INTERNATIONAL STANDARD

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Tool holders with cylindrical shank (boring bars) for indexable inserts — Designation

Porte-plaquette à queue cylindrique (porte-plaquette d'alésage) — Désignation

Reference number
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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

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 third edition cancels and replaces the second edition (ISO 6261:1995), which has been technically revised.

Tool holders with cylindrical shank (boring bars) for indexable inserts — Designation

1 Scope

This International Standard defines a code for the designation of tool holders for internal turning (boring bars) operations with cylindrical shank and standardized dimension, f, for indexable inserts (see ISO 5609) in order to simplify orders and specifications for such tools.

The designation of turning and copying tool holders and of cartridges for indexable inserts with rectangular shank is given in ISO 5608.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 1832, *Indexable inserts for cutting tools — Designation*

3 Configuration of the designation

The designation code includes ten symbols for the designation of dimensions and other characteristics of the tool holder and the indexable insert.

In addition to the standardized designation (symbols 1 to 10), 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/her products on condition that this symbol is separated from the standardized designation by a hyphen.

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

                                                                          1

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

Position	Definition of designation symbols
1	letter symbol identifying the type of tool (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);
-	hyphen not counted as a symbol;
4	letter symbol identifying the method of holding the indexable insert (see 4.4);
5	letter symbol identifying the indexable insert shape (see 4.5) (in accordance with ISO 1832);
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);
9	number symbol identifying the size of the indexable insert (see 4.9) (in accordance with ISO 1832);
10	number symbol identifying the numbers of flats and their location (see 4.10).

EXAMPLE

1	2	3	-	4	5	6	7	8	9	-	10
S	25	S	-	P	S	K	N	R	12	-	41

The term "tool" refers to boring bars (tool holders with cylindrical shank).

4 Designation symbols

4.1 Symbol for the type of tool — Letter symbol position 1

See Table 1.

Table 1 — Letter symbol position 1

Letter symbol	Type of tool
S	Solid steel tool
A	Solid steel tool with coolant/lubrication hole
B	Solid steel tool with anti-vibration device
D	Solid steel tool with anti-vibration device and coolant/lubrication hole
C	Hardmetal (carbide) tool with fixed steel head
E	Hardmetal (carbide) tool with fixed steel head and coolant/lubrication hole
F	Hardmetal (carbide) tool with fixed steel head and anti-vibration device
G	Hardmetal (carbide) tool with fixed steel head, anti-vibration device and coolant/lubrication hole
H	Solid heavy metal tool
J	Solid heavy metal tool with coolant/lubrication hole
K	Heavy metal tool with fixed steel head
L	Heavy metal tool with fixed steel head and coolant/lubrication hole

4.2 Symbol for the diameter of the shank — Number symbol position 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).

EXAMPLE 1

shank diameter   25 mm
symbol   25

EXAMPLE 2

shank diameter   8 mm
symbol   08

4.3 Symbol for the tool length — Letter symbol position 3
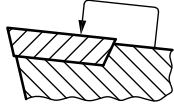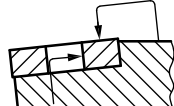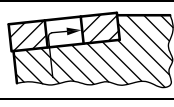
See Table 2.

Table 2 — Letter symbol position 3

Dimensions in millimetres

Letter symbol	Tool length
A	32
B	40
C	50
D	60
E	70
F	80
G	90
H	100
J	110
K	125
M	150
N	160
P	170
Q	180
R	200
S	250
T	300
U	350
V	400
W	450
X	Special length, to be specified
Y	500

4.4 Symbol for the method of holding the horizontally mounted indexable insert — Letter symbol position 4

See Table 3.

Table 3 — Letter symbol position 4

Letter symbol	Method of holding	Indexable insert	Illustration
C	Top clamping	without hole	
M	Top and hole clamping	with hole or with counterbore for holding	
P	Hole clamping		
S	Screw clamping through hole	with counterbore for holding	

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911a325bd58f/iso-6261-2011

4.5 Symbol for the indexable insert shape — Letter symbol position 5

See Table 4.

Table 4 — Letter symbol position 5

Letter symbol	Included angle ε_r	Indexable insert shape		Remark
H	120°	Hexagonal		Equilateral and equiangular
O	135°	Octagonal		
P	108°	Pentagonal		
S	90°	Square		
T	60°	Triangular		
C	80°	Rhombic		Equilateral but non-equiangular
D	55°			
E	75°			
M	86°			
V	35°			
W	80°	Hexagonal with 80° included angle		
L	90°	Rectangular		Non-equilateral but equiangular
A	85°	Parallelogram-shaped		Non-equilateral and non-equiangular
B	82°			
K	55°			
R	—	Round		Round
NOTE The included angle is always the smaller angle.				

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