

**“TAKE A BRAKE,
SANGSIN BRAKE”**

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**A STRONG PARTNER
IN AFTERMKT**

BRAKE, TOWARD ITS GREATEST VALUE



Hi-Q
TOTAL BRAKE SOLUTION

IT'S SANGSIN WAY

www.sangsin.com
www.e-sangsin.com

**“TAKE A BRAKE,
SANGSIN BRAKE”**

Why SANGSIN?



Korea's #1 Brake Pad



Leading OE Manufacturer



Complete Coverage



Environmentally Friendly

Sangsin Brake is the history of brakes of Korea.

Based on its long experience and verified technology, SANGSIN BRAKE endeavors to be a reliable company that continuously manufacturers safe and reliable products. We will do our best to be the most memorable company in history.

*Start to secure independent
technology for friction materials*

1975-97

Established SANGSIN BRAKE(1975).

Technical Partnership with TMD.

*Overcome a crisis & seize
an opportunity*

1998-05

Overcome national economic crisis
and listed in stock market (KOSPI,2004)
Supply to all of Korean
Car Manufacturers

*Laying the groundwork
for the global market*

2006-10

Establishment of Foreign
business department.
Supplied OE parts
to JAPAN & THAILAND

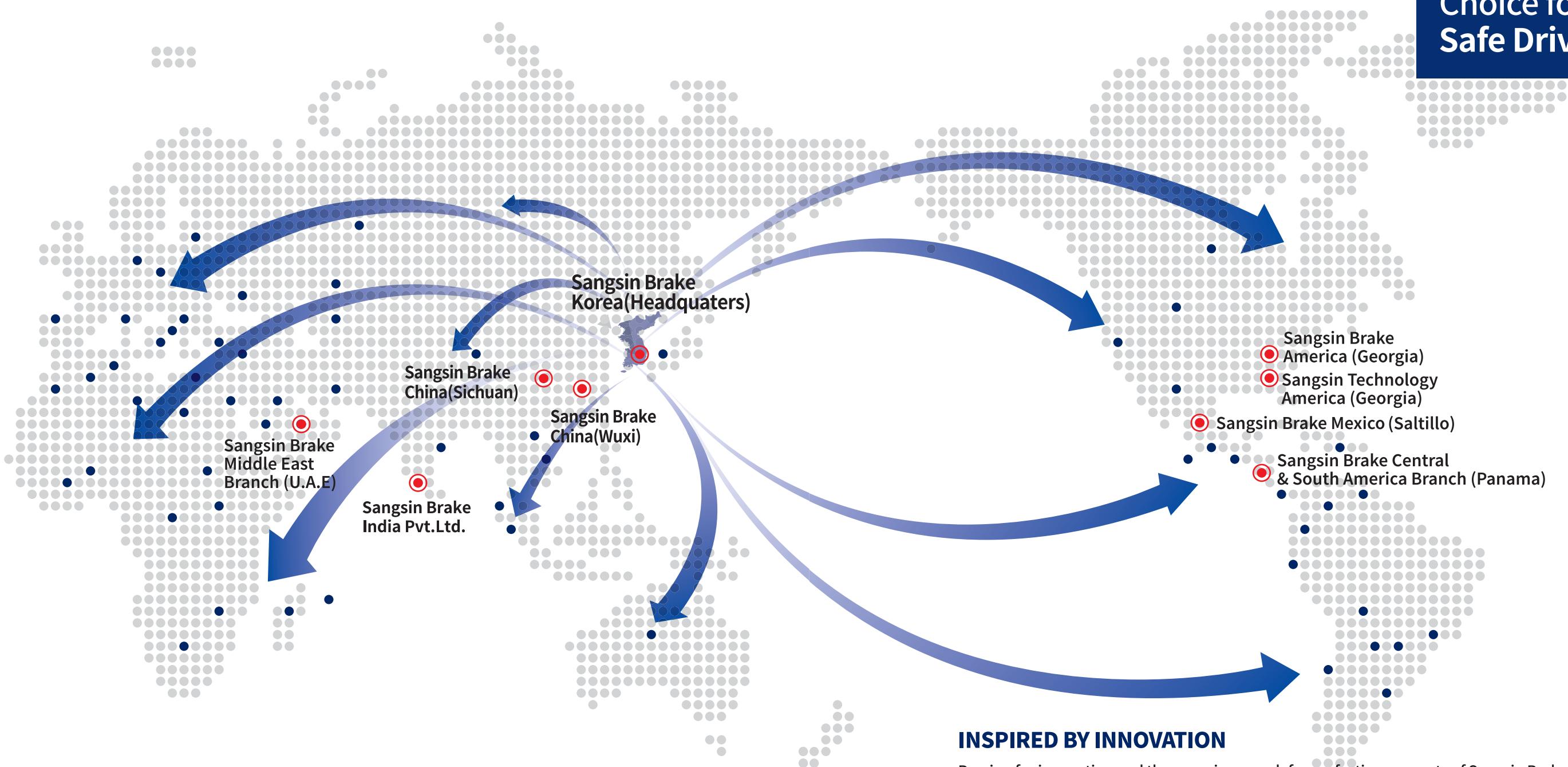
*To the global brake
system company*

2010-20

Relocated to new
H.Q, R&D center
Established Mexico,
U.S.A factory

Global No 1. **SANGSIN BRAKE!**

The Best
Choice for
Safe Driving



INSPIRED BY INNOVATION

Passion for innovation and the on-going search for perfection are parts of Sangsin Brake, which is geared towards seeking to raise new answer.

Since
1975

Customers
300

Exporting
counties
100

Employees
1000

R&D
Manpower
200

Brake
Dynamometers
23

Registered
trademarks
