How to Measure Elvarex Lower-Extremity Garments

Knee-, Thigh-, and Waist-High Garments

Elvarex custom-made lower-extremity garments are available in Elvarex compression class 1 (18-21 mmHg), 2 (25-32 mmHg), 3 (36-46 mmHg), 3 Forte (36-46 mmHg), 4 (59-70 mmHg), and 4 Super (70-90 mmHg).

We recommend you use an Elvarex measuring board as an aid. These are available to Elvarex fitters from BSN-JOBST.

- You will need the following:
  - Prescription Order Form #50331
  - Lower-Extremity Order Form #50333
  - Elvarex measuring board #50742
  - Measuring tape
  - Marking pen (optional).

Measure when the limb is at its smallest.

You will need to do the following:

- Complete the Prescription Order Form #50331 (see page 14).
- Complete clinic information and patient information on Lower-Extremity Order Form #50333.
- Complete style choice and desired options
- Mark compression class and quantity for each leg and panty portion you are ordering.
- Place the patient in a supine position (lying down) on the Elvarex measuring board with the heel firmly positioned against the foot portion of the board. If the patient is unable to lie on the Elvarex measuring board, other positions can be used.

Make sure you record the gender of the patient.

Measurements should be taken distally to proximally.
Elvarex lower-extremity measuring points

Depending on the style required (knee-high, thigh-high, chap-style, or pantyhose), the steps will vary. The following steps apply to the styles as indicated:

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STEPS TO FOLLOW FOR RECORDING CIRCUMFERENTIAL MEASUREMENTS (cA to cT) AND LENGTH (IA to IT) MEASUREMENTS

STEP 1  Measuring and Recording the Circumference (cA) and Length (IA)

Measure and record the circumference at A—taken diagonally across MTPs (from little toe metatarsal to great toe metatarsal). Do not pull tape measure too tight!

Measure and record the foot length from heel to the A point on both the lateral (outside) length measurement of 5th metatarsal (little toe), and the medial (inside) length from heel to metatarsal head of first metatarsal (great toe). This is the standard style foot—slant open toe (IA).

The distance between the medial and lateral length should not exceed 3 cm in difference.

For Slant Closed Toe
Record the foot length by recording the mark on the measuring board corresponding to the A point on both the lateral and medial aspects (lateral = metatarsal joint of little toe; medial = metatarsal joint of great toe), and record the length from heel to longest toe.
Indicate the shoe size.

For Straight Open Toe
Record the foot length by recording the mark on the measuring board corresponding to the A point (the metatarsal joint of the small toe) (IA).
Indicate the shoe size.

For Straight Closed Toe
Record the foot length by recording the mark on the measuring board corresponding to the length of the longest toe.
Indicate the shoe size.
STEP 3

Measure and Record the Circumference at the Heel (cY)

Measure and record the circumference at Y, around the heel and across the instep, with the foot in dorsiflexion. Keep the measuring tape loose!

For Elvarex 3 (36-46 mmHg), 3 Forte (36-46 mmHg), 4 (59-70 mmHg), and 4 Super (70-90 mmHg) you may add 1 cm to this circumference if needed, to ensure that the garment fits comfortably in the bend of the foot.

Measuring Point Y
(wrong)

Measuring Point Y with foot in dorsiflexion

STEP 4

Measuring and Recording Circumference and Length of Ankle (cB) and (IB)

Measure and record the circumference at B, the smallest ankle point, above the medial malleolus.

After checking the patient’s heel is correctly positioned, read and record the Elvarex board length measurement corresponding to the B point, IB.

Measuring Point B (smallest ankle joint) circumference/length

STEP 5

Measuring and Recording the Circumference and Length of the Proximal Achilles Tendon (cB') and (IB')

Measure and record the circumference where the Achilles tendon turns into the muscle (cB').

As a guide, this point is usually about 8 cm to 10 cm above the B measurement.

After checking to see the patient’s heel is correctly positioned, read and record the Elvarex board length measure corresponding to the IB'.
STEP 6  Measuring and Recording the Circumference and Length Measurement of the Widest Part of the Calf (C) and (IC)

Measure and record the circumference at C, the point corresponding to the widest part of the calf.

After checking to see the patient's heel is correctly positioned, read and record the Elvarex board length measurement corresponding to the C point, IC.

STEP 7 Measuring and Recording the Circumference and Length of the Head of the Tibial Tuberosity (D) and (ID)

Measure and record the circumference at D, the head of the tuberosity (approximately 1.5 cm below the bend of the knee). When measuring for a knee-length garment, this measurement should be taken loosely.

After checking to see the patient's heel is correctly positioned, read and record the Elvarex board length measurement that corresponds to the D point, (ID).

☑ IF YOU ARE ORDERING A KNEE-HIGH GARMENT, ALL OF THE MEASUREMENTS ARE COMPLETE AT THIS POINT.
STEP 8 Measuring and Recording the Circumference and Length of the Patella (Knee Cap) (E) and (IE)

Measure and record the circumference at E, the patella (knee cap). The knee should be flexed at a 45-degree angle to allow for comfort and movement when walking.

