



SAFETY

**MERITOR**<sup>®</sup>

An **ArvinMeritor**<sup>™</sup> Brand

**MERITOR WABCO**

# MERITOR<sup>®</sup>

**ADVANCED BRAKING SYSTEMS AND COMPONENTS**



# ARVINMERITOR AND MERITOR WABCO DELIVER AN UNBEATABLE COMBINATION OF INNOVATION AND PERFORMANCE



## Advanced Systems Proven Performance

ArvinMeritor delivers the stopping performance and the safety that commercial vehicle operators want and need in this new era of stricter stopping distance requirements.

Proven innovation and industry-leading performance are engineered into every Meritor® braking and stability enhancement solution, system and component.

It's all part of the ArvinMeritor vision as a leading global provider of innovative customer solutions that enhance mobility, safety and the environment.

## Meritor WABCO Is Innovation That Delivers

We've supplied more ABS to the North American truck and trailer market than any other manufacturer.

Our technology leadership continues to be first-to-market with many important new braking system technologies.

Even more important, we're known for being a reliable business partner delivering a competitive advantage for our customers...day in and day out.

# Advancing the Cause of Safety, Wherever It May Lead

ArvinMeritor and Meritor WABCO share a global leadership position in brakes that developed through a pioneering spirit of innovation and a willingness to partner with our customers to provide high-performance braking solutions.

The timeline shows our role in key advancements in foundation brakes, air disc brakes, ABS, hydraulics and components. And how we are continuing to lead the way with Stability Control Systems and Collision Safety Systems.

Today, as pending changes in federal regulations call for significantly decreased stopping distances, we are ready with the braking technology that delivers them.

1990

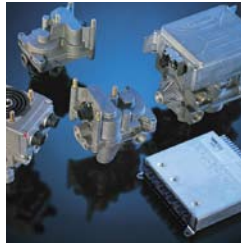
ArvinMeritor enters joint venture with WABCO

Meritor WABCO develops the first heavy truck ABS system in North America

**ArvinMeritor**  
+  
**WABCO**  
=  
**MERITOR WABCO**

1991

ArvinMeritor's corporate ancestor, Rockwell, introduces the Q Plus™ cam brake, which became the new industry standard and the industry's most popular air brake



1999

Introduces Hydraulic ABS for medium-duty trucks and buses



2000

Introduces new Twin-Piston ADB (EX225)



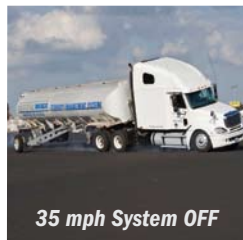
1993

Introduces the first commercial trailer ABS  
Introduces world's first heavy truck Electronic Braking System (EBS)

## M I L E S T O N E S   I N   B R A K I N G   I N N O V A T I O N

2002

Introduces first Roll Stability Control (RSC) for commercial vehicles



2007

Introduces first Roll Stability Support (RSSplus™) for trailers, including integrated PLC with InfoLink™



2003

Introduces first Roll Stability Support (RSS) for trailers  
Introduces Single-Piston ADB

2005

Introduces commercial vehicle Electronic Stability Control (ESC)



2008

Introduces OnGuard™ Collision Safety Systems

## ADVANCED BRAKING SYSTEMS AND COMPONENTS

### Foundation Brakes

As the leading supplier of foundation brakes in North America, ArvinMeritor knows that no matter how advanced your electronics, overall braking performance depends on the quality of your foundation brakes.

#### Drum Brakes

- Meritor air drum brakes are the market leaders and the industry's most popular OEM standard foundation brakes
- Include a wide range of standard and high-performance drum brakes that meet the new shorter stopping requirements
- High-performance Q Plus air drum brake offers extended life and is a cost-effective option for achieving the new shorter stopping requirements
- Meritor standard drum brakes are the market leaders in a wide variety of applications

#### Q Plus Cam Brakes

- Dependable stopping power for trucks, tractors and trailers from North America's leading manufacturer
- Dramatically shorter stopping distances
- Proven across a wide range of heavy-duty, vocational and severe applications
- Linings feature extra thickness at the maximum wear point to increase service life



