

kneeGRIP®

POSITIONING SYSTEM

Design Rational Technical Instructions



www.sunmedica.com
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kneeGRIP®

Surgical Positioning System

DESCRIPTION

The **kneeGRIP®** positioner is an intra-operative system of supports that are designed to hold the lower extremity with the knee flexed. This allows the surgeon and the assistant surgeon to direct their time and skills to the surgery, rather than holding the lower extremity.



kneeGRIP®



CARRYING CASE & PARTS DIAGRAM

- A** kneeGRIP® Foot Support
- B** kneeGRIP® Carrying Case
- C** kneeGRIP® 8" Upright Support
- D** kneeGRIP® 8" Upright Support Bar (AKA "I" Bar)
- E** kneeGRIP® Foot Support Foam Pad
- F** kneeGRIP® 8" Upright Support Pad
- G** kneeGRIP® Coversets (6 Come in each set)
Also sold in Cases of 25 Set-ups. Each disposable Set-up is a ziploc baggie that contains enough covers for one surgery.
- H** kneeGRIP® Thumb Screw

Intended Use

The kneeGRIP® system is intended for use in surgery of the lower extremity where knee flexion is a part of the surgery. This device is to be used by a surgeon well trained in orthopedic surgery and with a working knowledge of the anatomy of the femur.

Contraindications

The kneeGRIP® system is not designed or intended for any use except as indicated. The kneeGRIP® system should not be used when a patient's skin is so fragile that the pressure from the supports may injure the skin. The kneeGRIP® system puts pressure on the arch of the foot and over the greater trochanter, therefore, conditions such as bursitis or arthritis of these areas could be aggravated by the use of this device. If a tourniquet is used, then the kneeGRIP® system may put pressure on the lateral side of the tourniquet. The portal to the tourniquet should not be lateral as the pressure from the Upright Thigh Support may interfere with the tourniquet's function.

Warning

The kneeGRIP® should be placed and adjusted properly. Improper placement or positioning may result in ineffective function of the device or damage to the lower extremity.

Precautions

The directions for placement of the kneeGRIP® system are only approximate, the optimal position of the system may need to be determined at the time of surgery. On occasion the device may be ineffective and a different means of holding the leg will need to be utilized.

Sterility

The kneeGRIP® is generally a multi-use non-sterile device. The metal parts are either aluminum or stainless steel. The metal parts can be washed with soap/solvents or steamed for cleaning. Coversets help protect the closed cell foam pads which can be washed with soapy water. Do not autoclave the foam pads.

Disclaimer

SunMedica is not responsible for injury as a result of misuse or abuse of this product. Call SunMedica for any questions regarding proper use.

DIRECTIONS FOR USE

Patient Position:

The **kneeGRIP®** system is designed to aid the Orthopedic Surgeon and the assistant in performing a primary total knee replacement. The **kneeGRIP®** system provides support of the foot to keep the knee in a flexed position and support of the lateral proximal thigh to prevent hip abduction. This allows the surgeon and the assistant to direct their efforts toward the surgery.

Positioner Preparation:

The **kneeGRIP®** system is designed to work with the patient in the supine position. The pelvis should be level, especially if the bony landmarks are used as a reference for alignment of the knee replacement. The un-operated leg can be placed on pillows and secured to the operating table. It is also recommended that a pillow be placed distal to the foot support of the **kneeGRIP®** to support the calf and foot of the operated leg when the knee is extended. This prevents all of the weight of the leg from being borne on the foot support portion of the **kneeGRIP®** when the knee is extended. The tourniquet should be placed as far proximal as possible on the thigh.

Sequence of Placing Positioner:

STEP 1

Position the Foot Support

STEP 2

Position the Upright Support



STEP 1:

Position the Foot Support

The **Foot Support** (Figure 1) requires a 1" x 1/4" bar support that attaches to the operating table (not provided).

For most patients, the mid portion of the **Foot Support** (A) should line up with the distal aspect of the patella with the knee straight.

The height of the support depends on the softness of the operating table surface, the size of the patient and the thickness of the drapes. Usually, the undersurface of the **Foot Support** is placed about an inch above the table padding for a firm table top and at the surface for a soft table top.

Flex the knee and place the instep on the foot rest. Adjust the position of the **Foot Support** to reproduce the desired degree of flexion. This is illustrated in Figure 2.



Figure 1



Figure 2

STEP 2:

Positioning the Upright Support

The **Upright Support** (Figure 3) is positioned so that with the knee and hip flexed, the proximal thigh (and tourniquet) is supported, preventing abduction of the hip.

