
**Bonded abrasive products —
Dimensions —**

Part 4:

Grinding wheels for surface grinding/peripheral grinding

Produits abrasifs agglomérés — Dimensions —

Partie 4: Meules pour rectification plane/meulage tangentiel



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

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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 603-4 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 603-3:1999 and ISO 603-5:1999 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 4:

Grinding wheels for surface grinding/peripheral 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 7: Wheel recessed on both sides
- Type 20: Wheel relieved on one side
- Type 21: Wheel relieved on both sides
- Type 22: Wheel relieved on one side and recessed on the other side
- Type 23: Wheel relieved and recessed on one side
- Type 24: Wheel relieved and recessed on one side and recessed on the other side
- Type 25: Wheel relieved and recessed on one side and relieved on the other side
- Type 26: Wheel relieved and recessed on both sides.
- Type 38: Hubbed wheel
- Type 39: Double hubbed wheel

These bonded abrasive products are intended to be used for the grinding of plane surfaces where the workpiece is secured to a reciprocating table. The workpiece and the grinding wheel 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*.

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¹⁾ To be published.

3 Dimensions

3.1 Type 1: Straight grinding wheel

See Figure 1 and Table 1.

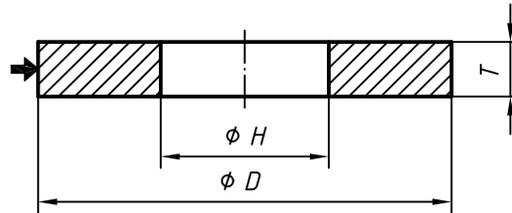


Figure 1 — Type 1

Table 1 — Dimensions of Type 1

D	T								H
	13	20	25	32	50	80	100	160	
150	X	—	—	—	—	—	—	—	32
180	X	—	—	—	—	—	—	—	
200	X	X	—	—	—	—	—	—	
	X	X	—	—	—	—	—	—	50,8
250	—	X	X	X	—	—	—	—	
	—	X	X	X	—	—	—	—	76,2
300	—	X	X	X	X	X	—	—	
	—	X	X	X	X	X	—	—	127
350/356	—	—	—	X	X	X	—	—	
	—	—	—	X	X	X	—	—	127
400/406	—	—	—	X	X	X	X	—	
	500/508	—	—	—	—	X	X	X	X
—		—	—	—	X	X	X	X	
600/610	—	—	—	—	X	X	X	X	304,8
750/762	—	—	—	—	X	X	X	X	

3.2 Type 5: Wheel recessed on one side

See Figure 2 and Table 2.

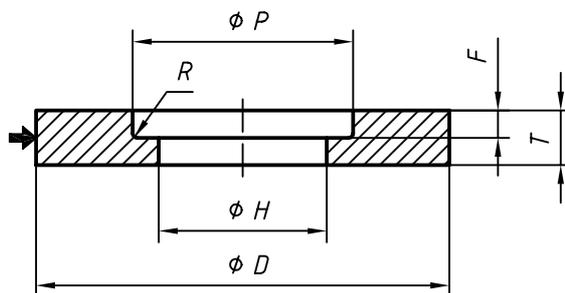


Figure 2 — Type 5

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Table 2 — Dimensions of Type 5

<i>D</i>	<i>T</i>	<i>H</i>	<i>P</i>	<i>F</i>	<i>R</i> _{max}
150	25	32	80	10	1
	32			13	
180	25	32	100	10	32
	32			13	
200	25	32	110	10	
	32			13	
200	25	50,8	110	10	
	32			13	
250	32	50,8	150	13	
	40				
250	32	76,2	150	13	
	40				
300	40	76,2	150	13	
	50				
300	40	127	190	13	
	50				
350/356	40	127	215	13	
	50				
400/406	40	127	215	13	
	50				
450/457	63	127	215	25	
	80				
450/457	40	203,2	280	13	
	50				
	63				
	80				
500/508	40	203,2	400	13	
	50				
	63				
	80				
500/508	40	304,8	400	13	
	50				
	63				
	80				
600/610	63	203,2	400	13	
	80			25	
	100			50	
600/610	63	304,8	400	13	
	80			25	
	100			50	
750/762	63	304,8	400	13	
	80			25	
	100			50	
900/914	63	304,8	450	13	
	80			25	
	100			50	

3.3 Type 7: Wheel recessed on both sides

See Figure 3 and Table 3.

