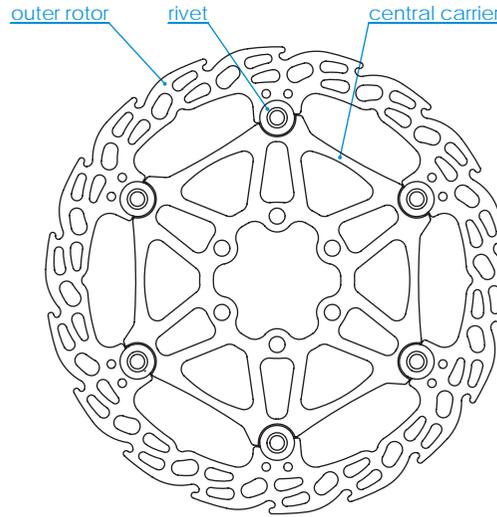


FIXED DISC

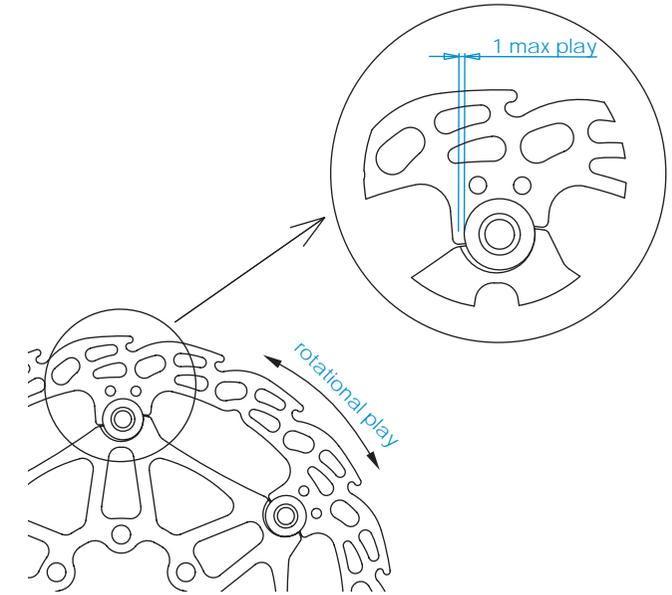
A fixed brake disc is a one piece brake disc. The brake pad contact face and hub mounting face are all part of the same piece of metal. They perform perfectly well within certain parameters, but if they are subjected to serious heat the braking surface is unable to dilate or expand freely because it is not floating. In some very rare extreme cases the disc could end up permanently deformed due to the induced mechanical stress in its central part.



FLOATING DISC

To avoid any permanent deformation even under the most severe conditions, a floating disc is constructed in two parts. An aluminium centre part (carrier) which is fixed to the hub and a stainless rotor part in contact with the brake pads. This is a high performance type brake disc. When the outer rotor is subjected to serious heat it expands. By allowing it to float separately from the centre it is free to expand and shrink again at will without putting any stress on the carrier. So floating discs are made in two parts to allow the discs to expand and prevent them from warping. Furthermore, the floating discs are generally lighter than the fixed ones.

The vented disc is a particular type of floating disc, the core of the outer rotor presents some cooling fins for better heat dissipation.



NOTE : The outer rotor of a floating disc is linked to the central carrier using some rivets and spring washers to avoid any noise. Because the disc is floating, there is still a play between the rivet and the other parts (carrier and outer). During operation and as the disc wear it is normal that you notice a certain amount of play developing between the outer rotor and carrier. This rotational play shouldn't be more than 1mm or the disc will need to be replaced. The drawing shows the tolerances for Hope Technology floating discs for your reference.