100

BRAKE EXPERTS WITHOUT LIMITS

The abilities to propose new solutions require the synergic exchange of experience & technology among the different business units.



Car & Truck
Brake systems



Commercial Vehicles
Linings, Shoes, Brake Assemblies



Aftermarket
Brake parts



Performance
Tuning parts



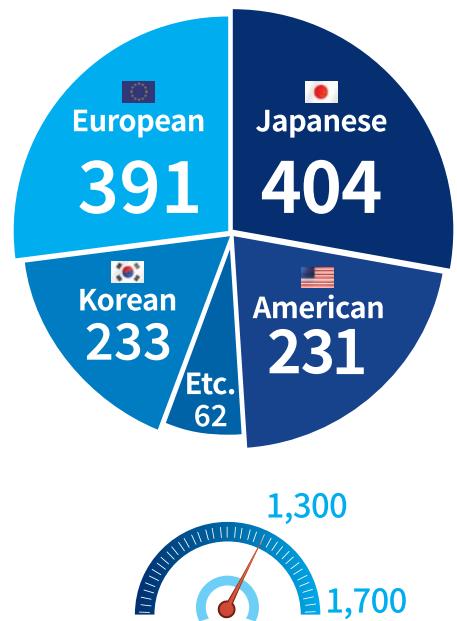
Car & Truck
Brake discs and drums



ETC.
Train, Yaw brake

PRODUCT RANGE FOR GLOBAL AFTERMARKET

(Brake pad application by 2019)



Full Coverage
for KOREAN & JAPANESE Vehicles

Focusing on Item Development
Developing 100+ New Items Every year



Car & Truck
Brake systems



Commercial Vehicles
Linings, Shoes, Brake Assemblies



Aftermarket
Brake parts



Performance
Tuning parts



Car & Truck
Brake discs and drums



ETC.
Train, Yaw brake

THE WORLD CLASS BRAKE PAD MANUFACTURER

We aim to be a world-class, reputable workholding brand focusing on customer satisfaction and creation of sound profits through the introduction of new technology, craftsmanship, and highest productivity.

VOLKSWAGEN Golf 2017

FRT SP1678

RR SP1900

LAND ROVER Range Rover 2016

FRT SP2238

RR SP1965

TOYOTA Camry 2018

FRT SP4275

RR SP2081

HONDA CR-V 2017

FRT SP4176

RR SP4177

AUDI Q5 2017

FRT SP1960

RR SP2146

BMW 740i 2016

FRT SP4139

THE PERFECT QUALITY FOR EVERY VEHICLES

The high level of technology and SANGSIN BRAKE's experience producing systems for major car manufacturers, combined with complete control of the production process, allows SANGSIN BRAKE to provide widest and the most reliable range of brake pads.

MAIN BRANDS

Premium quality brakes can enhance vehicles performance.

