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

**Part 10:
Style N**

Porte-plaquette à queue rectangulaire pour plaquettes amovibles —

Partie 10: Forme N

iTeh STANDARD PREVIEW
(standards.iteh.ai)

ISO 5610-10:2010

<https://standards.iteh.ai/catalog/standards/sist/70faab7e-db4f-4070-a76b-e54ac42f3c7d/iso-5610-10-2010>



PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

ISO 5610-10:2010

<https://standards.iteh.ai/catalog/standards/sist/70faab7e-db4f-4070-a76b-e54ac42f3c7d/iso-5610-10-2010>



COPYRIGHT PROTECTED DOCUMENT

© ISO 2010

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

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 5610-10 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 5610-10, together with ISO 5610-1, 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 5610-11, 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*

iTeh STANDARD PREVIEW
(standards.iteh.ai)

ISO 5610-10:2010

<https://standards.iteh.ai/catalog/standards/sist/70faab7e-db4f-4070-a76b-e54ac42f3c7d/iso-5610-10-2010>

Tool holders with rectangular shank for indexable inserts —

Part 10: Style N

1 Scope

This part of ISO 5610 specifies tool holders with rectangular shank, style N, i.e. with straight shank and cutting edge angle $\kappa_r = 63^\circ$ for side cutting.

These tool holders are primarily intended for indexable inserts made of hardmetal 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 5610-1:2010, Table A.1.

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 5608:1995, *Turning and copying tool holders and cartridges for indexable inserts — Designation*

ISO 5610-1:2010, *Tool holders with rectangular shank for indexable inserts — Part 1: General survey, correlation and determination of dimensions*

3 Dimensions

3.1 General

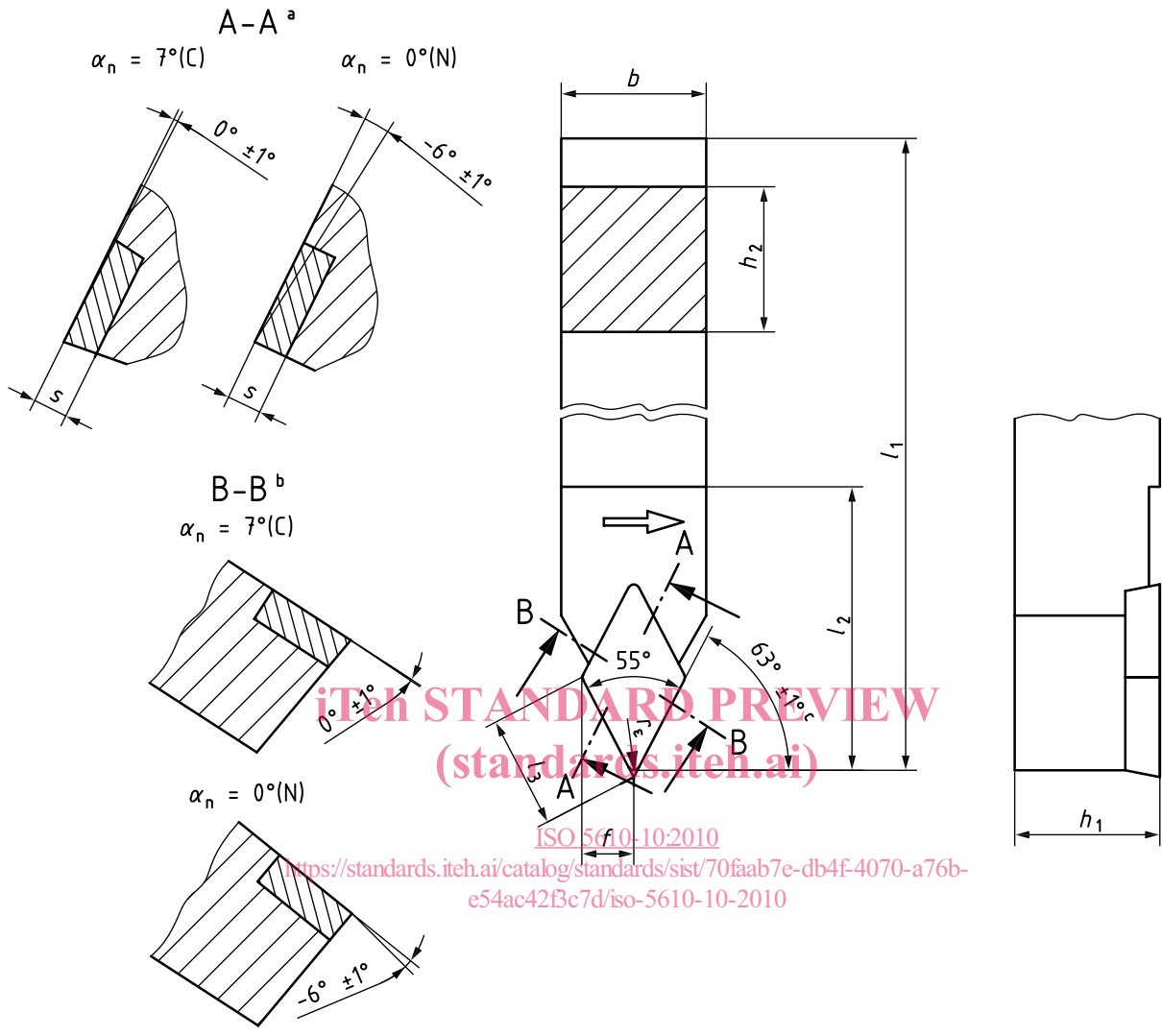
It is not necessary for tool holders to comply with the pictorial representation; only the dimensions given shall be observed.

