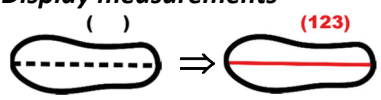

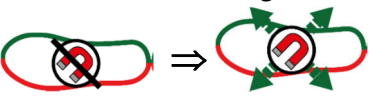
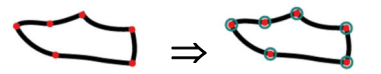


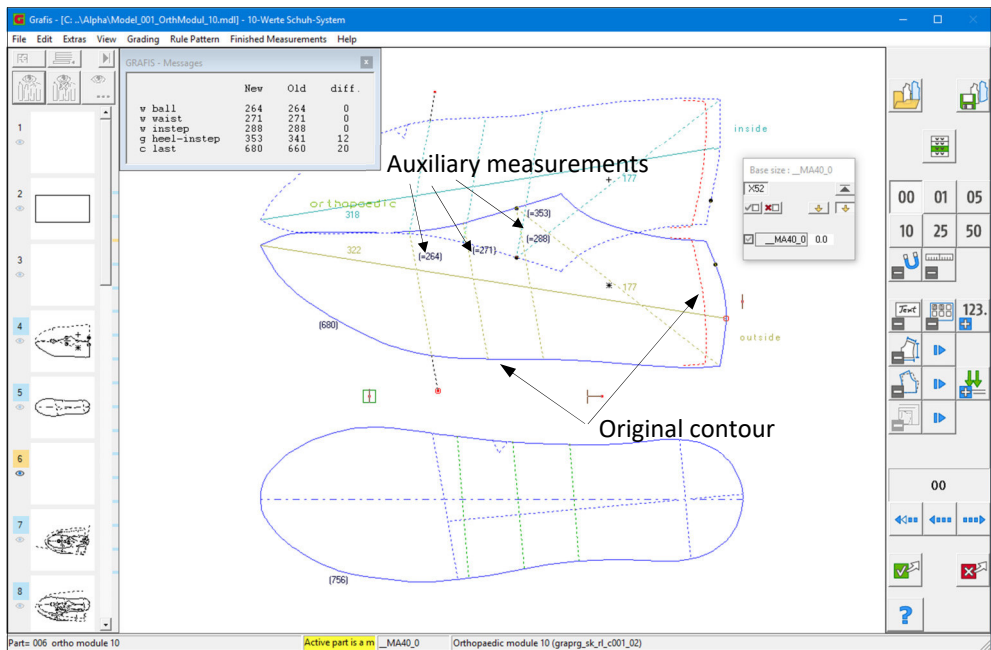
If the option *Display measurements* is active, numbers in brackets will appear at some drag points (Picture 2-19). These numbers indicate the order in which adjustments should be carried out. The order should be observed as some points depend on others and will be moved along with the adjustment of points of a higher priority.

Options of Insole 10

<p>Display measurements</p> 	<p>These options work in the same way as the options for <i>Last 10</i>, see section 2.5.</p>
<p>Curve types</p> 	
<p>Use outer lines as magnet lines</p> 	
<p>Display drag point marker</p> 	

2.7 Interactive Orthopaedic Module 10

The interactive *Orthopaedic Module 10* is an optional module for use with existing GRAFIS shoe styles. For example, the foot of a customer for whom a shoe style has already been developed has changed and the original last has been modified, a controlled adjustment of the originally traced last can be carried out with the *Orthopaedic Module 10*. The elaborate creation of a new last is thus omitted. When calling the *Orthopaedic Module 10* the original traced last is clicked. The orthopaedic module adopts its contour. The circumferences measured at different points on the modified last can be adjusted interactively with the *Orthopaedic Module 10*. Display of auxiliary measurements facilitates transfer of the modifications Picture 2-20. Alterations made to the last can be checked at any time.



