

Taking a foot imprint with the BorgiMobi

Terminology

- BorgiMobi: mobile imprint system by BORGinsole
- 1 vacuum space filled with aluminium granules

Advantages:

- Easy to move around and take with you
- Only 1 button to operate
- Taking a charged foot imprint with:
 - Perfect morphology of the foot intact
 - Imprint with neutral subtalar joint
 - o Visual and with palpation control

1. Preparation:

Position the BorgiMobi in front of a foothold (vertical bar on the wall) to which the patient/client can cling to. Use the supplied block of EVA as support for the contralateral leg which serves as support for the imprint of the other foot (left for right and vice versa).

The BorgiMobi can't be attached and can't be built into a frame, it has to be easily reachable to scan the side with the iPad and Structure Sensor.

1.1 Preparing the vacuum space

- Equally spread the granules around the vacuum space with your fingers
 - o A bit more granules at the heel compared to the front-foot (the heel always on the side of the operator).
- The vacuum space is ready to use after a normal aeration.

1.2 Position of the patient (example for imprint of right foot)

- Ask patient to hold onto e.g. a vertical bar with both hands.
- Ask patient to place left foot on the foothold to the left of the BorgiMobi while right foot remains airborne (relaxed).
- Therapist takes right foot and positions it centrally and perpendicular length-wise in the direction of the vacuum space (not in abduction or adduction).
- Therapist gently pushes knee of right leg back so the leg is 100% stretched. The heel will sink into the vacuum space nicely because of this (while the heel normally is the lowest point of the whole footprint).
 - o Do not pull or shuffle with the FOOT: it can damage the vacuum space.
- The right foot is proportionally charged with the left (50%).

1.3 Action therapist

- Therapist searches for NCS of the foot:
 - o Taking a charged imprint in the vacuum space demands a certain level of skill and practice.
 - o Make sure the foot doesn't go past neutral into inversion, but just goes to neutral.
 - If this does happen, restart the imprint procedure because the front-foot/rear-foot ratio will be off.
 - o Check the NCS position with 1 hand and maintain it.
 - o With the other hand, you press the white switch to activate the vacuum pump.
 - o Immediately after, when the vacuum has just started, you put a moderate amount of pressure on the toes with the same hand so they do not go into dorsal flexion in the vacuum space.
 - *The suction of the vacuum happens alongside the heel which gives you a little bit of time to press against the toes.*

