

ADVANCED  
TECHNOLOGY™

PROFESSIONAL  
GRADE™

**Raybestos®**  
**The best in brakes®**



# COMMERCIAL VEHICLES

**"HEAVY DUTY SOLUTIONS FOR MEDIUM DUTY TRUCKS"**



Modern brakes do more than just stop your truck. They affect traction control, stability control and are strategically connected to the electronic brake and ABS systems. One brand of brake parts is both predictable and stable enough to keep these electronic systems working — Raybestos®.

Attempting to match OE is where most manufacturers end. With Raybestos® brand disc brake pads, shoes, rotors, drums and hydraulics... that's just the beginning. Each Raybestos® brake part undergoes a strict process to ensure it meets the strictest physical, safety and performance requirements.

- **Systematic Testing**

In-house R&D analysis and on-road performance assessment

- **Ongoing Validation**

Daily production auditing and monthly product sampling

- **Meeting or Exceeding the OE Standards for Excellence**

ISO/TS 16949-2002 Certification of Accreditation has been earned for every Raybestos® brand friction manufacturing facility

Your customers moving heavy loads safely down the road — no other brand of brake parts can guarantee a higher level of professional confidence.

***“HEAVY DUTY SOLUTIONS FOR MEDIUM DUTY TRUCKS”***



### **ADVANCED TECHNOLOGY™ DISC BRAKE PADS**

Produced with our finest ceramic and semi-metallic formulations, Advanced Technology™ brake pads deliver industry leading performance, without the noise and wheel dusting. Developed for demanding applications or simply for those who want the best, a wide range of coverage ensures when you service hard working fleets, Raybestos® brand Advanced Technology™ brake pads have what you need.

### **PROFESSIONAL GRADE™ DISC BRAKE PADS**

The most complete, application specific friction line on the market, Professional Grade™ brake pads deliver safe, consistent, premium performance for everyday driving conditions. Can't find the parts you need for the latest addition to the fleet? Stop searching. Raybestos® brand Professional Grade™ brake pads are First to Market with a high quality, "OE or Better" offering.

### **PROFESSIONAL GRADE™ BRAKE SHOES**

Designed to provide the best overall premium performance for typical driving situations, Raybestos® brand Professional Grade™ brake shoes are either contour or cam grounded to eliminate chatter and rear wheel lock-up. All Professional Grade™ shoes are recoined to provide correct shoe-to-drum contact, are riveted or bonded and will provide optimal shear strength.



### **ADVANCED TECHNOLOGY™ ROTORS**

Raybestos® brand Advanced Technology™ rotors are ready to install right out of the box. Our rotors never require turning prior to installation and you can count on the fact that they have the minimum lateral run out, parallelism and surface finish due to our precision machining process. Fleet drivers will thank you for solving the common problems of noise and brake pulsation. You will have the confidence of no comebacks when you install Raybestos® brand Advanced Technology™ rotors.

### **PROFESSIONAL GRADE™ ROTORS**

Raybestos® brand Professional Grade™ rotors offer the best coverage in the industry — ensuring you'll always have access to the part you need when you need it. The vane configurations of Raybestos® brand Professional Grade™ rotors are designed for optimal cooling and noise dampening. They also apply a non-directional finish to remove peaks and directional lines, which could cause noise and brake roughness.

### **PROFESSIONAL GRADE™ DRUMS**

Raybestos® brand Professional Grade™ drums are produced using SAE J431/G3000 cast iron. Additionally they are designed with attributes that provide performance advantages.

### **PROFESSIONAL GRADE™ FRICTION-READY CALIPERS**

Professional Grade™ Friction-Ready calipers make it easy for fleet technicians to customize the friction for the application at hand. But like the loaded version, each Raybestos® brand Professional Grade™ Friction-Ready caliper has all required hardware and brackets, and are 100% pressure tested to ensure safe, leak-free performance.

