INTERNATIONAL STANDARD

ISO 10889-4

First edition
1997-12-15

Tool holders with cylindrical shank —

Part 4:
Type C with rectangular axial seat

Porte-outil à queue cylindrique —

Partie 4: Porte-outil axial de type C

Reference number
ISO 10889-4:1997(E)

Small tools.

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*

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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

Tool holders with cylindrical shank —

Part 4:
Type C with rectangular axial seat

1 Scope

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

This part of ISO 10889 specifies dimensions, designations and complementary technical delivery conditions for tool holders with rectangular axial seat of types C1 to C4 with cylindrical shank in accordance with ISO 10889-1. For non-standardized tool holders with rectangular axial seat, such as tool holders as shown in the drawings, it is recommended to apply the corresponding specifications of this part of ISO 10889.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 10889. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 10889 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 2768-1:1989, *General tolerances — Part 1: Tolerances for linear and angular dimensions without individual tolerance indications.*

ISO 10889-1:1997, *Tool holders with cylindrical shank — Part 1: Cylindrical shank, location bore — Technical delivery conditions.*

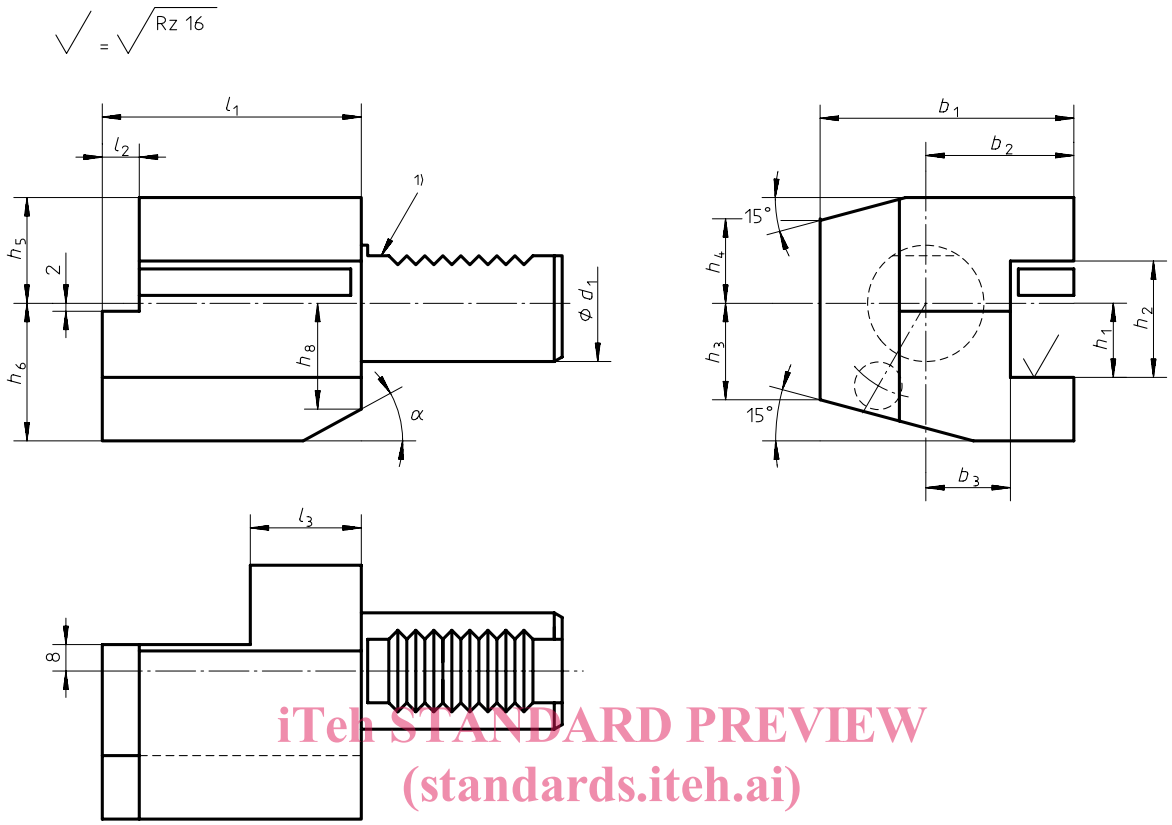
3 Dimensions

See figures 1 to 4 and table 1.

