International Standard 7755/1

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Hardmetal burrs — Part 1: General specifications

Fraises-limes en métaux-durs — Partie 1: Spécifications générales

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Foreword

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Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

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Hardmetal burrs — Part 1: General specifications

1 Scope and field of application

This part of ISO 7755 lays down the common characteristics of hardmetal burrs of various styles, in solid construction or with brazed shank.

The main dimensions of the cutting part of hardmetal burrs are dealt with individually in ISO 7755 parts 2 to 12.

2 References

ISO 7755/2, *Hardmetal burrs — Part 2: Cylindrical burrs (style A).*

ISO 7755/3, *Hardmetal burrs — Part 3: Cylindrical round-(ball-) nose burrs (style C).*

ISO 7755/4, *Hardmetal burrs — Part 4: Spherical burrs (style D).*

ISO 7755/5, *Hardmetal burrs — Part 5: Oval burrs (style E).*

ISO 7755/6, *Hardmetal burrs — Part 6: Arch round- (ball-) nose burrs (style F).*

ISO 7755/7, *Hardmetal burrs — Part 7: Arch pointed-nose burrs (style G).*

ISO 7755/8, *Hardmetal burrs — Part 8: Flame burrs (style H).*

ISO 7755/9, *Hardmetal burrs — Part 9: 60° cone and 90° cone burrs (styles J and K).*

ISO 7755/10, *Hardmetal burrs — Part 10: Conical round- (ball-) nose burrs (style L).*

ISO 7755/11, *Hardmetal burrs — Part 11: Conical pointed-nose burrs (style M).*

ISO 7755/12, *Hardmetal burrs — Part 12: Inverted cone burrs (style N).*

3 Dimensions

3.1 Cutting diameter

Table 1 gives the series of cutting diameters and their related tolerances.

Table 1

Dimensions in millimetres

Cutting diameter	Tolerances*
2	±0,1 (±0,2)
3 4 6 8 10	±0,2 (±0,5)
12 16	±0,3 (±0,7)

* Tolerances given in parentheses apply for a transitional period only, after which the values without parentheses should be adopted.

3.2 Cylindrical shank

Shank diameter 3 mm and 6 mm[1], with tolerance h9. Shank length according to table 2. The shank length is defined as the length of the burr minus the length of the cutting part as given in ISO 7755 parts 2 to 12.

NOTE — These length ranges permit manufacture both of burrs with constant overall length and variable shank length, and of burrs with constant shank length and variable overall length. In the latter case, national standards should indicate the agreed shank length, which shall be within the limits given in table 2.

Table 2

Dimensions in millimetres

Shank diameter*	Shank length
3	20 to 35
6	25 to 50

* The values 3,15 and 6,3 mm are acceptable for a transitional period.

1) The values 3,15 and 6,3 mm are acceptable for a transitional period.

3.3 Relation between cutting diameter and shank diameter

Table 3 gives the possible combinations of cutting diameters and shank diameters.

Table 3

Dimensions in millimetres

Cutting diameter	Shank diameter*	
	3	6
2	×	
3	×	×
4	×	×
6	×	×
8		×
10		×
12		×
16		×

* The values 3,15 and 6,3 mm are acceptable for a transitional period.

4 Direction of flute helix and direction of cut

Burrs shall have a right-hand helix and right-hand cut, unless otherwise specified.

60° and 90° cone burrs (shapes J and K) may also be straight fluted.

5 Designation

5.1 Explanation of the designation code

The designation of hardmetal burrs includes six symbols, the last one being optional.

The meaning of the symbols is as follows:

1 letter symbol identifying the burr style (see 5.2.1);

2 number symbol identifying the cutting diameter (see 5.2.2);

3 number symbol identifying the cutting part length (see 5.2.3);

4 letter symbol identifying the tooth type (see 5.2.4);

5 number symbol identifying the shank diameter (see 5.2.5);

6 number symbol identifying the shank length — optional (see 5.2.6).

