28-1 Tyre: Effective date from 2013/1/1

Refer to: R30 02-S16, R54 00-S17, R75 00-R2/C1

28-1.1 Effective date and Scope:

28-1.1.1 Effective date from 2013/1/1, the new type of tyres used in category symbols M, N and O and L, shall comply with this regulation.

28-1.1.2 Effective date from 2015/1/1, each type of run flat tyre and speeds in excess of 300 km/h tyre of the category symbols M1, O1 and O2 shall comply with this regulation.

28-1.1.3 Effective date from 2015/1/1, each type of Tyres used in category symbols L shall comply with this regulation.

28-1.1.4 As for the category symbol N1, the new pneumatic tyres shall comply with paragraphs either 28-1.4. or 28-1.5. specified below in this regulation.

28-1.1.5 Except for large passenger vehicle and child-only vehicle, applicants applying for low volume safety approval could exempt from this regulation.

28-1.1.6 Applying for vehicle-by-vehicle low volume safety approval, it could exempt from this regulation.

28-1.2 Definitions:

28-1.2.1 Snow tyre: means a tyre whose tread pattern and whose structure are primarily designed to ensure in mud and fresh or melting snow a performance better than that of an ordinary (road-type) tyre. The tread pattern of a snow tyre generally consists of groove (rib) and/or solid-block elements more widely spaced than on an ordinary (road type) tyre;

28-1.2.2 "Diagonal" or "bias-ply": describes a pneumatic-tyre structure in which the ply cords extend to the beads and are laid at alternate angles of substantially less than 90 degrees to the centre line of the tread;

28-1.2.3 Bias-belted: describes a pneumatic-tyre structure of diagonal (bias-ply) type in which the carcass is restricted by a belt comprising two or more layers of substantially inextensible cord material laid at alternate angles close to those of the carcass;

28-1.2.4 "Radial" describes a pneumatic-tyre structure in which the ply cords extend to the beads and are laid substantially at 90 degrees to the centre line of the tread, the carcass being stabilized by an essentially inextensible circumferential belt;

28-1.2.5 Reinforced or Extra Load: describes a pneumatic-tyre structure in which the carcass is more resistant than that of the corresponding standard tyre;

28-1.2.6 "Temporary use spare tyre" means a tyre different from a tyre intended to be fitted to any vehicle for normal driving conditions but intended only for temporary use under restricted driving conditions;

28-1.2.7 T-type temporary use spare tyre: means a type of temporary use spare tyre designed for use at inflation pressures higher than those established for standard and reinforced tyres;

28-1.2.8 Cord: means the strands forming the fabric of the plies in the pneumatic tyre;

28-1.2.9 Ply: means a layer of rubber-coated parallel cords;

28-1.2.10 Carcass: means that part of a pneumatic tyre other than the tread and the rubber side walls which, when inflated, bears the load;

28-1.2.11 Tread: means that part of a pneumatic tyre which comes into contact with the ground, protects the carcass against mechanical damage and contributes to ground adhesion;

28-1.2.12 Section width: means the linear distance between the outsides of the side walls of an inflated pneumatic tyre, excluding elevations due to labelling (marking), decoration or protective bands or ribs;

28-1.2.13 Overall width: means the linear distance between the outsides of the side walls of an inflated pneumatic tyre, including labelling (marking), decoration and protective bands or ribs;

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28-1.2.14 Section height: means a distance equal to half the difference between the outer diameter of the tyre and the nominal rim diameter;

28-1.2.15 Nominal aspect ratio (Ra): means the centuple of the number obtained by dividing the number expressing the section height by the number expressing the nominal section width;

28-1.2.16 Outer diameter: means the overall diameter of an inflated new pneumatic tyre;

28-1.2.17 Rim: means the support for a tyre-and-tube assembly, or for a tubeless tyre, on which the tyre beads are seated;

28-1.2.18 Nominal rim diameter: means the diameter of the rim on which a tyre is designed to be mounted; The values of the "d" symbols expressed in millimeter are shown below:

Nominal rim diameter code ("d" symbol)	Value of the "d" symbol expressed in mm	Nominal rim diameter code ("d" symbol)	Value of the "d" symbol expressed in mm	Nominal rim diameter code ("d" symbol)	Value of the "d" symbol expressed in mm	Nominal rim diameter code ("d" symbol)	Value of the "d" symbol expressed in mm
4	102	12	305	17.5	445	22.5	572
5	127	13	330	18	457	23	584
6	152	14	356	19	482	24	610
7	178	14.5	368	19.5	495	24.5	622
8	203	15	381	20	508	25	635
9	229	16	406	20.5	521	26	660
10	254	16.5	419	21	533	28	711
11	279	17	432	22	559	30	762

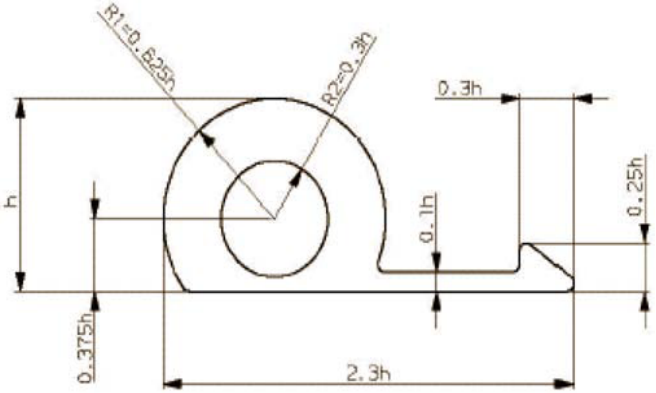
28-1.2.19 Speed category: means the maximum speed which the tyre can sustain, expressed by speed category symbol (see table below).

Speed-category symbol	Maximum speed (km/h)	Speed-category symbol	Maximum speed (km/h)
B	50	Q	160
F	80	R	170
G	90	S	180
J	100	T	190
K	110	U	200
L	120	H	210
M	130	V	240
N	140	W or Z	270
P	150	Y or Z	300

28-1.2.20 Theoretical rim： means the theoretical rim whose width would be equal to x times the nominal section width of a tyre. The value of x shall be specified by the manufacturer of that tyre;

28-1.2.21 Load capacity index: means a number associated to the reference mass a tyre can carry when operated in conformity with requirements governing utilization specified by the manufacturer. A=Load-capacity index, B=Corresponding mass of the vehicle which is to be carried.

28-1.2.22 Run flat tyre or Self supporting tyre: describes a pneumatic tyre structure provided with any technical solutions (for example, reinforced sidewalls, etc.) allowing the pneumatic tyre, mounted on the appropriate wheel and in the absence of any supplementary component, to supply the vehicle with the basic tyre functions, at least, at a speed of 80km/h (50mph) and a distance of 80km when operating in flat tyre running mode. The letter "F" placed in front of the rim diameter marking. The symbol below if the tyre where “h” is at least 12 mm.



28-1.2.23 Flat tyre running mode: describes the state of the tyre, essentially maintaining its structural integrity, while operating at an inflation pressure between 0 and 70 kPa.

28-1.2.24 Deflected section height: is the difference between the deflected radius, measured from the centre of the rim to the surface of the drum, and one half the nominal rim diameter .

28-1.2.25 MST: means "multiservice tyre", suitable both on and off road.

28-1.2.26 Moped tyre: means a tyre designed for the equipment of mopeds (categories L1 and L2).

28-1.2.27 Motor cycle tyre: means a tyre designed primarily for the equipment of motor cycles (categories L3, and L5). However, they may also equip mopeds (categories L1 and L2) and light trailers (category Ｏ1).

