

A-LINE™

The Fleet's First Choice



ENGINEERED FOR SAFER BRAKING, LONGER LIFE

The A-Line K-series of air disc pads are engineered with a proprietary blend of HighTorque Fibers (HTFs) and Modified Crosslinking Resins (MXRs). This series is engineered for applications ranging from on-highway to severe duty.

Because air disc braking generates extreme heat and torque, A-Line pads were designed to withstand the most demanding applications.



• **SHORTER STOPPING**

• **LONGER LIFE**

• **DOUBLE SHEAR STRENGTH**

• **FMVSS121 COMPLIANT**



AIR DISC BRAKE PADS

A-LINE™

The Fleet's First Choice



Beginning with the backing plate and Encapsulated Mechanical Retention System (EMRS), A-Line exceeds OE specifications for shear strength and backing plate integrity.

DIFFERENT LOADS REQUIRE DIFFERENT FORMULATIONS

Not all heavy duty vehicles, loads or drivers are the same. So A-Line created different frictions to meet your needs. We started with High Torque

Fibers (HTFs) and added Modified Crosslinking Resins (MXRs) to resist extreme heat. That means A-Line pads can continue to deliver higher torque when you need it.

BURNISHING STRIPS PERFECT BRAKE GEOMETRY

Noise and vibration are some of the leading causes of premature pad replacement.



A-Line brake pads are positive moulded and finished with microabrasive burnishing strips to seat the pad to the rotor. This creates a perfected brake geometry that reduces noise and vibration, extending your brake life.

STRATABOND® FOR SUPERIOR SHEAR STRENGTH

A-Line pads are built with a proprietary StrataBond® shear strength technology.

The secret to improved shear strength lies with stratified layers of encapsulated mechanical retention systems (EMRS), phenolic resin-based adhesive, a 3mm deep high-resin stabilizing layer, topped with a high-torque, low noise friction layer.

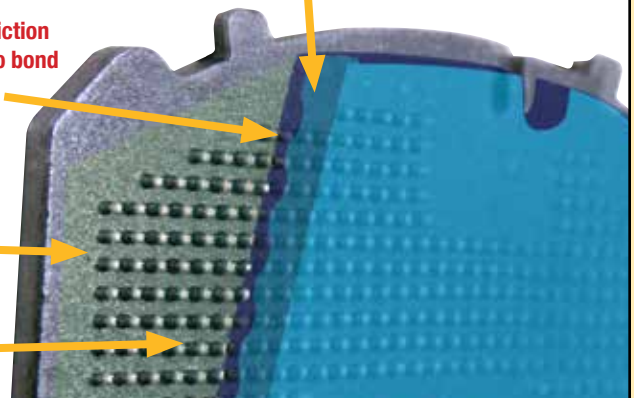
This improves shear strength up to 240% for high torque applications.

Low-noise, high-torque formulation cross links into Friction Stabilizing Layer.

Special high resin, high fiber Friction Stabilizer Layer is engineered to bond with the adhesive.

Phenolic resin-based thermal-set adhesive bonds the Retention System to the Friction Stabilizer Layer.

Encapsulated Mechanical Retention System (EMRS) provides anti-shear stability.



A-Line Air Disc Hardware Meets OE Specifications Aftermarket Hardware Fails!

A-Line hardware is built to meet the rigors of high temperature and high torque.

The 10mm shear adjustment nut is engineered to shear off if it encounters more than 20 lb-ft of stress during caliper tappet adjustment.

A-Line shear nuts tested to within 1.24 lb-ft of OE samples, and were within OE specifications. Aftermarket shear nuts were nearly 10 lb-ft over the OE samples and out of spec by 38%.

Proper caliper diagnosis can only be conducted with A-Line or OE-grade shear nuts. Use of inferior shear nuts can result in brake failure!

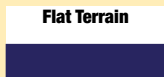
| Brand | Test Spec (lb-ft) |
|--------------------|-------------------|
| OE Specifications | 20 (-2) |
| Original Equipment | 17.43 |
| A-Line | 18.67 |
| Aftermarket | 28.30 |

A-LINE KZ3 PREMIUM DUTY 23K: OTR, TRUCK AND TRAILER, MOTOR COACH

For premium duty OTR 23k to severe duty applications like refuse, cement haulers and motor coaches, you need formulations that can withstand extreme torque and temperatures. KZ3 is formulated with High Thermal Fibers (HTFs) and Modified Crosslinking Resins (MXRs) so they can endure

the rigors of severe duty. Independent laboratory testing shows that KZ3 pads last longer than competing pads, while running cooler and withstanding up to 240% more shear force.