Complete your car with Hi-Q, HAGEN, HARDRON

HARDRON

HAGEN

Hi-Q

Product Line
PASSENGER BUS TRUCK

HARDRON

Premium Quality Brake Pads

- 100% Slotted for NVH Control
- Precision Fit Shims
- OE Positive Mold Design
- Cutting Edge Ceramic Formulas for Less Noise and Clean Wheels
- Excellent Performance & Long Lasting
- Engineered to Excel in the Most Extreme Conditions



Features

- Noble and elegant brake feeling
Hardron, which is often installed on premium vehicles, maintains an absolute superiority in braking power and wear resistance in the domestic brake market. The sensation of braking powerfully yet smoothly enhances the driving experience.
- Maximum safety
Hardron guarantees the maximum safety under the worst driving conditions such as rainy and snowy weather by maintaining a high friction factor.

HAGEN



Product Line
PASSENGER TAXI

Optimal Ceramic Brake Pads

- Cleanest Wheel Technology
- Stable Fade With Fast Recovery
- Quiet Friction Formulations
- Better Stopping Performance & Smooth Pedal Feel

Product Line
PASSENGER TAXI TRUCK

General Purpose Brake pads & Brake Shoes

- ECE R90 Approved
- Low Noise by Avoiding Squeal and Judder
- Dynamo Tested for Optimum Performance
- Designed for Thermal Heat Dissipation

Features

- Green technology
Hi-Q is produced with eco-friendly materials and does not contain heavy metals such as Pb, Cd, Hg, and Cr that could be harmful to the human body.
- Quiet braking, clean wheel
Hi-Q is made with copper free that brakes smoothly on the rotor of your wheel which will help to minimize the possibility of rotor damage.