A	B	A	B	A	B	A	B	A	B
0	45	41	145	82	475	123	1550	164	5000
1	46.2	42	150	83	487	124	1600	165	5150
2	47.5	43	155	84	500	125	1650	166	5300

3	48.7	44	160	85	515	126	1700	167	5450
4	50	45	165	86	530	127	1750	168	5600
5	51.5	46	170	87	545	128	1800	169	5800
6	53	47	175	88	560	129	1850	170	6000
7	54.5	48	180	89	580	130	1900	171	6150
8	56	49	185	90	600	131	1950	172	6300
9	58	50	190	91	615	132	2000	173	6500
10	60	51	195	92	630	133	2060	174	6700
11	61.5	52	200	93	650	134	2120	175	6900
12	63	53	206	94	670	135	2180	176	7100
13	65	54	212	95	690	136	2240	177	7300
14	67	55	218	96	710	137	2300	178	7500
15	69	56	224	97	730	138	2360	179	7750
16	71	57	230	98	750	139	2430	180	8000
17	73	58	236	99	775	140	2500	181	8250
18	75	59	243	100	800	141	2575	182	8500
19	77.5	60	250	101	825	142	2650	183	8750
20	80	61	257	102	850	143	2725	184	9000
21	82.5	62	265	103	875	144	2800	185	9250
22	85	63	272	104	900	145	2900	186	9500
23	87.5	64	280	105	925	146	3000	187	9750
24	90	65	290	106	950	147	3075	188	10000
25	92.5	66	300	107	975	148	3150	189	10300
26	95	67	307	108	1000	149	3250	190	10600
27	97	68	315	109	1030	150	3350	191	10900
28	100	69	325	110	1060	151	3450	192	11200
29	103	70	335	111	1090	152	3550	193	11500
30	106	71	345	112	1120	153	3650	194	11800
31	109	72	355	113	1150	154	3750	195	12150
32	112	73	365	114	1180	155	3875	196	12500
33	115	74	375	115	1215	156	4000	197	12850

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34	118	75	387	116	1250	157	4125	198	13200
35	121	76	400	117	1285	158	4250	199	13600
36	125	77	412	118	1320	159	4375	200	14000
37	128	78	425	119	1360	160	4500		
38	132	79	437	120	1400	161	4625		
39	136	80	450	121	1450	162	4750		
40	140	81	462	122	1500	163	4875		

28-1.3 Tyre shall according to suitable types and range of principle are as below：

28-1.3.1 Brand

28-1.3.2 Nominal aspect ratio or nominal rim of diameter code (For UK series use.)

28-1.3.3 Category of use (ordinary (road-type) or snow tyre or for temporary use)

28-1.3.4 Structure (diagonal (bias-ply), bias-belted, radial-ply, run flat tyre)

28-1.3.5 The suitable of vehicle's category.

28-1.4 New pneumatic tyres designed primarily, but not only, for vehicles in category symbols M1 ,N1, O1 and O2.

28-1.4.1 General Specifications:

28-1.4.1.1 Tyre-size designation is a designation showing:

28-1.4.1.1.1 The nominal section width (mm) (This width must be expressed in mm, except in the case of the types of tyre for which the size designation is shown in the first column of the tables)

28-1.4.1.1.1.1 Tyres in Diagonal Construction (European tyres)

Size	Measuring rim width code	Overall diameter (mm)	Tyre section width (mm)	Nominal rim diameter "d" (mm)
Super Ballon Series				
4.80-10	3.5	490	128	254
5.20-10	3.5	508	132	254
5.20-12	3.5	558	132	305
5.60-13	4	600	145	330
5.90-13	4	616	150	330
6.40-13	4.5	642	163	330
5.20-14	3.5	612	132	356
5.60-14	4	626	145	356

5.90-14	4	642	150	356
6.40-14	4.5	666	163	356
5.60-15	4	650	145	381
5.90-15	4	668	150	381
6.40-15	4.5	692	163	381
6.70-15	4.5	710	170	381
7.10-15	5	724	180	381
7.60-15	5.5	742	193	381
8.20-15	6	760	213	381
Low Section Series				
5.50-12	4	552	142	305
6.00-12	4.5	574	156	305
7.00-13	5	644	178	330
7.00-14	5	668	178	356
7.50-14	5.5	688	190	356
8.00-14	6	702	203	356
6.00-15L	4.5	650	156	381
Super Low Section Series註				
155-13/6.15-13	4.5	582	157	330
165-13/6.45-13	4.5	600	167	330
175-13/6.95-13	5	610	178	330
155-14/6.15-14	4.5	608	157	356
165-14/6.45-14	4.5	626	167	356
175-14/6.95-14	5	638	178	356
185-14/7.35-14	5.5	654	188	356
195-14/7.75-14	5.5	670	198	356
Ultra Low Section				
5.9-10	4	483	148	254
6.5-13	4.5	586	166	330
6.9-13	4.5	600	172	330
7.3-13	5	614	184	330

Note: The following size designations are accepted: 185-14/7.35-14 or 185-14 or 7.35-14 or 7.35-14/185-14.

28-1.4.1.1.1.2 Millimetric Series - Radial (European tyres)

Size	Measuring rim width code	Overall diameter (mm)	Tyre section width (mm)	Nominal rim diameter “d” (mm)
125 R 10	3.5	459	127	254
145 R 10	4	492	147	254
125 R 12	3.5	510	127	305
135 R 12	4	522	137	305
145 R 12	4	542	147	305
155 R 12	4.5	550	157	305
125 R 13	3.5	536	127	330
135 R 13	4	548	137	330
145 R 13	4	566	147	330
155 R 13	4.5	578	157	330
165 R 13	4.5	596	167	330
175 R 13	5	608	178	330
185 R 13	5.5	624	188	330
125 R 14	3.5	562	127	356
135 R 14	4	574	137	356
145 R 14	4	590	147	356
155 R 14	4.5	604	157	356
165 R 14	4.5	622	167	356
175 R 14	5	634	178	356
185 R 14	5.5	650	188	356
195 R 14	5.5	666	198	356
205 R 14	6	686	208	356
215 R 14	6	700	218	356
225 R 14	6.5	714	228	356
125 R 15	3.5	588	127	381
135 R 15	4	600	137	381
145 R 15	4	616	147	381
155 R 15	4.5	630	157	381
165 R 15	4.5	646	167	381
175 R 15	5	660	178	381

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185 R 15	5.5	674	188	381
195 R 15	5.5	690	198	381
205 R 15	6	710	208	381
215 R 15	6	724	218	381
225 R 15	6.5	738	228	381
235 R 15	6.5	752	238	381
175 R 16	5	686	178	406
185 R 16	5.5	698	188	406
205 R 16	6	736	208	406

28-1.4.1.1.1.3 45 Series - Radial on TR Metric 5 degrees Rims

Size	Measuring rim width code	Overall diameter (mm)	Tyre section width (mm)
280/45 R 415	240	661	281

28-1.4.1.1.2 A conventional number denoting the nominal rim diameter and corresponding to its diameter expressed either by codes (numbers below 100) or in millimetres (numbers above 100)

28-1.4.1.1.3 The indication of the structure

28-1.4.1.2 It does not apply to tyres designed for the equipment of vintage cars and competitions.

28-1.4.2 Test Procedure

28-1.4.2.1 Load/speed performance test

28-1.4.2.1.1 Where application is made for tyres identified by means of letter code "ZR" within the size designation and suitable for speeds over 300 km/h, the above load/speed test is carried out on one tyre at the load and speed conditions marked on the tyre. Another load/speed test must be carried out on a second sample of the same tyre type at the load and speed conditions specified as maximum by the tyre manufacturer. The second test may be carried out on the same tyre sample if the tyre manufacturer agrees.

28-1.4.2.1.2 Preparing the tyre

28-1.4.2.1.2.1 Mount a new tyre on the standard test rim

28-1.4.2.1.2.2 Inflate it to the appropriate pressure as given (in bar) in the table below:

Speed category	Diagonal (bias-ply) tyres			Radial/Run flat system		Bias-belted tyres
	Ply rating			Standard	Reinforced	Standard
	4	6	8			
L, M, N	2.3	2.7	3.0	2.4	2.8	-
P, Q, R, S	2.6	3.0	3.3	2.6	3.0	2.6
T, U, H	2.8	3.2	3.5	2.8	3.2	2.8
V	3.0	3.4	3.7	3.0	3.4	-
W	-	-	-	3.2	3.6	-

28-1.4.2.1.2.3 T-type temporary use spare tyres: to 4.2 bar.

28-1.4.2.1.2.4 The manufacturer may request, giving reasons, the use of a test-inflation pressure differing from those given above. In such a case the tyre shall be inflated to that pressure.