#### Meritor Severe Service Q Plus (SSQ) Brakes

- Heavy-duty brake system provides dependable stopping power for vehicles that operate in harsh or rugged environments
- Extend service life and improve asset utilization in vehicles used in construction, refuse collection, firefighting and off-road applications
- Ideal for customers who need to avoid downtime and stay on the road
- Reduce maintenance and life cycle costs with increased uptime and durability

#### LX500 Extended Lube Brake Package

- Q Plus LX500 Extended Lube feature for tractor brakes reduces maintenance and minimizes downtime
- Combines specially mated brake and Meritor Automatic Slack Adjuster
- LX500 is lubrication-free for 3-Years/500,000-Miles for linehaul applications, 1-Year/Unlimited Mileage for other applications

#### Cast Plus™ Cam Brakes

- Design utilizes our thicker Q Plus brake linings, which provide superior resistance to heat-related wear in heavy-duty coach and off-road environments
- Single-piece cast shoe offers more durability and is less prone to noise
- Offers added durability and reliability that coach, transit and off-highway vehicles demand
- Available in standard 6" width for steer applications and 8.625" width for drive axle applications

## Air Cam and Wedge Brakes

- ArvinMeritor is the world's largest producer of Z-cam, S-cam and wedge air drum brakes
- Over 2.5 million Meritor Z-cam drum brakes are installed on vehicles worldwide, with more than two million air-actuated wedge brakes installed in Europe alone



## Meritor Automatic Slack Adjusters (ASA)

- Keep brakes in constant adjustment for enhanced safety
- Keep trucks on the road longer
- Lightest-weight ASA on the market
- Eliminate the need for under-the-truck brake adjustments
- Proven in hundreds of billions of highway miles



## Air Disc Brakes

The expected federal regulations for braking – coming soon for tractors, to be followed by buses and trucks – call for more powerful braking performance. The proven line of air disc brakes from Meritor WABCO present a world-class solution.

### Twin-Piston EX225 Air Disc Brakes for Tractors and Severe Service

- North America's leading air disc brake
- Proven global platform with superior design and performance
- Superior fade resistance – ideal for applications with quick, frequent stops, such as construction, refuse, and fire and rescue
- Easy to maintain – no special tools required for pad replacement
- Twin-piston design for all applications with axle ratings up to 30,000 GAWR and specialty vehicle applications



### Single-Piston Pan and NG22MAX Air Brakes for Trucks and Trailers

- Single-piston design for truck, tractor and trailer linehaul applications with axle ratings at or below 23,000 GAWR
- Increased braking performance with decreased weight for 22.5" rim
- 20%-30% better stopping performance than standard drum brakes
- Increased pad thickness for optimum utilization

## ADVANCED BRAKING SYSTEMS AND COMPONENTS

### Hubs and Drums

#### MeritorLite™ Hubs

- Reduce weight without sacrificing strength and durability
- Increase truck payload
- Stronger and much more durable than aluminum hubs, with reduced maintenance time
- Higher-strength threads significantly reduce the likelihood of stripping, which can result in oil leaks and catastrophic bearing failures



#### SteelLite X30™ Drums

- Reduce weight and operating costs with increased reliability
- The new standard in advanced wheel-end design
- Superior to any other brake drum available
- Ideal for medium- and heavy-duty trucks, tractors and trailers

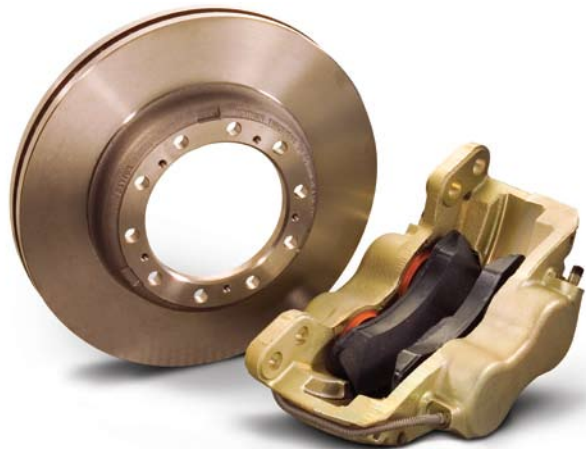


#### PreSet® Wheel Hub Assembly for Tractors

- Simplifies installation for improved overall vehicle performance, low maintenance and lower life cycle cost
- Never needs adjustment
- Pre-assembled to reduce risk of misalignment or damage during installation
- Equally spaced ribs around barrel provide unsurpassed strength and durability

