

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION

R 54

MODULES AND DIAMETRAL PITCHES
OF CYLINDRICAL GEARS FOR GENERAL ENGINEERING
AND FOR HEAVY ENGINEERING

2nd EDITION

April 1966

This second edition supersedes the first edition

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BRIEF HISTORY

The ISO Recommendation R 54, *Modules and Diametral Pitches of Cylindrical Gears for General Engineering*, was drawn up by the Technical Committee ISO/TC 60, *Gears*, the Secretariat of which is held by the Institut Belge de Normalisation (IBN).

A first draft proposal was drawn up at the first meeting of ISO/TC 60, held in Paris, in October 1950. This draft proposal was discussed by the Technical Committee in the two following meetings, held in London, in April 1952, and in Brussels, in December 1954. During this latter meeting, an amended text was unanimously adopted as a Draft ISO Recommendation.

On 16 December 1955, this Draft ISO Recommendation was circulated to all the ISO Member Bodies. The comments submitted during the enquiry were examined by the Technical Committee at its fourth meeting, held in Geneva, in September 1956, and it was decided to make certain editorial amendments to the Draft.

These amendments having been taken into account, the Draft ISO Recommendation was approved by the following 23 (out of a total of 37) Member Bodies:

*Austria	Germany	Romania
Belgium	*Greece	Spain
Bulgaria	Hungary	Sweden
Chile	India	Switzerland
Czechoslovakia	*Israel	Turkey
*Denmark	*Italy	United Kingdom
Finland	Netherlands	U.S.S.R.
France	Norway	

The revised Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in December 1957, to accept it as an ISO RECOMMENDATION.

* These Member Bodies stated that they had no objection to the Draft being approved.

BRIEF HISTORY DEALING WITH THE 2nd EDITION

At its meeting in Wiesbaden, in October 1961, the Technical Committee ISO/TC 60, considered that it might be necessary to undertake a revision of this ISO Recommendation so as to insert therein the modifications specified below:

1. **Title**, addition of the words " and for heavy engineering ".
2. **Table of modules *m***.
Addition of the following values to the bottom of column I: 25, 32, 40, 50;
Addition of the following values to the bottom of column II: 22, 28, 36, 45.
3. **Table of diametral pitches *P***
Deletion of the value 7, in column I.
Addition of the following values to the bottom of column I: 0.75, 0.625, 0.50.
Addition, in column II, of the value 11 between values 14 and 9,
and of the value 7 between values 9 and 5.50.
Addition, in column II, of a new value: 0.875.

This proposal having been adopted, a Draft Revision of ISO Recommendation R 54 (No. 696) was circulated in March 1964 to all the ISO Member Bodies. It was approved by 25 Member Bodies. No Member Body opposed the approval of the Draft Revision.

The Draft Revision of this ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in April 1966, to accept it. The present edition (2nd edition) embodies this revision.

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MODULES m

I	II	III
1		
1.25	1.125	
1.5	1.375	
2	1.75	
2.5	2.25	
3	2.75	
4	3.5	(3.25)
5	4.5	(3.75)
6	5.5	
8	7	(6.5)
10	9	
12	11	
16	14	
20	18	
25	22	
32	28	
40	36	
50	45	

DIAMETRAL PITCHES P

I	II
20	18
16	14
12	11
10	9
8	7
6	5.50
5	4.50
4	3.50
3	2.75
2.50	2.25
2	1.75
1.50	
1.25	
1	0.875
0.75	
0.625	
0.50	

The modules and the diametral pitches given in the tables apply to both straight and helical gears. (For the definition of basic rack, see ISO Recommendation R 53, *Basic Rack of Cylindrical Gears for General Engineering*.)

Preference should be given to the use of the modules and diametral pitches stated in column I. The three modules put in brackets in column III should be avoided wherever possible.