

The AGA / NAJA Cut Class diamond screening standards

Round Brilliants

rev 5/04 II

©AGA 1998-2009

CUT CLASSES	Class1A	Class1B	Class 2A	Class 2B	Class 3A	Class 3B	Class 4A	Class 4B
	American Ideal Cut		International fine trade cut		US domestic average cut		below average	
Table %	58%-53%	60%-52%	63%-51.5%	64%-51%	67%-50.5%	70%-50%	72%-49%	> 72% < 49%
Crown angle°	34-34.7	33-35.1	35.8-32.1	36.4-31.6	37.9-30.1	39.4-29.6	40.5-29	>40.5 < 29
Crown height %	16.3%-14.3%	16.8%-13.5%	17.9%-11.6%	18.1%-11.1%	19.3%-9.6%	20.5%-8.5%	21.8%-7.8%	>21.8% < 7.8%
Pavilion Depth %	42.8%-43.2%	43.5%-42.5%	44.0%-42.0%	44.9%-41.5%	45.5%-41.0%	46.0%-40.5%	48.0%-38.0%	>48.0% <38.0%
Girdle Thickness	Thin to Medium OR Med. to Sl. Thick	V. Thin to Med. OR Thin to Sl. Thick	V. Thin to Slightly Thick	V. Thin to Thick	Very Thin to Very Thick		Ext. Thin to Ext. Thick	
Total depth %	62.3%-58%- limiting range	62.99%-58.3%- limiting range	>62.99% OR <58.3% <i>Determined by factors already considered above</i>					

Polish/Symmetry	Excellent or Very Good	Excellent to Good	Good or Fair	Poor
------------------------	-------------------------------	--------------------------	---------------------	-------------

Pear, Heart, Oval, Marquise shapes

rev 5/04 II

©AGA 1998-2009

CUT CLASSES	Class 1A	Class1B	Class 2A	Class 2B	Class 3A	Class 3B	Class 4A	Class 4B
	Ideal Cut	Premium Cut	International Fine Trade Cut		US Domestic Average Cut		below average	
Table %	60%-55%	61.5%-53%	62%-52%	64%-51%	67%-51%	70%-49%	72%-48%	>72.0% <48%
Crown Height %	15%-12%	16%-11.5%	16.6%-11%	17.5%-10.1%	18%-9%	18.9%-8.3%	19.5%-7.8%	>19.5% <7.8%
Girdle thickness	V. Thin to Sl. Thick OR Thin to Thick			V. Thin to Thick	Very Thin to Very Thick		Ext. Thin to Ext. Thick	
Total Depth %	63%-59%			65.4%-58%	68.5%-56%	71%-46%	73.0%-43.0%	>73% <43%
Common length to width ratios	Pear 1.50 to 1.75 : 1				Heart 0.98 to 1.02 : 1			
	Marquise 1.75 to 2.25 : 1				Oval 1.33 to 1.66 : 1			

Polish/Symmetry	Excellent to Good	Good to Fair	Fair to Poor
------------------------	--------------------------	---------------------	---------------------

Princess cut

rev 5/04 II

©AGA 1998-2009

CUT CLASSES	Class1A	Class1B	Class 2A	Class 2B	Class 3A	Class 3B	Class 4A	Class 4B
	Ideal Cut	Premium Cut	International Fine Trade Cut		US Domestic Average Cut		below average	
Table %	68%-62%	72%-60%	74%-59%	78%-58%	82%-56%	85%-53%	88%-50%	>88% <50%
Crown Height %	15%-10%	16%-8.5%	16.9%-8%	18%-6%	19%-5%	19.9%-4%	20.9%-3%	>21% <3%
Girdle Thickness	V. Thin to Sl. Thick OR Thin to Thick			V. Thin to Thick	Very thin to Very Thick		Ext. thin to Ext. Thick	
Total Depth %.	75%-64%			80%-58%	83%-57%	84%-56%	85%-53%	>85.0% <53%

Polish/Symmetry	Excellent to Good	Good or Fair	Fair to Poor
------------------------	--------------------------	---------------------	---------------------

Common length to width ratios.	1 : 1 for square stones or 1 : 1.5 to 1.75 for rectangular shapes.
---------------------------------------	--