Place the cephalad border of the **Upright Support (C)** at the level of the greater trochanter. Slide the support toward the lateral thigh so that it just touches the tourniquet.

The **Upright Support Bar (D)**, also known as the “?” Bar, should be used to allow appropriate adjustment. Flex the knee and place the foot onto the **Foot Support**. Allow the hip to abduct and be supported by the lateral thigh support. Adjust the lateral **Upright Support** to achieve the position of the flexed knee that will be optimal for surgical exposure. This is illustrated in (Figure 4).

Figure 3

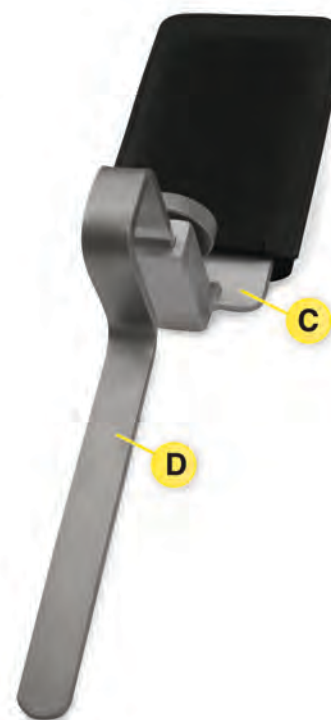
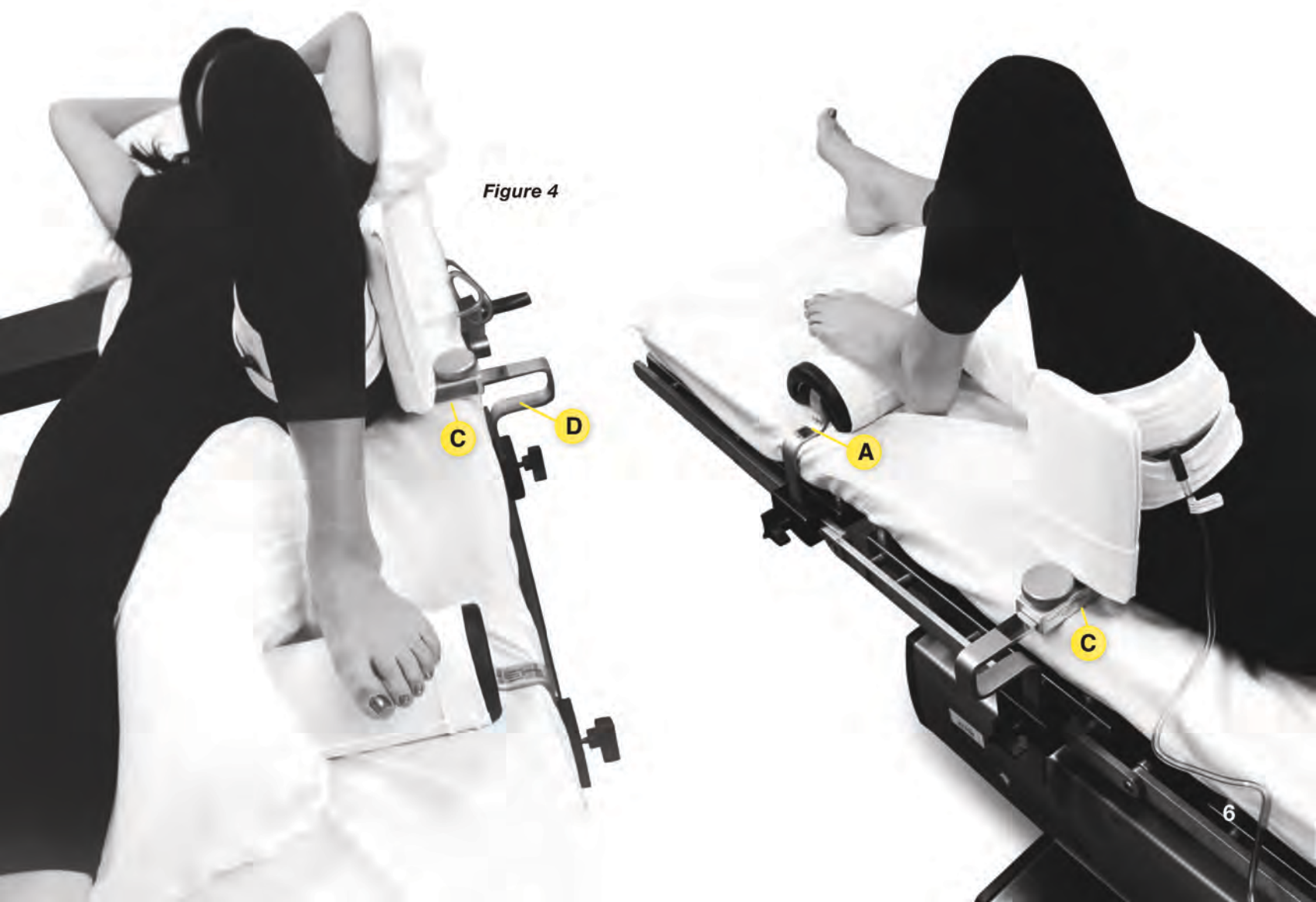


