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1971-2021

ÖSSUR®
LIFE WITHOUT LIMITATIONS

ICEFORM® Liners & Sleeve

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Webinar - July 2021

Objectives

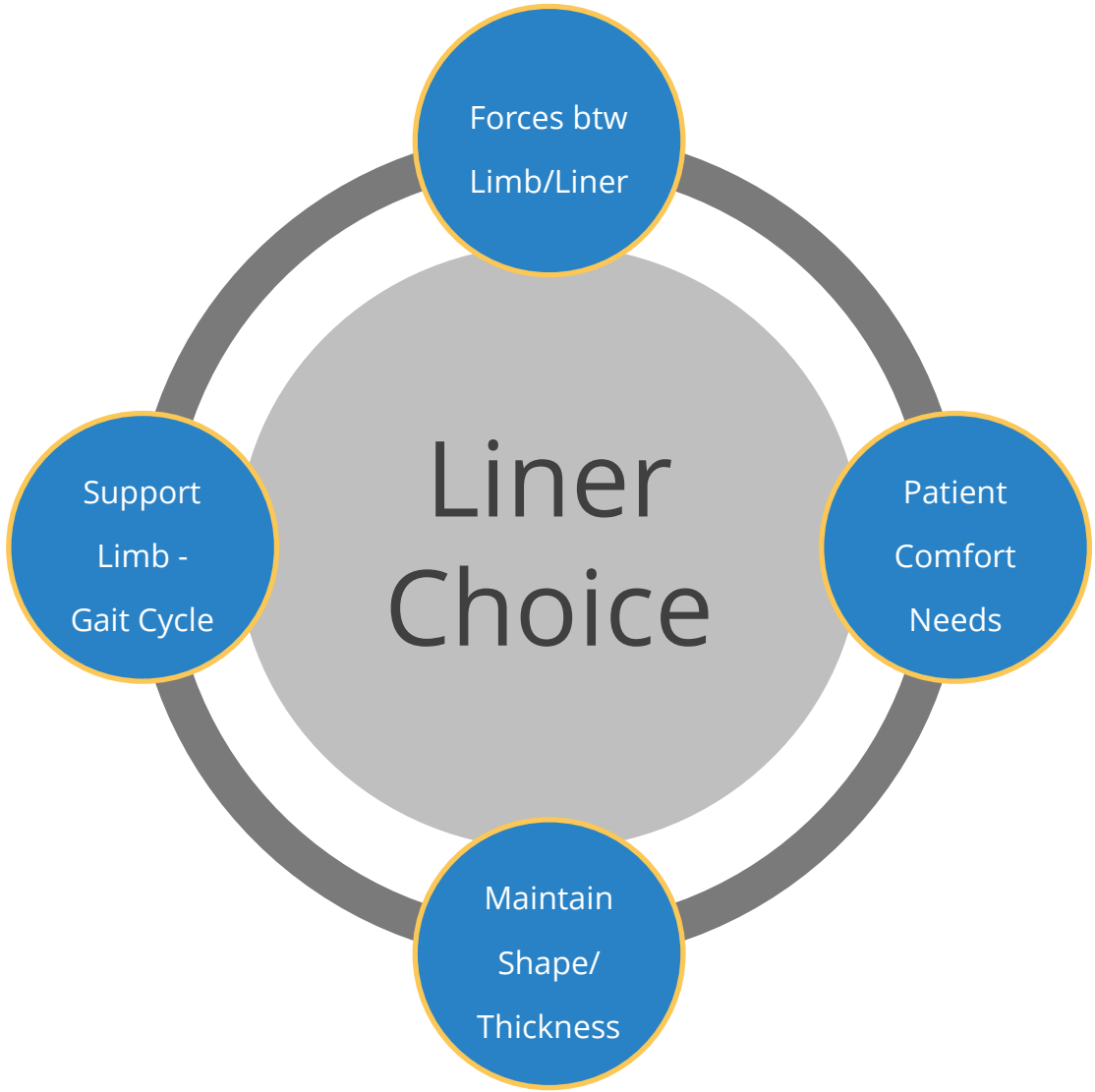
- Foundation of liner technology
- Introduction
  - What is TPE
- User Profile
- Product Characteristics
  - Liners
  - Sleeve
- Sizing
- Best Practices