### **PROFESSIONAL GRADE™ MASTER CYLINDERS**

All Professional Grade™ master cylinders are reviewed by our engineering staff to make sure each cylinder includes all the necessary attributes for a quick and easy installation. They check for proper form (material construction), fit (no modifications necessary) and function (performance and safety). All master cylinders are tested using both the SAE J1153 and J1154 testing procedures, which ensures Raybestos® brand Professional Grade™ hydraulics are of the highest quality each and every time they are installed.

### **PROFESSIONAL GRADE™ WHEEL CYLINDERS**

Professional Grade™ wheel cylinders feature the highest quality EPDM rubber components for superior resistance to heat and corrosion and longer service life. All wheel cylinder bleeder screws use a durable Trivalent coating to prevent corrosion. In addition, each bleeder screw is hardened so the head area will not strip during bleeding.

### **PROFESSIONAL GRADE™ CLUTCH HYDRAULICS**

All Professional Grade™ clutch hydraulics meet or exceed the O.E. performance requirements. These cylinders are stroke tested by lab personnel to SAE J431 requirements to deliver unequaled performance when it counts each and every time you shift.

**ADVANCED TECHNOLOGY™  
AND PROFESSIONAL  
GRADE™ DISC BRAKE PADS**

Before leaving the factory, Raybestos® brand Advanced Technology™ disc brake pads are post cured to eliminate break-in. Because of this, drivers will receive a confident pedal feel from the very first stop — giving them the safe and consistent performance they expect from Raybestos® brand products.

**SHIMS**

Selecting the correct shim material and attachment method for each application ensures that the shims perform as intended, reducing noise and vibration for the life of the pads. Installed on most applications, often improving on the OE specifications.

- A wide range of shim materials provides the best match for each application.
- Orbital Riveted, Spring Lock and Thermally bonded attachment methods keep the shims in place for the service life of the friction.

**SLOTS**

Allows for flexing of the friction material, while reducing noise and letting gasses escape. Raybestos® slot styles follow or improve upon the OE design. Raybestos® application specific slot configurations include:

- Single center slot
- Diagonal slot
- Dual slots
- Dual Diagonal slots
- Off-set slot

