

Technical Presentation of Kyoto Japan Radial TBR & PCR Tires

to

AB Lyngby **01/01/2021** Lunas

30/10/2020

Kyoto Japan 2021...

Symbol of Quality & Performance



Kyoto Japan Quick Service

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Kyoto Japan Premium Quality PCR & TBR Tires

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**Product
Catalogue**




SUV, 4x4,
UHP &
Passenger Car
(PCR) Tires

www.kyotojap.com

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**Product
Catalogue**



Truck & Bus,
Light-Truck,
Radial & Bias Tires,
Tubes & Wheels

www.kyotojap.com

Kyoto Japan Tire Range

| | |
|--------|---|
| - TBR | Truck and Bus Radial Tires |
| - WTBR | Winter Truck & Bus Radial Tires |
| - LTR | Light Truck and Van Radial Tires |
| - SUV | 4x4, Sports & Utility Vehicles Radial Tires |
| - UHP | Ultra High Performance PCR Tires |
| - PCR | Passenger Car Radial Tires |
| - WPCR | Winter Passenger Car Radial Tires |
| - TBB | Truck and Bus Bias (Nylon) Tires |
| - LTB | Light Truck & Van Bias (Nylon) Tires |
| - AGR | Agricultural Tires |
| - OTR | Off-the-Road Radial & Bias Tires |
| - MIN | Mining Tires |
| - IND | Industrial & Solid Tires |
| - MCT | Motorcycle Tires |
| - GOTR | Giant Radial OTR Tires (49" to 63") |

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Modern Standard 4.0 Robotic Manufacturing Plant



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Automatic Handling & Tire Testing Equipment



Automatic Handling



Robotic Green Tire Handling



R&D Centre



Drive Circuit



Sound Testing



Wear Testing



Balancing & Conformity Testing

Several Factors Leading to Different Quality

Tire Building Machine

VMI Building machine is imported from Holland .VMI is market leader in Tire Building Technology



Modern Robotic operation can avoid human error and ensure that no impurities enter the production link



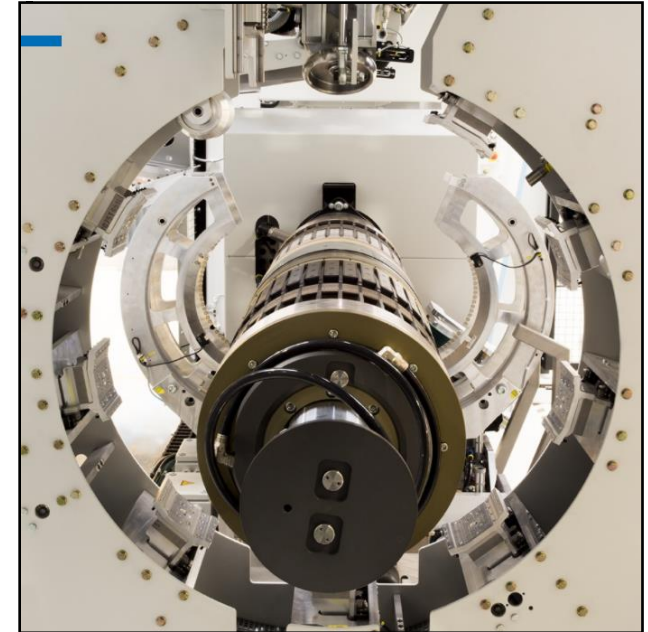
Kyoto Japan Tires are made by advanced production technics and testing facilities in the most modern industry 4.0 plant in China

Different Building Machines

Kyoto Japan One-Stage Tire Building



Two-Stage Tire Building



Conclusion

Compared with traditional two-stage building machines; Kyoto Japan One-Stage tire building technology with VMI ensures good tire balancing & avoids human error while preventing impurities in the green tire.

Raw Materials

**Kyoto Japan
Rubber
Content is
over 40%**

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Mix rubber and other chemical as 1st stage rubber



**Comfortable
Driving**



Note :

Kyoto Tires NEVER use second hand or recycled rubber .

Cheap quality tires use lower rubber compound or use recycled rubber to reduce cost which may bring pattern crack or short tire life

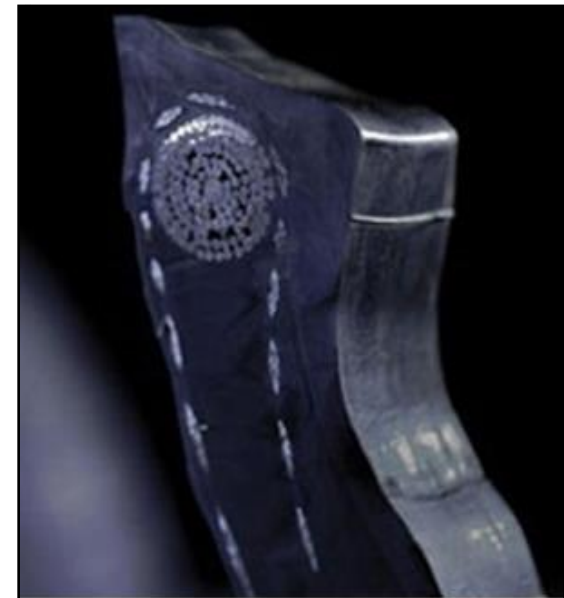
 **BEKAERT**

Symbol of Quality & Performance

**Kyoto Japan
Premium
Quality Steel
Bead Wire**



The high tensile strength and excellent ductility of **Bekaert of Germany** bead wire fully guarantee the stability of the production process and the safety and durability of tire products



What does the customer expect from a tire ?

Safety

- **Force transfer**
(vehicle weight, cornering, braking/traction)
- Air tightness/burst-pressure
- Rim seating

Durability

- **Structural endurance**
- High-Speed (less for truck)
- Stone retention



Economy

- optimal wear-shape
=> **Mileage**
- **Rolling resistance**
- **Retreadability**

