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**Tool holders with cylindrical shank —**  
**Part 3:**  
**Type B with rectangular radial seat**

*Porte-outil à queue cylindrique —*

*Partie 3: Porte-outil radial de type B*



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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](http://www.iso.org/directives)).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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 2, *Holding tools, adaptive items and interfaces*.

This third edition cancels and replaces the second edition (ISO 10889-3:2004), of which it constitutes a minor revision, notably with the addition of [Annex A](#), which gives the relationship between the designations of this part of ISO 10889 and the ISO 13399 series.

ISO 10889 consists of the following parts, under the general title *Tool holders with cylindrical shank*:

- *Part 1: Cylindrical shank, location bore — Technical delivery conditions*
- *Part 2: Type A, shanks for tool holders of special designs*
- *Part 3: Type B with rectangular radial seat*
- *Part 4: Type C with rectangular axial seat*
- *Part 5: Type D with more than one rectangular seat*
- *Part 6: Type E with cylindrical seat*
- *Part 7: Type F with taper seat*
- *Part 8: Type Z, accessories*

# Tool holders with cylindrical shank —

## Part 3:

## Type B with rectangular radial seat

### 1 Scope

This part of ISO 10889 specifies dimensions, designations, and complementary technical delivery conditions for tool holders with a rectangular radial seat of types B1 to B8 with cylindrical shank in accordance with ISO 10889-1.

ISO 10889 is applicable to tool holders with cylindrical shank for machine tools with non-rotating tools, preferably for turning machines.

For non-standardized tool holders with a rectangular radial seat such as the tool holders shown in the figures, it is advisable to apply the corresponding specifications of this part of ISO 10889.

### 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 2768-1, *General tolerances — Part 1: Tolerances for linear and angular dimensions without individual tolerance indications*

ISO 2768-2, *General tolerances — Part 2: Geometrical tolerances for features without individual tolerance indications*

ISO 10889-1, *Tool holders with cylindrical shank — Part 1: Cylindrical shank, location bore — Technical delivery conditions*

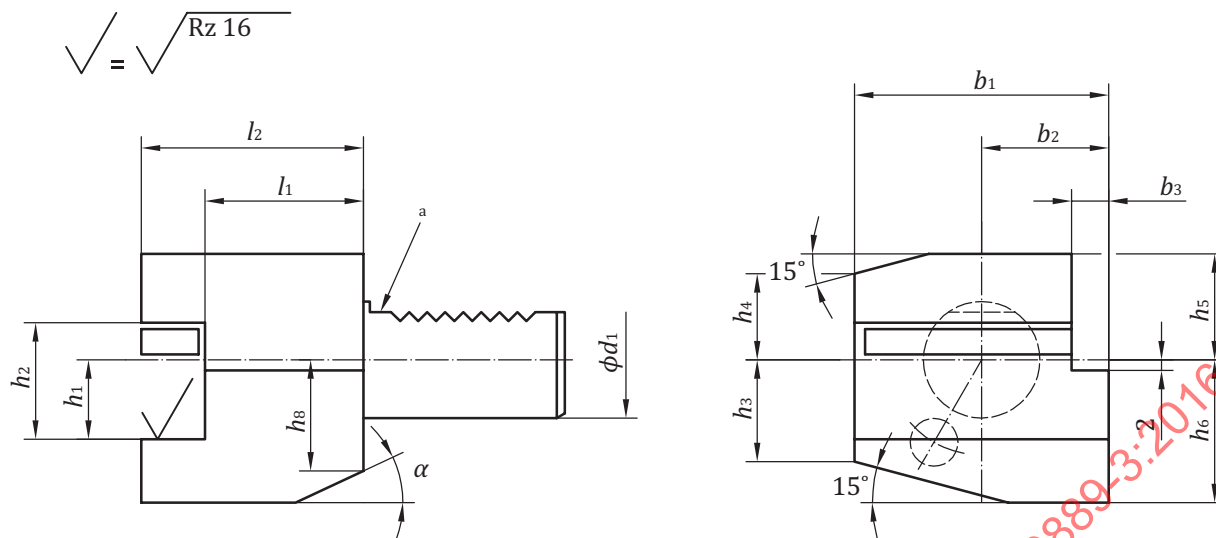
### 3 Dimensions

All dimensions and tolerances are given in millimetres. Tolerancing is done according to ISO 8015. Tolerances not specified shall be of tolerance class “m” in accordance with ISO 2768-1 and of class “H” in accordance with ISO 2768-2.

