

User Manual: Knee Arthroscopy Belt

Congratulations on your purchase of the Knee Arthroscopy Belt!

General information:

Version user manual: June 2024 (V0624)

Product name: Knee Arthroscopy Belt

Manufacturer: Knee Arthroscopy Belt B.V.

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Important Safety Information:

1. Read Before Use:

Please read this manual thoroughly before using the Knee Arthroscopy Belt to ensure safe and effective operation.

2. Consultation:

Prior to using the Knee Arthroscopy Belt, consult with a healthcare professional to ensure it is suitable for your condition and needs.

3. Usage Precautions:

The Knee Arthroscopy Belt is only intended to be used by orthopedic surgeons trained in arthroscopic knee surgery

Do not use the Knee Arthroscopy Belt without proper understanding of its intended use and instructions provided in this manual.

Avoid using the belt if you have open wounds, infections, or other contraindications as advised by your healthcare provider.

When pregnant, please consult your gynecologist before considering to use the KAB. Realize that when using the KAB intra-abdominal pressures can increase.

The device should be worn over the orthopedic surgeons unsterile OR suit and under the sterile gown. The device should not be worn directly on the orthopedic surgeons bare skin

Use the Knee Arthroscopy Belt only as directed. Misuse may result in injury or discomfort.

Be careful when putting the patient's leg on the brackets/belt. When using the KAB properly, the sterile surgical gown should not be perforated.

4. Device Description:

Main characteristics: The Knee Arthroscopy Belt is designed to improve ergonomics during arthroscopic procedures of the knee. It provides support to the lumbar spine of the surgeon and helps stabilizing the lower leg of the patient during surgery.

These characteristics make performing knee arthroscopy easier and with less effort. The Knee Arthroscopy Belt consists of an adjustable belt and 2 neoprene covered aluminum brackets which function as leg supports for the patients lower leg. The brackets are covered all around with 10mm neoprene, which distributes pressure and prevents tissue damage. On both sides of the brackets the overhang of the neoprene layer should be 10mm. Additionally this material helps preventing perforation of the sterile gown.

5. Assembly and Setup:

Adjust the belt of the Knee Arthroscopy Belt according to your waist size and comfort level. The belt must be tight so it can withheld the forces exerted on the brackets

Ensure that the neoprene is positioned in the right way around the brackets before use. The entire outside of the bracket should be covered with neoprene. On both sides of the aluminum brackets there should be 10mm overhang of the neoprene with respect to the aluminum edges to ensure prevention of damage to the patients skin or the sterile surgical gown.

Ensure that the belt with its belt buckle is intact without sharp edges due to damages before use.

6. Usage Instructions:

The Knee Arthroscopy Belt is only intended to be used by orthopedic surgeons trained in arthroscopic knee surgery

Our rough estimation is that it takes about 20 arthroscopic procedures to get a good feel for the KAB to experience its use properly.

The KAB is designed to relieve the lumbar spine of the surgeon and stabilize the patient's lower leg better during surgery. This allows the surgeon to apply more controlled varus and valgus stress to the patients' knee. In addition, the downward forces of the patient's leg are partially neutralized.

The belt itself should be tight enough not to slip during varus or valgus stress. However, the KAB loses its stabilizing effect on the LWK if it is worn too loosely.

The top position of the belt on the waist of the surgeon should be at the height of the umbilicus or slightly below the umbilicus.

Ideally, the belt buckle should sit centrally between the 2 neoprene covered aluminum brackets, with the end of the strap not extending past the brackets.

You can slide the supports along the strap as desired. The ideal positions are approximately at 10:00 and 14:00 (the umbilicus being 12:00).

The position of the foot/ankle on the brackets should be approximately at the level of the upper ankle joint. During varus stress, this will be the Achilles tendon/lateral malleolus/ventrolateral side of the ankle at the level of the upper ankle joint. During valgus stress, this will be the Achilles tendon/medial malleolus.

It is important to perform surgery with a horizontal pelvis. Put varus/valgus stress on the knee by moving in a horizontal plane while moving the table and/or a mechanical leg support vertically to further open or close the medial/lateral compartment of the knee.