Check that the patient's heel is positioned correctly, read and record the Elvarex board length measurement corresponding to the CE, the popliteal fossa, IE.

Measuring Point E with bended knee (45°)

STEP 9 Measuring and Recording the Circumference and Length Measurements of the Midpoint of the Thigh (CF) and (IF)

Measure and record the circumference at the midpoint of the thigh (CF). As a guide, this point is usually about 15 cm above the E measurement.

Measuring Point F mid thigh

Read and record the board length measurement corresponding to the F measurement, the midthigh, IF.

STEP 10 Measuring and Recording the Circumference of the Thigh (CG)

Measure and record the circumference at G. This should be a straight measurement; do not angle tape.

Measuring Point G circumference

Add 1 cm to circumference of G if an inside silicone band is used to aid in patient comfort.

Take the G measurements while the patient is standing.
STEP 11 Measuring and Recording the Length of the Thigh (IG)
With the patient standing straight with feet approximately shoulder-width apart, measure and record the length of the thigh (IG) as listed below:

- If the patient is going to be wearing a garter belt or a girdle, the garment should be measured to where the garters attach.
- If the thigh-length garment will be held up by a silicone band, the measurement should be taken below the gluteal fold.

IF YOU ARE ORDERING A THIGH-HIGH GARMENT, ALL OF THE MEASUREMENTS ARE COMPLETE AT THIS POINT.

If an “on top” silicone band option is selected, then the size of the band (3 cm or 5 cm) will be included in the length of the garment by BSN-JOBST.

- For chap-style, one-leg pantyhose, and pantyhose, the measurement is taken at the gluteal fold.
- For a leg extension on the one-leg pantyhose style: Length of the thigh (IG) is taken at the gluteal fold, IF is taken where you want the short panty leg to end.

To aid in patient comfort take these measurements loosely.

STEP 12 Measuring and Recording Circumferences and Length Measurements of the Body for Chap Style, One and a Half Leg Pantyhose, and Pantyhose, (cT through IT)
Measure and record the circumference at the patient’s waist, (cT).

![Measuring Point T waist circumference](image)

Measure and record the side length from the waist (cT) to the floor (IT).

Measuring the female patient, lK¹-T (front) and lK²-T (back)
Measure and record the length from the waist at the front of the body to the pubic symphysis (if patient is wearing a good-fitting pair of panties, this would be the beginning of the crotch seam in panties)

Then measure the back of the body, from the waist, over the curve of the buttock to the beginning of crotch seam of good fitting pair of panties.
Measuring the male patient, \( lK^1-T \) (front) and \( lK^2-T \) (back)

Measure and record the length from the waist at the front of the body to crotch, \( lK^1-T \). (This measurement lines up with inseam.)

Then measure the back of the body, over the buttock, from the waist to the gluteal fold, \( lK^2-T \).

- **If the patient's abdomen is pendulous, consider wrapping the abdomen with Comprilan** prior to measuring to help hold the abdomen in position.

**STEP 13** Measuring and Recording the Hip or Abdomen Circumference and Length (CH and LH).

Measure and record the patient's hip or abdominal circumference, CH, depending on which is larger.

Measure and record the side length from the floor to the hip or abdomen, LH, depending on which is larger.

- It is recommended that the fly option be selected for the male patient if a pantyhose garment is being measured.

**IF YOU ARE ORDERING A WAIST-HIGH GARMENT, ALL OF THE MEASUREMENTS ARE COMPLETE AT THIS POINT.**
Measuring for Biker Shorts and Capri Pants

Combining the use of Biker Shorts with thigh length garments or Capri Pants with knee length garments can be a very effective way of managing patients who need coverage to the waist, or above the waist, but cannot manage a complete pantyhose style. Donning one thigh length, or knee length at a time, and then stepping into the Biker Shorts, or Capri Pants and pulling them up breaks this style into manageable pieces for the patient.

Biker Shorts:

Biker Shorts is the term that is used when ordering a Waist High Pressure Panty and Left and Right Leg Extensions that end above the knee. Usually, the Leg Extensions are in Compression Class 1 because they are going over thigh lengths.

Capri Pants:

Capri Pants is the term that is used when ordering a Waist High Pressure Panty and Left and Right Leg Extensions that end anywhere below the knee. These are usually used with knee length garments with patients who have a lobule or lobules in the medial thigh that may, or may not hang down over the medial knee. The compression in the leg extensions can be whatever is necessary to manage the condition.

When determining who would be a suitable candidate for this combination of styles, the following types of patients could be considered:

- Patients with Lipedema
- Patients with Lipedema/Lymphedema in combination
- Obese patients
- Patients with Arthritis
- Elderly patients
General rules to follow when using Biker Shorts or Capri Pants:

**Use two order forms (one for the Biker Shorts or Capri Pants and one for the thigh lengths or knee lengths).**

- For Biker Shorts measure the length of the Leg Extensions to between the F(mid thigh) and above the E (patella). This measurement should be labeled E1. This prevents the Leg Extensions from rolling up.