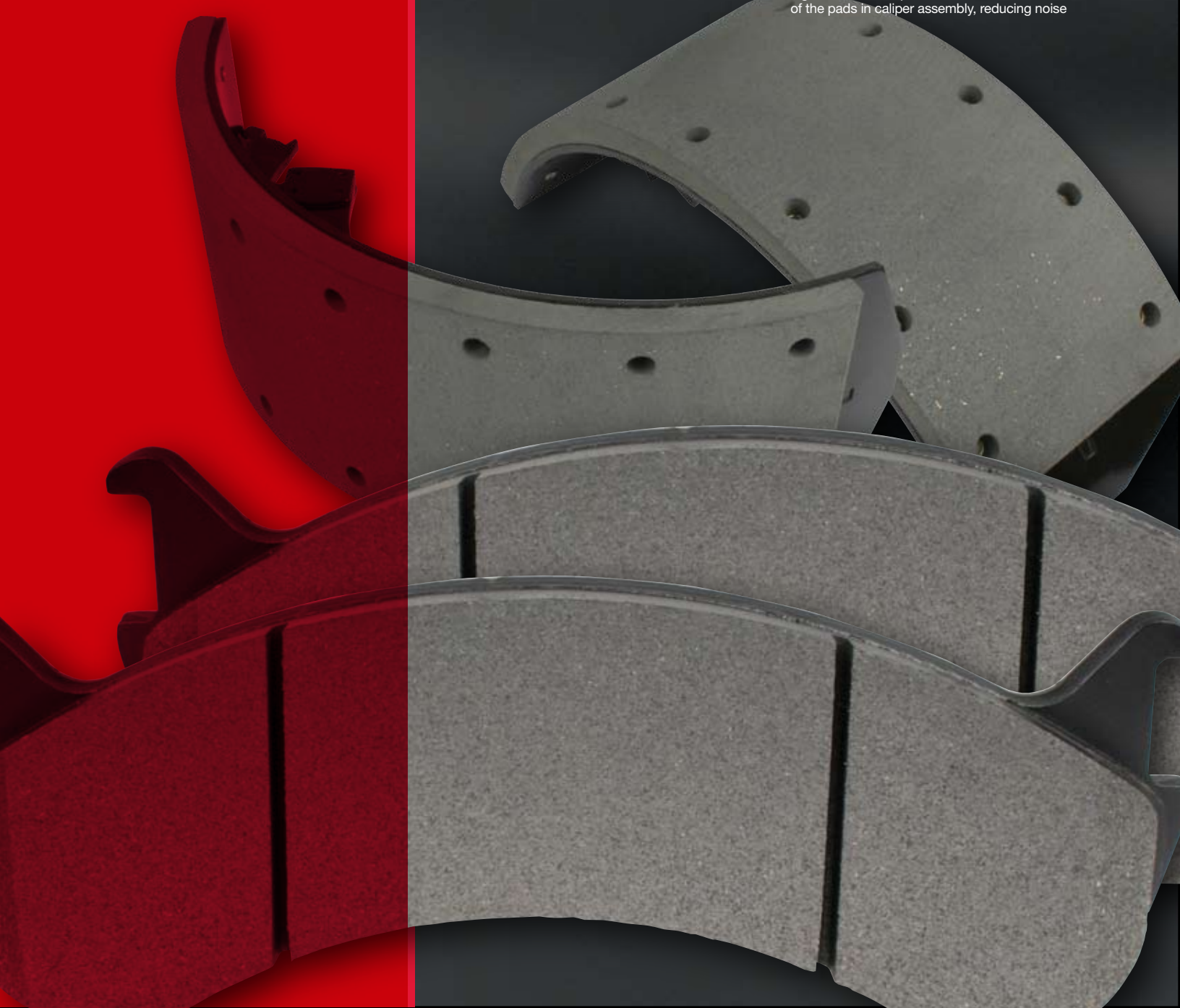
**STEEL PLATES**

**Mechanical Attachment**

- Unmatched sheer strength for the severe duty and problematic applications.
- Removal of the holes found in a traditional integrally molded plate, strengthens the pad and reduces noise attributed to plate flexing.
- Used on over 100 applications.

**Shaved Abutment Surfaces**

- Specified by OE Manufacturers
- Consistently flat surface at the points of contact between the brake pad and caliper assembly.
- Tighter tolerances promote free movement of the pads in caliper assembly, reducing noise



## ADVANCED TECHNOLOGY™ DISC BRAKE PADS

Each Raybestos® brand Advanced Technology™ brake pad is produced with the highest quality semi-metallic or ceramic formulations and features integrally molded construction for superior strength.

### Engineered Solutions for Demanding Applications

Our “OE or Better” formulations reduce cost per mile with exceptional longevity, maintain high performance levels at high temperatures and perform quietly and cleanly — living up to its name and delivering exactly what you expect from the latest in braking technology.

Additional features and benefits of Advanced Technology™ disc brake pads include:

- Advanced friction formulations reduce noise, dust and fade while delivering increased stopping power
- Application specific shim materials quiet noise and vibration
- Fully slotted and chamfered for quiet operation
- Nitrile-Polymer coated hardware for maximum noise suppression
- Electronic Wear Sensors where applicable
- Advanced Technology™ logo for easy identification
- Protective Foam Packaging Insert
- First to Market with late model coverage for hydraulic brake applications

## PROFESSIONAL GRADE™ DISC BRAKE PADS

The professionals choice to optimize brake performance. Our “OE or Better” philosophy extends to Professional Grade™. First to Market with complete application coverage.

The Professional Grade™ line features application specific semi-metallic, ceramic and NAO friction formulations to provide premium performance and quiet operation for everyday driving conditions. Many of the vehicles on the road today have been originally equipped or back serviced with ceramic disc brake pads. Our expanded ceramic coverage in Professional Grade™ products ensures the correct friction for each application.