28-1.4.2.1.2.5 Condition the tyre-and-wheel assembly at test-room temperature for not less than three hours.

28-1.4.2.1.2.6 Readjust the tyre pressure to that specified in 28.4.2.1.2.2~28.4.2.1.2.4 above.

28-1.4.2.1.3 Carrying out the test

28-1.4.2.1.3.1 Mount the tyre-and-wheel assembly on a test axle and press it against the outer face of a smooth wheel 1.70m +/- 1% or 2m +/- 1% in diameter.

28-1.4.2.1.3.2 Apply to the test axle a load:

28-1.4.2.1.3.2.1 Equal to 80% of the maximum load rating equated to the Load Capacity Index for tyres with Speed Symbols L to H inclusive,

28-1.4.2.1.3.2.2 Equal to 73% of the maximum load rating associated with a maximum speed of 240km/h for tyres Speed Symbol "V"

28-1.4.2.1.3.2.3 Equal to 68% of the maximum load rating associated with a maximum speed of 270km/h for tyres with speed symbol "W" or “Y”.

28-1.4.2.1.4 Throughout the test the tyre pressure must not be adjusted and the test load must be kept constant.

28-1.4.2.1.5 During the test the temperature in the test-room must be maintained at between 20 degrees and 30 degrees or at a higher temperature if the manufacturer agrees.

28-1.4.2.1.6 Carry the test through, without interruption in conformity with the following particulars:

28-1.4.2.1.6.1 Time taken to pass from zero speed to initial test speed: 10 minutes;

28-1.4.2.1.6.2 Initial test speed: prescribed maximum speed for the type of tyre, less 40km/h in the case of the smooth wheel having 1.70m +/- 1% in diameter or less 30 km/h in the case of the smooth wheel having 2m +/- 1% in diameter;

28-1.4.2.1.6.3 Successive speed increments: 10km/h to the highest testing speed.

28-1.4.2.1.6.4 Duration of test at each speed step except the last: 10 minutes;

28-1.4.2.1.6.5 Duration of test at last speed step: 20 minutes;

28-1.4.2.1.6.6 Maximum test speed: prescribed maximum speed for the type of tyre, less 10km/h in the case of the smooth wheel having 1.7m +/- 1% in diameter or equal to the prescribed maximum speed in the case of the smooth wheel having 2m +/- 1% in diameter.

28-1.4.2.1.6.7 However, for tyres suitable for maximum speed of 300km/h, the duration of test is 20 minutes at the initial test speed step and 10 minutes at the last speed step.

28-1.4.2.1.7 The procedure for the second test, to assess the performance of a tyre suitable for speeds in excess of 300 km/h,

shall be as follows:

28-1.4.2.1.7.1 Apply to the test axle a load equal to 80 per cent of the maximum load rating associated with the maximum speed specified by the tyre manufacturer (see paragraph 28-1.4.2.1.1. of this Regulation).

28-1.4.2.1.7.2 The test shall be run without interruptions in accordance with the following:

28-1.4.2.1.7.2.1 Ten minutes to build up from zero to the maximum speed specified by the tyre manufacturer (see paragraph 28-1.4.2.1.1. of this Regulation).

28-1.4.2.1.7.2.2 Five minutes at the maximum test speed.

28-1.4.2.2 Procedure to asses the "flat tyre running mode" of "run flat system"

28-1.4.2.2.1 Mount a new tyre on the test rim specified by the manufacturer.

28-1.4.2.2.2 Requirements Carry out the procedure with a test room temperature at 38 degrees C +/- 3 degrees C in relation to conditioning the tyre-and-wheel assembly as detailed in paragraph 28-1.4.2.1.2.

28-1.4.2.2.3 Remove the valve insert and wait until the tyre deflates completely

28-1.4.2.2.4 Mount the tyre-and-wheel assembly to a test axle and press it against the outer surface of a smooth wheel 1.70 m +/- 1 per cent or 2.0 m +/- 1 per cent in diameter.

28-1.4.2.2.5 Apply to the test axle a load equal to 65 per cent of the maximum load rating corresponding to the load capacity index of the tyre.

28-1.4.2.2.6 At the start of the test, measure the deflected section height (Z1).

28-1.4.2.2.7 During the test the temperature of the test room must be maintained at 38 degrees C +/- 3 degrees C.

28-1.4.2.2.8 Carry the test through, without interruption in conformity with the following particulars:

28-1.4.2.2.8.1 time taken to pass from zero speed to constant test speed: 5 minutes

28-1.4.2.2.8.2 test speed: 80 km/h

28-1.4.2.2.8.3 duration of test at the test speed: 60 minutes

28-1.4.2.2.9 At the end of the test, measure the deflected section height (Z2).

28-1.4.2.2.9.1 Calculate the change in per cent of the deflected section height compared to the deflected section height at the start of the test as ((Z1 - Z2) / Z1) x 100.

28-1.4.3 Test standard

28-1.4.3.1 A tyre which after undergoing the load/speed test does not exhibit any tread separation, ply separation, cord separation, chunking or broken cords shall be deemed to have passed the test.

28-1.4.3.2 However, a tyre marked with the speed symbol "Y" which, after undergoing the relevant test, exhibits superficial blistering of the tyre tread caused by the specific test equipment and conditions, is deemed to have passed the test.

28-1.4.3.3 If a "run flat system" tyre which, after undergoing the test, does not exhibit a change in the deflected section height, compared to the deflected section height at the start of the test, higher than 20 per cent and retains the tread connected to the two sidewalls, it is deemed to have passed the test.

28-1.5 New pneumatic tyres designed primarily, but not only, for vehicles in category symbols M2, M3, N, O3 and O4.

28-1.5.1 it does not apply to tyre types identified by speed category symbols corresponding to speeds below 80 km/h.

28-1.5.2 General Specifications:Tyre-size designation means a designation showing:

28-1.5.2.1 the nominal section width (mm) (This width must be expressed in mm, except in the case of the types of tyre for which the

size designation is shown in the first column of the tables)

28-1.5.2.1.1 Code designated sezes mounted on 5 degrees tapered rims or flat base rims-Radial and diagonal constructions

Tyre size designation	Measuring rim width code	Nominal Diameter d (mm)	Outer Diameter D (mm)		Section width S (mm)	
			Radial	Diagonal	Radial	Diagonal
Std. Series						
4.00R8*	2.50	203	414	414	107	107
4.00R10*	3.00	254	466	466	108	108
4.00R12*	3.00	305	517	517	108	108
4.50R8*	3.50	203	439	439	125	125
4.50R10*	3.50	254	490	490	125	125
4.50R12*	3.50	305	545	545	125	128
5.00R8*	3.00	203	467	467	132	132
5.00R10*	3.50	254	516	516	134	134
5.00R12*	3.50	305	568	568	134	137
6.00R9	4.00	229	540	540	160	160
6.00R14C	4.50	356	626	625	158	158
6.00R16*	4.50	406	728	730	170	170
6.50R10	5.00	254	588	588	177	177
6.50R14C	5.00	356	640	650	170	172
6.50R16*	4.50	406	742	748	176	176
6.50R20*	5.00	508	860	-	181	-
7.00R12	5.00	305	672	672	192	192
7.00R14C	5.00	356	650	668	180	182
7.00R15*	5.00	381	746	752	197	198
7.00R16C	5.50	406	778	778	198	198
7.00R16	5.50	406	784	774	198	198
7.00R20	5.50	508	892	898	198	198
7.50R10	5.50	254	645	645	207	207
7.50R14C	5.50	356	686	692	195	192
7.50R15*	6.00	381	772	772	212	212
7.50R16*	6.00	406	802	806	210	210
	6.00	432	852	852	210	210