Figure 4



Precautions

- Do not widely abduct the thigh with the **kneeGRIP®** in place. This will lever the thigh against the lateral support and could injure the thigh or hip.
- Do not place the **kneeGRIP® Foot Support** too far down the table such that the toes are blocked by the **Foot Support** rather than the instep of the foot. This may injure the toes.
- Do not place the tourniquet connection lateral such that it is against the lateral support. This may cause the tourniquet to malfunction.
- This device may not work well in markedly obese patients and a different method of support needs to be utilized.
- If the pad on the **Foot Support** or on the lateral support are damaged, replace prior to any subsequent use.

Plastic Drape

It is important that a plastic drape be placed between the lateral support and the tourniquet. This provides a number of benefits. The interposed plastic drape allows the tourniquet and thigh to slide easily over the lateral support as the knee and hip are changed from flexion to extension during the course of the surgery. The drape also protects the lateral support and tourniquet from the chemicals that are used to prep the skin. The preferred drape is a U-drape that also covers the Foot Support. This is illustrated in Figure 5.



kneeGRIP® CLEANING INSTRUCTIONS

The **kneeGRIP®** is a non-sterile device. The metal parts consist of both aluminium or stainless steel.

Foam Pads

The foam pads are closed-cell polyurethane foam. Before use, cover the foam pads with SunMedica's disposable **kneeGRIP®** Coversets.

Clean the kneeGRIP® after each operative procedure and before returning parts to the storage case.

What are Coversets?

Coversets (Figure 6) are latex-free and are made of mostly cotton. They are specially designed to easily protect the foam pads as well as conduct body moisture away from the pad's contact areas. This protects the patient's skin from maceration. The Coversets DO NOT protect the foam pads. It is recommended that you use a U-drape to protect the pads from body fluids.

kneeGRIP® Coversets Item# D-070-007:

Sold by the box/case. Includes 25 "Set-ups".

Each "Set-up" is a ziploc baggie that contains the appropriate number of covers per surgery.

The recommended method for cleaning the foam pads is to use soapy water and then rinse with clean water. Thoroughly dry the pads prior to use. Operating room cleaners can be used but test the cleaner on a small non-contact area of the pad prior to use. It is very important to rinse with clean water as no cleaner residue should be left on the pad surfaces.