Hi-Q



Product Line
BUS TRUCK

Hi-Q

RELIABLE BRAKING FORCE



Heavy Duty Brake pads & Lining for commercial Vehicles

- Standard equipment quality
- Stable fade with fast recovery

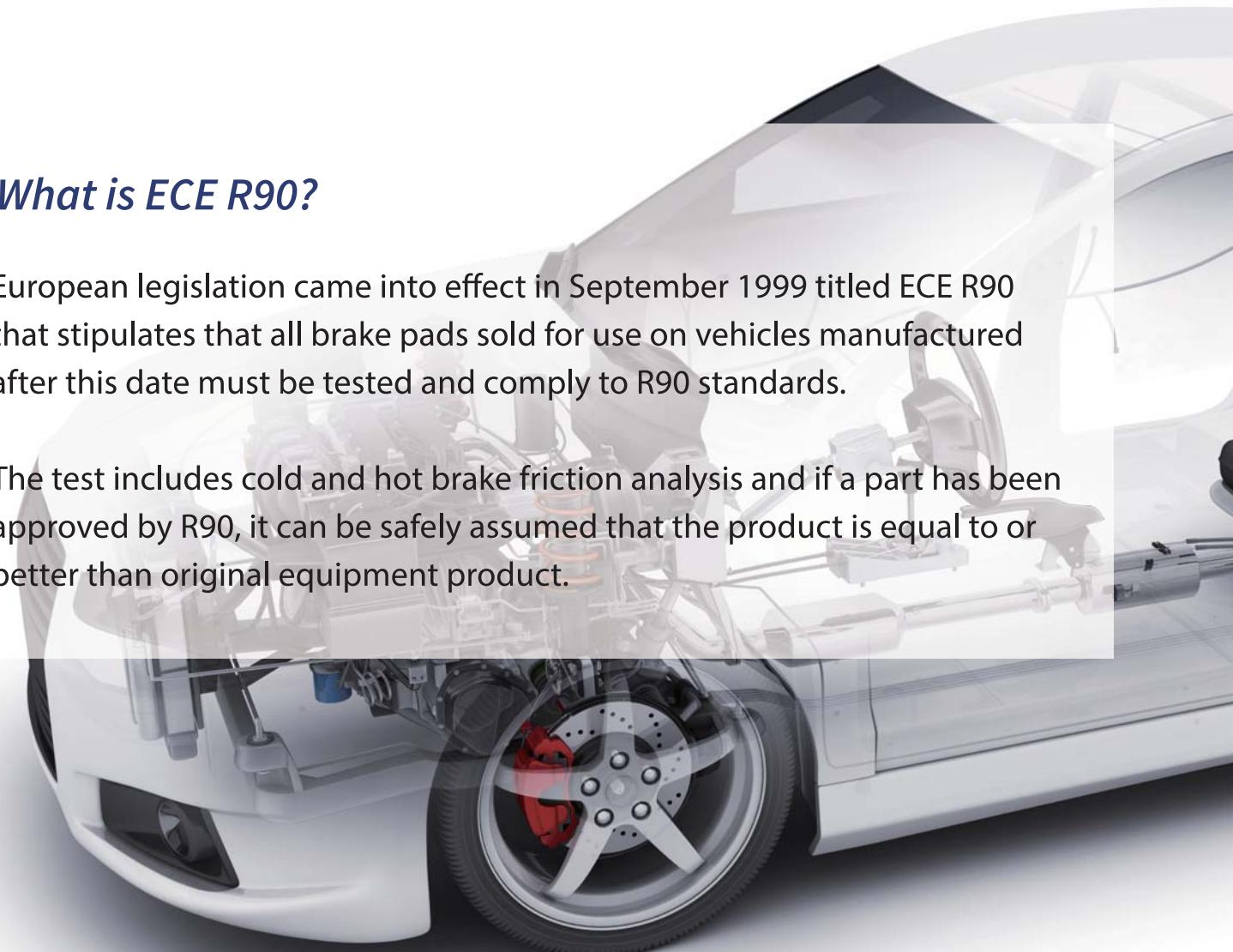
SUPERIORITY OF SANGSIN BRAKE PADS

Premium Friction Material & OE Performance

What is ECE R90?

European legislation came into effect in September 1999 titled ECE R90 that stipulates that all brake pads sold for use on vehicles manufactured after this date must be tested and comply to R90 standards.

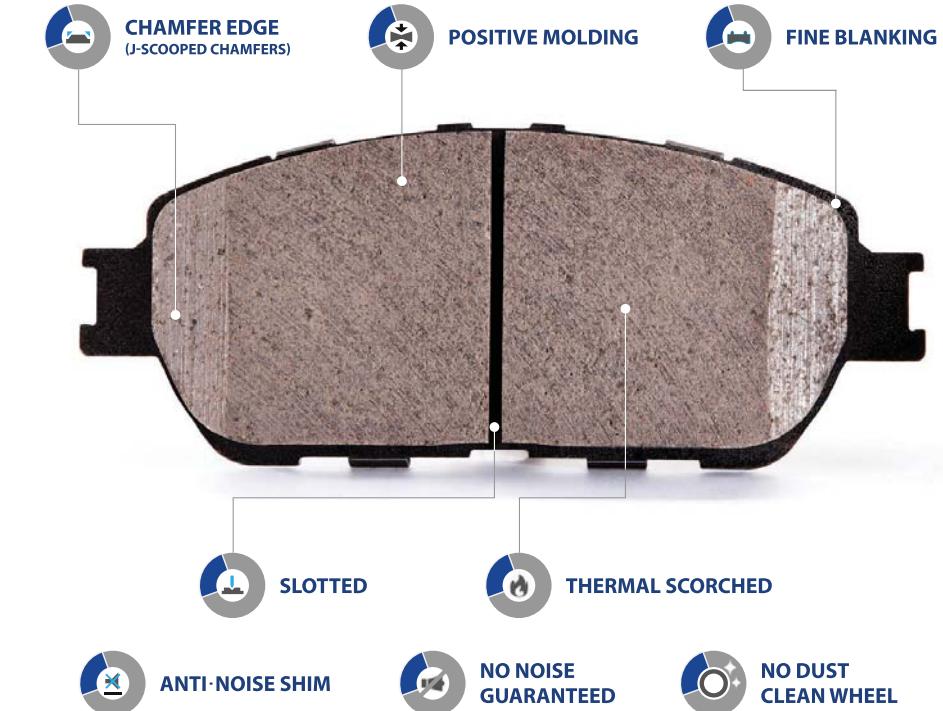
The test includes cold and hot brake friction analysis and if a part has been approved by R90, it can be safely assumed that the product is equal to or better than original equipment product.



ECE R90 coverage of SANGSIN BRAKE



More than 700 Sangsin brake pads & discs not only meet the regulations, but we go above and beyond the legal requirements to provide the perfect performing product each and every time giving you peace of mind that you are fitting high-quality products that meet all legal standards following the recent changes.



MADE FOR ALL KINDS OF CONDITIONS

provide efficient brake power for all terrains most aggressive to ensure safety and high quality of performance in all circumstances.

