
International Standard



6462

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

Face milling cutters with indexable inserts — Dimensions

Fraises à surfacer et à surfacer et dresser, à plaquettes amovibles — Dimensions

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[ISO 6462:1983](https://standards.iteh.ai/catalog/standards/sist/cc7fe99c-2fd-4482-9862-574349848d3c/iso-6462-1983)

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UDC 621.914.2 : 621.9.025.7

Ref. No. ISO 6462-1983 (E)

Descriptors : tools, cutting tools, milling cutters, inserts, dimensions.

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 6462 was developed by Technical Committee ISO/TC 29, *Small tools*, and was circulated to the member bodies in January 1981.

It has been approved by the member bodies of the following countries :

Australia	India	Romania
Austria	Israel	South Africa, Rep. of
Belgium	Italy	Spain
Bulgaria	Japan	Sweden
China	Korea, Dem. P. Rep. of	Switzerland
Egypt, Arab Rep. of	Korea, Rep. of	United Kingdom
France	Mexico	USA
Germany, F. R.	Netherlands	USSR
Hungary	Poland	

The member body of the following country expressed disapproval of the document on technical grounds :

Czechoslovakia

Face milling cutters with indexable inserts — Dimensions

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1 Scope and field of application

This International Standard lays down the dimensions of face milling cutters with indexable inserts.

The form and dimensions of the inserts are left to the choice of the manufacturer.

The range of outside diameters of these cutters is taken from ISO 523.

2 References

ISO 240, *Milling cutters — Interchangeability dimensions for cutter arbors or cutter mandrels — Metric series and inch series.*

ISO 523, *Milling cutters — Recommended range of outside diameters.*

ISO 2780, *Milling cutters with tenon drive — Interchangeability dimensions with cutter arbors — Metric series.*

ISO 2940/1, *Milling cutters mounted on centring arbors having a 7/24 taper — Fitting dimensions — Centring arbors.*

ISO 3365/1, *Indexable (throwaway) carbide inserts for milling cutters — Dimensions — Part 1 : Square inserts.*

ISO 3365/2, *Indexable (throwaway) carbide inserts for milling cutters — Dimensions — Part 2 : Triangular inserts.*

3 Style

Milling cutters with indexable inserts are standardized with cutting edge angles 45°, 75° and 90° and of the following styles :

- style A with tenon drive and hexagon socket head cap screw, diameter 50, 63, 80 and 100 mm;
- style B with tenon drive and cutter retaining screw with interchangeability dimensions according to ISO 2780 of diameter 80, 100 and 125 mm;
- style C mounted on centring arbor having a 7/24 taper with interchangeability dimensions according to ISO 2940/1 of diameter 160, 200, 250, 315, 400 and 500 mm.

NOTE — The milling cutter style C, diameter 160 mm may also be used with tenon drive.

4 Definitions

4.1 Cutting diameter, D , and cutting height, H

Diameter D and height H of the milling cutter are taken from point P as defined in the figures below.

The values of D and H and their tolerances, as given in the tables, are related to master inserts with wiper edges, having form and dimensions according to ISO 3365/1 and ISO 3365/2. When other inserts are used, H and D will vary.

4.2 cutting edge angle, α_r : Nominal value of the cutting edge angle of the insert.

The effective angle obtained on the workpiece depends on the geometry and the diameter of the milling cutter together with the cutting depth.