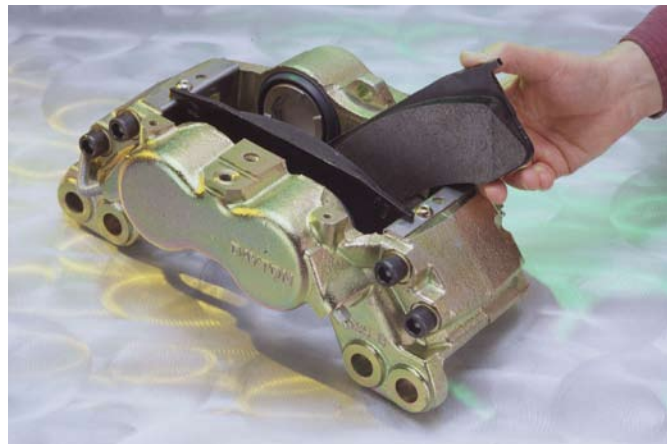
#### Medium-Duty Hydraulic ABS/Disc Brake Package

- Matches our ABS for medium-duty trucks, buses and motor homes with our leading hydraulic disc brake for high-performance medium-duty braking
- Provides superior vehicle control for medium-duty truck applications



#### Four-Piston Quadraulic™ Hydraulic Disc Brakes

- Provide increased vehicle control for medium-duty truck applications
- Feature four-piston Quadraulic disc brake calipers for 19.5" and 22.5" wheels
- Compatible with ABS and existing hydraulic systems

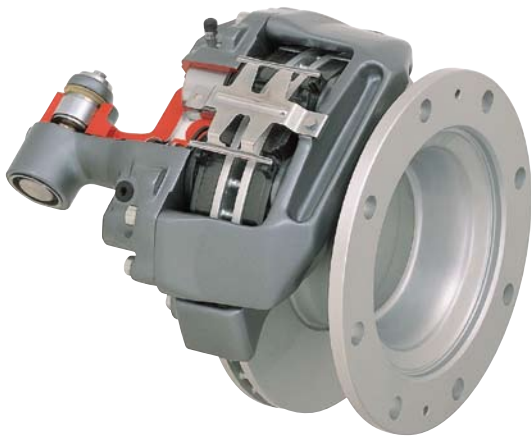


### Hydraulic Disc and Drum Brakes

- Meritor WABCO hydraulic ABS works with our hydraulic drum or disc brake system by controlling wheel speed during braking
- If a wheel starts to lock, the ECU signals an ABS modulator assembly to regulate brake pressure
- Ideal for delivery trucks, school buses, recreational, fire and emergency vehicles

### Reaction Beam Hydraulic Disc Brakes

- Designed for light- and medium-duty trucks
- Proven on more than one million vehicles
- Provide hydraulic service braking and integral mechanical parking for 16" and 17.5" wheels
- Available with and without parking feature



## Full Active Safety Systems Integration



We're now combining ABS with high-performance drum and air disc brakes for significantly shorter stopping distances. Plus, we continue to lead the way with

integrated stability and collision safety systems for an unprecedented new level of vehicle control.

### Next-Generation ABS for Trucks, Tractors and Buses

- More commercial vehicle operators trust the proven performance of Meritor WABCO anti-lock braking systems than any other
- Full range of ABS configurations available to match vehicle application, number of axles and type of suspension
- Automatic Traction Control (ATC) option increases vehicle control in extreme road conditions
- Reliable and easy to service
- Advanced ABS performance (hill-start, BPM and TPM)
- Stability Control Systems (ESC and RSC)
- Collision Safety with OnGuard
- Monitoring and telematics capabilities
- Improved diagnostics and event recording