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7.50R17*	6.00	508	928	928	210	213
7.50R20	6.50	381	836	836	230	234
8.25R15	6.50	406	860	860	230	234
8.25R16	6.50	432	886	895	230	234
8.25R17	6.50	508	962	970	230	234
8.25R20	6.00	381	840	840	249	249
9.00R15	6.50	406	912	900	246	252
9.00R16*	7.00	508	1018	1012	258	256
9.00R20	7.50	381	918	918	275	275
10.00R15	7.50	508	1052	1050	275	275
10.00R20	7.50	559	1102	1102	275	275
10.00R22	6.50	406	980	952	279	272
11.00R16	8.00	508	1082	1080	286	291
11.00R20	8.00	559	1132	1130	286	291
11.00R22	8.00	610	1182	1180	286	291
11.00R24	8.50	508	1122	1120	313	312
12.00R20	8.50	559	1174	1174	313	312
12.00R22	8.50	610	1226	1220	313	312
12.00R24	9.00	508	1176	1170	336	342
13.00R20	10.00	508	1238	1238	370	375
14.00R20	10.00	610	1340	1340	370	375
14.00R24	13.00	508	1370	1370	446	446
16.00R20						
80 Series	8.50	508	1008	-	305	-
12/80 R 20	9.00	508	1048	-	326	-
13/80 R 20	10.00	508	1090	-	350	-
14/80 R 20	10.00	610	1192	-	350	-
14/80 R 24	10.00	508	1124	-	370	-
14.75/80 R 20	10.00	508	1158	-	384	-
15.5/80 R 20						
Wide base tyre for multipurpose trucks						

7.50 R 18 MPT	5.50	457	885		208
10.5 R 18 MPT	9	457	905	276	270
10.5 R 20 MPT	9	508	955	276	270
12.5 R 18 MPT	11	457	990	330	325
12.5 R 20 MPT	11	508	1040	330	325
14.5 R 20 MPT	11	508	1095	362	355
14.5 R 24 MPT	11	610	1195	362	355

Note: (+) Tyres in diagonal construction are identified by an hyphen in place of the letter 'R' (e.g. 5.00-8).
(*) The tyre size designation may be supplemented with the letter 'C' (e.g. 6.00-16C).

28-1.5.2.1.2 Code designated sizes mounted on 15 degrees tapered rims-Radial

Tyre size designation	Measuring rim width code	Nominal Diameter d (mm)	Outer Diameter D (mm)	Section width S (mm)
7 R 17.5*	5.25	445	752	185
7 R 19.5	5.25	495	800	185
8 R 17.5*	6.00	445	784	208
8 R 19.5	6.00	495	856	208
8 R 22.5	6.00	572	936	208
8.5 R 17.5	6.00	445	802	215
9 R 17.5	6.75	445	820	230
9 R 19.5	6.75	495	894	230
9 R 22.5	6.75	572	970	230
9.5 R 17.5	6.75	445	842	240
9.5 R 19.5	6.75	495	916	240
10 R 17.5	7.50	445	858	254
10 R 19.5	7.50	495	936	254
10 R 22.5	7.50	572	1020	254
11 R 22.5	8.25	572	1050	279
11 R 24.5	8.25	622	1100	279
12 R 22.5	9.00	572	1084	300
13 R 22.5	9.75	572	1124	320
15 R 19.5	11.75	495	998	387
15 R 22.5	11.75	572	1074	387

16.5 R 19.5	13.00	495	1046	425
16.5 R 22.5	13.00	572	1122	425
18 R 19.5	14.00	495	1082	457
18 R 22.5	14.00	572	1158	457
70 Series				
10/70 R 22.5	7.50	572	928	254
11/70 R 22.5	8.25	572	962	279
12/70 R 22.5	9.00	572	1000	305
13/70 R 22.5	9.75	572	1033	330

Note: (*)The tyre size designation may be supplemented with the letter 'C' (e.g. 7 R 17.5C).

28-1.5.2.1.3 Tyres For light commercial vehicles-Radial and diagonal constructions

Tyre size designation	Measuring rim width code	Nominal Diameter d (mm)	Outer Diameter D (mm)		Section width S (mm)	
			Radial	Diagonal	Radial	Diagonal
Metric designated						
145 R 10C	4.00	254	492	-	147	-
145 R 12C	4.00	305	542	-	147	-
145 R 13C	4.00	330	566	-	147	-
145 R 14C	4.00	356	590	-	147	-
145 R 15C	4.00	381	616	-	147	-
155 R 12C	4.50	305	550	-	157	-
155 R 13C	4.50	330	578	-	157	-
155 R 14C	4.50	356	604	-	157	-
165 R 13C	4.50	330	596	-	167	-
165 R 14C	4.50	356	622	-	167	-
165 R 15C	4.50	381	646	-	167	-
175 R 13C	5.00	330	608	-	178	-
175 R 14C	5.00	356	634	-	178	-
175 R 16C	5.00	406	684	-	178	-
185 R 13C	5.50	330	624	-	188	-
185 R 14C	5.50	356	650	-	188	-
185 R 15C	5.50	381	674	-	188	-

185 R 16C	5.50	406	700	-	188	-
195 R 14C	5.50	356	666	-	198	-
195 R 15C	5.50	381	690	-	198	-
195 R 16C	5.50	406	716	-	198	-
205 R 14C	6.00	356	686	-	208	-
205 R 15C	6.00	381	710	-	208	-
205 R 16C	6.00	406	736	-	208	-
215 R 14C	6.00	356	700	-	218	-
215 R 15C	6.00	381	724	-	218	-
215 R 16C	6.00	406	750	-	218	-
245 R 16C	7.00	406	798	798	248	248
17 R 15C	5.00	381	678	-	178	-
17 R 380C	5.00	381	678	-	178	-
17 R 400C	150mm	400	678	-	186	-
19 R 400C	150mm	400	728	-	200	-
Code Designated						
5.60 R 12C	4.00	305	570	572	150	148
6.40 R 13C	5.00	330	648	640	172	172
6.70 R 13C	5.00	330	660	662	180	180
6.70 R 14C	5.00	356	688	688	180	180
6.70 R 15C	5.00	381	712	714	180	180

Note: (+)Tyres in diagonal construction are identified by an hyphen in place of the letter 'R' (e.g. 145-10 C).

28-1.5.2.1.4 Tyres for special applications-Radial and diagonal construction

Tyre size designation	Measuring rim width code	Nominal Diameter d (mm)	Outer Diameter D (mm)	Section width S (mm)
Code Designated				

15x4 1/2-8	3.25	203	385	122
16x6-8	4.33	203	425	152
18x7	4.33	203	462	173
18x7-8	4.33	203	462	173
21x8-9	6.00	229	535	200
21x4	2.32	330	565	113
22x4 1/2	3.11	330	595	132
23x5	3.75	330	635	155
23x9-10	6.50	254	595	225
25x6	3.75	330	680	170
27x10-12	8.00	305	690	255
28x9-15	7.00	381	707	216
Metric designated				
200-15	6.50	381	730	205
250-15	7.50	381	735	250
300-15	8.00	381	840	300

Note: (+)Tyres in radial construction are identified by the letter 'R' in place of the hyphen '-' (e.g. 15x4 1/2 R 8).

28-1.5.2.1.5 Tyres for light commercial vehicles (LT Tyres) diagonal and radial

Tyre size designation[1]	Measuring rim width code	Nominal Diameter d (mm)	Outer Diameter D (mm)[2]		Section width S (mm)[3]
			Normal	Snow	
6.00-16LT	4.50	406	732	743	173
6.50-16LT	4.50	406	755	767	182
6.70-16LT	5.00	406	722	733	191
7.00-13LT	5.00	330	647	658	187
7.00-14LT	5.00	356	670	681	187
7.00-15LT	5.50	381	752	763	202
7.00-16LT	5.50	406	778	788	202
7.10-15LT	5.00	381	738	749	199
7.50-15LT	6.00	381	782	794	220
7.50-16LT	6.00	406	808	819	220
8.25-16LT	6.50	406	859	869	241
9.00-16LT	6.50	406	890	903	257

G78-15LT	6.00	381	711	722	212
H78-15LT	6.00	381	727	739	222
L78-15LT	6.50	381	749	760	236
L78-16LT	6.50	406	775	786	236
7-14.5LT[4]	6.00	368	677		185
8-14.5LT[4]	6.00	368	707		203
9-14.5LT[4]	7.00	368	711		241
7-17.5LT	5.25	445	758	769	189
8-17.5LT	5.25	445	788	799	199

Note: 1/Tyres in Radial construction are identified by the letter "R" in place of "-" (e.g. 6.00 R 16LT).
2/Coefficient "b" for the calculation of Dmax: 1.08.
3/Overall width may exceed this value up to +8 per cent.
4/The suffix "MH"' may replace "LT" in the tyre size designation (e.g. 7-14.5 MH).

