



**Press Kit**  
**Autopromotec Bologna**  
**2019**

# Autopromotec 22nd – 26th May 2019

## Press Kit

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You will find further material on Hankook’s line-up on our Media Center:  
<https://www.hankooktire-mediacyter.com/autopromotec-2019>

## Hankook presents innovative solutions at the 2019 Bologna –Autopromotec“

**Tyre maker Hankook will be exhibiting at this year’s Autopromotec in Bologna from 22 to 26 May. At the show, the company will be presenting its range of sustainable high-performance tyres for cars, buses and trucks. Some innovations to be found at the Hankook stand include the new Ultra High Performance Ventus S1 evo 3 tyre, the all-season tyre Hankook Kinergy 4S 2 as well as tyres for long-distance coaches, the SmartTouring AL22.**

*Bologna, Italy, 22 May 2019* – Premium tyre maker Hankook will be present at the Autopromotec from 22 to 26 May again this year. On stand A70 in Hall 20 Hankook will show visitors its complete range for cars, SUVs, light- and heavy-duty transport, trucks and buses. Once again, the company will demonstrate its innovative strength, showcasing its latest generation innovative products, including the most recent Ultra High Performance Ventus S1 evo 3, the all-season Hankook Kinergy 4S 2 and tyres for long-distance coaches, the SmartTouring AL22.

“Autopromotec is one of the most important international trade fairs for the automotive industry and again this year we shall have the opportunity of showing our range of new car and truck tyres to customers from all over Europe. We are expecting the trade fair to be very successful for the Italian market in terms of sales and image”, states Carlo Citarella, Managing Director of Hankook Tire Italia.

The new Ultra High Performance tyre for cars, the Ventus S1 evo 3, combines the excellent features of performance and comfort of the “S1 evo”, already shown in many independent tests and a remarkable improvement in environmental characteristics. During development of the tyre treads made by the premium tyre maker, safety always took priority as far as the engineers were concerned. For the third generation of the S1 evo, special attention has been given to further improve the adherence to wet surfaces, steering performance and precision. Other new products include Hankook’s most recent all-season tyre, the Kinergy 4S 2, created with a view to offering safe performance 365 days a year with no change of tyres. On the stand there will also be an area showcasing Laufenn, the tyre range from the second brand.

Bus tyres will also play a central role at the Bologna fair, including the tyre for long-distance coaches, the SmartTouring AL22, which is suitable for all positions, guaranteeing excellent performance with regard to braking and a comfortable drive. The individual layers of the belt are placed structurally, so that heat production, when driving, is reduced to the minimum when compared to conventional tyres. This effect not only reduces rolling resistance with consequent savings on fuel, but it also considerably prolongs the lifetime of the tyre. Moreover, it possesses good winter characteristics, bearing the symbol 3PMSF.

Hankook demonstrates its commitment to future mobility with the futuristic “Hexonic” and “Aeroflow” tyres. The tyres, which were developed in collaboration with students from the Royal College of Art in London as part of a design study competition, had the slogan “Extending Future Life beyond Mobility”. The students were set the task to develop a new tyre concept for autonomous vehicles and thus to create a whole new experience for the mobility of the future. These were initially presented to the European market at the Essen Motor Show in 2018. Every two years, new concept tyres are developed in collaboration with world-renowned design universities as part of the Hankook “Design Innovation” project.

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## **Hankook's new Flagship tyre rewarded with podium finish in its first 3<sup>rd</sup> party test vs. 53 other brands**

**The Hankook Ventus S1 evo 3, an Ultra-High-Performance tyre for passenger cars and SUVs, has achieved a top position and outstanding rating in its very first 3<sup>rd</sup> party test from Germany's leading automotive media Auto Bild. In March 2019 the magazine tested Ultra-High-Performance (UHP) summer tyres from 53 brands in size 225/45 R 17 in all performance criteria, including mileage. As with all Hankook tyres, safety was again the emphasis in the development engineers' product specifications for the premium tyre maker's latest model. Great importance was therefore attached to further improvements especially in the areas of wet grip and handling/steering precision. Consequently, the new S1 evo 3 has outperformed all other tested tyres in wet braking, which is probably rated the most prestigious test criteria from the point of safety. Furthermore, the Auto Bild testers highlighted the tyre's precise steering behaviour and good feedback on dry roads. The new Hankook Ventus S1 evo 3 is initially being offered in the European market in 77 dimensions ranging from 17 to 22 inches.**

As a completely new development, the Hankook Ventus S1 evo 3 is the logical continuation of the success story of Hankook's Ultra-High-Performance tyres. Like its predecessor, it offers a very safe and sporting-yet-comfortable driving experience in both dry and wet conditions. The Ventus S1 evo 3 as the latest member of the Hankook Ventus family, which celebrated its market launch back in 1994 with the original "Ventus", sets a new focus, particularly in the area of environmental protection and resource conservation, without compromising safety relevant criteria.

For their 2019 edition, Europe's largest automobile consumer magazine Auto Bild has evaluated the size 225/45 R 17 on a BMW 1-series in probably the globally largest-scale tyre test, involving 53 summer products<sup>1)</sup> including all the top brands. Having achieved good and very good marks in all tested criteria, the Auto Bild editors testified the Hankook Ventus S1 evo 3 in their final verdict to be ... "a balanced, high performing tyre, truly without blame and blemish, offering a precise steering behaviour with a good feedback on dry tracks and the best overall wet braking ...".

"Our tyres have already established themselves as premium original equipment amongst leading car makers, including the high-performance sports car segment," explains Han-Jun Kim, President of Hankook Tire Europe. "With our new flagship, we're consciously continuing along this path and I am very glad, that the large number of new technologies we have applied into series production for our new flagship tyre, have shown their performance potential in one of the globally most prestigious independent 3<sup>rd</sup> party tests. I am certain that our new Ventus S1 evo 3 will be an immediate success with our customers from its launch."

