alpine skiing
- Telemark skiing
- Cross country skiing
- Ice skating
- Snow kiting

Water Sports

- Water skiing
- Wakeboarding
- Wind surfing
- Kite boarding
- Scuba diving
- Swimming
- Surfing

Summer Sports

- Mountain biking
- Road cycling
- Skate boarding
- Inline skating

Moto Sports

- Moto-cross
- Trail riding
- Snowmobile

Rehabilitation

- Build muscle
- Promote general fitness
- Increase active, qualtiy time with family

Manufacturer Recommended L-Codes:

L-5930 L-5824 L-5845 L-5822 L-5850

For more information and pricing call: 1.800.FABTECH

The Bartlett Tendon Knee (BTK) Difference

The first and only knee of this type - a Fabtech Exclusive.

The BTK is more than an oversized coil spring and simple shock design commonly seen when shopping for a high activity sports-only knee.

Inventor and professional downhill mountainbiker Brian Bartlett.

Large coil spring designs generate harsh jerky mechanical performance, and have many application limitations because the simple design.

The BTK overcomes harsh function by incorporating highly tunable state-of-the-art air/oil shock and multi-durometer elastic tendons. This unique design "smooths" out the knee action as it bends and extends through its cycle. Unlike mechanical steel springs that rely on compression to release its stored snappy energy, the BTK's tendons smoothly stretch and pull back, this resistance can be tuned by switching the tendons in different configurations in combination with adjusting the shock settings and pressure.

What could you do with a BTK ?

More Than Extreme Sports

The BTK is more than an extreme sports knee. Even though it is built to military spec and can handle incredible abuse, the BTK can also be used for activities ranging from aggressive downhill skiing, bike riding with the kids to rehabilitation activities, and anything in between.

Knee Specs:

The BTK knee is 9.5" tall, utilizes an industry standard 4 hole pattern with stainless steel inserts added for strength on the top and bottom. The upper carbon tendon connectors supplied with the knee kit are designed to attach to an existing composite socket using Fabtech Systems Composite One adhesive. The mounts can be attached in less than one minute. If attaching to a plastic socket, the tendon connectors can be riveted on and reinforced with the adhesive.

Military grade technology.

The lower aluminum tendon retainer is designed to slide along the 30mm or 34mm pylon, thus adding more adjustability with the tension in the tendons.

All aluminum parts are anodized to military spec. "Mil-A-8625 Type 3 Class 2". The result is an astoundingly strong device that is very light at 1.8lbs.

All parts are machined out of 6061T aircraft aluminum with the exception of the shaft pins and bolts that are machined out of stainless steel. We not only do this for strength but also to make the unit withstand any environments. ie: salt water, sand, snow, mud, etc.

Shock Specs:

The 4.2 Monarch Rock Shox shock supplied with the knee unit is hard anodized and has an air/oil capability from 5psi to 275psi. The shock has been tested at 330psi which can handle close to a 600lb. compressive hit.
The knee shock unit is highly adjustable, simply adjust it to the weight and residual limb leverage of the user and sport you are using it for at that time.

The integrated Rock Shox assures readily available parts and service.

Example of Shock Settings:

A short limb AK with a field amputation with little leverage over the knee, the adjustment for road biking is 0psi in the shock chamber with the rebound (red dial) fast and the compression (blue lever) at a minimum setting while using two soft tendons. When downhill mountain biking the user runs with 10psi in the shock chamber and the compression at middle setting, rebound set to fast and one hard tendon on the medial side and one soft tendon on the lateral side. When snowboarding or wake boarding the user adjusts the shock at minimal settings while using soft tendons. Since users are not the same shape and size, the adjustments may not be the same but they give you an idea of settings and configurations.

General Information About Tendons and Applications:

Soft Tendons:

Soft tendons are designed to provide light resistance during "push off", yet not work against the user in the activity they are performing.

In some cases, especially in rehabilitation applications the user may only use one soft tendon just to help aid in rebuilding muscle. A good example is a seated row machine.