Unspecified details shall be chosen appropriately.

The dimensions of tool holders type B shall be in accordance with the dimensions shown in [Figures 1 to 8](#) and given in [Table 1](#).

The relationship between the symbols of this part of ISO 10889 and the symbols according to ISO 13399 is given in [Annex A](#).

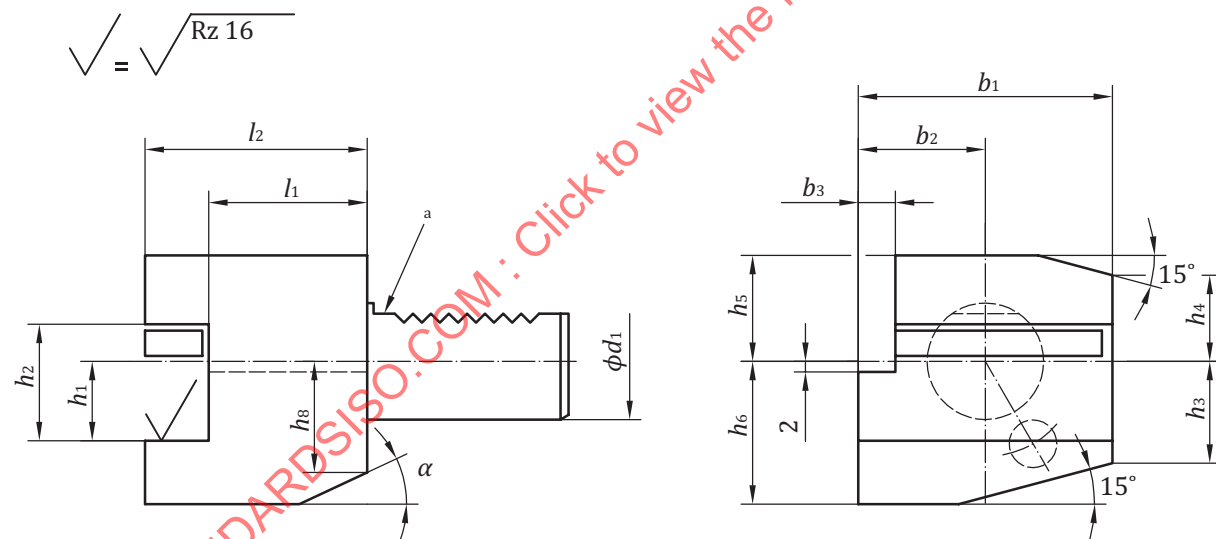


**Key**

a Cylindrical shank in accordance with ISO 10889-1.

NOTE Surface roughness is given in micrometres.