Thanks to continuous research, a new generation of innovative materials are being used for the Ventus S1 evo 3. Hankook's compounding experts have optimised the driving characteristics of the Ventus S1 evo 3 on wet and dry roads by using high-performance natural resins in the tread compound. This not only increases the grip level at the peak of performance output, the tyre also remains at this grip level across a significantly larger range of temperatures, resulting in a very wide threshold range. A high-grip full-silica tread compound and a special mixing technology for a significantly better distribution of polymers and filler material are used in the tread compound. This results in a clear improvement in brake performance in the wet as well as in reducing rolling resistance.

A new type of compound for the tyre's side wall also contributes to this reduction, further lowering the rolling resistance of the Ventus S1 evo 3 by at least an additional 2.5 per cent versus its predecessors. A new 0-degree cap ply made from aramid composite further reduces the unwanted growth in rolling circumference at high and very high (300 km/h and more) speeds by up to 60 per cent compared with traditional nylon-based fabrics, giving the Ventus S1 evo 3 significantly better driving stability and thanks to lower heat generation a longer tyre life.

The cap ply also contributes to an improvement in cornering forces of just over five per cent. 'Hyper slants' in the centre tread bar ribs also help to increase the cornering force by enlarging the contact surface under load, for example when sudden evasive manoeuvres are necessary. The blocks of highly rigid and especially widely outer ribs of the asymmetric tread have been reinforced with additional connecting bridges to provide precise and stable handling through corners.

The pronounced outer tread groove within the special block design is a purely visual feature reminiscent of the distinctive first Ventus S1 evo design, with its typical line in the outer tread area. From a technical perspective, the 'interlocking groove', in combination with the further flow-optimised 4-channel design, effectively reduces aquaplaning whilst also greatly increasing wet grip without causing any loss of performance on dry roads.

Engineer Klaus Krause, head of Hankook's European Development Center in Hanover/Germany, says: "For the Ventus S1 evo 3, our engineers set their sights on beating its predecessor – as Hankook's most successful tread in the market to date – in virtually every area. The result of their work is an Ultra-High-Performance tyre whose handling and driving characteristics have been optimised in such a way as to make driving emotion a true experience. Furthermore", Krause continues, "the future requirements of so-called real driving emissions that the automotive industry needs to meet, have already been incorporated into the development of the S1 evo 3."

In addition to the Hankook main R&D Center Technodome, the development for the Ventus S1 evo 3 was as well undertaken in the tyre maker's European Development Center in Hanover, which is part of the global Hankook Tire research network. Production takes place primarily in the company's ultra-modern production facility in Rácalmás, Hungary. Since its market launch the Ventus S1 evo 3 is also available in an adapted version for SUVs with a two-ply rayon carcass. A number of versions have already received original equipment approval from German car makers for their latest models. The initial line-up will include over 77 dimensions ranging in size from 17 to 22 inches in the 55 to 25 series, with tread widths ranging from 205 to 315 mm.

<sup>1)</sup> 53 Tyre patterns pre-tested (wet/dry braking), 20 best braking patterns (combined) continued in main test.

## Hankook Ventus S1 evo 3: Technical Features

### 1. Handling Performance & Further Development

- Hyper slants in the centre tread bar ribs help to increase the cornering force by enlarging the contact surface under load.
- The blocks of high rigidity and wider outer ribs of the asymmetric tread have been reinforced with additional connecting bridges to provide precise and stable handling around corners.



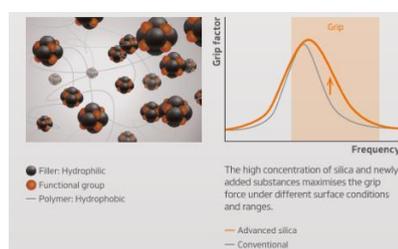
### 2. Reduction of height growth at high speeds due to new aramid composite material

- A new 0-degree cap ply made from aramid composite further reduces the unwanted growth in rolling circumference at (300 km/h and more) speed by up to 60 per cent compared with traditional nylon-based fabrics.



### 3. Improved wet braking performance and reduction of rolling resistance

- A high grip silica tread compound and a special mixing technology makes for a significantly better distribution of polymers and filler material, which is also used in the tread compound. This results in a clear improvement in braking performance in the wet as well as in reducing rolling resistance.
- Hankook's compounding experts have optimised the driving characteristics of the Ventus S1 evo 3 on wet and dry roads by using high performance natural resins in the tread compound.



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## Hankook's all-weather tyre Kinergy 4S 2

**A reliable performance 365 days a year without changing tyres – this is what the latest generation of Hankook's all-weather tyres has been developed for. With more than 20 years of experience in the all-weather tyre product category, the tyre maker is one of the pioneers in this field. The entire know-how of the Hankook engineers has been incorporated in the development of the Kinergy 4S 2, which has been specially designed for European road conditions. With its new V-shaped tread pattern and a state-of-the-art tread mixture made of natural oil components, the Kinergy 4S 2 guarantees stable driving and braking behaviour all year round across the different temperature ranges that regularly occur in Europe. It is now available in 66 popular sizes from 14 to 20 inches.**

With the Kinergy 4S 2 all-weather specialist, which has been completely redeveloped for no less than its fifth generation, premium tyre maker Hankook is specifically targeting quality- and cost-conscious drivers who prefer not have to change their tyres every six months but who do not want to go without balanced performance and safety. In order to be equipped for all weathers and temperatures, the Kinergy 4S 2 offers specially balanced and constant performance features across all seasons. This is made possible by a directional tread being used for Hankook all-weather tyres for the first time, combined with a particularly innovative polymer silica tread mixture. This makes the product an attractive alternative when it comes to ensuring legally compliant year-round mobility, particularly as weather conditions in Europe become increasingly changeable, as well as for use in more urban traffic. Thanks to the snowflake marking (3PMSF), which has been binding for winter tyres in Europe since January 2018, the tyre can be used all year round even in countries with situational or static winter tyre requirements.

As Dipl.-Ing. Klaus Krause, head of the Hankook European Development Centre in Hanover, emphasises, “Our team of engineers was able to fall back on more than twenty years of expertise in the field of all-weather tyres for the Kinergy 4S 2. The result is a completely new product which makes a particularly stable performance available with the aid of an innovative tyre compound and the special tread design, independently of weather conditions and temperatures.”