Unspecified details shall be chosen appropriately.

General tolerances: ISO 2768-1 - mB

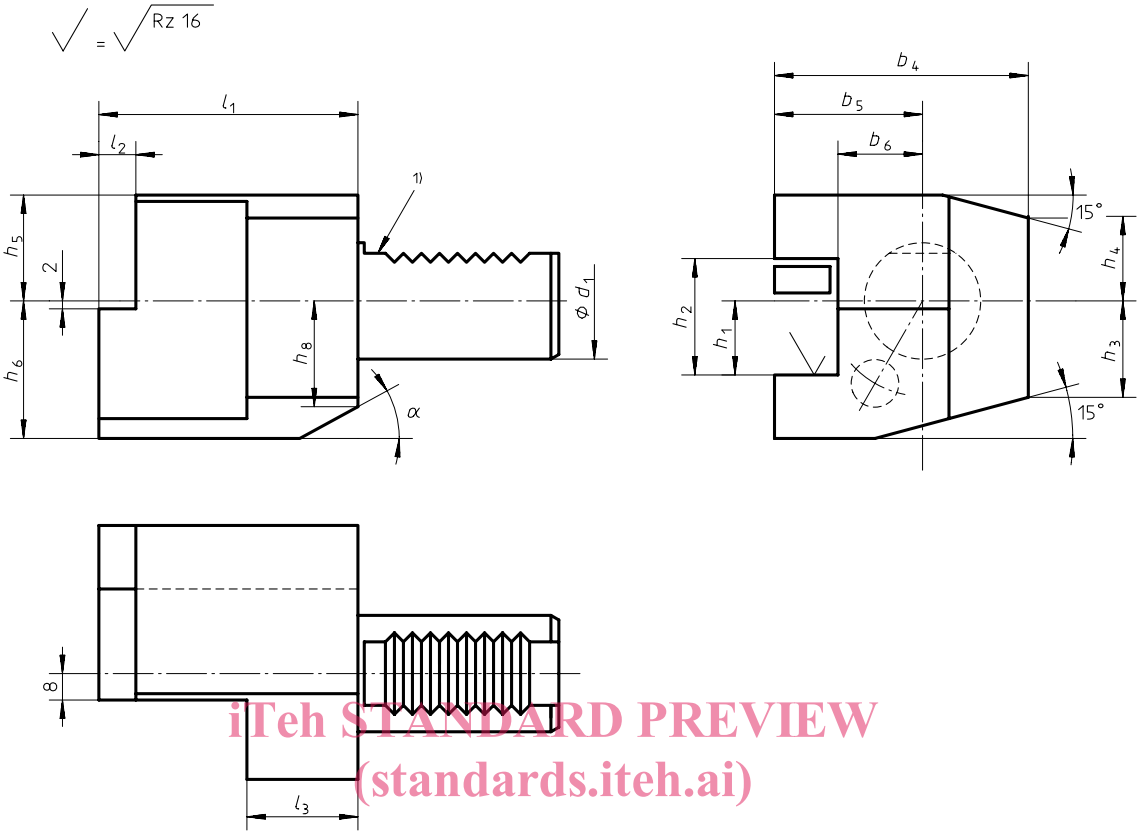
Dimensions in millimetres,
surface roughness in micrometres



1) Cylindrical shank in accordance with ISO 10889-1.

