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МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ

Motorcycle tyres and rims (metric series) —

Part 2 :
Tyre series 100, 90, 80, 70 and 60

Pneumatiques et jantes pour motocycles (séries millimétriques) —

Partie 2 : Pneumatiques des séries 100, 90, 80, 70 et 60

Reference number
ISO 5751-2 : 1988 (E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established 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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 5751-2 was prepared by Technical Committee ISO/TC 31, *Tyres, rims and valves.*

This second edition cancels and replaces the first edition (ISO 5751-2 : 1983), of which it constitutes a technical revision.

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

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Motorcycle tyres and rims (metric series) —

Part 2 :
Tyre series 100, 90, 80, 70 and 60

0 Introduction

ISO 5751 gives the requirements for motorcycle tyres and rims of the metric series. It consists of the following parts :

Part 1 : Tyres, all series.

Part 2 : Tyre series 100, 90, 80, 70 and 60.

Part 3 : Rims for tyre series 100, 90, 80, 70 and 60.

NOTE — ISO 4249 deals with the requirements for motorcycle tyres and rims (code-designated series) for rim diameters code 13 and above. ISO 6054 deals with the requirements for motorcycle tyres and rims (code-designated series) for rim diameters code 12 and below.

1 Scope and field of application

This part of ISO 5751 specifies the designation, dimensions, load rating and rim requirements of metric series 100, 90, 80, 70 and 60 motorcycle tyres to be mounted on code-designated rims.

It applies to motorcycle tyres with reduced height/width ratio (low profile — 100, 90, 80, 70 and 60).

2 References

ISO 4223-1, *Definitions of some terms used in the tyre industry — Part 1 : Pneumatic tyres.*

ISO 5751-1, *Motorcycle tyres and rims (metric series) — Part 1 : Tyres, all series.*

3 Definitions

For definitions of terms relating to tyres, see ISO 4223-1.

Section one : Tyre designation and dimensions

4 Tyre designation

The tyre designations shall be as shown in table 1. The designation shall be completed by the addition of the "service condition characteristics", i.e. load index and speed symbol. See table 2.

Example

A tyre having a nominal section width of 100 mm, nominal aspect ratio 90, of diagonal construction, nominal rim diameter code 18, load-carrying capacity 224 kg, maximum speed 150 km/h, shall be marked :

100/90-18	56 P

NOTE — The load-carrying capacity and maximum speed codes are given in ISO 5751-1.

5 Tyre dimensions

Table 1 [a), b), c), d) and e)] shows :

a) the tyre designation as indicated in clause 4;

b) the measuring rim width code;

c) the design new tyre dimensions, i.e. section width and overall diameter;

d) the maximum tyre dimensions in service, i.e. overall width and overall diameter, for the various types of "tread configurations" to be considered by vehicle manufacturers in designing for tyre clearances.

6 Method of measurement of tyre dimensions

Before measuring, the tyre shall be mounted on the measuring rim ready for tyre fitment and inflated :

a) **for standard load tyres**

225 kPa for speed symbol P and lower

250 kPa for speed symbol S

280 kPa for speed symbol higher than S

b) **for extra load tyres**

280 kPa for speed symbols M and P

and allowed to stand for 24 h at normal room temperature, after which the inflation pressure shall be readjusted to the values shown above.

7 Tread configurations

The figure in ISO 5751-1 shows various tread configurations.

NOTES

1 Tread type A corresponds to highway service tyres manufactured in speed symbols P, S and higher.

2 Tread type B corresponds to highway service tyres (for high performance vehicles) manufactured in speed symbols S and higher.

3 Tread type C corresponds to tyres for on-and-off-road service manufactured in speed symbols M and P.

4 Tread type D corresponds to tyres for exclusive off-road service manufactured in speed symbol M.

5 The above attributions of tread type configurations to the service are to be considered as examples only. The choice of a given tread type configuration for a given tyre depends on the tyre manufacturer alone.