Iceform® Locking

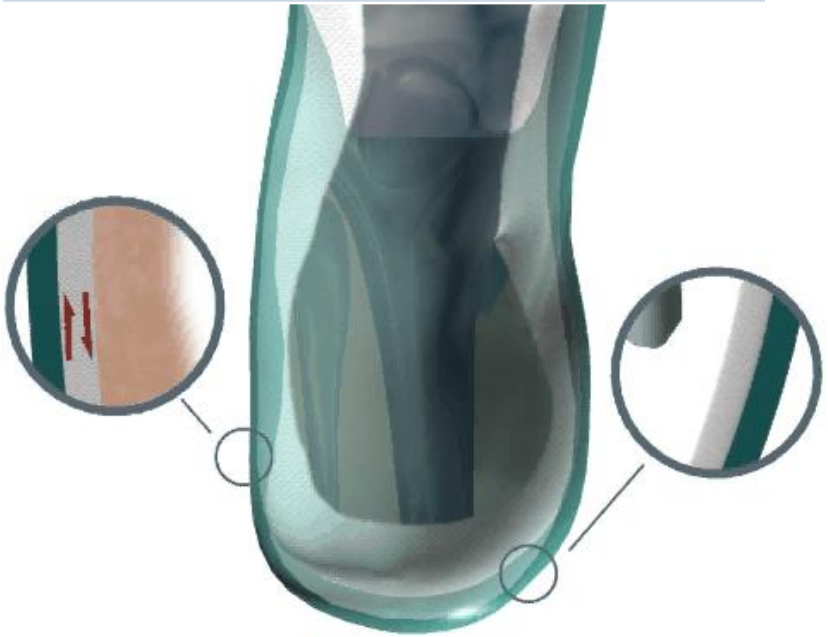
Iceform® Cushion

Iceform® Sleeve

Foundations of Liner Technology

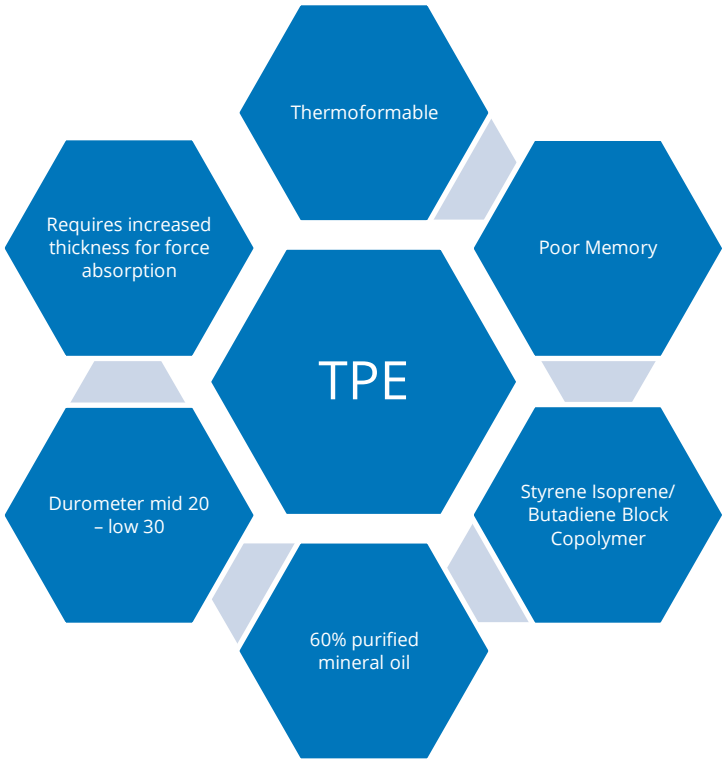


Liner Materials
Thermoplastic elastomer (TPE)
Polyurethane (TPU / PUR)
Silicon elastomer (Silicon)



Liner Materials

- Thermoplastic elastomer (TPE)
- Polyurethane (TPU / PUR)
- Silicone elastomer (Silicone)