Figure 1 — Type C1 tool holder, right-hand

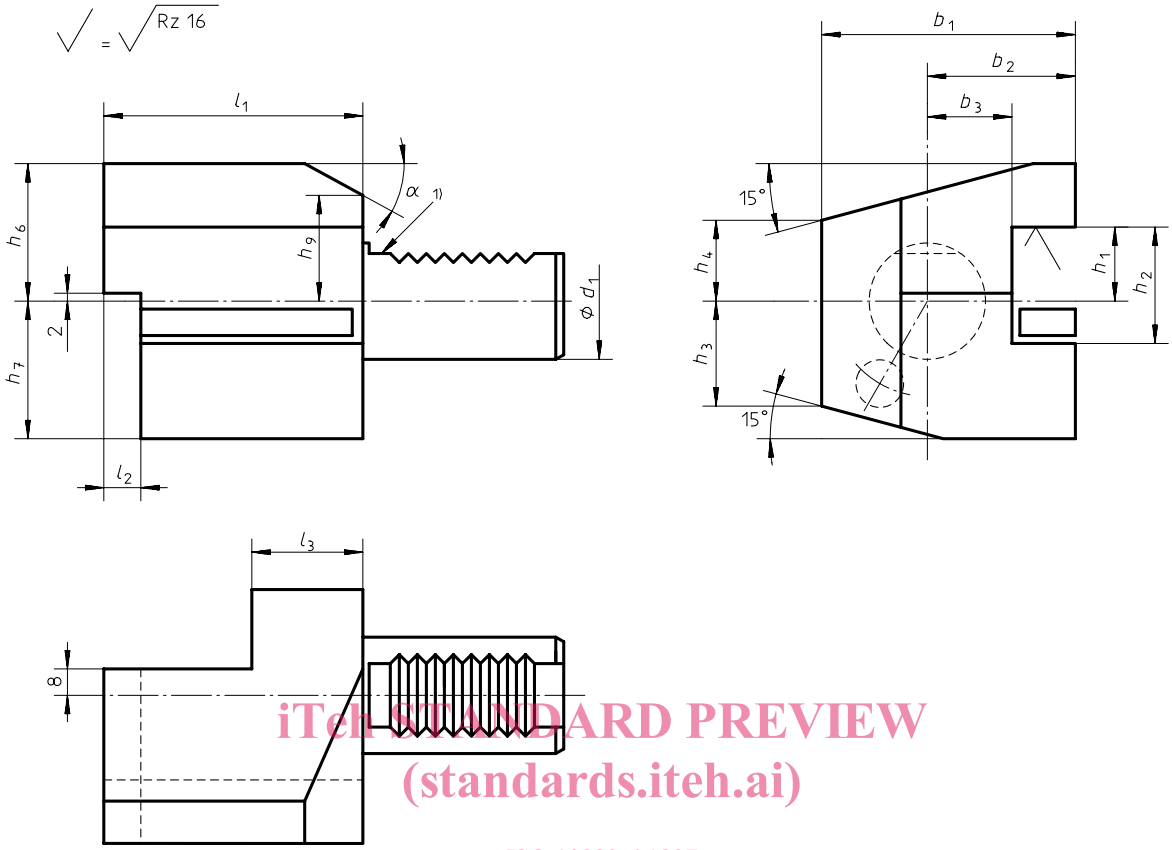
Dimensions in millimetres,
surface roughness in micrometres



1) Cylindrical shank in accordance with ISO 10889-1.