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 N for rhombic indexable insert shape D



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

- a Inclination angle λ_n .
- b Rake angle γ_n .
- c Neutral tool holders, note ^c of Table 1.

Figure 1 — Tool holder style N for rhombic indexable insert — D

Table 1

Dimensions in millimetres

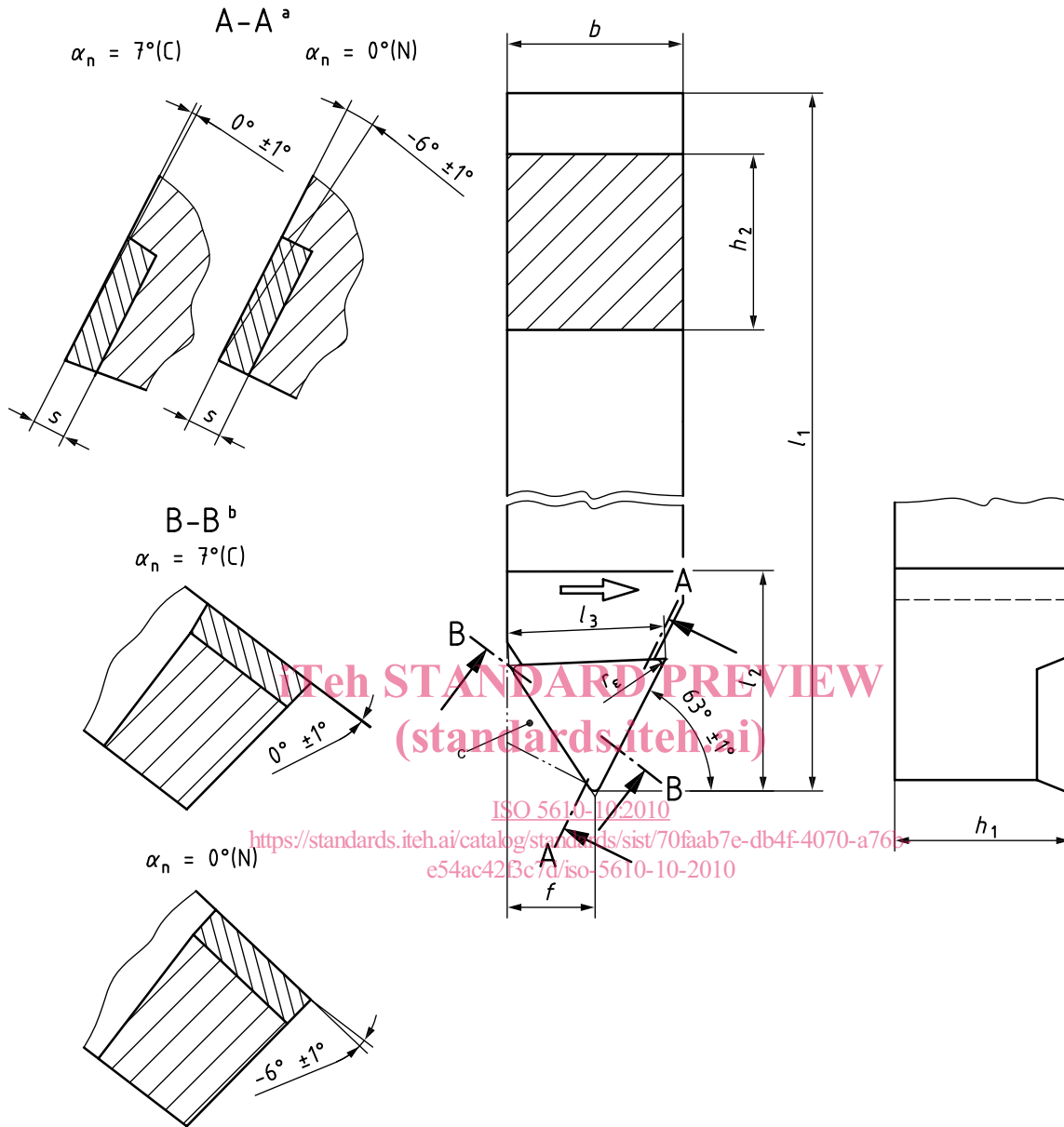
| Symbol ^a | h_1 js13 | b h13 | l_3 ≈ | f $^{+0,5}_0$ | h_2 h13 | l_1^a k16 | l_2 max. | s^b |
|------------------------------|---------------|------------|------------|--------------------|--------------|----------------|---------------|-------|
| SDNCR 0808 — 07 | 8 | 8 | 7,75 | 4 | 8 | — | 25 | 2,38 |
| SDNCL 0808 — 07 | | | | | | | | |
| SDNCN 0808 — 07 ^c | | | | | | | | |
| SDNCR 1010 — 07 | 10 | 10 | 7,75 | 5 | 10 | — | 25 | 2,38 |
| SDNCL 1010 — 07 | | | | | | | | |
| SDNCN 1010 — 07 ^c | | | | | | | | |
| SDNCR 1212 — 07 | 12 | 12 | 7,75 | 6 | 12 | — | 25 | 2,38 |
| SDNCL 1212 — 07 | | | | | | | | |
| SDNCN 1212 — 07 ^c | | | | | | | | |
| SDNCR 1616 — 11 | 16 | 16 | 11,6 | 8 | 16 | — | 32 | 3,97 |
