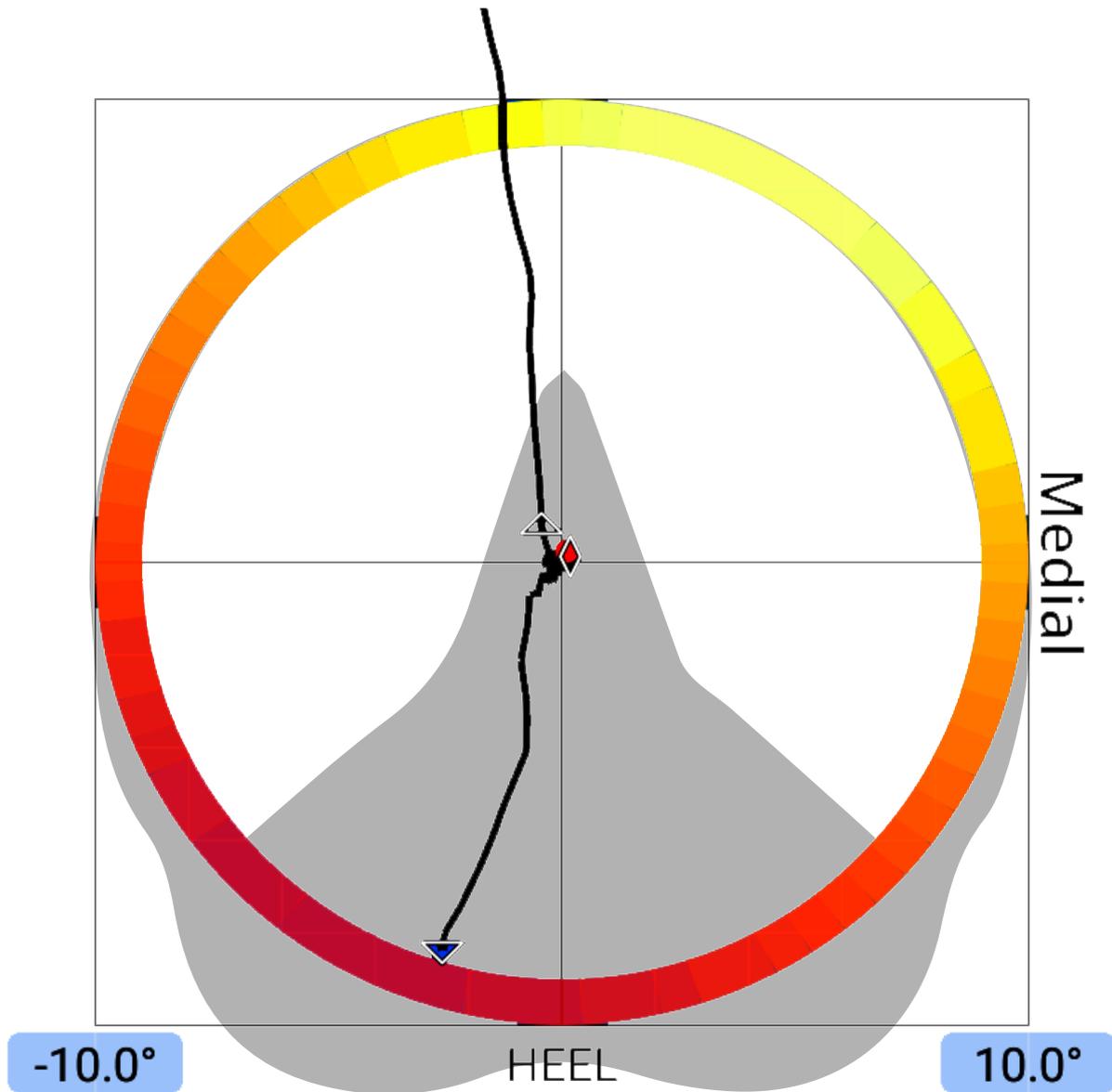


THE RING OF WERKMAN



The Ring of Werkman is an animated representation of the entire stance phase: the moment of contact between the hoof and the ground. The initial ground contact, the movement during the stance phase and the break-over point during break-over. The Ring of Werkman shows all angles at which this occurs, for both walking and trotting, on both hard and soft surfaces.