Figure 2 — Type C2 tool holder, left-hand

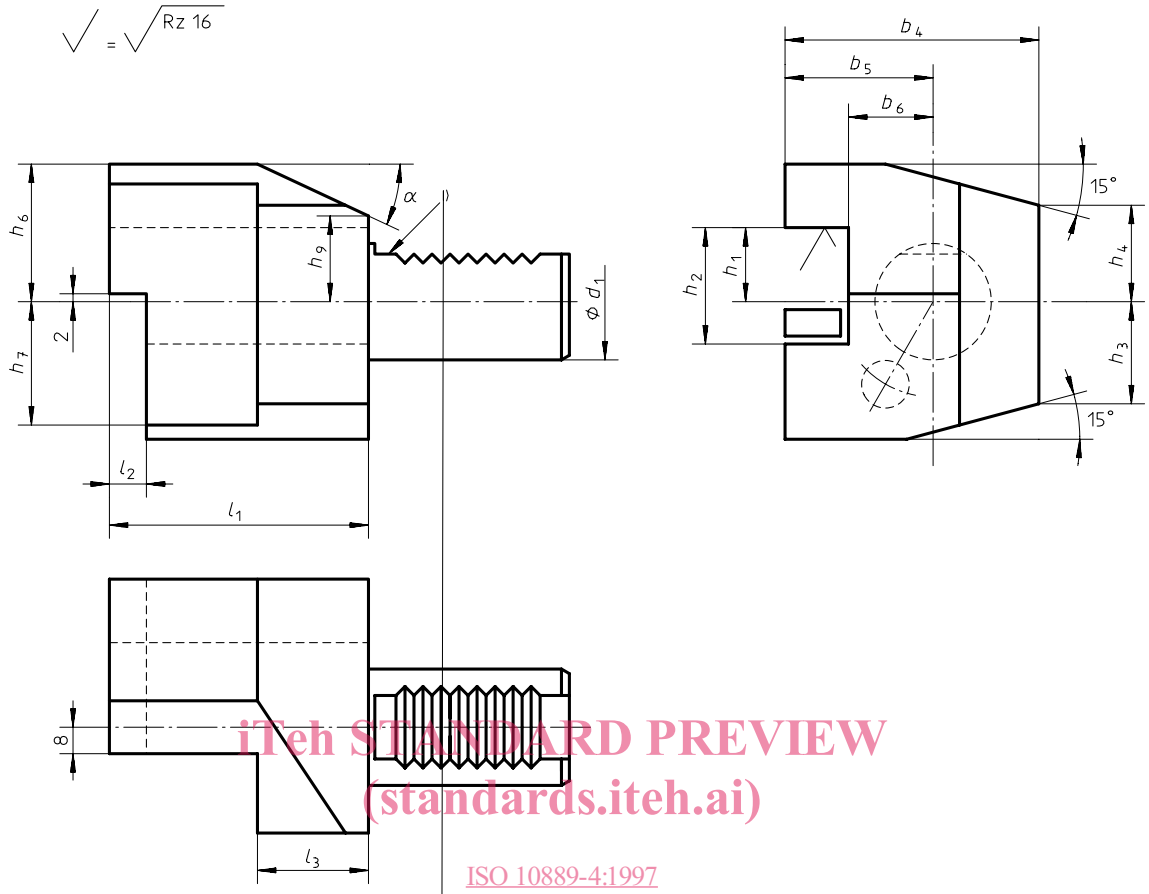
Dimensions in millimetres,
surface roughness in micrometres



1) Cylindrical shank in accordance with ISO 10889-1.

Figure 3 — Type C3 tool holder, overhead, right-hand

Dimensions in millimetres,
surface roughness in micrometres



1) Cylindrical shank in accordance with ISO 10889-1.

Figure 4 — Type C4 tool holder, overhead, left-hand

Table 1

Dimensions in millimetres

d_1	b_1	b_2	b_3 $^{+0,3}_{0}$	b_4	b_5	b_6 $^{+0,3}_{0}$	h_1 $^{0}_{-0,1}$	h_2 max.	h_3	h_4	h_5	h_6	h_7	h_8	h_9	l_1	l_2	l_3	α
	Types C1 and C3			Types C1 and C4															
16	43	24	13	43	24	13	12	17	15	15	20	22	20	19	19	44	5	20	30°
20	52	27	13	—	—	—	16	22	19	19	25	30	25	23	23	55	7	30	30°
	65	40	26	65	40	26										50	—		
25	58	33	19	58	33	29	16	22	22,5	22,5	25	30	25	25	25	55	7	20	30°
30	70	35	17	76	41	23	20	29	26	22	28	38	35	30	28	70	10	30	25°
40	85	42,5	21	90	47,5	25,5	25	34	35	30	32,5	48	42,5	—	—	85	12,5	30	—
50	100	50	26	105	55	30,5	32	41	42	35	35	60	50	—	—	100	16	40	—
60	125	62,5	33	125	62,5	33	32	41	46	42,5	42,5	62,5	62,5	—	—	125	16	40	—
80	160	80	42	160	78	42	40	53	60	55	55	80	80	—	—	160	20	40	—

4 Geometrical tolerances

See figure 5.