5 Dimensions

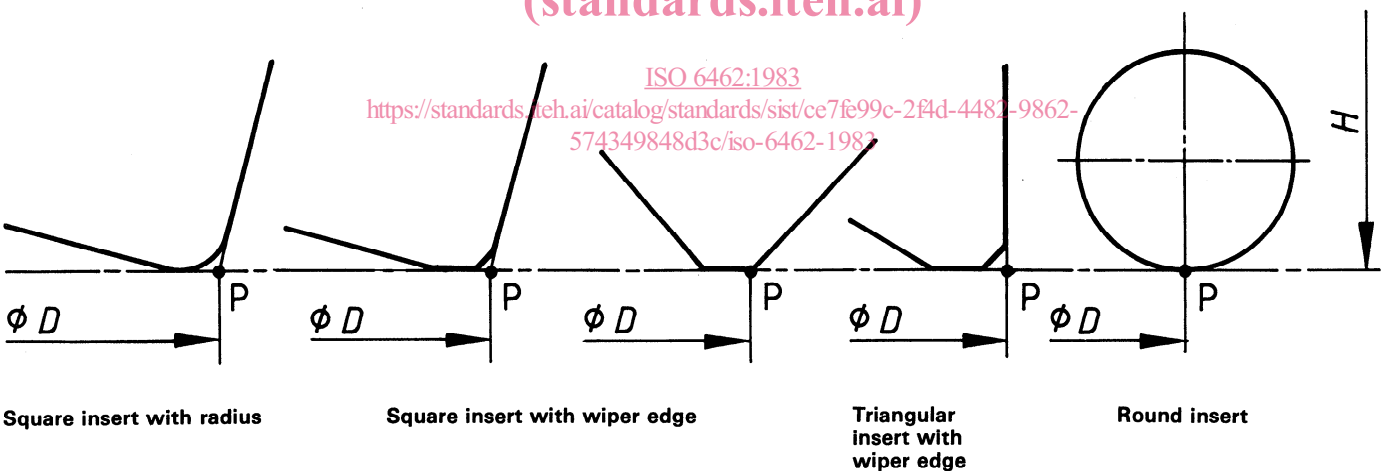
5.1 Holes for lifting devices

For milling cutters of diameter D equal to or above 250 mm, threaded holes for lifting devices can be provided at the manufacturer's option. The number of holes and their position is at the manufacturer's choice but their minimum dimensions must be as follows :

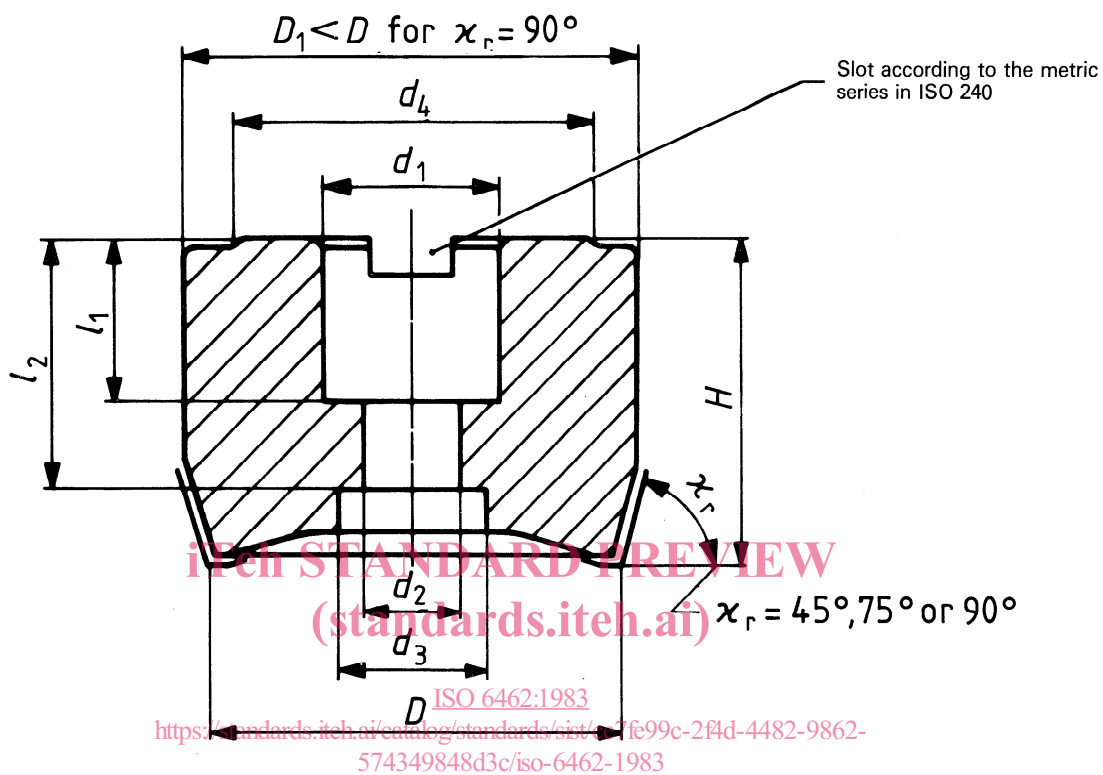
- for milling cutters where $D = 250$ or 315 mm, threaded holes M12 \times 27;
- for milling cutters where $D = 400$ or 500 mm, threaded holes M16 \times 34.

