



## DRAFT AMENDMENT ISO 1832:1991/DAM 2

ISO/TC 29/SC 9

Secretariat: **DIN**

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**2002-07-25**

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

# Indexable inserts for cutting tools — Designation

## AMENDMENT 2: Designation symbols

*Plaquettes amovibles pour outils coupants — Désignation*

*AMENDEMENT 2: Symboles de désignation*

ICS 25.100.01

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Amendment 2 to International Standard ISO 1832:1991 was prepared by Technical Committee ISO/TC 29, *Small tools*, Subcommittee SC 9, *Tools with cutting edges made of hard cutting materials*.

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# Indexable inserts for cutting tools — Designation

## AMENDMENT 2: Designation symbols

### 1 Scope

This Draft Amendment specifies the designation symbols for cubic boron nitride (BN) inserts, tipped and solid as well as polycrystalline diamond (DP) inserts, tipped.

At a later date, this amendment shall be incorporated in the fourth edition of ISO 1832.

### 2 Explanation of designation code

<b>Designation of insert for turning</b>	<b>S</b>	<b>N</b>	<b>M</b>	<b>A</b>	<b>15</b>	<b>06</b>	<b>08</b>	<b>E</b>	<b>(N)</b>	<b>—</b>	<b>B</b>	<b>L</b>	<b>—</b>	<b>...</b>	
<b>Designation of insert for milling</b>	<b>T</b>	<b>P</b>	<b>G</b>	<b>T</b>	<b>16</b>	<b>T3</b>	<b>AP</b>	<b>S</b>	<b>01520</b>	<b>R</b>	<b>—</b>	<b>M</b>	<b>028</b>	<b>—</b>	<b>...</b>
	①	②	③	④	⑤	⑥	⑦	⑧	⑩	⑨		⑪	⑫		⑬

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①	Letter symbol identifying	<b>insert shape</b>	Compulsory symbols for indexable inserts (according to ISO 1832:1991)	Compulsory symbols for tipped inserts, except as noted	
②	Letter symbol identifying	<b>normal clearance</b>			
③	Letter symbol identifying	<b>tolerance class</b>			
④	Letter symbol indicating	<b>fixing and/or chip breakers</b>			
⑤	Number symbol identifying	<b>insert size</b>			
⑥	Number of symbol identifying	<b>insert thickness</b>			
⑦	Letter or number symbol identifying	<b>insert corner configuration</b>			
⑧ <sup>a</sup>	Letter symbol indicating	<b>cutting edge condition</b>			
⑨ <sup>a</sup>	Letter symbol identifying	<b>cutting direction</b>			
⑩ <sup>b</sup>	Number symbol identifying	<b>size of cutting edge condition</b>			See 3.1
⑪	Letter symbol identifying	<b>style of tipped or solid cutting edge and number of tipped corners</b>			See 3.2
⑫	Letter or number symbol identifying	<b>length of tipped cutting edge</b>			See 3.3
⑬ <sup>a</sup>	Manufacturer's symbol				

<sup>a</sup> optional symbols for indexable and tipped inserts  
<sup>b</sup> optional symbol for tipped inserts

### 3 Optional Symbols

#### 3.1 Size of cutting edge condition

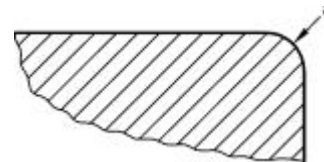
— reference ⑩

Maximum is a 5 digit number symbol dependent on the cutting edge condition

##### 3.1.1 E = rounded

no coding of the size

EXAMPLE SNMA150608E



a Honing

Figure 1

##### 3.1.2 T = chamfered

5 digit number symbol

—  $b_g$  — T-land size in 1/100 mm 3 digit

—  $g$  — T-land angle 2 digit

Symbol	$b_g$	Symbol	$g$
005	0,05	05	5°
010	0,10	10	10°
015	0,15	15	15°
020	0,20	20	20°
025	0,25	25	25°
030	0,30	30	30°
050	0,50		
070	0,70		
100	1,00		
150	1,50		
200	2,00		