These are ideal for 23K severe duty applications, including tractor, trailer, refuse, heavy haul and motor coach.



A-LINE KZ6 SEVERE DUTY 26K: WHERE HEAVY HAUL MEETS ROUGH TERRAIN

When severe duty meets stop and go and downhill applications, or when your GAWR is 26,000 lbs, you need A-Line's KZ6.

This 26K rated friction uses RGC fibers to withstand higher temperatures and torque loads than 23K frictions. KZ6

builds on the use of MXR's to last up to 40% longer than competing 26K frictions.

Competitive FMVSS Testing Proves A-Line KZ6:

- Superior Stopping Distance: over 10% shorter than federal standards

- 25% lower rotor temperatures

- 18% longer rotor life

These are ideal for 26K severe duty applications, including tractor trailer heavy haul, refuse, cement haul, and motor coach.



A-LINE KZ9 XTREME DUTY 29K: TRANSIT AND EXTREME HAULING FOR ALL TERRAIN

Extreme duty hauling and transit applications need A-Line KZ9, our 29K Xtreme Duty friction product.

Formulated with Resilient Graphite Carbon (RGC) and NBR's, this friction

product is engineered to withstand extreme wheel end temperatures of 1,500° F, and wheel end torques of 15,000 lb-ft.

This means less wear under higher

stress conditions. So you have a lower CPM and fewer brake changes.

These are ideal for 29K transit and all terrain extreme duty applications.



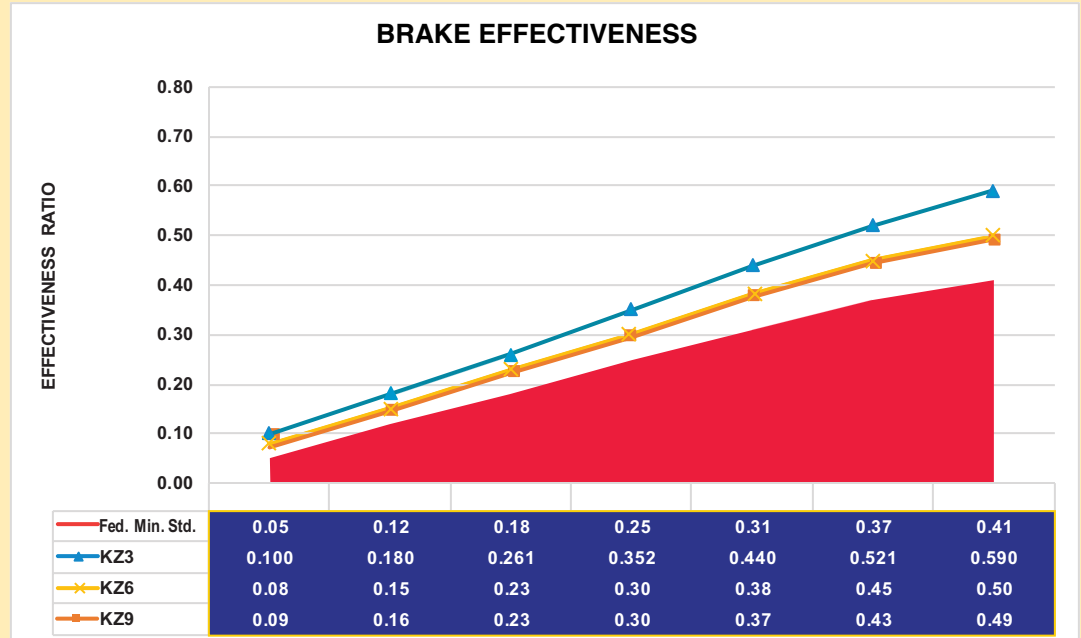
A-LINE KZ SERIES AIR DISC PADS

FORMULATED TO EXCEED OE SPECIFICATIONS

KZ Series Air Disc Pads Provide Safer Braking

A-Line's KZ air disc pads have been formulated for consistent brake effectiveness (BE) as shown in the graph to the right.

