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# INTERNATIONAL STANDARD



# 2940/I

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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

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## Milling cutters mounted on centring arbors having a 7/24 taper — Fitting dimensions — Centring arbors

*Fraises à surfacer et à surfacer et dresser, à montage direct sur nez de broches à conicité 7/24 — Dimensions d'interchangeabilité — Mandrins de centrage*

First edition — 1974-04-01

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ISO 2940-1:1974

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UDC 621.914.2

Ref. No. ISO 2940/I-1974 (E)

**Descriptors** : tools, milling cutters, mandrels, dimensions, interchangeability.

## FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up 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.

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.

International Standard ISO 2940/1 was drawn up by Technical Committee ISO/TC 29, *Small tools*, and circulated to the Member Bodies in October 1972.

It has been approved by the Member Bodies of the following countries:

Belgium	Israel	Thailand
Czechoslovakia	Italy	Turkey
Egypt, Arab Rep. of	Poland	U.S.A.
Germany	Romania	U.S.S.R.
Hungary	South Africa, Rep. of	
India	Switzerland	

The Member Bodies of the following countries expressed disapproval of the document on technical grounds:

Austria  
France  
Japan  
Sweden  
United Kingdom

# Milling cutters mounted on centring arbors having a 7/24 taper — Fitting dimensions — Centring arbors

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### 1 SCOPE AND FIELD OF APPLICATION

This International Standard lays down the fitting dimensions for milling cutters mounted on centring arbors having a 7/24 taper, and the dimensions of centring arbors intended to facilitate centring of the cutter on the spindle nose.

This International Standard applies both to cutters with inserted teeth, made from high speed steel or with brazed carbide tips, and to cutters equipped with indexable carbide tips.

It concerns :

- firstly, the so-called “single purpose mounting” milling cutter, arbor located, to be used with a well-defined spindle nose having a 7/24 taper.
- secondly, the so-called “dual purpose mounting” milling cutter, arbor located, to be used with both spindle nose No. 50 and spindle nose No. 60 having a 7/24 taper.

The general fitting dimensions are in accordance with ISO/R 297 and its addendum 1.

### 2 REFERENCES

ISO/R 297, *7/24 tapers for tool shanks*.

ISO/R 1101, *Technical drawings — Tolerances of form and of position — Part 1: Generalities, symbols, indications on drawings*.

ISO 2940/II, *Milling cutters mounted on centring arbors having a 7/24 taper — Inserted tooth cutters*.

3 CENTRING ARBORS

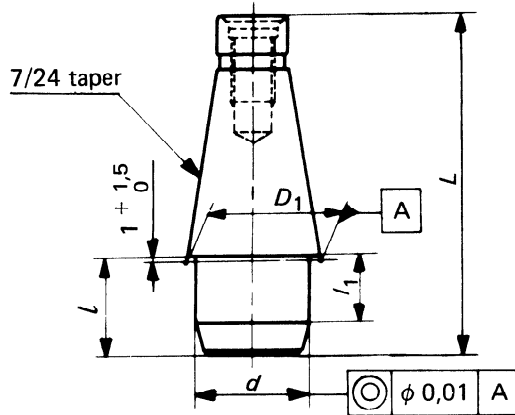


TABLE 1

Dimensions in millimetres

For spindle 7/24 No.	$D_1$	$d$ g5	$l$ max.	$l_1$	$L$ max.	For cutters of $D =$							
						160	200	250	315	400	500	630	
40	44,45	40	40	25	133	X	X						
45	57,15				146	X	X	X	X				
50	69,85	60	48	32	174		X	X	X	X	X		
55	88,90				212		X	X	X	X	X	X	
60	107,95				254		X	X	X	X	X	X	

The shape of the spigot of the arbor is at the manufacturer's discretion.

7/24 tapers in accordance with ISO/R 297 and its addendum 1, except for the location of the end of taper with respect to the gauge plane on which is located diameter  $D_1$ .