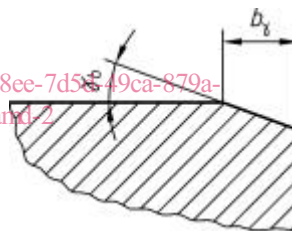


Figure 2

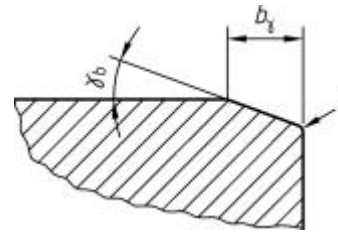
EXAMPLE SNMA150608T05020

3.1.3 S = chamfered and rounded

5 digit number symbol

- $b_g$  — T-land size in 1/100 mm 3 digit
- $g_b$  — T-land angle 2 digit
- rounding no code

Symbol	$b_g$	Symbol	$g_b$
005	0,05	05	5°
010	0,10	10	10°
015	0,15	15	15°
020	0,20	20	20°
025	0,25	25	25°
030	0,30	30	30°
050	0,50		
070	0,70		
100	1,00		
150	1,50		
200	2,00		



a Honing

Figure 3

EXAMPLE SNMA150608S05020

3.1.4 K = double chamfered

5 digit number symbol

- $b_{g1}$  — T-land size in 1/100 mm 3 digit
- $g_{1}$  — T-land angle 2 digit

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Symbol	$b_{g1}$	$g_{1}$	$b_{g2}$	$g_{2}$
05015	0,50	15°	0,10	30°
07015	0,70	15°	0,15	30°
10015	1,00	15°	0,20	30°
15010	1,50	10°	0,25	30°
20010	2,00	10°	0,25	30°

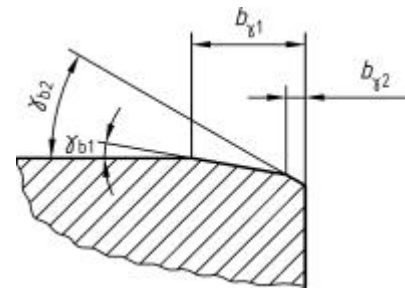


Figure 4

EXAMPLE SNMA150608K15010

## 3.1.5 P = double chamfered and rounded

5 digit number symbol

—  $b_{g1}$  — T-land size in 1/100 mm

3 digit

—  $g_1$  — T-land angle

2 digit

—  $b_{g2} \times g_2$  dependent on  $b_{g1} \times g_1$ 

— rounding

no code

Symbol	$b_{g1}$	$g_1$	$b_{g2}$	$g_2$
05015	0,50	15°	0,10	30°
07015	0,70	15°	0,15	30°
10015	1,00	15°	0,20	30°
15010	1,50	10°	0,25	30°
20010	2,00	10°	0,25	30°

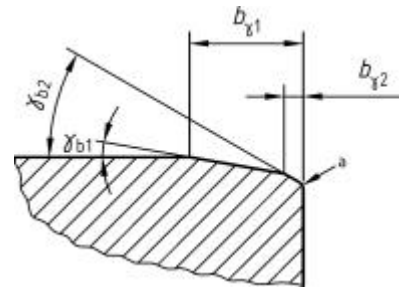


Figure 5

EXAMPLE SNMA150608P15010

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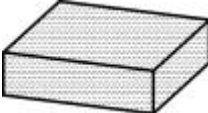
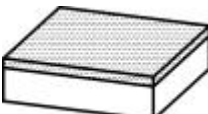
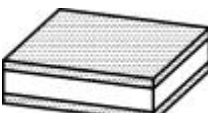



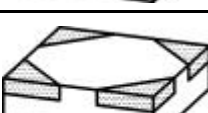
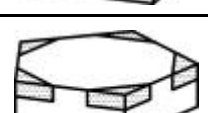
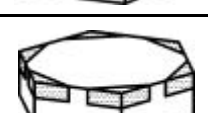



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## 3.2 Style of tipped or solid cutting edge and number of tipped corners

1 digit letter symbol

— reference ①

Symbol	Picture	Description
S		solid
F		full face — one-sided
E		full face — two-sided
A		tipped — one-sided — one corner
B		tipped — one-sided — two corners
C		tipped — one-sided — three corners
D		tipped — one-sided — four corners
G		tipped — one-sided — five corners
H		tipped — one-sided — six corners
J		tipped — one-sided — eight corners
K		tipped — two-sided — one corner
L		tipped — two-sided — two corners