NOTE — National safety regulations must be taken into consideration.

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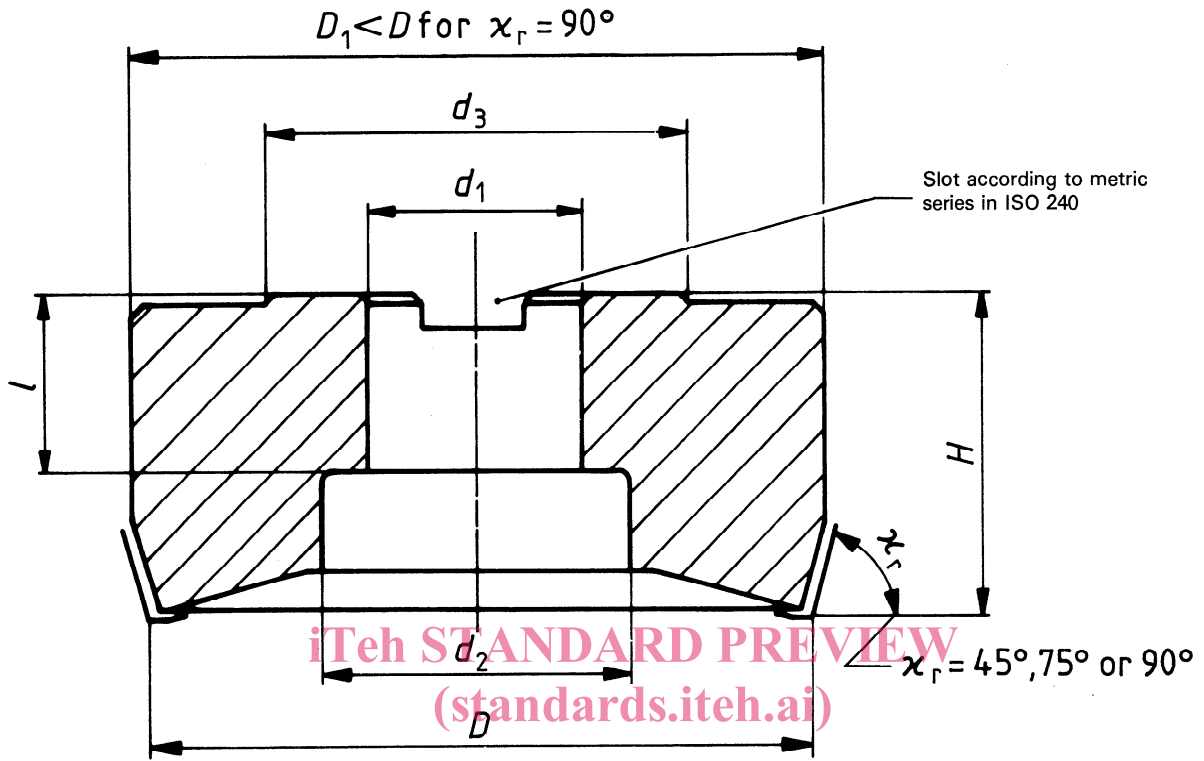
5.2 Style A, tenon drive, hexagon socket head cap screw



Dimensions in millimetres

D j_s16	d_1 H7	d_2	d_3	d_4 min.	H $\pm 0,15$	l_1	l_2 max.	Retaining screw
50	22	11	18	41	40	20	33	M10
63	22	11	18	41	40	20	33	M10
80	27	13,5	20	49	50	22	37	M12
100	32	17,5	27	59	50	25	33	M16

