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JIS R 6211-5 : 2003

(GIS/JSA)

**Bonded abrasive products —
Dimensions —
Part 5: Grinding wheels for
surface grinding/face grinding**

ICS 25.100.70

Reference number : JIS R 6211-5 : 2003 (E)

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Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee in accordance with the proposal of revising a Japanese Industrial Standard from the Japan Grinding Wheel Association (GIS)/the Japanese Standards Association (JSA), with a draft of Industrial Standard based on the provision of Article 12 Clause 1 of the Industrial Standardization Law which shall be applied by Article 14 of the same Law. Consequently **JIS R 6211-5:1999** is replaced with **JIS R 6211-5:2003**.

In this revision **ISO 603-5:1999, Bonded abrasive products — Dimensions — Part 5: Grinding wheels for surface grinding / face grinding** is used as a basis to make Japanese Industrial Standard conform to the corresponding International Standard.

Attention is drawn to the possibility that some parts of this Standard, which have technical properties, may conflict with a patent right, application for a patent after opening to the public, utility model right or application for registration of utility model after opening to the public. The Minister of Economy, Trade and Industry and the Japanese Industrial Standards Committee are not responsible for identifying the patent right, application for a patent after opening to the public, utility model right or application for registration of utility model after opening to the public which have the said technical properties.

JIS R 6211 consists of the following 16 parts under the general title *Bonded abrasive products — Dimensions*.

- Part 1: Grinding wheels for external cylindrical grinding between centres*
- Part 2: Grinding wheels for centerless 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*

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Technical Committee on Ceramics

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In the event of any doubts arising as to the contents,
the original JIS is to be the final authority.

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Contents

	Page
Introduction	1
1 Scope	1
2 Normative reference	1
3 Dimensions	2
3.1 Type 2: Cemented or clamped cylinder wheel	2
3.2 Type 6: Straight cup wheel	3
3.3 Type 31: Segments	4
3.4 Type 35: Cemented or clamped disc wheel	6
3.5 Type 36: Disc wheel with inserted nuts	7
3.6 Type 37: Cylinder wheel with inserted nuts	9
4 Designation	10
Annex (informative) Comparison table between JIS and corresponding International Standard	21

Bonded abrasive products — Dimensions — Part 5: Grinding wheels for surface grinding/face grinding

Introduction This part of **JIS R 6211** has been prepared based on the first edition of **ISO 603-5 Bonded abrasive products — Dimensions — Part 5: Grinding wheels for surface grinding/face grinding** published in 1999, with modifying the technical contents of the tables in A series because of unmatching with an obligatory law, the structural specification for grinding machine. The tables in B series specify the dimensions mainly used in Japanese market. However, A series shall take precedence, and B series will be restudied in five years.

The portions sidelined or underlined with dots in this part of **JIS R 6211** are the matters not included in the original International Standard.

1 Scope This part of **JIS R 6211** specifies the nominal dimensions of grinding wheels for surface grinding/face grinding:

- Type 2: Cemented or clamped cylinder wheel
- Type 6: Straight cup wheel
- Type 31: Segments
- Type 35: Cemented or clamped disc wheel
- Type 36: Disc wheel with inserted nuts
- Type 37: Cylinder wheel with inserted nuts

Remarks 1 Abrasive products specified in this part of **JIS R 6211** are intended to be used for surface grinding where the workpiece is secured to a reciprocating table that moves in a straight line or to a rotating table, or used for grinding of two parallel surfaces where the workpiece is passed between the facing grinding wheels.

The workpiece and the grinding wheel are mechanically guided.

2 The International Standard corresponding to this part of **JIS R 6211** is as follows.

In addition, symbols which denote the degree of correspondence in the contents between the relevant International Standard and JIS are IDT (identical), MOD (modified), and NEQ (not equivalent) according to **ISO/IEC Guide 21**.

ISO 603-5:1999 *Bonded abrasive products — Dimensions — Part 5: Grinding wheels for surface grinding/face grinding* (MOD)

2 Normative reference The following standard contains provisions which, through reference in this part of **JIS R 6211**, constitute provisions of this part of **JIS R 6211**. The most recent edition of the standard (including amendments) shall be applied.

JIS R 6242 *Bonded abrasive products — General — Designation, marking, range of outside diameters and tolerances*

Remarks : ISO 525:1999 Bonded abrasive products— General requirements is equivalent to the said standard.

