

INTERNATIONAL STANDARD

ISO
6261

Second edition
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Boring bars (tool holders with cylindrical shank) for indexable inserts — Designation

*Porte-plaquette d'alésage (porte-plaquette à queue de section ronde) —
Désignation*



Reference number
ISO 6261:1995(E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established 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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 6261 was prepared by Technical Committee ISO/TC 29, *Small tools*, Subcommittee SC 9, *Tools with cutting edges made of hard cutting materials*.

This second edition cancels and replaces the first edition (ISO 6261:1984), subclause 4.6 of which has been technically revised (addition of boring bar style P).

Annex A of this International Standard is for information only.

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International Organization for Standardization

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Boring bars (tool holders with cylindrical shank) for indexable inserts — Designation

1 Scope

This International Standard establishes a code for the designation of boring bars (tool holders with cylindrical shank) with standardized dimension f (see ISO 5609), for indexable inserts so that orders and specifications for such tools can be simplified.

The designation of turning and copying tool holders and of cartridges for indexable inserts with rectangular shank is specified in ISO 5608 (see annex A).

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 5609:1995, *Boring bars for indexable inserts — Dimensions*.

3 Explanation of the designation code

The designation code includes nine symbols for the designation of dimensions and other characteristics of the tool and the insert.

In addition to the standardized designation [symbols (1) to (9)], a supplementary symbol consisting of a maximum of three letters and/or numbers may be added by the manufacturer for a better description of

his products on condition that this symbol is separated from the standardized designation by a dash.

No addition to or extension of the code given in this International Standard shall be made without consultation with Technical Committee ISO/TC 29 and its agreement. Rather than adding symbols not provided for in this system, it is preferable to add all necessary explanations in detailed sketches or specifications to the designation conforming to this International Standard.

The meaning of the nine compulsory symbols constituting the code is as follows:

- (1) letter symbol identifying the type of tool¹⁾ (see 4.1);
- (2) number symbol identifying the diameter of the shank (see 4.2);
- (3) letter symbol identifying the length of the tool (see 4.3);
- dash not counted as a symbol;
- (4) letter symbol identifying the method of holding the insert (see 4.4);
- (5) letter symbol identifying the insert shape (see 4.5);²⁾
- (6) letter symbol identifying the style of the tool (see 4.6);
- (7) letter symbol identifying the insert normal clearance (see 4.7);
- (8) letter symbol identifying the hand of the tool (see 4.8);

1) The term “tool” in this International Standard refers to boring bars (tool holders with cylindrical shank).

2) In accordance with ISO 1832 (see annex A).

(9) number symbol identifying the size of the insert (see 4.9)²⁾.

EXAMPLES

S 25R-CTFPR16 Solid steel tool, 25 mm diameter, 200 mm long, top clamping, triangular insert, style “F”, insert normal clearance 11°, right hand tool, 16 mm insert size.

F 32S-MSKNR12 Hardmetal (carbide) tool with fixed steel head, antivibration device, 32 mm diameter, 250 mm long, top and hole clamping, square insert, style “K”, insert normal clearance 0°, right hand tool, 12 mm insert size.

4 Symbols

4.1 Symbol for the type of tool — Reference (1)

See table 1.

4.2 Symbol for the diameter of the shank — Reference (2)

The number symbol for the shank diameter is the value of the diameter in millimetres. If the resulting symbol has only one digit, it shall be preceded by 0 (zero).

EXAMPLES

shank diameter	25 mm
symbol	25
shank diameter	8 mm
symbol	08

Table 1

Letter symbol	Type of tool
S	Solid steel tool
A	Solid steel tool with lubrication hole
B	Solid steel tool with antivibration device
D	Solid steel tool with antivibration device and lubrication hole
C	Hardmetal (carbide) tool with fixed steel head
E	Hardmetal (carbide) tool with fixed steel head and lubrication hole
F	Hardmetal (carbide) tool with fixed steel head and antivibration device
G	Hardmetal (carbide) tool with fixed steel head, antivibration device and lubrication hole
H	Heavy metal tool
J	Heavy metal tool with lubrication hole

4.3 Symbol for the tool length — Reference (3)

See table 2.

Table 2

Letter symbol	Tool length, mm
F	80
G	90
H	100
J	110
K	125
L	140
M	150
N	160
P	170
Q	180
R	200
S	250
T	300
U	350
V	400
W	450
Y	500
X	Special length, to be specified

4.4 Symbol for the method of holding the horizontally mounted insert — Reference (4)

See table 3.

Table 3

Letter symbol	Method of holding
C	Top clamping (insert without hole)
M	Top and hole clamping (insert with hole)
P	Hole clamping (insert with hole)
S	Screw clamping through hole (insert with hole)

4.5 Symbol for the insert shape — Reference (5)

See table 4.