Example:

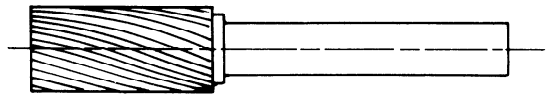
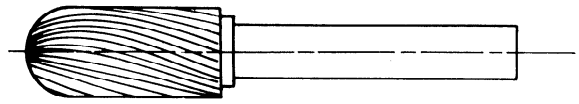
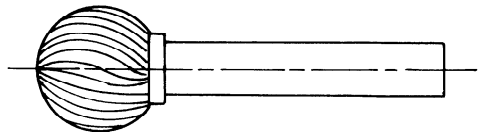
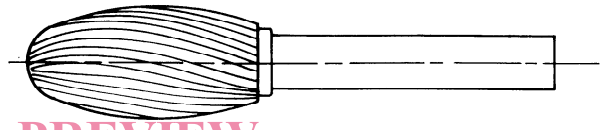
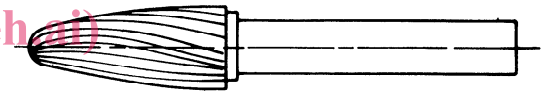
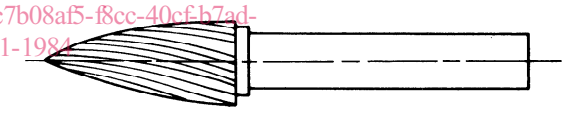
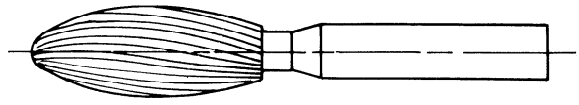
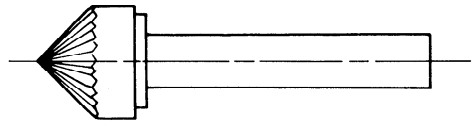
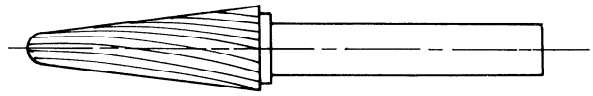
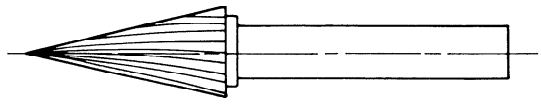
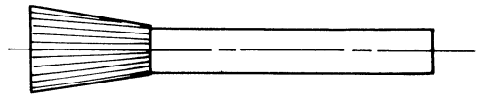
1	2	3	4	5	6
C	12	25	M	06	30

5.2 Symbols

5.2.1 Symbol for the burr style — Reference 1

Table 4 gives the letter symbols identifying each burr style.

Table 4

Letter symbol	Type	Figure
A	Cylindrical burr	
C	Cylindrical round- (ball-) nose burr	
D	Spherical burr	
E	Oval burr	
F	Arch round- (ball-) nose burr	
G	Arch pointed-nose burr	
H	Flame burr	
J	60° cone burr	
K	90° cone burr	
L	Conical round- (ball-) nose burr	
M	Conical pointed-nose burr	
N	Inverted cone burr	

5.2.2 Symbol for the cutting diameter — Reference 2

The number symbol is the numerical value of the cutting diameter in millimetres. One digit values shall be preceded by an 0 (zero).

Examples:

cutting diameter 6 mm — symbol **06**

cutting diameter 12 mm — symbol **12**

5.2.3 Symbol for the cutting part length — Reference 3

The number symbol is the numerical value of the cutting part length in millimetres, ignoring decimals. One digit values shall be preceded by an 0 (zero).

Examples:

cutting part length 5,2 mm — symbol **05**

cutting part length 10 mm — symbol **10**

5.2.4 Symbol for the tooth type — Reference 4

Table 5 gives the letter symbols identifying each type of tooth.

Table 5

Letter symbol	Tooth type
F	fine teeth
M	standard (medium) teeth
C	coarse teeth

NOTE — The number of teeth for each tooth type will be studied later.

5.2.5 Symbol for the shank diameter — Reference 5

Table 6 gives the number symbols identifying the shank diameter.

Table 6

Dimensions in millimetres

Number symbol	Shank diameter
03	3
06	6
31	3,15
63	6,3

5.2.6 Symbol for the shank length — Reference 6

The optional number symbol is the numerical value of the shank length in millimetres, ignoring decimals.

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