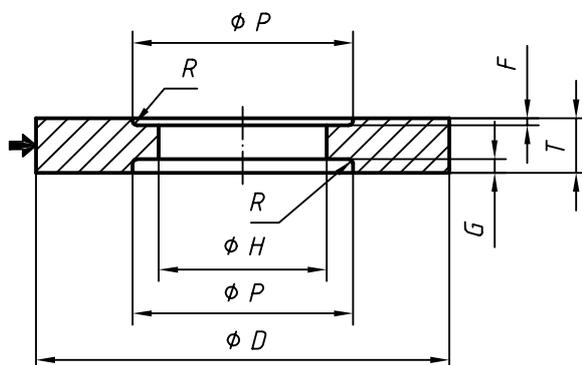


Figure 3 — Type 7

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Table 3 — 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	40	76,2	150	6	6	3,2
	50			10	10	
300	40	127	190	6	6	5
	50		215	10	10	
350/356	40	127		215	10	
	50					
400/406	40	127	215	10	10	
	50					
450/457	63	127	215	13	13	
	80					
450/457	50	203,2	280	10	10	
	63			13	13	
	80					
500/508	40	203,2	400	10	10	
	50					
	63			13	13	
	80					
500/508	40	304,8	400	10	10	
	50					
	63			13	13	
	80					
600/610	50	203,2	400	10	10	
	63					
	80			13	13	
	100					25
600/610	50	304,8	400	10	10	
	63					
	80			13	13	
	100					25
750/762	80	304,8	400	13	13	
	100				25	
900/914	80	304,8	450	13	13	
	100				25	

3.4 Type 20: Wheel relieved on one side

See Figure 4 and Table 4.

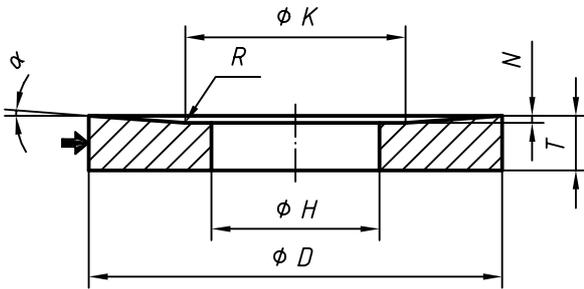


Figure 4 — Type 20

3.5 Type 21: Wheel relieved on both sides

See Figure 5 and Table 4.

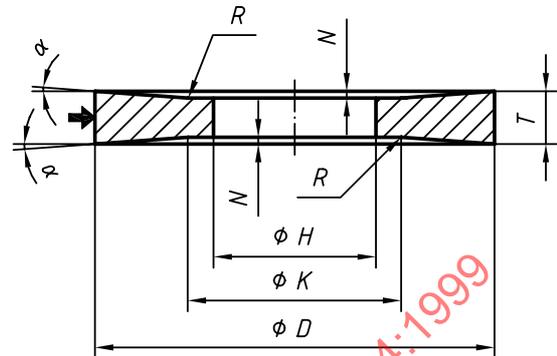


Figure 5 — Type 21

Table 4 — Dimensions of Type 20 and Type 21

D	T											H	K	N ^a		R _{max}
	13	16	20	25	32	40	50	63	80	100	125			α ≈ 2°	α ≈ 4°	
250	X	X	X	X	X	X	—	—	—	—	—	76,2	150	2	4	3,2
												127	190	1	2	5
300	X	X	X	X	X	X	X	—	—	—	—	76,2	150	3	5	3,2
												127	190	2	4	
300/356	—	—	X	X	X	X	X	X	—	—	—	127	215	2	5	5
400/406	—	—	X	X	X	X	X	X	—	—	3			7		
450/457	—	—	X	X	X	X	X	X	—	—	127	215	4	8		
											203,2	280	3	6		
500/508	—	—	X	X	X	X	X	X	—	—	203,2	400	2	4	8	
											304,8					
600/610	—	—	—	X	X	X	X	X	X	—	203,2	400	4	7		
											304,8					
750/762	—	—	—	X	X	X	X	X	X	X	304,8	400	6	13		

^a The values N or 2N are taken less than or equal to half thickness T.

3.6 Type 22: Wheel relieved on one side and recessed on the other side

See Figure 6 and Table 5.

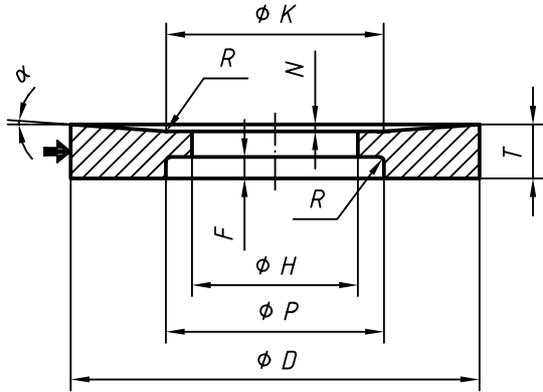


Figure 6 — Type 22

3.7 Type 23: Wheel relieved and recessed on one side

See Figure 7 and Table 5.