28-1.5.2.1.6 Tyres for light commercial vehicles (High flotation tyres) diagonal and radial

Tyre size designation[1]	Measuring rim width code	Nominal Diameter d (mm)	Outer Diameter D (mm)[2]		Section width S (mm)[3]
			Normal	Snow	
9-15LT	8.00	381	744	755	254
10-15LT	8.00	381	773	783	264
11-15LT	8.00	381	777	788	279
24x7.50-13LT	6	330	597	604	191
27x8.50-14LT	7	356	674	680	218
28x8.50-15LT	7	381	699	705	218
29x9.50-15LT	7.5	381	724	731	240
30x9.50-15LT	7.5	381	750	756	240
31x10.50-15LT	8.5	381	775	781	268
31x11.50-15LT	9	381	775	781	290
31x13.50-15LT	11	381	775	781	345
31x15.50-15LT	12	381	775	781	390
32x11.50-15LT	9	381	801	807	290
33x12.50-15LT	10	381	826	832	318
35x12.50-15LT	10	381	877	883	318

37x12.50-15LT	10	381	928	934	318
37x14.50-15LT	12	381	928	934	372
8.00-16.5LT	6.00	419	720	730	203
8.75-16.5LT	6.75	419	748	759	222
9.50-16.5LT	6.75	419	776	787	241
10-16.5LT	8.25	419	762	773	264
12-16.5LT	9.75	419	818	831	307
30x9.50-16.5LT	7.50	419	750	761	240
31x10.50-16.5LT	8.25	419	775	787	266
33x12.50-16.5LT	9.75	419	826	838	315
37x12.50-16.5LT	9.75	419	928	939	315
37x14.50-16.5LT	11.25	419	928	939	365
33x9.50 R15LT	7.50	381	826	832	240
35x12.50 R16.5LT	10.00	419	877	883	318
37x12.50 R17LT	10.00	432	928	934	318

Note: 1/Tyres in Radial construction are identified by the letter "R" in place of "-" (e.g. 24x7.50 R 13LT).
2/Coefficient 'b' for the calculation of Dmax: 1.07.
3/Overall width may exceed this value up to +7 per cent.

28-1.5.2.1.7 Code designated tyres mounted on 5 degrees tapered or flat base rims diagonal and radial

Tyre size designation[1]	Measuring rim width code	Nominal Diameter d (mm)	Outer Diameter D (mm)[2]			Section width S (mm)[3]
			(a)	(b)	Snow	
6.50-20	5	508	878		893	184
7.00-15TR	5.5	381	777		792	199
7.00-18	5.5	457	853		868	199
7.00-20	5.5	508	904		919	199
7.50-15TR	6	381	808		825	215
7.50-17	6	432	859		876	215
7.50-18	6	457	884		901	215
7.50-20	6	508	935		952	215
8.25-15TR	6.5	381	847	855	865	236
8.25-20	6.5	508	974	982	992	236
9.00-15TR	7	381	891	904	911	259

9.00-20	7	508	1019	1031	1038	259
10.00-15TR	7.5	381	927	940	946	278
10.00-20	7.5	508	1054	1067	1073	278
10.00-22	7.5	559	1104	1118	1123	278
11.00-20	8	508	1085	1099	1104	293
11.00-22	8	559	1135	1150	1155	293
11.00-24	8	610	1186	1201	1206	293
11.50-20	8	508	1085	1099	1104	296
12.00-20	8.5	508	1125		1146	315
12.00-24	8.5	610	1226		1247	315
14.00-20	10	508	1241		1266	375
14.00-24	10	610	1343		1368	375

Note: 1/Tyres in Radial construction are identified by the letter "R" in place of "-".(e.g. 6.50 R 20).
2/Coefficient 'b' for the calculation of Dmax : 1.06.
3/Overall width may exceed this value up to +6 per cent.

28-1.5.2.1.8 Code designated tyres for special services diagonal and radial

Tyre size designation	Measuring rim width code	Nominal Diameter d (mm)	Outer Diameter D (mm)[1]		Section width S (mm)[2]
			(a)	(b)	
10.00-20ML	7.5	508	1073	1099	278
11.00-22ML	8	559	1155	1182	293
13.00-24ML	9	610	1302		340
14.00-20ML	10	508	1266		375
14.00-24ML	10	610	1368		375
15-19.5ML	11.75	495	1019		389
24 R 21	18	533	1372		610

Note: 1/ Coefficient "b" for the calculation of Dmax : 1.06.
2/Overall width may exceed this value up to +8 per cent.

28-1.5.2.1.9 Code designated tyre mounted on 15 degrees tapered rims diagonal and radial

Tyre size designation[1]	Measuring rim width	Nominal Diameter d	Outer Diameter D (mm)[2]	Section width S (mm)[3]

	code	(mm)	(a)	(b)	Snow	
8-19.5	6.00	495	859		876	203
8-22.5	6.00	572	935		952	203
9-22.5	6.75	572	974	982	992	229
10-22.5	7.50	572	1019	1031	1038	254
11-22.5	8.25	572	1054	1067	1073	279
11-24.5	8.25	622	1104	1118	1123	279
12-22.5	9.00	572	1085	1099	1104	300
12-24.5	9.00	622	1135	1150	1155	300
12.5-22.5	9.00	572	1085	1099	1104	302
12.5-24.5	9.00	622	1135	1150	1155	302
14-17.5	10.50	445	907		921	349-
15-19.5	11.75	495	1005		1019	389-
15-22.5	11.75	572	1082		1095	389-
16.5-22.5	13.00	572	1128		1144	425-
18-19.5	14.00	495	1080		1096	457-
18-22.5	14.00	572	1158		1172	457-

Note: 1/Tyres in Radial construction are identified by the letter "R" in place of "-" (e.g. 8R19.5).
2/Coefficient "b" for the calculation of Dmax : 1.05.
Category of use: Normal Service tyres: (a) Highway tread (b) Heavy tread
3/Overall width may exceed this value up to +6 per cent
(-)Overall width may exceed this value up to +5 per cent.

28-1.5.2.2 A conventional number denoting the nominal rim diameter and corresponding to its diameter expressed either by codes (numbers below 100) or in millimetres (numbers above 100)

28-1.5.2.3 The indication of the structure

28-1.5.3 Test method

28-1.5.3.1 Load/speed endurance test

28-1.5.3.1.1 Preparing the tyre

28-1.5.3.1.1.1 Mount a new tyre on the standard test rim.

28-1.5.3.1.1.2 Use a new inner tube or combination of inner tube, valve and flap (as required) when testing tyres with inner tubes.

28-1.5.3.1.1.3 Inflate the tyre to the pressure corresponding to the pressure index specified by the manufacturer

28-1.5.3.1.1.4 Condition the tyre-and-wheel assembly at test-room temperature for not less than three hours.

28-1.5.3.1.1.5 Readjust the tyre pressure to that specified in paragraph 28.5.3.1.1.3 above.

28-1.5.3.1.2 Test procedure

28-1.5.3.1.2.1 Mount the tyre-and-wheel assembly on the test axle and press it against the outer face of a smooth power-driven test drum 1.70 m +/- 1% in diameter having a surface at least as wide as the tyre tread.

28-1.5.3.1.2.2 Apply to the test axle a series of test loads expressed in percent of the load indicated opposite the load index engraved on the sidewall of the tyre. Where the tyre has load-capacity indices for both single and twinned utilization, the reference load for single utilization shall be taken as the basis for the test loads.

28-1.5.3.1.2.2.1 In the case of a tyre with a load capacity index 121 or less and a speed category above P test procedures are as specified in paragraph 28.5.3.1.3.