IMPORTANT: The representation is not PRESSURE, but rather the MOVEMENT ARISING FROM PRESSURE that the ground exerts on the hoof.

THE GRID

The grid is the blue support grid. By default, this is set to a 10-degree angle. Each square in the blue grid represents 2 degrees. Just as in the 3D image, you can zoom in and out.

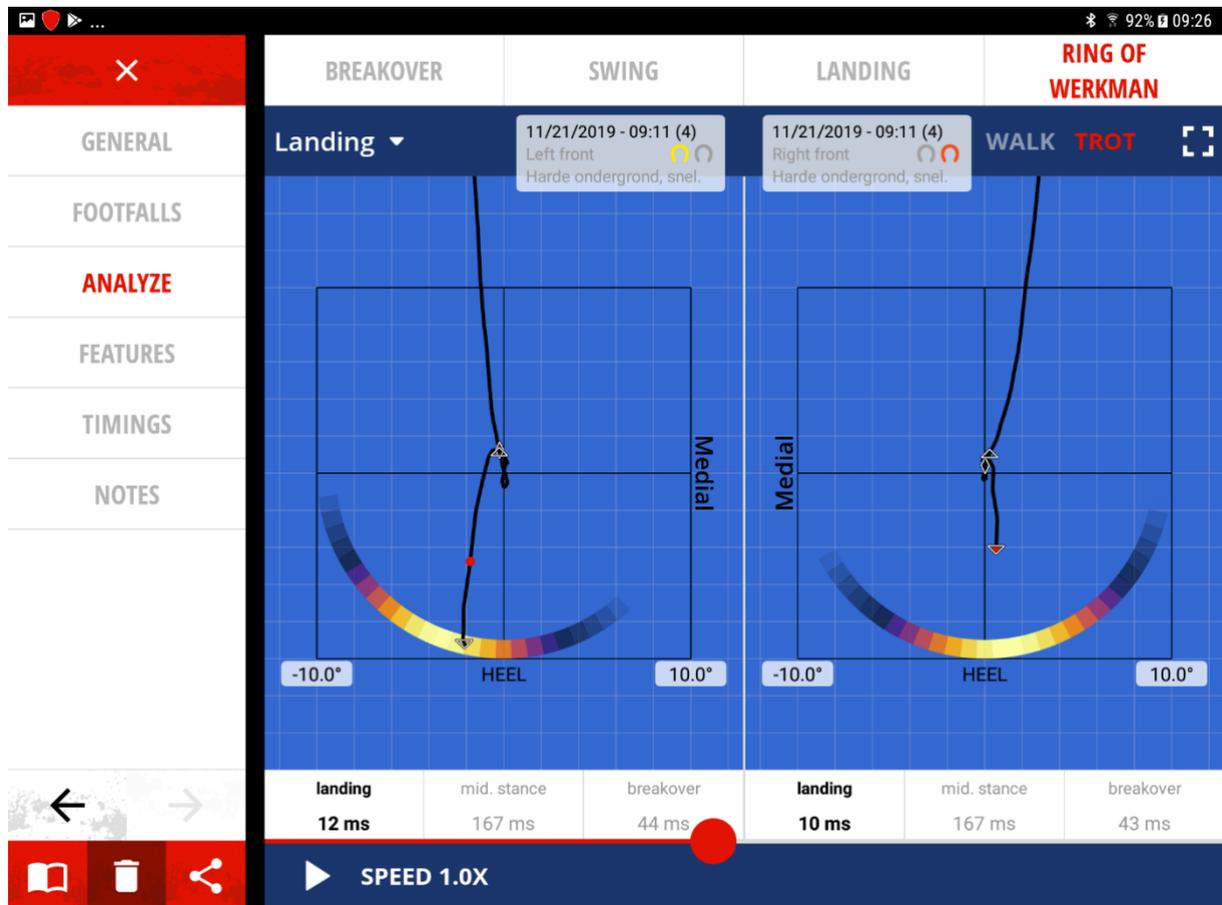
The times in each phase are shown at the bottom of the ring. The phase lights up in sync as the ring plays back.

For further details, please refer to the manual enclosed as an appendix. This tool gives you even more insight!

