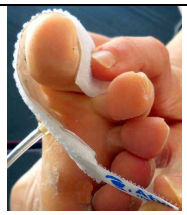
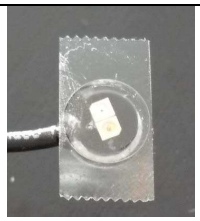
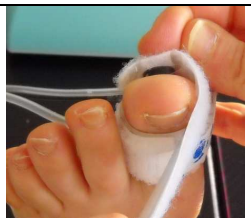
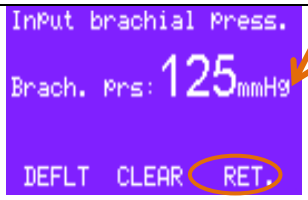
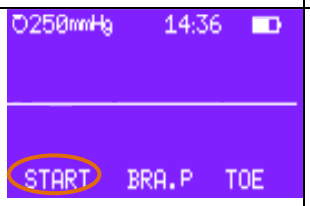
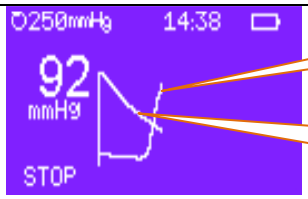
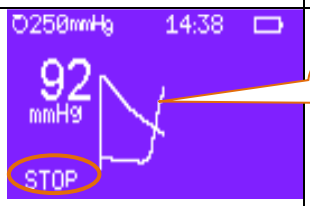
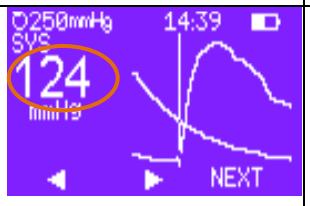
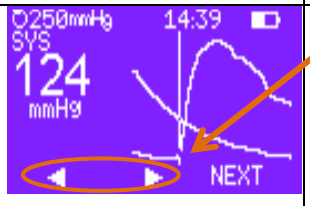
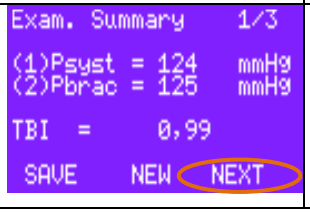
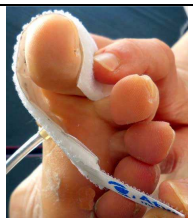
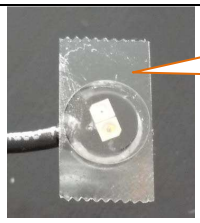
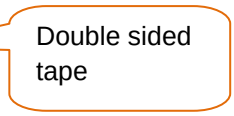
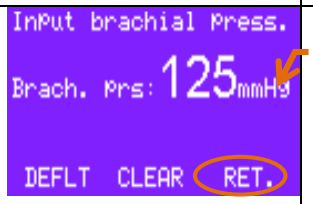
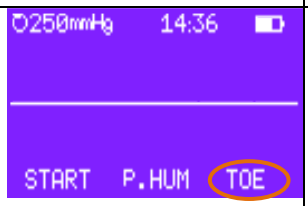
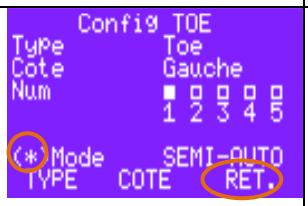
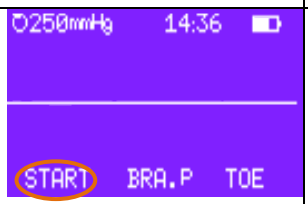
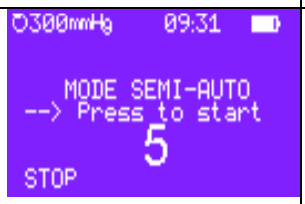
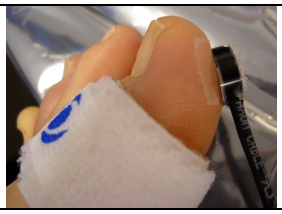
Normal toe

1	The supine patient should be resting for 10 min in a room between 22℃ and 25 ℃. The patient's feet should be warm (≈27℃)			
2	Wrap the occlusion cuff at the base of the toe. The cuff must not be too tighten to prevent any residual pressure			
3	It is compulsory to stick a piece of double sided tape on the sensor. The user must avoid putting his/her fingers on the tape above the photo cells (white rectangle).			
4	Stick the sensor on the pulp extremity of the toe and secure the sensor cuff. The sensor wire and the cuff tube go downwards as shown on the picture.			
5	Switch on the SysToe. Press on **BRA.P** in order to input the arm pressure.			Input the pressure with the keyboard. Then press on **RET.**.
6	The displayed signal is pulsed or flat. Press on **START**. The measure is performed automatically.			Sensor signal Occlusion cuff pressure
7	Press on **STOP** when there is a clear and confirmed increase of the sensor signal. This action stops the examination before the complete deflation of the occlusion.		Clear & confirmed increase	
8	The opposite screen is displayed. The measured systolic pressure is displayed on this screen.			
9	The vertical cursor must be positioned at the foot of the increase. If it is not the case, move the cursor with the horizontal arrows.		Vertical cursor at the foot of the increase.	
10	Then press on **NEXT** to display the toe bracchial index (TBI).			

