

# TYRES **RALLY**



**PIRELLI**



**GRAVEL**

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**SCORPION™**

**ASPHALT**

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**PZERO™**

**SNOW**

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**SOTTOZERO™ SNOW**

**ICE**

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**SOTTOZERO™ ICE**



# Tyres Rally

**GRAVEL**

**SCORPION**

**K**



It is a tyre with elevated steering precision and grip during traction and braking, above all on fast roads, even at low grip levels. Its rigid structure and its compact tread pattern ensure good stability above all in fast corners characterized by prolonged stress on the tyre. The asymmetric tread pattern ensures excellent performance both in traction and in braking due to the orientation of the internal blocks. The external blocks facilitate an excellent steering precision and high lateral grip. The product is available in different compounds, according to the characteristics of stage surface and the weather conditions. For the hardest and most severe surfaces, the K is available in a "reinforced" version. The features of directionality and traction are combined with durability and integrity thanks to its reinforced structure both in the tread zone and in the sidewalls which are more resistant to lacerations and cuts.

MEASURE	VERSION	ø mm D	ROPE mm C	ROPE BTS mm Cb	CIRCUMFERENCE of rolling	CIRCLE	CONDITION		
							WET	HUMID	DRY
165/70R15	K4-K6	610	171	150	1915	5,5	6	6	4
175/70R15	K4-K6	625	191	165	1965	6	6	6	4
185/70R15	K4-K6-K8	635	199	165	1995	6	8	6	6
195/70R15	K4-K6	650	203	180	2045	6,5	6	6	4/2
205/65R15	K2-K4-K6-K8	650	220	180	2045	7	6/8	6	6/4
205/65R15*	KHB-KSB	650	222	185	2040	7	KSB	KSB	KHB

DURABLE mixture 2 - AVERAGE 4 - HB - SOFT 6 - HS - SUPER SOFT 8  
\* Reinforced

**T**



This tyre is suitable to be used on gravel and non-asphalted surfaces, usually with a low adherence. It is not recommended for heavy use on highly abrasive surfaces. The tread profile is flat with defined corners, providing the excellent directionality and lateral grip. The radial tread blocks guarantee maximum traction, especially on soft ground and less compact surfaces. The construction has special lateral reinforcements which protect the tyre from any damage caused by impacts.

MEASURE	VERSION	ø mm D	ROPE mm C	ROPE BTS mm Cb	CIRCUMFERENCE of rolling	CIRCLE	CONDITION		
							WET	HUMID	DRY
165/70R14	T4-T6	590	178	150	1855	6	6	6	4

MEDIUM mix 4 - SOFT 6

**GM**



Pirelli GM™ is a tyre for gravel roads, developed for historic rally cars. The tread pattern design has been optimized for the specific use in all dry, damp, wet or muddy conditions according to the chosen compound. The strength of Pirelli GM™ is its great versatility. It has a unique asymmetric tread able to work efficiently in both directional stability and pure traction, ensuring the best performance in every weather condition. The success of this tyre is in the three distinct versions: GM4, GM6 and GM8. The first is the compound developed for dry surfaces, perfect for maintaining high and stable performance on hard abrasive grounds with high temperatures. The GM6 compound is specifically for wet surfaces and low temperatures, assuring traction and lateral grip. The GM8 performance levels are enhanced on mud with low temperatures.

MEASURE	VERSION	ø mm D	ROPE mm C	ROPE BTS mm Cb	CIRCUMFERENCE of rolling	CIRCLE	CONDITION		
							WET	HUMID	DRY
165/80R13	GM4-GM6-GM8	600	163	135	1885	5,5	8	6	4/6
185/70R13	GM4-GM6-GM8	600	180	160	1885	5,5	8	6	4/6
185/70R15	GM6-GM8	640	203	160	2015	6,5	8	8	6

MEDIUM mix 4 - SOFT 6 - SUPER SOFT 8



KM



It is suited above all to damp, wet and at-the-limit muddy conditions. It can be used also in dry conditions on inconsistent, loose or sandy surfaces. It is less suitable for compact and fast stages. The tread pattern derives from the K version. The reduced width of the tread and the more open pattern ensure the correct balance between performance and handling on low grip surfaces. The less rigid construction allows an excellent adaptation of the tyre to the ground and provides easier steering, above all on very winding stages on irregular surfaces where an elevated level of grip is needed. Many compounds are available which can be used in different weather conditions and with different levels of surface characteristics.

