
**Tool holders with rectangular shank for
indexable inserts —**

Part 1:
**General survey, correlation and
determination of dimensions**

iTeh STANDARD PREVIEW
*Porte-plaquette à queue rectangulaire pour plaquettes amovibles —
Partie 1: Vue d'ensemble, corrélation et détermination des dimensions*
(standards.iteh.ai)

ISO 5610-1:2010

<https://standards.iteh.ai/catalog/standards/sist/e4c199bf-b5fc-4741-8eac-2fed576601a9/iso-5610-1-2010>



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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 5610-1 was prepared by Technical Committee ISO/TC 29, *Small tools*, Subcommittee SC 9, *Tools with cutting edges made of hard cutting materials*.

This first edition of ISO 5610-1, together with ISO 5610-2, ISO 5610-3, ISO 5610-4, ISO 5610-5, ISO 5610-6, ISO 5610-7, ISO 5610-8, ISO 5610-9, ISO 5610-10, ISO 5610-11, ISO 5610-12, ISO 5610-13, ISO 5610-14 and ISO 5610-15, cancels and replaces ISO 5610:1998.

ISO 5610 consists of the following parts, under the general title *Tool holders with rectangular shank for indexable inserts*:

- Part 1: General survey, correlation and determination of dimensions
- Part 2: Style A
- Part 3: Style B
- Part 4: Style D
- Part 5: Style F
- Part 6: Style G
- Part 7: Style J
- Part 8: Style K
- Part 9: Style L
- Part 10: Style N
- Part 11: Style R
- Part 12: Style S
- Part 13: Style T
- Part 14: Style H
- Part 15: Style V

Tool holders with rectangular shank for indexable inserts —

Part 1:

General survey, correlation and determination of dimensions

1 Scope

This part of ISO 5610 specifies tool holders with rectangular shank for indexable inserts and specifies their styles in relation to their dimensions according to ISO 5610-2, ISO 5610-3, ISO 5610-4, ISO 5610-5, ISO 5610-6, ISO 5610-7, ISO 5610-8, ISO 5610-9, ISO 5610-10, ISO 5610-11, ISO 5610-12, ISO 5610-13, ISO 5610-14 and ISO 5610-15.

These tool holders are primarily intended for indexable inserts made of hardmetal, ceramic or other cutting materials intended to be mounted by clamping and used for turning operations. This part of ISO 5610 is general and is intended to be used with ISO 5610-2, ISO 5610-3, ISO 5610-4, ISO 5610-5, ISO 5610-6, ISO 5610-7, ISO 5610-8, ISO 5610-9, ISO 5610-10, ISO 5610-11, ISO 5610-12, ISO 5610-13, ISO 5610-14 and ISO 5610-15.

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2 Normative references (standards.iteh.ai)

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 5608, *Turning and copying tool holders and cartridges for indexable inserts — Designation*

ISO 5610-2, *Tool holders with rectangular shank for indexable inserts — Part 2: Style A*

ISO 5610-3, *Tool holders with rectangular shank for indexable inserts — Part 3: Style B*

ISO 5610-4, *Tool holders with rectangular shank for indexable inserts — Part 4: Style D*

ISO 5610-5, *Tool holders with rectangular shank for indexable inserts — Part 5: Style F*

ISO 5610-6, *Tool holders with rectangular shank for indexable inserts — Part 6: Style G*

ISO 5610-7, *Tool holders with rectangular shank for indexable inserts — Part 7: Style J*

ISO 5610-8, *Tool holders with rectangular shank for indexable inserts — Part 8: Style K*

ISO 5610-9, *Tool holders with rectangular shank for indexable inserts — Part 9: Style L*

ISO 5610-10, *Tool holders with rectangular shank for indexable inserts — Part 10: Style N*

ISO 5610-11, *Tool holders with rectangular shank for indexable inserts — Part 11: Style R*

ISO 5610-12, *Tool holders with rectangular shank for indexable inserts — Part 12: Style S*