As an all-weather tyre, the Kinergy 4S 2 is a real all-rounder and combines crucial summer and winter tyre properties without temperature-related performance losses. It is extremely reliable in wet and dry conditions as well as on snow.

The directional tread is one of the factors that ensures safe driving on wet roads. The V-shaped interleaved tread blocks guarantee high driving stability. They are divided by extra-wide two-level grooves which disperse water ideally to the side even in heavy rain. The drainage system prevents hydro planning and even discharges slush out of the tread effectively. These tread characteristics are supported by the newly developed tyre mixture from a high-density silica polymer compound which ensures very good wet grip on nano level thanks to a high share of natural renewable raw materials among other factors.

The same combination of natural and synthetic high-tech ingredients also has a positive effect on the dry performance of the Kinergy 4S 2. For the all-weather tyre, Hankook's compound experts have achieved a high rigidity, extra stability round bends and improved steering precision on dry roads as well as high grip independently of the temperature. This high rigidity is guaranteed by the solid block structure and its special layout. Thus, the Hankook engineers ensure that the braking distances remain short even on dry roads and at higher temperatures, and the tyre shoulder offers the necessary footing, benefiting dry handling properties as a whole.

In addition, the variation in block layout, which has a zigzag pattern in the centre of the tread, results in a reduction in noise level compared to the predecessor tread. Functionalised polymers ensure a high-density compound with silica structures. Thus, elasticity is retained while rolling resistance is reduced and the tyre's natural aging process is slowed down by the stable chemical composition of the individual constituents. This also has a positive effect on mileage. The Kinergy 4S 2 is particularly resilient and has a long service life and good operating efficiency thanks to reduced abrasion.

With all-weather tyres it is important that the tyre compound remains elastic and does not harden at low temperatures. This is the only way the tyre's contact surface can retain the crucial number of contact points with the road to ensure the necessary grip for safe driving even at temperatures below freezing. Fine 3D sipes in the centre tread block increase the surface area and ensure optimum grip in the snow. The special 3D wave layout keeps the Kinergy 4S 2 stable and ensures short braking distances during braking actions not only in the winter, it also reduces wear on the sipes under greater loads on the tyre at high temperatures as well. An optimised tread surface with V-shaped crosswise grooves also enables controlled handling and good lateral stability on snowy roads.

Special winter tread wear indicators (WTWI) incorporated into the tread grooves at regular intervals also make it quick and easy for drivers to check whether the tread meets the minimum depth requirements for winter tyres.

The Hankook Kinergy 4S 2 line-up provides now 66 sizes from 14 to 20 inches in the 35 to 70 series and tread widths from 165 to 275 with speed ratings T, H, V, W and Y.

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## Hankook presents SmartTouring, an ultra-modern tyre for long-distance coaches

**Tyre maker Hankook presents its range of coach tyres for long-distance travel with SmartTouring products in the European market. Having anticipated the growing significance of long-distance coach travel and thus the increasing demand for high-technology coach tyres in this category, tyre maker Hankook is launching a new coach tyre for long-distance travel in the European market. The Hankook SmartTouring AL22 can be used on all axle positions and provides maximum ride and rolling comfort, excellent concentricity, a very low rolling noise and, as is customary with Hankook tyres, optimised rolling resistance and low wear for particularly efficient travel. Hankook's SmartTouring DL22 is specifically adapted for drive axle tyres.**

In 2016 premium tyre maker Hankook presented a state-of-the-art tyre for long-distance European coach travel at this year's IAA for Commercial Vehicles. Since that time the Hankook SmartTouring AL22 is available in the sizes 295/80R22.5 and 315/80R22 and is suitable for all long-distance coach wheels in all axle positions. Klaus Krause, Vice President and Head of the European Development Centre in Hanover adds: "During development of the SmartTyre line, we focused particularly on ride and rolling comfort as well as on a straight driving performance. The characteristics of the SmartTouring AL22 not only allow maximum travel comfort for passengers, they also maximise driving and handling comfort for the driver on long-distance trips."

The carcass contour of the SmartTouring AL22 ensures the best suspension properties and contributes to a particularly safe driving style. The longitudinal 5-rib profile with its closed, solid central rib makes an excellent, straight driving performance possible at all times. Special Multi-3D sipes guarantee both good traction and an outstanding braking response.

The bead area of the SmartTouring AL22 has been developed for outstanding retreadability. In addition, its new contour achieves a particularly precise rim joint stiffness, which results in excellent concentricity and travel comfort.

The individual belt layers of the new SmartTouring AL22 are structurally arranged in such a way that significantly less heat is developed in operation compared to conventional tyres. This effect not only reduces rolling resistance and economises on fuel, it also considerably extends the service life of the tyre.

Fuel savings through reduced heat development have been achieved not only by the belt structure, but also by the tread compound used for the Hankook SmartTouring AL22. Special soot molecules with a larger volume and a particularly stable structure are used for the basic tread rubber, leading to a significant reduction in energy loss during movement. These so-called highly structured carbon molecules also guarantee enhanced abrasion resistance and, in combination with the other technologies, help to increase the mileage of the SmartTouring AL22 compared with conventional products by more than 17 percent.

## Hankook SmartTouring AL22: Technical properties

### 1. Longitudinal oriented tread pattern with Multi-3D sipes and solid central rib

- High directional stability and comfortable handling response.
- Excellent straight driving.
- Very good braking and traction performance.



### 2. Special belt structure and newly developed bead area

- Reduced heat development.
- High retreadability.



### 3. New tyre compound with highly structured carbon black molecules:

- Low rolling resistance and reduced fuel consumption.
- Increased abrasion resistance, up to 17% increase in mileage compared with conventional products.