XR



It is highly recommended for uneven ground and also for mixed off/on-road stages on hard, compact and abrasive surfaces. It is particularly resistant to impacts thanks to its internal structure, specially designed to ensure an easy steering and an excellent resistance to stresses. The tread and the sidewall profiles are designed to strengthen the structure in these areas and to ensure the maximum integrity of the tyre. The symmetric tread ensures a very good stability on clean and abrasive surfaces. On the contrary, on surfaces covered by sand and gravel, it does not offer high directionality due to the very compact tread pattern. It has an excellent durability thanks to the specific design of the tread blocks and the profile. Many compounds are available which can be used in different weather conditions and with different levels stage surface characteristics.

MEASURE	VERSION	ø mm D	ROPE mm C	ROPE BTS mm Cb	CIRCUMFERENCE of rolling	CIRCLE	CONDITION		
							WET	HUMID	DRY
205/65R15	KM4-KM6	650	215	170	2045	7	6	6	4

MEDIUM mix 4 - SOFT 6

MEASURE	VERSION	ø mm D	ROPE mm C	ROPE BTS mm Cb	CIRCUMFERENCE of rolling	CIRCLE	CONDITION		
							WET	HUMID	DRY
225/55R15	XR5	645	222	195	2025	7	-	-	5

MEDIUM mix 5



RK



Thanks to its two longitudinal grooves, this product, designed for asphalt, can be used both in dry and damp conditions. The two longitudinal channels are positioned on the internal part of the tyre to ensure more effective water drainage and avoid aquaplaning. The outer part of the tread due to the asymmetric profile presents a flatter and less grooved footprint which contributes to maximising grip and lateral stability.

RW\* New



This product is designed specifically for damp and full wet asphalt conditions. The three longitudinal channels and the transversal grooves are positioned to ensure an efficient water dispersion, avoiding aquaplaning.

MEASURE	VERSION	ø mm D	ROPE mm C	ROPE BTS mm Cb	CIRCUMFERENCE di rotolamento	CIRCLE	CONDITION		
							WET	HUMID	DRY
175/60R14	RK5-RK7	560	188	160	1765	6		7	5/7
175/60R14	RKW7	560	188	160	1765	6	W7	W7	
190/580R15	N3	580	190	180	1825	6,5	N3		
195/50R15	RK5-RK7	580	192	180	1825	6			5/7
195/50R15	RKW7	580	192	180	1825	6	W7	W7	
195/50R16	RK5-RK7A	600	193	190	1885	6,5			5/7
195/50R16	RKW7	600	193	190	1885	6,5	W7	W7	
205/45R17	RK5-RK7A	625	203	195	1965	7			5/7
205/45R17	RKW7A	625	203	195	1965	7	W7	W7	
215/45R17	RK5-RK7A	625	220	208	1965	7,5			5/7
215/45R17	RKW7	625	220	208	1965	7,5	W7	W7	
235/40R18	RK5A-RK7B RK9A-RKW7A	650	225	210	2035	8		9W7	5/7

MEASURE	VERSION	ø mm D	ROPE mm C	ROPE BTS mm Cb	CIRCUMFERENCE of rolling	CIRCLE	CONDITION		
							WET	HUMID	DRY
235/40R18	RWA*	650	225	210	2035	8	RWARWA		

\*Available only in version 18"

DURABLE mixture5 - AVERAGE 7 - SOFT 9 - WET W7



S-SOTTOZERO SNOW



It is a specific tyre for full snow road conditions. It has narrow blocks and deep grooves. This tyre has been designed for use on 100% snow conditions.

Studding:  
Max protrusion 2 mm

MEASURE	VERSION	ø mm D	ROPE mm C	ROPE BTS mm Cb	CIRCUMFERENCE of rolling	CIRCLE
135/85R15	SA1	620	130	95	1950	5
135/90R16	S1	648	140	100	2035	5

SOTTOZERO SNOW



This tyre is characterized by a tread pattern ensuring a perfect adaptability to different types of surfaces. It has a dense siping in the center for better traction and braking and more robust blocks on the shoulder for increased stability. The shoulder and intermediate tread blocks have the stud position indicated. This tyre has been designed for use on mixed conditions up to 30/40% snow/ice and asphalt. For cars Gr. N, S2000-R5-R3-R2

Studding:  
Max protrusion 2 mm

MEASURE	VERSION	ø mm D	ROPE mm C	ROPE BTS mm Cb	CIRCUMFERENCE of rolling	CIRCLE
185/45R16	Sottozero B	620	199	170	1900	6,5
195/45R17	Sottozero A	625	203	185	1965	7
235/40R18	Sottozero A	650	222	190	2045	8



J-SOTTOZERO ICE



It is a studded “Sweden” tyre, with a directional asymmetric design which is ideal for snow-covered and icy surfaces. The specific orientation of the tread blocks together with the patented Pirelli studding process guarantees the best stability and grip of the studs, even in the most extreme surface conditions. It is available only with “Sweden” type studding.