When diving or snorkeling the shock unit is removed and only one soft tendon is necessary to aid in kicking and swimming motions.

(Continued next page)

(Tendon info continued)

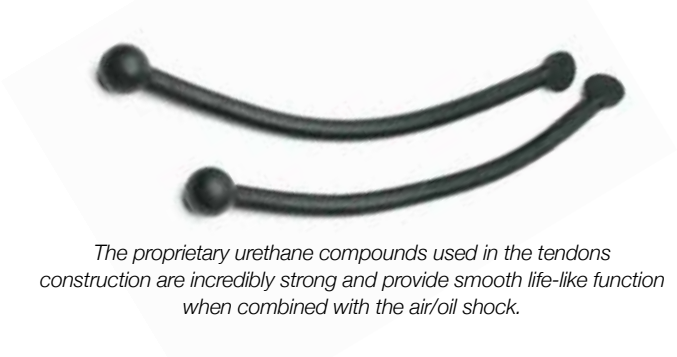
Recommended Applications for Hard Tendons:

Road biking, XC mountain bike, velodrome cycling, recreational bike riding, crewing, roller blading and roller skating, XC skiing, snowboarding, wake boarding, stand up/ sit down jet skiing, water skiing, soccer, cricket, badminton, tennis, roller derby, hockey, figure skating, base jumping, stand up surf/paddle, etc.

Note: To be used in sports like tennis and the knee has to be fitted with the correct foot and ankle running set up and may only use one soft tendon to give resistance in the "Lunge" movement.

Hard Tendons:

Hard tendons are designed to be used for a person that is heavier in weight or is participating in more aggressive hard impact sports. In these applications the user is going to manipulate the hard tendon to "push against". The hard tendon provides a natural feel of just riding the knee while it delivers the support and tension to pull out of a crouched position.



The proprietary urethane compounds used in the tendons construction are incredibly strong and provide smooth life-like function when combined with the air/oil shock.

Recommended Applications for Hard Tendons:

Downhill mountain biking, motocross, snowmobiling, alpine skiing, tele skiing, snowboarding, tow-in surfing, alpine ski jumping, etc.

Note: To be used in sports such as teleskiing the user can ride the tension moment in the knee during harder impacts not to be so dynamic, but more to feel a "bounce" sensation.

Mixing the Tendons:

Some users may want to mix the tendons to fine tune the knee to the activity they are doing. By utilizing one hard tendon and one soft tendon at the same time a more dynamic feel may be accomplished, while still being able to absorb a harder impact. We tend to like the harder tendon placed on the Medial side of the socket if a user is running a mixed set. The reason being that users tell us the residual limb feels a bit stronger in the socket on the Medial side. However, we recommend users and their prosthetist, try different configurations.

Combining tendon and shock settings gives the user control, resulting in higher, more natural performance from the most demanding sports to day-to-day use.

Knee Kit Contents:

The Bartlett Tendon Knee comes with everything you will need to get up and start being active:

- Fabtech Systems complete One Minute Composite Adhesive system
- Two "On the Spot" carbon upper tendon connectors
- Tendon connector placement template
- Rock Shox 2011 Monarch RT3 shock unit
- Rock Shox air pump
- Adjustable 30mm lower tendon retainer
- One set - soft tendons
- One set - hard tendons
- Instructional video

Warranty:

The Bartlett Tendon Knee System is warranted to be free from defects in materials and workmanship under ordinary use for up to one year from date of purchase, and must be accompanied by the original receipt.

Warranty applies to the original owner and is not transferable to subsequent parties. Warranty is void if the unit has been subjected to improper maintenance, alteration, improper repair and / or modification. Leftside Industries Inc. and Fabtech Systems LLC reserve the right to refuse warranty based on determination of defects caused by any other factor than manufacturer error.

All shipping costs associated with returning the product to Fabtech Systems LLC or Leftside Industries Inc. will be the responsibility of the party making the warranty claim.

For more information and pricing call: 1.800.FABTECH