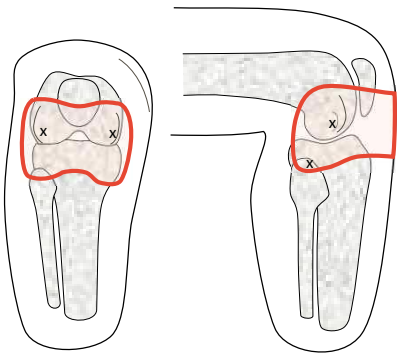
Quick Reference Guide

Plaster Casting - 3 stage approach

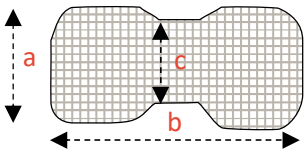
- Check proper functioning of the 755Z19=230 Vacuum pump. Select the appropriate size latex casting bag from the 683G1=10 set. The latex bag should fit loosely on the residual limb.
- Prepare the patient by positioning on a casting chair. Don the liner and isolate the liner with the cling film wrap.
- Pull one-layer 99B25 socks, locate and mark the bony as well as other important landmarks.

Stage	Objectives	Knee Angle	Plaster bandage	Vacuum
1st	Capture and build-in the femoral condyles at the maximum flexion angle in the cast itself to enable easy flexion.	90°	6 Layer Splint	500 mbar
2nd	Capture and build-in the residual limb bony structures into the cast itself to prevent pain and excess pressure.	0°/10°	4 Layer Splint	
3rd	Capture and build-in the residual limb shape and volume into the cast itself.	0°/10°	3 Layer Wrap	

1st Stage



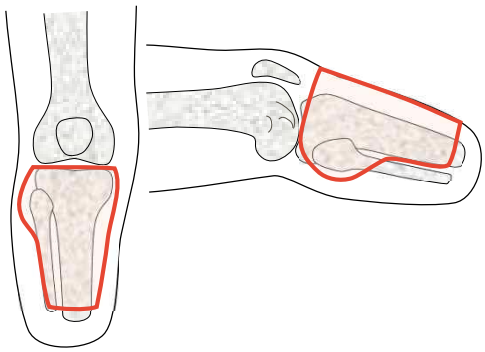
- Create a plaster splint that is 6 layers thick in below dimension.



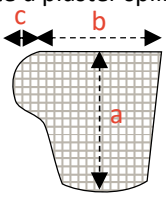
a. Extends from femoral condyle till superior edge of fibula head and tibial condyles (approx.7.5 cm.)
b. Extends from medial to lateral midlines of tibia
c. Extends from mid-patella till tibial tubercle (approx. 4cm.)

- The goal is to capture the femoral condyles, tibial condyles, lower half of patella, patellar tendon and superior edge of fibula head.
- Flex the knee 90°, apply the splint at its anatomical position, pull a 99B25 socks, don the latex bag, seal proximally, switch on the vacuum and obtain soft finger impression on patella tendon adjoining the lower edge of patella. Wait for the plaster splint to set and harden. Take off the latex bag. Then carefully remove the outer 99B25 socks leaving the plaster splint at its anatomical position.

2nd Stage



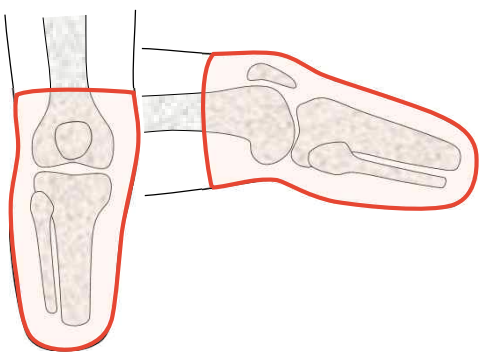
- Create a plaster splint that is 4 layers thick in below dimension.



a. Extends from mid-patella tendon till just 6mm. above the antero-distal edge of tibia.
b. Extends from medial to lateral midlines of tibia
c. Extension for head of fibula

- The goal is to capture the tibia bone (till just 6mm above the ant-distal end) and head of fibula (fully).
- Apply the splint at its intended anatomical position, pull a 99B25 socks, don the latex bag, seal proximally and switch on the vacuum.
- Maintain the knee at 10° for non-protruding and in full extension for protruding / sharp ant-distal tibial edge. Wait for the plaster to set.
- Take off the latex bag. Then carefully remove the outer 99B25 socks leaving the plaster splint at its anatomical position.

3rd Stage



- The goal here is to capture correct residual limb volume and shape.
- Use 10cm. plaster bandage. Start wrapping distal to proximal with up to 3 layers. Apply cling film wrap and pull 2 layers of 99B25 socks. This arrangement will help in good vacuum formation. Now don the latex bag, seal proximally and switch on the vacuum.
- Maintain the knee at 10° for non-protruding and in full extension for protruding / sharp ant-distal tibial edge.
- Ask the patient to contract and release the residual limb muscles alternatively till the plaster sets fully.
- Take off the latex bag and rescue the negative. Cut off the outer 99B25 socks proximally and carefully remove the inner socks.
- Inspect the cast for appropriateness and achievement of all set objectives. Recast if the same is not achieved.