Studding:  
Max stud protrusion 7 mm  
(100% ice - frozen ground)  
Max stud protrusion 8 mm  
(50% snow - 50% ice)

MEASURE	VERSION	ø mm D	ROPE mm C	ROPE BTS mm Cb	CIRCUMFERENCE of rolling	CIRCLE
145/85R16	J	648	159	115	2035	5,25

SOTTOZERO ICE 1



It is a studded “Sweden” tyre, with a directional asymmetric design which is ideal for snow-covered and icy surfaces. Its specific orientation of the tread blocks together with the patented Pirelli studding process guarantees the best stability and grip of the studs, even in the most extreme surface conditions. It is available only with “Sweden” type studding.

Studding:  
Max stud protrusion 7 mm  
(100% ice - frozen ground)  
Max stud protrusion 8 mm  
(50% snow - 50% ice)  
tot stud 390

MEASURE	VERSION	ø mm D	ROPE mm C	ROPE BTS mm Cb	CIRCUMFERENCE of rolling	CIRCLE
205/65R15	Sottzero Ice 1	650	202	145	2045	7

WR-SOTTOZERO ICE



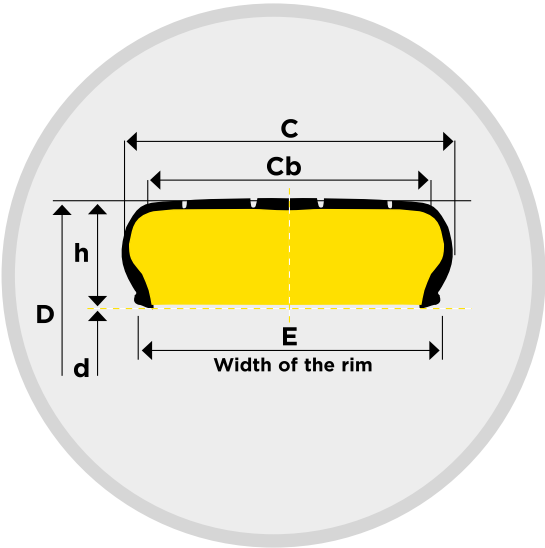
It is a studded “Sweden” tyre, with a high traction directional design which is ideal for snow-covered and icy surfaces. The patented Pirelli studding process guarantees maximum stability and grip of the studs. This tyre is available with “Sweden” type studding only.

Studding:  
Max stud protrusion 7 mm  
(100% ice - frozen ground)  
Max stud protrusion 8 mm  
(50% snow - 50% ice)

MEASURE	VERSION	ø mm D	ROPE mm C	ROPE BTS mm Cb	CIRCUMFERENCE of rolling	CIRCLE
135/85R15	WR5	620	146	95	1950	5
145/85R16	WR6	648	147	115	2035	5,5

IDENTIFICATION TYRE

The markings that appear on the sidewall of the tyres indicate the basic size of the tyre and the rim diameter. The examples reported below illustrate how to read two different types of marking that appear on the sidewall of rally tyres.



C	D	d
Larghezza nominale di sezione espressa in mm	Diamentro esterno nominale espresso in mm	Diametro nominale di calettamento del cerchio espresso in pollici (inch)
225	600	16

C	h/C		d
Larghezza nominale di sezione espressa in mm	Serie tecnica dello pneumatico. Esprime il rapporto tra l'altezza di sezione (in mm) e la larghezza nominale di sezione (in mm)	Costruzione radiale	Diametro nominale di calettamento del cerchio espresso in pollici (inch)
205	65	R	15

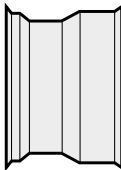


MARKING

The treads of the different versions of rally tyres are described by one or two letters followed by a number. The letters identify the type of tread. The number after the letter indicates the type of use, for example: RX 7

RIMS

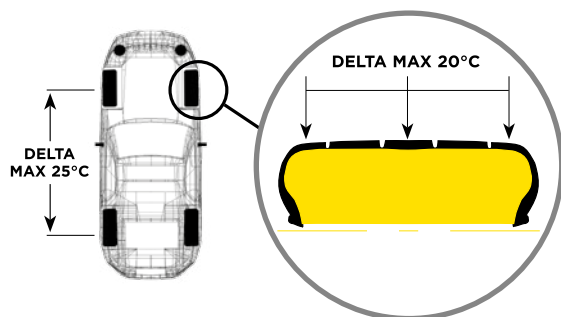
The size of the rims indicated in this manual must be respected. If you have any doubts, please contact Pirelli staff.



