



INTERNATIONAL STANDARD ISO 603-1:1999

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TECHNICAL CORRIGENDUM 1

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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Bonded abrasive products — Dimensions —

- Part 1: Grinding wheels for external cylindrical grinding between centres
- Part 2: Grinding wheels for centreless external cylindrical grinding
- Part 3: Grinding wheels for internal cylindrical grinding
- Part 4: Grinding wheels for surface grinding/peripheral grinding
- Part 5: Grinding wheels for surface grinding/face grinding
- Part 6: Grinding wheels for tool and tool room grinding
- Part 7: Grinding wheels for manually guided grinding
- Part 8: Grinding wheels for deburring and fettling/snagging
- Part 9: Grinding wheels for high-pressure grinding
- Part 10: Stones for honing and superfinishings
- Part 11: Hand finishing sticks
- Part 12: Grinding wheels for deburring and fettling on a straight grinder
- Part 13: Grinding wheels for deburring and fettling on a vertical grinder
- Part 14: Grinding wheels for deburring and fettling/snagging on an angle grinder
- Part 15: Grinding wheels for cutting-off on stationary or mobile cutting-off machines
- Part 16: Grinding wheels for cutting-off on hand held power tools

TECHNICAL CORRIGENDUM 1

Produits abrasifs agglomérés — Dimensions —

- Partie 1: Meules pour rectification cylindrique extérieure entre centres*
- Partie 2: Meules pour rectification cylindrique extérieure sans centres*
- Partie 3: Meules pour rectification cylindrique intérieure*
- Partie 4: Meules pour rectification plane/meulage tangentiel*
- Partie 5: Meules pour rectification plane/meulage latéral*
- Partie 6: Meules pour affûtage d'outils*
- Partie 7: Meules pour meulage à guidage manuel*
- Partie 8: Meules pour ébarbage et ébavurage*
- Partie 9: Meules pour meulage haute pression*
- Partie 10: Bâtons rodoirs et de super finition*
- Partie 11: Pierres à main*
- Partie 12: Meules pour ébarbage et ébavurage sur meuleuses portatives droites*
- Partie 13: Meules pour ébarbage et ébavurage sur meuleuses portatives à axe vertical*
- Partie 14: Meules pour ébarbage et ébavurage sur meuleuses portatives à renvoi d'angle*
- Partie 15: Meules pour tronçonnage sur machines fixes ou mobiles*
- Partie 16: Meules pour tronçonnage sur machines portatives*

RECTIFICATIF TECHNIQUE 1

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Foreword

Paragraph 5, replace the reference to ISO 3290:1976 by ISO 3920:1976.

INTERNATIONAL STANDARD

ISO 603-6

First edition
1999-07-15

Bonded abrasive products — Dimensions —

Part 6: Grinding wheels for tool and tool room grinding

Produits abrasifs agglomérés — Dimensions —

Partie 6: Meules pour affûtage d'outils

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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 3.

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.

International Standard ISO 603-6 was prepared by Technical Committee ISO/TC 29, *Small tools*, subcommittee SC 5, *Grinding wheels and abrasives*.

This first edition, together with ISO 603-1:1999 to ISO 603-5:1999 and ISO 603-7:1999 to ISO 603-16:1999, cancels and replaces ISO/R 603:1967, ISO 603-2:1981, ISO 1117:1975, ISO 2220:1972, ISO 2933:1974, ISO 3290:1976 and ISO 3921:1976 as a technical revision of these standards.

ISO 603 consists of the following parts, under the general title *Bonded abrasive products — Dimensions*:

- *Part 1: Grinding wheels for external cylindrical grinding between centres*
- *Part 2: Grinding wheels for centreless external cylindrical grinding*
- *Part 3: Grinding wheels for internal cylindrical grinding*
- *Part 4: Grinding wheels for surface grinding/peripheral grinding*
- *Part 5: Grinding wheels for surface grinding/face grinding*
- *Part 6: Grinding wheels for tool and tool room grinding*
- *Part 7: Grinding wheels for manually guided grinding*
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- *Part 14: Grinding wheels for deburring and fettling/snagging on an angle grinder*
- *Part 15: Grinding wheels for cutting-off on stationary or mobile cutting-off machines*
- *Part 16: Grinding wheels for cutting-off on hand held power tools*