SLOTTED

CLEAR BRAKE SURFACE, INCREASES BRAKE BITE
This technology keeps your brakes clean and free from peak high performance so that drivers



AUTOMATIC WEIGHING & MIXING MACHINE

We are able to guarantee stable performance by having an automatic weighing & mixing machine that enables surgical precision in design and consistency in applying our high standards.



THERMAL SCORCHED

Thermal scorching our brake pads ensures a higher level of performance consistency and increased friction levels. This gives drivers the benefit of a more complete bed-in of new pads and significantly increased stopping power that's highly responsive. Our pads are then precured to ensure that they are immediately ready for performance.



BRAKE DISCS & DRUMS

Hi-Q offers the professional aftermarket brake discs and full coverage with exclusive access to the latest vehicles in Aftermarket.

Hi-Q presents a various portfolios of brake discs that guarantee optimized, less brake judder and noise.

 Complete Coverage

 Tested to Ensure Performance

 OE Fit / Matches OE Form and Function

 100% Balancing Guarantee

 Weight Equals to OEM Brake Discs

 Respect for the Environment

 Long Life

 Less Noise



PREMIUM BRAKE DISCS & DRUMS

 - weight

 + cooling

 + performance

 + resistance to cracks

 - consumption

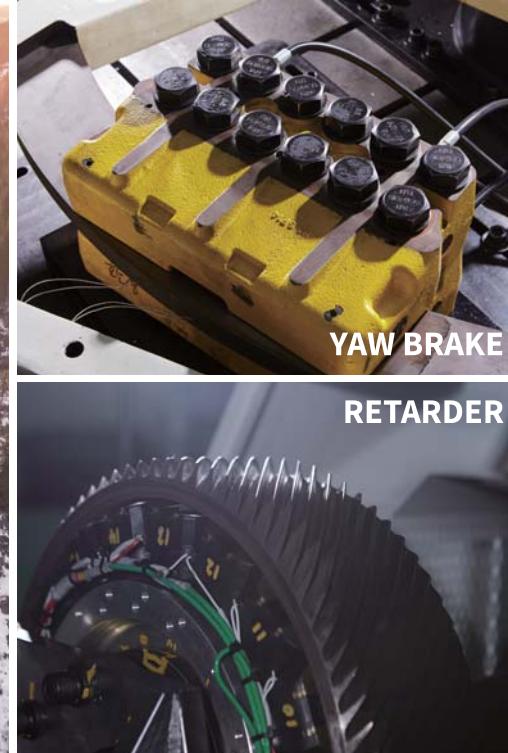
 + life span of the disc

 - emissions

 + life span of the components

NEW GROWTH POWER & SPARE PARTS

SANGSIN BRAKE adds more spare parts to enhance Hi-Q brand recognition.



RAILWAY BRAKE
BATTERY



C.V. JOINT



SUSPENSION PARTS



BALL JOINT



STEERING PARTS



HALOGEN BULB



WIPER BLADE



R&D Center



A MILLION KILOMETERS FOR PERFECT BRAKING Testing Analysis Evaluation

Appearance may be imitated,
but Sangsin's cutting-edge Technology Cannot be imitated.

Technology Research Center



Research Dept

Design friction material mixes and develop/research raw material.



Testing and Evaluation Dept

Testing friction material performance, abrasion, fade, brake NVH, life span test, etc.



Developing Dept

Developing OEM & aftermrket products, certifying technology.



Design Dept

Reviewing the validity of parts development and designs.

Testing Equipment



Chassis Noise Brake Dynamometer

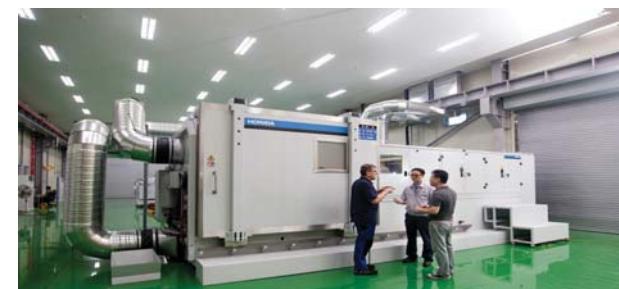
- Realizing actual driving and braking conditions with a real car.
- Controlling environmental conditions(temperature/humidity).
- Analyzing brake NVH (Noise, Vibration, Harshness) test.