Comfort

- Handling
- Damping
- **Noise**
- **Uniformity**

1. PCR Tire Construction & Function

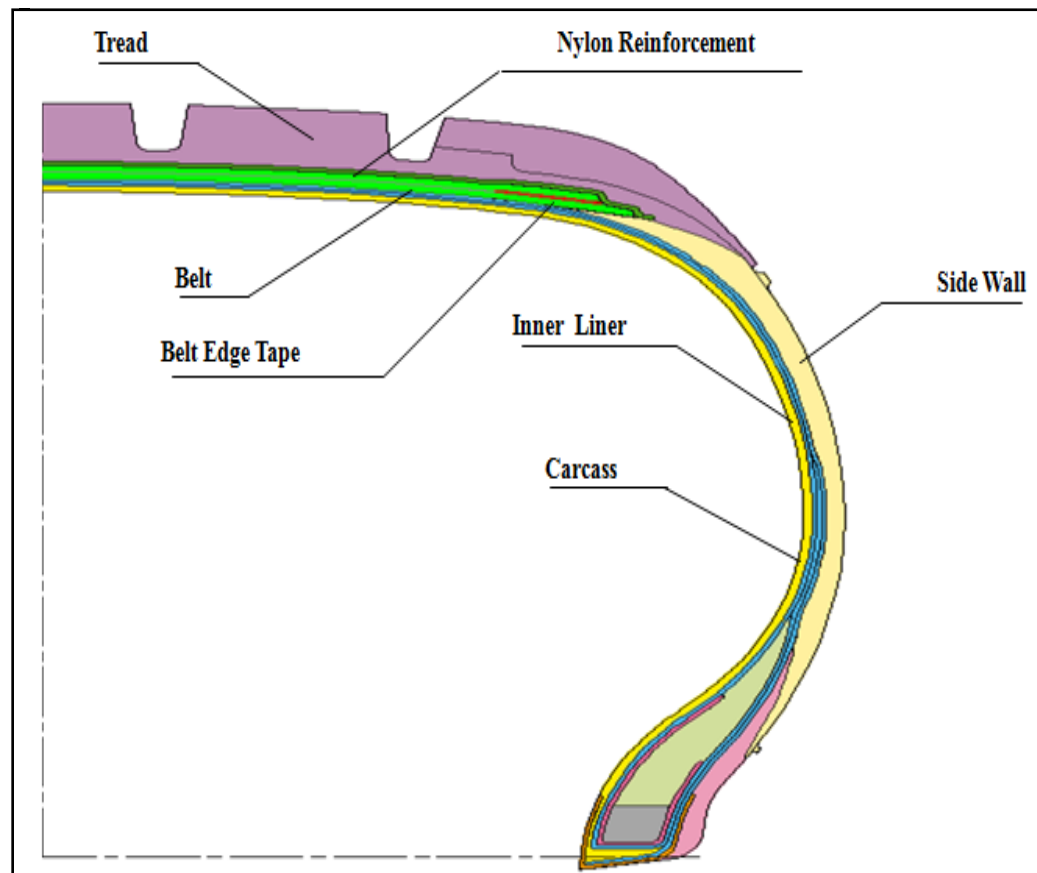
2. PCR Tread Pattern Features

3. TBR Tire Construction & Function

4. TBR Tread Pattern Features

5. Summary

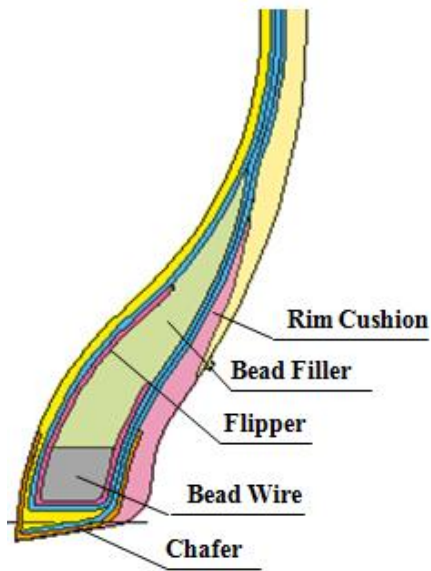
PCR Tire Structure & functions of different parts (1)



PCR Tire Structure & functions of different parts (2)

Chafer <lower reinforcement wall>

- A material composed of nylon and rubber.
- When loading and unloading the rim, it prevents damage to the BEAD part of the tire.



PCR Tire Structure & functions of different parts (2)

Tread

It is the only part of the tire that is in contact with the ground, mainly to convey the driving force and braking force.

Main components – rubber - Pattern

Belt

In the TREAD part of the tire together with the rubber, an element that has a very large effect on the performance of the tire.

The BELT with uniform steel distribution determines the tire maneuverability and the sense of riding.

BELT Construction - STEEL BELT (1#BELT, 2#BELT) - Reinforced BELT

Reinforcing Belt

NFC (JFC): inhibits the separation of 1#BELT and 2#BELT, and increases the rigidity of the TREAD part.

NEC (JEC) : Suppress the separation of 1#BELT and 2#BELT..

PCR Tire Structure & functions of different parts (2)

Bead

Prevent the tire from coming off the rim and consist of steel wire.

- According to the damage strength calculation, it is decided to use different BEAD with different specifications.

Bead Filler

In order to meet the steel reinforcement of the side wall part, ride feeling, and handling stability to determine the use of BEAD FILLER. When the volume of BEAD FILLER increases, the tire Uniformity is not favorable.

Rim Cushion (Soft Bead)

Contact with rubber to suppress abrasion of BEAD. Use high strength rubber in side wall.

PCR Tire Structure & functions of different parts (3)

Sidewall

- Located outside Carcass, it absorbs various shocks from the outside and protects Carcass.
- While the vehicle is in motion, the steering wheel conveys load from the BEAD part to the middle of TREAD.
- Main components - INNER LINE - Carcass - Sidewall rubber

Carcass (tire body)

The skeleton of the tire (mainly in the load support, ride feeling and handling stability)

Material - Polyester cord: A cord used in the world except Europe

- Nylon cord: European adoption with emphasis on handling performance

Inner Liner (Inner Layer)

Maintains air pressure inside the tire with butyl rubber with the highest air pressure retention.

1. PCR Tires Construction & Function

2. PCR Tread Patterns & Features

3. TBR Tire Construction & Function

4. TBR Tread Patterns & Features

5. Summary

Summer HP, UHP, SUV and A/T Patterns

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Winter and L/T Patterns

SNOW

Symbol of Quality & Performance



KO7100



KO7200



KO7300



KO7400

L/T



KO636



KO637

Kyoto Japan PCR Summer Pattern Features

Symbol of Quality & Performance

HP Pattern KO795



KO795



Kyoto Japan PCR Summer Pattern Features

HP Pattern KO795

Excellent Low Noise Level

Optimized variable pitch sequence design disperses road noise and reduces vibration, driving comfort is highly improved.

Symmetrical pattern design and small notched design on the tread increases the friction between the tire and the ground, driving comfort is significantly improved.

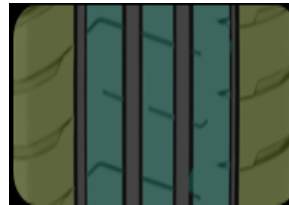
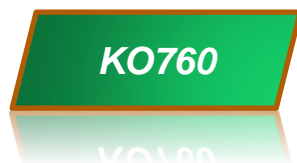


Artistic Design

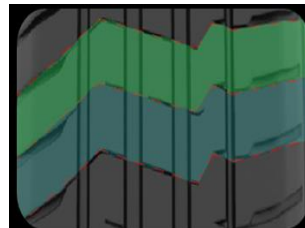
Size engraving in the central rib reveals the stylish design.



HP Pattern KO760 Features



The asymmetrical pattern design ensures the grip of the tire when turning and improves the handling performance of the tire.

