
**Bonded abrasive products —
Dimensions —**

**Part 7:
Grinding wheels for manually guided grinding**

Produits abrasifs agglomérés — Dimensions —

Partie 7: Meules pour meulage à guidage manuel

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International Organization for Standardization
Case postale 56 • CH-1211 Genève 20 • Switzerland
Internet iso@iso.ch

Printed in Switzerland

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 603-7 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 603-6:1999 and ISO 603-8:1999 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*
- *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*

Bonded abrasive products — Dimensions —

Part 7:

Grinding wheels for manually guided grinding

1 Scope

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

- Type 1: Straight grinding wheel
- Type 5: Wheel recessed on one side
- Type 6: Straight cup wheel
- Type 35: Cemented or clamped disc wheel
- Type 36: Disc wheel with inserted nuts
- Type 37: Cylinder wheels with inserted nuts

These bonded abrasive products are intended to be used for the grinding of any surface and regrinding of workpieces. The workpiece is guided by hand, the grinding wheel is fixed.

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 603-5:1999, *Bonded abrasive products — Dimensions — Grinding wheels for surface grinding/face grinding.*

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

See Figure 1 and Table 1.

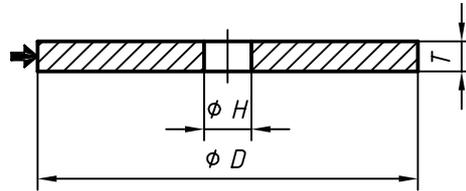


Figure 1 — Type 1

Table 1 — Dimensions of Type 1

D	T									H
	13	20	25	32	40	50	63	80	100	
100	X	X	—	—	—	—	—	—	—	16
										20
125	X	X	—	—	—	—	—	—	—	20
										32
150	—	X	X	—	—	—	—	—	—	20
										32
200	—	X	X	—	—	—	—	—	—	32
250	—	—	X	X	—	—	—	—	—	
300	—	—	—	X	X	—	—	—	—	32
										50,8
										76,2
350/356	—	—	—	X	X	X	—	—	—	32
										50,8
										76,2
400/406	—	—	—	—	X	X	X	—	—	50,8
										76,2
										127
450/457	—	—	—	—	X	X	X	—	—	50,8
										76,2
										127
										152,4
500/508	—	—	—	—	—	X	X	X	—	50,8
										127
										152,4
										203,2
600/610	—	—	—	—	—	X	X	X	—	76,2
										127
										203,2
750/762	—	—	—	—	—	—	X	X	X	304,8
										203,2
										304,8

3.2 Type 5: Wheel recessed on one side

See Figure 2 and Table 2.

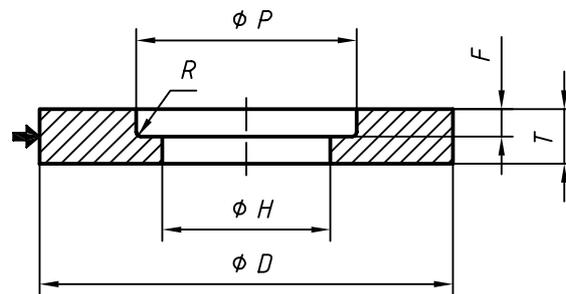


Figure 2 — Type 5

Table 2 — Dimensions of Type 5

D	T	H					P	F	R_{max}
		20	32	50,8	76,2	127			
150	32	X	X	—	—	—	80	16	3,2
175	32	—	X	X	—	—	90	16	
200	40	—	X	X	—	—	110	20	
250	40	—	—	X	X	—	150	20	5
300	40	—	—	—	X	—	150	20	
	45							25	
400	50	—	—	—	—	X	215	25	

3.3 Type 6: Straight cup wheel

See Figure 3 and Table 3.

