

JIS

JAPANESE INDUSTRIAL STANDARD

**Straight Bevel Gear Generating
Cutters (Type G)**

JIS B 4351 —1985

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JAPANESE INDUSTRIAL STANDARD

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Straight Bevel Gear Generating Cutters
(Type G)

B 4351-1985

1. Scope

This Japanese Industrial Standard specifies the straight bevel gear generating cutters (Type G), hereinafter referred to as the "cutters", for a finish of 0.5 to 8 mm in module (m) used for the straight bevel gear cutting machine.

2. Definitions

The definitions of principal terms used in this standard shall be in accordance with JIS B 0174.

3. Classification

The cutters shall be classified into 3 classes of Type 75, Type 150 and Type 300 according to the size of gear cutting machine to be applied.

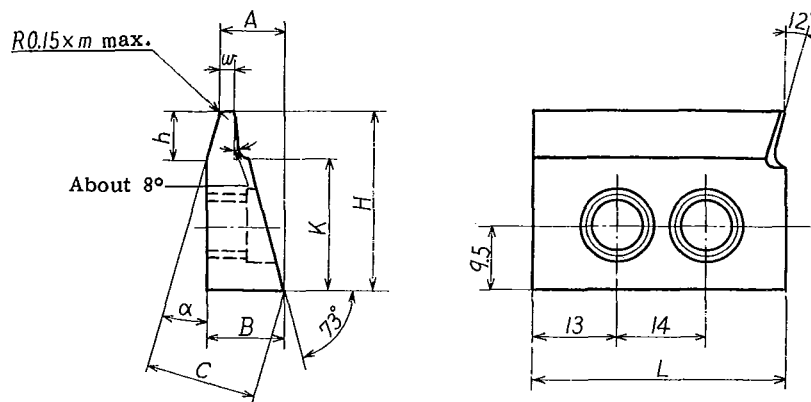
4. Shapes and Sizes

The shapes and sizes of cutters shall be as given in Tables 1 to 3.

Applicable Standards and Reference Standards: See page 12.

Table 1. Type 75

Unit: mm



Unit: mm

Module (<i>m</i>)			In the case of 20° in pressure angle (α)			In the case of 14.5° in pressure angle (α) (reference)			<i>h</i>	<i>K</i>	<i>H</i>	<i>L</i>	
Series (¹)			<i>C</i> = 18.63			<i>C</i> = 16.44							
1	2	3	<i>A</i> (²)	<i>B</i> (about)	<i>w</i>	<i>A</i> (²)	<i>B</i> (about)	<i>w</i>					
0.5	0.55	0.65	10	10.5	0.20	10	10.3	0.28	1.2	21	27	40	
0.6			10	10.5	0.22	10	10.4	0.31	1.3	21			
			10	10.6	0.24	10	10.4	0.33	1.4	21			
			10	10.6	0.26	10	10.4	0.36	1.5	21			
			10	10.6	0.28	10	10.5	0.39	1.7	21			
0.8	0.75		10	10.7	0.30	10	10.5	0.42	1.8	21			
	10		10.7	0.32	10	10.5	0.44	1.9	21				
	0.9		10	10.8	0.36	10	10.6	0.50	2.1	21			
			10	10.9	0.40	10	10.6	0.55	2.4	20			
1.25			10	11.1	0.50	10	10.8	0.69	3	20			
1.5	1.75		10	11.3	0.59	10	10.9	0.83	3.5	20			
2			10	11.5	0.69	10	11.1	0.97	4.1	20			
			10	11.7	0.79	10	11.2	1.1	4.7	20			
			2.25	10	12	0.89	10	11.4	1.2	5.3			20
				10	12.2	0.99	10	11.5	1.4	5.9			20

Notes. ⁽¹⁾ The series of module shall be in accordance with specifications of JIS B 1701.⁽²⁾ *A* indicates the basic size.