**Figure 1 — Type B1 tool holder, right-hand, short**

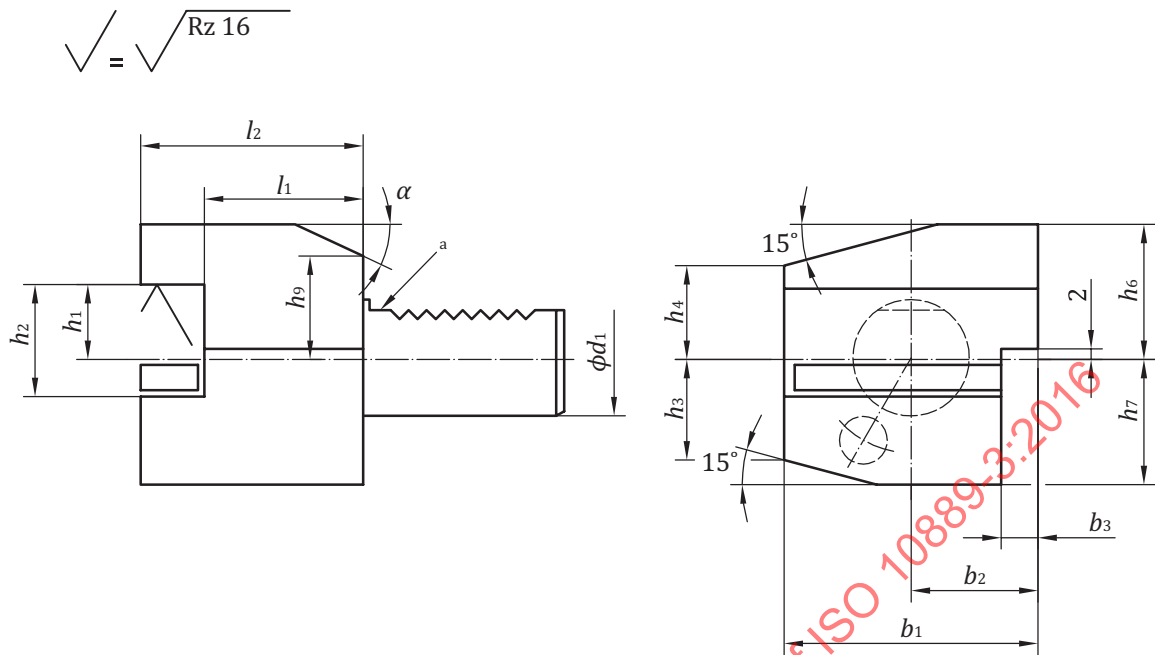


**Key**

a Cylindrical shank in accordance with ISO 10889-1.

NOTE Surface roughness is given in micrometres.

**Figure 2 — Type B2 tool holder, left-hand, short**

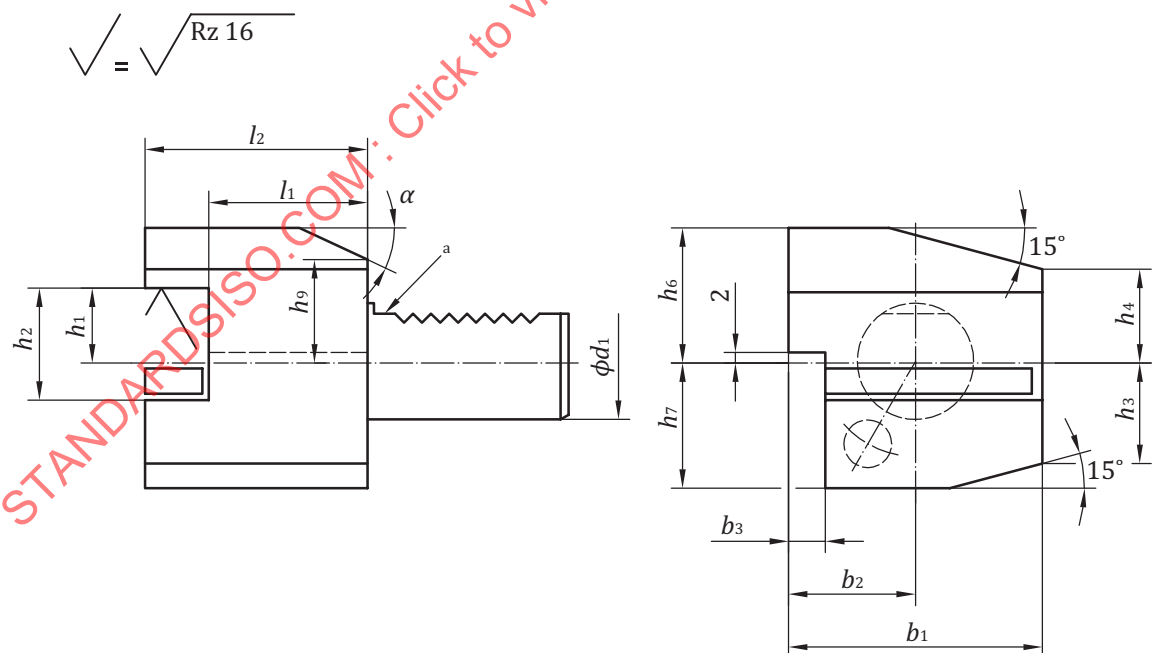


**Key**

a Cylindrical shank in accordance with ISO 10889-1.

NOTE Surface roughness is given in micrometres.