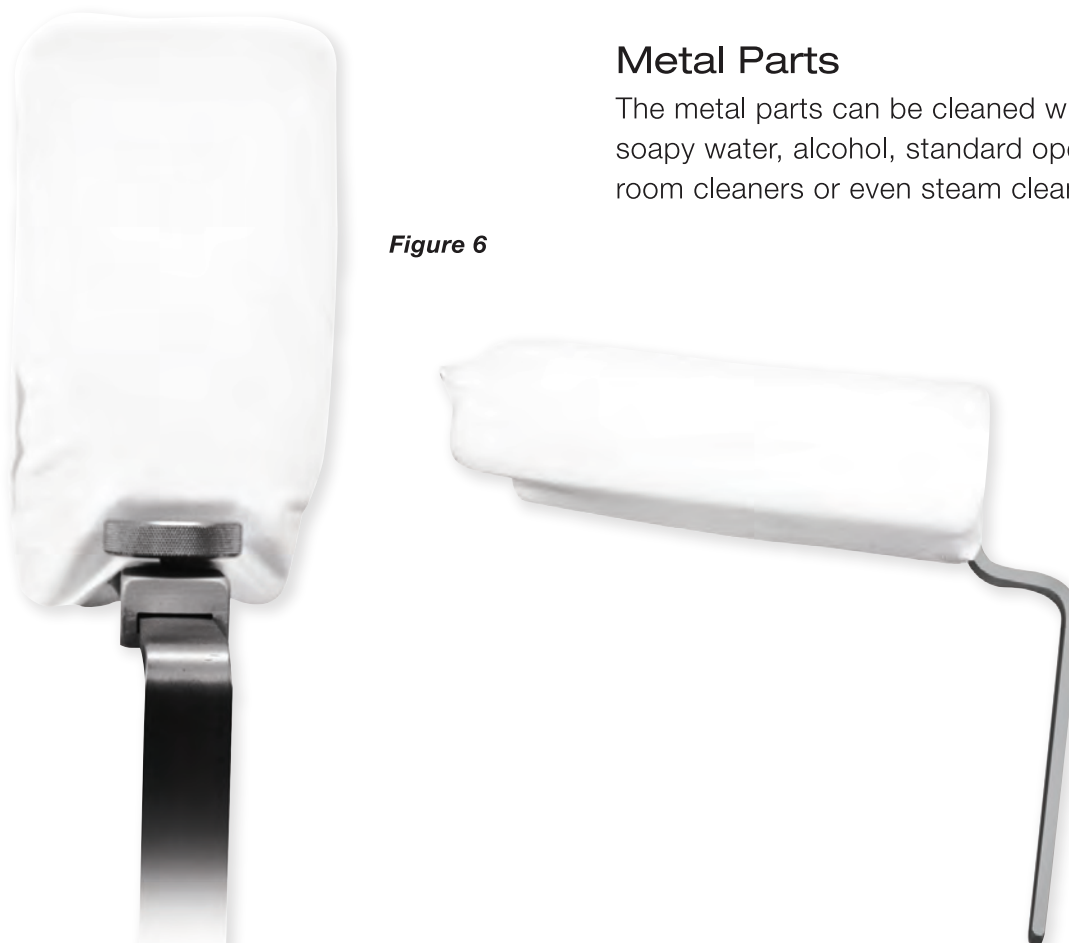
SunMedica has coversets available for all positioning devices. Each ziploc baggie is a "set-up".

Metal Parts

The metal parts can be cleaned with soapy water, alcohol, standard operating room cleaners or even steam cleaned.



Figure 6



INSTRUCTIONS FOR REPLACING FOAM PADS

Upright Support

- Remove old pad from support.
- Clean and lubricate surface with soap, wax or KY jelly (Figure 1).
- Place the thick side of pad on the opposite side of Thumb Screw and slide on (Figure 2).

Foot Support

- Remove old pad from Foot Support.
- Clean surface.
- Place the curved pad on the Foot Support and slide on (Figure 3).

Figure 1



Figure 2



Figure 3



IMPORTANT MESSAGE: FOAM PAD MAINTENANCE

To maintain soil free positioner pads you must take the following precautions:

- Use a U-DRAPE or similar drape to protect the positioner pads from solutions used in skin preparation and body fluids.
- Use the Coversets to conduct body moisture and prevent skin irritation. These covers DO NOT protect the foam pads from body fluids or skin preparations.

- Pads must be replaced when contaminated with patient body fluids; become hard or lose their resilience after extensive repeated use; damaged in any way that compromises the intended use.

Save Replacement Costs

You can save money on replacement costs by taking the above precautions to help avoid contamination of the foam pads from blood, body fluids or skin preparation solutions.

kneeGRIP®



View images of individual
parts, Coversets and pads at
www.sunmedica.com



ORDER#	PART	DESCRIPTION
D-070-100		kneeGRIP® Complete Set <ul style="list-style-type: none"> • 1-Foot Support + Foam Pad • 1-8" Upright Support + Foam Pad+ 8" Upright Support Bar + Thumb Screw • Coversets (1 Case/25 Set-ups) See "G" below • Carrying Case
D-070-001	A	kneeGRIP® Foot Support
D-070-002	B	kneeGRIP® Carrying Case
D-070-003	C	kneeGRIP® 8" Upright Support
D-070-004	D	kneeGRIP® 8" Upright Support Bar
D-070-005	E	kneeGRIP® Foot Support Foam Pad
D-070-006	F	kneeGRIP® 8" Upright Support Pad
D-070-007	G	kneeGRIP® Coversets (1 Case/25 Set-ups) <i>Each Set-up includes 1-Foot Support cover and 1-8" Upright Support cover</i>
D-070-010	H	kneeGRIP® Thumb Screw



