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Hankookmotorsports.com

Hankook Tire Specifications

2020 F4 U.S CHAMPIONSHIP & F3 AMERICAS

Now into our second year with F4 United States and F3 Americas, we are proud to continue our partnership and support of these groundbreaking series. In 2019 we watched as F4 United States dominated the world with the largest F4 field ever seen and F3 Americas grew into its sophomore year and solidifed into a series destined to create future international champions.

Enclosed you will find information regarding the Hankook brand, tire technical data, tire pricing, ordering, and trackside fitting process. Should you have any technical questions, please contact us at 800-287-5013 or via email at f3f4@hankookmotorsports.com.



Statement of Confidentiality

This proposal and supporting materials contain confidential and proprietary business information of Hankook Motorsports. These materials may be printed or photocopied for use in evaluating the proposed project, but are not to be shared with other parties.



Hankook Tire is committed to the future of motorsports

Hankook Tire encourages all drivers around the world to pursue their passion by sponsoring competitions and racing teams. In motorsports, where limits are pushed and overcome and true potential is realized, our technological know-how is fully demonstrated.

By sponsoring a wide range of motorsports competitions and teams at home and abroad, Hankook Tire is inspiring drivers worldwide to overcome the challenges posed by speed and to take on new possibilities. Through Hankook Tire's innovative technology, drivers around the world can enjoy achieving new goals and setting new records. Hankook Tire is raising the bar of motorsports for a passionate driving culture for those who are thrilled about the world of motorsports competition.

Take a look at some of our current sponsored race series to see how Hankook supports motorsports around the globe.



Hankook is Driving Emotion



Vision for 2020

Hankook Tire has grown to be the fifth largest in tire production capacity and seventh in sales internationally. We have 7 production sites, 30 sales branches and 5 R&D centers around the world. This is a result of Hankook Tire's spirit of challenge, commitment, and hard work. Without breaking stride, our vision is to lead the world's driving industry, and become a major global player by providing our customers value and pleasure.

What we do

We strive to be the best at what we do

- Production Capacity : 104 million units in 2017
- Local offices in 30 countries, 5 R&D centers located in Korea, USA, Germany, China and Japan
- 8 production facilities in Korea (2), China (3), USA, Hungary and Indonesia



Hankook in F3 and F4



The FIA Formula 3 European Championship is a gateway to becoming an international F1 driver and talented young race car drivers from all over the world are realizing their dream to be among the world's best with Hankook Tire.

Hankook Tire has actively sponsored talented up-andcoming drivers as an official corporate sponsor of FIA Formula 3 since 2012 and the British and Australian F4 series since 2015.



Specially designed single-seater slicks and wets

▶ Ventus F200 (Dry)	▶ Ventus Z207 (Wet)
Circuit / Slick	► Circuit / Wet
Top-notch performance tire with high mileage and consistency on a dry surface. Radial Construction. Directional tires.	Extremely reliable circuit tire to be used exclusively on wet surfaces As a wet tire, the Z207 prevents hydroplaning whilst maintaining
As a dry tire, the F200 is a high-tech slick tire which has excellent grip ability and continuous performance even in the limit of high speed driving.	excellent controlling stability and the best drainage performance.



F3 Tire Data and Spring Rates (dry only)

Hankook F3ES Tire technical data					
F200 - SLICK TIRE					
Tire Size		230/560R13 F200	280/580R13 F200		
Permitted Rim		9.5"~10.5"	11.5"~12.5"		
Optimum Rim (Measuring)		8.5"	10.5"		
Tread Width (mm)		230	280		
Section Width (mm)		282	335		
Overall Diameter (mm)		551	572		
Overall Circumference (mm)		1731	1797		
Revolutions/km		599.3	577.3		
Recommended Inflation	Cold	1.1~1.2	1.1~1.2		
Pressure (bar) Hot		1.5~1.6	1.5~1.6		
Recommended Camber		-2.5~3.5	-2.0~2.5		
Recommended Toe		20' OUT	10' IN		

F3 America Tire Technical Data (Dry Tire)

Static Spring Rates

Size		230/560R13	280/580R13
Trea	d Pattern	F200	F200
Spee	ification	C72	C72
Sidewall	Decal Color	-	-
Rim S	Size (Inch)	10.0JX13	12.0JX13
Inflation P	ressure (kgf/cm)	1.5	1.5
ertical load (kgf)	Spring rates (kgf/mm)		
100	Vertical	20.6	22.8
	Lateral	13.9	14.4
	Torsional	17.3	20.6
	Vertical	20.0	22.7
200	Lateral	16.0	16.3
	Torsional	26.0	25.7
	Vertical	19.7	21.8
300	Lateral	16.2	16.6
	Torsional	27.6	26.5



F4 Tire Data and Spring Rates

F4 Tire Technical Data (Dry Tire)

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F4 Tire Technical Data (Wet Tire)

Static Spring Rates

Static Spring Rates

Size		180/550R13	240/570R13
Tread	Pattern	F200	F200
Speci	fication	F4(C92)	F4(C92)
Sidewall I	Decal Color		
Rim Si	ze (Inch)	8.5JX13	10.5JX13
Inflation Pre	essure (kgf/cm)	1.5	1.5
Vertical load (kgf)	Spring rates (kgf/mm)		
	Vertical	19.2	21.3
150	Lateral	13.7	13.2
	Torsional	323.0	282.4
180	Vertical	19.6	20.4
180	Lateral		
210	Vertical	19.6	20.8
210	Lateral		
240	Vertical		21.3
240	Lateral		