Additional features and benefits of Professional Grade™ disc brake pads include:

- Application specific shim materials quiet noise and vibration
- Slots and chamfers match the OE design
- Expanded abutment clip coverage
- Electronic wear sensors where applicable
- Professional Grade™ logo for easy identification
- Protective foam packaging insert
- First to market with late model coverage for all hydraulic brake applications

## PROFESSIONAL GRADE™ BRAKE SHOES

Professional Grade™ brake shoes provide exceptional performance for everyday driving conditions and are suited for trucks, police, taxi and fleet-type vehicles that require severe duty performance and demand extra long life.

Quality features of Professional Grade™ brake shoes include:

- Contour or cam grounded to eliminate chatter and rear wheel lock-up
- Recoiled to provide correct shoe-to-drum contact
- Riveted and bonded per OE that delivers the highest possible shear strength and reduce noise/vibration
- OE matched levers and hardware are also included for simple installation
- Steel coating prevents rust and provides superior durability
- Designed for optimal brake performance in conjunction with matching front brake



Steel Plates  
Mechanical Attachment

## **SEVERE DUTY APPLICATIONS**

Advanced Technology™ rotors for severe duty applications are specially designed by Raybestos® for trucks, police, taxi and fleet type vehicles that endure extreme conditions and require extra long life. These rotors provide increased air circulation for faster heat dissipation and reduced rotor wear. Drivers experience reduced noise and vibration, and less wear on brake pads which provide for longer friction life. SAE J431/G3000 material with 30,000 psi tensile strength castings provide the structural integrity needed for the service demands of fleet operations.

## **PROFESSIONAL GRADE™ ROTORS**

Professional Grade™ rotors are designed to provide the highest levels of dependability, safety and superior performance. They have an ultra smooth braking surface to reduce noise, dust and maximize disc pad life.

## **PROFESSIONAL GRADE™ BRAKE DRUMS**

Professional Grade™ brake drums offer a complete line of premium, high quality drums in the marketplace. These vehicle-specific drums provide consistent quality, strength, performance and reduced noise.



## **ADVANCED TECHNOLOGY™ DISC BRAKE ROTORS**

**Raybestos® brand Advanced Technology™ rotors are ready to install right out of the box and come with our exclusive “NO TURN GUARANTEE”.**

### **OE Stopping Power, Cooling and Noise Control**

Raybestos® brand Advanced Technology™ disc brake rotors are engineered for superior performance to deliver the same stopping power, cooling properties and noise control as the original rotors they replace and can even increase the life of the brake pad. In specific applications, we improve upon OE design and performance to supply a more trouble free rotor.

### **Specific Metallurgy**

Many economy rotors take a “one metallurgy fits all” approach. Advanced Technology™ rotors always match the specific metallurgy of the original rotor and use damped iron to solve noisy, problem applications.

### **Minimal Thickness Variation**

Excessive thickness variation, even as little as .0005”, can cause pulsation problems. Typically, economy rotors exceed .0005”, but Advanced Technology™ rotors are measured 360° around the rotor to ensure the nominal thickness variation is .0004” or less.



### **Expanding Import Coverage**

As our foreign name plate coverage continues to expand, Raybestos® brand rotors have the solution you are looking for and provide the innovation, quality and coverage you and your fleet operations can count on.

## **PROFESSIONAL GRADE™ ROTORS**

**Veering from the original design can increase weight and impair proper heat dissipation, which can change the geometry of the wheel and lead to pulling, pulsing and the need to have service performed prematurely on your vehicle. With Raybestos® brand Professional Grade™ rotors, you can be assured that there are no significant differences from the original design. Professional Grade™ rotors are tested to ensure the replacement rotor will maintain a safe and reliable braking system.**

Providing full line coverage and great value, Raybestos® brand Professional Grade™ rotors are evaluated and analyzed for proper specified characteristics and tolerances.