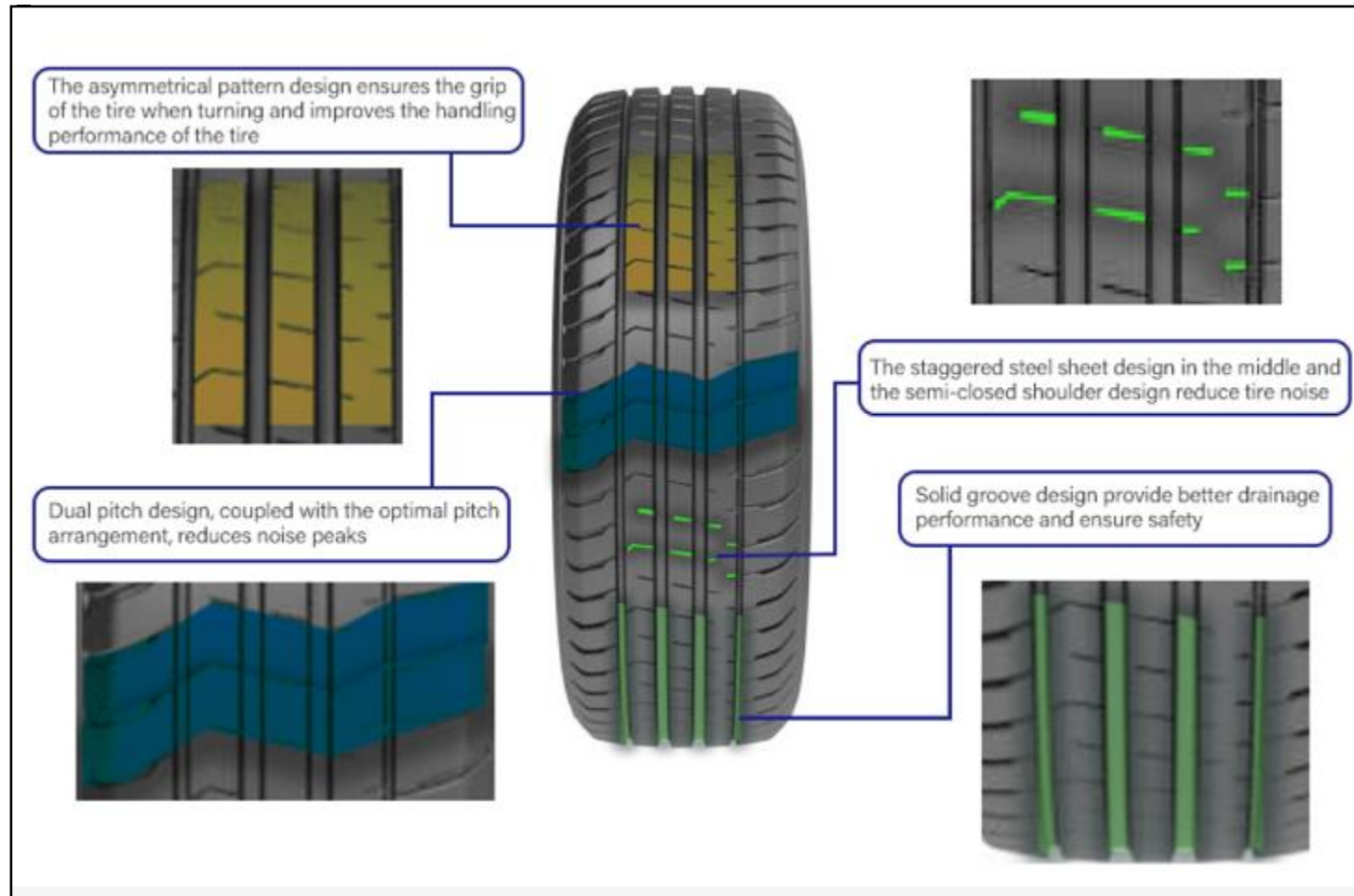


Dual pitch design, coupled with the optimal pitch arrangement, reduces noise peaks



The staggered steel sheet design in the middle and the semi-closed shoulder design reduce tire noise

HP Pattern KO760 Features



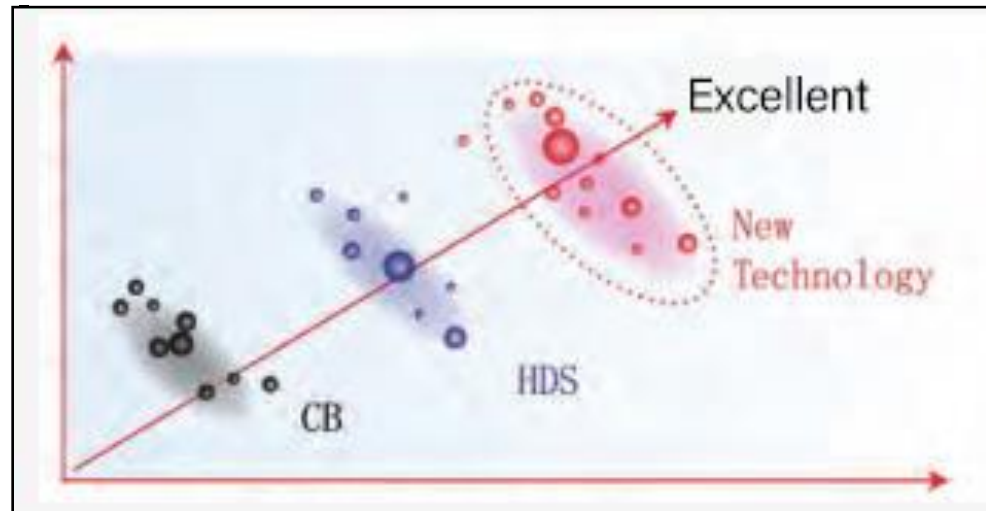
HP Pattern KO760 Features

Symbol of Quality & Performance



KO760

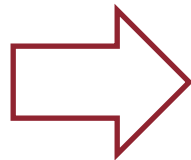
ROLLING GRIP PERFORMANCE



BRAKING PERFORMANCE
(WET AND SLIPPERY ROAD)

UHP Pattern KO750 Features

Symbol of Quality & Performance



KO750

UHP Pattern KO750 Features



UHP Pattern KO755 Features

Symbol of Quality & Performance



KO755



- 1 Special rubber compound improves heat resistance, good abrasion resistance, driving performance and grip.
- 2 RIM protection, protect wheels from accidental damage.
- 3 Layer of protection uses new materials, as well as the seamless technology, improve braking and durability, tread the ground more evenly and improving handling safety.
- 4 High tensile steel belt, lower rolling resistance, increased handling safety and more fuel and protect the environment.

UHP Pattern KO755 Features

Symbol of Quality & Performance



KO755



Ultra high strength carcass and bead design greatly improves driving performance.



Unequal pitch design simulated by computer reduces driving noise effectively.

Asymmetric thread design provides excellent grip force in the crooked roads and good water drainage performance.

SUV & 4X4 Pattern KO645 Features

Symbol of Quality & Performance

Excellent Drainage Performance:4

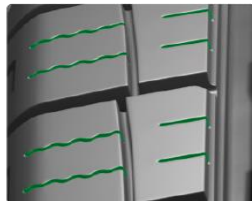
longitudinal grooves
interconnecting with the edge
grooves offers better drainage
performance, safety driving under
rainy weather is further
guaranteed consequently.

Optimized Pattern Design

Through 5 pitch design effectively
reduces noise and improves
comfort

The Excellent Pattern Design

Small notched design on tread patterns
improves the durability of the tire
and the grip performance on wet
ground.



KO645

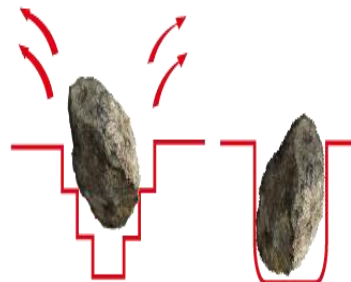
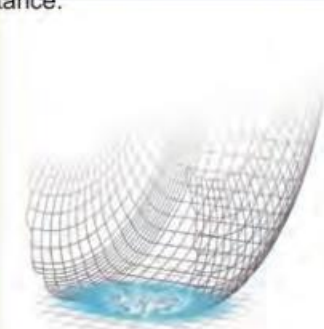
SUV & 4X4 Pattern KO645 Features

Symbol of Quality & Performance



Super Silica Compound

All new winter silica compounded tread provides super grip power on wet ground and less rolling resistance.



“Pop-up” Design:

Stepped groove design avoids small stones embedded into tire patterns damaging the tire, better guarantees the driving stability.