### Available dimensions

Tread	Size	LI	Label marking		M+S	Availability
AL22	295/80R22.5	154M	C/B/W1 71dB		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	315/80R22.5	156/150L	C/B/W1 71dB		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## Premium original fitment options with Hankook Ventus S1 evo 2 SUV and Winter i\*cept evo 2 SUV

**The current generation of the BMW X3 has been on the market since November 2017 and is available with tyre options including Hankook summer tyres in the size 225/60 R18 104 W XL or Hankook winter tyres in 225/60 R18 104 H XL. With more than 1.5 million vehicles sold world-wide since the BMW X3 was launched in 2003, the model is one of the most popular in its class. The premium Hankook Ventus S1 evo 2 SUV and Winter i\*cept evo 2 SUV tyres contribute towards the brand-typical driving dynamics and agile handling of the new BMW X3. The passenger car version of these tyres has already proven itself as an original fitment tyre on the flagship BMW 7 Series among others.**

Hankook won another original fitment order covering both summer and winter tyres, this time for the current BMW X3. This year for the first time, 25 percent of passenger car production will be for the popular SUV vehicle segment in Europe. Hankook supplies its Ultra High Performance (UHP) tyres in an SUV version especially for this product class. The BMW Group recognised the trend towards this versatile vehicle class early and was very successful with the predecessor models of the BMW X3. In terms of tyres for the third BMW X3 generation, the manufacturer favours the Hankook brand amongst others. The BMW X3 can be delivered with the Ventus S1 evo 2 SUV in size 225/60 R18 104 W XL and with Hankook's Winter i\*cept evo 2 SUV in 225/60 R18 104 H XL for a dynamic sporty appearance.

With the summer tyre in particular, the BMW Group required Hankook's engineers to develop a tyre that offered a high performance without compromising comfort, thus not only doing justice to the brand's sporty reputation but also matching the comfortable yet agile character of the BMW X3.

To meet these requirements, the Ventus S1 evo 2 SUV with the star marking for the BMW X3 has been fitted with a specially adapted bead filler. This has been specifically designed for more sporty vehicles and offers the necessary rigidity to guarantee high steering precision that does justice to the vehicle's driving dynamics and still gently cushions the increased weight of an SUV. To be able to cope with high temperatures the Ventus S1 evo 2 SUV is exposed to driving at approved speeds of up to 270km/h and the reinforced layers are made of a specially developed heat-resistant hybrid textile. The high rigidity of the lower sidewall also achieves particularly good handling characteristics.

The rolling resistance has been significantly reduced with the aid of a multi-layer tread structure. At the same time, the tread compound enhances wet grip, thus optimally supplementing the safety features of the BMW X3. The tyres also offer a particularly low rolling noise to match the acoustic glazing of the windscreen fitted as standard. The innovative DTM inspired 3-layer block design, with its special staircase arrangement of the outer rib blocks, ensures an improved contact surface even as tyre wear progresses, thereby guaranteeing very good traction throughout the entire lifetime of the tyre.

“The fact that our summer and winter tyres are now being used as original equipment not only for the BMW 7 Series but also for the BMW X3 is a testament to the engineering performance of our tyre developers and proof of the high quality of our products,” said Tony Lee, Vice President Marketing & Sales at Hankook Tire Europe. “Hankook’s investment in its own winter testing ground “Technotrac” in Ivalo, Finland, which provides us with a very good basis for the development of winter tyres for original fitment as well, is certainly paying off in the European market, which is a very important market for us.”

Like the summer tyres, the Winter i\*cept evo 2 SUV with the star marking has been designed to provide optimum support for the driving dynamics of the BMW X3 even in wintry weather conditions. Development work focussed particularly on good track performance as well as on low rolling resistance. By minimising block movement and wear, 3D sipes applied to the entire tread area ensure additional driving stability as well as improving the general handling properties with the aid of maximised edge effects. A highly dispersible nano-silica compound is used, which prevents hardening of the tyre at low temperatures and thus ensures better grip on wintry and wet roads through greater elasticity of the tyre contact area, as shown by the short braking distances. The rolling noise is pleasantly quiet for a winter tyre, thus increasing driving comfort and reducing noise pollution for the environment.

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## Hankook's winter tyres give a convincing performance in European tyre tests

**With tyre models Winter i\*cept RS 2, Winter i\*cept Evo 2 and Winter i\*Pike RS 2, tyre maker Hankook provides a choice of three outstanding winter tyres for the upcoming cold season. All three models obtained top scores in the tyre tests conducted by European specialist magazines and testing organisations and are continuing the success of the 2017 test season.**

The tyres Winter i\*cept RS 2, Winter i\*cept evo 2 and Winter i\*Pike RS 2 tyres scored above-average results in comparative tests throughout Europe. Above all, the independent testers from specialist media from Germany, Finland, Russia, Sweden and the United Kingdom praised the handling and braking characteristics of Hankook tyres on snow. Hankook's success model for moderate latitudes such as Central and Western Europe – Winter i\*cept RS 2 – was among the top-rated tyres in several tests conducted by German and English specialist magazines. The tyre convinced testers above all by its "excellent handling properties in all weather conditions" (Autobild, Germany, 38/2018). The Winter i\*cept RS 2 proved to be "highly reliable, precise and providing powerful traction" (auto motor sport, Germany, 21/2018) and with "impressive safety and excellent manageability on both wet and dry roads" (Auto Express, UK, 09/2018). The Winter i\*cept RS 2 tyre thereby continues the good test results of the previous year.

Another tyre which is designed for winter road conditions in Central and Western Europe is Hankook's Winter i\*cept evo 2. The ultra-high performance winter tyre impressed above all with its strong braking performance on snow-covered roads and provided optimum grip on bends and corners. The tyre tread "offers exemplary traction properties when braking on snow". In addition, Hankook's Winter i\*cept evo 2 is "easy to manage in wet conditions" while providing "safe understeering" on dry roads (sport auto, Germany, 11/2018). For snowy regions with permafrost in winter such as Scandinavia and Russia, Hankook offers the i\*Pike RS 2 model. The studded winter tyres reached top positions in Russian and Scandinavian testing magazines. It impressed above all with excellent braking properties on snow and equally outstanding lateral traction on ice (Za Rulem, Russia, 09/2018). Hankook developed the new tread with major involvement from its own test centre in Ivalo in Northern Finland, which has been carrying out comprehensive tests on winter tyres particularly destined for Europe since it opened at the beginning of 2017.