- Heat Dissipation
- Stopping Distance
- Rotor and Friction Wear

## **PROFESSIONAL GRADE™ BRAKE DRUMS**

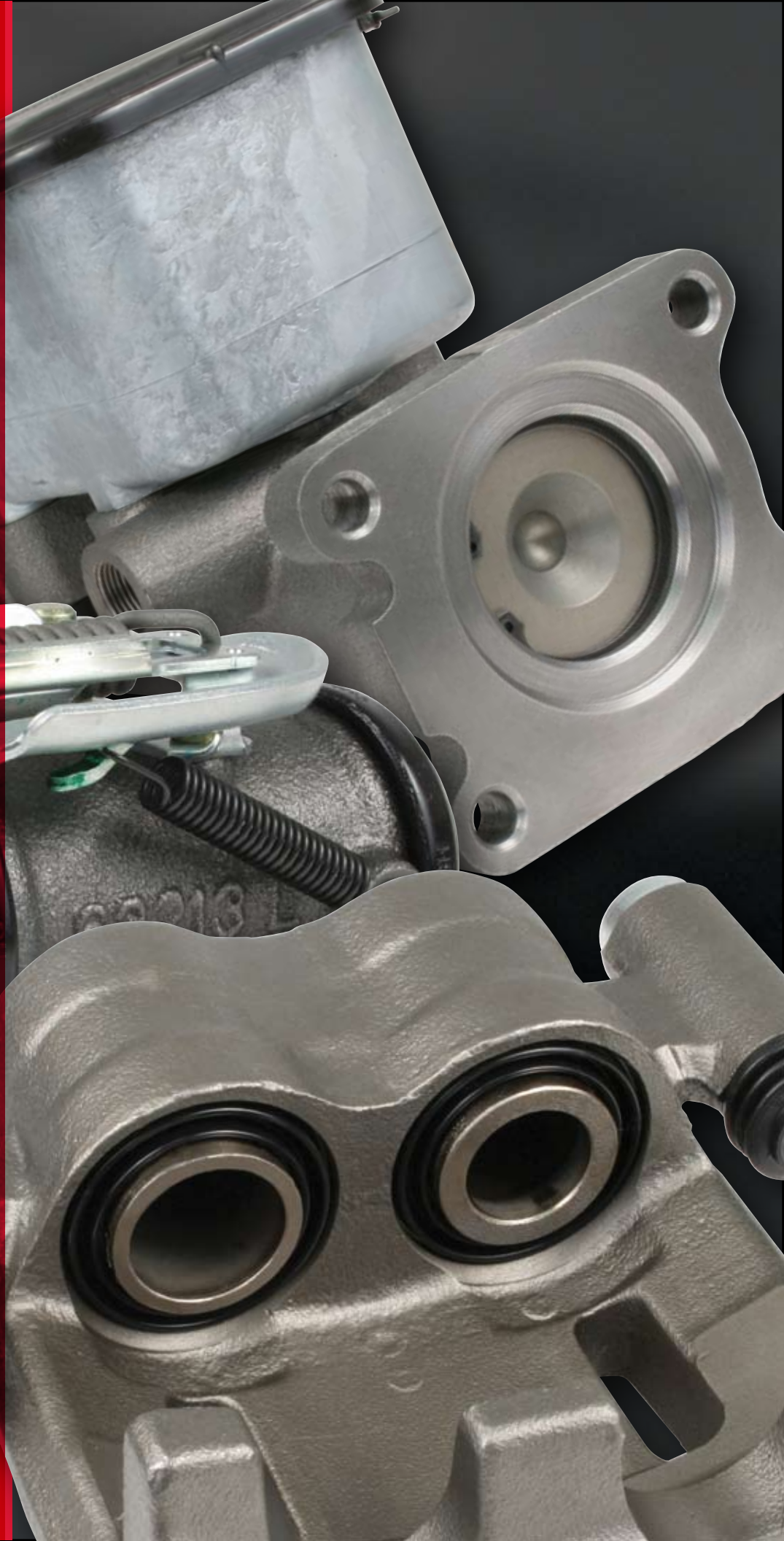
**Raybestos® brand has the most complete line of premium, high-quality drums in the Aftermarket. Our vehicle-specific drums provide consistent quality, strength and performance to be consistent with Motor Vehicle Safety Standards required for new vehicles.**

The castings of Professional Grade brake drums meet SAE J431/G3000 specifications to provide vehicle tensile strength. When specified by OE, we also use composite plates to ensure proper fit and function.