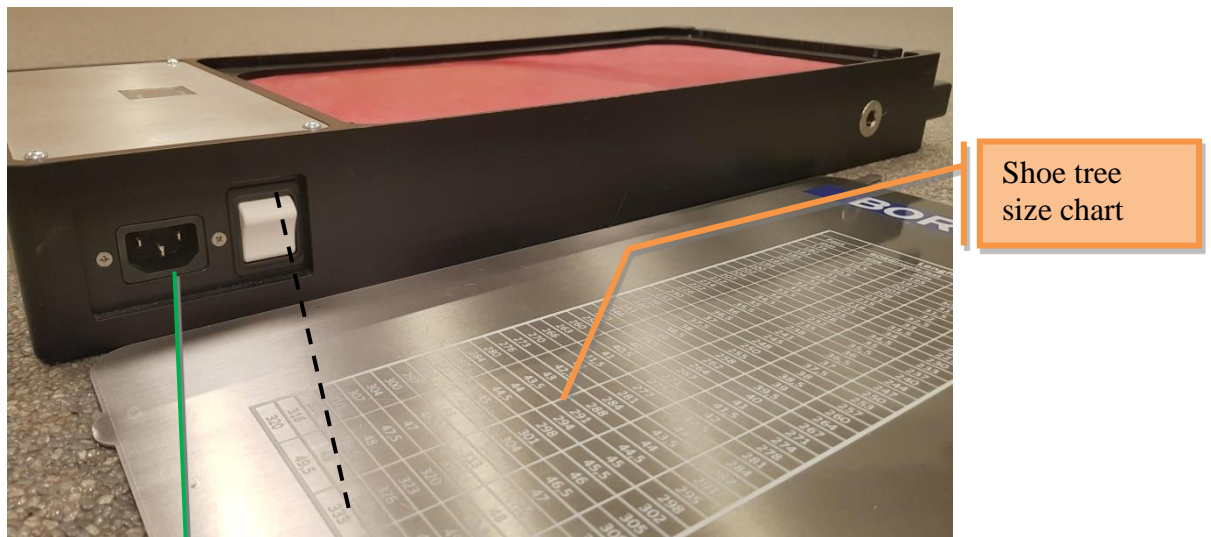
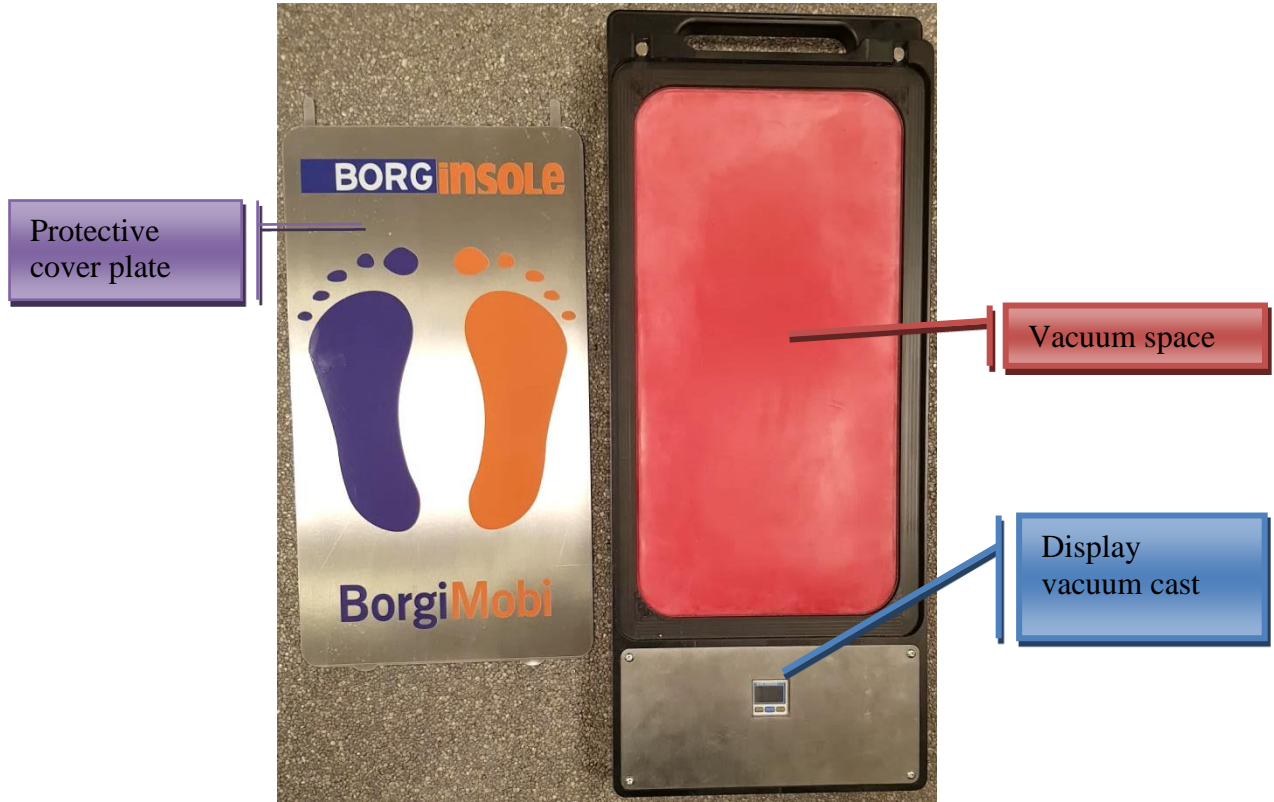
2. Important points, pitfalls : *The technique of taking the imprint is important.*

- If the rear-foot is too inverted when searching for STG neutral, the whole foot (front + rear) will invert in the vacuum space.
- Moving the foot back to eversion will work for the heel but not for the front-foot: resulting in too much front-foot varus.
- Always practice taking the imprint in STG neutral charged position beforehand. Do this by not letting the STG move past neutral from eversion. Say "STOP" to your patient/client in a timely manner.
- In order to take an imprint of a rear-foot varus or a front-foot valgus, you can tweak the process by positioning the entire body of the patient to get the rear-foot out of the exaggerated inverted position.
 - o (Let it tilt, in a controlled manner, to the contralateral foot)
- Make sure the patient is always balanced.
 - o Sometimes the patient laterally tilts the whole body too much.
 - This will create a wrong, much too inverted imprint of the whole foot.