Table 1a) — 100 series tyre dimensions — Design and in-service

Dimensions in millimetres

Tyre designation	Measuring rim width code R_m	Design new tyre		In-service			
		Section width S	Overall diameter D_o	Maximum overall width W_{max}		Maximum overall diameter $D_{o,\,max}$	
				Tread types A, B and C	Tread type D	Tread types A and B[1]	Tread types C and D
80/100 - 14 M/C	1.85	80	516	88	100	528	536
90/100 - 14 M/C	2.15	90	535	99	113	548	558
70/100 - 15 M/C	1.60	69	521	76	86	531	537
80/100 - 15 M/C	1.85	80	541	88	100	553	561
90/100 - 15 M/C	2.15	90	561	99	113	573	583
70/100 - 16	1.60	69	546	76	86	556	562
80/100 - 16	1.85	80	566	88	100	578	586
90/100 - 16	2.15	90	586	99	113	598	608
100/100 - 16	2.50	101	606	111	126	620	630
130/100 - 16	3.00	129	666	142	161	684	698
140/100 - 16	3.50	142	686	156	178	706	720
70/100 - 17	1.60	69	572	76	86	582	588
80/100 - 17	1.85	80	592	88	100	604	612
90/100 - 17	2.15	90	612	99	113	624	634
100/100 - 17	2.50	101	632	111	126	646	656
110/100 - 17	2.50	109	652	120	136	668	678
120/100 - 17	2.75	119	672	131	149	588	700
130/100 - 17	3.00	129	692	142	161	710	724
70/100 - 18	1.60	69	597	76	86	607	613
80/100 - 18	1.85	80	617	88	100	629	637
90/100 - 18	2.15	90	637	99	113	649	659
100/100 - 18	2.50	101	657	111	126	671	681
110/100 - 18	2.50	109	677	120	136	693	703
120/100 - 18	2.75	119	697	131	149	713	725
130/100 - 18	3.00	129	717	142	161	735	749
70/100 - 19	1.60	69	623	76	86	633	639
80/100 - 19	1.85	80	643	88	100	655	663
90/100 - 19	2.15	90	663	99	113	675	685
100/100 - 19	2.50	101	683	111	126	697	707
110/100 - 19	2.50	109	703	120	136	719	729
120/100 - 19	2.75	119	723	131	149	739	751
130/100 - 19	3.00	129	743	142	161	761	775

1) Maximum overall diameters for tread types A and B are related to service up to 150 km/h.

Table 1b) — 90 series tyre dimensions — Design and in-service

Dimensions in millimetres

Tyre designation	Measuring rim width code R_m	Design new tyre		In-service			
		Section width S	Overall diameter D_o	Maximum overall width W_{max}		Maximum overall diameter $D_{o,max}$	
				Tread types A, B and C	Tread type D	Tread types A and B[1]	Tread types C and D
80/90 - 14 M/C	2.15	90	518	99	113	530	538
90/90 - 15 M/C	2.15	90	543	99	113	555	563
100/90 - 15 M/C	2.50	101	561	111	126	573	583
110/90 - 15 M/C	2.50	109	579	120	136	593	603
120/90 - 15 M/C	2.75	119	597	131	149	613	623
130/90 - 15 M/C	3.00	129	615	142	161	631	643
140/90 - 15 M/C	3.50	142	633	156	178	651	663
150/90 - 15 M/C	3.50	150	651	165	188	669	683
80/90 - 16	1.85	80	550	88	100	560	568
90/90 - 16	2.15	90	568	99	113	580	588
100/90 - 16	2.50	101	586	111	126	598	608
110/90 - 16	2.50	109	604	120	136	618	628
120/90 - 16	2.75	119	622	131	149	638	648
130/90 - 16	3.00	129	640	142	161	656	668
140/90 - 16	3.50	142	658	156	178	676	688
150/90 - 16	3.50	150	676	165	188	694	708
70/90 - 17	1.60	69	558	76	85	566	574
80/90 - 17	1.85	80	576	88	100	586	594
90/90 - 17	2.15	90	594	99	113	606	614
100/90 - 17	2.50	101	612	111	126	624	634
110/90 - 17	2.50	109	630	120	136	644	654
120/90 - 17	2.75	119	648	131	149	664	674
130/90 - 17	3.00	129	666	142	161	682	694
70/90 - 18	1.60	69	583	76	86	591	599
80/90 - 18	1.85	80	601	88	100	611	619
90/90 - 18	2.15	90	619	99	113	631	639
100/90 - 18	2.50	101	637	111	126	649	659
110/90 - 18	2.50	109	655	120	136	669	679
120/90 - 18	2.75	119	673	131	149	689	699
130/90 - 18	3.00	129	691	142	161	707	719
70/90 - 19	1.60	69	609	76	86	617	625
80/90 - 19	1.85	80	627	88	100	637	645
90/90 - 19	2.15	90	645	99	113	657	665
100/90 - 19	2.50	101	663	111	126	675	685
110/90 - 19	2.50	109	681	120	136	695	705
120/90 - 19	2.75	119	699	131	149	715	725
130/90 - 19	3.00	129	717	142	161	733	745
90/90 - 21	2.15	90	635	99	113	707	715
100/90 - 21	2.50	101	713	111	126	725	735

1) Maximum overall diameters for tread types A and B are related to service up to 150 km/h.