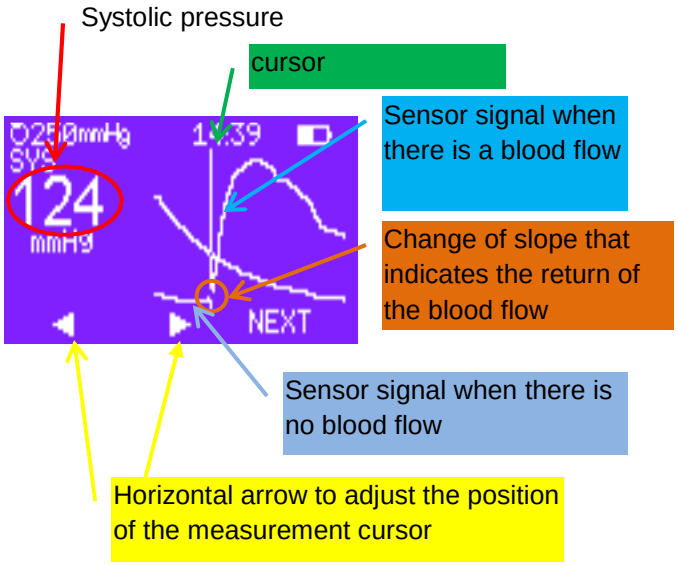
***ATYS** Médical World* - Parc d'Arbora, 69510 SOUCIEU EN JARREST, FRANCE
Tel : 04 78 05 69 69 Fax : 04 78 05 69 60 E-mail: **atys@atysmedical.com**

Short toe

The SysToe is fitted with a short toe module. This module should be used only if the toe is too short to accommodate the occlusion cuff and the sensor cuff.

1	The supine patient. Wrap the occlusion cuff at the base of the toe. The cuff must not be too tighten to prevent any residual pressure			
2	Remove the sensor from its cuff and stick a piece of double side tape on it.			
3	Stick the sensor on the toe pulp. The sensor wire and the cuff tube go downwards as shown on the picture.			
4	Switch on the SysToe. Press on **BRA.P** in order to input the arm pressure.			Entrer la pression avec le clavier. Puis appuyer sur **RET.**.
5	Press on **TOE**.			
6	Press on * on the keyboard in order **to select the semi automatical mode**. Press on **RET.**.			
7	Press on **START**			The opposite screen is displayed
8	Then press immediately strongly on the sensor as indicated on picture. Maintain the pressure as long as « **Keep press Until BIP** » is displayed.			
9	When this message disappears, release the pressure. The measurement is performed automatically. For the next steps, refer to the normal toe guide (step 7).			

Curve analysis



The sensor detects the return of the blood flow when the occlusion cuff is slowly deflated.
When the blood flow comes back, the sensor signal curve shows a significant change of its slope (it goes up). The systolic pressure is measured where the change of slope happens.

At the end of the examination, a vertical cursor is automatically positioned on the blood flow return and the systolic pressure (SYS) is simultaneously displayed.

In case of positioning error, the vertical cursor can be adjusted by the user with the horizontal arrows.

Toe systolic pressure (SYS) and Toe Bracchial Index (TBI)

Diagnosis of peripheral Arterial Disease

When arm pressure is input by the user, the SysToe calculates the TBI value.

$$TBI = \frac{\text{Toe systolic pressure (mmHg)}}{\text{Arm pressure (mmHg)}}$$

- TBI < 0.65 → PAD
- TBI >0.65 → No PAD

Diagnosis of critical ischemia : SYS < 30 mmHg

Diagnosis of arterio venous hemodialysis access-induced hand ischemia

SYS < 60 mmHg or TBI < 0.4 are highly associated with hand ischemia.

When the measured value is lower than the normal value, it is advised to perform a second measurement and even a third one.

***ATYS** Médical World* - Parc d'Arbora, 69510 SOUCIEU EN JARREST, FRANCE
Tel : 04 78 05 69 69 Fax : 04 78 05 69 60 E-mail: **atys@atysmedical.com**