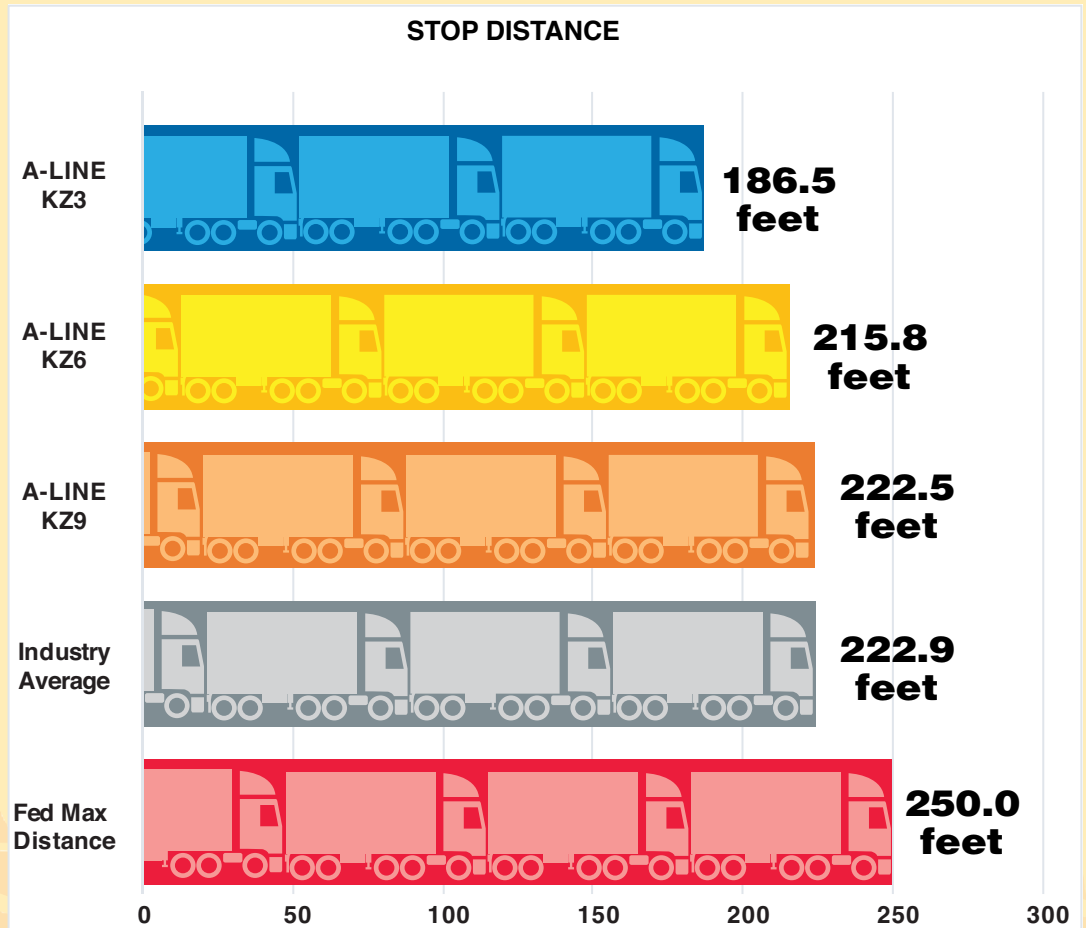
A-Line strives to achieve a BE rating that is well above Federal standards, while not over-torquing the friction.