## ADVANCED BRAKING SYSTEMS AND COMPONENTS

### Automatic Traction Control (ATC)

- Operates automatically under control of the ABS
- Reduces jackknife potential caused by wheel overspin
- ATC applies the brake to the spinning wheel until traction is restored
- When both drive wheels are on a poor surface, ATC automatically reduces engine power to increase traction



### Enhanced Easy-Stop™ Trailer ABS

- Proven to significantly increase vehicle directional control and stability
- PLC technology enables communication between the ABS ECUs in the tractor and trailer
- Provides reduced downtime from accidents, and reduced maintenance
- Trailer diagnostics easily conducted through the tractor ABS utilizing TOOLBOX™ software



35 mph system OFF in a specific driving maneuver



35 mph system ON in same driving maneuver

### Roll Stability Control (RSC)

- Helps driver maintain vehicle directional control and aids in reducing tractor-trailer rollovers
- When critical lateral acceleration thresholds are exceeded, RSC intervenes by reducing engine torque while automatically applying drive axle and trailer brakes
- RSC continually checks the vehicle's rollover threshold and intervenes as needed, often before the driver is aware of any problem

### Electronic Stability Control (ESC)

- Helps the driver maintain vehicle directional control during non-braking maneuvers, such as rapid lane changes or cornering, as well as during braking
- Combines RSC rollover protection with directional stability, providing added jackknife prevention as well as spinout and driftout control
- Brakes are applied selectively to individual wheels on the front and rear axles, as well as the trailer axles, to bring the vehicle back on course



### RSSplus Roll Stability Support for Trailers

- Next-generation roll stability support system reduces the potential for tractor-trailer rollovers
- Monitors the vehicle's rollover threshold and activates trailer braking to slow the vehicle when necessary
- Integrated with next-generation Meritor WABCO trailer ABS, as well as Power Line Carrier (PLC) communication for the transfer of data to an in-cab PLC Display, plus telematics capability



### OnGuard Collision Safety System

- OnGuard uses the forward-looking radar sensor technology featuring advanced algorithms to monitor the distance to the moving vehicle ahead
- If a potential rear-end collision is developing without proper driver reaction, OnGuard's Active Braking automatically applies up to .25Gs of braking power
- Automatic Active Braking de-throttles the engine, applies the brakes and alerts the driver to prevent a collision or reduce its impact
- Reduces the time to achieve proper braking pressure

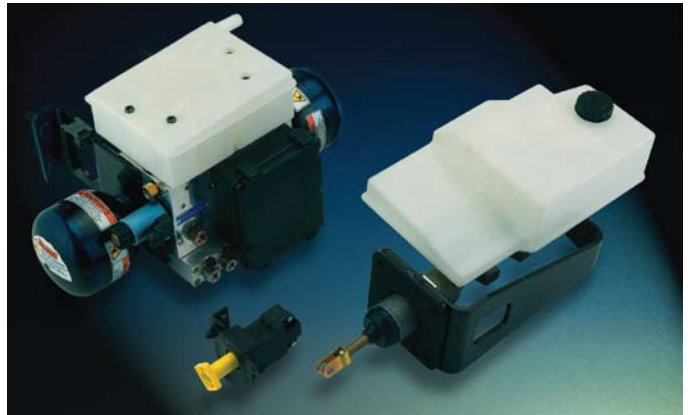


**OnGuard™**  
Collision Safety Systems

- Alerts driver to apply added braking force if needed
- Driver stays in control and can override system by taking proper braking action

### Hydraulic Power Brake (HPB)

- Advanced braking and vehicle control system for vehicles in Class 4 through Class 7 (includes medium-duty and buses)
- Provides quicker unprecedented stopping power when combined with integrated Meritor WABCO ABS and Quadraulic hydraulic disc brakes
- Optional auto-apply electronic parking brake control



### Hydraulic ABS (HABS)

- The ABS of choice for medium-duty trucks, buses and RVs
- Features a compact cab-mount or frame-mount ECU, plus new PC-based diagnostic capabilities
- Modulator assembly controls the speed of each wheel individually for optimum performance
- Standard blink-code information is provided to easily perform system diagnostics



NOTE: All ArvinMeritor and Meritor WABCO advanced braking and stability systems provide valuable assistance to the driver in maintaining directional control of the vehicle and reducing the risk of rollovers. However, no system can prevent all accidents, loss of control, or rollover in all driving conditions. An alert and unimpaired driver remains the most important element in ensuring that the physical limits of the vehicle are not exceeded.