TPE - Thermoplastic Elastomer, AKA: GEL

(Styrene) plastics + Mineral oil =

Stiffness modified by *level of mineral oil* incorporated in the polymer matrix

Benefits

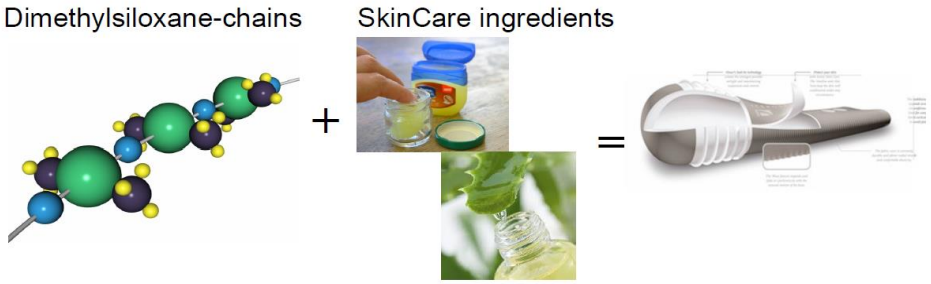
- Gel Flow = High to Low areas of pressure
- Cushioning
- Even Pressure Distribution
- Reduced Friction
- Provide Suspension

Liner Materials

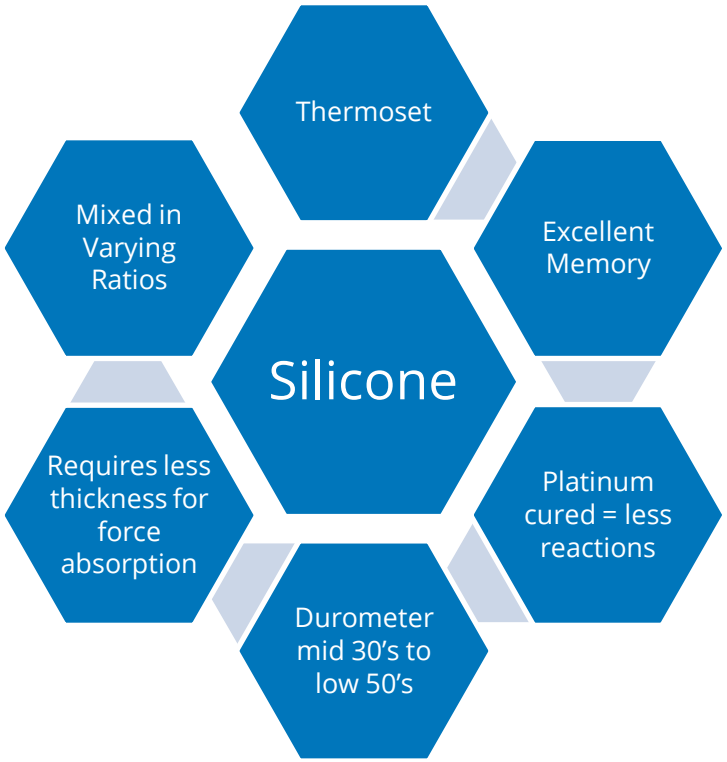
- Thermoplastic elastomer (TPE)
- Polyurethane (TPU / PUR)
- Silicone elastomer (Silicone)

Silicone elastomer, Iceross

Dimethylsiloxane-chains + SkinCare ingredients =



Stiffness modified by chain length, level of crosslinking & skincare additives



Benefits

- Many suspension possibilities, all activity levels
- Effective comfortable suspension
- Improved function
- Active skin care
- Ideal for total weight bearing socket solution

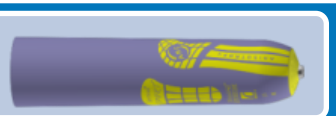
Durometer Shore Hardness Scale

- Durometer is a measure of the hardness (flexibility) used typically with polymers, elastomers, and rubbers
- **The purpose of the scale is to provide individuals with a common point of reference for the observed material or similar product**
- Developed in the 1920's by Albert Ferdinand Shore
- The hardness of a material can be defined as the resistance to permanent indentation of that material (Softer materials = lower numbers)