**Figure 3 — Type B3 tool holder, overhead, right-hand, short**



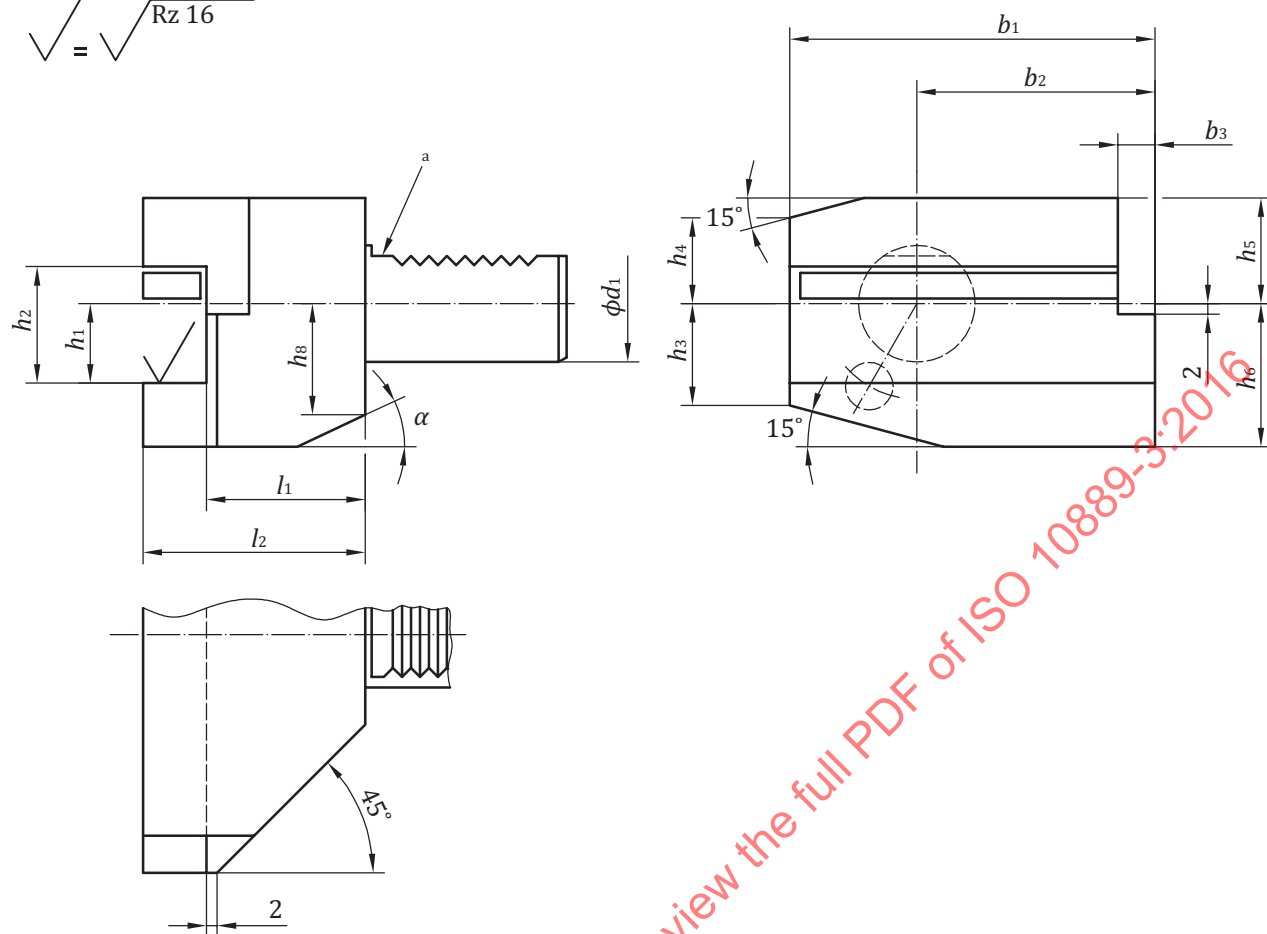
**Key**

a Cylindrical shank in accordance with ISO 10889-1.

NOTE Surface roughness is given in micrometres.

