

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION R 666

MOUNTING OF PLAIN GRINDING WHEELS BY MEANS OF HUB FLANGES

1st EDITION

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BRIEF HISTORY

The ISO Recommendation R 666, *Mounting of plain grinding wheels by means of hub flanges*, was drawn up by Technical Committee ISO/TC 39, *Machine tools*, the Secretariat of which is held by the Association Française de Normalisation (AFNOR).

Work on this question by the Technical Committee began in 1951 and led, in 1965, to the adoption of a Draft ISO Recommendation.

In February 1966, this Draft ISO Recommendation (No. 984) 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	Israel	Sweden
Belgium	Italy	Switzerland
Brazil	Japan	Turkey
Chili	Korea, Rep. of	U.A.R.
Czechoslovakia	Netherlands	United Kingdom
France	Poland	U.S.S.R.
Hungary	Portugal	Yugoslavia
India	Spain	

Two Member Bodies opposed the approval of the Draft:

Germany
U.S.A.

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

MOUNTING OF PLAIN GRINDING WHEELS BY MEANS OF HUB FLANGES

1. SCOPE

The object of this ISO Recommendation, which applies to the mounting of grinding wheels by means of hub flanges, is to specify, having regard to safety requirements, the dimensions of interchangeability between hub flanges and grinding wheels.

It is applicable to the following types of plain grinding wheels, having bores between 76.2 and 508 mm (3 and 20 in):

- fettling and sharpening plain wheels,
- plain wheels for external cylindrical grinding (except centreless)
- surface plain grinding wheels.

The requirements of this ISO Recommendation provide for complete interchangeability between the components (grinding wheels and hub flanges) regardless of whether they are manufactured to metric or inch dimensions.

2. GENERAL

The dimensions specified in this ISO Recommendation, together with the manufacturing requirements and checks to be made before use given below, have been determined taking into account the conditions necessary for ensuring safe assembly of the grinding wheels and the hub flanges, these conditions being as follows for the external diameter H of the hub flanges and for the radial width R of their gripping rim:

- (a) The value of R should be great enough to ensure a sufficient contact surface, but small enough to maintain a sufficient clamping pressure and to reduce the risks of abnormal stress due to imperfect flatness of the grinding wheel.
- (b) The difference between the internal diameter $H - 2R$ of the gripping rim and the bore A of the grinding wheel should be equal to at least 12 mm ($1/2$ in).
- (c) The difference between the recess diameter of recessed grinding wheels and the diameter H of the hub flanges should be equal to at least 10 mm ($3/8$ in).

Important Note. — It is considered essential that the regulations in force at the present time in various countries should be brought into line with the safety requirements thus defined, particularly with regard to the values of dimensions R and H . The retention of values of H greater than those given in this ISO Recommendation, far from improving safety, would have the opposite effect, and would adversely affect both the interchangeability and the satisfactory use of the grinding wheel.