Table 4

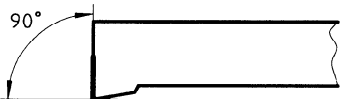
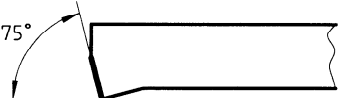
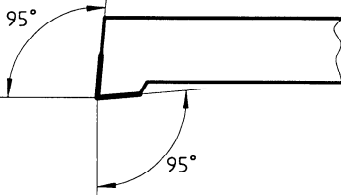
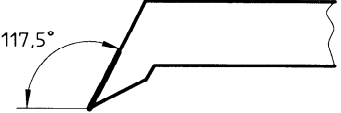
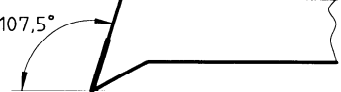
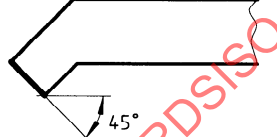
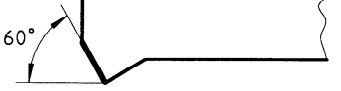
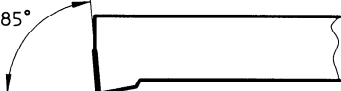
Letter symbol	Insert shape	
H O P S T	Hexagonal Octagonal Pentagonal Square Triangular	Equilateral and equiangular inserts
C D E M V W	Rhombic with 80° included angle Rhombic with 55° included angle Rhombic with 75° included angle Rhombic with 86° included angle Rhombic with 35° included angle Hexagonal with 80° included angle	Equilateral but non-equiangular inserts
L	Rectangular	Non-equilateral but equiangular inserts
A B K	Parallelogram-shaped with 85° included angle Parallelogram-shaped with 82° included angle Parallelogram-shaped with 55° included angle	Non-equilateral and non-equiangular inserts
R	Round	Round inserts

NOTE — The included angle is always the smaller angle.

4.6 Symbol for the tool style — Reference (6)

See table 5.

Table 5

Letter symbol	Tool style	
F		90° cutting edge angle, offset shank, for end cutting
K		75° cutting edge angle, offset shank, for end cutting
L		95° cutting edge angles on both cutting edges, offset shank, for side and end cutting
P		117,5° cutting edge angle, offset shank, for end cutting
Q		107,5° cutting edge angle, offset shank, for end cutting
S		45° cutting edge angle, offset shank, for side and end cutting
U		93° cutting edge angle, offset shank, for end cutting
W		60° cutting edge angle, offset shank, for end cutting
Y		85° cutting edge angle, offset shank, for end cutting
NOTE — Tools of style S may also be equipped with round inserts (shape R).		

4.7 Symbol for the insert normal clearance — Reference (7)

See table 6.

Table 6

Letter symbol	Insert normal clearance
A	3°
B	5°
C	7°
D	15°
E	20°
F	25°
G	30°
N	0°
P	11°

NOTE — For non-equilateral inserts, the symbol applies to the normal clearance of the longer side.

4.8 Symbol for the hand of tool — Reference (8)

See table 7.

Table 7

Letter symbol	Hand of tool
R	Right hand
L	Left hand

4.9 Symbol for insert size — Reference (9)

See table 8.

Table 8

Insert type	Number symbol
Equilateral and equiangular (H, O, P, S, T) and equilateral and non-equiangular (C, D, E, M, V, W)	The symbol of designation for the insert size is the side length, disregarding any decimals. EXAMPLE Edge length: 16,5 mm Symbol: 16
Non-equilateral but equiangular (L), and non-equilateral and non-equiangular (A, B, K)	The symbol of designation for the insert size is always given for the major cutting edge or the longer cutting edge. The symbol of designation is the length, disregarding any decimals. EXAMPLE Length of the major cutting edge: 19,5 mm Symbol: 19
Round insert (R)	The symbol of designation for the insert size is always given for the diameter value, disregarding any decimals. EXAMPLE Diameter: 15,875 mm Symbol: 15
NOTE — When the symbol resulting from the retained value has only one digit, it shall be preceded by 0 (zero). EXAMPLE Cutting edge length: 9,525 mm Symbol of designation: 09	

Annex A

(informative)

Bibliography

- [1] ISO 1832:1991, *Indexable inserts for cutting tools — Designation.*
- [2] ISO 5608:1995, *Turning and copying tool holders and cartridges for indexable inserts — Designation.*
- [3] ISO 5610:1995, *Single-point tool holders for turning and copying, for indexable inserts — Dimensions.*

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