INTERNATIONAL STANDARD

**ISO 10889-8**

First edition
1997-12-15

# Tool holders with cylindrical shank —

# Part 8:
Type Z, accessories

*Porte-outil à queue cylindrique —*

*Partie 8: Accessoires, type Z*

Reference number
ISO 10889-8:1997(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 8:
Type Z, accessories

## 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, materials, designations and technical delivery conditions for accessories type Z, i.e. clamping rings, sealing plugs and ball-type noggles, for tool holders with cylindrical shank in accordance with ISO 10889-2 to ISO 10889-7. For non-standardized accessories such as accessories 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.*

ISO 10889-2:1997, *Tool holders with cylindrical shank — Part 2: Type A, shanks for tool holders of special designs.*

ISO 10889-3:1997, *Tool holders with cylindrical shank — Part 3: Type B with rectangular radial seat.*

ISO 10889-4:1997, *Tool holders with cylindrical shank — Part 4: Type C with rectangular axial seat.*

ISO 10889-5:1997, *Tool holders with cylindrical shank — Part 5: Type D with more than one rectangular seat.*

ISO 10889-6:1997, *Tool holders with cylindrical shank — Part 6: Type E with cylindrical seat.*

ISO 10889-7:1997, *Tool holders with cylindrical shank — Part 7: Type F with taper seat.*

## 3 Dimensions

Unspecified details shall be chosen appropriately.

General tolerances: ISO 2768-1 - mH

### 3.1 Clamping ring

The clamping rings need not correspond to the figure 1; only the given dimensions shall be complied with.

See figure 1 and table 1.

Dimensions in millimetres,
surface roughness in micrometres

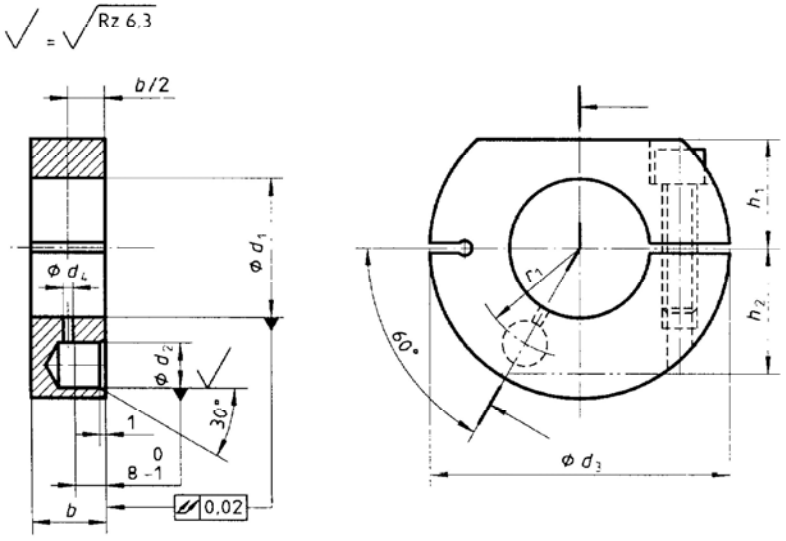



**Figure 1 — Type Z1, clamping ring**

**Table 1**

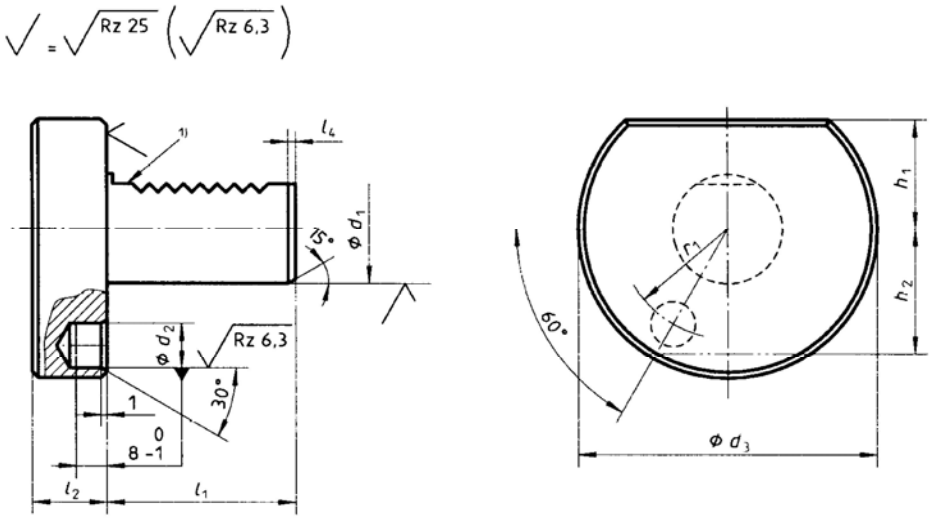
Dimensions in millimetres

| $d_1$ H7 | $b$ | $d_2$ H8 | $d_3$ | $d_4$ min. | $h_1$ | $h_2$ | $r_1$ ± 0,02 |
|---|---|---|---|---|---|---|---|
| **20** | 16 | 10 | 50 | 3 | 23 | 23 | 18 |
| **25** | 16 | 10 | 58 | 3 | 25 | 25 | 21 |
| **30** | 22 | 14 | 68 | 5 | 28 | 30 | 25 |
| **40** | 22 | 14 | 83 | 6 | 32,5 | — | 32 |
| **50** | 30 | 16 | 98 | 7 | 35 | — | 37 |
| **60** | 30 | 16 | 123 | 7 | 42,5 | — | 48 |
| **80** | 40 | 20 | 158 | 7 | 55 | — | 65 |

### 3.2 Sealing plug

See figure 2 and table 2.