**Figure 4 — Type B4 tool holder, overhead, left-hand, short**

$$\sqrt{\quad} = \sqrt{Rz\ 16}$$



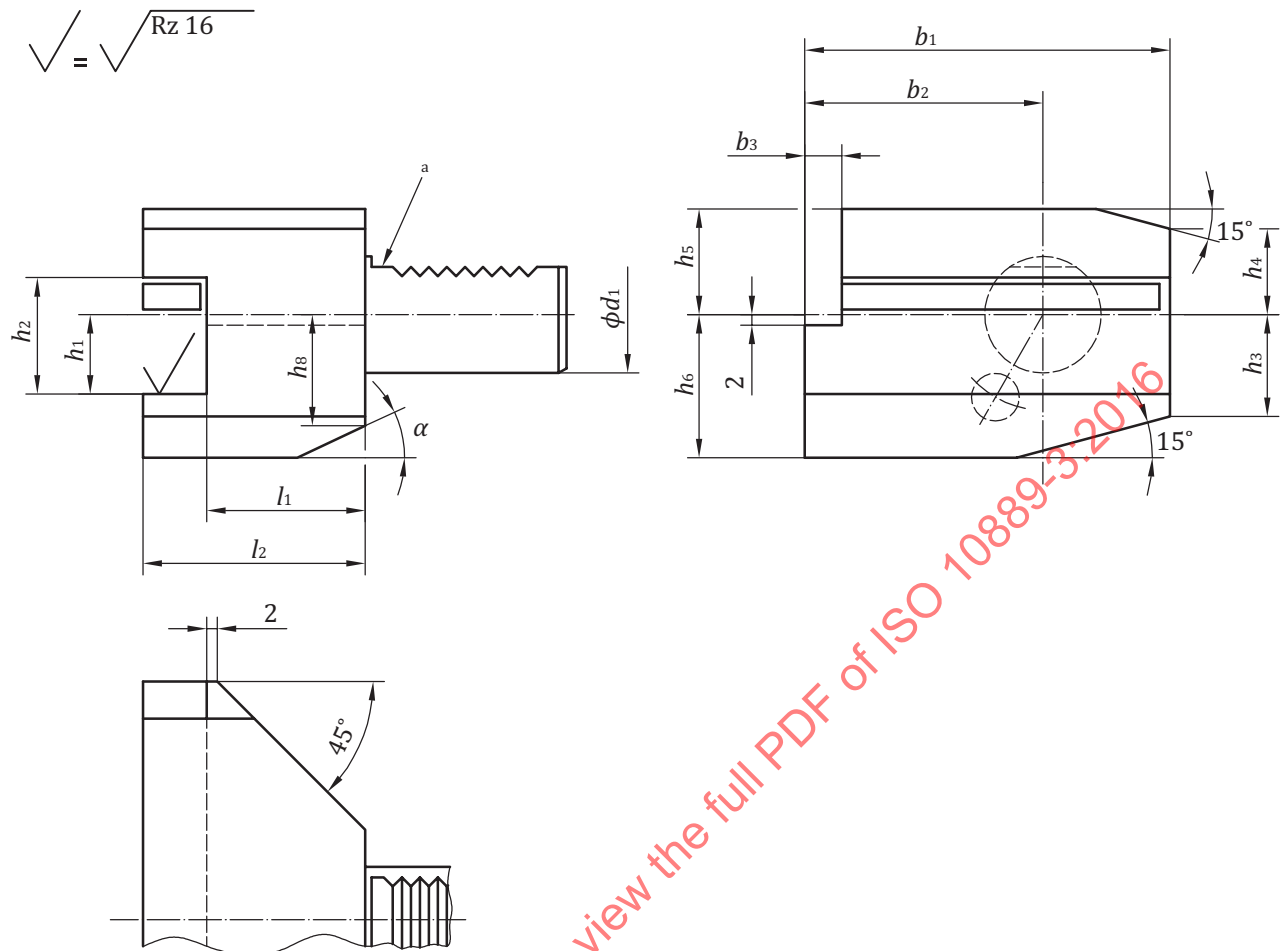
**Key**

a Cylindrical shank in accordance with ISO 10889-1.

NOTE Surface roughness is given in micrometres.

