International Standard 3365/2

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

Indexable (throwaway) hardmetal inserts for milling cutters — Dimensions — Part 2 : Triangular inserts

Plaquettes amovibles en métaux-durs pour fraises — Dimensions — Partie 2 : Plaquettes triangulaires

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Descriptors : tools, cutting tools, milling cutters, carbide cutters, carbide tools, inserts, designation, marking, dimensions, dimensional tolerances.

Price based on 4 pages

Indexable (throwaway) hardmetal inserts for milling cutters — Dimensions — Part 2 : Triangular inserts

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1 Scope and field of application

This International Standard specifies the dimensions of triangular indexable (throwaway) hardmetal (cemented carbide) inserts intended to be mounted mechanically, and not by brazing, on milling cutters.

Square inserts are dealt with in ISO 3365/1.

2 References

ISO 513, *Application of carbides for machining by chip removal — Designation of the main groups of chip removal and groups of application.*

ISO 1832, *Indexable (throwaway) inserts for cutting tools — Designation — Code of symbolization.*

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

3 Interchangeability

Dimension m specified in the tables refers to a theoretically perfect insert. In practice, as the points on which the inserts are located in both manufacture and measuring may be different, the nominal value of dimension m may vary from one manufacturer to another within a range of ± 0,05 mm. Nevertheless, for inserts from the same manufacturer, dimension m shall comply with the tolerances given in ISO 1832 (see the annex).

4 Types of inserts

The types of triangular indexable (throwaway) hardmetal (cemented carbide) inserts for milling cutters are the following :

— TP .... PPN : Symmetrical triangular inserts with 90° cutting edge angle, 11° normal clearance and 11° wiper edge normal clearance.

— TP .... PD : Asymmetrical triangular inserts with chamfered corners, 90° cutting edge angle, 11° normal clearance and 15° wiper edge normal clearance.

5 Tolerances

Indexable (throwaway) hardmetal (cemented carbide) inserts according to this International Standard may be manufactured in tolerance classes A, C or K, according to ISO 1832. The values of these tolerances for the dimensions of the inserts are given in the annex.

It is recommended that national standards be limited to only two tolerance classes.

6 Designation and marking

6.1 Designation

The designation of the indexable (throwaway) hardmetal (cemented carbide) inserts for milling cutters covered by this International Standard shall conform to ISO 1832. For symmetrical triangular inserts the symbol N at the end of the designation (left and right hand cutting) is compulsory.

In addition to this designation, one or both of the following may be indicated :

— the symbol of the group of application, according to ISO 513;

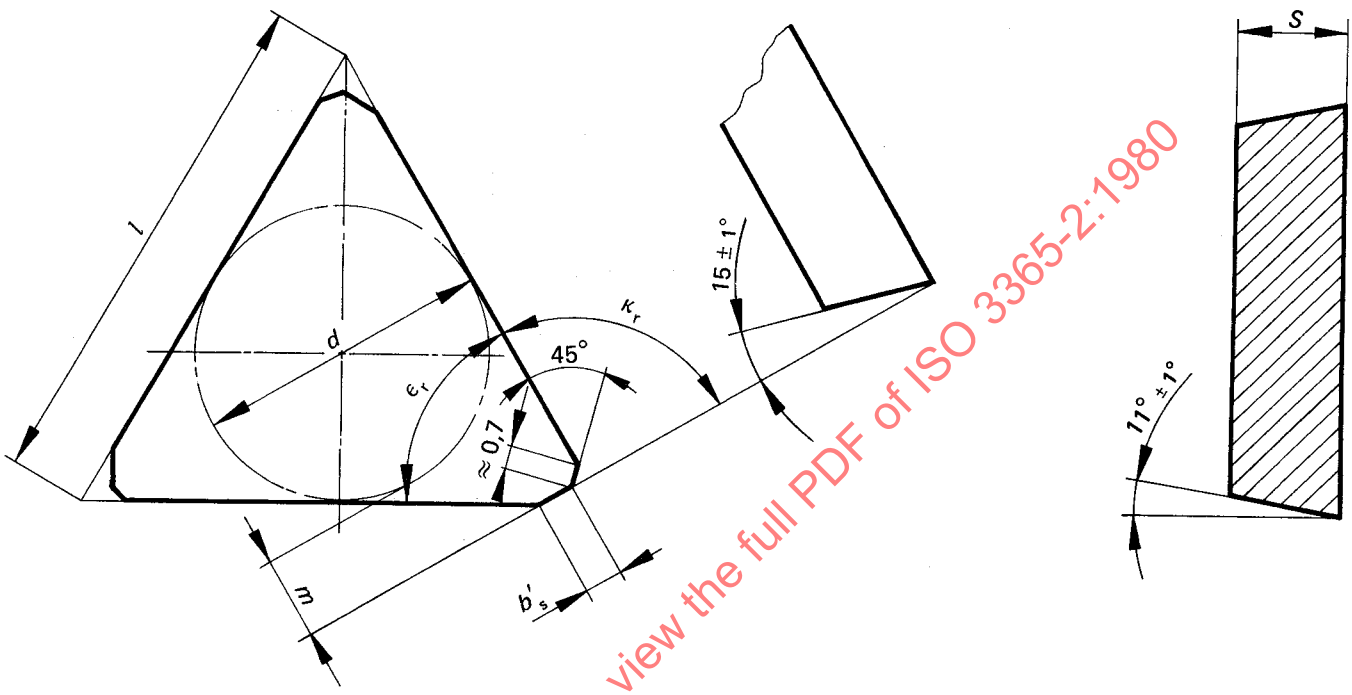
— the commercial designation of the hardmetal (cemented carbide) grade.

6.2 Marking

The following symbol, at least, shall be marked on the insert itself :

— symbol of the group of application, or commercial designation of the hardmetal (cemented carbide) grade (or both, if possible, on large inserts).

7.2 Asymmetrical triangular inserts with chamfered corners, 90° cutting edge angle, 11° normal clearance and 15° wiper edge normal clearance.



The diagram shows a right-hand cutting insert.

Designation		d	l	m	s	b'_s	ϵ_r		κ_r	
metric	inch	1)	≈	1)	1)	≈		tol.		tol.
TPAN1603PDR	TPAN32PDR	9,525	16,5	2,45	3,175	1,3	60°	± 8′	90°	+ 15′ 0
TPAN1603PDL	TPAN32PDL									
TPCN1603PDR	TPCN32PDR									
TPCN1603PDL	TPCN32PDL									
TPKN1603PDR	TPKN32PDR							± 15′		+ 30′ 0
TPKN1603PDL	TPKN32PDL									
TPAN2204PDR	TPAN43PDR	12,7	22	3,55	4,76	1,4	60°	± 8′	90°	+ 15′ 0
TPAN2204PDL	TPAN43PDL									
TPCN2204PDR	TPCN43PDR									
TPCN2204PDL	TPCN43PDL									
TPKN2204PDR	TPKN43PDR							± 15′		+ 30′ 0
TPKN2204PDL	TPKN43PDL									

1) For tolerances on d, m and s, see the annex.

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