Explanation of the animation:

- **Angle / black line**, The black line shows the angle of the hoof at each moment throughout the stance phase. An acute angle during landing means a flatter landing.
- **Red circle** The red circle indicates the time that the Ring of Werkman is imaging.

LANDING

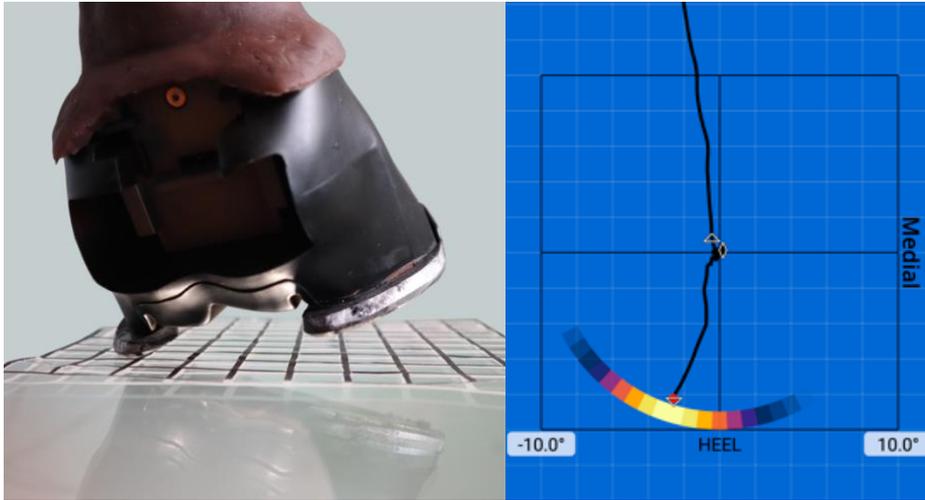


The Ring is a semi-circle during landing. It emphasizes on which side the landing is occurring. The black line quantifies the angle of the hoof. A smaller angle means the hoof is more levelled with respect to the ground surface and the semicircle of the ring will be larger. First contact of the hoof with the ground (hoof on) starts where the downwards pointing triangle is placed on the black line. The red dot shows which point in time is currently shown in the ring. The landing phase ends at the diamond. The diamond symbolizes the start of the mid stance.