Table 1c) — 80 series tyre dimensions — Design and in-service

Dimensions in millimetres

Tyre designation	Measuring rim width code R_m	Design new tyre		In-service			
		Section width S	Overall diameter D_o	Maximum overall width W_{max}		Maximum overall diameter $D_{o,\,max}$	
				Tread types A, B and C	Tread type D	Tread types A and B[1)]	Tread types C and D
100/80 - 14 M/C	2.50	101	516	111	126	528	536
120/80 - 14 M/C	2.75	119	548	131	149	562	572
130/80 - 14 M/C	3.00	129	564	142	151	578	588
160/80 - 14 M/C	4.00	162	612	178	203	630	642
150/80 - 15 M/C	3.50	150	621	165	188	637	649
160/80 - 15 M/C	4.00	162	637	178	203	655	667
170/80 - 15 M/C	4.00	170	653	187	213	673	685
100/80 - 16	2.50	101	566	111	126	578	586
110/80 - 16	2.50	109	582	120	136	594	604
120/80 - 16	2.75	119	598	131	149	612	622
130/80 - 16	3.00	129	614	142	161	628	638
140/80 - 16	3.50	142	630	156	178	646	656
150/80 - 16	3.50	150	646	165	188	662	674
160/80 - 16	4.00	162	662	178	203	680	723
80/80 - 17	1.85	80	560	88	100	568	576
90/80 - 17	2.15	90	576	99	113	586	594
100/80 - 17	2.50	101	592	111	126	604	612
110/80 - 17	2.50	109	608	120	136	620	630
120/80 - 17	2.75	119	624	131	149	638	648
130/80 - 17	3.00	129	640	142	161	654	664
140/80 - 17	3.50	142	656	156	178	672	682
70/80 - 18	1.60	69	569	76	86	577	583
80/80 - 18	1.85	80	585	88	100	593	601
90/80 - 18	2.15	90	601	99	113	611	619
100/80 - 18	2.50	101	617	111	126	629	637
110/80 - 18	2.50	109	633	120	136	645	655
120/80 - 18	2.75	119	649	131	149	663	673
130/80 - 18	3.00	129	665	142	161	679	689
140/80 - 18	3.50	142	681	156	178	697	707
150/80 - 18	3.50	150	697	165	188	713	725
160/80 - 18	4.00	162	713	178	203	731	743
80/80 - 19	1.85	80	611	88	100	619	627
90/80 - 19	2.15	90	627	99	113	637	645
100/80 - 19	2.50	101	643	111	126	655	663
110/80 - 19	2.50	109	659	120	136	671	681
120/80 - 19	2.75	119	675	131	149	689	699
80/80 - 21	1.85	80	661	88	100	669	677
90/80 - 21	2.15	90	677	99	113	687	695
100/80 - 21	2.50	101	693	111	126	705	713

1) Maximum overall diameters for tread types A and B are related to service up to 150 km/h.

Table 1d) — 70 series tyre dimensions — Design and in-service

Dimensions in millimetres

Tyre designation	Measuring rim width code R_m	Design new tyre		In-service			
		Section width S	Overall diameter D_o	Maximum overall width W_{max}		Maximum overall diameter $D_{o,max}$	
				Tread types A, B and C	Tread type D	Tread types A and B[1)]	Tread types C and D
100/70 - 16 100/70 - 17 100/70 - 18 100/70 - 19	2.75	100	546 572 597 623	110	—	556 582 607 633	—
110/70 - 16 110/70 - 17 110/70 - 18 110/70 - 19	3.00	110	560 586 611 637	121	—	570 596 621 647	—
120/70 - 16 120/70 - 17 120/70 - 18 120/70 - 19	3.50	122	574 600 625 651	134	—	586 612 637 663	—
130/70 - 16 130/70 - 17 130/70 - 18 130/70 - 19	3.50	129	588 614 639 665	142	—	600 626 651 677	—
140/70 - 16 140/70 - 17 140/70 - 18 140/70 - 19	4.00	141	602 628 653 679	155	—	616 642 667 693	—
150/70 - 16 150/70 - 17 150/70 - 18 150/70 - 19	4.00	149	616 642 667 693	164	—	630 656 681 707	—
160/70 - 16 160/70 - 17 160/70 - 18 160/70 - 19	4.50	161	630 656 681 707	177	—	646 672 697 723	—

1) Maximum overall diameters for tread types A and B are related to services up to 150 km/h.

Table 1e) — 60 series tyre dimensions — Design and in-service

Dimensions in millimetres

Tyre designation	Measuring rim width code R_m	Design new tyre		In-service			
		Section width S	Overall diameter D_o	Maximum overall width W_{max}		Maximum overall diameter $D_{o,\,max}$	
				Tread types A, B and C	Tread type D	Tread types A and B[1]	Tread types C and D
110/60 - 16 110/60 - 17 110/60 - 18 110/60 - 19	3.00	110	538 564 589 615	121	—	548 574 599 625	—
120/60 - 16 120/60 - 17 120/60 - 18 120/60 - 19	3.50	122	550 576 601 627	134	—	560 586 611 637	—
130/60 - 16 130/60 - 17 130/60 - 18 130/60 - 19	3.50	129	562 588 613 639	142	—	572 598 623 649	—
140/60 - 16 140/60 - 17 140/60 - 18 140/60 - 19	4.00	141	574 600 625 651	155	—	586 612 637 663	—
150/60 - 16 150/60 - 17 150/60 - 18 150/60 - 19	4.00	149	586 612 637 663	164	—	598 624 649 657	—
160/60 - 16 160/60 - 17 160/60 - 18 160/60 - 19	4.50	161	598 624 649 675	177	—	612 638 663 689	—
170/60 - 16 170/60 - 17 170/60 - 18 170/60 - 19	4.50	168	610 636 661 687	185	—	624 650 675 701	—

1) Maximum overall diameters for tread types A and B are related to service up to 150 km/h.