"We are extremely proud of the many good test results for our current winter tyre models in different countries," says Han-Jun Kim, President of Hankook Tire Europe. "Regularly scoring such good and very good results for our Hankook winter tyres in independent tyre tests throughout Europe and the CIS show that we can offer consumers suitable products for a wide range of applications on these demanding markets."

Magazine	Issue	Country	Model	Tyre size:	Result
<b>Autobild</b>	38/2018	Germany	Winter i*cept RS 2	195/65 R 15 H	Good
<b>auto motor sport</b>	21/2018	Germany	Winter i*cept RS 2	205/55 R 16 H	Recommended
<b>sport auto</b>	11/2018	Germany	Winter i*cept evo 2	FA: 235/40 R 18 V RA: 255/35 R 18 V	Recommended
<b>Auto Express</b>	09/2018	UK	Winter i*cept RS 2	205/55 R 16 H	99 % (2nd place from 8)
<b>Aftonbladet</b>	11/10/2018	Sweden	Winter i*Pike RS 2	205/55 R 16 T	4 stars (3rd place from 12)
<b>Za Rulem</b>	09/2018	Russia	Winter i*Pike RS 2	195/65 R 15 T	2nd place from 12
<b>Tekniikan Maailma</b>	17/2018	Finland	Winter i*Pike RS 2	205/55 R 16 T	4 stars (best result)
<b>Moottori</b>		Finland	Winter i*Pike RS 2	205/55 R 16 T	Recommended for ice/snow

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## Hankook's winter line-up 2018/2019 further expanded

**Since the last winter season 2018/2019, Hankook has expanded its line-up in the two winter profiles i\*cept evo<sup>2</sup> SUV and Winter i\*cept RS 2 by additional sizes. The all-weather tyre Kinergy 4S 2 has also been boosted by SUV dimensions.**

The Winter i\*cept RS 2, which was especially developed for compact and middle-class cars, is now being supplied in further specifications. The new dimensions 205/55 R16 V XL, 215/65 R16 H XL and 225/45 R17 H XL and V XL not only serve the needs of compact cars but also the continually growing market for smaller SUVs. In addition, the Winter i\*cept RS 2 has been optimised for the moderate winter temperatures usually prevalent in central and western Europe.

The Ultra High Performance winter profile, which is available for SUVs and passenger cars, is also being extended by further sizes for the coming winter season. In line with the constantly increasing sales figures for SUVs, Hankook is boosting the line-up of its UHP winter tyre Winter i\*cept evo 2 SUV by further sizes and offering three new additional versions 225/60 R18 H XL, 225/55 R19 V und 235/50 R19 V XL. Among other things, the asymmetric tread design ensures a particularly good performance in snow as well as increased traction and braking performance on wet and dry roads.

For customers who drive a lot of shorter distances and in urban areas, an all-weather tyre can be a viable alternative to changing tyres according to season. The Kinergy 4S 2 launched on the market in 2018 benefits from Hankook's expertise in the field of all-weather tyres, which goes back more than twenty years. The V-shaped tread and the state-of-the-art tread compound made of natural oil components used for the Kinergy 4S 2 guarantee stable driving and braking behaviour all year round across all the different temperature ranges that regularly occur in Europe. For the coming winter season 2018/2019, Hankook has added SUV sizes that go beyond 18 inches to those available for its predecessor tyre, making them suitable for larger models in this vehicle segment. With speed index W, the sizes 235/55R19W XL, 255/50R19W XL and 275/45R20W XL are also suitable for vehicles with powerful engines that can reach up to 270km/h.

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## All-rounders for all-year tyres

Particularly in changeable weather conditions, Hankook recommends that truck and bus customers use the SmartFlex all-weather tyre line for medium and long haul trips. Commercial vehicle customers can rely in particular on a high level of driving safety as well as the current trend of increased load-bearing capacity for some sizes.

Both the steering axle tyres SmartFlex AH31 and the drive axle tyres SmartFlex DH31 have M+S marking and the snowflake (3PMSF) symbol, which means good traction is guaranteed even if drivers should be surprised by wintry road conditions. The Hankook SmartFlex DH31 has a 6-rib tread with special hexagonal tread blocks that guarantees more even wear behaviour and thus a longer tyre service life. Hankook's patented self-cleaning sipes in the middle of each block prevent damage to the block edges and thus guarantee excellent traction throughout the tyre life.

The SmartFlex all-weather tyre line is completed by the corresponding trailer tyre SmartFlex TH31. Its wide, closed shoulder area supports stable straight driving and ensure good lateral stability. Chamfered tread grooves help prevent splintering.

Whilst the SmartFlex AH31 and SmartFlex DH31 are designated mainly for larger wheel sizes in the 22.5 inch range, SmartFlex AH35 and its drive axle counterpart SmartFlex DH35 is more designated for smaller wheels with 17.5/19.5 inch sizes.