Dimensions in millimetres

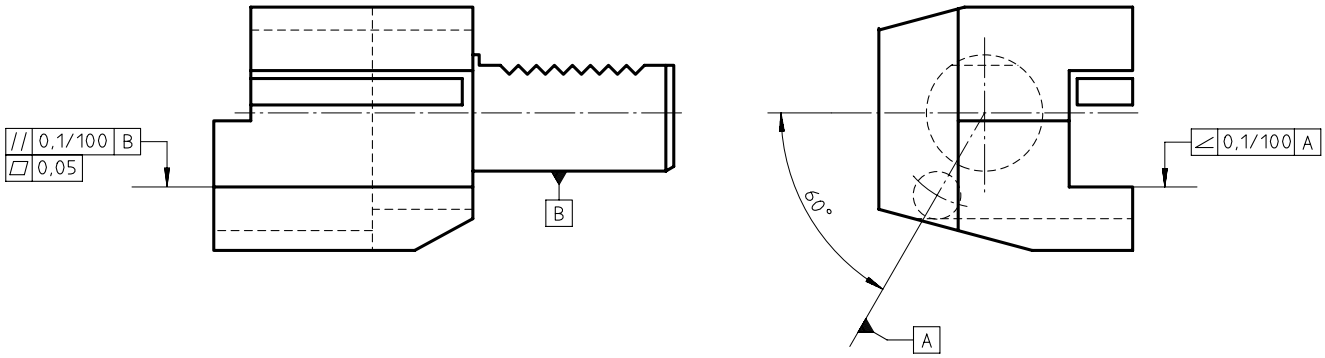


Figure 5 — Geometrical tolerances

5 Designation

A type C tool holder with rectangular axial seat in accordance with this part of ISO 10889 shall be designated by

a) "Tool holder";
b) reference to this part of ISO 10889, i.e. ISO 10889-4;
c) type (C1 to C4);
d) nominal diameter, d

h_1, in millimetres;
f) nominal length, l_1, in millimetres, only if d_1 = 20 mm.

EXAMPLES

A tool holder with rectangular axial seat of type C1 with a nominal diameter d_1 = 60 mm and a nominal diameter h_1 = 32 mm is designated as follows:

Tool holder ISO 10889-4 - C1 - 60 × 32

A tool holder with rectangular axial seat of type C1 with a nominal diameter d_1 = 20 mm, a nominal diameter h_1 = 16 mm and a nominal length l_1 = 55 mm is designated as follows:

Tool holder ISO 10889-4 - C1 - 20 × 16 × 55

6 Technical delivery conditions

As a complement to the requirements of ISO 10889-1 the following applies.

6.1 Design

Tool holders with rectangular axial seat are equipped with a coolant outlet with adjustable direction; the design is at the discretion of the manufacturer, e.g. ball-type nozzle.

The tools shall be ajustable in the tool holder at right angles to the rectangular seat; the design is at the discretion of the manufacturer.

It shall be possible to reduce the dimension h_1 specified in table 1 to the next smaller standardized dimension h_1 given in table 2. The design is at the discretion of the manufacturer.

Table 2

Dimensions in millimetres

d_1	**16**	**20**	**25**	**30**	**40**	**50**	**60**	**80**
h_1	10	12	12	16	20	25	25	32

Tool holders can also supplied with hardened contact surface. Then it shall be mentioned in the designation (H for hardened contact surface).

For instance a tool holder with rectangular axial seat of type C1 with a nominal diameter d_1 = 40 mm, a nominal height h_1 = 20 mm with hardened contact surface is designated as follows:

Tool holder ISO 10889-4 - C1 - 40 × 20 H

6.2 Scope of delivery

The scope of delivery of tool holders includes clamping elements for the clamping of the tools; the design of the clamping elements is at the discretion of the manufacturer.