**Figure 5 — Type B5 tool holder, right-hand, long**





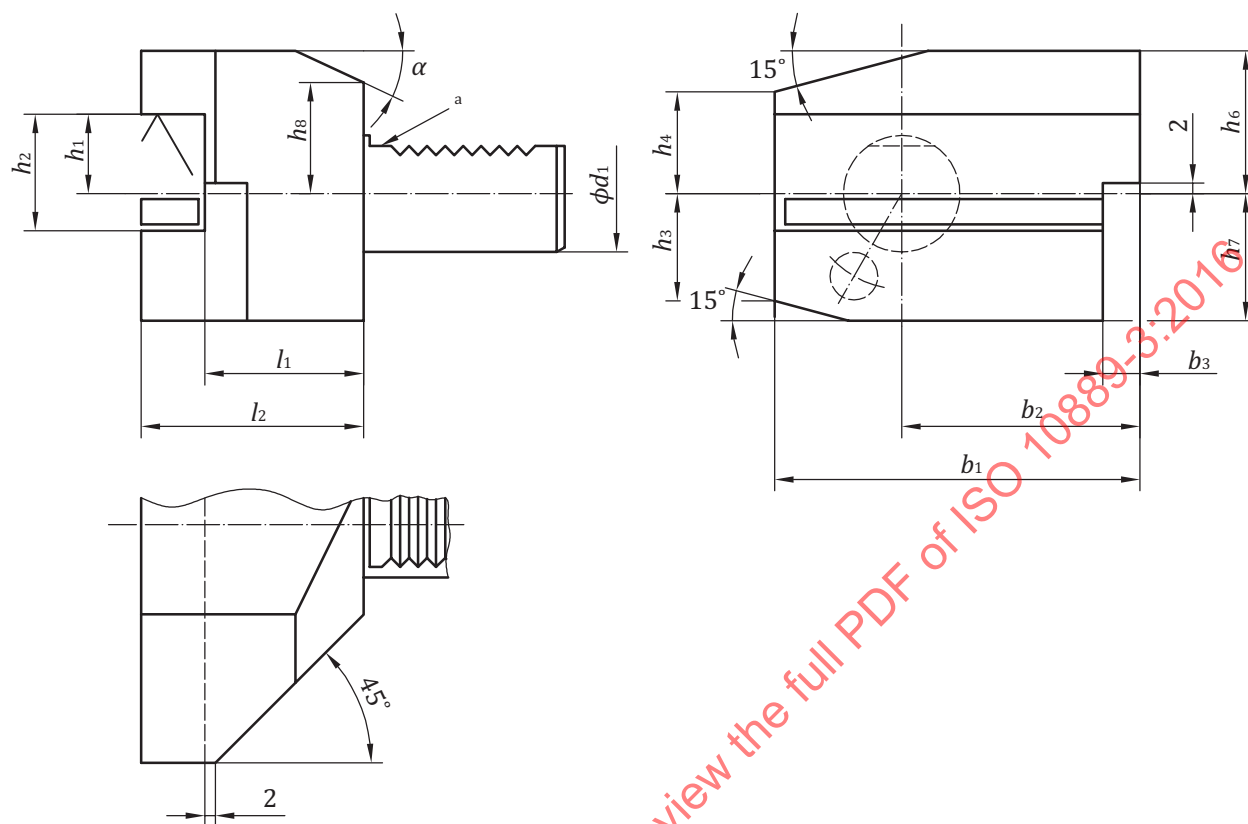
**Key**

a Cylindrical shank in accordance with ISO 10889-1.

NOTE Surface roughness is given in micrometres.

