INTERNATIONAL STANDARD

ISO 3338-2

Sixth edition
2007-02-15

Cylindrical shanks for milling cutters —

Part 2: Dimensional characteristics of flatted cylindrical shanks

Queues cylindriques d'outils à fraiser —

Partie 2: Caractéristiques dimensionnelles des queues cylindriques à méplat

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 3338-2 was prepared by Technical Committee ISO/TC 29, *Small tools*, Subcommittee SC 2, *High speed steel cutting tools and their attachments*.

This sixth edition cancels and replaces the fifth edition (ISO 3338-2:2000), which has been technically revised.

ISO 3338 consists of the following parts, under the general title *Cylindrical shanks for milling cutters*:

— *Part 1: Dimensional characteristics of plain cylindrical shanks*

— *Part 2: Dimensional characteristics of flatted cylindrical shanks*

— *Part 3: Dimensional characteristics of threaded shanks*

Cylindrical shanks for milling cutters —

Part 2:
Dimensional characteristics of flatted cylindrical shanks

1 Scope

This part of ISO 3338 specifies the dimensions of flatted cylindrical shanks for milling cutters — of diameters 6 mm to 20 mm for single-flatted shanks, 25 mm to 63 mm for double-flatted shanks and 6 mm to 32 mm for shanks with an inclined clamping surface. In the case of single-flatted shanks, it is applicable to both single-ended cutters and double-ended cutters, as double-flatted shanks cannot admit single-ended cutters.

The dimensions of plain cylindrical shanks and threaded shanks are given in ISO 3338-1 and ISO 3338-3, respectively.

The two shank types covered by ISO 3338-1 and this part of ISO 3338 have the same dimensional characteristics (diameters and lengths) but different tolerances on diameters, namely:

— h8 for plain cylindrical shanks, commonly used for tools mounted in collets;

— h6 for flatted cylindrical shanks, intended to be mounted in chucks and secured with a clamping screw, and requiring an accuracy adjustment.

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

3 Dimensions

3.1 General

All dimensions and tolerances are given in millimetres. Tolerances not specified shall be of tolerance class m, in accordance with ISO 2768-1:1989.

3.2 WE form — Flatted cylindrical shanks with single flat for diameter d_1 of 6 mm to 20 mm

The dimensions of flatted cylindrical shanks with a single flat are shown in Figure 1 and given in Table 1.

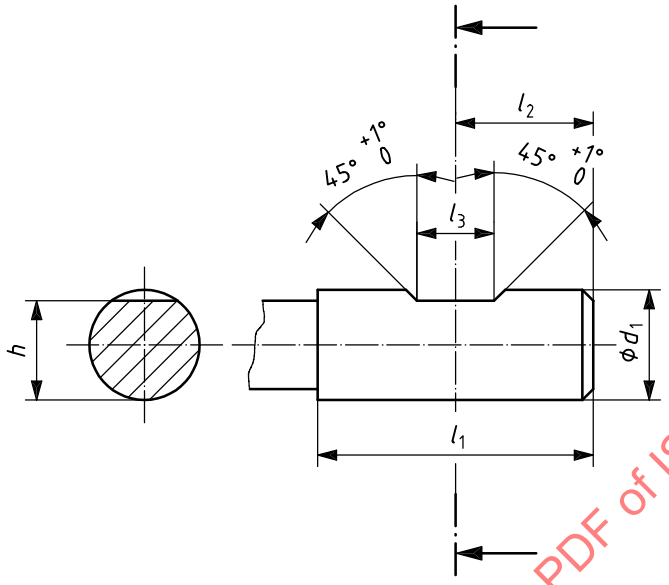

Figure 1 — WE form — Flatted cylindrical shanks with single flat

3.3 WE form — Flatted cylindrical shanks with double flat for diameter d_1 of 25 mm to 63 mm

The dimensions of flatted cylindrical shanks with a double flat are shown in Figure 2 and given in Table 1.

