

**PERFORMANCE[®]
FRICTION
BRAKES**



Big Brakes



CALIPER TECHNOLOGY

The System...

The caliper, disc and pads work as a system: dynamically effecting bite, torque and release. Performance Friction's improvements in pad and disc technology, combined with improvements in caliper design, results in exceptional performance and reliability.

Short Aspect Ratio 4-Piston Design for a stiffer caliper body, which reduces drag and temperature as well as improving release and control over 6-piston designs.

High Tension Seals for proper piston rollback, which reduces drag and improves consistency.

High Temperature Aluminum Alloy for stiffness and improved pedal feel at the highest temperatures.

Monobloc FEA Design reduces caliper deflection for less pedal travel and improved response.

Abutment Design for optimized torque takeout, which improves release and control.



Two-piece Bleeder Design protects against thread and seat damage.

Integrated Bleeder and Bridge Pipe Guards.



Two-Piece Floating Direct Drive™ Street Upgrade Disc Technology

Ever since the disc brake was invented vibration and pulsation caused by thermal expansion (warped discs) has been a major issue.

Until Now...

With Performance Friction's two-piece floating Direct Drive and Direct Drive 'V2' disc assemblies, the disc flange floats in the bobbin structure, allowing radial and axial expansion of the disc without being constrained by the hub or hat.

Direct Drive™ Systems

Years of R&D and thousands of race miles have resulted in the development of PFC's Patented Direct Drive™ Systems. Direct Drive uses a saddle bobbin as part of the mounting system. Direct Drive V2 is an integral drive in hat system and is the latest generation disc mounting system designed to enhance the Z-Rated Big Brake kits by reducing the number of components and overall disc assembly weight.

A true two-piece floating race disc optimized for road and track duty.

- Reduced thermal distortion and warping.
- No rattling – 100% silent operation.
- Reduced drag and increased mileage.
- Reusable hat/hub assembly.



Direct Drive



Direct Drive V2

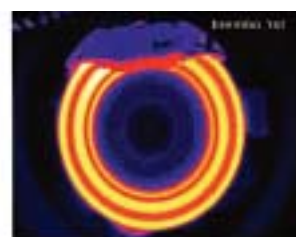
Direct Drive™ Discs



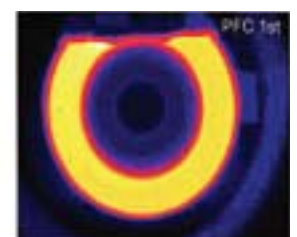
1. High Carbon Alloy with copper and molybdenum for high temperature strength and durability.
2. Vanes turned OD and ID for balance to reduce thermal warping and vibration.
3. Run-out less than .001 inches, reducing pulsation and vibration.
4. Thickness variation less than .0003 inches reduces vibration.
5. 47 or more vanes for superior thermal capacity.
6. Aircraft quality heat-treated for microstructure alignment and durability.
7. Surface finishes less than .7 microns.
8. 100% measured and inspected to meet tolerance specifications.

The Result...

Performance Friction Brakes outperform the competition by more efficiently distributing heat for lower lap times, longer life and improved driver control.



Competitor



PFC



BRAKE PAD TECHNOLOGY

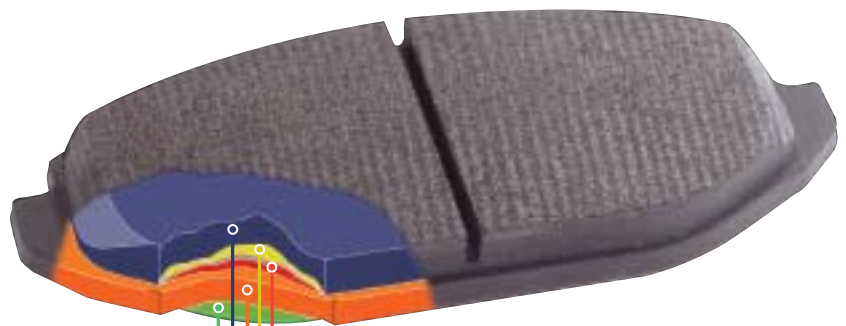
Z-RATED[®] Carbon Metallic[®]

The Latest in Brake Pad Technology for specific Severe Duty and High Performance Applications

Sports and Trackday – more stopping power and increased fade resistance for the high performance driver that demands better than OE to get the most from their high performance sports car.

- **More stopping power**
- **Fade resistant**
- **Quieter**
- **High pad life**
- **Lower disc wear**
- **Low dusting**

Multi-Layer Technology[™]



Each layer reduces brake noise by absorbing specific ranges of sound frequencies.

Layer 1 Vehicle specific formulated friction materials - this means exceptional stopping power over a longer performance life.

Layer 2 Enhance material technology - exclusive underlayment - this means it isolates, dampens and reduces noise.