SUV & 4X4 Pattern KO650 Features

Symbol of Quality & Performance

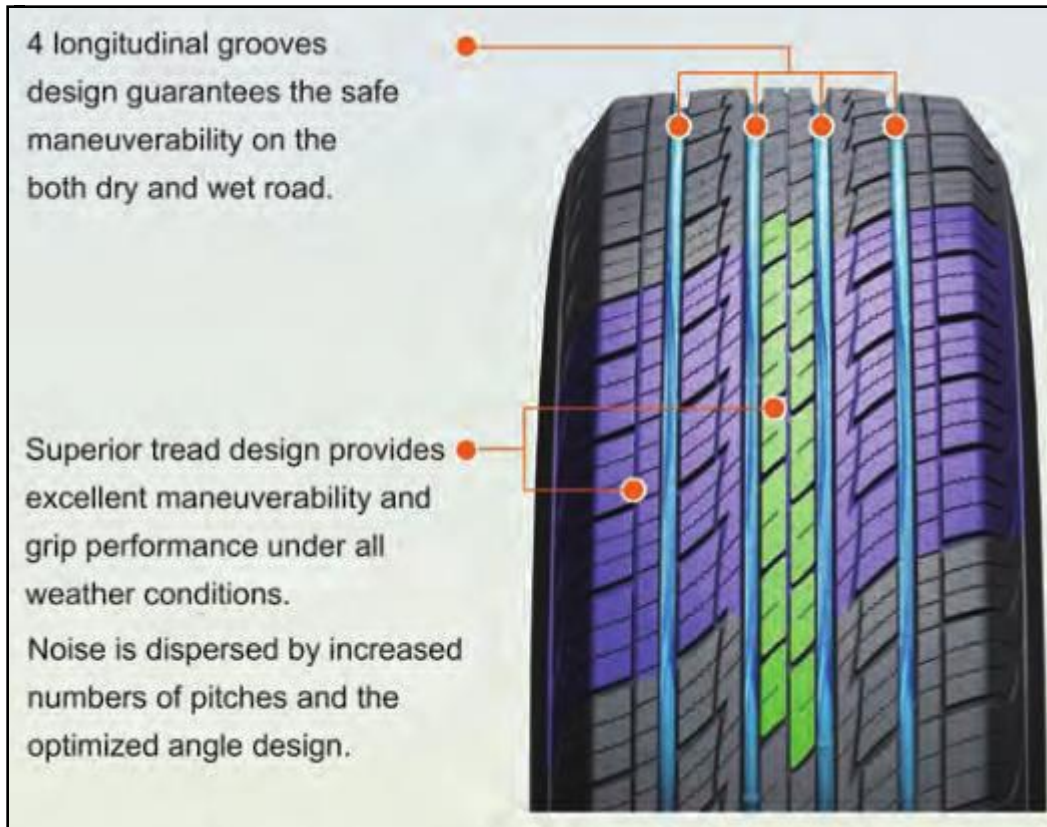


Safe Handling Performance :

Solid shoulder pattern design provides accurate maneuverability on direction and braking .

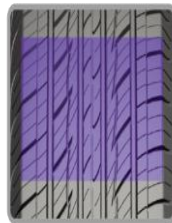
SUV & 4X4 Pattern KO655 Features

Symbol of Quality & Performance



Lateral pattern grooves on shoulder part ensures the best drainage performance.

SUV & 4X4 Pattern KO655 Features

**KO655**

Superior tread design provides excellent maneuverability and grip performance under all weather conditions.



Noise is dispersed by increased numbers of pitches and the optimized angle design.



Lateral pattern grooves on shoulder part ensures the best drainage performance.

A/T Pattern KO640 Features

Symbol of Quality & Performance



Tread Pattern Design:

Big tread pattern design increases the contacting area with the ground, offering excellent handling and braking performance on all terrain and all weather conditions.

Open Shoulder Design:

Heat release ability is improved by open shoulder design, tire durability and driving safety is greatly enhanced.

“Pop-up” Design:

Stepped groove design avoids small stones embedded into tire patterns damaging the tire, better guarantees the driving stability.

Durability:

Deep waved grooves improve the durability of the tread and wet grip performance on all terrain road conditions.

