INTERNATIONAL STANDARD

ISO 10889-7

Second edition
2004-11-15

Tool holders with cylindrical shank —

Part 7: Type F with taper seat

Porte-outil à queue cylindrique —

Partie 7: Porte-outil de type F pour outils à queue conique

Reference number
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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 10889-7 was prepared by Technical Committee ISO/TC 29, *Small tools*.

This second edition cancels and replaces the first edition (ISO 10889-7:1997), Table 1 of which has been technically revised.

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 7:
Type F with taper seat

1 Scope

ISO 10889 is applicable 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 taper seat of type F and with a cylindrical shank mounting system in accordance with ISO 10889-1. For non-standardized tool holders with taper 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 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 296, *Machine tools — Self-holding tapers for tool shanks*

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*

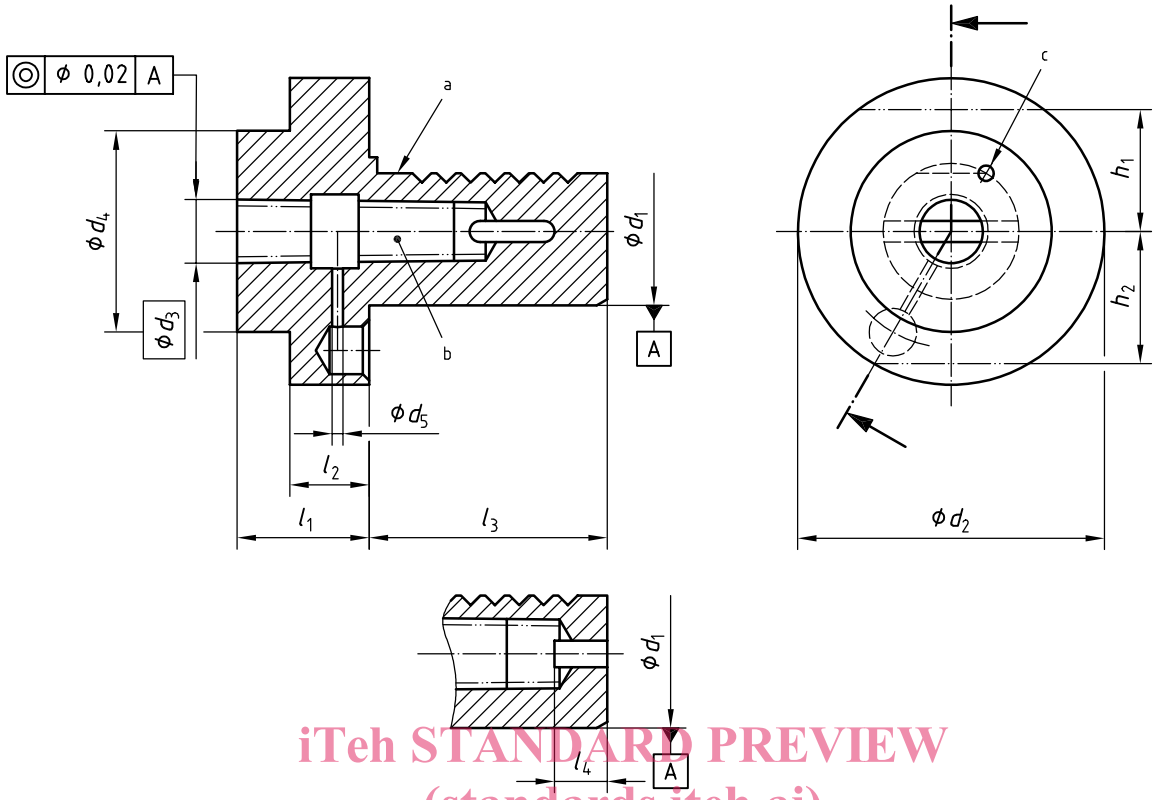
3 Dimensions

See Figure 1 and Table 1.

Unspecified details shall be chosen appropriately.

General tolerances: ISO 2768-mH.

Dimensions in millimetres



a Cylindrical shank in accordance with ISO 10889-1.

b Internal Morse taper, type BIK in accordance with ISO 296.

c External coolant supply (closable).

Figure 1 — Taper seat type F tool holder, for taper shanks with flat tang

Table 1 — Type F tool holder dimensions

Dimensions in millimetres

d_1	Internal Morse taper, type BIK No.	d_2	d_3	d_4	d_5	h_1	h_2	l_1	l_2	l_3	l_4
20	1	50	12,065	—	—	—	23	23	—	40	7[a]
25	1	58	12,065	—	—	25	25	23	—	48	—
	2		17,780	—	5			27	—		—
30	1	68	12,065	—	—	28	30	27	—	55	—
	2		17,780	—	5				—		14[a]
40	2	83	17,780	55	5	32,5	—	36	22	63	—
	3		23,825	58	6						14[a]
	4		31,267	68	7			80			—
50	2	98	17,780	55	5	35	—	36	30	78	—
	3		23,825	58	6						—
	4		31,267	68	7			80			18[a]
60	3	123	23,825	58	6	42,5	—	36	30	94	—
	4		31,267	68	7			50			—
	5		44,399	98	7			63			32[a]
80	4	158	31,267	68	7	55	—	50	40	104	—
	5		44,399	98							—

[a] These sizes have a recess for taper shanks with flat tang up to the end face of the cylindrical shank. The design of slot is at the discretion of the manufacturer.

4 Designation

A type F tool holder with Morse taper 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 10889-7,

c) type (F),

d) nominal diameter, d_1, in millimetres,

e) internal taper type.

EXAMPLE A type F tool holder with a Morse taper seat and nominal diameter d_1 = 40 mm and an internal taper, type BIK 3 is designated as follows:

Tool holder ISO 10889-7 - F - 40 - MT-BIK 3

5 Technical delivery conditions

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

The taper socket shall be hardened, with a surface hardness of (56 $^{+4}_{0}$) HRC and a depth of hardening of at least 0,5 mm.

The taper angle tolerance class of taper socket shall be AT5 in accordance with ISO 296.

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

EXAMPLE A type F tool holder with a Morse taper seat and nominal diameter d_1 = 40 mm, an internal taper type BIK 3 and hardened contact surface is designated as follows:

Tool holder ISO 10889-7 - F - 40 – MT-BIK 3 H