

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION R 677

BASIC RACK OF STRAIGHT BEVEL GEARS
FOR GENERAL ENGINEERING AND HEAVY ENGINEERING

1st EDITION

March 1968

COPYRIGHT RESERVED

The copyright of ISO Recommendations and ISO Standards belongs to ISO Member Bodies. Reproduction of these documents, in any country, may be authorized therefore only by the national standards organization of that country, being a member of ISO.

For each individual country the only valid standard is the national standard of that country.

Printed in Switzerland

Also issued in French and Russian. Copies to be obtained through the national standards organizations.

BRIEF HISTORY

The ISO Recommendation R 677, *Basic rack of straight bevel gears for general engineering and heavy engineering*, was drawn up by Technical Committee ISO/TC 60, *Gears*, the Secretariat of which is held by the Institut Belge de Normalisation (IBN).

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

In November 1965, this Draft ISO Recommendation (No. 883) 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 :

| | | |
|----------------|---------------|----------------|
| Australia | Hungary | Spain |
| Austria | India | Switzerland |
| Belgium | Israel | Turkey |
| Brazil | Italy | United Kingdom |
| Chile | Netherlands | U.S.S.R. |
| Czechoslovakia | Poland | Yugoslavia |
| France | South Africa, | |
| Germany | Rep. of | |

No Member Body opposed the approval of the Draft.

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.

BASIC RACK OF STRAIGHT BEVEL GEARS FOR GENERAL ENGINEERING AND HEAVY ENGINEERING

1. SCOPE

This ISO Recommendation describes the basic rack of straight bevel gears having a constant bottom clearance. In these gear pairs the tip angle of one gear is equal to the difference between the designed shaft angle and the root angle of the mating gear.

2. DEFINITIONS

- 2.1 *Basic rack.* Rack, the profile of which corresponds to a section of the tooth surface of a crown gear of infinitely large diameter on a plane at right angles to the tooth surfaces. This profile is used as the basis of a system of bevel gears having straight teeth.
- 2.2 *Reference line.* Straight line on the profile of the basic rack, with reference to which the tooth dimensions are specified.

3. PROFILE OF THE BASIC RACK

Figure 1, below, represents the profile of the basic rack for gears of module $m = 1$ and of diametral pitch $P = 1$ for straight bevel gears for general engineering and for heavy engineering within the following limits : *

$$1 \leq m \leq 50$$

$$20 \geq P \geq 0.5$$

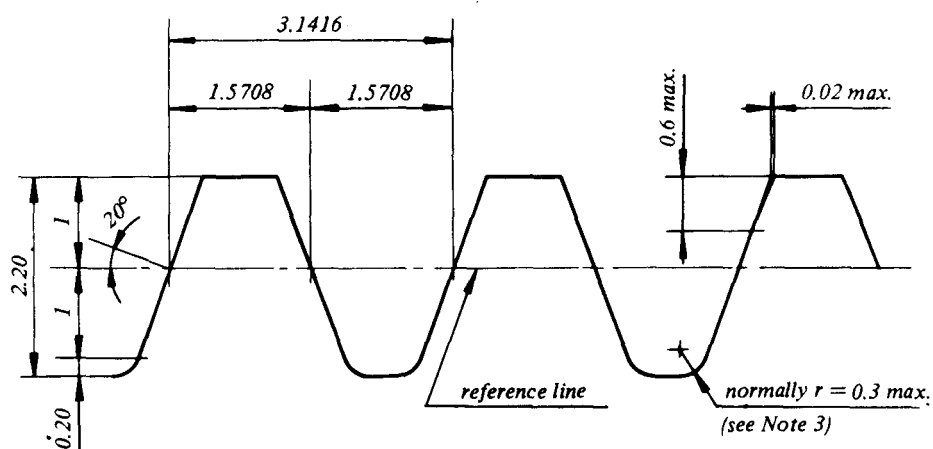


FIG. 1 – Profile of basic rack

* See ISO Recommendation R 678, *Modules and diametral pitches of straight bevel gears for general engineering and heavy engineering.*