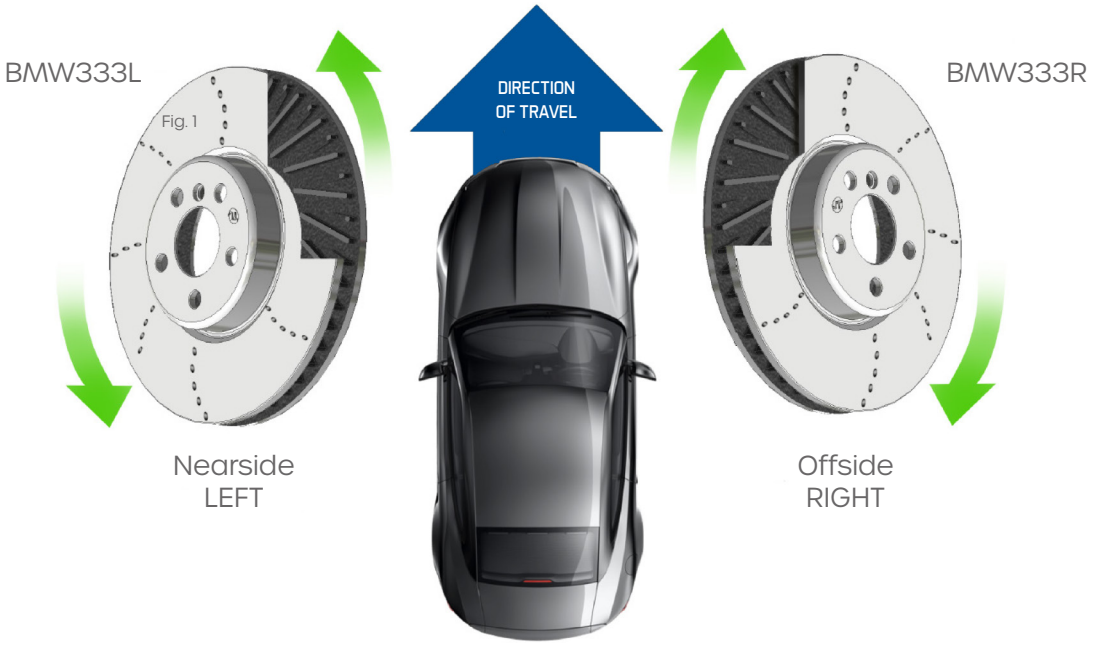
# Correct Installation of Handed Discs

Heat generated by friction must be dissipated quickly during braking to help avoid brake fade and rapid brake pad deterioration. Most vehicles with internal cooling vanes which extend from the centre of the disc outwards in a straight line. Some higher performance vehicles feature directional discs which have curved or tilted internal cooling vanes.

When brake discs rotate at speed, centrifugal force pulls air from the centre of the disc through the vents and out of the disc, resulting in improved cooling efficiency. Because of this, there will be left and right-hand discs. These are indicated in the Juratek range by part numbers containing either an 'L' or 'R' suffix.




When directional discs are properly installed, the internal vanes should lean towards the rear of the vehicle. The direction of any slots or drill holes on the outside of the disc do not indicate which side of the vehicle the disc should be installed.

Incorrect installation of discs can result in tl discs becoming extremely hot. If the discs exceed normal operating temperature, this can cause hot brake judder.

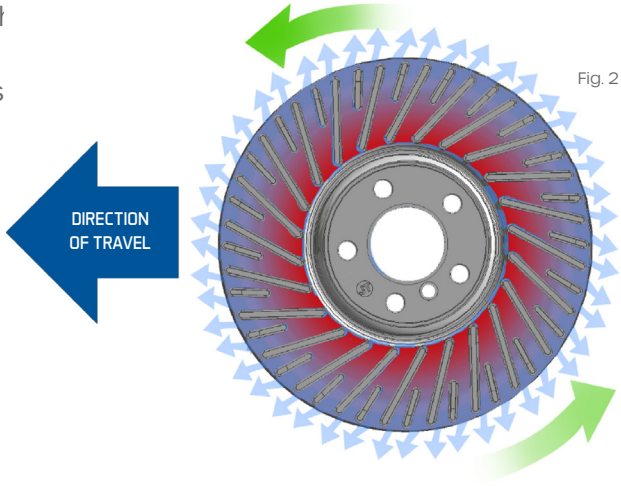




Fig. 3

Fig. 3 shows oxidisation (orange colouring), soot deposits on the hub surface, and a blue tint on the braking surface which all indicate excessive temperatures that can eventually lead to disc distortion and cracking.

## Why do some discs feature curved cooling vanes, but are not sold as handed discs?

On many OE SUV and premium applications, manufacturers use a softer curved vane shape that:

- Improves stiffness
- Improves airflow slightly over straight vanes*
- Reduces harmonic noise
- Improves casting strength

However:

- The curve is mild
- Vane spacing is symmetrical
- Airflow penalty running 'backwards' is relatively small

*The cooling compromise is acceptable because these vehicles are not designed for track use. Airflow testing may show only a small difference between clockwise and anticlockwise rotation, so the vehicle manufacturer keeps the disc non-handed.

This means the disc can be fitted on either side without causing overheating or warranty issues.