ICEROSS - DUROMETER OPTIONS

Original
- 60

Transfemoral
- 50



Sport
- 50/25

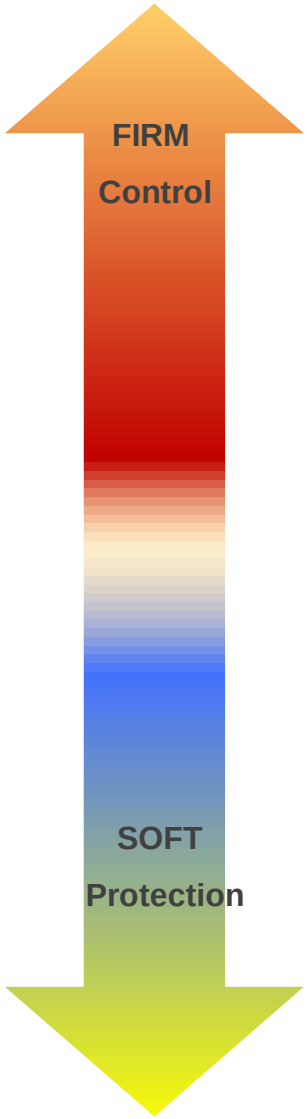
Activa
- 50/25

Synergy
- 50/25

Iceform TPE
- 37

Comfort
- 30

Dermo
- 25



What is TPE

TPE = thermoplastic elastomer or “gel”

- Polystyrene – microscopic crosslinks that can be rearranged with heat, but reform during cooling

(Styrene) plastics

+

Mineral oil

=

- Stiffness of material modified by level of mineral oil incorporated into polymer mix

What is TPE

- Gel flows from areas of high pressure to areas of lower pressure
- Helps to reduce friction against the skin that may occur while walking
- Conform to shape of residual limb
- Wear-and-tear of daily activities
- Liners vary in thickness and stiffness and usually have some type of fabric on one or both sides