Bonded abrasive products — Dimensions —

Part 6:

Grinding wheels for tool and tool room grinding

1 Scope

This part of ISO 603 specifies the nominal dimensions, in millimeters, of:

- Type 1: Straight grinding wheel (general application and saw sharpening)
- Type 3: Wheel tapered on one side
- Type 5: Wheel recessed on one side
- Type 6: Straight cup wheel
- Type 7: Wheel recessed on both sides
- Type 11: Taper cup wheel
- Type 12: Dish wheel

These bonded abrasive products are intended to be used for grinding or regrinding of cutting faces and edges of tools. The workpieces and the grinding wheels are mechanically guided.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 603. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 603 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 525:1999, *Bonded abrasive products — General requirements.*

ISO 6103:1999, *Bonded abrasive products — Static balancing of grinding wheels — Testing.*

ISO 13942:—¹⁾, *Bonded abrasive products — Limit deviations and run-out tolerances.*

¹⁾ To be published.

3 Dimensions

3.1 Type 1: Straight grinding wheel (general application)

See Figure 1 and Table 1.

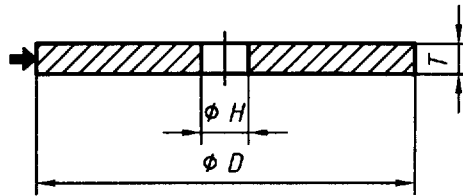


Figure 1 — Type 1

Table 1 — Dimensions of Type 1

D	T							H					
	6	10	13	16	20	25	32	13	16	20	25	32	51
50	X	X	X	—	—	—	—	X	—	—	—	—	—
100	—	X	X	—	X	—	—	—	X	X	—	—	—
125	—	—	X	X	X	X	—	—	—	X	—	X	—
150	X	X	X	X	X	X	—	—	—	X	X	X	—
175	—	X	X	X	X	X	X	—	—	X	—	X	—
200	X	X	X	X	X	X	X	—	—	X	X	X	X
250	—	—	X	—	X	X	—	—	—	—	—	X	—
300	—	—	—	—	X	X	X	—	—	—	—	X	—

3.2 Type 3: Wheel tapered on one side

See Figure 2 and Table 2.

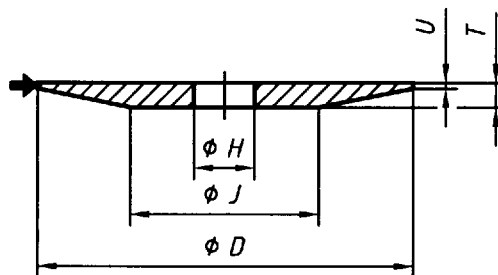


Figure 2 — Type 3

Table 2 — Dimensions of Type 3

D	T	H	J	U
80	5	13	40	1
100	6	20	50	1,5
125	7	20	63	2
		32		
150	8	32	75	3
175	10		85	
200	13		100	
250	14		125	

3.3 Type 5: Wheel recessed on one side

See Figure 3 and Table 3.

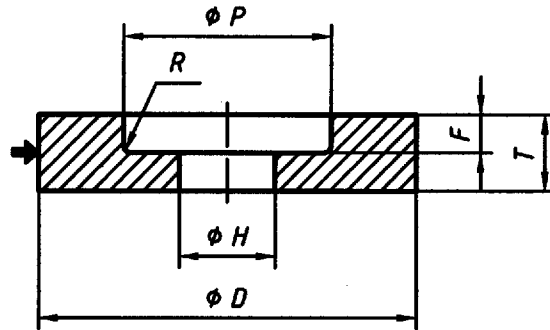


Figure 3 — Type 5

Table 3 — Dimensions of Type 5

<i>D</i>	<i>T</i>	<i>H</i>	<i>P</i>	<i>F</i> ^a	<i>R</i> _{max}
150	32	20	80	16	3,2
		32			
175	32	32	90	16	
200	40	32	110	20	
		50,8			
250	40	50,8	150	20	
		76,2			
300	45	76,2	150	20	
	50			25	
400	50	127	215	25	

^a The value *F* is taken less than or equal to half thickness *T*.