**Figure 6 — Type B6 tool holder, left-hand, long**

$$\sqrt{\quad} = \sqrt{\text{Rz } 16}$$



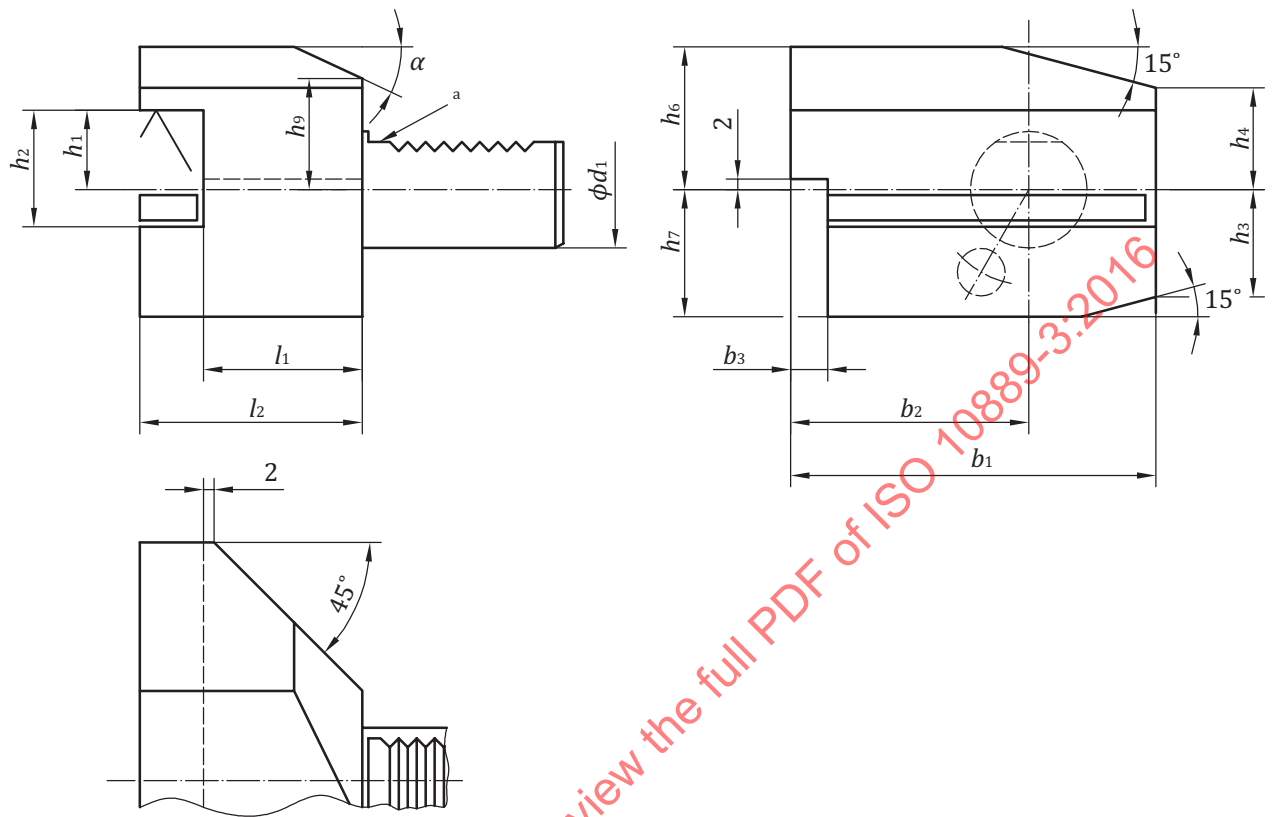
**Key**

a Cylindrical shank in accordance with ISO 10889-1.

NOTE Surface roughness is given in micrometres.

**Figure 7 — Type B7 tool holder, overhead, right-hand, long**

$$\sqrt{\quad} = \sqrt{Rz\ 16}$$



**Key**

a Cylindrical shank in accordance with ISO 10889-1.

NOTE Surface roughness is given in micrometres.

