



TYRE SPEED SYMBOLS & CATEGORIES

Max Speed (sustained) Kilometres/hr	Speed Rating												Max Speed (sustained) Miles/hr
	N	P	Q	R	S	T	U	H	V	W	Y	Z	
300 Kph													190 Mph
290 Kph											■	■	
280 Kph											■	■	
270 Kph											■	■	170 Mph
260 Kph										■	■	■	
250 Kph										■	■	■	
240 Kph										■	■	■	150 Mph
230 Kph									■	■	■	■	
220 Kph									■	■	■	■	
210 Kph									■	■	■	■	130 Mph
200 Kph								■	■	■	■	■	125 Mph
190 Kph							■	■	■	■	■	■	119 Mph
180 Kph						■	■	■	■	■	■	■	113 Mph
170 Kph				■	■	■	■	■	■	■	■	■	106 Mph
160 Kph			■	■	■	■	■	■	■	■	■	■	100 Mph
150 Kph		■	■	■	■	■	■	■	■	■	■	■	94 Mph
140 Kph	■	■	■	■	■	■	■	■	■	■	■	■	88 Mph
130 Kph	■	■	■	■	■	■	■	■	■	■	■	■	81 Mph
120 Kph	■	■	■	■	■	■	■	■	■	■	■	■	75 Mph
Max Speed (sustained) Kilometres/hr	N	P	Q	R	S	T	U	H	V	W	Y	Z	Max Speed (sustained) Miles/hr
	Speed Rating												

Marking	Characteristics
Speed Symbol "N"	For vehicles with a speed capability not exceeding 140 Km/h (88 Mph)
Speed Symbol "P"	For vehicles with a speed capability not exceeding 150 Km/h (94 Mph)
Speed Symbol "Q"	For vehicles with a speed capability not exceeding 160 Km/h (100 Mph)
Speed Symbol "R"	For vehicles with a speed capability not exceeding 170 Km/h (106 Mph)
Speed Symbol "S"	For vehicles with a speed capability not exceeding 180 Km/h (113 Mph)
Speed Symbol "T"	For vehicles with a speed capability not exceeding 190 Km/h (119 Mph)
Speed Symbol "U"	For vehicles with a speed capability not exceeding 200 Km/h (125 Mph)
Speed Symbol "H"	For vehicles with a speed capability not exceeding 210 Km/h (130 Mph)
Speed Category "VR"	For vehicles having speed capability over 210 Km/h (e.g. 195.50 VR 15)
Speed Category "ZR"	For vehicles with a speed capability over 240 Km/h (e.g. 205.40 ZR 17)
Speed Symbol "V"	For vehicles with a speed capability not exceeding 240 Km/h (e.g. 225.55 R 15 91V)
Speed Symbol "W"	For vehicles having speed capability not exceeding 270 Km/h (e.g. 225.60 R 15 96W)
Speed Symbol "Y"	For vehicles having speed capability not exceeding 300 Km/h (e.g. 275.40 R 18 94Y)
ZR+ Speed Symbol "W"	Tyres marked with both designations for vehicles with speed capability over 240 Km/h but not exceeding 270 Km/h
ZR+ Speed Symbol "Y"	Tyres marked with both designations for vehicles with speed capability over 240 Km/h but not exceeding 300 Km/h

Load Rating

On any tyre sidewall you'll find the Load and Speed Rating following the key Sidewall Marking, for example 105 S. This first number refers to the load rating - the maximum weight that tyre can carry. So in this case 105 would refer to a load carrying capacity of 925kg, with most passenger vehicle load indexes range from 62 to 126.

Load index	Load in Kg per tyre	Load index	Load in Kg per tyre	Load index	Load in Kg per tyre	Load index	Load in Kg per tyre	Load index	Load in Kg per tyre
62	265	75	387	88	560	101	825	114	1180
63	272	76	400	89	580	102	850	115	1215
64	280	77	412	90	600	103	875	116	1250
65	290	78	425	91	615	104	900	117	1285
66	300	79	437	92	630	105	925	118	1320
67	307	80	450	93	650	106	950	119	1360
68	315	81	462	94	670	107	975	120	1400
69	325	82	475	95	690	108	1000	121	1450
70	335	83	487	96	710	109	1030	122	1500
71	345	84	500	97	730	110	1060	123	1550
72	355	85	515	98	750	111	1090	124	1600
73	365	86	530	99	775	112	1120	125	1650
74	375	87	545	100	800	113	1150	126	1700

Speed Rating

The speed rating, in this case 'S', indicates the maximum speed recommended for that tyre. See the chart below for the full list of speed ratings and their applicable values. In all instances the tyres load and speed rating must meet or exceed the vehicles placard.