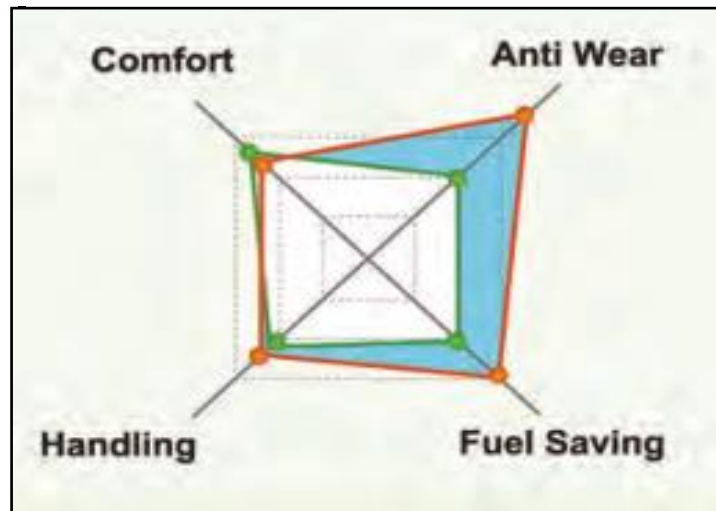
LT Pattern KO636 VAN Features



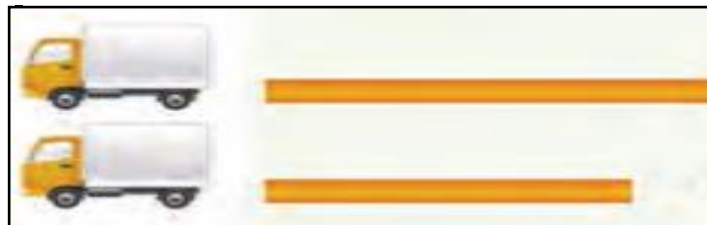
LT Pattern KO636 VAN Features



KO636



Anti Wear Ratio Comparison



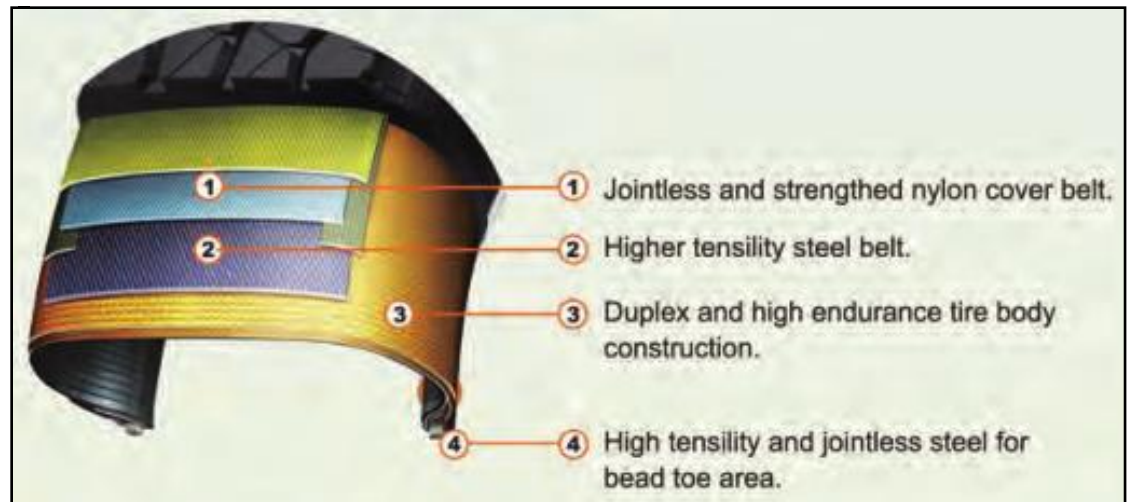
KO636

Others

LT Pattern KO637 VAN Features



KO637



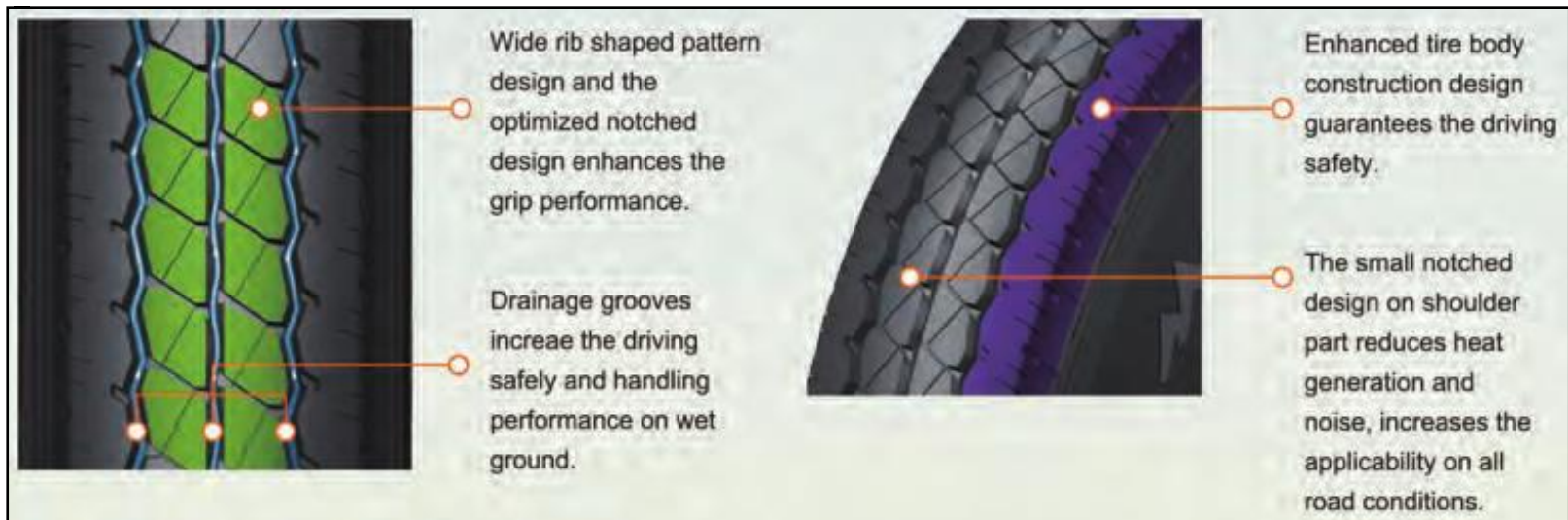
Safety :

Three longitudinal grooves design and wide rib shaped pattern design enhances the water drainage performance and handling safety

Extra long mileage:

Enhance tire body construction design and optimized compound offers extra long mileages .The small notched design on shoulder part reduces heat generation and guarantees the driving safety .

LT Pattern KO637 VAN Features



Winter Tire Patterns

Symbol of Quality & Performance



Winter PCR Tire Pattern KO7100 Features



KO7100



Tread Pattern Design:

Perfect braking & grip power on snow/ice road conditions provided by directional pattern and studdable design.



Super Braking Power:

6% widened tread design offers even landing area, improves braking and wear resistant performance on snow/ice terrain.



Excellent Drainage Performance:

"V" groove design delivers perfect water drainage performance when snow melts, more stable driving.terrain road conditions.

Winter PCR Tire Pattern KO7100 Features



Optimized Tire Body Construction

1. Jointless and high-strength nylon covering layer .
2. High tension steel belt
3. Dual carcass construction
4. Jointless and high-strength bead and steel wire .

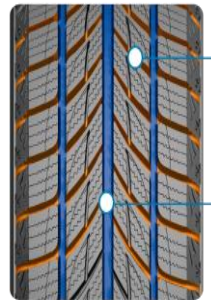
**Guarantee
the driving
safety**



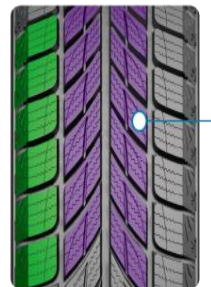
Winter UHP Tire Pattern KO7200 Features



KO7200



Handling Performance on Ice And Snow Road:
Interval arranged lateral groove design in carter part increase grip ability on snow/ice terrain, guarantees safe handling performance.



Drainage Performance on Ice And Snow Road:
Wide and straight longitudinal groove design improves performance on wet ground.

Breaking Performance on Ice And Snow Road:
Special studless tread compound greatly improves braking performance in winter.

Winter SUV Tire Pattern KO7300 Features



KO7300



Central rib pattern and multi-sipe design makes excellent braking and steering performance on snow/ice terrain.



Wide tread design increase the contacting area with the ground, guarantees the driving safety on snow/ice terrain.



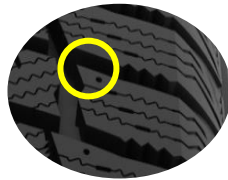
Combination of longitudinal and lateral grooves to ensure the best water drainage performance.

Winter SUV Tire Pattern KO7400 Features

Symbol of Quality & Performance

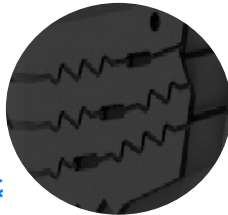


KO7400



Three-dimensional and Steep Design in Tire Shoulder

The three-dimensional right angle design of the outer shoulder increases the shoveling ability when tires are deep into snow.



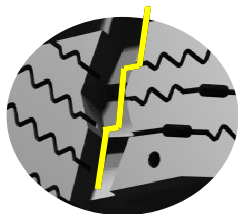
Suction Pump and Water Storage Hole Design

The tread will absorb the water film on the surface of ice and snow into the suction pump, when the tread leaves the ground, the water will be out of the suction pump to make sure the safety performance of tire.



Zigzag Trapezoid Grooves Design

Zigzag pattern grooves could break the water film in short time, so tires could stay adhere to the icy and snowy road. Trapezoidal groove design, narrow on the top and wide on the bottom, under the force of tire and ground to form a snow pump, which will discharge the snow and water easily.



Snow Shovel Design in Pattern Grooves

Z type patterns grooves is added with stepped snow shovel, which could make sure tire and road are stay attached, enhanced grip ability.

1. PCR Tire Construction & Function

2. PCR Tread Pattern Features

3. TBR Tire Construction & Function

4. TBR Tread Pattern Features

5. Summary

Tire Concept

A tire is:

a complex structural composite which is built up by several rubber and reinforcement-materials, that

- ▶ ensures **transformation of forces from vehicle to road**
- ▶ thereby has to resist
 - extreme **large deformations**
 - for large amount of **loading/ -unloading cycles.**

Tire-size

315 / 80 R 22.5 KO405

Nominal tire-width / aspect-ratio (height/width) / "R"=radial tire / nominal rim-diameter / KJ Code

TBR Tires Construction--1

1. TREAD

2. BELTS

3. CARCASS

4. INNERLINER

5. SIDEWALL

6. BEAD REINFORCEMENT

8. APEX

7. BEAD CORE



TBR Tires Construction--2

1. TREAD

Rubber

- **Road-contact**
- **Friction**
- **Wear Resistance**

2. BELTS

4 layers of Steel Cords

50° R/18° R/18° L/18° R (19,5" / 22,5")

- **stiffness**
circumferential, lateral, radial
(restricts the expansion of the carcass-body
in the crown-area)

3. CARCASS

Steel Cord 90°

- **Radial stiffness**
(takes the tensile
forces caused by
inner pressure)

4. INNERLINER

Rubber

- **Air tightness**

5. SIDEWALL

Rubber

- **Impact / UV
resistance**

TBR Tires Construction--3

6. BEAD REINFORCEMENT

3 Nylon 45° R/L/R

Steel Cord 25°

➤ **bead stiffness**

(to stiffen the bead-construction)

➤ **fix the bead-core**

(to prevent uncontrolled movement of the bead-core)

➤ **fix the carcass-cords**

(to prevent carcass-cords to be pulled out)

7. BEAD CORE

Steel wire 0°

➤ **carcass anchor**

➤ **rim seat**

8. APEX

Rubber mono/duplex

➤ **handling**

➤ **durability**

(decouple ply-turn-up and BRF-edge from carcass)