Picture 2-20

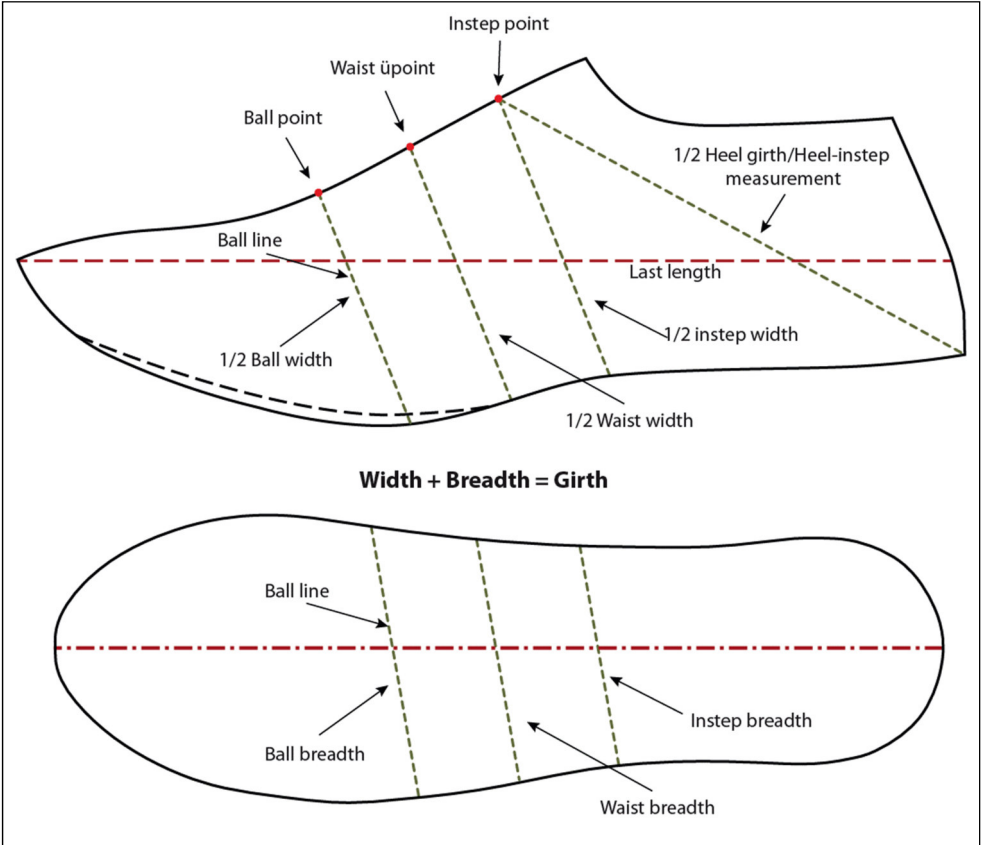
When transferring the measured values to the *Orthopaedic Module 10* it is important to consider whether the circumferences of the last have been measured including the insole or whether the width have been measured across the last.

Three important width and circumference measurements are derived: the ball measurement, the waist measurement and the instep girth.

The **ball measurement** is measured at the widest part of the foot. On the last, this corresponds with the measurement along the ball line. The **instep measurement** is measured from the instep point, parallel to the ball line. The **waist measurement** is measured exactly between the ball and instep line, parallel to the ball line, see Picture 2-21.

These measurements can also be measured on the insole at the same distance from the ball line. These measurements are called breadths. The width of the last plus the breadth of the insole gives the respective girth measurement. Two further important measurements are the **heel girth**, also called heel-instep measurement and the **last length**. The heel girth is measured from the instep point via the heel and back to the instep point. The last length starts at the tip of the last and ends at approx. 1/3 of the back last centre.

The Orthopaedic Module 10 can be added to Basic Shoe 10 subsequently; see section 13.5 example 2.



Picture 2-21

Options of Orthopaedic Module 10

<p>Display measurements</p> <p>() ⇒ (123)</p>	<p>The options are applied in the same way as the options of <i>Last 10</i>, see section 2.5.</p>
<p>Mirrored adjustment</p>	

If the boot last option is active in the last, corresponding adjustment options for the width of leg are also available in the *Orthopaedic Module 10*.