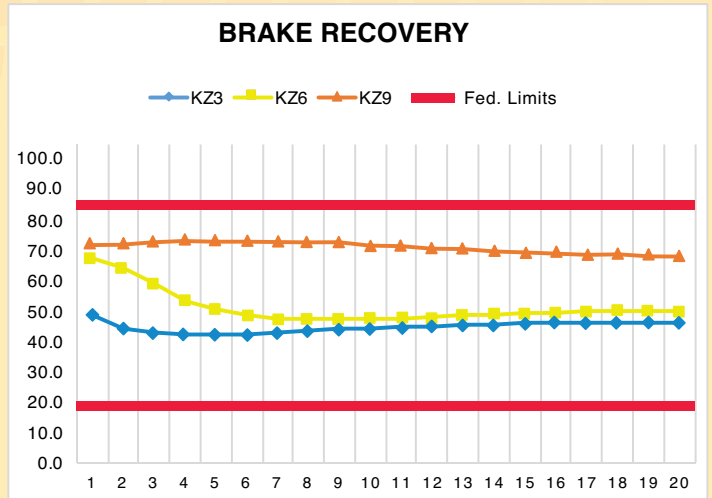
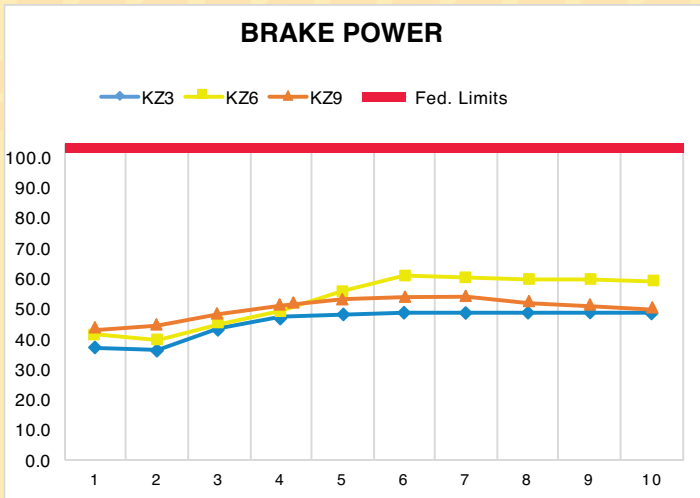


KZ Series Ideal for Reduced Stop Distance

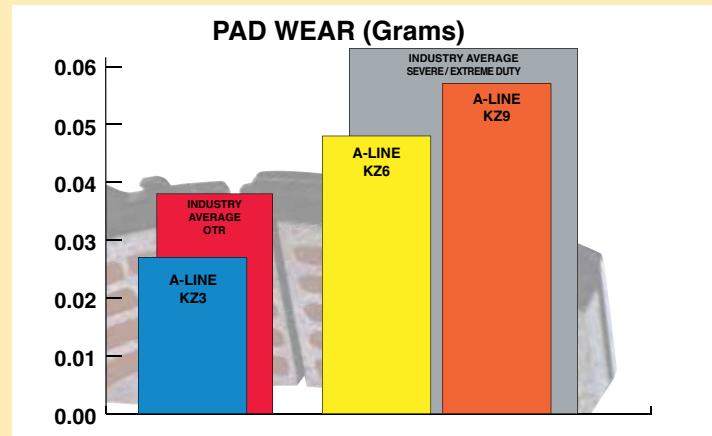
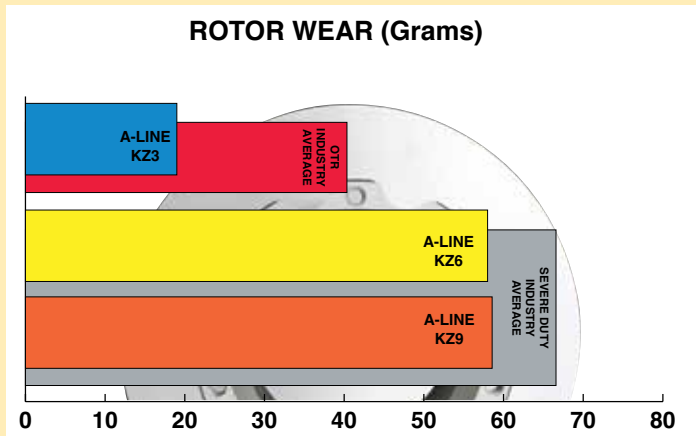
FMVSS dynamometer tests show that A-Line air disc pads have a predictive stop distance as low as 186.5 ft.

All KZ series frictions are precisely engineered to produce shorter stop distances without sacrificing pad integrity.

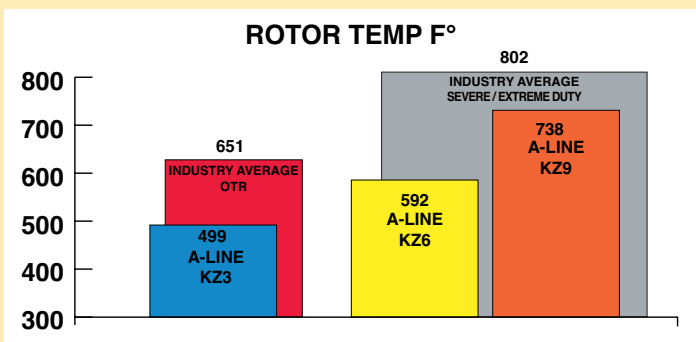




Reduced Line Pressure for Increased Brake Safety
A-Line's formulations yield consistently low line pressures. This is ideal for stop-and-go, downhill or severe duty applications.