**Figure 8 — Type B8 tool holder, overhead, left-hand, long**

Table 1 — Type B tool holder dimensions

Dimensions in millimetres

| $d_1$ | $b_1$<br>Type B |        | $b_2$<br>Type B |        | $b_3$ | $h_1$<br>0<br>-0,1 | $h_2$<br>max. | $h_3$ | $h_4$ | $h_5$ | $h_6$ | $h_7$ | $h_8$ | $h_9$ | $l_1$<br>+0,5<br>0 | $l_2$ | $\alpha$ |
|-------|-----------------|--------|-----------------|--------|-------|--------------------|---------------|-------|-------|-------|-------|-------|-------|-------|--------------------|-------|----------|
|       | 1 to 4          | 5 to 8 | 1 to 4          | 5 to 8 |       |                    |               |       |       |       |       |       |       |       |                    |       |          |
| 16    | 42              | 58     | 23              | 39     | 5     | 12                 | 17            | 15    | 15    | 20    | 22    | 20    | 19    | 19    | 13                 | 24    | 30°      |
|       |                 |        |                 |        |       |                    |               |       |       |       |       |       |       |       | 23                 | 34    |          |
| 20    | 55              | 75     | 30              | 50     | 7     | 16                 | 22            | 19    | 19    | 25    | 30    | 25    | 23    | 23    | 16                 | 30    | 30°      |
|       |                 |        |                 |        |       |                    |               |       |       |       |       |       |       |       | 26                 | 40    |          |
| 25    | 55              | 75     | 30              | 50     | 7     | 16                 | 22            | 22,5  | 22,5  | 25    | 30    | 25    | 25    | 25    | 16                 | 30    | 30°      |
|       |                 |        |                 |        |       |                    |               |       |       |       |       |       |       |       | 26                 | 40    |          |
| 30    | 70              | 100    | 35              | 65     | 10    | 20                 | 29            | 26    | 22    | 28    | 38    | 35    | 30    | 28    | 22                 | 40    | 25°      |
|       |                 |        |                 |        |       |                    |               |       |       |       |       |       |       |       | 42                 | 60    |          |
| 40    | 85              | 118    | 42,5            | 75,5   | 12,5  | 25                 | 34            | 35    | 30    | 32,5  | 48    | 42,5  | —     | —     | 22                 | 44    | —        |
| 50    | 100             | 130    | 50              | 80     | 16    | 32                 | 41            | 42    | 35    | 35    | 60    | 50    | —     | —     | 30                 | 55    | —        |
| 60    | 125             | 145    | 62,5            | 82,5   | 16    | 32                 | 41            | 46    | 42,5  | 42,5  | 62,5  | 62,5  | —     | —     | 30                 | 60    | —        |
| 80    | 160             | 190    | 80              | 110    | 20    | 40                 | 53            | 60    | 55    | 55    | 80    | 80    | —     | —     | 40                 | 75    | —        |

#### 4 Geometrical tolerances

The geometrical tolerances shall be as defined in [Figure 9](#).

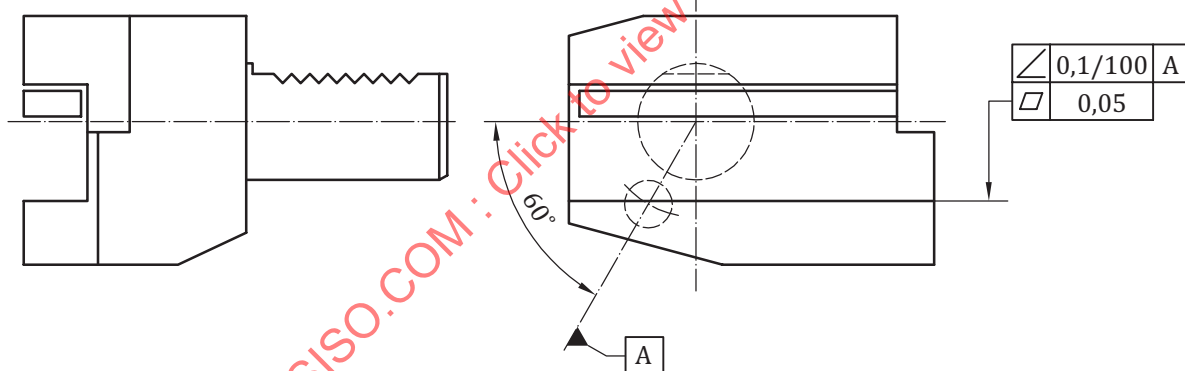


Figure 9 — Geometrical tolerances

#### 5 Designation

A type B tool holder with rectangular radial seat in accordance with this part of ISO 10889 shall be designated by the following:

- “Tool holder”;
- reference to this part of ISO 10889, i.e. ISO 10889-3;
- type (B1, B2, B3, B4, B5, B6, B7, or B8);
- nominal diameter,  $d_1$ , in millimetres;
- nominal height,  $h_1$ , in millimetres;