Speed Symbol	J	K	L	M	N	P	Q	R	S	T	U	H	V	W	Y	VR	ZR
Speed in kmh	100	110	120	130	140	150	160	170	180	190	200	210	240	270	300	>210	>240

* A tyre with ZR symbols have a speed capability of over 240km/h

Tyre Dimensions and Aspect Ratios

Example: 235.70R15 102 H

- The first number refers to the nominal maximum tyre width in millimetres: In the example, the tyre width is 235mm.
- The second number is the aspect ratio in percentage points. That is the height of the tyre, between the rim and the outer edge of the tyre, as a percentage of its width. In the example, the tyre is 70% as high as it is wide: the tyre height is nominally 70% of 235mm=165mm. **NOTE:** If the aspect ratio is not stated, then the default value is 82%. For example, a 205x15 marking may be interpreted as a 205.82x15.
- The letter or letters, R in the example, define the tyre type. R is for a radial tyre. Sometimes the marking is "x" (no meaning other than "by"), HR, SR, ZR: the H, S and Z are the speed ratings, which are generally repeated in the final code (102H in this case).

This tyre could also have been marked 235.70HR15 102 or 235.70x15 102H

- The third number is the rim diameter in inches. In the example, the tyre fits a 15" rim.

In the example, the overall tyre diameter is 15" plus 165mm plus 165mm which equals $15" + 6.5" + 6.5" = 28"$. Note that manufacturers generally round the diameter to the nearest half inch. Tyres of various rim diameters, widths and aspect ratios may produce the same tyre rolling diameter, eg 205x15, 235.70x15, 255.65x15, 255.60x16 and 255.55x17 all have a 28" rolling diameter.

The final code (102H) refers to the load & speed ratings described in the pages above.

Width mm	Aspect Ratio	Wheel Diameter inches	Tyre Diameter Nominal	% change from standard a positive reading gives a high speedo reading Nominal	MM dia Nominal	Inch Diameter Specification As produced	MM Diameter Specification As produced	% change from standard positive reading gives a high speedo reading As Produced
205	0.82	15	28.24	-0.8	717	28	711	0.18
215	0.75	15	27.70	1.26	703.5	28	711	0.18
225	0.70	15	27.40	2.32	696	27.5	699	1.96
225	0.75	15	28.29	-0.84	718.5	28.5	724	-1.60
235	0.70	15	27.95	0.35	710	28	711	0.18
255	0.60	15	27.05	3.58	687	27	686	3.75
255	0.65	15	28.05	0	712.5	28	711	0.18
275	0.55	15	26.91	4.07	683.5	27	686	3.75
275	0.60	15	27.99	0.21	711	28	711	0.18
265	0.60	15	27.52	1.89	699	28	711	0.18
265	0.65	15	28.56	-1.82	725.5	29	737	-3.38
245	0.65	15	27.54	1.82	699.5	28	711	0.18
245	0.70	15	28.50	-1.61	724	28.5	724	-1.60
255	0.55	16	27.04	3.59	686.9	27	686	3.75
255	0.60	16	28.05	0.01	712.4	28	711	0.18
255	0.65	16	29.05	-3.56	737.9	29	737	-3.38
265	0.60	16	28.52	-1.67	724.4	28.5	724	-1.60
255	0.55	17	28.04	0.03	712.3	28	711	0.18
255	0.60	17	29.05	-3.55	737.8	29	737	-3.38

**Direct Drive (3rd gear of either 3L80 or 4L80E transmissions)
With 205x15, 235.70x15, 255.65x15, 255.60x16 or 255.55x17 Tyres**

Note maximum speeds quoted above 140 MPH are theoretical values for SY Turbo R Cars from Chassis 20,000 to 23935

These cars have no road speed limiter.

Most other Turbo R cars are speed limited to 240km/h or 255 km/h depending on Model Year.

2.28:1 final drives apply almost exclusively to UK-Spec 20,000-series Turbo Rs with the 3L80 transmission.

3.08 axle figures apply to normally-aspirated SY and SZ cars before Chassis 44,000.

SZ cars from Chassis 44,000 are fitted with the 4L80E overdrive transmission, so higher speeds apply in 4th Overdrive ratio.

Those cars mostly have a 2.69:1 final drive (Continental T excepted), and are speed-limited.

Axle Ratio	Tyre Diameter	Working Tyre Circumference Inches	MPH/1000RPM No converter Slip	RPM Engine Speed Limited	Speed MPH	Speed KM/H
2.28	28.00	87.98	36.54	4500	165	270
2.69	28.00	87.98	30.97	4500	139	227
3.08	28.00	87.98	27.05	4500	122	198