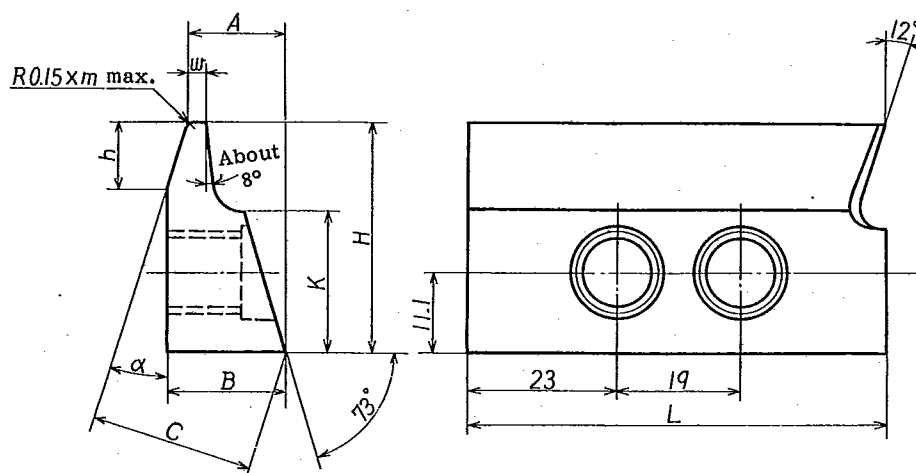
Remark: The cutters shall be of a pair of upper tool and lower tool. Figure indicates the top tooth.

Reference: The screw thread shall be as follows:

The nominal designation shall be, as a rule, M 10 of JIS B 0205 and its precision shall be 7 H specified in JIS B 0209. However, 3/8 - 16 UNC of JIS B 0206, the precision of which is 1 B of JIS B 0210 may be used.

Table 2. Type 150

Unit: mm



Unit: mm

Module (<i>m</i>)			In the case of 20° in pressure angle (<i>α</i>)			In the case of 14.5° in pressure angle (<i>α</i>) (reference)			<i>h</i>	<i>K</i>	<i>H</i>	<i>L</i>
Series (¹)			<i>C</i> =24.31			<i>C</i> =23.03						
1	2	3	<i>A</i> (²)	<i>B</i> (about)	<i>w</i>	<i>A</i> (²)	<i>B</i> (about)	<i>w</i>				
1	1.75		13.5	14.4	0.40	15	15.6	0.55	2.4	25	34	65
1.25			13.5	14.6	0.50	15	15.8	0.69	3	25		
1.5			13.5	14.8	0.59	15	15.9	0.83	3.5	25		
			13.5	15	0.69	15	16.1	0.97	4.1	25		
2			13.5	15.2	0.79	15	16.2	1.1	4.7	23		
2.5	2.25	3.25	13.5	15.5	0.89	15	16.4	1.2	5.3	23		
			13.5	15.7	0.99	15	16.5	1.4	5.9	23		
	2.75		13.5	15.9	1.1	15	16.7	1.5	6.5	23		
3			13.5	16.1	1.2	15	16.8	1.7	7.1	23		
			13.5	16.3	1.3	15	17	1.8	7.6	23		
4	3.5	3.75	13.5	16.5	1.4	15	17.1	19	8.2	23		
			13.5	16.7	1.5	15	17.3	21	8.8	23		
			13.5	16.9	1.6	15	17.4	22	9.4	21		
	4.5		13.5	17.4	1.8	15	17.7	25	10.6	21		
	5		13.5	17.8	2.0	15	18	28	11.7	21		

Remark: The cutters shall be of a pair of upper tool and lower tool. Figure indicates the upper tool.

Reference: The screw thread shall be as follows:

The nominal designation shall be, as a rule, M 12 of JIS B 0205 and its precision shall be 7 H specified in JIS B 0209. However, 1/2 - 13 UNC of JIS B 0206, the precision of which is 1 B of JIS B 0210 may be used.