| SDNCL 1616 — 11 | | | | | | | | |
| SDNCN 1616 — 11 ^c | | | | | | | | |
| SDNCR 2020 — 11 | 20 | 20 | 11,6 | 10 | 20 | — | 32 | 3,97 |
| SDNCL 2020 — 11 | | | | | | | | |
| SDNCN 2020 — 11 ^c | | | | | | | | |
| SDNCR 2020 — 15 | 20 | 20 | 15,5 | 10 | 20 | — | 40 | 4,76 |
| SDNCL 2020 — 15 | | | | | | | | |
| SDNCN 2020 — 15 ^c | | | | | | | | |
| PDNNR 2020 — 15 | 25 | 25 | 15,5 | 12,5 | 25 | — | 40 | 6,35 |
| PDNNL 2020 — 15 | | | | | | | | |
| SDNCR 2525 — 15 | | | | | | | | |
| SDNCL 2525 — 15 | 25 | 25 | 15,5 | 12,5 | 25 | — | 40 | 4,76 |
| SDNCN 2525 — 15 ^c | | | | | | | | |
| PDNNR 2525 — 15 | | | | | | | | |
| PDNNL 2525 — 15 | 32 | 25 | 15,5 | 12,5 | 32 | — | 40 | 6,35 |
| SDNCR 3225 — 15 | | | | | | | | |
| SDNCL 3225 — 15 | | | | | | | | |
| SDNCN 3225 — 15 ^c | 32 | 25 | 15,5 | 12,5 | 32 | — | 40 | 4,76 |
| PDNNR 3225 — 15 | | | | | | | | |
| PDNNL 3225 — 15 | | | | | | | | |
| SDNCR 4032 — 15 | 40 | 32 | 15,5 | 16 | 40 | — | 40 | 4,76 |
| SDNCL 4032 — 15 | | | | | | | | |
| SDNCN 4032 — 15 ^c | | | | | | | | |
| PDNNR 4032 — 15 | 40 | 32 | 15,5 | 16 | 40 | — | 40 | 6,35 |
| PDNNL 4032 — 15 | | | | | | | | |