5.3 Style B, tenon drive, cutter retaining screw



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Dimensions in millimetres

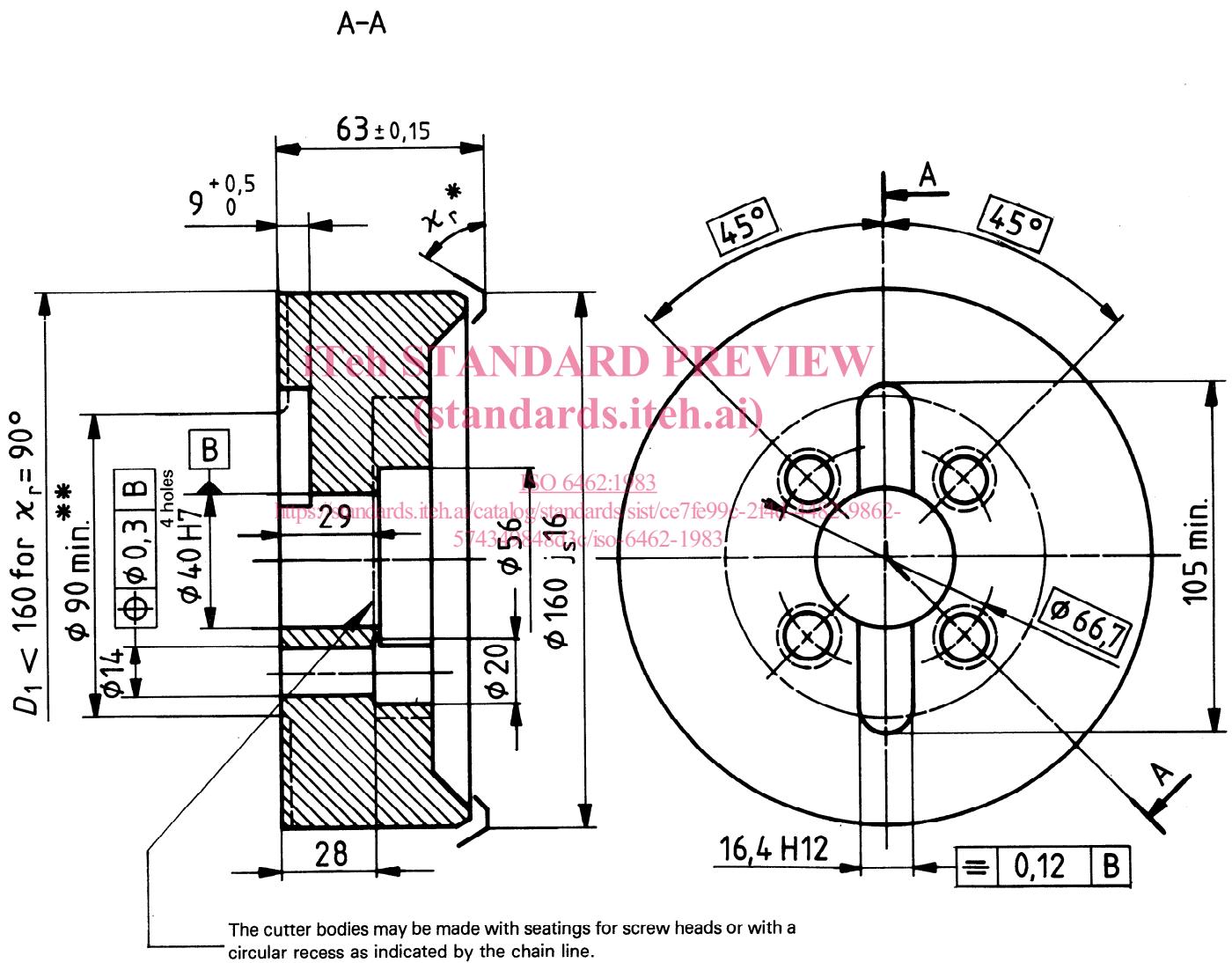
D $j_s 16$	d_1 H7	d_2	d_3 min.	H $\pm 0,15$	l		Retaining screw
					min.	max.	
80	27	38	49	50	22	30	M12
100	32	45	59	50	25	32	M16
125	40	56	71	63	28	35	M20

5.4 Style C, mounted on centring arbor having a 7/24 taper

5.4.1 $D = 160$ mm, centring arbor No. 40

NOTE — This milling cutter may also be used with tenon drive.