### Sizes of the SmartFlex tyre line available

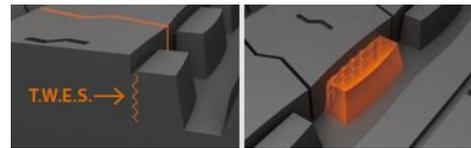
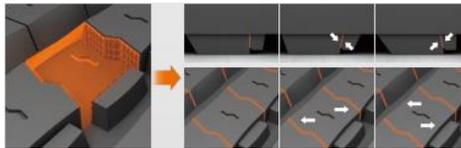
Tread	Size	LI	Marking		M+S	Availability	Remark
<b>AH31</b>	295/80R22.5	152/148M (154M/149L)	C/B/W1 73 dB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	-
	295/80R22.5	154/149M	C/B/W1 73 dB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Tyre with higher load-bearing capacity
	315/80R22.5	156/150L	C/B/W1 73 dB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	-
	315/70R22.5	156/150L	C/B/W1 73 dB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	-
	385/65R22.5	164K	C/B/W1 69 dB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	-
	385/65R22.5	160K	C/B/W1 69 dB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	-
	315/60R22.5	154/148L	C/B/W1 70 dB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	-
	385/55R22.5	160K	C/B/W1 69 dB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	-
	355/50R22.5	156L	C/B/W1 69 dB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	-
275/70R22.5	148/145M	C/C/W1 73 dB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	-	
<b>DH31</b>	295/80R22.5	152/148M	D/C/W2 75 dB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	-
	315/80R22.5	156/150L	D/C/W2 75 dB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	-
	315/70R22.5	154/150L	D/C/W2 75 dB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	-
	295/60R22.5	150/147K	D/C/W2 75 dB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	-
	315/60R22.5	152/148L	D/C/W2 75 dB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	-
<b>TH31</b>	385/65R22.5	160K	B/B/W1 69 dB	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	-
	435/50R19.5	160J	B/B/W2	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	-
	455/40R22.5	160J				In production	-

## Technical properties of the Hankook SmartFlex all-year tyre line

### SmartFlex AH 31

#### Truck all-year tyres for the steering axle for medium to long-haul applications

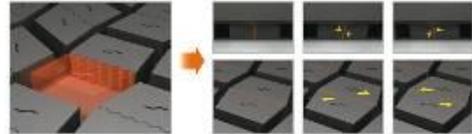
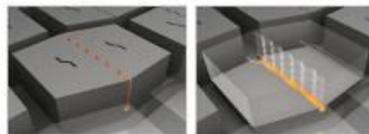
1. **Extra-wide tread and shoulder area:**
  - The extra-wide open shoulder area supports a high mileage and traction as well as outstanding handling properties
2. **Multi-3D sipe treads:**
  - High traction and mileage with even wear
3. **Tread Wear Equalizer Stepper Technology (T.W.E.S.):**
  - Stabilisers on profile blocks
  - Reduction of uneven/one-sided wear



### SmartFlex DH 31

#### Truck all-year tyres for the drive axle for medium to long-haul applications

1. **A Multi-3D sipes:**
  - High traction and mileage with even wear
2. **6-rib block tread:**
  - Sturdy 6-rib block tread with special hexagonal tread blocks
3. **C Self-cleaning sipes:**
  - Constant traction over the entire service life
  - Protection against splintering at the corners of the sipes



## SmartFlex TH 31

### Truck all-year tyres for the trailer axle for medium to long-haul applications

1. **4 Zigzag sipes:**
  - 4 main tread grooves ensure optimum water displacement
2. **Chamfered profile block design:**
  - Chamfered profile blocks sipes help to prevent material splintering
3. **Extra-wide tread and shoulder area:**
  - The extra-wide closed shoulder area supports high driving stability and ensures good lateral stability as well as even wear



###

## Treads for mixed on-road and off-road use supplement Hankook's SmartWork line

Treads for mixed on-road and off-road use are supplementing Hankook's existing tyre line for use on construction sites, Hankook SmartWork. The SmartWork AM11 for the steering axle, DM11 for the drive axle and the trailer tyre TM11, have been designed with the requirements of construction site supply vehicles in mind. The series not only holds its own with good traction on site, it performs well on the road too, with a long service life amongst other things.

The treads in the Hankook SmartWork line, AM11, DM11 and TM11, have been specifically developed for construction site vehicles used for the supply and removal of raw materials, gravel, waste or similar to or from construction sites and thus cover most of their miles on public roads. Steering axle, drive axle and trailer tyres offer both a long service life for use on the road and high traction for off-road use on construction sites. The tread design to match all the axle positions on the vehicle and the specially developed rubber compound make sure of that.



The SmartWork AM11 for the steering axle or use on all axles, has three extra-wide main drainage tread grooves in a zigzag design to improve hydroplaning safety. Special rubber blocks in the tread grooves stop stones from becoming lodged. An angular sipe design guarantees optimum traction, while chamfered block edges and special sipes on the tread blocks contribute towards more block stability and also improve the braking and handling response. The SmartWork AM11 also has a closed shoulder design for more driving stability,

lateral stability and even abrasion for a longer service life.

The trailer tyre TM11 differs from the SmartWork AM11 in that it has a half-open shoulder design. Lateral grooves enhance tyre traction particularly on muddy or snow-covered roads and on construction sites. Both the SmartWork AM11 and the SmartWork TM11 have M+S marking.

The SmartWork DM11 is available for the drive axle. The directional V-shaped tread design enables improved displacement of mud and water in the construction site area. The interblock tie-bars at the centre of the SmartWork DM11 ensure high block stability and guarantee outstanding straight driving performance and impact dispersion for blocks, thereby improving durability. Three-dimensional sipes also enhance tyre traction. The SmartWork DM11 also has the snowflake symbol, which means it can even be used under very wintry conditions.

**Sizes of the SmartWork line available**

Tread	Size	LI	Marking		M+S	Availability
AM11	315/80R22.5	156/150K	C/B/W2 (71dB)	-	<input checked="" type="checkbox"/>	Q2/2019
DM11	315/80R22.5	156/150K	C/B/W2 (74dB)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Q2/2019
TM11	385/65R22.5	160K	C/B/W2 (73dB)	-	<input checked="" type="checkbox"/>	Q2/2019

**Technical properties of the Hankook SmartWork AM11**

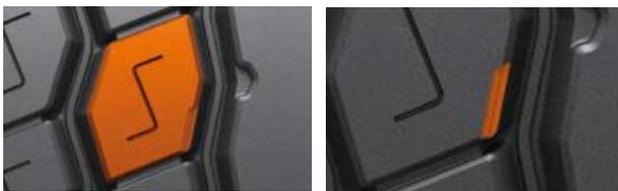
**1. Wide zigzag grooves for improved hydroplaning safety and optimised braking response**

- Three extra-wide tread grooves in a zigzag design guarantee optimum water displacement both on tarmacked roads and off-road.
- Angular sipes for optimum traction.
- Additional pimples in the grooves support the tyre's self-cleaning function.