3.4 Type 7: Wheel recessed on both sides

See Figure 4 and Table 4.

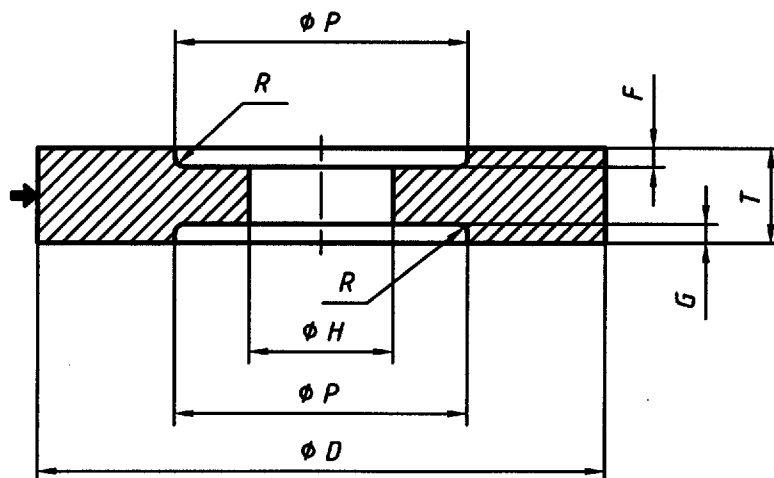


Figure 4 — Type 7

Table 4 — Dimensions of Type 7

<i>D</i>	<i>T</i>	<i>H</i>	<i>P</i>	<i>F</i>	<i>G</i>	<i>R</i> _{max}
300	50	76,2	150	10	10	5
400	65	127	215			

3.5 Type 1: Straight grinding wheel (saw sharpening)

See Figure 5 and Table 5.

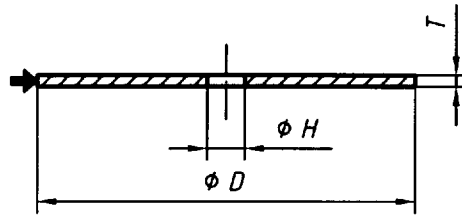


Figure 5 — Type 1

Table 5 — Dimensions of Type 1

<i>D</i>	<i>T</i>	<i>H</i>
100	1	20
	1,3	
	1,6	
	2	
	2,5	
	3	
	3,2	
	4	
125	1	20
	1,3	
	1,6	
	2	
	2,5	
	3,2	
	4	
150	1,6	20
	2	
	2,5	
	3	
	3,2	
	4	
	5	
	6	
150	1,6	32
	2	
	2,5	
	3	

<i>D</i>	<i>T</i>	<i>H</i>
150	3,2	32
	4	
	5	
	6	
	8	
	10	
	13	
	16	
200	2	20
	2,5	
	3	
	3,2	
	4	
	5	
	6	
	8	
	10	
	13	
200	2	32
	2,5	
	3	
	3,2	
	4	
	5	
	6	
	8	

<i>D</i>	<i>T</i>	<i>H</i>
200	10	32
	13	
	16	
	20	
250	3	32
	3,2	
	4	
	5	
	6	
	8	
	10	
	13	
300	16	32
	20	
	25	
	5	
	6	
	8	
	10	
	13	

3.6 Type 6: Straight cup wheel

See Figure 6 and Table 6.