Reduced Rotor and Pad Wear
KZ series pads demonstrate significantly less rotor and pad wear. Rotor wear is reduced up to 68%, while pad wear is up to 33% less than industry average.

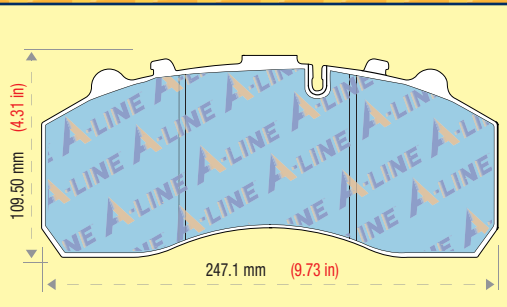


Lower Wheel End Temperatures
FMVSS testing shows that A-Line's engineered formulations yield cooler running wheel ends. Rotor temperatures are more than 150° F cooler than OTR industry average. And cooler rotors mean longer rotor life.

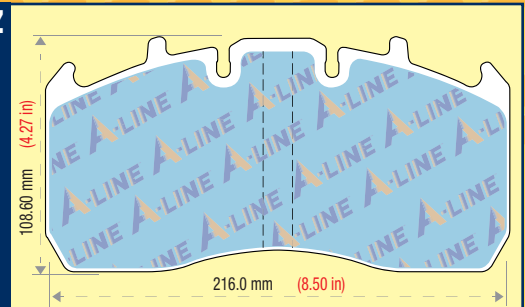
| SPECS | KZ3 | KZ6 | KZ9 |
|----------------------|---------|---------|---------|
| GAWR | 23,000 | 26,000 | 29,000 |
| Avg. Stroke | 0.995" | 1.573" | 1.297" |
| Brake Chamber | T24 | T24 | T24 |
| Rolling Radius | 19.6" | 19.6" | 19.6" |
| Max. Torque | 11,430 | 11,080 | 11,340 |
| Friction Coefficient | .465 FF | .472 FG | .485 FG |
| Hot Stop | 744° F | 800° F | 942° F |
| Temp. Range | 667° F | 716° F | 743° F |
| Specific Gravity | 2.32 | 2.38 | 2.34 |

Testing: FMVSS 121(d) Approved
 SAEJ661 Chase

All A-Line product is independently tested by accredited testing facilities. FMVSS121 testing conducted by Greening Testing Laboratories, Detroit, MI, USA.

ALP1203-KZKnorr Bremse
SB7, SN7WVA: 29087, 29105,
29106, 29108,
29109, 29163,
29179, 29201,
29202, 29275APS: Neoplan, Nova
Prevost, Setra
Van Hool**ALP1370-KZ**Meritor EX225 L2
WVA: 29189