Analysis Equipment



XRF (X-Ray Fluorescence Analyzer)

- Qualitative analysis of inorganic matters of friction materials and raw materials.
- Identifying the quality dispersion of friction materials and the homogeneity through qualitative and semi quantitative analysis.



Performance Dynamometer

- Realizing the brake system for driving and braking in each of the brake module: a 1/4 car, and a 1/2 car unit.
- Controlling environmental conditions (temperature/humidity).



SEM/EDS(Scanning electron microscopy/energy dispersive x-ray spectroscopy)

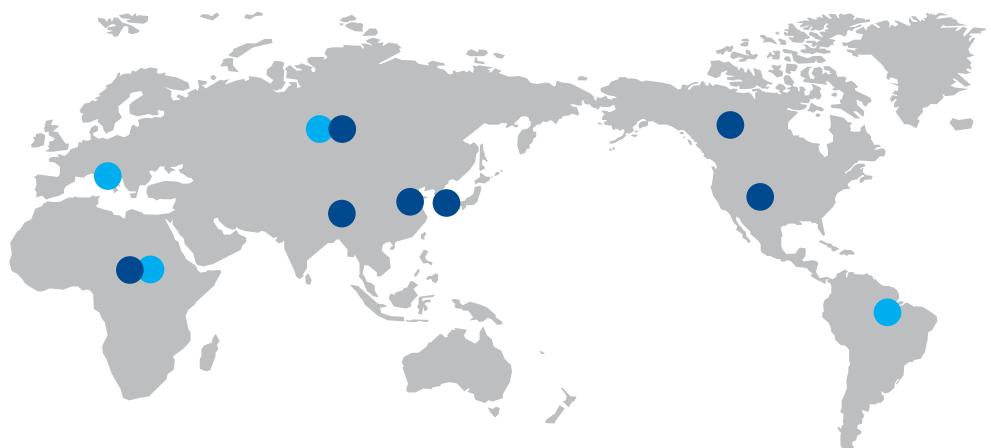
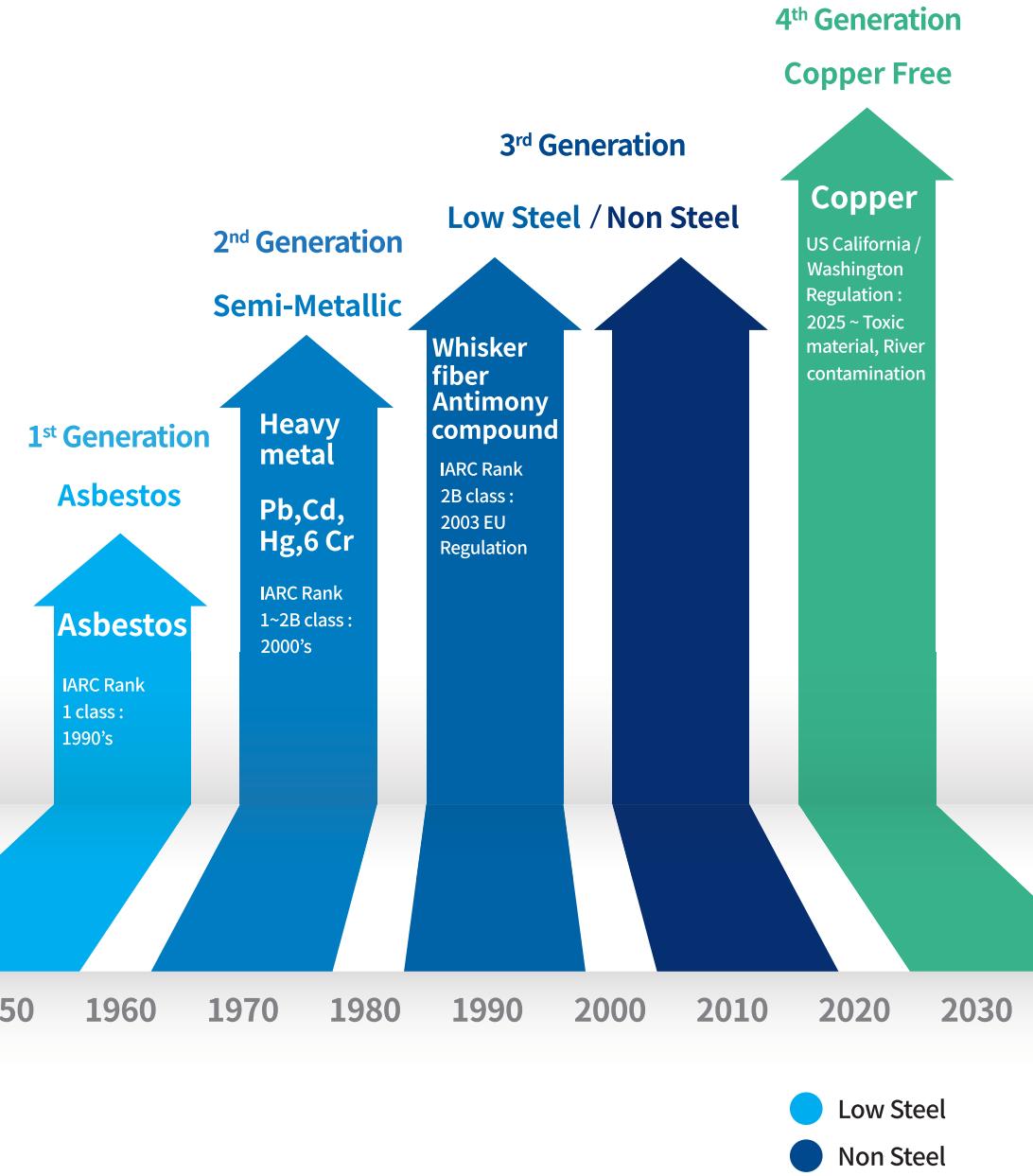
- Observing and analyzing raw material components and compositions.
- Benchmarking competitors' products through observing and analyzing the components.