Dimensions in millimetres

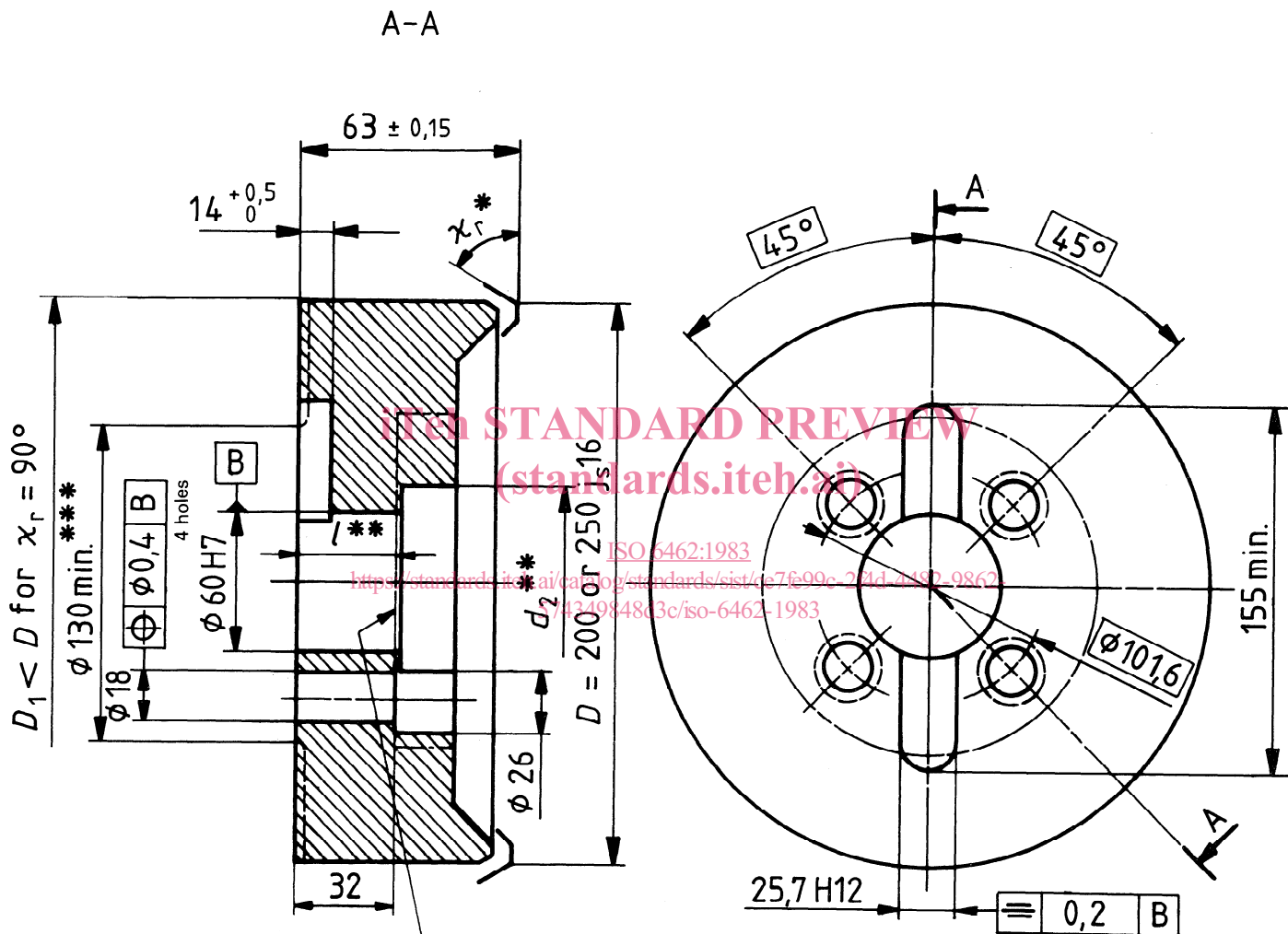


* $\chi_r = 45^\circ, 75^\circ$ or 90°

** Relief with diameter 90 mm min. on the back face of the body is optional.

5.4.2 $D = 200$ and 250 mm, centring arbor No. 50

Dimensions in millimetres



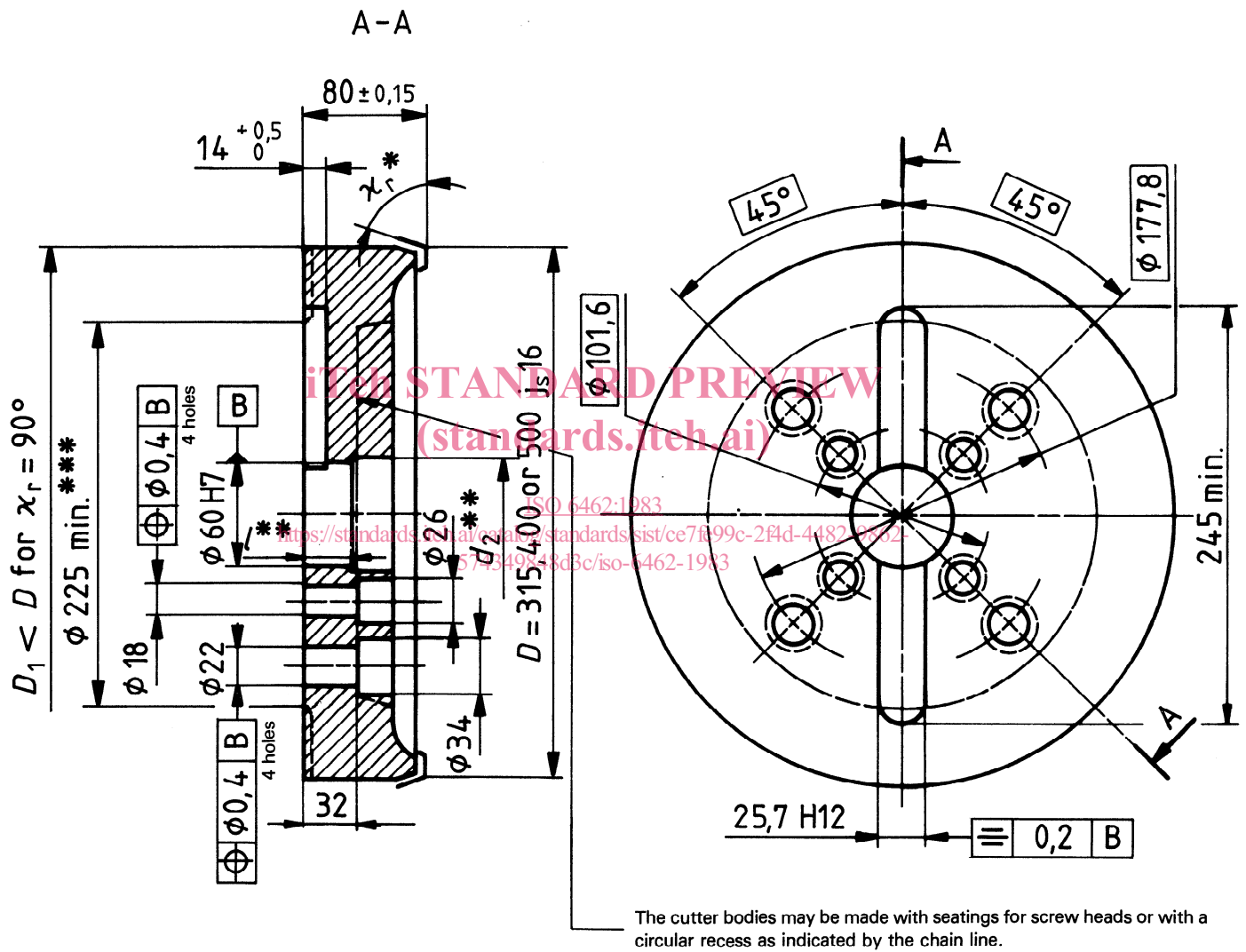
* $\chi_r = 45^\circ, 75^\circ$ or 90°

** At the manufacturer's option.

*** Relief with diameter 130 mm min. on the back face of the cutter body is optional.

5.4.3 $D = 315, 400$ and 500 mm, centring arbor No. 50 and 60

Dimensions in millimetres



* $\alpha_r = 45^\circ, 75^\circ$ or 90°

** At the manufacturer's option.

*** Relief with diameter 225 mm min. on the back face of the cutter body is optional.