After scanning the right foot, repeat the process for the left foot. Now press the white switch to aerate the vacuum space.

3. Start the scanning procedure

1.1 Hardware



Power cord connection

On / Off Switch

You also control the vacuum pump with this:
Power on > a vacuum forms
Power off > aerates the space

1.2 Scanning with BorgiMobi

The same as scanning with the 3D Digitizer: first you have to create an **INSOLE (0)** file and it has to be linked to an examination.

Step by step:

- 1) Go to **BIOMECHANICA (0)**

Make a new file ahead of a first appointment


 + New

- 2) Fill in your length, weight, biomechanical goniometry,...
- 3) Press 'save'
- 4) You will then see the following bar, click 'BORGinsole order'

ONDERZOEK

3 D FILES (0)

BORGINSOLE BESTELLING (0)

- 5) Make a  one, select a date behind 'Examination' (you already have this date if you have saved a file under **BIOMECHANICA (0)**)

BORGinsole : 0

Onderzoek

Patiënt

02-03-2018

- 6) Press 

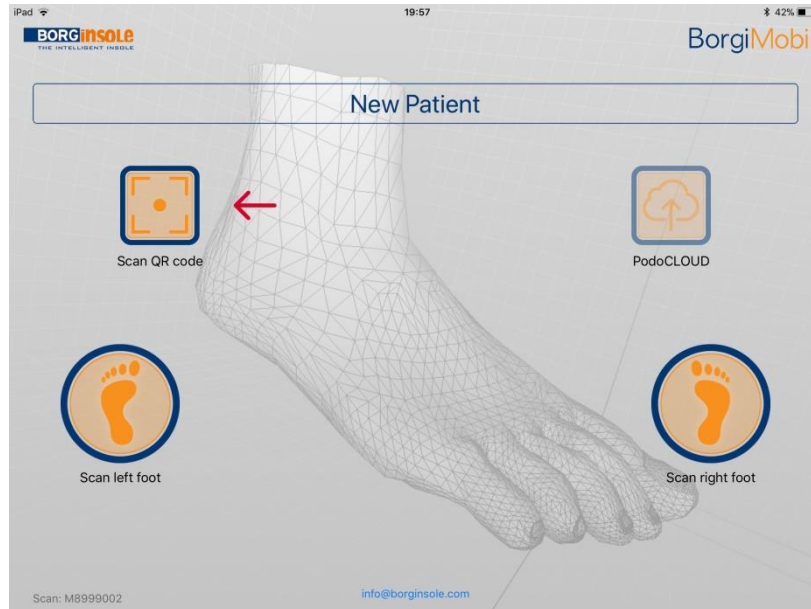
- 7) Go to **QR CODE** . This QR code is temporary and works for just a few minutes (not days or weeks, it's a temporary link to the podocLOUD).