User Profile

- TT users
- K1-K2
- Low to moderate impact levels
- Balance Solution

User Information	
Amputation Level:	Transtibial
Impact Level:	Low to Moderate

Iceform Liners and Sleeve

Iceform Locking

Iceform Cushion

Iceform Sleeve

Iceform liners

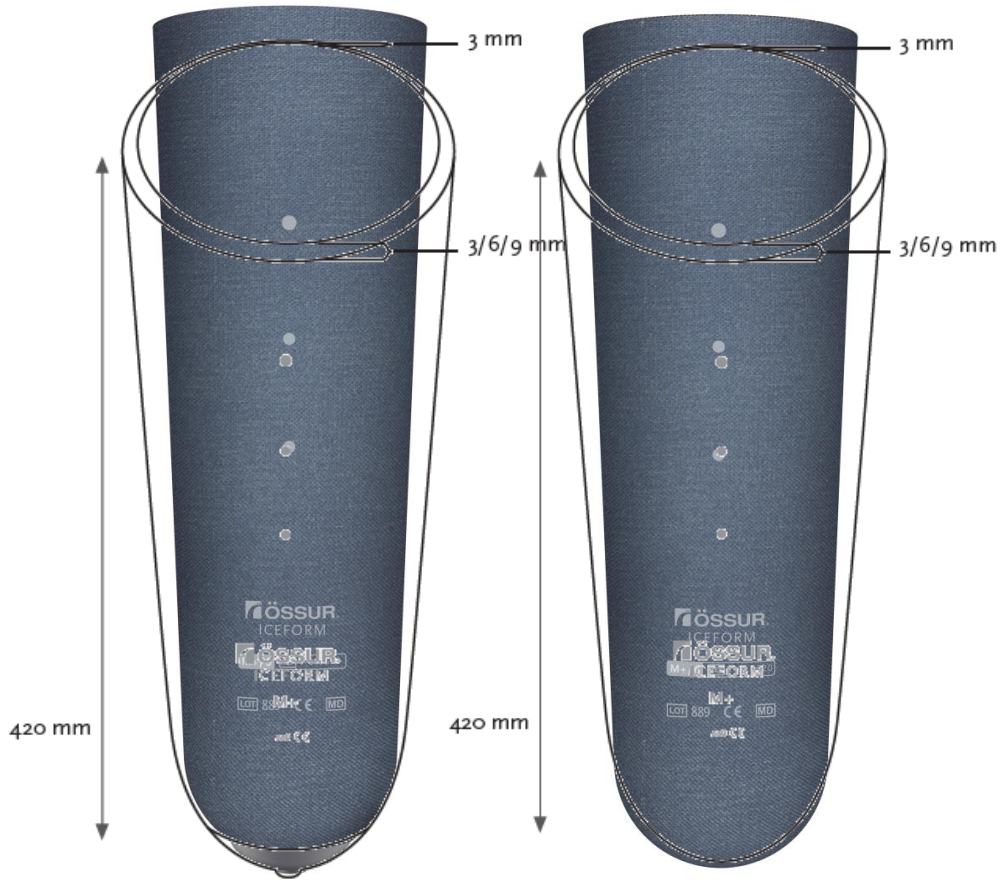
TPE material

Locking / Cushion

Seamless textile

Indicators for anterior midline

10cm matrix



Uniform liner profile

To be used with
- Icelock series
- Iceform Sleeve

Shape capture

Posterior thickness
3 mm

Anterior thickness
3, 6 or 9 mm

Iceform sleeve

TPE material

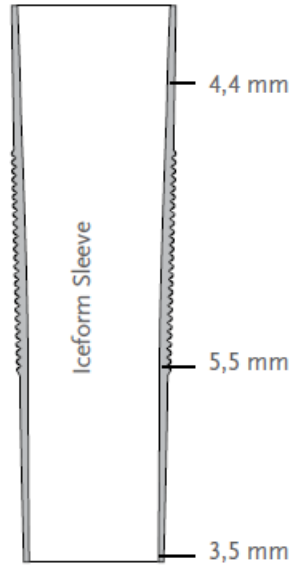
To be used with Iceform cushion liner

Expulsion valve recommended

Seamless textile

Shape capture

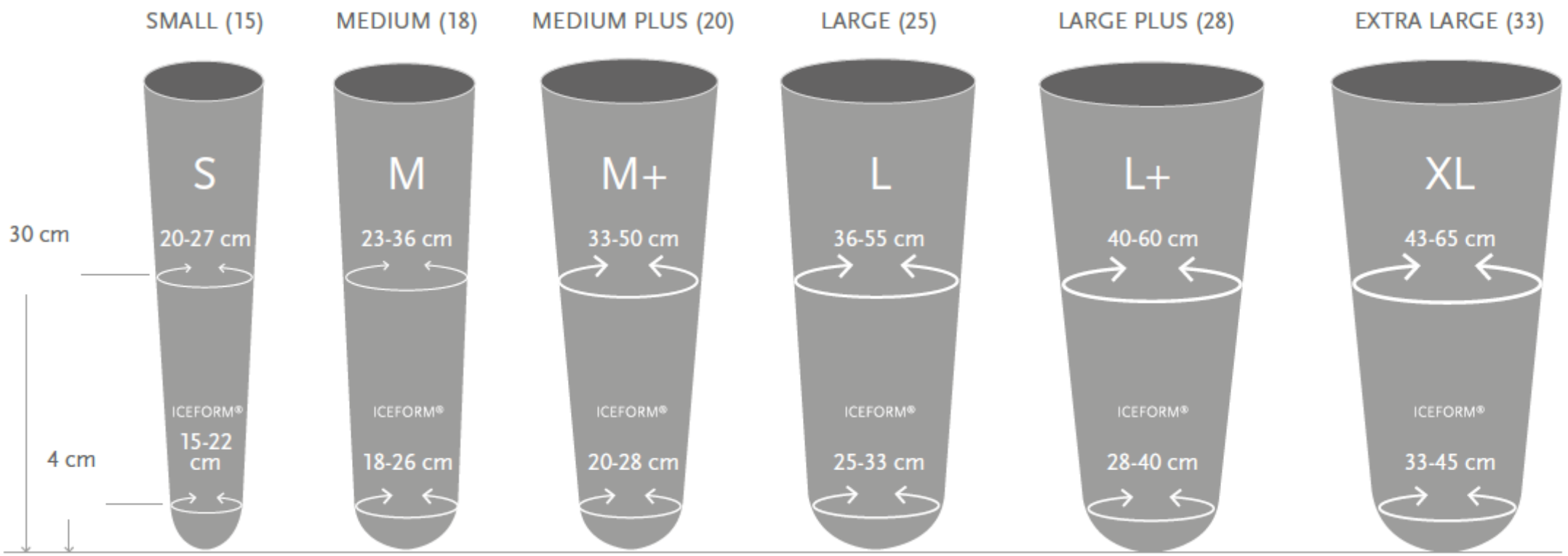
Profile



Wave feature

Sizing

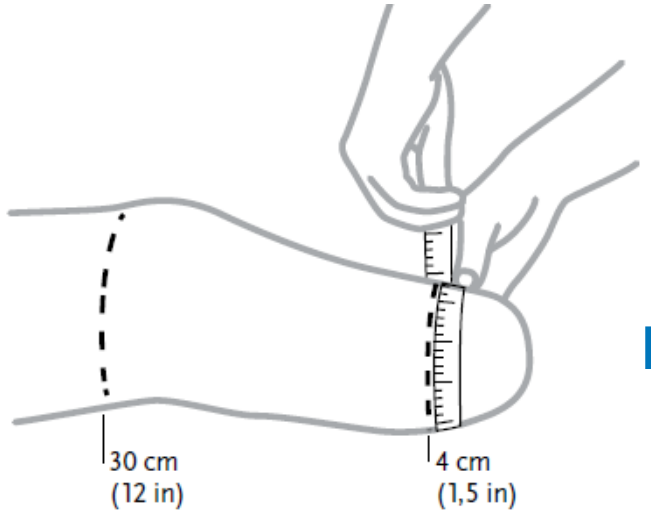
Available sizes

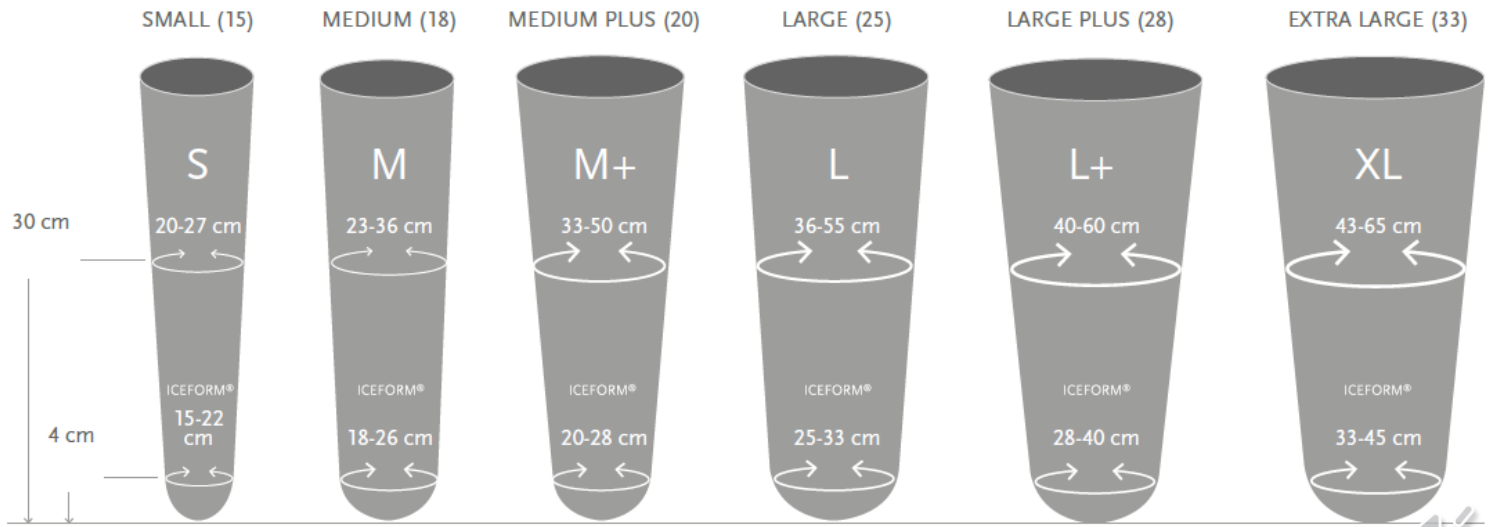


Sizing

Sizing liners

- Measure circumference 4 cm and 30 cm from distal end residual limb