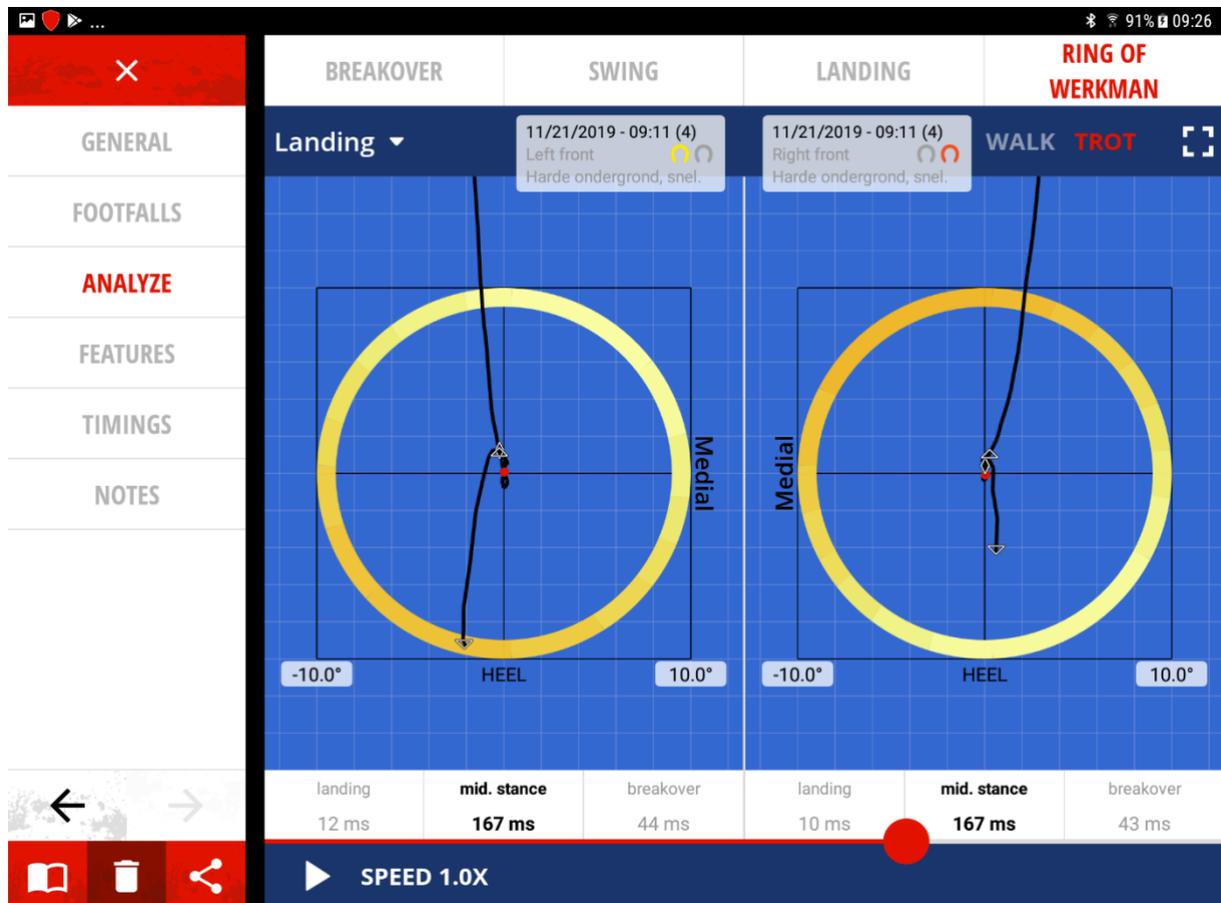


In the picture above a trotting horse is shown. This particular horse shows that its left hoof lands towards the heel with more than 9 degrees and 2 degrees lateral. The right hoof lands about 4 degrees on the heel and less than 1 degree lateral.

▼ **LANDING / REVERSED TRIANGLE** The initial contact between the hoof and the surface is the start of the landing. This is shown with a triangle. The ring indicates where the landing occurred and is shown as a semi-circle.