TBR Tire Parts & Functions

| No. | COMPONENT NAME | MAIN FUNCTION | MATERIAL |
|-----|--------------------|---|-----------------------------------|
| 1 | Tread | <ul style="list-style-type: none">- Road-contact and friction- Traction and adhesion- wear-resistance | Rubber (Hard) |
| 2 | Belt-Package | <ul style="list-style-type: none">- Lateral, circumferential, radial stiffness- ensure tread-area and aspect-ratio | Steel-cords |
| 3 | Carcass | <ul style="list-style-type: none">-Radial stiffness- Inner pressure generates tensile forces in the carcass-cords | Steel-cord (90°) |
| 4 | Inner Liner | <ul style="list-style-type: none">- Air-tightness | Chloro-butyl-rubber |
| 5 | Sidewall | <ul style="list-style-type: none">- Impact / UV resistance | Rubber |
| 6 | Bead Reinforcement | <ul style="list-style-type: none">- Stiffen the bead-construction- Prevent uncontrolled movement of bead-core- Prevent carcass-cords to be pulled out | Nylon 45° R/L/R Steel Cord 25° |
| 7 | Bead Core | <ul style="list-style-type: none">- Ensure the rim-seat- Anchor the carcass | Steel-wire 0° (1,6 Mm) |
| 8 | Apex | <ul style="list-style-type: none">- Bead endurance | Rubber |

TBR Tire Load Calculation

Equilibrium in vertical direction:

axle LOAD = contact AREA x inner PRESSURE



Do Not Overload:



1. PCR Tire Construction & Function

2. PCR Tread Pattern Features

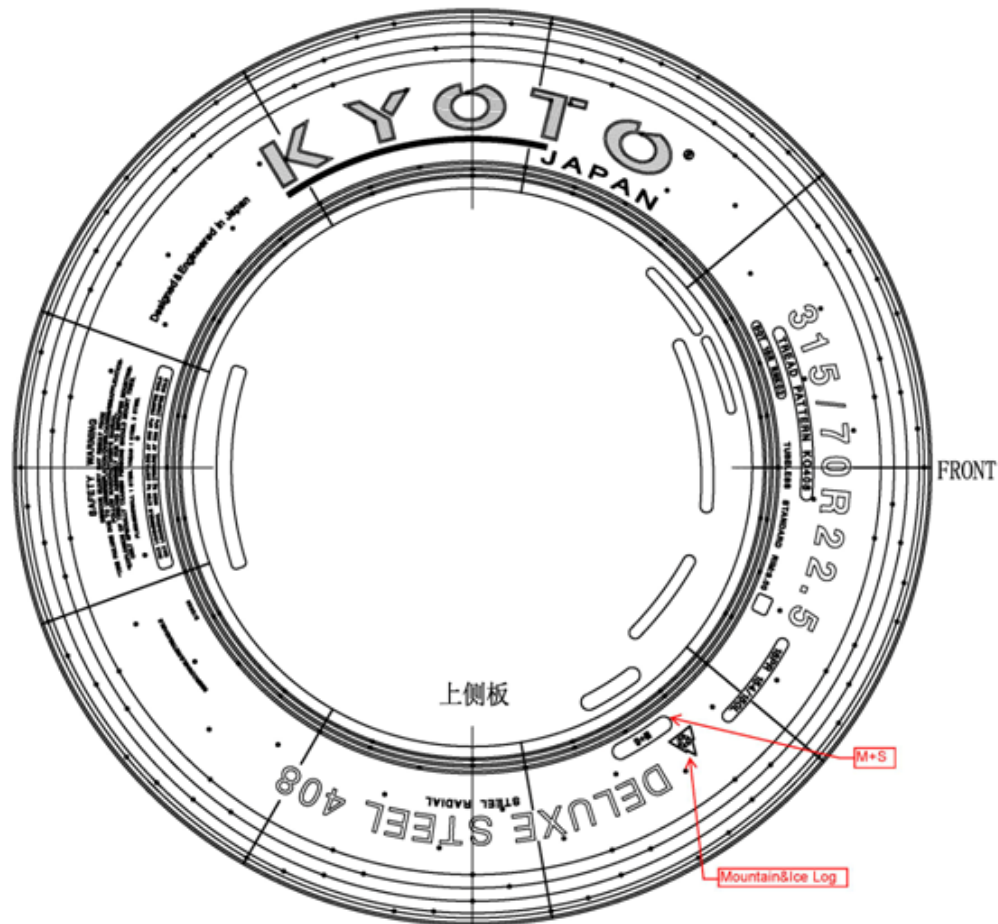
3. TBR Tire Construction and function

4. TBR Tread Pattern Features

5. Summary

Kyoto Japan TBR Side Wall

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TBR KO408 E4 Test Report

Symbol of Quality & Performance

TEST REPORT

according to UN-Regulation

Uniform provisions concerning the approval of pneumatic tyres
for commercial vehicles and their trailers

UN Regulation No. 54

including all amendments until

Amend.00, Suppl. 23

Approval Status

UN approval : E4*54R00/22*41069*00

Structure of the Test Report

Item No.

0. General information
1. Tested vehicle(s) / object(s)
2. Test record
3. List of appendices
4. Statement of conformity



The Test Report shall be reproduced and published in full by the client only. It shall however be reproduced partially with the written permission of the Testing Laboratory only.

TÜV RHEINLAND GROUP

Test Report No. 86-R54-3175/20-00



Type : 315/80R22.5
Manufacturer : Qingdao Doublestar Tire Industrial Co., Ltd.

- 1.2.7 Circumference : 3380 mm
- 1.2.8 Outer diameter : 1075.9 mm
- 1.2.9 Tread depth / void to fill ratio in case of special use tyre : Not applicable
- 1.3. Load/speed performance test according to Annex 7
- 1.3.1 Test machine : TJR-2-TB(Y)
- 1.3.2 Diameter of test drum : 1.707 m
- 1.3.3 Test rim : 9.00 x 22.5
- 1.3.4 Inflation pressure adjusted before conditioning : 8.5 bar
- 1.3.5 Conditioning of tyre : More than 3 hours
- 1.3.6 Test-room temperature : 28°C
- 1.3.7 Inflation pressure readjusted after conditioning : 8.5 bar
- 1.3.8 Circumference after conditioning, before testing : 3380 mm
- 1.3.9 Outer diameter after conditioning, before testing : 1075.9 mm
- 1.3.10 100% load corresponding to L.L.(single) : 4000 kg

| Step | Step duration [h] | Total duration [h] | Actual speed [km.h ⁻¹] | Test Load [%] | Test Load [kg] |
|------|-------------------|--------------------|------------------------------------|---------------|----------------|
| 1. | 7 | 7 | 64 | 66 | 2640 |
| 2. | 16 | 23 | 64 | 84 | 3360 |
| 3. | 24 | 47 | 64 | 101 | 4040 |

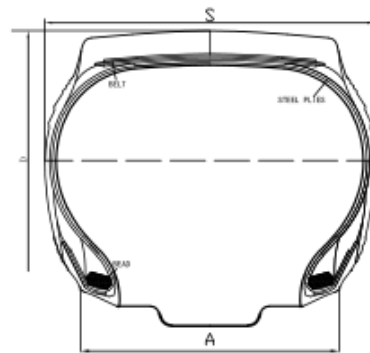
- 1.3.11 Conditioning after testing : More than 6 hours
- 1.3.12 Circumference after conditioning, after testing : 3398 mm
- 1.3.13 Outer diameter after conditioning, after testing : 1081.6 mm
- 1.3.14 Difference outer diameter before and after testing (max. 3.5 %) : 5.7 mm : 0.53 %
- 1.3.15 Inspection after test : The tyre does not exhibit tread separation, ply separation, cord separation, chunking or broken cords.