**2. Polygonal stepped blocks for a more pronounced edge effect**

- Special edge angle at the individual tread blocks and chamfered block edges for optimum braking response.



**3. Closed shoulder design increases the tyre's driving stability**

- Improved resistance against forces acting at the side.
- Protection against damage to the block edges.
- Shoulder lugs help to reduce heat development while driving.



## Technical properties of the Hankook SmartWork DM11

### 1. Directional tread design

- V-shaped directional tread design for the outstanding displacement of mud and water.



### 2. Bars between the tread blocks

- Bars between the tread blocks stabilise the tyre.



## Technical properties of the Hankook SmartWork TM11

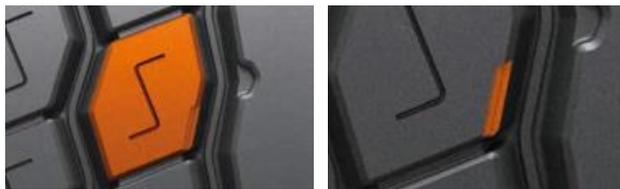
### 1. Wide zigzag grooves for improved hydroplaning safety and optimised braking response

- Three extra-wide tread grooves in a zigzag design guarantee optimum water displacement both on tarmac roads and off-road.
- Angular sipes for optimum traction.
- Additional pimples in the grooves support the tyre's self-cleaning function.



### 2. Polygonal stepped blocks for a more pronounced edge effect

- Special notches at the individual tread blocks and chamfered block edges for optimum braking response.



**3. Half-open shoulder design**

- Half-open shoulder design for enhanced traction particularly on muddy or snow-covered roads, or within the construction site



###

## Hankook extends its tyre portfolio in the light truck segment

**Tyre maker Hankook is extending its product portfolio in the light truck and minivan segment. The tyres used are from the award-winning, cutting-edge tyre series Ventus and Vantra, which are made in Europe with high-performance treads and are being delivered as premium original fitment tyres to Daimler AG.**

Premium tyre maker Hankook is extending its line-up of tyres for the minivan and light truck segment by specific high-performance variants in 16 and 17 inch sizes. The tyre models Ventus Prime<sup>2</sup> and Vantra LT are being manufactured in original fitment versions for the Mercedes-Benz V-Class. Alongside good wet grip and precise handling, the development of the tyres, which are being manufactured at the company's state-of-the-art production facility in Hungary, mainly focus on a high level of comfort combined with exceptional environmental properties such as low rolling resistance and a low rolling noise.

In addition to the safety aspects such as outstanding braking performance and first-class handling, which have always been important topics for tyre maker Hankook, the development engineers' specification concentrated particularly on high noise and rolling comfort and a significantly reduced rolling resistance. Hankook's original fitment specialist Ventus Prime<sup>2</sup>, which is fitted in the 17-inch version in size 225/55 R 17 101 V XL to the Mercedes-Benz V-Class for example, stood out on account of its extremely comfortable driving properties during the extensive test phase.

One of the key factors is the tyre contour of the Hankook Ventus Prime<sup>2</sup> in Multi-Tread-Radius technology, which is matched to specific application requirements. In conjunction with a high-strength steel cord material for the especially compact belt design the best possible tyre contact area is thus always guaranteed – no matter the load of the vehicle. Thanks to the use of an innovative nano-silica tread compound with a specially adapted basic mixture, the rolling resistance has been significantly reduced, while high wet grip properties have been retained at the same time. The tread profile in bionic design also guarantees high aquaplaning reserves without having a negative effect on the rolling noise.

The 16-inch tyres used on the new minivans include Hankook tyres of the type Vantra LT in size 205/65 R 16 C 101/103 H. The award-winning light truck tyre (independently tested by Auto Bild Reisemobil, April 2014, for example) was developed in view of the high demands and special requirements of regional and local passenger and commercial transport. The engineers focused on excellent wet grip and on the maximisation of tread life coupled with optimised fuel efficiency by minimising energy losses during driving, thus enhancing overall economic efficiency. Thanks to numerous new technologies such as the sidewall protect shield and optimised tread block layout and structure ("durable contact patch technology"), the Vantra LT offers both improved driving properties and safety at high speeds as well as reduced tread wear. This has allowed the tread life potential of the tyre to be increased by up to 12% compared with its predecessor.

## Hankook Ventus Prime 2: Technical properties

### 1. Optimized distribution of pressure on the contact surface for high wet grip

- The multi-tread radius technology guarantees the best possible road contact for safe driving and high braking power particularly in the wet, even when driving round bends, and at high speeds.



### 2. Optimum handling and longer service life

- The SCCT technology (Stiffness Control Contour Theory) patented by Hankook results in the extremely even distribution of pressure on the contact surface and less deformation for particularly safe driving no matter the load state, and reduces wear at the same time.



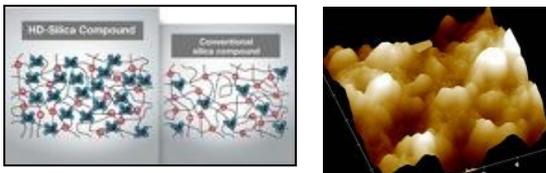
### 3. Bionic design and asymmetrical tread pattern

- The asymmetrical tread pattern combines very good aquaplaning values with handling performance and precise steering feedback while at the same time reducing rolling noise.
- The jaguar's tooth shape design of the outer profile grooves of the tread block interlocks with the road surface and thus guarantees consistently high traction and curve stability.



### 4. Improved wet grip and environmental properties

- Use of a hybrid-silica tread compound with special hybrid polymer chains and nano particles for manufacturing the Ventus Prime<sup>2</sup> maximizes wet grip, tread life and fuel efficiency at the same time.



### 5. Available sizes

- The Hankook Ventus Prime 2 is available in 35 sizes from 15 to 19 inches (series 70 to 40) for vehicles from the compact to luxury class in tread widths from 195 to 255 mm (speed index H-W), mainly as the particularly stable extra-load (XL) version, some models also as a runflat version (as HRS Hankook Runflat System).