FITMENT

Make sure that tyres are fitted by experts with specialised dedicated machinery and equipment, following the safety procedures. Before assembling the tyres, clean the surface of the beads and the area of the rim that comes into contact with the tyre. Use ONLY special tyre lubricants for mounting tyres. Do NOT use silicone or petroleum lubricants. Check the state of the valves to prevent air loss; check the seals and the tightness for metal ones and check also for any tears or cracks in rubber seals. If necessary, replace them. When the tyre is being used, always use the valve cap. Follow the indications provided on the sidewall of the tyre referring to the rolling direction and the correct positioning of the internal and external sidewalls, if specified. Use the safety cage when inflating tyres. Before unseating the tyre from the rim during dismounting, make sure that the tyre has been fully deflated, removing the inner valve mechanism.

Temperatures measured on the tread are an excellent indicator for deciding the best choice of tread compound and for optimising the vehicle setup for each wheel position, such as camber and toe. We recommend measuring the temperature at three different points: inner (innermost side of the vehicle), centre, outer tread. In particular, average temperatures must be the ones shown in the table, the difference between the values measured internally, in the center and externally must be maximum 20°, while the difference between the front and rear axles must be no more than 25°. If these values are exceeded, we recommend the use of a different tread compound or that the vehicle's geometry should be adjusted.



Working pressure values depend on the size of the tyre in relation to the load that it is subjected to. In other words, it will vary according to the type of car, the weight and conditions of use. In particular, as the weight of the vehicle, speeds and accelerations that the tyre is subjected to increase, the working pressure must be increased. In any case, tyres should not be used at pressures below 1.6 bar. Using excessively low pressures can cause damage to the tyre due to excess stress on the sidewall or unseating from the rim. "Hot" working pressures are usually in the range of 2.2 - 2.5 bar. Initial inflation pressures vary in order to obtain these values, depending on whether the tyres are preheated or used "cold". Indeed, preheated tyres can be inflated to slightly lower values than cold tyres. The difference will depend on the type of heater, the time it remains and the environmental conditions.

[illegible]

ASPHALT	COMPOUND			SURFACE		
			WORKING TEMPERATURE	SMOOTH	MEDIUM	ABRASIVE
	Morbida	RK9	20° - 50°			
	Media	RK7	40° - 100°			
	Dura	RK5	60° - 120°			
	Intermedia	RKW	20° - 60°			
	Rain	RW	20° - 60°			

TREAD HAND-CUTTING

The tread on some types of tyres can be hand cut to increase the size of the existing grooves. Hand-cutting is useful for improving grip in certain intermediate situations, between dry and completely wet surfaces, or on mixed gravel/rock and sandy surfaces. The tread efficiency in the conditions for which it was originally designed will no longer be the same. Hand-cutting must be carried out by experts using specialised equipment, suitable for this operation while observing safety regulations.

GRAVEL GROOVES

THE COLOURS ARE USED TO HIGHLIGHT WHERE GROOVES CAN BE HAND-CUT



INSIDE ORIGINAL OUTSIDE



INSIDE ORIGINAL OUTSIDE



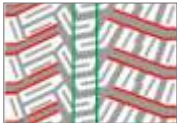
INSIDE CUT 1 OUTSIDE



INSIDE CUT 1 OUTSIDE



INSIDE CUT 2 OUTSIDE

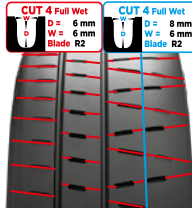
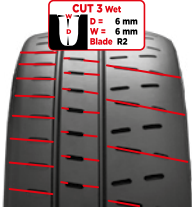
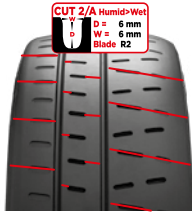
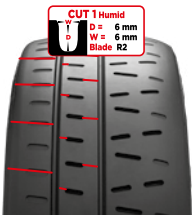


INSIDE CUT 3 OUTSIDE

ASCUITO  
BAGNATO  
FANGO

ASPHALT GROOVES

THE COLOURS ARE USED TO HIGHLIGHT WHERE GROOVES CAN BE HAND-CUT



Blade R2 (U): Width 6 mm Depth 6 mm

Blade W3 (L): Width 8 mm Depth 6 mm

Oficjalny dystrybutor:



FF-Sport Sp.z o.o.  
Spacerowa 34  
05-152 Dębina

email: [biuro@ff-sport.pl](mailto:biuro@ff-sport.pl)  
tel.: 22 487 81 90  
tel. kom.: 665 391 419  
tel. kom.: 503 167 025

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