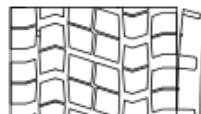
2. Remarks : The test data refer to report No.: 86-R54-0488/18-00 corresponding to type approval No.: E4*54R00/22*41069*00

TBR KO408 Approved Drawing by TUV - Germany

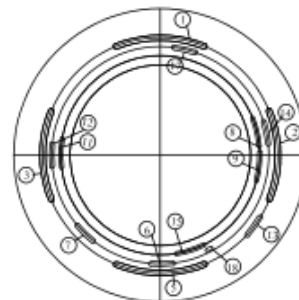
Drawing No: DST/QAC-YF-2020



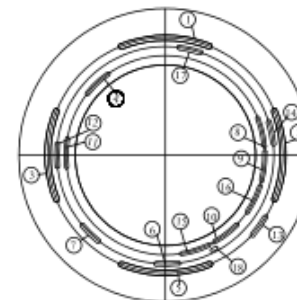
PROJECTION



KO408 SKID DEPTH (mm) : 21



TOP SIDEWALL



BOTTOM SIDEWALL

| | |
|----|---|
| 18 | |
| 17 | JAPAN |
| 16 | 3C |
| 15 | M+S |
| 14 | TREAD PATTERN KO408 |
| 13 | 156/150 L 200R |
| 12 | PLIES SIDEWALL 1 STEEL TREAD 1 STEEL 3 STEEL |
| 11 | MAX LOAD - SINGLE 4000 KG(8800 LBS) AT 850 KPA(125PSI)COLD MAX LOAD - DUAL 3350 KG(7400 LBS) AT 830 KPA(120 PSI)COLD |
| 10 | ECE APPROVAL MARK AND NO. |
| 9 | TUBELESS RIM 9.00 |
| 8 | DOT USR BN ***** (DATE CODE) |
| 7 | REGROOVABLE RETREADABLE |
| 6 | STEEL RADIAL |
| 5 | DELUXE STEEL 408 |
| 4 | MADE IN CHINA |
| 3 | SAFETY WARNING |
| 2 | 315/80R22.5 156/150L |

| | | |
|---|--------------------------------------|-----------|
| 1 | TRADE MARK: KYOTO[®] | 2020.8.14 |
|---|--------------------------------------|-----------|

| | | | | | | |
|-------------|------------|--------------|----------|--------|--------|--------|
| 315/80R22.5 | 156/150 | L | TUBELESS | 1076 | 312 | 228.6 |
| TYRE SIZE | LOAD INDEX | SPEED SYMBOL | TYPE | D (mm) | S (mm) | A (mm) |

| | | | | | | | |
|----------|----------|------------|---------------|-------------|--------------|--|------------|
| DRAWN BY | Zhao Fei | CHECKED BY | Huang Ruijiao | APPROVED BY | Gong Jinrong | Qingdao Doublestar Tire Industrial Co., Ltd. | DRAFT DATE |
|----------|----------|------------|---------------|-------------|--------------|--|------------|

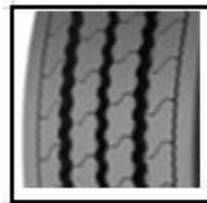


| | |
|----|-------|
| 18 | |
| 17 | JAPAN |
| 16 | 3C |
| 15 | M+S |

TBR Pattern KO407

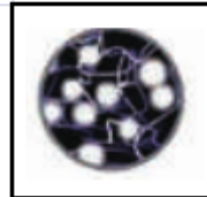


Characteristics



Anti-eccentric ,increase the using life

Three zig-zag longitudinal pattern groove combine with crack pattern design provide good wet resistance and good heat and dispersion performance



Anti-eccentric wear, longer service life

Using high anti-wear and low heat generation rubber compound ensure long mileage and high fuel efficiency.



Better handling for safe driving

Enclosed tire shoulder[design provides good steering performance.

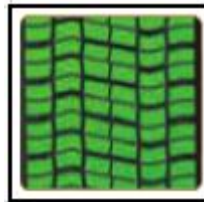
All Position



TBR Pattern KO408

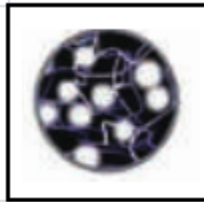


Characteristics



Better Braking and Wet Grip Performance

All-season pattern design, excellent driving, braking and anti-skid performance in the condition of rainy and snowy weather.



Higher Mileage

Using the anti-wear carbon black +anti-tearing resin, makes the rubber more resilient.



Stronger Loading Capability

Reinforced bead design improves the tire's loading capacity.

Drive Position



TBR Pattern KO444



Characteristics



Excellent Driving And Traction Performance

Big block pattern ensures excellent driving and stronger traction performance.



Low Rolling Resistance, More Fuel Efficient

Single direction pattern design, low rolling resistance and better wet-skid resistance.

Low Heat Generation

The design of the heat sink in the shoulder prevents the high heating.

Self-cleaning, Prolong The Using Life

Small bulge in the bottom of grooves can effectively pop out the stones.

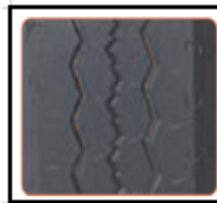
Drive Position



TBR Pattern KO410

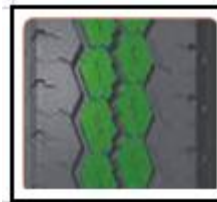


Characteristics



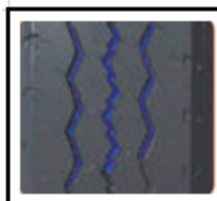
Self-cleaning, Prolong The Using Life

Small bulge in the bottom of grooves can effectively pop out the stones.



Better Grip Performance

Large block design provide the stronger grip force.



Excellent Drainage Performance

Three longitudinal groove pattern design provides excellent drainage performance.

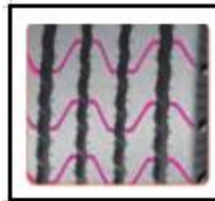
Drive Position



TBR Pattern KO412

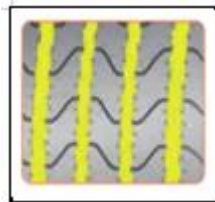


Characteristics



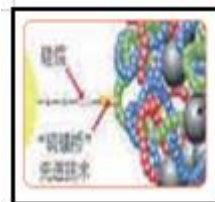
Low Noise, Better Driving Experience

Professional low noise pattern design, excellent steering performance, anti-wear.



Better Handling For Safe Driving

Four longitudinal grooves design provides better handling stability.



Low Fuel Consumption, High Economical Efficiency

Low rolling resistance tread compound, excellent high-speed performance.

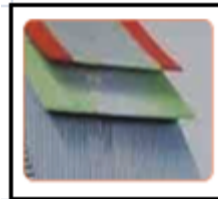
Trailer Position



TBR Pattern KO412



Characteristics



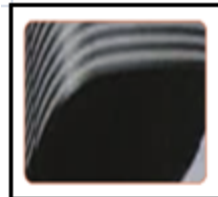
Stronger Loading Capability

Strengthened steel belt ensure better loading capability and safety..



Low Noise, Better Driving Experience

Professional low noise pattern design, excellent steering performance.



Stronger Carcass, Retread

High flexion carcass ensures durability and retread ability.

Steer & Trailer Position



TBR Pattern KO415

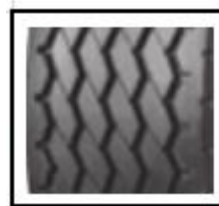


Characteristics



Low Heat Generation, Longer Service Life

Low generation, higher driving mileage, and excellent fuel efficiency.



Anti-Wear, High Mileage

Low profile and wider tread design ensures even wear.