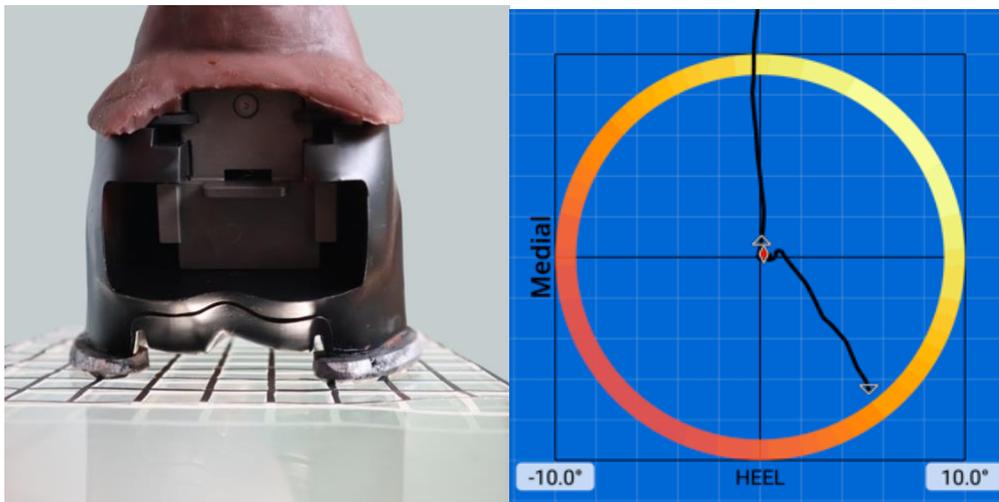
MID STANCE



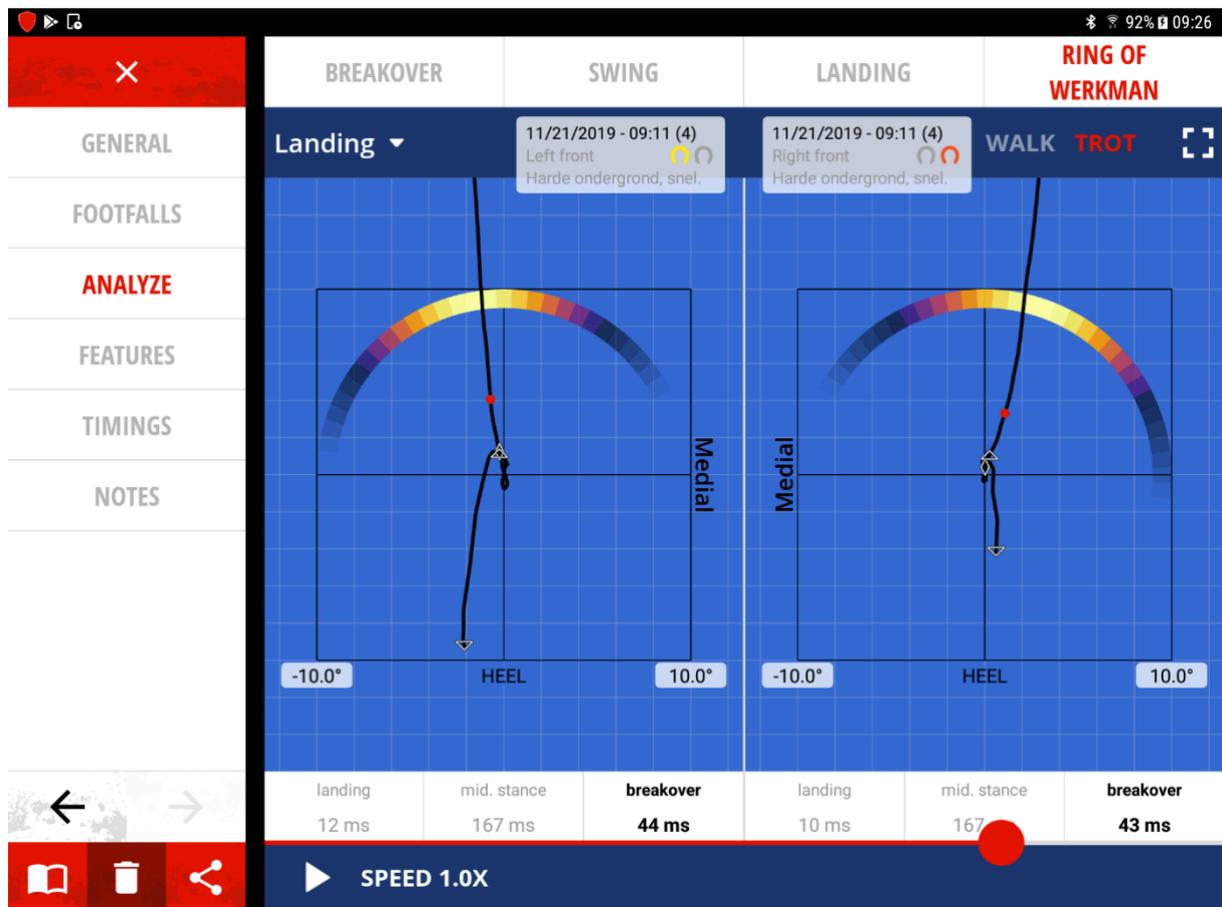
During mid stance and when on hard surfaces, the hoof will usually be level with the surface and hence the ring will be a full ring which is equally colored throughout its circumference.

◆ **STANCE PHASE / DIAMOND** When the hoof is located completely on the surface and the landing phase has ended, the stance phase begins, which is shown with a diamond.

During the stance phase, the hoof is parallel to the surface. Contact is complete and the ring is completely filled in. Hoof movement is still possible during the stance phase. This can be explained by the hoof mechanism, for instance.



BREAKOVER



The start of the breakover is indicated with a triangle pointing upwards. The default scaling shows the breakover up to 10 degrees. By zooming out the whole breakover can be visualized until the hoof lifts up from the ground (hoof off).

▲ BREAK-OVER/ TRIANGLE The triangle pointed upwards indicates the start of the break-over. The break-over starts when the heel of the hoof is 0.5 degrees off the ground.

