
International Standard



4249/2

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

● **Motorcycle tyres and rims (code designated series) —
Part 2: Tyre load ratings**

*Pneumatiques et jantes pour motocycles (Séries dont les dimensions sont désignées par des pouces codes) —
Partie 2: Capacités de charge des pneumatiques*

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been authorized has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 4249/2 was developed by Technical Committee ISO/TC 31, *Tyres, rims and valves*, and was circulated to the member bodies in December 1982.

It has been approved by the member bodies of the following countries:

Australia	Israel	South Africa, Rep. of
Austria	Italy	Thailand
China	Korea, Rep. of	United Kingdom
Czechoslovakia	Netherlands	USA
Egypt, Arab Rep. of	Poland	
Germany, F.R.	Romania	

The member body of the following country expressed disapproval of the document on technical grounds:

USSR

Motorcycle tyres and rims (code designated series) — Part 2: Tyre load ratings

0 Introduction

The tyres covered in part 1 of ISO 4249 are designated by nominal section width — nominal rim diameter in the inch code. This designation indicates the origin of these tyres and does not indicate the preference for a unit not contained in the SI system of units; it is merely a convenient designation for a series of motorcycle tyres which have been in existence for a long period of time.

ISO 4249 consists of three parts:

- Part 1: Tyres
- Part 2: Tyre load ratings
- Part 3: Rims

1 Scope and field of application

This part of ISO 4249 specifies the load ratings for an inch code designated series of tyres for motorcycles.

2 Tyre load-carrying capacity

Load indices are shown in table 1.

3 Service condition characteristics

The characteristics shall be indicated as follows:

- Load index
- Speed symbol

Table 1 — Correlation between Load Index (LI) and tyre load-carrying capacity (TLCC)

LI	TLCC kg	LI	TLCC kg	LI	TLCC kg
0	45	30	106	60	250
1	46,2	31	109	61	257
2	47,5	32	112	62	265
3	48,7	33	115	63	272
4	50	34	118	64	280
5	51,5	35	121	65	290
6	53	36	125	66	300
7	54,5	37	128	67	307
8	56	38	132	68	315
9	58	39	136	69	325
10	60	40	140	70	335
11	61,5	41	145	71	345
12	63	42	150	72	355
13	65	43	155	73	365
14	67	44	160	74	375
15	69	45	165	75	387
16	71	46	170	76	400
17	73	47	175	77	412
18	75	48	180	78	425
19	77,5	49	185	79	437
20	80	50	190	80	450
21	82,5	51	195	81	462
22	85	52	200	82	475
23	87,5	53	206	83	487
24	90	54	212	84	500
25	92,5	55	218	85	515
26	95	56	224	86	530
27	97,5	57	230	87	545
28	100	58	236	88	560
29	103	59	243	89	580

4 Speed symbols

The speed symbols are shown in table 2.

Table 2 — Correlation between speed symbol and speed category

Speed symbol	Speed category km/h
L	120
M	130
N	140
P	150

5 Maximum load capacities

Table 3 shows the maximum tyre load capacities for "standard" and "extra load" versions of tyres with speed category symbol L and P.

6 Inflation pressures

The inflation pressures shown in table 3 are given as a guide only.

The inflation pressures used in practice are subject to agreement between the tyre and motorcycle manufacturers and should take into account not only the load, but also the tyre construction, road holding, maximum speed, the operating conditions, the mechanical characteristics of the vehicle and the location of the tyre.

7 Load capacities at reduced speeds

Subject to acceptance by the tyre manufacturer and taking into account the conditions of use of the motorcycle, the load capacities corresponding to the load indices indicated in table 3 may be modified according to the percentage shown in table 4. This modification is possible when the motorcycle maximum speed is different from the one which is associated with the load index.

