

Transformed

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

**ISO RECOMMENDATION
R 691**

TOLERANCES ON SPANNER GAPS AND SOCKETS

(Metric values for general use)

1st EDITION

March 1968

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BRIEF HISTORY

The ISO Recommendation R 691, *Tolerances on spanner gaps and sockets (Metric values for general use)*, was drawn up by Technical Committee ISO/TC 29, *Small tools*, the Secretariat of which is held by the Association Française de Normalisation (AFNOR).

Work on this question by the Technical Committee began in 1961 and led, in 1965, to the adoption of a Draft ISO Recommendation.

In March 1966, this Draft ISO Recommendation (No. 937) was circulated to all the ISO Member Bodies for enquiry. It was approved, subject to a few modifications of an editorial nature, by the following Member Bodies :

Austria	India	Spain
Belgium	Israel	Sweden
Canada	Italy	Switzerland
Chile	Japan	Turkey
Czechoslovakia	Korea, Rep. of	U.A.R.
France	Netherlands	Yugoslavia
Germany	Poland	
Hungary	Portugal	

Two Member Bodies opposed the approval of the Draft :

United Kingdom
U.S.A.

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in March 1968, to accept it as an ISO RECOMMENDATION.

TOLERANCES ON SPANNER GAPS AND SOCKETS

(Metric values for general use)

1. SCOPE

This ISO Recommendation specifies tolerances on spanner gaps and sockets for bolts and nuts (or similar parts) having metric across flat dimensions.

It gives, for each dimension, the tolerance for general use, defined by its two deviations, minimum and maximum, with respect to the nominal value.

These deviations have been determined in relation to the across flat tolerances for bolts and nuts specified in ISO Recommendation R....* *Hexagon bolts and nuts – Metric series – Tolerances on widths across flats Widths across corners*, and with regard to the manufacture of tightening tools.

The nominal dimensions given in the Table below cover, in addition to the standard values of the metric widths across flats specified in ISO Recommendation R 272, *Hexagon bolts and nuts – Widths across flats, heights of head, thicknesses of nuts*, a certain number of possible intermediate values which are indicated in brackets.

2. TOLERANCES

Dimensions in millimetres

Nominal dimensions	Tolerances on spanner gaps and sockets			
	Machined closed or open		Unmachined closed	
	Deviations		Deviations	
	min.	max.	min.	max.
3.2	+ 0.02	+ 0.08	X	X
4 - 5 - 5.5	+ 0.02	+ 0.12		
(6) - 7	+ 0.03	+ 0.15		
8 - (9)	+ 0.03	+ 0.15	+ 0.03	+ 0.18
10 - 11	+ 0.04	+ 0.19	+ 0.04	+ 0.24
12 - 13	+ 0.04	+ 0.24	+ 0.04	+ 0.30
14 - (15) - (16)	+ 0.05	+ 0.27	+ 0.05	+ 0.35
17 - (18)	+ 0.05	+ 0.30	+ 0.05	+ 0.40
19 - (20) - (21) - 22 - (23) - 24 - (25)	+ 0.06	+ 0.36	+ 0.06	+ 0.46
(26) - 27 - (28) - 30 - 32	+ 0.08	+ 0.48	+ 0.08	+ 0.58
36 - 41 - 46 - 50	+ 0.10	+ 0.60	+ 0.10	+ 0.70
55 - 60	+ 0.12	+ 0.72	+ 0.12	+ 0.92

* At present Draft ISO Recommendation No. 952.