HISTORY OF FRICTION MATERIAL

Seeking Perfection with Advanced Technology



ENVIRONMENTAL RESTRICTION



SUPERIORITY OF FRICTION MATERIAL

Expertly combined to deliver exact braking characteristics



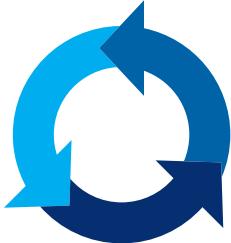
SECTION	BRAKE POWER	WEAR	NOISE	BRAND
Copper Free	○	○	○	HARDRON
Ceramic	○	○	○	HAGEN
Low-Steel	○	○	○	Hi-Q
Semi-Metallic	△	○	○	none



Ask for copper-free pads for your next brake job.

WHY WE ARE ECO-FRIENDLY

World wide technology trends tend to support the environment by offering eco-friendly solutions. Sangsin Brake embraced the challenge of complying with new legislation as an opportunity to innovate.



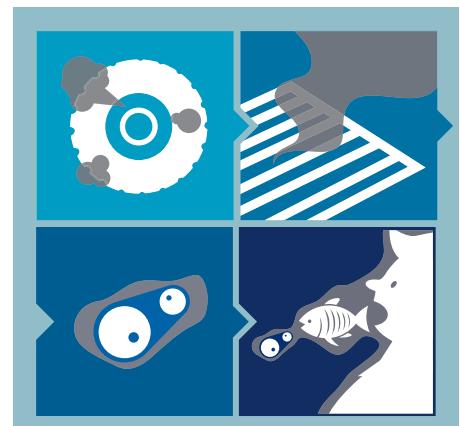
MORE MATERIALS FROM RENEWABLE SOURCES

We contribute to environmental sustainability by eliminating harmful materials and increasing the usage of chemicals from renewable sources



LOOK FOR THE LEAF MARK

Copper free : "N", or three black leaves, designates contamination of copper below 0.5%



COPPER'S ENVIRONMENTAL IMPACT

Debris from brake pads containing copper is released and ends up in runoff and waterways. Copper may be toxic to aquatic organisms which are the base of the food chain.

Sangsin Brake is committed to remove any component harmful to plant, animal or human life.



RESPECT FOR THE ENVIRONMENT

Our brake pads use zero harmful elements



ECO FRIENDLY WITHOUT SACRIFICING QUALITY

THE SANGSIN BRAKE ONLINE CATALOGUE

Sangsin Brake offers the widest range of products and services for not only passenger & commercial vehicles.

You can easily find brake pads, shoes, discs, C.V. Joints, and other after market spare parts for SANGSIN BRAKE brand.



 **TecAlliance**
Certified Data Supplier

HARDRON

HAGEN

Hi-Q