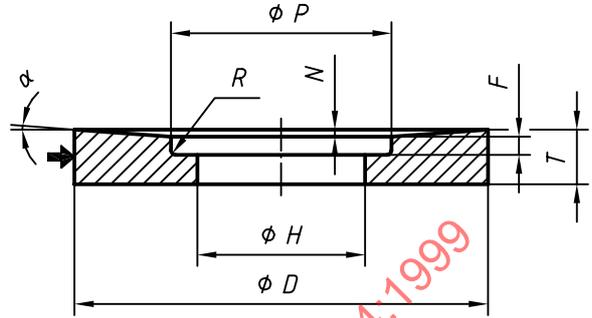


Figure 7 — Type 23

Table 5 — Dimensions of Type 22 and Type 23

D	T	H	K = P	F	N		R _{max}
					α ≈ 2°	α ≈ 4°	
300	40	76,2	150	13	3	5	3,2
	50				3	5	
300	40	127	190	13	2	4	5
	50				2	4	
350/356	40	127	215	13	2	5	
	50				2	5	
400/406	40	127	215	13	3	7	
	50				3	7	
450/457	63	127	215	25	4	8	
	80				4	8	
450/457	40	203,2	280	13	3	6	
	50				3	6	
	63			25	3	6	
	80				3	6	
500/508	40	203,2	400	13	2	4	
	50				2	4	
	63			25	2	4	
	80				2	4	
500/508	40	304,8	400	13	2	4	
	50				2	4	
	63			25	2	4	
	80				2	4	
600/610	63	203,2	400	13	4	7	
	80			25	4	7	
	100			40	4	7	
600/610	63	304,8	400	13	4	7	
	80			25	4	7	
	100			40	4	7	
750/762	63	304,8	400	13	6	13	
	80			25	6	13	
	100			40	6	—	

3.8 Type 24: Wheel relieved and recessed on one side and recessed on the other side

See Figure 8 and Table 6.

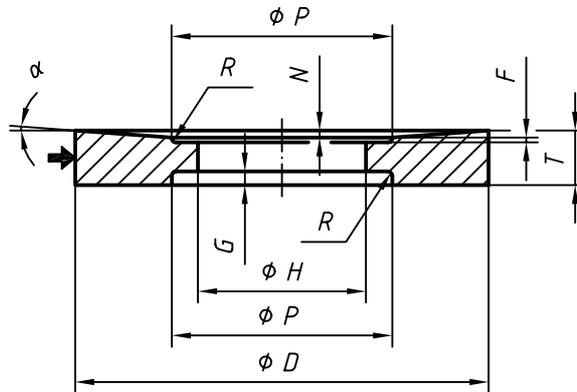


Figure 8 — Type 24

Table 6 — Dimensions of Type 24

D	T	H	P	F^a	G^a	N^a		R_{max}
						$\alpha \approx 2^\circ$	$\alpha \approx 4^\circ$	
300	40	76,2	150	6	6	2	4	3,2
	50			10	10	3	—	
300	40	127	190	6	6	2	4	5
	50			10	10	3	—	
350/356	40	127	215	6	6	2	5	
	50					2	5	
400/406	40	127	215	6	6	3	7	
	50					3	7	
450/457	63	127	215	10	13	4	8	
	80			13		4	8	
450/457	50	203,2	280	6	13	3	6	
	63			3		6		
	80			3		6		
500/508	40	203,2	400	6	6	2	4	
	50			6	2	4		
	63			13	2	4		
	80				2	4		
500/508	40	304,8	400	6	6	2	4	
	50			6	2	4		
	63			13	2	4		
	80				2	4		
600/610	50	203,2	400	6	6	4	7	
	63			13	4	—		
	80				4	7		
	100			25	4	7		
600/610	50	304,8	400	6	6	4	7	
	63			13	4	—		
	80				4	7		
	100			25	4	7		
750/762	80	304,8	400	13	13	6	13	
	100					6	—	

^a The values $N + F + G$ are taken less than or equal to half thickness T .

3.9 Type 25: Wheel relieved and recessed on one side and relieved on the other side

See Figure 9 and Table 7.