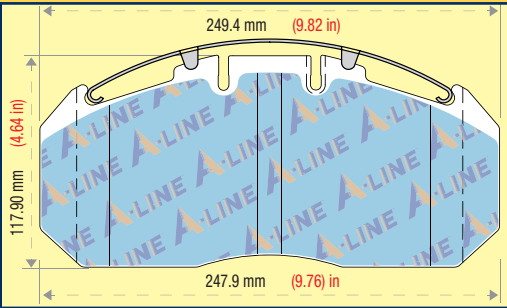
APS: Tractor, Trailer

**ALP1310-KZ**

Meritor D ELSA-2

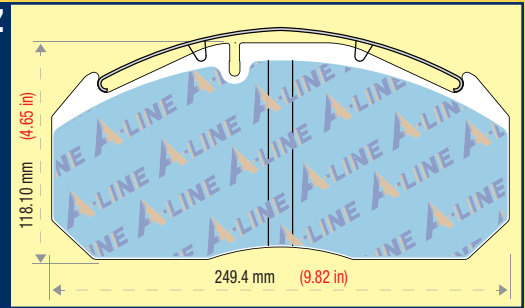
WVA: 29131, 29156

APS: MAN, Van Hool

**ALP1407-KZ**

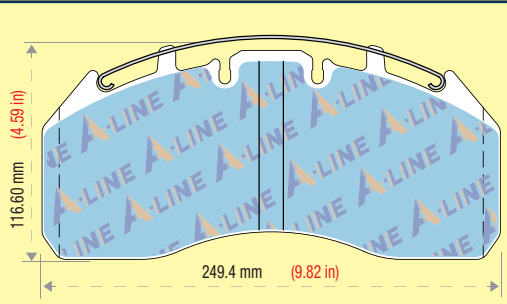
Meritor D ELSA-1

WVA: 29030

APS: MAN, Setra,
VanHool**ALP1311-KZ**Meritor EX225 H2,
EX+

WVA: 29187

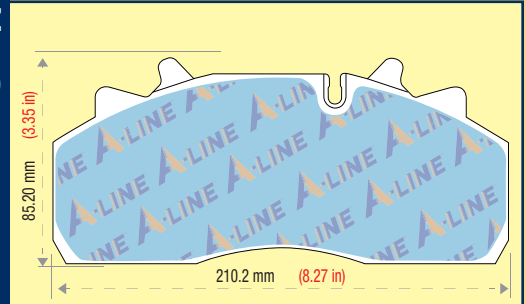
APS: MCI

**ALP1438-KZ**

WABCO PAN 19-1

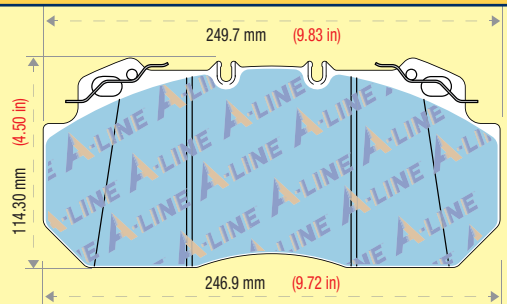
WVA: 29126, 29159

APS: Trailer Axles

**ALP1312-KZ**

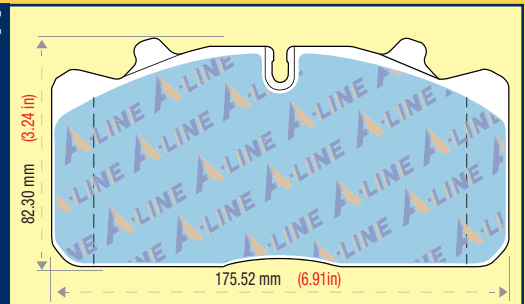
Meritor D LISA

WVA: 29090

APS: MCI, Neoplan
Prevost, Volvo**ALP1518-KZ**

WABCO PAN 17

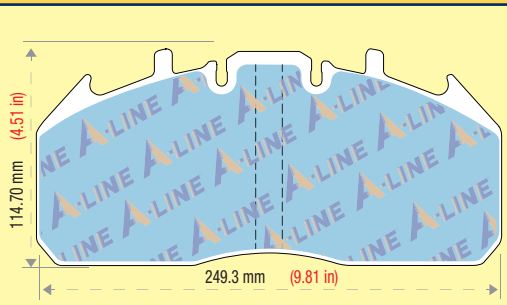
WVA: 29088

APS: Cozad Trailers,
Mack Freedom 17"
Axles**ALP1323-KZ**

Meritor EX225 H3

WVA: 29188

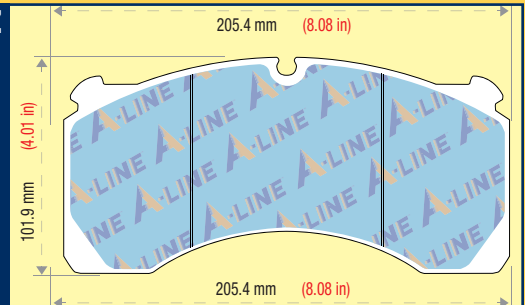
APS: Transit Bus

