

SMI - ID Slicing Blades

1. General information

SMI uses only 100% natural virgin diamonds (De Beers), electronically plated pure stress free nickel, in 100% concentration and distribution.

All SMI I.D. slicing blades (except MARK VIII) are manufactured with multiple layer diamond rim under U.S. Patents 3205624, 3488892, 3640027 and other corresponding foreign Patents.

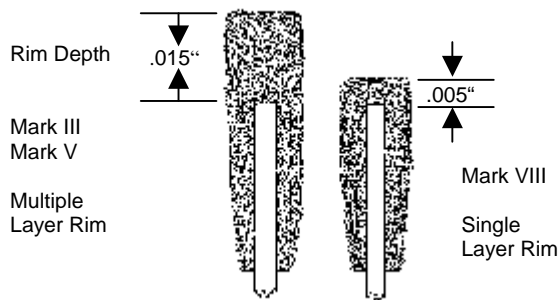
2. Available version for different applications

2.1 Patented multiple layer rim

- ⇒ MARK III for Silicon or similar hardness
- ⇒ MARK III for Gallium Arsenide, Germanium or similar hardness
- ⇒ MARK V for GGG, Quartz, Sapphire, Magnetic Materials or similar hardness

2.2 Single layer rim

- ⇒ MARK VIII



3. Diamond Size Availability

SMI is using a standard range from 60 grit to 500 grit.

Model	Standard Blend
MARK V	60, 80, 100, 120, 140, 170, 200, 230
MARK III	270/325
MARK III	325/400
MARK III	400/500

⇒ **Special grit sizing is available upon request**



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4. Sizing of diamonds

US - Mesh	FEPA
60/80	D 252
80/100	D 181
100/120	D 151
120/140	D 126
140/170	D 107
170/200	D 91
200/230	D 76
230/270	D 64
270/325	D 54
325/400	D 46
400/500	D 38

5. Chemicals

SMI uses only 100 % electronically graded chemicals to assure true consistency of pure stress-free nickel plating.

6. SMI new «high speed» stainless steel core material

The special rolled core materials produce higher yield strengths relatively equal in parallel and transverse directions.

Results by using «Isotropic Material»:

- ⇒ ease of mounting (hydraulic or mechanical heads)
- ⇒ increases tension levels
- ⇒ reduces bowing
- ⇒ reduces creeping (over night)
- ⇒ increases blade life (high yield)
- ⇒ ease of re-tension

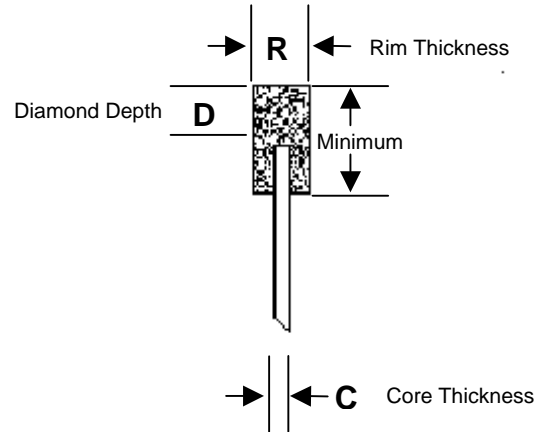
The new core material is available in different thickness':
.0048"; .005"; .006"; .007"; .0086"

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Standard dimension of MARK III

MARK III

- ⇒ Silicon
- ⇒ Germanium
- ⇒ Gallium Arsenide
- ⇒ or similar hardness



O.D.	I.D.	C = core thickness	R = rim thickness	D = diamond depth
inch	inch	micron	micron	micron
8	3 ¼	121	290-380	381
10 12	4	121	290-380	381
16 5/8	5 ½	121	290-330	381
	6	152	350-380	
	6 ¾ 8			
21 ½	7 ¼	127	290-350	381
	8	152	350-400	
	9 ½	177	380-400	
22	7 ¼	127	290-350	381
	8	152	350-400	
	9 ½	177	380-400	
23.5	8	127	290-350	381
	9 ½	152	350-400	
		177	380-400	
27	9 ½	127	290-400	381
	12	152	350-400	
	13	177	380-400	
34	12	177 218	380-400	381
	10		400-420	
	15			

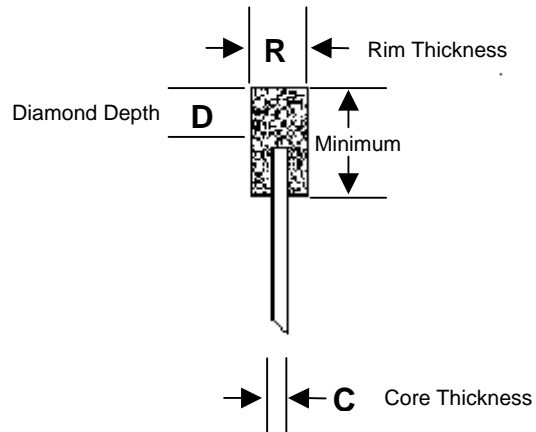
⇒ Other sizes and dimensions available upon request

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Standard dimension of MARK V

MARK V (Hard Material)

- ⇒ Magnetic Materials
- ⇒ Quartz
- ⇒ Sapphire
- ⇒ Ceramics
- ⇒ Optics
- ⇒ or similar hardness



O.D	I.D	C = core thickness	R = rim thickness	D = diamond depth
inch	inch	micron	micron	micron
8	3 ¼	121	457-585	457
10 12	4	121	457-585	457
16 5/8	5 ½	121	457-585	457
	6	152	457-585	
	6 ¾ 8	177	535-700	
21 ½	7 ¼	152	535-700	457
	8 9 ½	177	535-700	
22	7 ¼	152	535-700	457
	8 9 ½	177	535-700	
23.5	8	152	535-700	457
	9 ½	177	535-700	
27	9 ½	152	535-700	457
	12 13	177	535-700	
34	12	177	535-700	457
	10 15	218	535-700	

⇒ Other sizes and dimensions available upon request