28-1.5.3.1.2.2.2 For all other tyre types the endurance test programme is shown as follows:

Load index	Tyre speed category	Test-drum speed		Load placed on the wheel as a percentage of the load corresponding to the load index		
		Radial-ply min^{-1}	Diagonal(bias-ply) min^{-1}	7h	16h	24h
□122	F	100	100	66%	84%	101%
	G	125	100			
	J	150	125			
	K	175	150			
	L	200	-			
	M	225	-			
<=121	F	100	100			
	G	125	125			
	J	150	150			
	K	175	175			
	L	200	175	70%	88%	106%
				4h	6h	
	M	250	200	75%	97%	114%
	N	275	-	75%	97%	114%
	P	300		75%	97%	114%

Notes:

(1) "Special-use" tyres should be tested at a speed equal to 85% of the speed prescribed for equivalent

normal tyres.

(2) Tyres with load index 121 or more, speed categories N or P and the additional marking "LT" included in the tyre size designation, shall be tested with the same programme as specified in the above table for tyres with load index 121 or less.

28-1.5.3.1.2.3 The tyre pressure must not be adjusted throughout the test and the test load must be kept constant.

28-1.5.3.1.2.4 During the test the temperature in the test-room must be maintained at between 20 ℃ and 30 ℃ or at a higher temperature if the manufacturer so agrees.

28-1.5.3.1.2.5 The endurance-test programme shall be carried out without interruption.

28-1.5.3.1.3 Load/speed test programme for tyre with a load capacity index 121 and less, or the additional marking "LT" included in the tyre size designation, and a load capacity index above 121 and a speed category Q and above

28-1.5.3.1.3.1 Load placed on the wheel as a percentage of the load corresponding to the load index:

28-1.5.3.1.3.1.1 90% when tested on a test drum 1.70 m +/- 1% in diameter.

28-1.5.3.1.3.1.2 92% when tested on a test drum 2.0 m +/- 1% in diameter.

28-1.5.3.1.3.2 Initial test speed: speed corresponding to the speed category symbol less 20 km/h;
Time to reach the initial test speed 10 min.
Duration of the first step = 10 min.

28-1.5.3.1.3.3 Second test speed: speed corresponding to the speed category symbol less 10 km/h; Duration of the second step = 10 min.

28-1.5.3.1.3.4 Final test speed: speed corresponding to the speed category symbol; Duration of the final step = 30 min.

28-1.5.3.1.3.5 Total test duration: 1 h.

28-1.5.3.1.4 If a method other than that described in paragraph 28.5.3.1.2 above is used, its equivalence must be demonstrated.

28-1.5.4 Requirements

28-1.5.4.1 Load/speed endurance test

28-1.5.4.1.1 Each type of pneumatic tyre shall undergo at least one load/speed endurance test.

28-1.5.4.1.2 A tyre which, after undergoing the endurance test, does not exhibit any tread separation, ply separation, cord separation, chunking or broken cords shall be deemed to have passed the test.

28-1.6 Moped tyre and motor cycle tyre:

28-1.6.1 This regulation does not apply to the "off-road" and marked "NHS" (Not for Highway Service) of tyre, and the tyre for automobile racing.

28-1.6.2 General Specifications:

28-1.6.2.1 Tyre-size designation is a designation showing:

28-1.6.2.1.1 The nominal section width (mm) (Except for the first column marks size of tyre, the width must express in mm.)

28-1.6.2.1.1.1 Tyres for motor cycles. Sizes with rim diameter code 12 and below：

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TYRE SIZE	MEASURING RIM WIDTH CODE	OVERALL DIAMETER (mm)			SECTION WIDTH (mm)	Maximum overall width (mm)
		D min	D	D max		
2.50-8	1.50	328	338	352	65	70
2.50-9		354	364	378		
2.50-10		379	389	403		
2.50-12		430	440	451		
2.75-8	1.75	338	348	363	71	77
2.75-9		364	374	383		
2.75-10		389	399	408		
2.75-12		440	450	462		
3.00-4	2.10	241	251	264	80	86
3.00-5		266	276	291		
3.00-6		291	301	314		
3.00-7		317	327	342		
3.00-8		352	362	378		
3.00-9		378	388	401		
3.00-10		403	413	422		
3.00-12		454	464	473		
3.25-8	2.50	362	372	386	88	95
3.25-9		388	398	412		
3.25-10		414	424	441		
3.25-12		465	475	492		
3.50-4	2.50	264	274	291	92	99

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TYRE SIZE	MEASURING RIM WIDTH CODE	OVERALL DIAMETER (mm)			SECTION WIDTH (mm)	Maximum overall width (mm)
		D min	D	D max		
3.50-5		289	299	316		
3.50-6		314	324	341		
3.50-7		340	350	367		
3.50-8		376	386	397		
3.50-9		402	412	430		
3.50-10		427	437	448		
3.50-12		478	488	506		
4.00-5	2.50	314	326	346		
4.00-6		339	351	368		
4.00-7		365	377	394	105	113
4.00-8		401	415	427		
4.00-10		452	466	478		
4.00-12		505	517	538		
4.50-6	3.00	364	376	398		
4.50-7		390	402	424		
4.50-8		430	442	464		
4.50-9		456	468	490	120	130
4.50-10		481	493	515		
4.50-12		532	544	568		
5.00-8	3.50	453	465	481		
5.00-10		504	516	532	134	145
5.00-12		555	567	583		
6.00-6	4.00	424	436	464		
6.00-7		450	462	490		
6.00-8		494	506	534	154	166
6.00-9		520	532	562		

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28-1.6.2.1.1.2 Tyres for mopeds. Sizes with rim diameter code 12 and below：

Tyre size	Measuring rim width (Code)	Overall diameter (mm)			Section width (mm)	Maximum overall width (mm)[1]
		D.min	D	D.max[1]		
2 - 12	1.35	413	417	426	55	59
2-1/2 - 12	1.50	425	431	441	62	67
2-1/2 - 8	1.75	339	345	356	70	76
2-1/2 - 9	1.75	365	371	382	70	76
2-3/4 - 9	1.75	375	381	393	73	79
3 - 10	2.10	412	418	431	84	91
3 - 12	2.10	463	469	482	84	91

[1] Normal road (highway) service.

28-1.6.2.1.1.3 Tyres for motor cycles. Normal section size：

Table 3: Tyres for motor cycles
Normal section sizes

Tyre size	Measuring rim width Code	Overall diameter (mm)				Section width (mm)	Maximum overall width (mm)		
		D.min	D	D.max[1]	D.max[2]		3	4	5
2.00 - 14	1.20	460	466	478		52	57	60	65
2.00 - 15		485	491	503					
2.00 - 16		510	516	528					
2.00 - 17		536	542	554					
2.00 - 18		561	567	579					
2.00 - 19		587	593	605					
2.25 - 14	1.60	474	480	492	496	61	67	70	75
2.25 - 15		499	505	517	521				
2.25 - 16		524	530	542	546				
2.25 - 17		550	556	568	572				
2.25 - 18		575	581	593	597				
2.25 - 19		601	607	619	623				
2.50 - 14	1.60	486	492	506	508	65	72	75	79
2.50 - 15		511	517	531	533				
2.50 - 16		536	542	556	558				
2.50 - 17		562	568	582	584				
2.50 - 18		587	593	607	609				
2.50 - 19		613	619	633	635				
2.50 - 21		663	669	683	685				
2.75 - 14	1.85	505	512	524	530	75	83	86	91
2.75 - 15		530	537	549	555				
2.75 - 16		555	562	574	580				
2.75 - 17		581	588	600	606				
2.75 - 18		606	613	625	631				
2.75 - 19		632	639	651	657				
2.75 - 21		682	689	701	707				