**ALP1525-KZ**

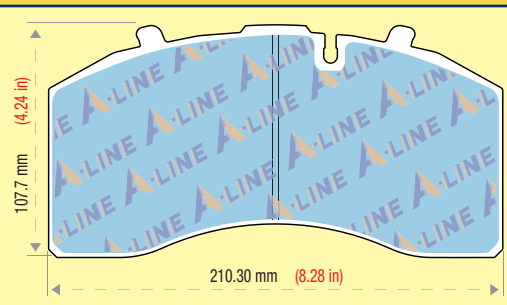
Meritor DX195

WVA: 29124

APS: Volvo

**ALP1369-KZ**Knorr Bremse
SK7, ADB22X

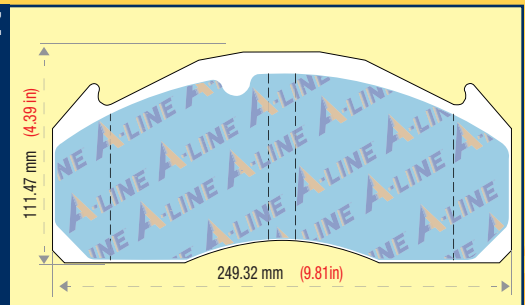
WVA: 29158

APS: Freightliner,
Hendrickson, Ken-
worth, Mack, Navistar,
Peterbilt, Spartan,
Sterling, Thomas,
Volvo**ALP1560-KZ**

Meritor D DUCO

WVA: 29125

APS: Volvo



ALP1583-KZ

Haldex DB22LT
 WVA: 29175, 29195,
 29198, 29274
 APS: Hendrickson

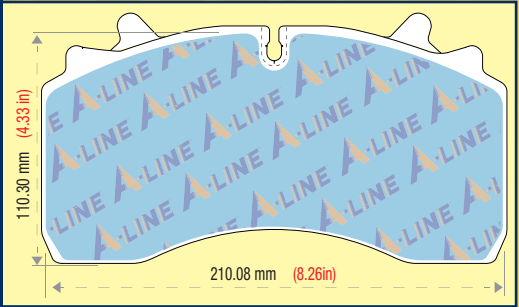
**ALP9007-KZ**

WABCO PAN 22-1
 WVA: 29162
 APS: Hendrickson
 Trailer Axles

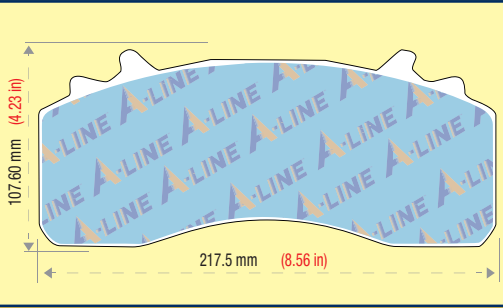
ALP9007A-KZ

WABCO MaxxUS 22,
 Maxx 22LT

APS: Freightliner,
 Hendrickson Trailer

**ALP2929-KZ**

WABCO MAXX 22
 WVA: 29729
 APS: Freightliner,
 Hendrickson

**SPEC YOUR A-LINE FRICTION**

After you cross-reference your part number in the chart below, replace the x in KZx with the proper friction grade.