^a For the selection of length, l_1 , the en-dash may be replaced by the dimensions of ISO 5610-1:2010, Table 2. For letter symbols identifying the tool length, see ISO 5608:1995, Table 6.

^b Insert thickness without shim, if any.

^c Tool holder for use in both directions of feed. The cutting edge angle $\kappa_1 = 62,5^\circ \pm 1^\circ$ and the tolerances $\pm 0,25$ mm on dimension f apply for this design.

3.3 Tool holder style N for triangular indexable insert shape T



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

- a Inclination angle λ_n .
- b Rake angle γ_n .
- c Tool holder style with feed of insert in both directions.

Figure 2 — Tool holder style N for triangular indexable insert — T

Table 2

Dimensions in millimetres

| Symbol ^a | h_1 js13 | b h13 | l_3 ≈ | f $^{+0,5}_0$ | h_2 h13 | l_1^a k16 | l_2 max. | s^b |
|---------------------|---------------|------------|------------|--------------------|--------------|----------------|---------------|-------|
| STNCR 2525 — 16 | 25 | 25 | 16,5 | 12,5 | 25 | — | 32 | 3,97 |
| STNCL 2525 — 16 | | | | | | | | 4,76 |
| PTNNR 2525 — 16 | | | | | | | | |
| PTNNL 2525 — 16 | | | | | | | | |
| STNCR 2525 — 22 | 25 | 25 | 22 | 12,5 | 25 | — | 32 | 4,76 |
| STNCL 2525 — 22 | | | | | | | | |
| PTNNR 2525 — 22 | | | | | | | | |
| PTNNL 2525 — 22 | | | | | | | | |
| STNCR 3225 — 16 | 32 | 25 | 16,5 | 12,5 | 32 | — | 32 | 3,97 |
| STNCL 3225 — 16 | | | | | | | | 4,76 |
| PTNNR 3225 — 16 | | | | | | | | |
| PTNNL 3225 — 16 | | | | | | | | |
| STNCR 3225 — 22 | 32 | 25 | 22 | 12,5 | 32 | — | 36 | 4,76 |
| STNCL 3225 — 22 | | | | | | | | |
| PTNNR 3225 — 22 | | | | | | | | |
| PTNNL 3225 — 22 | | | | | | | | |
| STNCR 4032 — 22 | 40 | 32 | 22 | 16 | 40 | — | 36 | 4,76 |
| STNCL 4032 — 22 | | | | | | | | |
| PTNNR 4032 — 22 | | | | | | | | |
| PTNNL 4032 — 22 | | | | | | | | |

^a See Table 1.

^b See Table 1.

4 Designation

A tool holder in accordance with this part of ISO 5610 shall be designated by:

- “Tool holder”;
- reference to this part of ISO 5610, i.e. ISO 5610-10;
- type of mounting, in accordance with ISO 5608;
- symbol for indexable insert shape, in accordance with ISO 5608;
- symbol for tool style, in accordance with ISO 5608;
- symbol for the indexable insert normal clearance, in accordance with ISO 5608;
- symbol for hand of tool, in accordance with ISO 5608;