In the addition to the established options a further option is available:

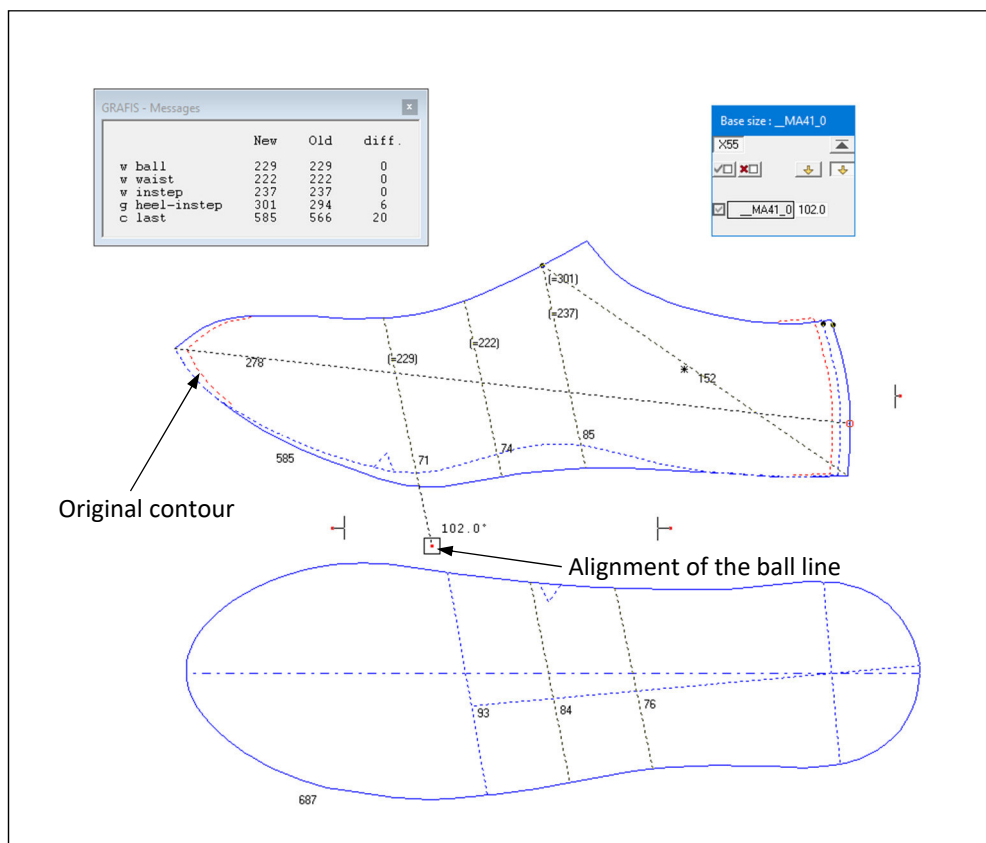
Display insole



With this option the insole can be hidden if it is not required for adjustment of the *Orthopaedic Module 10*. The insole reappears after quitting the drag environment.

Adjustment of Orthopaedic Module 10

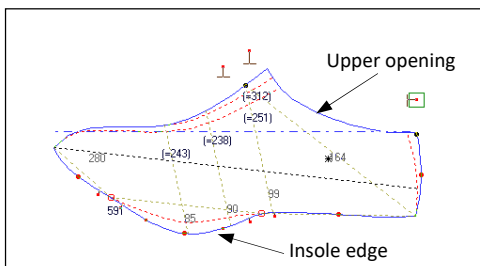
Before transferring the alterations to the last in the orthopaedic module the measurement lines must be aligned. This ensues in the drag area *Adjusting the last* by dragging the ball line, see Picture 2-22.



Picture 2-22

The inner and outer lasts can be lengthened or shortened in the front and back areas via the two controls at the bottom. The control at the rear lengthens the back last centre. The red dashed lines indicate the original contour of the last, see Picture 2-23.