Size		180/550R13	240/570R13
Tread	Tread Pattern		Z207
Specif	Specification		F4
Sidewall I	Sidewall Decal Color		
Rim Siz	ze (Inch)	8.5JX13	10.5JX13
Inflation Pre	essure (kgf/cm)	1.5	1.5
Vertical load (kgf)	Spring rates (kgf/mm)		
	Vertical	16.7	18.2
150	Lateral	10.7	11.1
	Torsional	205.5	259.8
180	Vertical	17.0	18.9
180	Lateral		-
210	Vertical		18.5
210	Lateral		-
240	Vertical		
	Lateral		

<u>F4 Tire Technical Data (Dry Tire)</u>		
<u>Dimension</u>		
Size	180/550R13	240/570R13
Tread Pattern	F200	F200
Specification	F4(C92)	F4(C92)
Sidewall Decal Color		
Rim Size (Inch)	8.5JX13	10.5JX13
Recommanded (Rim Width)	8.0 - 9.0	10.0 - 11.0
Inflation Pressure (kgf/cm)	1.5	1.5
Overall Diameter	551mm	574mm
Section Width	241mm	290mm
Tread Width	200mm	250mm

F4 Tire Technical Data (Wet Tire)

<u>Dimension</u>		
Size	180/550R13	240/570R13
Tread Pattern	Z206	Z207
Specification	F4	F4
Sidewall Decal Color	-	
Rim Size (Inch)	8.5JX13	10.5JX13
Recommanded (Rim Width)	8.0 - 9.0	10.0 - 11.0
Inflation Pressure (kgf/cm ²)	1.5	1.5
Overall Diameter	552mm	575mm
Section Width	239mm	295mm
Tread Width	200mm	250mm



F4 Tire Data Continued

F200 - SLICK TIRE			
Tire Size		180/550R13 F200	240/570R13 F200
Permitted Rim		8"~9"	10"~10.5"
Optimum Rim (Measuring)		8.5"	10.5"
Tread Width (mm)		200	250
Section Width (mm)		241	294
Overall Diameter (mm)		551	572
Overall Circumference (mm)		1731	1797
Revolutions/km		600	575
Recommended Inflation	Cold	1.1~1.2	1.1~1.2
Pressure (bar) Hot		1.5~1.6	1.5~1.6
Recommended Camber		-2.5~3.5	-2.0~2.5
Recommended Toe		20' OUT	10' IN

Z206/Z207 - WET TIRE

Tire Size		180/550R13 Z206	240/570R13 Z207
Permitted Rim		8"~9"	10"~10.5"
Optimum Rim (Measuring)		8.5"	10.5"
Tread Width (mm)		200	250
Section Width (mm)		239	295
Overall Diameter (mm)		552	575
Overall Circumference (mm)		1734	1806
Revolutions/km		600	575
Recommended Inflation	Cold	1.2~1.3	1.2~1.3
Pressure (bar)	Hot	1.5~1.6	1.5~1.6



Pricing and Ordering

Category	Tire Size	Model	Price
F3	230/560R13	Slick/Wet	\$305
F3	280/580R13	Slick/Wet	\$345
F4	180/550R13	Slick/Wet	\$285
F4	240/570R13	Slick/Wet	\$315

Order Details

- 1. All prices are exclusive of tax and shipping.
- 2. If you provide a sales tax resale certificate, no sales tax will be applied.
- 3. Orders can be placed by filling out the official F3 F4 order form and sending it to: f3f4@hankookmotorsports.com
- 4. Orders for delivery at a race or test event must be made at least 2 weeks prior to the event.
- 5. Delivery to the track at official events is free if orders are placed 2 weeks or more prior to the event. Event orders made less than 2 weeks prior to an event may incur a shipping charge.
- 6. For orders delivered at an official event, payment is due within 7 calendar days after event.
- 7. For orders shipped directly to you, payment is due prior to shipment.
- 8. We ship via both ground and freight services.
- 9. You can make arrangements to pick tires up from our facility in Austin, TX free of charge.
- 10. We accept credit cards, cash, checks, bank transfer (echeck), wire transfer and PayPal.
- 11. We can keep your credit card on file for future invoices.



Services and Trackside Fitting Regulations

Trackside Service and Support - Provided by Race Tires Sales and Service Inc.

Trackside support is our business. We started our motorsports careers as drivers and understand the demanding needs of teams, drivers and engineers. That's why we provide much more than just tire fitting - we provide a total tire service solution. We always have knowledgeable staff on site to answer even the toughest technical questions and provide accurate feedback to the competitors and the teams. Safety is paramount and we go to great lengths to ensure proper tire care and fitting services. We help the teams monitor tire usage and get the most out of their tires; both in longevity and performance.

- > Engineers at every event provide technical answers, setup guides and monitor tires for wear
- > Full fitting services including multiple lines of dismount, mount, balance and recycling
- > Hankook branded tire fitting tent with top quality tire fitting equipment
- Barcode scanning system for tire usage control
- Multiple payment options for teams onsite include credit card, checks, bank transfer and PayPal

Trackside Tire Service Procedure

- 1. Wheels must be cleaned, weights removed and valve stem taken out.
- 2. Team name and car number must be visible on the wheel.
- 3. You must confirm your fitting request with on site Hankook personnel when you bring wheels for fitting services. Do not drop or leave unattended wheels or tires.
- 4. You must sign a receipt for all tires/services when you pick up tires/wheels.
- 5. You will be charged \$25 for every tire fit on the track.
- 6. We can recycle or dispose of used tires at the track for \$5 per tire.



Tire Photos

























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