3 Dimensions Dimensions shall be as follows.

3.1 Type 2: Cemented or clamped cylinder wheel

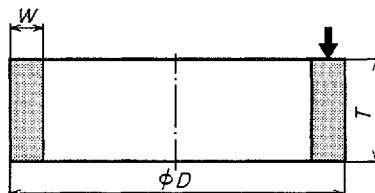


Fig. 1 Type 2: Cemented or clamped cylinder wheel

Table 1 Type 2: Cemented or clamped cylinder wheel (A series)

Unit: mm

D	T	W
150	80	16
180		20
200	100	20
250		25
300		32
350/356	125	40
400/406		
450/457		
500/508	125	50
600/610		63

Remarks : In the case that the outside diameter (D) is not less than 350 mm and the column enumerates two dimensions, "/" in the table means "or".

Table 2 Type 2: Cemented or clamped cylinder wheel (B series)

Unit: mm

D	T	W
205	100	25
	125	
255	100	25
		32
	125	25
305	100	25
		32
		38
355	100	32
		38
	125	32
		38
405	125	32
		38
455	125	32
		38
		50
		100
510	125	38
		50
		100
560	125	38
		50
		100
610	125	38
		50
		100

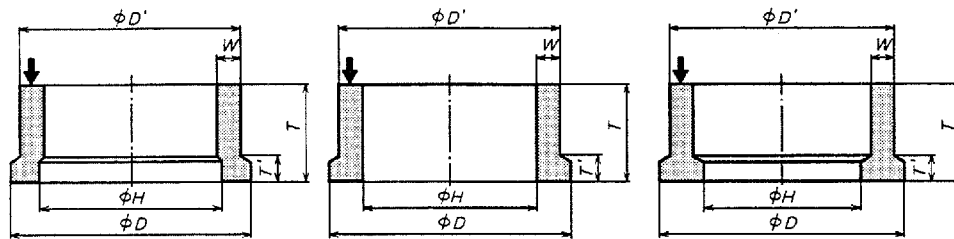


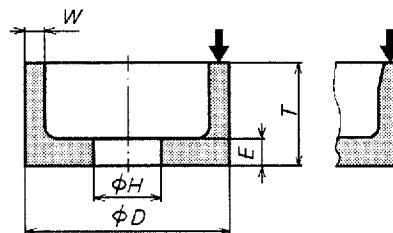
Fig. 2 Type 2: Cemented or clamped cylinder wheel (deformed)

Table 3 Type 2: Cemented or clamped cylinder wheel (deformed) (B series)

Unit: mm

D		T		H	D'	T'	W						
255	100	125	—	177.8	205	250	17	22	25	32	38	—	50
310	100	125	—	230	254	305	17	22	25	32	38	—	—
355	100	125	—	270	—	350	17	22	25	32	38	45	50
405	—	125	—	300	—	400	17	—	—	32	38	45	50
455	—	125	150	360	—	450	19	—	—	—	—	45	—
560	—	125	150	460	—	550	20	—	—	—	—	45	—
610	—	125	150	520	—	605	20	—	—	—	—	45	—

3.2 Type 6: Straight cup wheel



Remarks : The brim of cup may be inclined with a suitable angle toward inside shown in the above figure.

Fig. 3 Type 6: Straight cup wheel

Table 4 Type 6: Straight cup wheel (A series)

Unit: mm

<i>D</i>	<i>T</i>	<i>H</i>	<i>W</i>	<i>E</i>
125	63	32	13	16
150	80	32	16	20
180	80	76.2	20	
200	100	76.2	20	25
	125	76.2	20	32
250	100	76.2	25	25
	100	127		32
	125	76.2		
	125	127		
300	100	127	25	25
	125	127		32

Information : Dimensions underlined with dots are changed from 25 to 32 because the original International Standard does not satisfy the Article 14 of the structural specification for grinding machine and so on specified in Article 42 in the Industrial Safety and Healthy Law.