Stabilizing the patient's foot/ankle when put on the leg support of the KAB is performed by a slight push to the lower part of the bracket with your hip/pelvis. During surgery you can improve this stabilization of the bracket by standing like a snowboarder with one foot somewhat in front of the other and your hip turned towards the patient

The degree of knee flexion can also be varied during surgery. When applying stress to the knee, it is important to determine which bracket position works best for you. Experience shows that they work best when positioned slightly more ventrolateral for shorter legs and that for longer legs, the supports can be placed further back. Varus stress is somewhat easier if you have slightly less knee flexion than usual. So if you normally use 90 degrees of flexion/figure of 4 position to open the lateral compartment well, with the KAB it will be approximately 20-60 degrees. This is to maintain proper tension and position of the foot/ankle on the brackets. Personal preferences will of course vary between surgeons.

Finally, it is possible to remove the strap during surgery. So, when the support of the KAB is not desired anymore, but the procedure is not yet over (for example, in an ACL reconstruction), you can simply loosen and drop the KAB under your sterile gown. However, our experience shows that it is quite comfortable to wear the strap throughout the entire procedure. It is also possible to operate sitting down with this strap, for example, when obtaining a hamstring graft at the beginning of an ACL reconstruction.

For additional reinforcement of the sterile jacket, an extra adhesive sterile cloth can be placed at the level of the Knee Arthroscopy Belt. This is to reduce the chance of damaging the sterile gown.

The belt should not be used for purposes other than those described above.

7. Photos









8. Care and Maintenance:

The Knee Arthroscopy Belt is not suitable for any kind of sterilization process. Cleaning and maintaining the materials of the KAB is allowed as described below

Clean the leather belt weekly with a damp cloth. Clean monthly with leather shampoo and use a leather conditioner to keep the quality of the leather sound. Allow it to air dry completely before storage

The neoprene can be cleaned weekly with a damp cloth. Clean monthly with neoprene shampoo. In case of intensive use, clean more often with neoprene shampoo. Allow it to air dry completely before storage

Avoid exposing the belt to extreme temperatures or prolonged direct sunlight.

Inspect the belt for any signs of wear or damage before each use. Discontinue use if any defects are found. Check the buckle and belt monthly to ensure that all screws/bolts are still tight.

The neoprene with loop strap (Velcro) is attached to the hook strap (Velcro) on the aluminum bracket. We strongly recommend replacing neoprene 1 time per year.

The belt lasts 2-3 years, depending on intensity of use.

In principle, the aluminum bracket should last for a longer period of time. If the bracket is bent or broken, it should be replaced.

9. Storage:

Store the Knee Arthroscopy Belt in a cool, dry place away from moisture and direct sunlight when not in use.

10. Warnings and Precautions:

Discontinue use of the Knee Arthroscopy Belt if you experience discomfort, pain, or skin irritation during or after use.

When there's discomfort when using the KAB it is advised to release a bit of pressure on the brackets or remove the foot/ankle of the patient from the bracket for a while.

Do not over-tighten the belt to avoid abdominal discomfort. When the belt is over-tightened it can be loosened without taking off the sterile gown. Beware not to damage the sterile gown.

Make sure that the foot/ankle of the patient is properly placed on the neoprene of the brackets to prevent damage to the soft tissues. The heel of the patient is allowed to be positioned on the belt itself for a short time of period.

The KAB is made for use under your sterile surgical gown. Make sure to check your sterile surgical gown for damages after the procedure. When in doubt please use an extra sterile cloth on top of your sterile surgical gown.

Please remember to replace the neoprene covering the aluminum brackets in time and in the right way to prevent damage to the patients soft tissues and your sterile gown. Also remember to replace the belt in time to ensure proper use of the KAB.

Consult your healthcare provider if you have any concerns about using the Knee Arthroscopy Belt.

11. Manufacturer Contact Information:

For questions, concerns, or assistance regarding the Knee Arthroscopy Belt, please contact our customer service department at: info@kneearthroscopybelt.com / www.kneearthroscopybelt.com

Thank you for choosing the Knee Arthroscopy Belt. We wish you a lot of safe, comfortable and ergonomic surgical procedures!