Professional Grade™ brake drums offer the most complete line of premium, high quality drums in the marketplace. These vehicle specific drums provide consistent quality, strength, performance and reduced noise. Professional Grade™ has some of the best coverage in the industry for any vehicle requiring drums.

**PROFESSIONAL GRADE™  
HYDRAULICS**

Raybestos® brand Professional Grade™ hydraulics provide a perfect OE match in terms of form, fit and function. OE specifications for cast iron or aluminum are also met to ensure proper operation, easy installation and the longest possible life of the product. And with the best overall coverage, Raybestos® brand Professional Grade™ hydraulics are the perfect choice for both budget-minded and quality-conscious customers.



## **PROFESSIONAL GRADE™ FRICTION-READY CALIPERS**

If you need to keep inventory to a minimum, Professional Grade™ Friction-Ready calipers allow you to do this by selecting and installing your choice of Raybestos® brand friction. Short of the brake pads, Friction-Ready calipers include everything you need to provide your customer with a complete brake repair and are fully assembled with hardware and mounting brackets — making separate hardware purchase unnecessary and saving you time during the service process.

The following items are also included for safe, leak-free installation:

- EPDM rubber components
- New bleeder screws
- Copper sealing washers
- Mounting brackets (where applicable)
- New phenolic piston or OE specified
- Pre-lubed/ready for pads

## **PROFESSIONAL GRADE™ HYDRAULIC BRAKE MASTER CYLINDERS**

Like all Professional Grade™ replacement products, the technically advanced components used in the construction of our master cylinders assure they will perform as good as, or better than, the original equipment — providing safe and reliable braking you can count on.

Professional Grade™ hydraulic brake master cylinders use both aluminum and iron castings for an exact match to the OE design. To cut costs, some competitors may replace the original aluminum design with cast iron, but we always replicate the original aluminum design in order to keep the weight of the system even and not stress the brake booster mounting. This also aids in corrosion and wear resistance.

## **PROFESSIONAL GRADE™ WHEEL CYLINDERS**

By designing our premium product to fit the application as well as the original, we promise that each Professional Grade™ premium wheel cylinder will perform as good as the OE part.

Consistent, safe and reliable performance can only be achieved by maintaining vehicle-specific designs. To ensure proper fit, function and safety, Professional Grade™ wheel cylinders match the specific design and metallurgy to the vehicle's original equipment. Each wheel cylinder is built for long service life and feature the highest quality EPDM components and seals for superior resistance to heat, corrosion and leakage.

## **PROFESSIONAL GRADE™ CLUTCH HYDRAULICS**

Raybestos® brand Professional Grade™ hydraulics provide a perfect OE match in terms of form, fit and function. OE specifications for plastic, cast iron or aluminum are also met to ensure proper operation, easy installation and the longest possible life of the product. And with the best overall coverage, Raybestos® brand Professional Grade™ hydraulics are the perfect choice for both budget-minded and quality-conscious customers.

Our hydraulic products are continually sampled, inspected and tested under SAE J1153 and J1154 guidelines to ensure they meet OE specifications and provide safe, reliable braking.

## PROFESSIONAL GRADE™ BRAKE HOSES

The full line of Raybestos® brand Professional Grade™ brake hose products perform to the identical standards set by OE manufacturers. In order to ensure optimal protection, service life and safety, each brake hose meets all FMVSS and SAE Standards. In addition to our OE features and superior performance, Professional Grade™ brake hoses are also easier to install than any other Aftermarket brand.