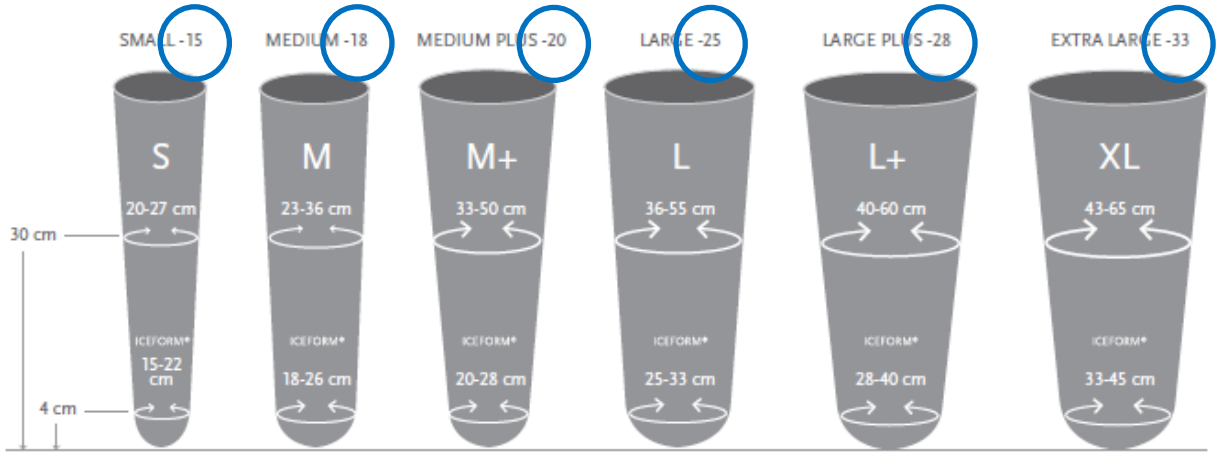




Item numbers

Liners

Part#	Profile	Suspension Method
T-0103XX	Iceform Uniform 3 mm	Locking
T-0106XX	Iceform Uniform 6 mm	Locking
T-0109XX	Iceform Uniform 9 mm	Locking
T-CL03XX	Iceform Uniform 3 mm	Cushion
T-CL06XX	Iceform Uniform 6 mm	Cushion
T-CL09XX	Iceform Uniform 9 mm	Cushion



Sizing

Sizing sleeve

- Measure circumference 15 cm above mid-patella to choose the correct size.

Part#	Size	Measurements
S-201135	35	35-41 cm
S-201141	41	41-49 cm
S-201149	49	49-55 cm
S-201155	55	55-62 cm
S-201162	62	62-76 cm

Best Practices

Custom Shape Capture:

- Automatic customisation

After < 2 weeks of use liner conformed to shape assisting with liner orientation

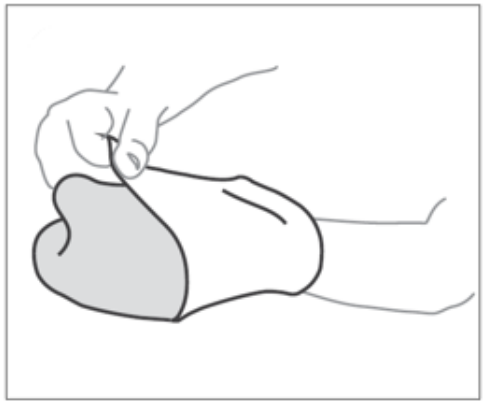
- Cold Capture
  - Add a protective layer to the clean positive model
  - Apply Iceform liner to positive model
  - Leave for a minimum time of one hour

- Hot Capture