ISO 5610-13, *Tool holders with rectangular shank for indexable inserts — Part 13: Style T*

ISO 5610-14, *Tool holders with rectangular shank for indexable inserts — Part 14: Style H*

ISO 5610-15, *Tool holders with rectangular shank for indexable inserts — Part 15: Style V*

3 Survey

The survey of the tool holders with rectangular shank cross-section shall be as given in Table 1. The tool holders with rectangular shank cross-section and their corresponding letter symbols and shank sizes shall be in accordance with ISO 5610-2, ISO 5610-3, ISO 5610-4, ISO 5610-5, ISO 5610-6, ISO 5610-7, ISO 5610-8, ISO 5610-9, ISO 5610-10, ISO 5610-11, ISO 5610-12, ISO 5610-13, ISO 5610-14 and ISO 5610-15.

The designation code shall be as given in ISO 5608.

Table 1 — Tool holders with rectangular shanks

Dimensions in millimetres

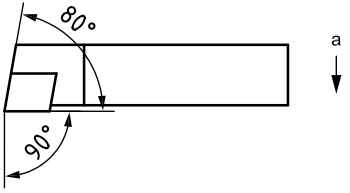
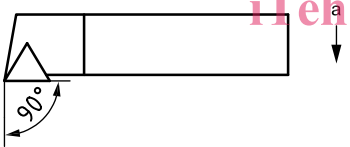
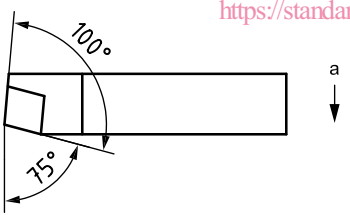
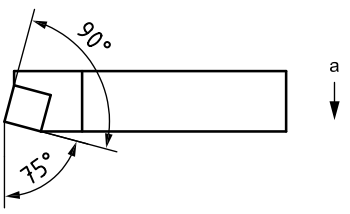
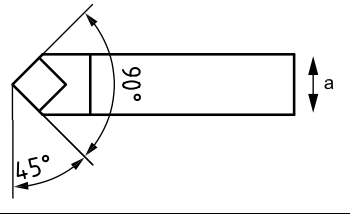

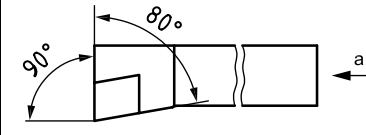
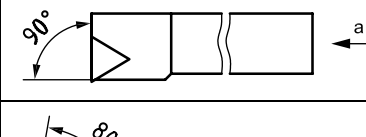
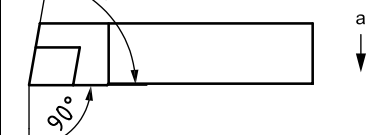
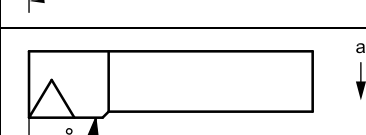
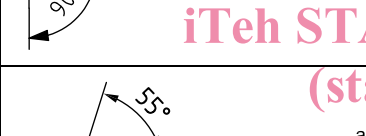

Style of tool holder	Illustration	Symbols for the cross-section										Dimensions in	
		$h_2 \times b$											
		0808	1010	1212	1616	2020	2525	3225	3232	4032	4040	5050	
A			•										ISO 5610-2
									•		•		
B		•	•										ISO 5610-3
				•	•	•	•	•	•		•	•	
D			•	•	•	•	•	•					ISO 5610-4
		•	•	•	•	•	•	•	•		•		

Table 1 (continued)

Style of tool holder	Illustration	Symbols for the cross-section											Dimensions in
		$h_2 \times b$											
		0808	1010	1212	1616	2020	2525	3225	3232	4032	4040	5050	
F		•	•										ISO 5610-5
				•	•	•	•	•	•			•	
G		•	•									ISO 5610-6	
				•	•	•	•	•	•				•
H												ISO 5610-14	
				•	•	•	•	•					