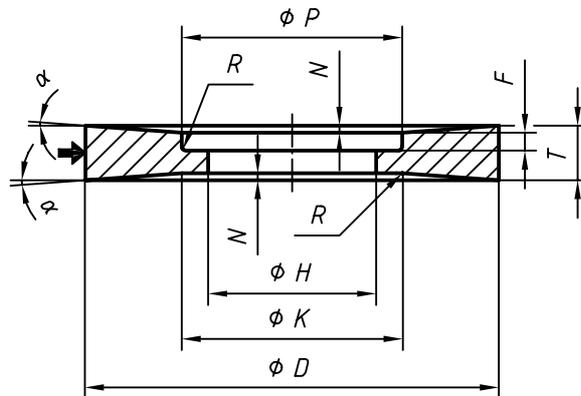


Figure 9 — Type 25

Table 7 — Dimensions of Type 25

D	T	H	K = P	F ^a	N ^a		R _{max}
					α ≈ 2°	α ≈ 4°	
300	40	76,2	150	13	3	—	3,2
	50				3	5	
300	40	127	190	13	2	—	5
	50				2	4	
350/356	40	127	215	13	2	—	
	50				2	5	
400/406	40	127	215	13	3	—	
	50				3	6	
450/457	63	127	215	13	4	8	
	80			25	4	7	
450/457	40	203,2	280	13	3	—	
	50				3	6	
	63			3	6		
	80			25	3	6	
500/508	40	203,2	400	13	2	—	
	50				2	4	
	63			2	4		
	80			25	2	4	
500/508	40	304,8	400	13	2	—	
	50				2	4	
	63			2	4		
	80			25	2	4	
600/610	63	203,2	400	13	4	7	
	80			25	4	7	
	100			40	4	—	
600/610	63	304,8	400	13	4	7	
	80			25	4	7	
	100			40	4	—	
750/762	63	304,8	400	13	6	—	
	80			25	6	—	
	100			40	5	—	

^a The values 2N + F are taken less than or equal to half thickness T.

3.10 Type 26: Wheel relieved and recessed on both sides

See Figure 10 and Table 8.

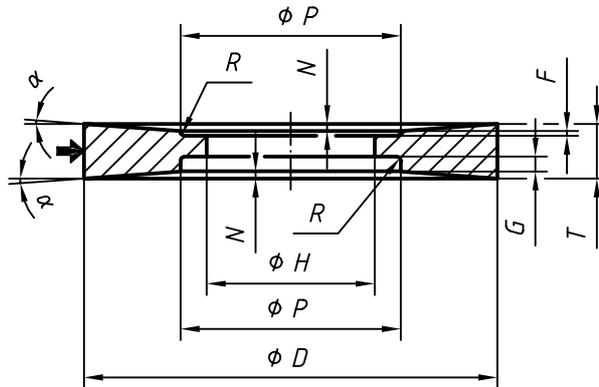


Figure 10 — Type 26

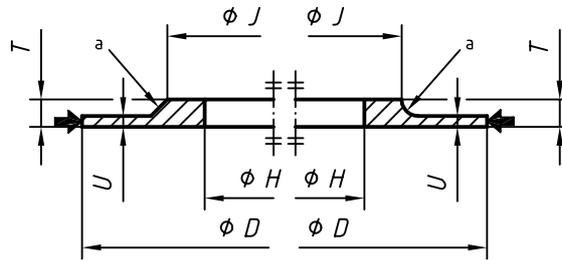
Table 8 — Dimensions of Type 26

D	T	H	P	F ^a	G ^a	N ^a		R _{max}
						α ≈ 2°	α ≈ 4°	
300	40	76,2	150	6	6	2	4	3,2
	50			10	10	2	—	
300	40	127	190	6	6	2	4	5
	50			10	10	2	—	
350/356	40	127	215	6	6	2	—	
	50			6	2	5		
400/406	40	127	215	6	6	3	—	
	50			6	3	6		
450/457	63	127	215	6	6	4	8	
	80			13	13	4	7	
450/457	50	203,2	280	6	6	3	6	
	63			6	3	6		
	80			13	13	3	6	
500/508	40	203,2	400	6	6	2	4	
	50			6	2	4		
	63			13	13	2	—	
	80			6	2	4		
500/508	40	304,8	400	6	6	2	4	
	50			6	2	4		
	63			13	13	2	—	
	80			6	2	4		
600/610	50	203,2	400	6	6	4	—	
	63			6	—	—		
	80			13	13	4	—	
	100			25	4	—		
600/610	50	304,8	400	6	6	4	—	
	63			6	—	—		
	80			13	13	4	—	
	100			25	4	—		
750/762	80	304,8	400	13	13	6	—	
	100			13	25	6	—	

^a The values 2N + F + G are taken less than or equal to half thickness T.

3.11 Type 38: Hubbed wheel

See Figure 11 and Table 9.

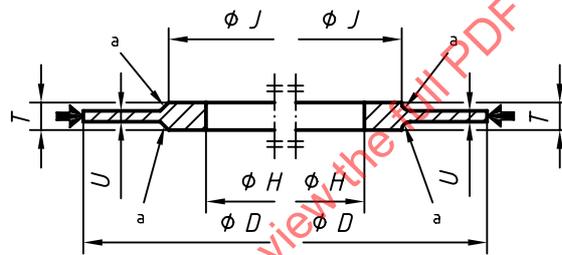


^a Chamfer or radius left to the manufacturer's discretion.

Figure 11 — Type 38

3.12 Type 39: Double hubbed wheel

See Figure 12 and Table 9.



^a Chamfer or radius left to the manufacturer's discretion.

Figure 12 — Type 39

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