Layer 3 Exclusive Ionic Fusion[™] bonding technology - this means dependable braking under severe conditions and it prevents delaminating.

Quality Steel Statistically controlled plates to ensure proper fit.

Visco-Elastic Shims Multi-Layer, noise insulating Visco-elastic shims are the final barrier to noise and vibration.

Patented graphite enhanced powder coating - prevents steel plate corrosion to improve pad life.

Z-Rated[®] Carbon Metallic[®] is denoted with a part number ending in .10 or .11
For example: BMW E46 M3 - 0394.11

Z-RATED[®] BRAKE KITS

- Forged Multipad Monobloc Caliper
- Direct Drive V2 Molybdenum Alloy Discs
- Z-Rated[®] Carbon Metallic[®] Pads
- Custom Engineered for the Street
- Genuine Race Technology
- Custom Colours



Application	Mounting	Part Number
BMW E36 M3		
ZR44 Caliper Upgrade Kit (323mm x 32mm disc)	Front	4400.0002
ZR31 Caliper Upgrade Kit (355mm x 32mm disc)	Front	3100.0006
ZR29 Caliper Upgrade Kit (321mm x 20mm disc)	Rear	0029.0003
BMW E46 M3		
ZR44 Caliper Upgrade Kit (323mm x 32mm disc)	Front	4400.0001
ZR31 Caliper Upgrade Kit (355mm x 32mm disc)	Front	3100.0004
ZR29 Caliper Upgrade Kit (321mm x 20mm disc)	Rear	0029.0002
BMW E90 330i		
ZR31 Caliper Upgrade Kit (355mm x 30mm disc)	Front	3100.0003
ZR31 Caliper Upgrade Kit (371mm x 30mm disc)	Rear	0031.0002
BMW E92 M3		
ZR31 Caliper Upgrade Kit (372mm x 32mm disc)	Front	3100.0008
ZR31 Caliper Upgrade Kit (371mm x 30mm disc)	Rear	0031.0003
CORVETTE C5/C6 Z06		
ZR31 Caliper Upgrade Kit (362mm x 32mm disc)	Front	3100.0005
ZR31 Caliper Upgrade Kit (371mm x 30mm disc)	Rear	0031.0001
LEXUS IS - F		
ZR31 Caliper Upgrade Kit (372mm x 32mm disc)	Front	3100.0009
ZR31 Caliper Upgrade Kit (355mm x 30mm disc)	Rear	0031.0004
MITSUBISHI EVO X		
ZR31 Caliper Upgrade Kit (362mm x 32mm disc)	Front	3100.0001
ZR29 Caliper Upgrade Kit (330mm x 22mm disc)	Rear	0029.0001
MITSUBISHI EVO 6-9		
ZR31 Caliper Upgrade Kit (362mm x 32mm disc)	Front	3100.0007
S197 MUSTANG (2005-)		
ZR31 Caliper Upgrade Kit (355mm x 32mm disc)	Front	3100.0002
OE Caliper Upgrade Kit (328mm x 19mm disc)	Rear	0001.0001

* - Z Rated brake kits have been designed to fit most 18" wheels and some smaller sizes. Confirmation of fitment with the use of a template gauge (available from PFC) is required before placement of order as various makes and styles of wheels, OE and aftermarket, can be fitted to the same vehicle model.



Caliper Specifications - Torque Balanced for Every Application



ZR44

Front Brake Upgrade Kit

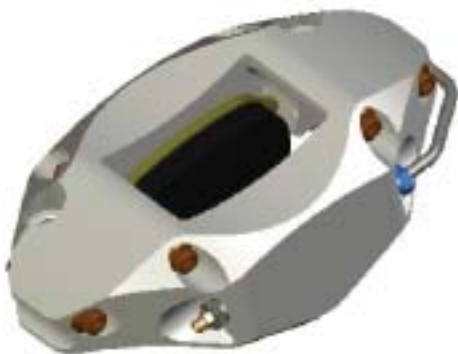
- Race Proven Monobloc, Multi-pad caliper (4 pads per caliper)
- Z-Rated Carbon Metallic pads
- Designed to use 278-330mm OD discs
- Suitable for disc thicknesses between 30-32mm
- Piston sizes 41mm
- Pad swept depth 42-47mm



ZR31

Front Brake Upgrade Kit

- Race Proven Monobloc, Multi-pad caliper (4 pads per caliper)
- Z-Rated Carbon Metallic pads
- Designed to use 355-378mm OD discs
- Suitable for disc thicknesses between 30-32mm
- Piston sizes between 29-44mm
- Pad swept depth 47-51.5mm



ZR29

Rear Brake Upgrade Kit

- Race Proven Billet caliper
- Z-Rated Carbon Metallic pads
- Designed to use 278-323mm OD discs
- Suitable for disc thicknesses between 20-22mm
- Piston size 44mm
- Pad swept depth 42mm