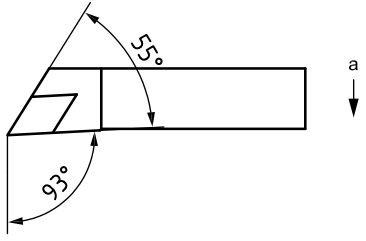
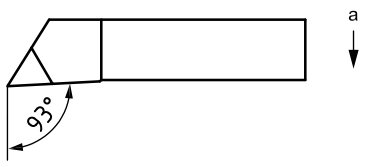
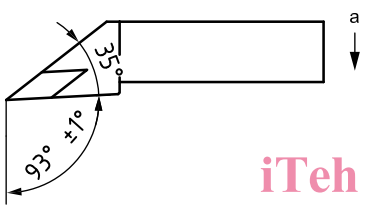
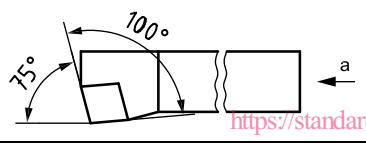
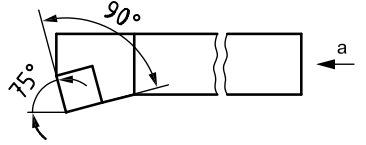
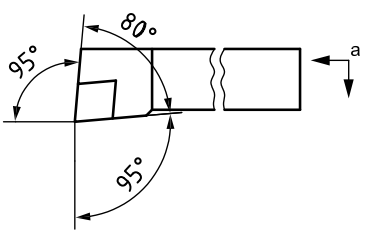
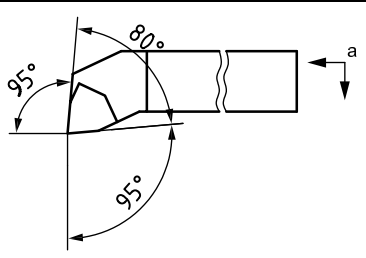
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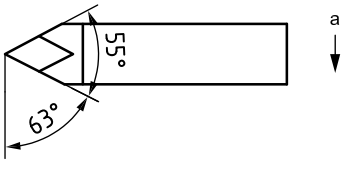
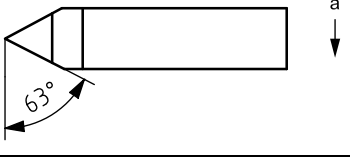
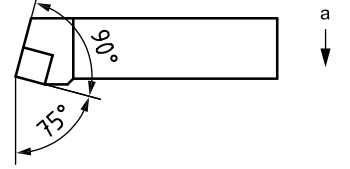
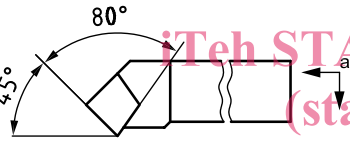
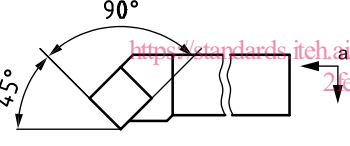
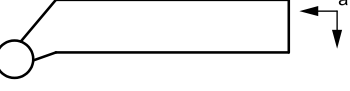
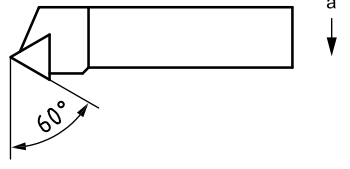
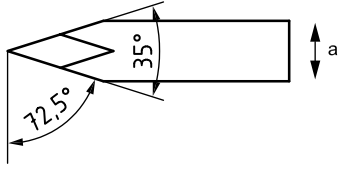
Table 1 (continued)

