INTERNATIONAL STANDARD

ISO 5610-12

Second edition
2014-09-01

Tool holders with rectangular shank for indexable inserts —

Part 12: **Style S**

Porte-plaquette à queue rectangulaire pour plaquettes amovibles —

Partie 12: Forme S

Reference number
ISO 5610-12:2014(E)

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 29, *Small tools*, Subcommittee SC 9, *Tools with defined cutting edges, cutting items*.

This second edition cancels and replaces the first edition (ISO 5610-12:2010), of which it constitutes a minor revision.

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 12: Style S

1 Scope

This part of ISO 5610 specifies tool holders with rectangular shank, style S, i.e. with offset shank and cutting edge angle κ_r = 45° for side cutting.

These tool holders are primarily intended for indexable inserts made of hard metal or other cutting materials to be mounted by clamping and to be used for turning operations.

NOTE The symbols for the dimensions shown in the tables of this part of ISO 5610 and the corresponding preferred symbols of properties defined in ISO/TS 13399-2 and ISO/TS 13399-3 are given in ISO 5610-1:2014, Table A.1.

2 Normative references

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

ISO 5608:2012, *Turning and copying tool holders and cartridges for indexable inserts — Designation*

ISO 5610-1:2014, *Tool holders with rectangular shank for indexable inserts — Part 1: General survey, correlation and determination of dimensions*

3 Dimensions

3.1 General

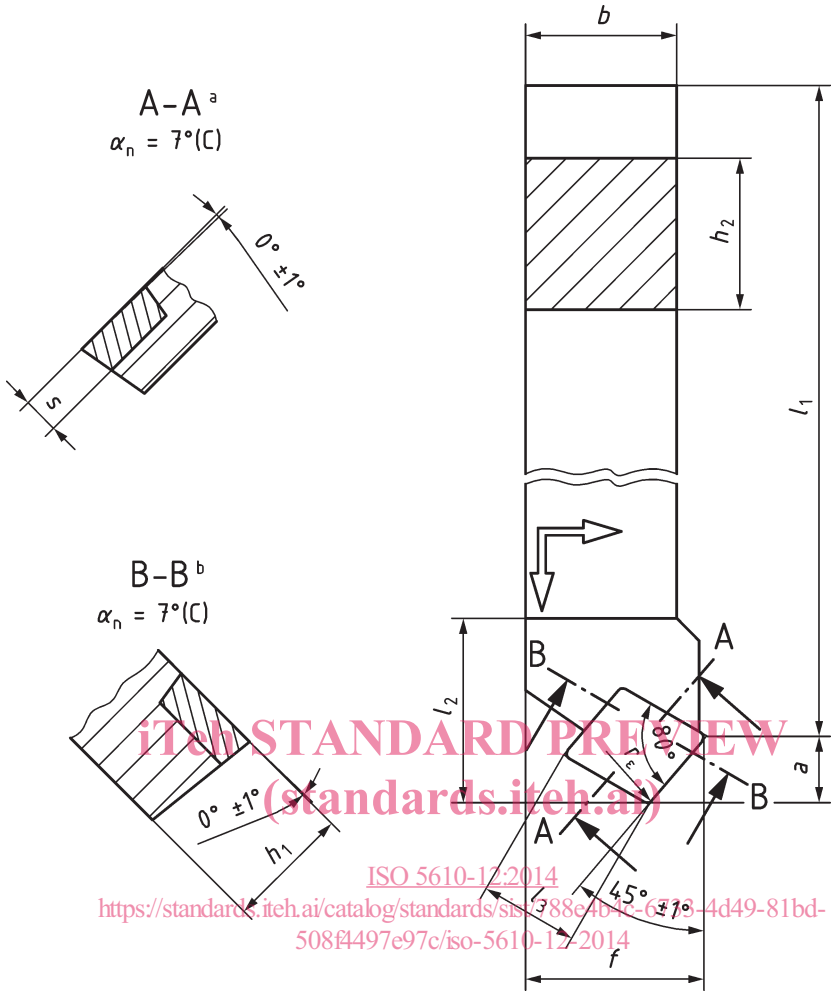
It is not necessary for tool holders to comply with the pictorial representation; only the dimensions given shall be observed.

For determination of dimensions h_1, f, and l_1, see ISO 5610-1.

For explanation of the designation code for tool holders, see ISO 5608.

NOTE The values of rake angles and inclination angles shown in the figures are recommended values; they can vary according to the application.

3.2 Tool holder style S for rhombic indexable insert shape C



Key

a Inclination angle, λ_S.

b Rake angle, γ_O.

NOTE This figure shows a right-hand tool holder (R); left-hand tool holder (L) laterally reversed.

