
**Drills with indexable inserts — Cylindrical
shanks with a parallel flat**

Forets à plaquettes amovibles — Queues cylindriques à méplat

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ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

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Foreword

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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 9766 was prepared by Technical Committee ISO/TC 29, *Small tools*, Subcommittee SC 9, *Tools with cutting edges made of hard cutting materials*.

This second edition cancels and replaces the first edition (ISO 9766:1990), of which it constitutes a minor revision.

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1 Scope

This International Standard specifies the dimensions necessary for the interchangeability of cylindrical shanks with a parallel flat for drills with indexable inserts, which can be made of carbide and ceramic materials according to ISO 513 or HSS according to ISO 11054.

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 286-2, *Geometrical product specifications (GPS) — ISO code system for tolerances on linear sizes — Part 2: Tables of standard tolerance classes and limit deviations for holes and shafts*

3 Dimensions

See Figure 1 and Table 1.

4 Specifications

A hole shall be provided in order to axially feed coolant through the drill.

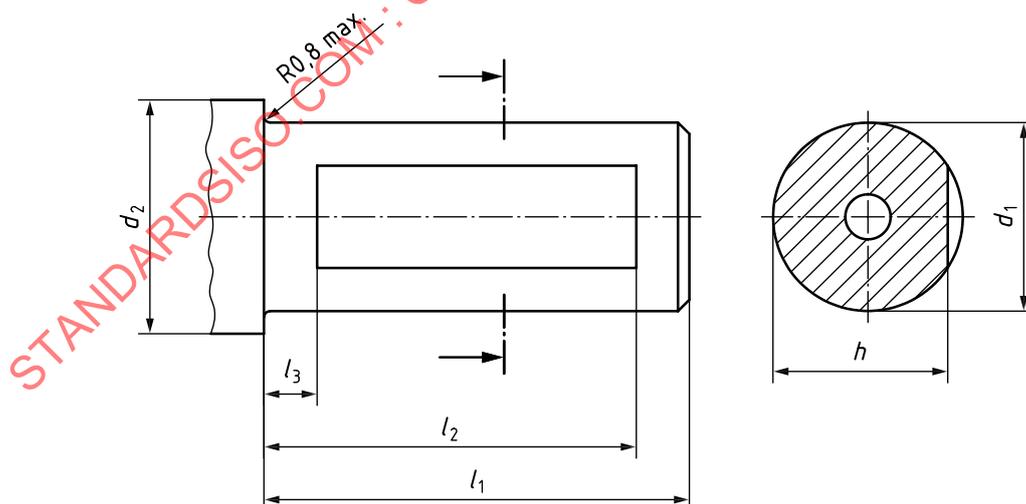


Figure 1 — Example of cylindrical shank with a parallel flat for drills with indexable inserts

Table 1 — Dimensions

Dimensions in millimetres

d_1	d_2^a	h	l_1	l_2	l_3
h6	min	h13	± 1	min.	max.
20	25	18,2	50	43	7
25	31	23	56	49	7
32	38	30	60	53	7
40	46	38	70	63	7
50	56	47,8	80	73	7

^a Tolerances on d_2 are in accordance with ISO 286-2.

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Annex A (informative)

Relationship between designations in this International Standard and the ISO 13399 series

For the relationship between designations in this International Standard and preferred symbols according to the ISO 13399 series, see Table A.1.

**Table A.1 — Relationship between designations in this International Standard
and the ISO 13399 series**

Symbol in this International Standard (ISO 9766)	Reference in this International Standard (ISO 9766)	Property name in the ISO 13399 series	Symbol in the ISO 13399 series	Reference in the ISO 13399 series
d_1	Figure 1 Table 1	Shank diameter	DMM	ISO/TS 13399-3 and ISO/TS 13399-4 71CF29862B277
d_2	Figure 1 Table 1	Flange diameter	DF	ISO/TS 13399-3 and ISO/TS 13399-5 71EC61D8A1771
h	Figure 1 Table 1	Not specified	Not specified	Not specified
l_1	Figure 1 Table 1	Shank length	LS	ISO/TS 13399-3 and ISO/TS 13399-4 71CF298870946
l_2	Figure 1 Table 1	Not specified	Not specified	Not specified
l_3	Figure 1 Table 1	Not specified	Not specified	Not specified

Bibliography

- [1] ISO 513, *Classification and application of hard cutting materials for metal removal with defined cutting edges — Designation of the main groups and groups of application*
- [2] ISO 11054, *Cutting tools — Designation of high-speed steel groups*
- [3] ISO 13399 (all parts), *Cutting tool data representation and exchange*

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