Style of tool holder	Illustration	Symbols for the cross-section											Dimensions in
		$h_2 \times b$											
		0808	1010	1212	1616	2020	2525	3225	3232	4032	4040	5050	
J		•	•	•	•	•	•	•		•			ISO 5610-7
						•	•	•		•			
					•	•	•	•	•				
K		•	•										ISO 5610-8
				•	•	•	•	•	•		•		
L		•	•	•	•	•	•	•	•		•		ISO 5610-9
		•	•	•	•	•	•	•	•				

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Table 1 (continued)

Style of tool holder	Illustration	Symbols for the cross-section											Dimensions in	
		$h_2 \times b$												
		0808	1010	1212	1616	2020	2525	3225	3232	4032	4040	5050		
N		•	•	•	•	•	•	•			•		ISO 5610-10	
								•	•		•			
R				•	•	•	•	•	•			•	•	ISO 5610-11
S		•	•	•	•	•	•	•					ISO 5610-12	
										•		•		•
		•	•	•	•	•	•	•	•					•
T				•	•	•	•	•	•			•	ISO 5610-13	
V				•	•	•	•	•					ISO 5610-15	
<ul style="list-style-type: none"> • standardized blank not standardized a Primary direction of feed. 														

4 Dimensions

4.1 Cross-section and length, l_1

The dimensions of the cross-section, depending on the length, l_1 , and height, h_1 , of the cutting edge shall be in accordance with Figure 1 and Table 2.

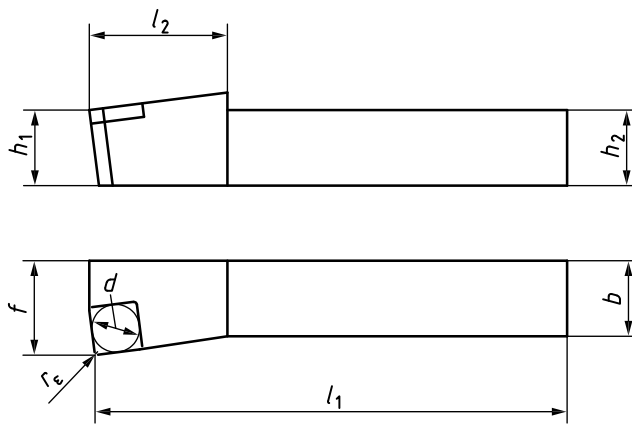


Figure 1 — Tool holder type K

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Table 2 — Dimensions of the cross-section
Dimensions in millimetres

h_1 js13	h_2 h13	b^a h13		l_1 k16	
		Series 1	Series 2	long	short
		8	8	8	—
10	10	10	8	70	50
12	12	12	10	80	60
16	16	16	12	100	70
20	20	20	16	125	80
25	25	25	20	150	100
32	32	32	25	170	125
40	40	40	32	200	150
50	50	50	40	250	—

^a Series 1: $b = h_2$; Series 2: $b \approx 0,8 h_2$.

4.2 Head length, l_2

The maximum head length, l_2 , depending on the diameter, d , of the inscribed circle of the indexable inserts, shall be in accordance with Figure 1 and Table 3.

The head length given in Table 3 shall not apply to tool holders with indexable inserts styles D and V.

Table 3 — Head length

Dimensions in millimetres

d	l_2 max.
6,35	25
7,94	28
9,525	32
12,7	36
15,875	40
19,05	45
25,4	50

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4.3 Dimension, f

The dimension, f , depending on the width, b , of the cross-section and the shape of the tool holder, shall be in accordance with Table 4.

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Table 4 — Dimension f

Dimensions in millimetres

b	f for tool holder styles					
	D, V $\pm 0,25$	N $+0,5$ 0	B, T $+0,5$ 0	A $+0,5$ 0	R $+0,5$ 0	F, G, H, J, K, L, S $+0,5$ 0
8	4		7	8,5	9	10
10	5		9	10,5	11	12
12	6		11	12,5	13	16
16	8		13	16,5	17	20
20	10		17	20,5	22	25
25	12,5		22	25,5	27	32
32	16		27	33	35	40
40	20		35	41	43	50
50	25		43	51	53	60