

A3/MK5 VW White paper

The STaSIS/ALCON brake upgrade for the Audi A3/MK5 VW replaces the OEM components in the front brake assembly. The kit includes the following:

- (2) STaSIS/ALCON 2 piece floating rotor assemblies
- (2) ALCON Mono 4 Calipers
- (2) STaSIS caliper mounting brackets
- (1) Set of high performance brake pads
- (1) High temp brake fluid
- (1) Goodridge brake lines
- (1) Necessary mounting hardware

The STaSIS/Alcon 2 piece rotor assembly replaces the 311 mm 1 piece cast iron rotor with a 2 piece floated rotor. The 328 mm assemblies remove 6 pounds per corner while the 355 mm assemblies shed approximately 1.5 pounds. Compared to the OEM vented rotor, the Alcon rotor features directional aerofoils with 2 point pickups. High nickel and copper contents improve heat radiation and pad performance.

The float arrangement joining the aluminum STaSIS hat to the ALCON rotor allows for approximately .030" of axial expansion and .040" radial expansion in either direction. The rotor can safely run at temperatures in excess of 1000 degrees Fahrenheit without thermally induced distortion.

The OEM 2 piece single piston slider calipers are replaced with Alcon Mono 4 1 piece monoblock 4 piston calipers. The deep-core cast monoblock units are stiffer than the stock counterparts and feature high resilience piston seals – pedal travel is firmer and more linear.

Stainless steel wrapped Teflon brake lines replace the OE rubber units, permitting less volume change under pressure increases – the interaction between pedal application and caliper piston displacement more approximately linear.

High boiling point brake fluid and performance brake pads replace the street-oriented OEM units – larger temperature ranges and higher temperature ceilings result.

	OEM Audi A3	STaSIS/ALCON
Rotor Diameter (mm)	311	328/355/370
Rotor Thickness (mm)	25	28
Air Gap (mm)	8.5	16.3/14/14
Rotor Weight (lbs)	18.6	12.6/16/16.5
Caliper Description	2 piece 1 piston slider	1 piece monoblock 4 piston
Caliper Weight (lbs)	14	9.6
Piston Sizes (mm)	54	41.3/38.1
Pad Annulus (mm)	62	48
Swept Area (cm ²)	485	422/463/?

Table 1: Comparison of OEM Audi A3 and STaSIS/ALCON Brake Systems