Dimensions in millimetres,
surface roughness in micrometres




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

**Figure 2 — Type Z2, sealing plug**

**Table 2**

Dimensions in millimetres

| $d_1$ h8 | $d_2$ $^{+0,1}_{0}$ | $d_3$ | $h_1$ | $h_2$ | $l_1$ $^{0}_{-1}$ | $l_2$ | $l_4$ $^{+1}_{0}$ | $r_1$ ± 0,1 |
|---|---|---|---|---|---|---|---|---|
| **16** | 8,3 | 40 | 18 | 18 | 32 | 13 | 2 | 14,5 |
| **20** | 10,3 | 50 | 23 | 23 | 40 | 16 | 2 | 18 |
| **25** | 10,3 | 58 | 25 | 25 | 48 | | 2 | 21 |
| **30** | 14,3 | 68 | 28 | 30 | 55 | | 2 | 25 |
| **40** | 14,3 | 83 | 32,5 | — | 63 | 20 | 3 | 32 |
| **50** | 16,3 | 98 | 35 | — | 78 | | 3 | 37 |
| **60** | 16,3 | 123 | 42,5 | — | 94 | | 4 | 48 |
| **80** | 20,3 | 158 | 55 | — | 124 | | 4 | 65 |

### 3.3 Ball-type nozzle

See figure 3 and table 3.

Surface roughness in micrometres

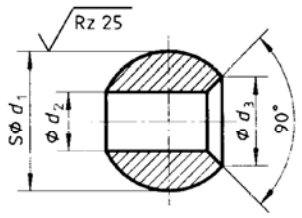



**Figure 3 — Type Z3, ball-type nozzle**

**Table 3**

Dimensions in millimetres

| $d_1$ $^{0}_{-0,1}$ | $d_2$ | $d_3$ |
|---|---|---|
| **8** | 3,5 | 5,5 |
| **10** | 5 | 7 |
| **12** | 5 | 8 |
| **14** | 6 | 9 |

## 4 Material

### 4.1 Clamping ring

The clamping ring shall be made of steel; the type of steel is at the discretion of the manufacturer.

### 4.2 Sealing plug

Steel is at the discretion of the manufacturer; other materials may be used upon agreement.

### 4.3 Ball-type nozzle

The ball-type nozzle shall be a copper-zinc alloy type or stainless steel, at the discretion of the manufacturer.

## 5 Designation

### 5.1 Clamping ring

A clamping ring in accordance with this part of ISO 10889 shall be designated by

a) "clamping ring";
b) reference to this part of ISO 10889, i.e. ISO 10889-8;
c) type (Z1);
d) nominal diameter, $d_1$, in millimetres.

EXAMPLE

A type Z1 clamping ring with a nominal diameter $d_1$ = 40 mm is designated as follows:

**Clamping ring ISO 10889-8 - Z1 - 40**

### 5.2 Sealing plug

A sealing plug in accordance with this part of ISO 10889 shall be designated by

a) "Sealing plug";
b) reference to this part of ISO 10889, i.e. ISO 10889-8;
c) type (Z2);
d) nominal diameter, $d_1$, in millimetres.

EXAMPLE

A type Z2 sealing plug with a nominal diameter $d_1$ = 40 mm is designated as follows:

**Sealing plug ISO 10889-8 - Z2 - 40**

### 5.3 Ball-type nozzle

A ball-type nozzle in accordance with this part of ISO 10889 shall be designated by

a) "Ball-type nozzle";
b) reference to this part of ISO 10889, i.e. ISO 10889-8;
c) type (Z3);
d) nominal diameter of ball, $d_1$, in millimetres.

EXAMPLE

A type Z3 ball-type nozzle with a nominal diameter $d_1$ = 10 mm is designated as follows:

**Ball-type nozzle ISO 10889-8 - Z3 - 10**

## 6 Technical delivery conditions

### 6.1 Design

Clamping rings are provided for an internal coolant supply; the design is at the discretion of the manufacturer.

### 6.2 Scope of delivery

The scope of delivery of clamping rings includes a clamping screw; the design is at the discretion of the manufacturer.

**ICS 25.060.20**

**Descriptors:** tools, tool holders, shanks, parallel shanks, accessories, specifications, dimensions, delivery condition, designation.

Price based on 6 pages