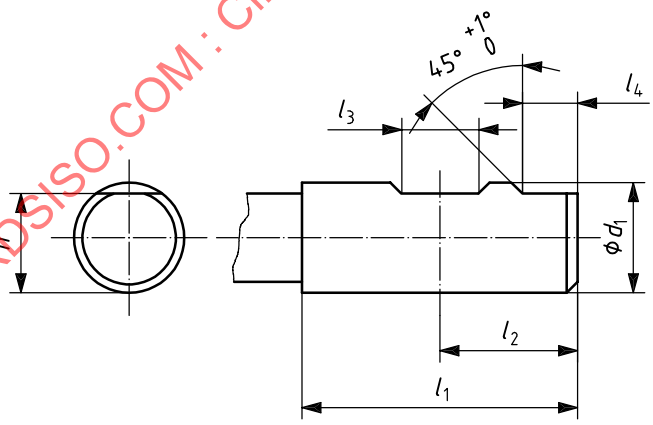

Figure 2 — WE form — Flatted cylindrical shanks with double flat

Table 1 — WE form — Flatted cylindrical shanks with single or double flat

Dimensions in millimetres

d_1 h6	l_1 $^{+2}_{0}$	l_2 $^{0}_{-1}$	l_3 $^{+0,05}_{0}$	l_4 $^{+1}_{0}$	h h11
6	36	18	4,2	—	4,8
8			5,5		6,6
10	40	20	7		8,4
12	45	22,5	8		10,4
14					12,7
16	48	24	10		14,2
18					16,2
20	50	25	11		18,2
25	56	32	12	17	23
32	60	36	14	19	30
40	70	40			38
50	80	45	18	23	47,8
63	90	50			60,8

3.4 WN form — Flatted cylindrical shanks with inclined clamping surface

The dimensions of flatted cylindrical shanks with an inclined clamping surface are shown in Figure 3 and given in Table 2.

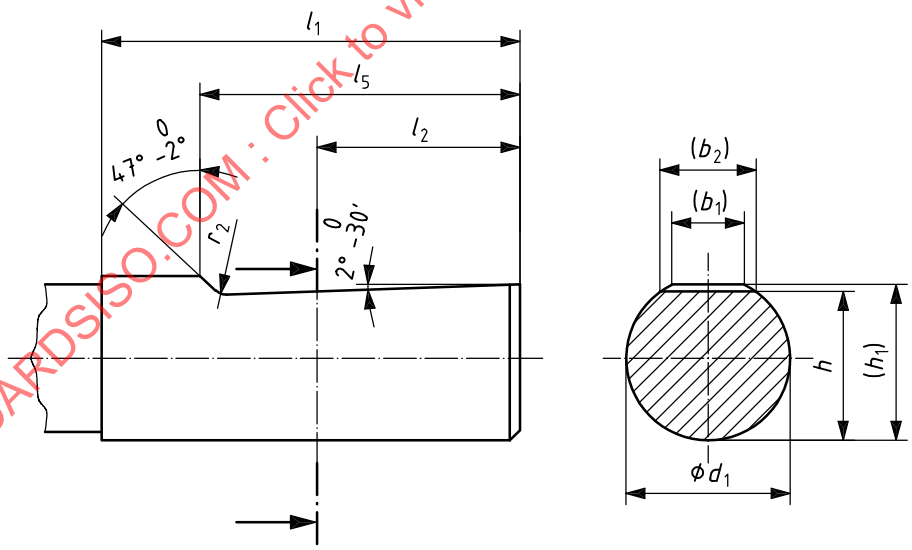

Figure 3 — WN form — Flatted cylindrical shanks with inclined clamping surface

Table 2 — WN form — Flatted cylindrical shanks with inclined clamping surface

Dimensions in millimetres

d_1 h6	l_1 $^{+2}_{0}$	l_2	l_5 $^{0}_{-1}$	h h11	h_1	b_1	b_2	r_2
6	36	18	25	4,8	5,4	3,5	4,8	1,2
8				6,6	7,2	4,7	6,1	
10	40	20	28	8,4	9,1	5,7	7,3	
12	45	22,5	33	10,4	11,2	6	8,2	
14				12,7	—	—	8,1	
16	48	24	36	14,2	15	7,6	10,1	1,6
18				16,2	—	—	10,8	
20	50	25	38	18,2	19,1	8,4	11,5	
25	56	32	44	23	24,1	9,3	13,6	
32	60	36	48	30	31,2	9,9	15,5	