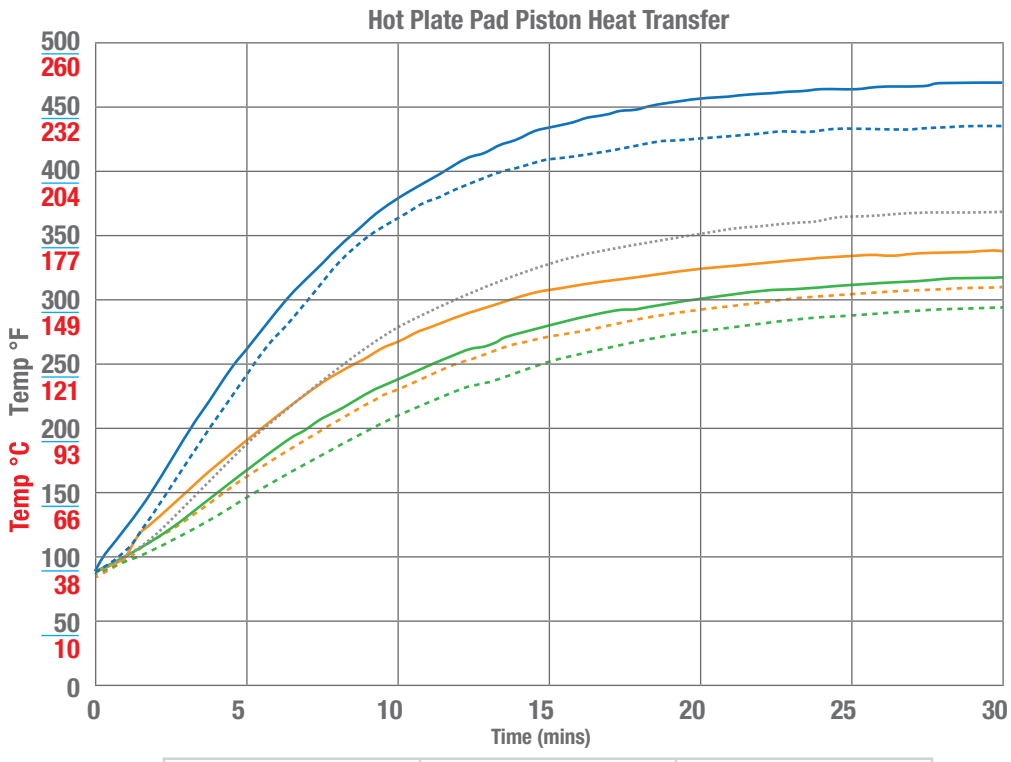
Titanium Shims

New titanium shims are a must-have for high-performance braking.

These new perforated titanium heat insulation shims have been shown in laboratory tests to reduce heat transfer through the pads to the caliper by around 32°C/90°F.

EBC Brakes' titanium shims are designed to reduce heat transfer on all types of pads as shown in the graph below.



These tests were conducted to compare the heat transferred with plain shims or perforated shims and EBC race materials were used. However, the physics remains sound and any semi-metallic pad should benefit from shim heat insulation.

Most caliper seals are damaged when exposed to caliper body temperatures above 220°C or 430°F which equates to a seal temperature of approx 150°C or 300°F. Anything to reduce heat getting to them is good news. EBC recommends re-sealing any calipers where heat strips show temperatures have passed this limit.

Laser-cut from titanium sheet and perforated to reduce conductive heat transfer, the EBC titanium shims come in sets of two or four depending on caliper type and are for popular front fitments only.

Shims are applied to your pad set and can be re-used at pad change unless damaged.

How to Install

- Shims must be flat and sit without any gapping on the rear of the brake pad.
- If your pad set is supplied with any other shims such as the rubberised shims on most stock pads, these MUST be removed before fitting titanium shims to avoid a pad over-thickness situation.
- Simply prize the old shims off to break the adhesive seal with a blunt edge screwdriver or similar, and once removed lightly, sand the rear of the pad to remove any excess glue or surface irregularities. The new titanium shims MUST be snugged up against the pad backing plate without any debris between to avoid long pedal/brake sponge.
- Titanium shim sets for sliding calipers contain only two shims and these must each be applied to the pad located next to the piston. Titanium shims for multi-piston calipers are supplied for all four pads in the axle set.

What's wrong with rubberised shims?

First of all, all race pads from EBC and every other brand are supplied without any shims at all, and EBC's titanium shims are advised for all brands of the pad and will reduce heat transfer in the higher temperatures of racing. They are therefore a worthwhile investment. This applies to any brand of pad, we are not saying EBC generate more heat than others because they do not….all pads generate heat and braking energy is always translated into heat.

Non-race caliper (stock) pads feature an anti-noise shim that has a rubber coating and it's best to replace those with a harder titanium shim to reduce pedal sponge and shim distortion. Titanium shims are much harder and less likely to buckle and distort. OEM rubberised stock shims are also not perforated and the reduced surface contact area with the EBC perforated shims reduces conductive heat transfer.

The EBC titanium shims are of course perforated for this reason.

EBC did some simple lab test show in the graph above which clearly showed that although a plain (non-perforated) titanium shim helps, a perforated shim is far better at heat reducing heat transfer into the caliper.