  - Add a protective layer to the clean dry positive model
  - Place positive model into preheated oven at 65°C for 60 minutes
  - Apply Iceform liner to positive model and place into the oven
  - After maximum of 10 minutes remove from oven

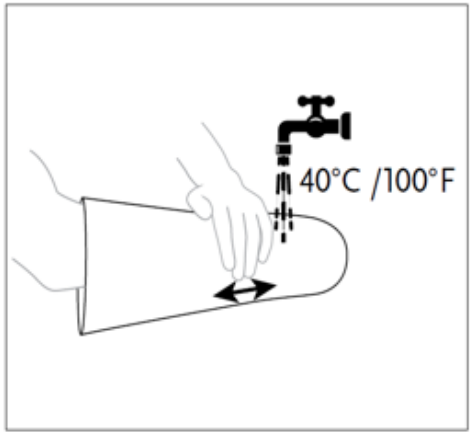
Best Practices

Maintenance, Cleaning, and Storage:

- Turn liner inside out
- Wash the liner with pH-balanced dye-free soap



- Rinse the liner with approx 40^0 C warm water
- Pat dry the liner with lint-free cloth



Best Practices

Casting:

- Cast and modification for Total Surface Bearing (TSB) concept
  - Pressure distribution
  - Liner life expectancy

- Recommended to create check socket first

Conclusion

- Össur TPE solution
- Locking, cushion and sleeve
- Trans-tibial amputee with low to moderate impact level

Providing a safe, secure and comfortable suspension for those patients that need/require a TPE liner

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