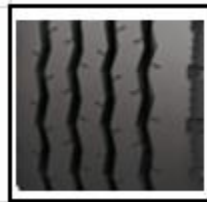
Drive & Trailer Position



TBR Pattern KO437

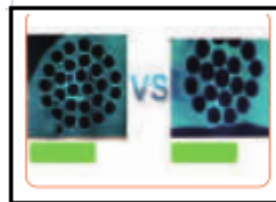


Characteristics



Anti-Sideslip, Much Safer

Multi longitudinal pattern grooves design provides excellent drainage and anti-sideslip performance.



Strengthened Carcass, Much Safer

Adopting high strength steel cords, tire strength is increased about 15%, for safer driving.



Low Rolling Resistance, High Economical Efficiency

Low rolling resistance design reduces the rolling resistance to 4.5 (down about 20%) and save about 4% fuel.

Steer & Trailer Position

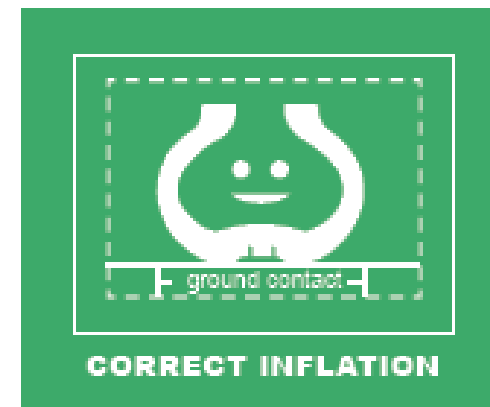


Kyoto Japan Tire Management

Symbol of Quality & Performance

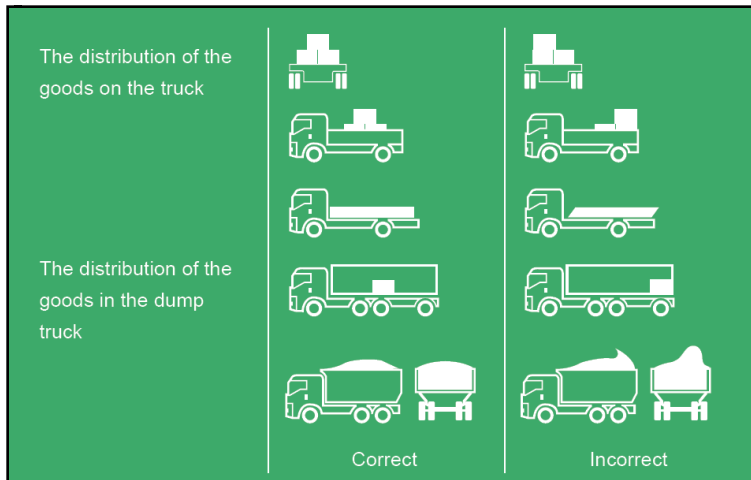
Control Tire Pressure

- Cause excessive wear of the shoulder
- Early damage of the treads
- Side-slip easily
- Lack of safety-control and comfort
- High fuel consumption
- Cause the unusual wear of the tread centre
- Easy to blast when meets obstacles
- Easy to bump thus influences the driving comfort
- Make sure of the tire's even contact with the ground to extend the lifetime



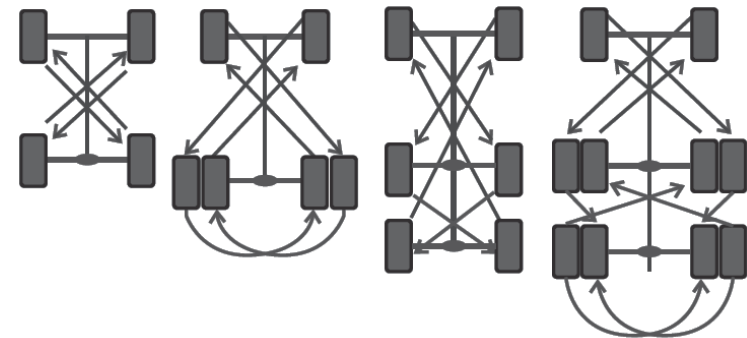
Reasonable Load

- The load of tires is closely related to the pressure. High load means low pressure which will cause damage.
- Overloading will shorten the tires' potential lifetime by 20%-50%.
- Incorrect loading will influence the driving safety.



Tires Rotation

- The tires should be rotated regularly.
- The inner tubes and flaps need the comprehensive inspection.
- Due to the exchange of the tires' location, the wear can be more even so to extend the service life.



Tips on Tire Maintenance

1. Assembly

- The same axle should be equipped with the tires of same label, specifications, structures and patterns. The ordinary tires and the radial tires cannot work together.

2. Change the Tire

- When changing the tires, it's better to change them all, or change the front wheels or the after filling-up wheels.

3. Vehicle

- Bad vehicle condition will cause tires' early abrasion. The uneven loading can also lead to tires' damage. If you find any symptom of deformity, please check the tires in time.

4. Storage

- The tires should be stored in dry, clean ventilation of the Treasury, to prevent exposed to direct sunlight, oil, acid and heat. The flammable commodity and corrosives should be kept isolated. The proper storage temperature is -10°C~+30°C while the relative humidity is 50%~80%.

Tire Selection

Longitudinal Patterns

This pattern applies to the rigid pavement made of cement or tar, having better passing performance.

Off-Road Pattern

This pattern applies to the mine road, or the road with bad condition.

Lateral Pattern

Having strong adaptability, it applies to our national road condition, climate, and highway.

Mixed Pattern

It is the transitional pattern between the longitudinal and the lateral one. Because of its good wear-resistance and grip performance, it applies to pavements made of asphalt, concrete, even mud or snow.

The Advantage of Tubeless Tire

Better Driving Stability

With a lower height-width-ratio, low gravity center, single rim and good buffer performance, the tubeless tires gain high balance and stability. When meeting a sharp turn, the vehicle bumps less so to make sure a safe-driving

Excellent High-speed Performance

There is bigger space between the tire and the rim and the brake drum so the tires produce less heat when driving fast. With the same loading, the tubeless tires have low temperature than the tube-type tires.

Energy-efficient

The tubeless tires are lighter and the rolling resistance is much lower. Compared with the tube-type tire, it can save more fuel.

Security

When punctured by sharp objects, the tubeless tires leak more slowly. And the bead is not easily to fall off from the rim base. Then the vehicle will keep working but not stop immediately.

Long Service Life

The tubeless tires can avoid the damages caused by friction and lack of matching between the inner and outer tubes.

Safe Driving

- **New tires have a run-in period, normally at about 200 km.**
- **Rest the tires after high-speed driving (normally 1-2 hours) and check the tires.**
- **Avoid abrupt start, emergency brake and sharp turn.**
- **Avoid overload and over-speed driving.**
- **Drive on roads with good condition. Protect the tires from severe impact.**
- **Avoid using the renovated tires for the front wheel.**
- **You must change the tires when the abrasion meets the mark.**
- **Change the tires immediately when tires malfunction.**

Summary

Kyoto Japan PCR and TBR tires have Premium Quality features :

- **Higher Mileages for PCR over 120,000 kms and for TBR over 100,000 kms**
(subject to correct driving & tire maintenance & good road conditions)
- **Good driving performance and comfortable feeling .**
- **Good durability.**
- **New and popular patterns being developed every year to meet clients' demands .**
- **Serious tire quality control and inspection before delivery .**
- **After-Sales-Service from Switzerland**

**Kyoto Japan PCR and TBR Tires offer Premium Quality
for all your transportation needs**

Kyoto Japan Direct Tire Technical Support

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KYOTO
JAPAN

Symbol of Quality & Performance

Kyoto Japan Billboard on China Highway



“Symbol of Quality & Performance”

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