- All length measurements of the Leg Extensions for Biker Shorts are to be measured from the floor to E1, F, and G.

- All length measurements of the Leg Extensions for Capri Pants are to be measured from the floor to wherever you want the Leg Extension to end (this could be B, B1, or C).

- If the patient has a large waist circumference, consider using the adjustable waistband. This could prevent rolling at the waist.

- If the patient has a large lobule at the medial thigh, you may want to wrap the lobule with a short stretch wrap before measuring.

- If the patient has Lipedema, you may want to consider only using a compression Class 1 in the panty and the legs.

- If the patient has any degree of Lymphedema in the abdominal area, you would use the appropriate compression class in the panty to manage the condition.

- When taking body measurements, take the CT (circumference Top of garment) and the IT (length from the floor to the Top of the garment). Then take the CH (circumference Hip or Abdomen, whichever is larger) and the IH (length from the floor to the Hip or Abdomen, whichever is larger).

Example “A” shows sample order forms for Biker Shorts and thigh length garments.
It is imperative that you measure the K1T and the K2T measurement for the male patient and the female patient to two different landmarks.

The K1T measurement requirement for a man instructs you to measure from the waist to the inseam. It is sometimes awkward to determine that location.

An easy way to determine that you have the correct inseam measurement that is aesthetically pleasing for both you and your patient: Turn the patient so their back is facing you. Position your tape measure circumferentially at the gluteal fold. While the tape measure is still around the proximal thigh, turn the patient to face you and mark the center of the thigh at this level. Then, simply measure from this mark to the waist. Basically what you have done is to translate the inseam to a more convenient place to measure.

- When measuring the K2 measurement for a man, you are instructed to measure from the waist of the patient, over the curve of the buttocks to the gluteal fold. This measurement ensures that the back of the panty will be longer than the front and will not slide down when the patient sits.
- To measure the female patient for the K1T, measure in the front from the waist to the pubic symphysis (crotch seam in panties).
- To measure the female patient for the K2T, measure from the waist in the back, over the buttocks to the beginning of the crotch seam in the panties.

Example “B” shows sample order forms for Capri Pants and knee length garments.
Foot Caps

For patients with toe edema, an Elvarex foot cap is available.

Elvarex custom-made foot caps are available in Elvarex compression classes 1 (18-21 mmHg), 2 (25-32 mmHg), and 3 (36-46 mmHg).

As high compression on the toes may be uncomfortable, it is generally recommended that foot caps be ordered as an Elvarex compression class 1 (18-21 mmHg) or 2 (25-32 mmHg).

Elvarex compression class 3 should be reserved for severe cases.

Measure when the limb is at its smallest.

You will need the following:

- Prescription Order Form #50331
- Foot Cap Order Form #50334
- Elvarex measuring board #50742
- Measuring tape
- Plain piece of paper for foot drawing (optional).

You will need to do the following:

- Complete all sections of the Prescription Order Form #50331.
- Complete clinic information and patient information on the Foot Cap Order Form #50334.
- Complete style, class, quantity, and options desired.
- Have patient stand on a plain piece of paper and draw an outline of foot, including toes. Mark the measurement points (A) and (A1) and desired length of each toe on the foot drawing. Take all foot lengths from drawing.
- Have the patient stand on the Elvarex measuring board and record all lengths from board.
Measuring Points for the Elvarex Foot Cap

Steps to Follow to Take Circumferential and Length Measurements Required for Foot Cap

STEP 1  **Measuring and Recording the Circumference of the Metatarsal Joints (A) and (A¹)**  
Measure and record the circumference of the metatarsal joints at the largest circumference (A) and the circumference where you would like the garment to end at midfoot (A¹).

STEP 2  **Measuring and Recording the Medial and Lateral Lengths of the Foot**  
Measure, record the lengths on the medial (inside) and lateral (outside) of the foot to the A¹ point. These can be adjusted so the proximal end of the toe piece is on the bias (diagonal cut), if desired.

STEP 3  **Measuring and Recording the Proximal and Distal Circumferences of Each Toe**  
Measure and record the X and Z measurements. X is measured at the base of the toe. Z is measured below the toenail, or where you would like the toe to end.

STEP 4  **Measuring and Recording Toe Lengths Z to X**  
Measure and record the toe lengths (Z to X). These measurements should be taken from the web to the desired finished length on each toe. If you have taken a foot drawing, these lengths should be measured from the drawing and recorded in the space between the arrows on each toe covered.

- **The foot cap covers toes 1 through 4—the small toe is usually omitted.**
- **Toe pieces generally work in combination with lower-extremity garments. The lower-extremity garment simply overlaps the foot cap.**