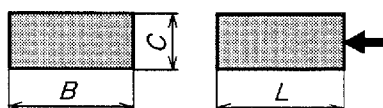
Table 5 Type 6: Straight cup wheel (B series)

Unit: mm

<i>D</i>	<i>T</i>	<i>H</i>					<i>W</i>	<i>E</i>
205	75	25.4	31.75	38.1	101.6	—	25	25
	100							
255	100	25.4	31.75	38.1	101.6	—	25	25
	125						32	32
305	100	—	31.75	38.1	101.6	127	32	32
							38	38
	125						32	32
	150						38	38
355	100	—	—	38.1	101.6	127	32	32
							38	38
	125						32	32
	150						38	38
405	100	—	—	38.1	101.6	127	38	38
	125						50	50

3.3 Type 31: Segments

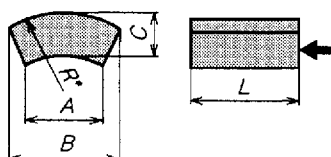
Table 6 Type 3101 (A series)



Unit: mm

<i>B</i>	<i>C</i>	<i>L</i>
50	25	150
60	25	150
80	25	150
	30	
90	35	180
		200
110	40	180
		200
120	30	180
	40	
120	30	200
	40	

Table 7 Type 3104 (A series)

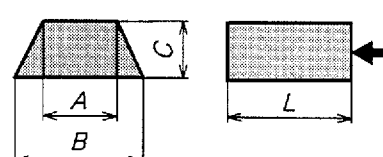


Unit: mm

<i>B</i>	<i>A</i>	<i>C</i>	<i>L</i>	<i>R*</i>
95	72	25	120	170
103	77	25	150	200
106	80	25	150	180
117	74	39	120	171.5
143	103.5	38	200	273
152	108	44	200	179

Note * Expresses the curvature radius of segment grinding wheel.

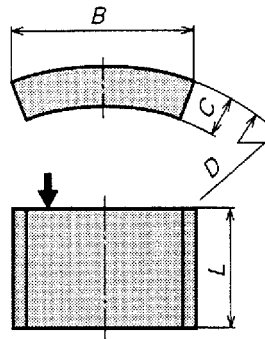
Table 8 Type 3109 (A series)



Unit: mm

<i>B</i>	<i>A</i>	<i>C</i>	<i>L</i>
60	54	22	110
70	64	25	110
			150
80	70	40	150
103	94	38	150
			180
120	106	41	200
152	135	63	200
			250

Table 9 Type 3104 SG-1 (B series)

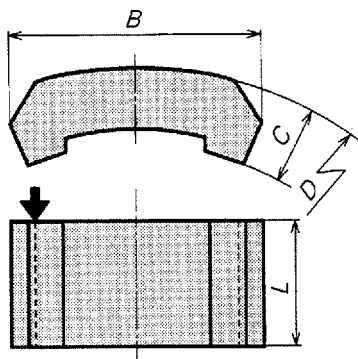


Unit: mm

Assembled diameter D	Number of sets	B	C					L		
255	6	75	19	25	—	—	—	100	125	—
280	7	75	19	25	—	—	—	100	125	—
305	8	105	19	25	—	—	—	100	125	—
355	8	120	19	25	—	—	—	—	125	150
405	8	135	—	25	32	—	—	—	125	150
455	10	135	—	—	32	38	—	—	125	150
510	10	130	—	—	32	—	—	—	—	150
610	12	140	—	—	32	—	45	—	—	150

Remarks : Assembled diameter and number of sets are given for information.

Table 10 Type 3104 SG-2 (B series)

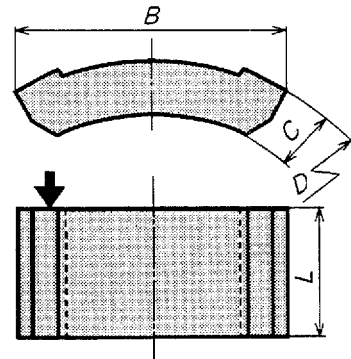


Unit: mm

Assembled diameter D	Number of sets	B	C		L
305	6	120	32	—	150
355	6	130	—	38	150
405	6	130	—	38	150
455	8	125	—	38	150
510	9	125	—	38	150
610	10	125	—	38	150

Remarks : Assembled diameter and number of sets are given for information.

Table 11 Type 3104 SG-3 (B series)



Unit: mm

Assembled diameter D	Number of sets	B	C		L	
355	6	130	32	—	125	—
405	6	130	32	—	125	150
455	6	185	—	38	125	150

Remarks : Assembled diameter and number of sets are given for information.