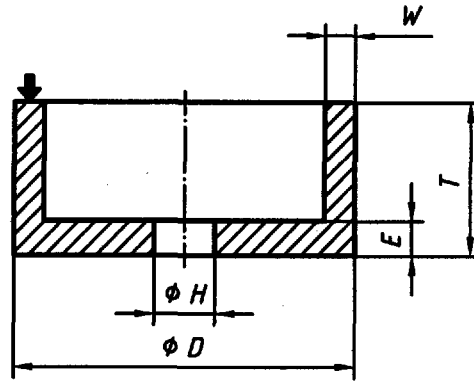


Figure 6 — Type 6

Table 6 — Dimensions of Type 6

D	T	H	W	E min.
50	32	13	5	8
80	40		6	
100	50	20	8	10
125	63	20	8	
		32		13
150	80	32	10	16
180	80		16	16

3.7 Type 11: Taper cup wheel

See Figure 7 and Table 7.

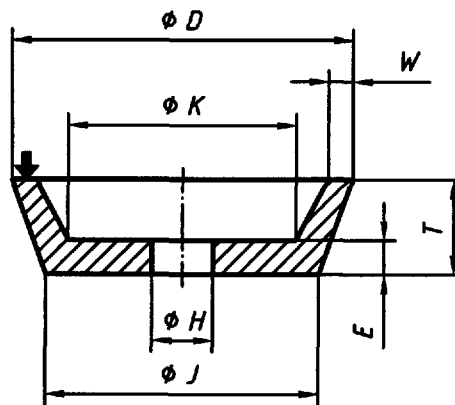


Figure 7 — Type 11

Table 7 — Dimensions of Type 11

D	T	H	J	K	W	E min.
50	32	13	27	22	4	8
80			57	46	6	
100	40	20	71	56	8	10
125		20	96	81		
		32				13
150	50	32	114	96	10	13
180			144	120	13	13

3.8 Type 12: Dish wheel

See Figure 8 and Table 8.

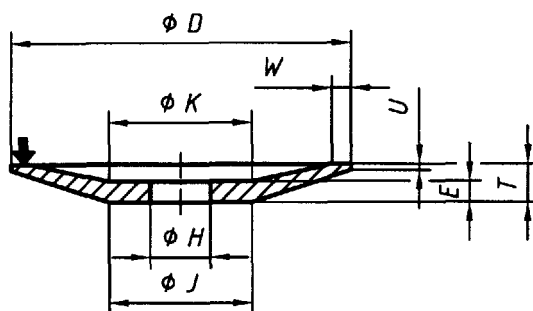


Figure 8 — Type 12

Table 8 — Dimensions of Type 12

<i>D</i>	<i>T</i>	<i>H</i>	<i>J = K</i>	<i>W</i>	<i>E</i> min.	<i>U</i>
80	10	13	31	4	6	2,5
100	13	20	36	5	7	3,2
125	13	20	61	6	7	
		32				
150	16	32	66	8	9	
180	20		76	10	11	
200	20		90	10	12	

4 Designation

A complete designation of a bonded abrasive product in accordance with this part of ISO 603 shall be consist of the following information:

- a) designation of the bonded abrasives, e.g. "Straight cup wheel";
- b) reference of this part of ISO 603;
- c) type (shape);
- d) dimensions;
- e) specifications of an internal nature;
- f) the maximum operating speed.

In accordance with ISO 525 and this part of ISO 603

EXAMPLE

A straight cup wheel for regrinding of cutting faces, Type 6, $D = 125$ mm, $T = 63$ mm, $H = 32$ mm, $W = 8$ mm, $E = 13$ mm nature of abrasive C, grain size 60, grade I, structure 6, nature of bond V and a maximum operating speed of 32 m/s is designated as follows:

Straight cup wheel ISO 603-6 - 6 - 125 × 63 × 32/8/13 - C 60 I6V - 32 m/s

5 Specifications

The specifications are left to the manufacture's discretion, see ISO 525.

5.1 Tolerances

Limit deviations and run-out tolerances in accordance with ISO 13942.

5.2 Balancing

Balancing is in accordance with ISO 6103.

5.3 Marking

Marking of bonded abrasive products is in accordance with ISO 525.

Bibliography

- [1] ISO 8486-1, *Bonded abrasives — Determination and designation of grain size distribution — Part 1: Macrogrits F4 to F220.*
- [2] ISO 8486-2, *Bonded abrasives — Determination and designation of grain size distribution — Part 2: Microgrits F230 to F1200.*

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