

Expand into Next-Generation Technology— 3

Next-Generation Electro-Mechanical/High Performance Brakes 2: High Performance Brakes

High Performance Automotive Brakes (Opposed piston disc brake calipers)

Opposed piston disc brake calipers, which are mainly used in high performance vehicles, are a type of disc brake caliper with pistons on both sides of the brake rotor. Opposed piston-type caliper features include stable braking power and high controllability.

6-pot Opposed Brake Caliper

Akebono mass-produced 6-pot opposed-type brake calipers have a total of six pistons, three on each side, and is adopted for use in high performance SUVs and sports cars that require high braking performance.



10-pot Opposed Brake Caliper

The 10-pot brake caliper mass-produced by Akebono has a total of 10 pistons, five on each side, and is adapted for use in large high performance vehicles.



These brake calipers depend on brake technology knowhow developed by Akebono through its various motor sports activities and possess such characteristics as high-speed, high-load, and high-temperature braking performance along with the comfort required for high-price vehicles.

Electro-Mechanical Parking Brake Opposed-type Rear Brake Caliper (Prototype)

This is an opposed-type electro-mechanical parking brake developed for the rear wheels of high performance vehicles. This was developed for existing electro-mechanical parking brakes with the aim reducing weight and enhancing design.



Ai-Ring

Ai-Ring is one of the largest proving grounds operated by an automotive parts maker in Japan. More than 720,000m² in size, Ai-Ring's facility is equipped with test tracks, high-speed 3,016-meter (one lap) oval, a low μ road and winding road. The facility suffered costly damage in the Great East Japan Earthquake of March 2011, but the high-speed oval was subsequently restored and the facility reopened in November 2012. From 2013, the second stage of restoration commenced with the restoration of the comprehensive test track and the low μ road, the further expansion of slopes, the installation of a new winding road and rough-road, and the expansion of dynamometer facilities. This has enabled us to conduct brake assessment under conditions closer to global real world. The ability to conduct comprehensive evaluation from bench testing to actual vehicle testing in a single facility has speeded up the development process. In April 2018, we began loaning out the track (including part of the maintenance shop) to companies. For further details, please fill out the inquiry form on our website.



Ai-Ring

Development and Supply of Formula One Brakes

Since 2007, Akebono has been supplying its brake systems to the McLaren team that competes in Formula One (F1), the pinnacle of motorsports. To continue to supply highly reliable brakes that always exhibit stable performance and achieve higher performance, even in harsh environments where rotor temperatures reach as high as 800 degrees Celsius immediately after hard braking, we are intensely committed to every aspect of design including structure, material, and surface treatment.