Other premium benefits include:

- Double-crimped fittings afford longer hose life and exceptional durability
- Each brake hose includes every feature you would find on the OE part, including brackets, grommets and molded plastic guards or wire clips

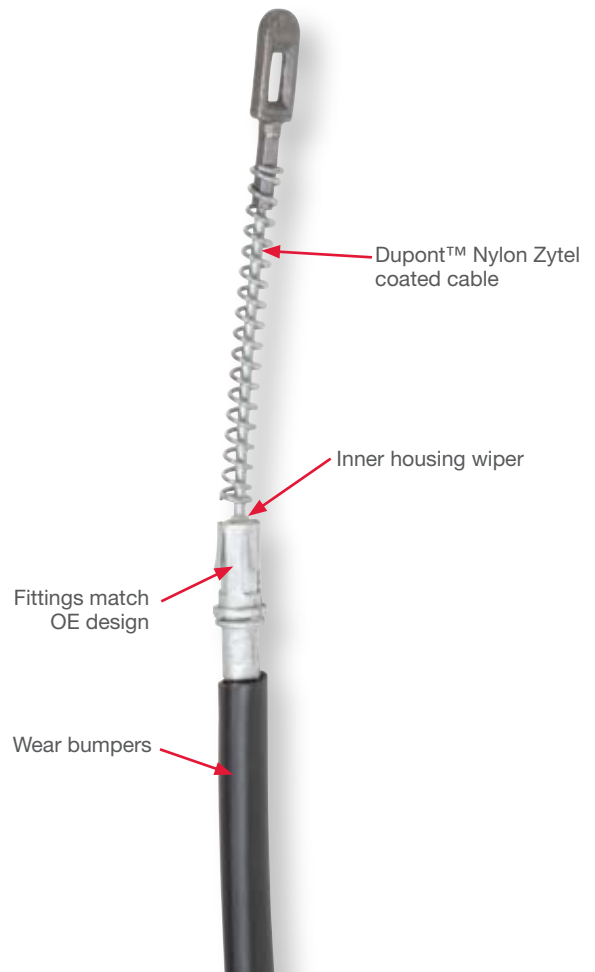


## PROFESSIONAL GRADE™ BRAKE CABLES

The designs employed by Raybestos® brand brake cables are the most technically advanced in the Aftermarket. The full line of Professional Grade™ brake cable assemblies are tested for strength, fit and corrosion resistance and meet the standards required by OE manufacturers to ensure optimal protection, service life and safety.

Other premium benefits include:

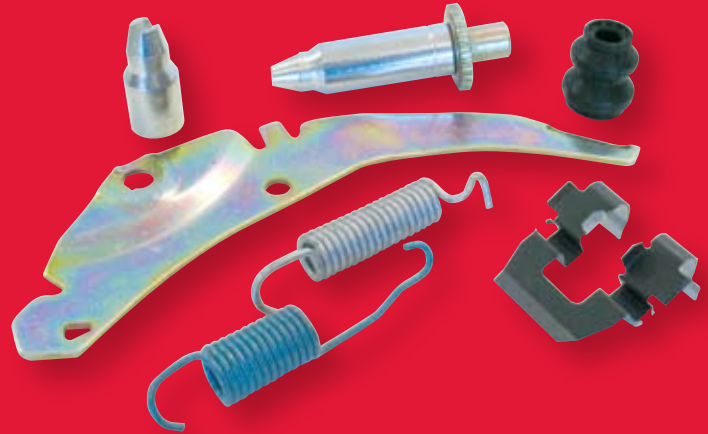
- Dupont™ Nylon Zytel plastic-coated steel brake cables provide superior corrosion resistance to ensure long life and smooth operation
- OE-style brackets and end fittings make installation easy and guarantee a fit identical to that of the original cable



## PROFESSIONAL GRADE™ BRAKE HARDWARE

The full line of Raybestos® brand Professional Grade™ hardware provides everything you need to do the job correctly for a safe and complete brake repair. And because each part is engineered to perform to the identical standards set by OE manufacturers, problems like brake squeal, grinding, growling or grabbing brakes can be resolved with the right piece of Professional Grade™ hardware.