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Tyre size	Measuring rim width Code	Overall diameter (mm)				Section width (mm)	Maximum overall width (mm)		
		D.min	D	D.max[1]	D.max[2]		3	4	5
3.00 - 14	1.85	519	526	540	546	80	88	92	97
3.00 - 15		546	551	565	571				
3.00 - 16		569	576	590	596				
3.00 - 17		595	602	616	622				
3.00 - 18		618	627	641	647				
3.00 - 19		644	653	667	673				
3.00 - 21		694	703	717	723				
3.00 - 23		747	754	768	774				
3.25 - 14	2.15	531	538	552	560	89	98	102	108
3.25 - 15		556	563	577	585				
3.25 - 16		581	588	602	610				
3.25 - 17		607	614	628	636				
3.25 - 18		630	639	653	661				
3.25 - 19		656	665	679	687				
3.25 - 21		708	715	729	737				
3.50 - 14	2.15	539	548	564	572	93	102	107	113
3.50 - 15		564	573	589	597				
3.50 - 16		591	598	614	622				
3.50 - 17		617	624	640	648				
3.50 - 18		640	649	665	673				
3.50 - 19		666	675	691	699				
3.50 - 21		716	725	741	749				
3.75 - 16	2.15	601	610	626	634	99	109	114	121
3.75 - 17		627	636	652	660				
3.75 - 18		652	661	677	685				
3.75 - 19		678	687	703	711				
4.00 - 16	2.50	611	620	638	646	108	119	124	130
4.00 - 17		637	646	664	672				
4.00 - 18		662	671	689	697				
4.00 - 19		688	697	715	723				
4.25 - 16	2.50	623	632	650	660	112	123	129	137
4.25 - 17		649	658	676	686				
4.25 - 18		674	683	701	711				
4.25 - 19		700	709	727	737				

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Tyre size	Measuring rim width Code	Overall diameter (mm)				Section width (mm)	Maximum overall width (mm)		
		D.min	D	D.max[1]	D.max[2]		[3]	[4]	[5]
4.50 - 16	2.75	631	640	658	668	123	135	141	142
4.50 - 17		657	666	684	694				
4.50 - 18		684	691	709	719				
4.50 - 19		707	717	734	745				
5.00 - 16	3.00	657	666	686	698	129	142	148	157
5.00 - 17		683	692	710	724				
5.00 - 18		708	717	735	749				
5.00 - 19		734	743	761	775				

[1] Tyres for normal highway service.
[2] Tyres for special service and snow tyres.
[3] Tyres for normal highway service up to speed category P inclusive.
[4] Tyres for normal highway service above speed category P and snow tyres.
[5] Tyres for special service.

28-1.6.2.1.1.4 Tyres for motor cycles. Low section sizes：

Table 4: Tyres for motor cycles
Low section sizes

Tyre size	Measuring rim width Code	Overall diameter (mm)				Section width (mm)	Maximum overall width (mm)		
		D.min	D	D.max[1]	D.max[2]		[3]	[4]	[5]
3.60 - 18	2.15	605	615	628	633	93	102	108	113
3.60 - 19		631	641	653	658				
4.10 - 18	2.50	629	641	654	663	108	119	124	130
4.10 - 19		655	667	679	688				
5.10 - 16	3.00	615	625	643	651	129	142	150	157
5.10 - 17		641	651	670	677				
5.10 - 18		666	676	694	702				
4.25/85 - 18	2.50	649	659	673	683	112	123	129	137
4.60 - 16	2.75	594	604	619	628	117	129	136	142
4.60 - 17		619	630	642	654				
4.60 - 18		644	654	670	678				
6.10 - 16	4.00	646	658	678	688	168	185	195	203

[1] Tyres for normal highway service.
[2] Tyres for special service and snow tyres.
[3] Tyres for normal highway service up to speed category P inclusive.
[4] Tyres for normal highway service above speed category P and snow tyres.
[5] Tyres for special service.

28-1.6.2.1.1.5 Motor cycle tyres. Low pressure sizes：

Table 6: Motor cycle tyres
Low pressure sizes

Tyre size	Measuring rim width Code	Overall diameter (mm)			Section width (mm)	Maximum overall width (mm)
		D.min	D	D.max		
5.4 - 10	4.00	474	481	487	135	143
5.4 - 12		525	532	547		
5.4 - 14		575	582	598		
5.4 - 16		626	633	649		
6.7 - 10	5.00	532	541	561	170	180
6.7 - 12		583	592	612		
6.7 - 14		633	642	662		

28-1.6.2.1.1.6 Motor cycle tyres. Sizes and dimensions of American tyres：

Table 7: Motor cycle tyres
Sizes and dimensions of American tyres

Tyre size		Measuring rim width Code	Overall diameter (mm)			Section width (mm)	Maximum overall width (mm)
			D.min	D	D.max		
MH90	- 21	1.85	682	686	700	80	89
MJ90 -	18	2.15	620	625	640	89	99
MJ90 -	19	2.15	645	650	665		
ML90 -	18	2.15	629	634	650	93	103
ML90 -	19	2.15	654	659	675		
MM90 -	19	2.15	663	669	685	95	106
MN90 -	18	2.15	656	662	681	104	116
MP90 -	18	2.15	667	673	692	108	120
MR90 -	18	2.15	680	687	708	114	127
MS90 -	17	2.50	660	667	688	121	134
MT90 -	16	3.00	642	650	672	130	144
MT90 -	17	3.00	668	675	697		
MU90 -	15M/C	3.50	634	642	665	142	158
MU90 -	16	3.50	659	667	690		
MV90 -	15M/C	3.50	643	651	675	150	172
MP85 -	18	2.15	654	660	679	108	120
MR85 -	16	2.15	617	623	643	114	127
MS85 -	18	2.50	675	682	702	121	134
MT85 -	18	3.00	681	688	709	130	144
MU85	16M/C	3.50	650	658	681	142	158
MV85 -	15M/C	3.50	627	635	658	150	172

28-1.6.2.1.2 A conventional number denoting the nominal rim diameter and corresponding to its diameter expressed either by codesor in millimetres

28-1.6.2.1.3 The indication of the structure

28-1.6.2.1.4 Speed category

28-1.6.3 Test Procedure

28-1.6.3.1 Load/speed performance test

28-1.6.3.1.1 Where application is made for tyres identified by means of letter code "V" within the size designation and suitable for

speeds over 240km/h or for tyres identified by means of letter code "Z" （or W or Y）within the size designation and suitable for speeds over 270km/h, the above load/speed test is carried out on one tyre at the load and speed conditions marked within parenthesis on the tyre. Another load/speed test must be carried out on a second tyre of the same type at the load and speed conditions, if any, specified as maximum by the tyre manufacturer.

28-1.6.3.1.2 Preparing the tyre

28-1.6.3.1.2.1 Mount a new tyre on the standard test rim

28-1.6.3.1.2.2 Inflate it to the appropriate pressure as given (in bar) in the table below:

Tire size	Speed Category	Inflation pressure（kPa）
Standard	B	250
	M,N,P	250
	Q,R,S	300
	T,U,H,V	350
	W	320
Reinforced	B	300
	M,N,P	330
	Q,R,S,T,U,H	390

For speeds above 240km/h the test pressure is 3.20bar (320kPa).

For other types of tyre inflate to the pressure specified by the manufacturer.

28-1.6.3.1.2.3 The manufacturer may request, giving reasons, the use of test-inflation pressures differing from those above. In such a case the tyre shall be inflated to that pressure.

28-1.6.3.1.2.4 Condition the tyre-and-wheel assembly at test-room temperature for not less than three hours.

28-1.6.3.1.2.5 Readjust the tyre pressure to that specified in 28-1.6.3.1.2.2 or 28-1.6.3.1.2.3 above.

28-1.6.3.1.3 Carrying out the test

28-1.6.3.1.3.1 Mount the tyre-and-wheel assembly on a test axle and press it against the outer face of a smooth wheel 1.70m +/- 1% or 2m +/- 1% in diameter.

28-1.6.3.1.3.2 Apply to the test axle a load equal to 65% of:

28-1.6.3.1.3.2.1 The maximum load rating equated to the Load Capacity Index for tyres with speed symbols up to H inclusive,

28-1.6.3.1.3.2.2 The maximum load rating equated to the Load Capacity Index up to 85□ associated with a maximum speed of 240km/h for tyres speed symbol "V"

28-1.6.3.1.3.2.3 The maximum load rating equated to the Load Capacity Index up to 75□ associated with a maximum speed of 270km/h for tyres with speed symbol "W"

28-1.6.3.1.3.2.4 The maximum load rating associated with the maximum speed specified by the tyre manufacturer for

tyres suitable for speeds above 240km/h (or 270km/h as applicable).