## ADVANCED BRAKING SYSTEMS AND COMPONENTS

### Braking Controls and Components

More fleets in North America trust our braking components than any other brand. Period. Because ArvinMeritor and Meritor WABCO deliver the proven performance, safety and efficiency that fleets need to run a competitive business.



#### Air Brake Control Valves

- Complete product line of pneumatic valves and components to meet virtually all air system valve requirements
- Feature die-cast aluminum and engineered-grade composite technology, for corrosion resistance and consistent performance
- Push-to-connect fittings and standard NPT ports allow installation flexibility



#### System Saver Air Compressors

- Up to 90% lower oil consumption for cleaner air system operation and extended component life
- Higher efficiency, greater air output and durability than competitive models
- Superior piston and bore process technology
- Smaller-space envelope requirement (up to 30% less) for easier installation in limited spaces



#### System Saver Air Dryers

- Set the industry standard for desiccant-type air dryers
- Include premium desiccant replaceable spin-on cartridge for greater operating efficiency, less downtime and easier maintenance
- Compact, lightweight design
- Cartridges with coalescing option greatly reduce oil consumption in the air system

# Spec the System That Delivers the Braking Performance You Want



Meeting the new federal braking requirements and also meeting your needs for the best braking solution for your vehicles, configurations and applications can be demanding. That's why ArvinMeritor and Meritor WABCO offer you the advantage of our unrivaled consultation to help you spec the braking system that does the best job for you.

Because we manufacture a vast range of leading systems and components, customer service reps and engineers are uniquely equipped to offer unbiased and objective advice. For example, air disc brakes may indeed be the best solution for you. Or, combining ABS with high-performance drum brakes may give you the best combination of stopping distance and cost effectiveness. Your rep knows the answer.

And we're ready to deliver for you.

## Warranty Coverage

ArvinMeritor and Meritor WABCO braking systems and components are fully covered by our complete warranty. And fully supported by our OnTrac online warranty claim system. For complete details, see [www.arvinmeritor.com](http://www.arvinmeritor.com) and download a copy of our current warranty brochure SP-95155.

# The People Behind the Performance

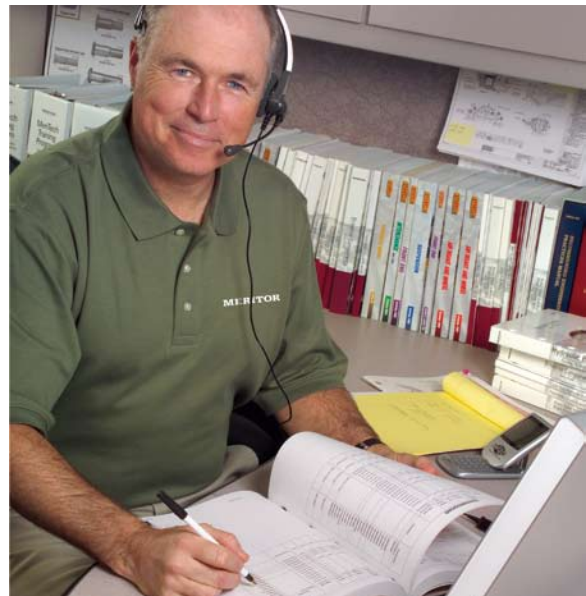
For Service. For Support. For Technical Expertise.

To keep your competitive edge sharp, it takes people with the technical expertise, the global commitment and the resources to make it happen.

Recognized for over 2,658 years of combined industry experience, ArvinMeritor professionals provide unmatched consultation and follow-through. Your braking performance – and your business performance – deserves nothing less. That's where our people make the difference.

You can also count on ArvinMeritor down the road. Our responsive aftermarket parts and distribution system is ready to deliver leading brands and proven customer solutions.

For complete support, call the ArvinMeritor customer service team in North America at 800-535-5560 or visit [www.arvinmeritor.com](http://www.arvinmeritor.com).





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