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Table 3 — Maximum tyre load capacities for standard and "extra load" version of tyres (speed symbols L and P)

Type size designation	Service description	Maximum load capacity kg	Inflation pressure, kPa	
			Standard	Reinforced
2.00-14	21 L	82,5	225	—
2.00-17	27 L	97,5	225	—
2.00-19	31 L	109	225	—
2.25-14	27 L	97,5	225	—
2.25-14	32 L*	112	—	280
2.25-15	29 L	103	225	—
2.25-15	34 L*	118	—	280
2.25-16	31 L	109	225	—
2.25-16	36 L*	125	—	280
2.25-17	33 L	115	225	—
2.25-17	38 L*	132	—	280
2.25-18	35 L	121	225	—
2.25-18	40 L*	140	—	280
2.25-19	37 L	128	225	—
2.25-19	42 L*	150	—	280
2.50-14	32 L	112	225	—
2.50-14	37 L*	128	—	280
2.50-15	34 L	118	225	—
2.50-15	39 L*	136	—	280
2.50-16	36 L	125	225	—
2.50-16	41 L*	145	—	280
2.50-17	38 L	132	225	—
2.50-17	43 L*	155	—	280
2.50-18	40 L	140	225	—
2.50-18	45 L*	165	—	280
2.50-19	41 L	145	225	—
2.50-19	46 L*	170	—	280
2.50-21	43 L	155	225	—
2.50-21	48 L*	180	—	280
2.75-14	35 P	121	225	—
2.75-14	41 P*	145	—	280
2.75-15	37 P	128	225	—
2.75-15	42 P*	150	—	280
2.75-16	40 P	140	225	—
2.75-16	46 P*	170	—	280
2.75-17	41 P	145	225	—
2.75-17	47 P*	175	—	280
2.75-18	42 P	150	225	—
2.75-18	48 P*	180	—	280
2.75-19	43 P	155	225	—
2.75-19	49 P*	185	—	280
2.75-21	45 P	165	225	—
2.75-21	52 P*	200	—	280
3.00-14	40 P	140	225	—
3.00-14	45 P*	165	—	280
3.00-15	41 P	145	225	—
3.00-15	47 P*	175	—	280
3.00-16	43 P	155	225	—
3.00-16	48 P*	180	—	280
3.00-17	45 P	165	225	—
3.00-17	50 P*	190	—	280
3.00-18	47 P	175	225	—
3.00-18	52 P*	200	—	280
3.00-19	49 P	185	225	—
3.00-19	54 P*	212	—	280
3.00-21	51 P	195	225	—
3.00-21	57 P*	230	—	280
3.25-14	44 P	160	225	—
3.25-14	52 P*	200	—	280
3.25-15	46 P	170	225	—
3.25-15	53 P*	206	—	280
3.25-16	48 P	180	225	—
3.25-16	55 P*	218	—	280
3.25-17	50 P	190	225	—
3.25-17	57 P*	230	—	280
3.25-18	52 P	200	225	—
3.25-18	59 P*	243	—	280
3.25-19	54 P	212	225	—
3.25-19	60 P*	250	—	280
3.25-21	57 P	230	225	—
3.25-21	62 P*	265	—	280
3.50-14	48 P	180	225	—
3.50-14	54 P*	212	—	280
3.50-15	50 P	190	225	—
3.50-15	56 P*	224	—	280
3.50-16	52 P	200	225	—
3.50-16	58 P*	236	—	280
3.50-17	54 P	212	225	—
3.50-17	60 P*	250	—	280
3.50-18	56 P	224	225	—
3.50-18	62 P*	265	—	280
3.50-19	57 P	230	225	—
3.50-19	63 P*	272	—	280
3.50-21	60 P	250	225	—
3.50-21	65 P*	290	—	280
3.75-17	58 P	236	225	—
3.75-18	60 P	250	225	—
3.75-19	61 P	257	225	—
4.00-16	60 P	250	225	—
4.00-18	64 P	280	225	—
4.00-19	65 P	290	225	—
4.25-17	64 P	280	225	—
4.25-18	66 P	300	225	—
4.25-19	67 P	307	225	—
4.50-17	67 P	307	225	—
4.50-18	70 P	335	225	—
5.00-16	71 P	345	225	—

* Extra load version may be identified by REINF or 6 PR or LRC.

Table 4 – Variation of the maximum load capacities of the tyres according to the maximum speed of the motorcycle

Maximum speed km/h	Load variation, %	
	Speed symbol	
	L	P
50	+30	+30
60	+23	+23
70	+16	+16
80	+10	+14
90	+7,5	+12
100	+5	+10
110	+2,5	+8
120	0	+6
130	-5	+4
140		0
150		0

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