Figure 1 — Tool holder style S for rhombic indexable insert — C

Table 1

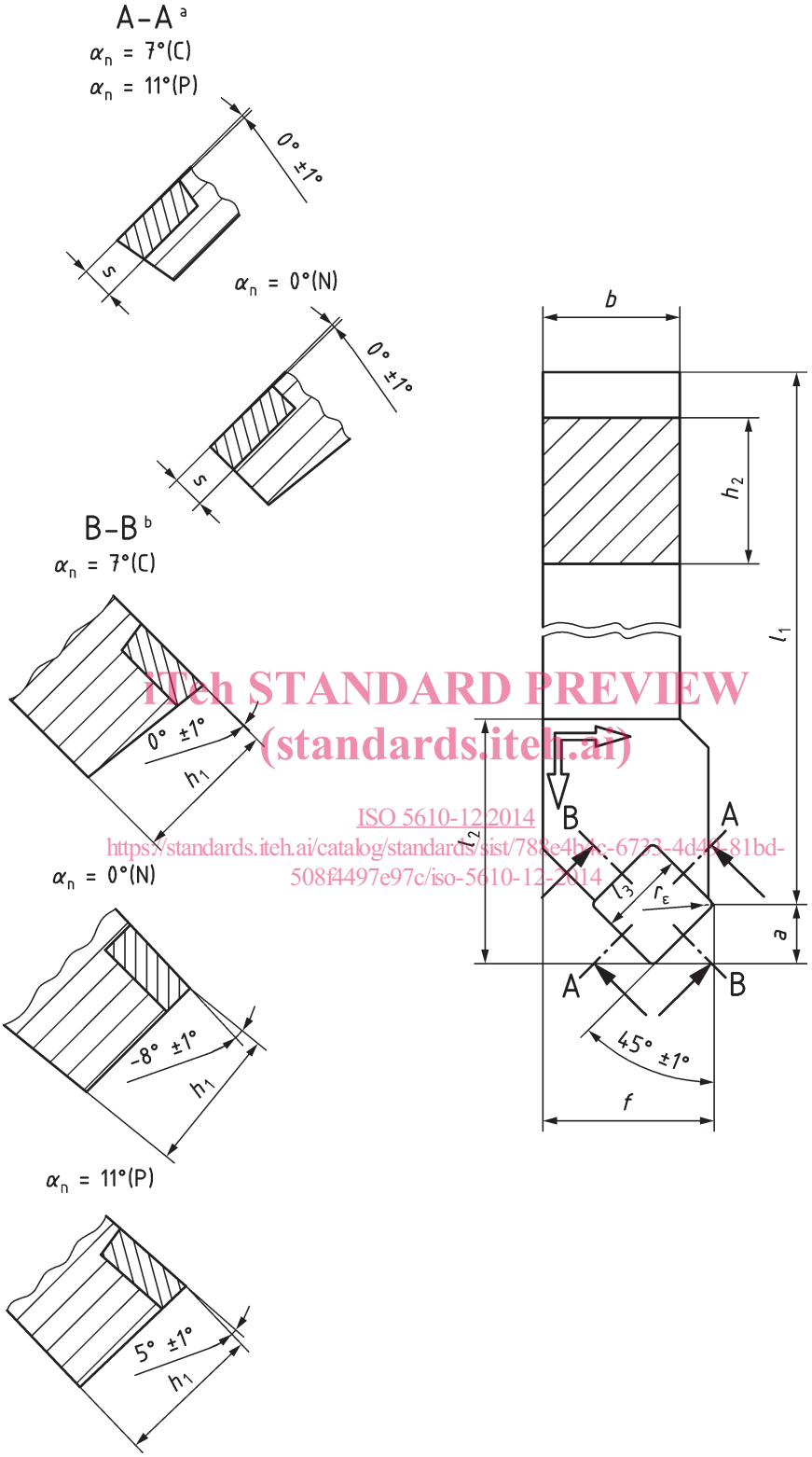
Dimensions in millimetres

Symbol[a]	h_1 js13	b h13	l_3 ≈	a	f +0,5 0	h_2 h13	l_1[a] k16	l_2 max	s[b]
SCSCR 0808 — 06	8	8	6,4	4,2	10	8	60	12	2,38
SCSCL 0808 — 06									
SCSCR 1010 — 06	10	10	6,4	4,2	12	10	70	12	2,38
SCSCL 1010 — 06									

[a] For the selection of length, l_1, the dash can be replaced by the dimensions of ISO 5610-1:2014, Table 2. For letter symbols identifying the tool length, see ISO 5608:2012, Table 6.

[b] Insert thickness without shim, if applicable.

3.3 Tool holder style S for square indexable insert shape S



Key

a Inclination angle, λ_S.

b Rake angle, γ_O.

NOTE This figure shows a right-hand tool holder (R); left-hand tool holder (L) laterally reversed.

Figure 2 — Tool holder style S for square indexable insert — S

Table 2

Dimensions in millimetres

Symbol[a]	h_1 js13	b h13	l_3 ≈	a	f +0,5 0	h_2 h13	l_1[a] k16	l_2 max.	s[b]
SSSCR 1212 — 09	12	12	9,525	6,1	16	12	—	32	3,97
SSSCL 1212 — 09									
PSSNR 1212 — 09									3,18
PSSNL 1212 — 09									
CSSPR 1212 — 09									
CSSPL 1212 — 09									
SSSCR 1616 — 09	16	16	9,525	6,1	20	16	—	32	3,97
SSSCL 1616 — 09									
PSSNR 1616 — 09									3,18
PSSNL 1616 — 09									
CSSPR 1616 — 09									
CSSPL 1616 — 09									
SSSCR 1616 — 12	16	16	12,7	8,3	20	16	—	36	4,76
SSSCL 1616 — 12									
PSSNR 1616 — 12									
PSSNL 1616 — 12									
CSSPR 1616 — 12									3,18
CSSPL 1616 — 12									
SSSCR 2020 — 12	20	20	12,7	8,3	25	20	—	36	4,76
SSSCL 2020 — 12									
PSSNR 2020 — 12									
PSSNL 2020 — 12									
CSSPR 2020 — 12									3,18
CSSPL 2020 — 12									
CSSNR 2525 — 12	25	25	12,7	8,3	32	25	—	36	7,94
CSSNL 2525 — 12									
SSSCR 2525 — 12									4,76
SSSCL 2525 — 12									
PSSNR 2525 — 12									
PSSNL 2525 — 12									
CSSPR 2525 — 12									3,18
CSSPL 2525 — 12									

[a] For the selection of length, l_1, the dash can be replaced by the dimensions of ISO 5610-1:2014, Table 2. For letter symbols identifying the tool length, see ISO 5608:2012, Table 6.

[b] Insert thickness without shim, if applicable.