## Hankook Vantra LT: Technical properties

### 1. Optimised tyre structure for more durability and safety

- The double belt structure guarantees consistent performance thanks to the reinforced belt design. Special bead filler for enhanced rim joint stiffness for optimised driving properties. Sidewall protect shield prevents sidewall damage.



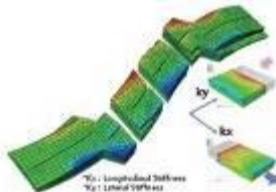
### 2. Improved driving properties and wet grip

- Three wide main draining channels and 3D lateral grooves improve aquaplaning performance by up to 14% compared with conventional tread.
- Innovative tread design for high traction and braking performance even in wet and cold weather.



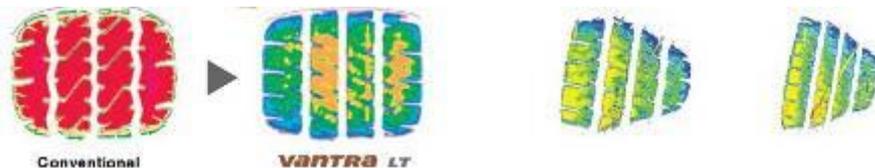
### 3. Improved fuel efficiency and extended mileage

- Wear performance improved by up to 12% thanks to innovative tread structure and compound technology.
- Optimised carcass profile for up to 13% improvement in fuel efficiency by minimising energy loss in driving.



### 4. Increased durability and driving stability

- Square-shaped tread with improved groove layout for increased stability near the outer footprint area for increased driving stability and lateral grip even at higher speeds and loads.



### 5. Available sizes

- The Vantra LT is available in 49 sizes from 12 to 17 inches in the 82 to 60 series and in tread widths from 155 to 235. All models have M+S marking.

###

## Hankook Tire presents futuristic concept tyres

**The “Design Innovation” project, organised by Hankook every two years in collaboration with internationally renowned design universities was concluded at the Motor Show in Essen last year. The 2018 design studies in cooperation with the London Royal College of Art were accompanied by the slogan “Extending Future Life beyond Mobility”. The winning entries “Aeroflow” and “Hexonic” by the London-based design students were unveiled in Europe for the first time last year. The innovation project initiated by Hankook is intended to motivate design students to develop ideas which go beyond the limits of today’s tyre and mobility developments.**

At last year’s Essen Motor Show, premium tyre maker Hankook Tire again concentrated on future mobility and presented two futuristic concept tyres, the Aeroflow and the Hexonic. The innovation concepts initiated with the London Royal College of Art in 2018 within the context of the Hankook “Design Innovation” was launched under the slogan “Extending Future Life beyond Mobility”. The task the participating students were set was to develop a new tyre concept for autonomous vehicles and thus to create a whole new experience for mobility of the future. Evaluation criteria for choosing the winners included attractiveness for the user, design and the implementation of convincing technical principles.

“This project is part of our effort to find creative and efficient solutions for mobility of the future,” explained Klaus Krause, Head of the European Research and Development Centre at Hankook. “We are very pleased to be presenting creative contributions that demonstrate the out-of-the-box mindset that we also promote in our employees. Over the past few years, the project has already contributed to the development of innovative tyres. We will no doubt continue to develop new visions that go beyond the limits of current tyres and mobility.”

“Hexonic” is an intelligent tyre concept for autonomous shared mobility vehicles. The designer considered completely autonomous, driverless vehicles as the standard for future cities and developed a tyre for jointly used cars. Passenger comfort is the deciding factor for the driving experience here. The Hexonic supports the vehicle’s efforts to offer maximum driving comfort by scanning and analysing the road in real time using seven separate sensors. This way, the tyre records road conditions such as grip, temperature and state of the road surface and adapts the tyre treads accordingly.

The “Aeroflow” is a tyre for maximum downforce designed for use in motorsports. To achieve this, the wheel has been widened through a separable tread and the tyre grip has been optimised. The wheels have been equipped with turbine impellers to pick up the air during driving and use this to generate additional downforce if necessary. The focus of the design on downforce, which is not generally taken into consideration during tyre development, is what makes the draft so unique.

Following their European première at the Essen Motor Show, the award-winning concept tyres will be on show at further European trade fairs in 2019.

###

## About Hankook Tire

Hankook Tire manufactures globally innovative, award winning radial tyres of proven superior quality for passenger cars, light trucks, SUVs, RVs, trucks, and buses as well as motorsports (circuit racing/rallies).

Aspiring to bring consumers the utmost excellence in product quality, technological excellence and driving satisfaction, Hankook Tire continuously invests in research and development maintaining five R&D centres and eight production facilities around the world. Bespoke tyre solutions for the European markets as well as European Original Equipment according to the requirements of leading premium car manufacturers, are developed in the company's regional Technical Center in Hanover/Germany. Production for the European region is taking place in the state-of-the-art manufacturing site in Rácalmás/Hungary which was inaugurated in June 2007 and is continuously being expanded. Currently around 3,000 employees produce up to 19 million tyres a year for passenger cars, SUVs and light trucks.

Hankook Tire's European headquarters are located in Neu-Isenburg near Frankfurt am Main in Germany. The manufacturer operates further branches in Czech Republic, France, Germany, Hungary, Italy, the Netherlands, Poland, Russia, Spain, Sweden, Turkey, UK and Ukraine. Hankook products are sold directly through regional distributors in other local markets. Hankook Tire employs approximately 21,000 people worldwide and are selling their products in over 180 countries. Internationally leading car manufacturers rely on tyres made by Hankook for their original equipment. Approximately 30 percent of the company's global sales are generated within the European and CIS-Region. Hankook Tire has been represented in the renowned Dow Jones Sustainability Index World (DJSI World) since 2016.

For more information please visit [www.hankooktire-mediacyber.com](http://www.hankooktire-mediacyber.com) or [www.hankooktire.com](http://www.hankooktire.com)

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