KZ3 Over-the-road Premium Duty 23k

KZ6 Severe Duty 26k

KZ9 Xtreme Duty / Transit 29k

Example: ALP1369-KZx for severe duty should be:
ALP1369-KZ6

| A-Line # | FMSI# | WVA# | Abex | Bendix / Knorr Bremse | Meritor | Fras-Le | MAKE | CALIPER MODEL |
|--------------|-------|--|-------------------------|------------------------------|---|---------|----------------------|------------------------|
| ALP1203-KZx | D1203 | 29087, 29105, 29106, 29108, 29109, 29163, 19179, 29201, 29202, 29275 | ADB1203FE ADB1203AFE | 5013257 K006060 | MMD1203AF | ESD1203 | Knorr Bremse | SB7, SN7 |
| ALP1310-KZx | D1310 | 29131, 29156 | ADB1310FE ADB1310AFE | | MDP5060 / MMD1310AF | ESD1310 | Lucas | Elsa 2 |
| ALP1311-KZx | D1311 | 29187 | ADB1311 | | 2252H2BA / 2252H2DA / 2252H2CD / 2252H2CE / MMD1311AF | ESD1311 | Meritor | EX225 H2 |
| ALP1312-KZx | D1312 | 29090 | ADB1312 | | 68932068NZZP / MMD1312AF | ESD1312 | Meritor | D-Lisa |
| ALP1323-KZx | D1323 | 29188 | | | 2252H3CE / MMD1323AF | ESD1323 | Meritor | EX225 H3 Transit |
| ALP1369-KZx | D1369 | 29158 | ADB1369 | 802078 K054101 K070796 | MMD1369AF | ESD1369 | Bendix, Knorr Bremse | ADB22X, ADB22X-LT, SK7 |
| ALP1370-KZx | D1370 | 29189 | | | 2252L2DA / 2252L2CD / MMD1370AF | ESD1370 | Meritor | EX225 L2 |
| ALP1407-KZx | D1407 | 29030, 29083, 29084 | ADB1407FE ADB1407AFE | | MDP5110 / MMD1407AF | ESD1407 | Meritor | D-Elsa 1 |
| ALP1438-KZx | D1438 | 29126, 29159 | ADB1438 | | 12-999-737VT / MMD1438AF | | Wabco | Pan 19-1 |
| ALP1518-KZx | D1518 | 29088 | ADB1518 | | 12-999-703VT / MMD1518AF | ESD1518 | Wabco | Pan 17 |
| ALP1525-KZx | D1525 | 29124, 29155 | ADB1525FE | | MD1314 / MD5076 / MMD1525AF | ESD1525 | Meritor | DX195 |
| ALP1560-KZx | D1560 | 29125 | | | MDP5057 / MMD1560AF | | Meritor | D DUCO |
| ALP1583-KZx | D1583 | 29175, 29195, 29198, 29274 | ADB1583 | | MMD1583AF | ESD1583 | Haldex | DB22 LT |
| ALP2929-KZx | | 29279 | G6988 | | | | Wabco | Maxx 22 |
| ALP9007-KZx | D9007 | 29162 | | | 12-999-796 / MMDW-P22AF | | Wabco | Pan 22-1 |
| ALP9007A-KZx | D9007 | 29162 | | | 12-999-796 / MMDW-P22AF | | Wabco | MaxxUS 22, Maxx 22LT |

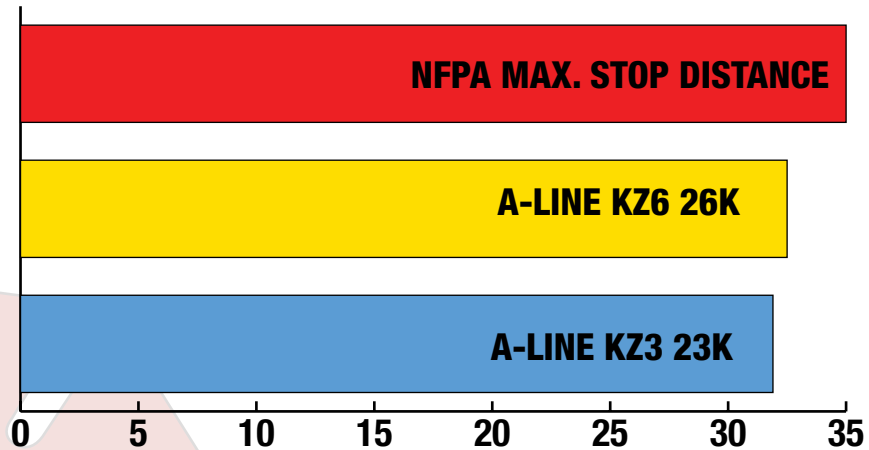
A-LINE KZ3, KZ6 OUTPERFORM NFPA FIRE TRUCK STOP DISTANCES

KZ3 and KZ6 Prove Ideal For Fire Truck Rigors

Few frictions comply with NFPA's 1911 4.17.5 Stop Distance Standard that requires a fire truck to stop within 35 feet at 20 mph.

Independent laboratory testing by Greening Laboratories of Detroit, Michigan shows that A-LINE KZ3 (23K) and KZ6 (26K) frictions both stop shorter than the standard.

NFPA 20 MPH STOP DISTANCE



“The air service brakes shall bring the apparatus to a complete stop from a speed of 20 mph (32.2 km/hr) in a distance not exceeding 35 ft (10.7 m).”

—NFPA 1911 4.17.5

Multiple Friction Grades for Multiple Applications

With KZ3 and KZ6 you have the option to use our KZ3 on the steer axle, while installing the severe duty KZ6 on the drive axle.


Or use the KZ3 on lighter weight emergency vehicles.

When you need safer braking, and more application choice, you need A-LINE®.



Toll Free 844-4AIR DISC
(424-7347)

www.a-lineairdisc.com



Durable Engineering For All Your Air Disc Braking Needs

- Transit
- Class 8 Truck and Trailer
- School Bus
- Fire Truck
- Refuse Vehicles
- Severe Service Vehicles

A-LINE[™]
The Fleet's First Choice

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