SAMENVATTING | GEGEVENS | PRESTATIES | BORGINSOLE | 3D INFO | **QR CODE**

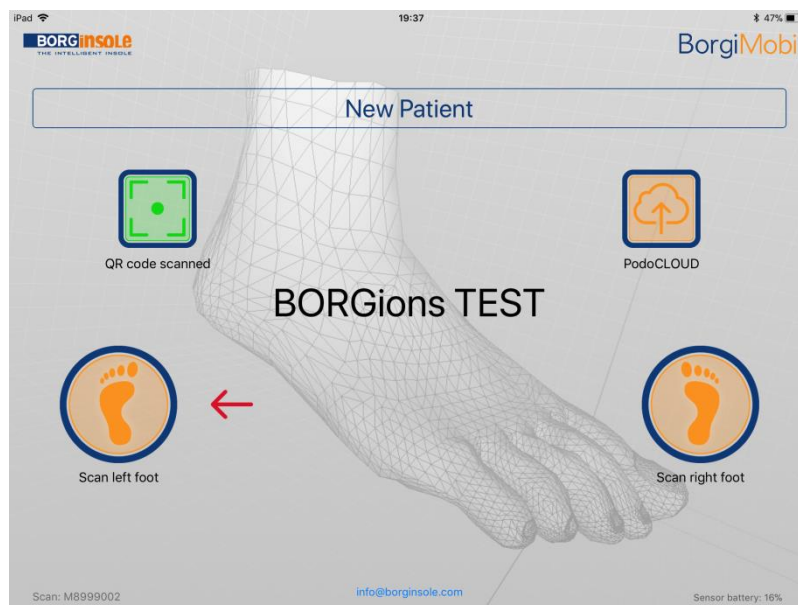




Now take your tablet computer and open the BorgiMobi app



- 8) Click 'Scan QR code' by aiming the camera at the screen, the app will search for the QR code itself and if it finds the code, the QR code will also be read immediately. The name of the patient will appear in the middle and 'Scan QR code' will glow green.



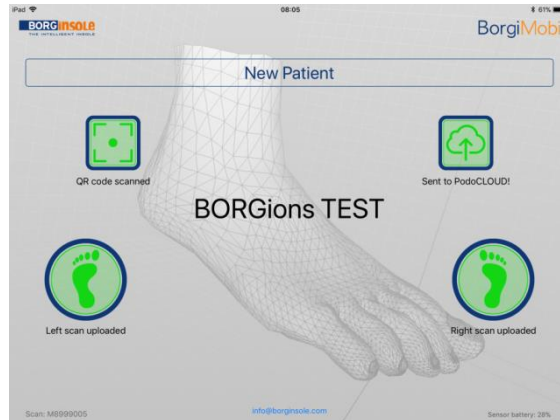
- 9) Press 'Scan left foot.' Follow the instructions on the screen closely. You will be shown a 3D rectangle, which has to match the rectangular shape of the vacuum space of the BorgiMobi. The app will indicate where the heel must be positioned (this is important for the Sole App to read the foot). You will also receive a colour code, it has to be green! If it is red or orange, your iPad is too far removed from the vacuum space.



- 10) If you followed the instructions closely, click 'Scan.' Scanning takes about 4 seconds. Approach the vacuum space with the iPad by 5 to 10 centimetres during these 4 seconds, this way you will end up with a smooth scan.



- 11) Once the scanning is completed, you will receive a 3D visualization. Now you can judge your imprint and scan. Swipe and look at your scan in the different planes. **Make sure the heel isn't positioned too low! You should try to align the metatarsal bones and the heel as horizontally as possible.**
- 12) You can approve and confirm your scan by pressing **V** or redo the scan by pressing **X**.
- 13) If you approved the imprint and scan and pressed **V**, you will arrive back at the start-up screen. Notice that 'Scan left foot' is now also glowing green.
- 14) Repeat steps 11 to 15 to 'Scan right foot.'



15) Finally, if both feet have been scanned, click on **Sent to PodoCLOUD**.

The scans will now be added to the file of the patient in question through the QR code (**you need internet/wifi obviously**).

Want to check if your scans have properly arrived in the podoCLOUD?

- 1) Go back to BORGinsole order / **INSOLE (0)** file.
- 2) Now go to 3D info.

SAMENWATTING	GEGEVENS	PRESTATIES	BORGINSOLE	3D INFO	QR CODE			
C Mail	Foto	Bestandsnaam	Type	Datum	Meting	Bestelling		
<input type="checkbox"/> 363 kb		D8068150R.xyz	3D scan	02-03-2018 15:13:19			<input type="checkbox"/>	Verwijderen
<input type="checkbox"/> 363 kb		D8068150L.xyz	3D scan	02-03-2018 15:13:18			<input type="checkbox"/>	Verwijderen

Here you should find your 2 scans, left (...L) and right (...R).

If that's the case, your scans arrived properly 😊

Those who use 3D Sole view



can also view the scans by opening that application.

Problem: BorgiMobi scans are not arriving in Cloud

- ➔ Is Internet connected?
- ➔ Waited too long? QR code expired? > create new insole file

How to scan without an Internet connection?

The BorgiMobi is able to remember the most recent scan. This scan can then be recovered later on (when the Internet connection is restored) and sent to the podoCLOUD.

Seeing as there's about an hour in between 2 scans most of the time, there should be enough time to restore the connection.