The contours of the outer last are altered in the drag area *Adjustment outer last*. The front last centre can be rotated via the uppermost control. This increases or reduces the width of the upper opening. The control to the left alters this area from the break point (Picture 2-23). The back last centre can



Picture 2-23

be rotated via the uppermost right control. This also gives more or less width for the upper opening. The insole edge is divided into 3 sections. By moving the basic points the specific area for alteration of the contour can be determined. When moving form points of the 1st order form points of the 2nd order appear for more accurate shaping of the curve. The new curve transition can be balanced via these points. The back last centre can be shaped in the same way.

The drag area *Adjustment inner last* offers the same adjustments for the inner last. To ensure optimum control of the alterations, auxiliary measurements are displayed for the last. An information box comparing the old and new measurements is also displayed. If the insole was included, the following measurements appear:

GRAFIS - Messages

	New	Old	diff.
g ball	224	227	-3
g waist	224	222	2
g instep	237	235	2
g heel-instep	294	294	0
c last	566	566	0
c insole	687	---	---

g ball = ball girth
g waist = waist girth
g instep = instep girth
g heel-instep = heel girth
c last = girth last / insole edge

If the insole was not included, the following measurements appear:

	New	Old	diff.
w ball	132	135	-3
w waist	140	138	2
w instep	161	159	2
g heel-instep	294	294	0
c last	566	566	0

w ball = ball width
w waist = waist width
w instep = instep width
g heel-instep = heel girth
c last = girth last / insole edge

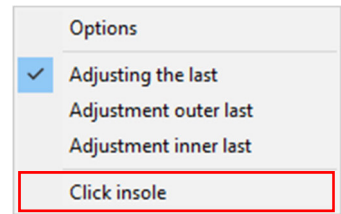
Attach/ detach insole

If you have used the *Orthopaedic Module 10* without insole originally, you can load the *Insole 10* subsequently. Press the right mouse button and select *Click insole* from the context menu (Picture 2-24).

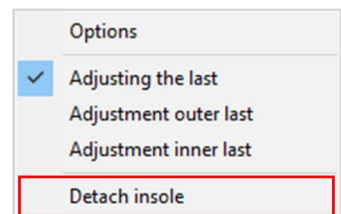
You will be asked to click on the insole. The insole must be visible within the style. As soon as the insole has been clicked, the measurements of the insole are included in the calculations.

If you have used the insole but no longer need it, you can detach the insole. Press the right mouse button and select *Detach insole* (Picture 2-25).

The insole is now detached and the measurements are calculated without the insole.



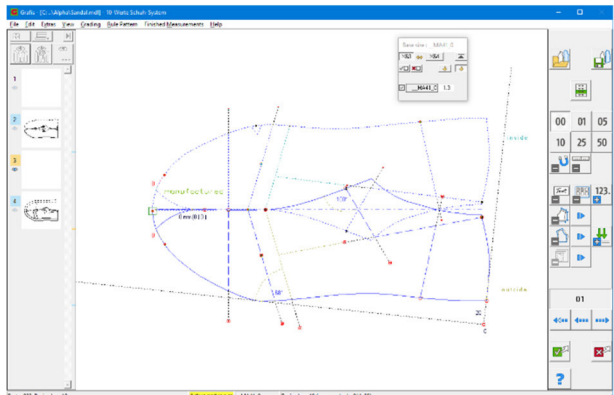
Picture 2-24



Picture 2-25

2.8 Interactive Basic shoe 10

A number of tasks for the generation of the upper pattern are processed in the interactive *Basic shoe 10* (Picture 2-26). If required, the last and the insole can be combined and grading is carried out. *Basic shoe 10* also offers construction of auxiliary lines and adjustments for ease as well as options for different boot leg variations.



Picture 2-26

Construction lines

A number of construction lines can be adjusted in *Basic shoe 10* enabling the development of most shoes and boots.