4 FITTING DIMENSIONS FOR MILLING CUTTERS MOUNTED ON CENTRING ARBORS HAVING A 7/24 TAPER

4.1 For single purpose mounting cutters

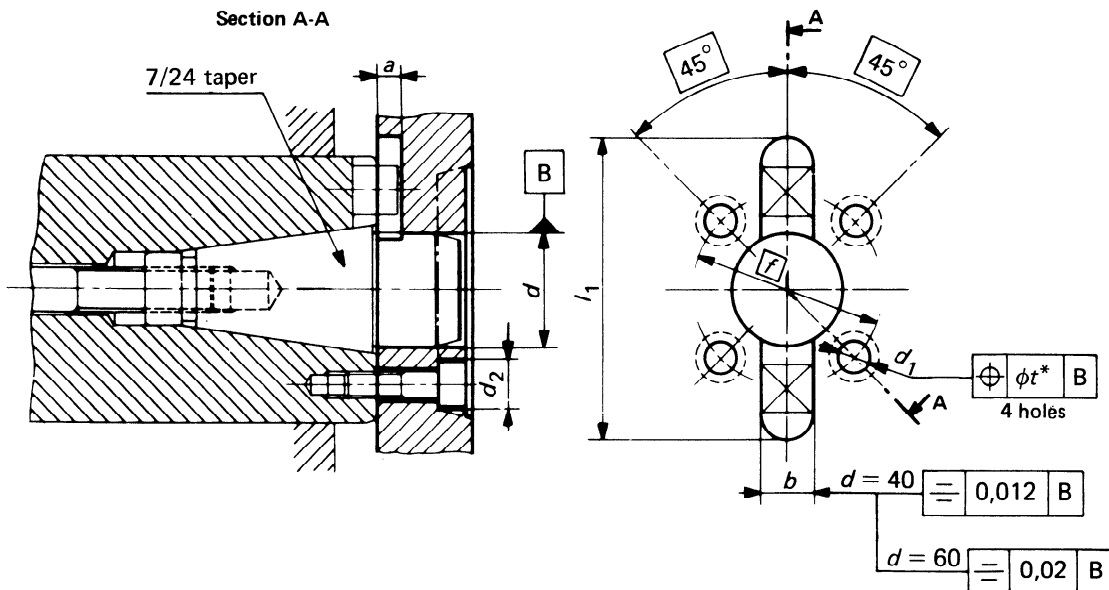


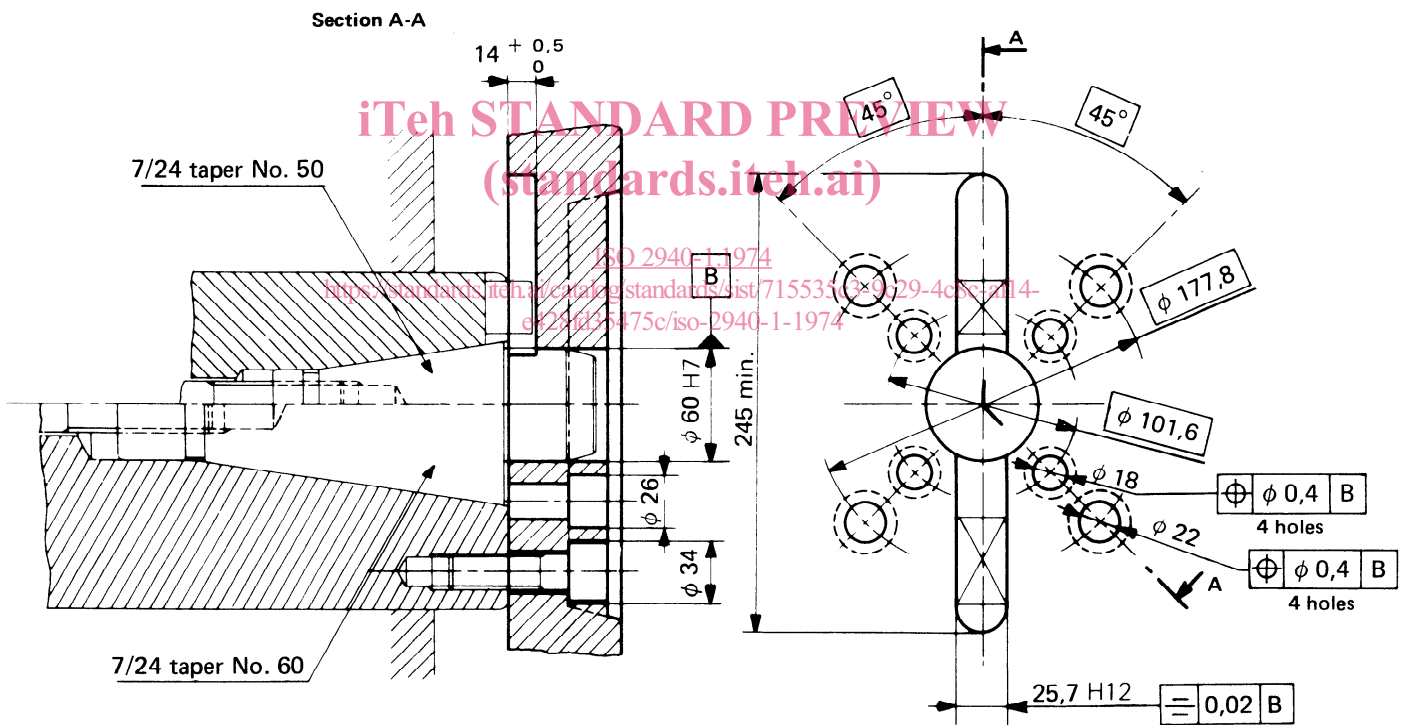
TABLE 2

Dimensions in millimetres

Mounting on 7/24 spindle nose No.	$d$ H7	$f$	$d_1$	$t^*$	$d_2$	$b$ H12	$a$ $+0,5$ $0$	$l_1$ min.
40	40	66,7	14	0,3	20	16,1	9	105
45	40	80,0	14	0,3	20	19,3	11	123
50	60	101,6	18	0,4	26	25,7	14	155
55	60	120,6	22	0,4	34	25,7	14	180
60	60	177,8	22	0,4	34	25,7	14	245

\* Dimension  $t$  represents the positional tolerance of the axis of the holes of diameter  $d_1$ . Each of the axes of the four holes should be contained within a cylindrical zone of diameter  $t$  the axes of which are in the true specified position (see ISO/R 1101).

4.2 For dual purpose mounting cutters mounted on 7/24 spindle noses No. 50 or 60



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