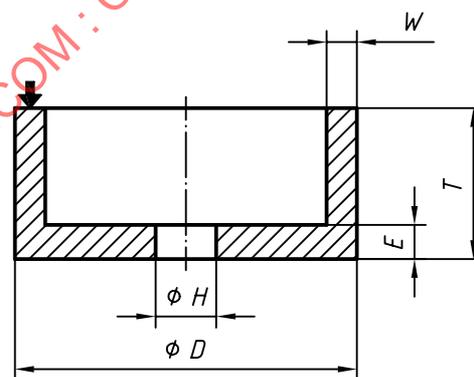


Figure 3 — Type 6

Table 3 — Dimensions of Type 6

D	T	H						W	E min.
		13	20	25	32	50,8	76,2		
50	32	X	—	—	—	—	—	8	8
80	40	X	—	—	—	—	—	10	10
100	50	—	X	—	—	—	—		10
125	63	—	X	—	X	—	—	13	13
150	80	—	—	—	X	—	—	16	16
175	80	—	—	X	X	X	X	20	20
200	100	—	—	X	X	X	X	20	20

3.4 Type 35: Cemented or clamped disc wheel

See Figure 4 and Table 4.

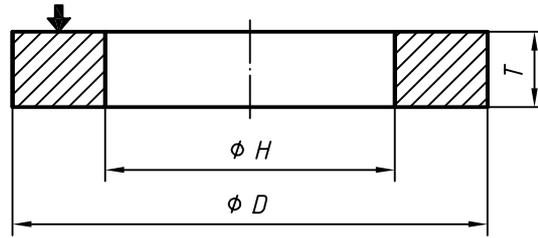


Figure 4 — Type 35

Table 4 — Dimensions of Type 35

D	T		H
350/356	63	80	203,2
400/406	63	80	254
450/457			304,8
500/508			400
600/610	63	80	508
750/762			—
900/914	—	80	

3.5 Type 36: Disc wheel with inserted nuts

See Figure 5 and Table 5.

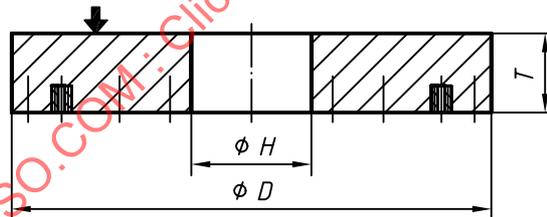


Figure 5 — Type 36

Table 5 — Dimensions of Type 36

D	T			H max.	Insert layout
350/356	63	80	—	120	See Figures 8 to 14 and Tables 8 to 14 in ISO 603-5:1999
400/406			100	140	
450/457			50		
500/508	63	80	100	150	
600/610			50		
750/762			280		
900/914	—	80	100		

3.6 Type 37: Cylinder wheels with inserted nuts

See Figure 6 and Table 6.

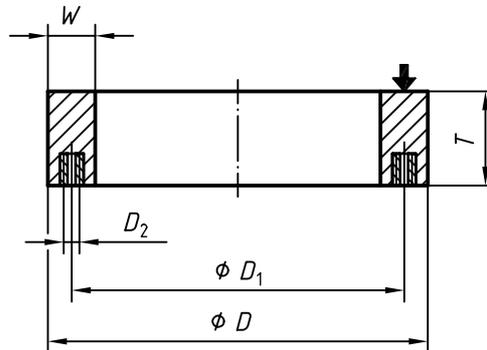


Figure 6 — Type 37

Table 6 — Dimensions of Type 37

D	T	W	D_1	Insert layout	D_2
				Number of holes	
400/406	100	50	350	8 at 45°	M10
450/457			400	10 at 36°	
500/508	125	63	450	12 at 30°	
600/610			540		

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:

- designation of the bonded abrasives, e.g. "Grinding wheel";
- reference of this part of ISO 603;
- type (shape);
- dimensions;
- specifications of an internal nature;
- the maximum operating speed.

In accordance with ISO 525
and this part of ISO 603

EXAMPLE

A disc wheel with inserted nuts for off-hand grinding, Type 36, $D = 500$ mm, $T = 80$ mm, $H = 50$ mm, nature of abrasive A, grain size 46, grade H, structure 8, nature of bond B and a maximum operating speed of 32 m/s is designated as follows:

Disc wheel ISO 603-7 - 36 - 500 × 80 × 50 - A 46 H8B - 32 m/s