Professional Grade™ caliper anti-rattle clips, seals, pins and dust boots along with drum shoe return springs, hold down springs and adjuster assemblies help maintain consistent, balanced braking. Instead of taking a one-size-fits-all approach, each piece is manufactured to precise specifications in terms of form, fit and function to provide the highest temperature rating and longest service life.



**Raybestos®**  
**The best in brakes®**

**“HEAVY DUTY SOLUTIONS FOR MEDIUM DUTY TRUCKS”**



WARNING: This part should be installed by a qualified mechanic only in accordance with the application(s) specified in our product catalog.

Raybestos® is a registered trademark licensed to Brake Parts Inc. by Raybestos® Products Company.

### Value Added Programs

True value comes from a first-rate education in product knowledge and effective selling techniques. We provide our jobbers and installers with the facts they need to get the job done right the first time — increasing customer satisfaction and sales.

### Technical Support

At any time during the workday, you have access to the industry's most highly trained and knowledgeable tech support specialists. Our ASE certified representatives are experts in choosing and utilizing the latest parts, tools and equipment. They can be reached by calling 1-900-733-8377 (rate \$1.75 per minute). Free to our Raybestos® Brake & Safety Center members.

### Training

Throughout the course of the year, we conduct comprehensive training courses for Raybestos® brand products for technicians, shop owners, service managers and counter people. Each group receives world-class training and personal attention in a practical, hands-on environment. Service manuals and CDs with repair information are also provided.

### Raybestos® Brand Online Cataloging

Our electronic and paper catalogs recommend the appropriate part for each specific application. This gives the counterperson the ability to quickly and easily recommend the correct part with little chance of an unwanted comeback.

### The Raybestos® Family of Products

From our rotors, pads, calipers, drums and shoes to our wheel cylinders, master cylinders, hardware, hoses and cables — we offer complete coverage with high-quality products that have proven themselves both in the lab and in the real world.

Our research and development is driven by our OE or Better strategy and our in-house engineering is validated by multiple third-party endorsements. Last but not least, the only thing to top our industry-best turnaround time and first-to-market innovations is our commitment to total customer support.



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## ADVANCED TECHNOLOGY™ AND PROFESSIONAL GRADE™ DISC BRAKE PADS

Before leaving the factory, Raybestos® brand Advanced Technology™ disc brake pads are post cured to eliminate break-in. Because of this, drivers will receive a confident pedal feel from the very first stop — giving them the safe and consistent performance they expect from Raybestos® brand products.

### SHIMS

Selecting the correct shim material and attachment method for each application ensure the shims perform as intended, reducing noise, vibration and harshness for the life of the pads. Installed on most applications, they often improve on the OE design.

- A wide range of shim materials provides the best match for each application
- Orbital riveted, spring lock and thermally bonded attachment methods keep the shims in place for the service life of the friction

### CHAMFERS

#### Standard Chamfers

The edges created by the chamfers at the friction face are two parallel lines.

#### Compound Chamfers

The edges created by the chamfers at the friction face are two lines perpendicular to the surface of the rotor.

### SLOTS

Allow for flexing of the friction material while reducing noise and letting gasses escape.

Raybestos® brand friction slot styles follow or improve upon the OE design. Raybestos® brand friction application specific slot configurations include:

- Single center slot
- Diagonal slot
- Dual slots
- Dual Diagonal slots
- Off-set slot

### STEEL PLATES

#### Mechanical Attachment

- Unmatched sheer strength for severe duty and problematic applications
- Removal of the holes found in a traditional integrally molded plate, strengthens the pad and reduces noise attributed to plate flexing
- Used on over 100 applications



#### Shaved Abutment Surfaces

- Specified by OE Manufacturers
- Consistent flat surface at the points of contact between the brake pad and caliper assembly
- Tighter tolerances promote free movement of the pads in the caliper assembly and reduce noise occurrences