28-1.6.3.1.3.3 Throughout the test the tyre pressure must not be adjusted and the test load must be kept constant.

Speed category	Testing pressure（kPa）
P	225
Q,R,S	250
T,U,H	280
V and above	290

28-1.6.3.1.3.4 During the test the temperature in the test-room must be maintained at between 20 degrees and 30 degrees or at a higher temperature if the manufacturer agrees.

28-1.6.3.1.3.5 According to speed category and test steel wheel diameter are not interruption to test in sequence.

（a）Initial tests speed compare to speed category: 30km/h less than the speed corresponding to the speed category symbol marked on the tyre ,if a 2.0m diameter test drum is used, or 40km/h less if a 1.7m diameter test drum is used.

（b）Twenty minutes is allowed to build up from zero to the initial test speed;

（c）Test steel wheel on initial speed shall duration of 10 minutes with regular speed to accelerate test steel wheel;

（d）Speed steps of 10km/h, test duration at each speed step: 10 minutes;

（e）Speed steps of 20km/h, test duration at each speed step: 10 minutes;

（f）Speed steps of 30km/h, test duration at each speed step: 10 minutes;

28-1.6.3.1.3.5.1 In case of moped tyres (speed category symbol B), the test speed is 50 km/h, the build-up from 0 to 50 km/h is 10 minutes, the duration at the speed step is 30 minutes with a total duration of the test of 40 minutes.

28-1.6.3.1.3.6 However, in case a second test is performed to assess the top performances of tyres suitable for speeds above 240km/h, the procedure shall be the following:

According to paragraph 28-1.6.3.1.2.1 to 28-1.6.3.1.3.4 to test, could replace test time and speed with following conditions.

（a）Twenty minutes to build up from zero to the initial test speed;

Test steel wheel diameter	Initial test speed	
	V/VB/VR	ZR/ZB
1.7 m	200 km/h	230 km/h
2.0 m	210 km/h	240 km/h

（b）Twenty minutes at the initial test speed;

（c）Ten minutes to build up to the maximum test speed;

（d）Five minutes at the maximum test speed.

Maximum test speed: the maximum rated speed of the type of tyre if the test is performed with a 2.0 m diameter test drum; maximum rated speed for the type of tyre less 10 km/h if the test is performed with a 1.7 m diameter test drum.

Test load is based on manufacturer authorized at the highest speed multiplied by the maximum load capacity of 65%.

28-1.6.3.1.4 The use of different methods mentioned above, need to be demonstrated to have the same effect.

28-1.6.3.2 Enveloping curve for centrifugal growth test

28-1.6.3.2.1 This testing requirements is suitable for the tyre of define in paragraph 28-1.6.3.2.2.2.

28-1.6.3.2.2 Preparing the tyre

28-1.6.3.2.2.1 Mount a new tyre on the standard test rim

Speed category	Testing pressure（kPa）
P	225
Q,R,S	250
T,U,H	280
V and above	290

28-1.6.3.2.2.2 Bias-belted tyres inflate it to the appropriate pressure as given (in bar) in the table below:

28-1.6.3.2.2.3 Condition the tyre-and-wheel assembly at test-room temperature for not less than three hours

28-1.6.3.2.2.4 Readjust the tyre pressure to the former required pressure .

28-1.6.3.2.3 Carrying out the test

28-1.6.3.2.3.1 Mount the tyre-and-wheel assembly on a test axle and press it against the outer face of a smooth wheel 1.70m +/- 1% or 2m +/- 1% in diameter.

28-1.6.3.2.3.2 Position the contour outline device and as certain that it is perpendicular to the rotation of the test tyre tread.

28-1.6.3.2.3.3 Accelerate the assembly without interruption to reach within five minutes the maximum speed capability of the tyre.

28-1.6.3.2.3.4 Check that the peripheral speed of the tread surface is within +/- 2% of the maximum speed capability for the tyre. Maintain the equipment at constant speed for at least five minutes.

28-1.6.3.2.3.5 During the test the temperature in the test-room must be maintained at between 20 degrees and 30 degrees or at a higher temperature if the manufacturer agrees.

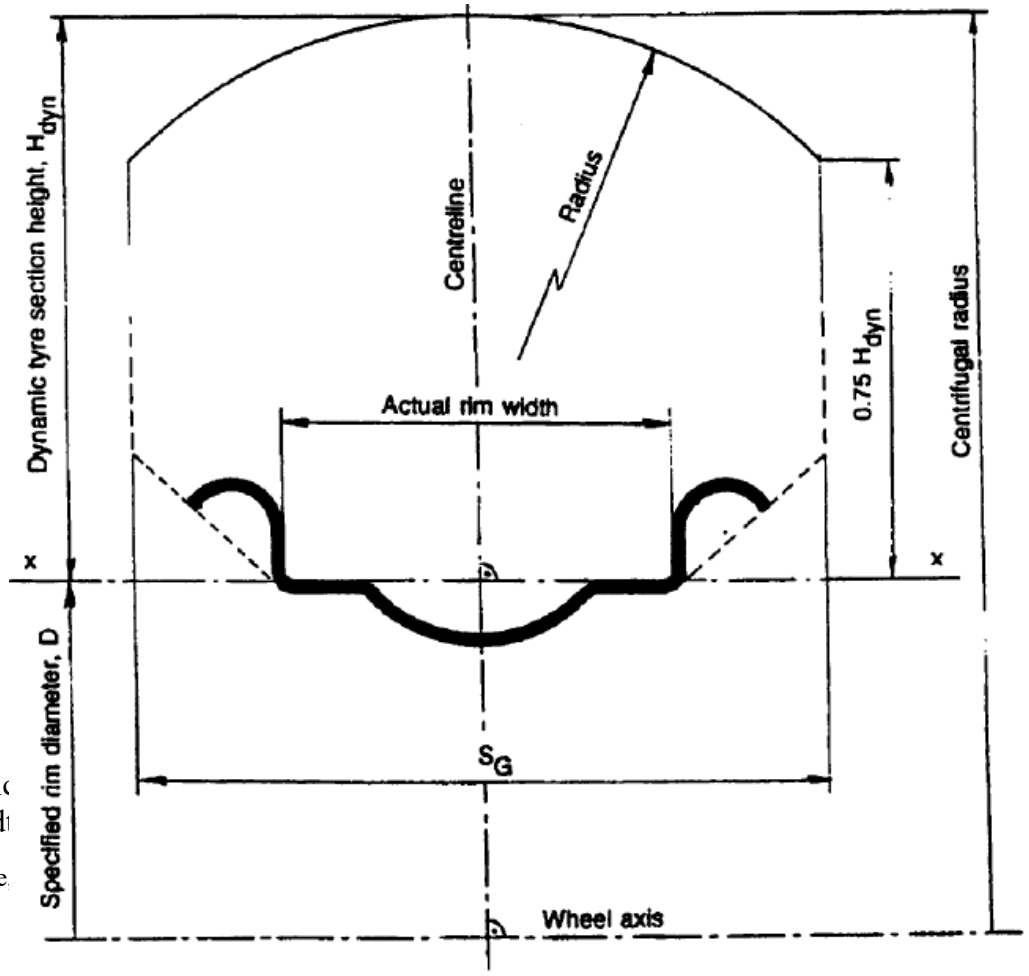
28-1.6.4 Requirements

28-1.6.4.1 Load/speed performance test

28-1.6.4.1.1 A tyre which after undergoing the load/speed test does not exhibit any tread separation, ply separation, cord separation, chunking or broken cords shall be deemed to have passed the test.

28-1.6.4.2 Enveloping curve for centrifugal growth test

Tyres for above speed category P, the contour of the tyre portrayed at the maximum speed shall not exceed the enveloping curve, with reference to the tyre axes.



SG=Maximum overall width in servic
(This changes 1 mm per 0.1 Rim widt

The official directions are written in Chinese.

Hdyn=Centrifugal radius - D/2

Speed Category	H_{dyn} (mm)	
	Category of Use: Normal	Category of Use: Snow and special
P/Q/R/S	H x 1,10	H x 1,15
T/U/H	H x 1,13	H x 1,18
Over 210 km/h	H x 1,16	-