Emerald & Radiant cuts

rev 5/04 II

©AGA 1998-2009

CUT CLASSES	Class1A	Class1B	Class 2A	Class 2B	Class 3A	Class 3B	Class 4A	Class 4B
	Ideal cut	Premium cut	International fine trade cut		US domestic average cut		below average	
Table %	65.5%-60%	68%-59%	69.5%-58%	72%-57%	74%-56%	76%-53%	78%-50%	>78% <50%
Crown Height %	15%-12%	16%-11%	16.5%-10%	17.2%-9%	18%-8%	19.5%-7%	20.5%-6%	>20.5% <6%
Girdle thickness	V. Thin to Sl. Thick OR Thin to Thick			V. Thin to Thick	Very Thin to Very Thick		Extremely Thin to Extremely Thick	
Total Depth %.	65%-60%			69%-58.0%	74%-57%	78%-56%	80%-53%	>80% <53%

Polish/Symmetry	Excellent to Good	Good or Fair	Fair to Poor
------------------------	--------------------------	---------------------	---------------------

Common length to width ratios	1 : 1 for square stones or 1 : 1.5 to 1.75 for rectangular shapes
--------------------------------------	---

Rules For Determining "Overall" Cut Grade.

1A grade: All characteristics are best when 1A, but may include a single 1B characteristic. You pay a premium for this cut and you should insist on getting exactly what you are paying for.

1B grade: All characteristics need to be all 1B or 1A to 2B. Only a single class 2 characteristic is permitted. The class 2 characteristic should be within 2% or 2 degrees of the 1B characteristic.

2A grade: All characteristics need to be 2A or 1A thru 2B. Only a single 2B parameter is permitted and it must be within 2% or 2 degrees of the 2A characteristic. (crown angle degree rounds only)

2B grade: All characteristics need to be all 2B or 1A thru 3A. Only a single 3A characteristic is permitted and the 3A characteristic cannot be a very thick girdle or more than 1 degree too shallow a crown angle. The 3A characteristic must be within 2% or 1 degree of the 2B characteristic. (crown angle degree rounds only)

3A grade: A stone may be all 3A or 1A thru 4A. Any characteristics of 4A must be within 2% or 1 degree the 3B characteristic. More than a single 4A characteristic and the stone cannot grade 3A. An overall class 4 girdle thickness cannot grade 3A overall. An overall girdle thickness is NOT determined by a single thin or thick area of a girdle. "Overall" has a meaning equivalent to "the major portion." (crown angle degree rounds only)

3B grade: As stone may be all 3B or 1A thru 4B. Any single characteristic of grade 4B must be within 2% or 1 degree of the 4A measurement. Only one class 4 characteristic permitted. Stones with class 4 extremely thick or extremely thin over all girdles may not be graded overall 3B. (crown angle degree rounds only)

4A grade: A stone may be all 4A or 1A thru 4B. Only two 4B characteristics are permitted at most. (crown angle degree rounds only)

4B grade: Is all 4B or may be any combination from 1A thru 4B. Stones with more than two 4B characteristics are automatically 4B.

Specialty Cuts: This may include many forms of **BRANDED DIAMONDS**.

There are diamonds that do not conform to the classic shape cut parameters and must be considered on an individual basis. **ONE CANNOT GRADE UNUSUAL CUT DIAMONDS SOLELY ON ARBITRARY PARAMETERS. EXPERIENCE IN EXAMINING DIAMONDS FOR EFFECTIVE AND PRECISE CUTTING IS REQUIRED FOR CUTS NOT COVERED IN THE FOUR CHARTS OF TYPICAL STANDARD CUT DIAMONDS.**

Things to keep in mind for the finest fancy shapes:

FANCY IDEAL CUTS

All ideal cuts must look “beautiful”. Beauty is initially achieved through proper outline, careful facet arrangement, and facet matching. It is furthered by proper cut craftsmanship. The parameters of cut for relative show of size and for durability must be observed. Lastly, all ideal cuts exhibit relatively high, yet balanced amounts of brilliancy, scintillation and intensity. Fire may also be considered as an element of appearance in certain instances where it is featured.

Needle-like shapes, high or dropped shoulders, bulging or flat sides, asymmetry, overly deep or too shallow all contribute to lack of beauty. Don’t blind your self to the obvious. Pear, marquise, oval and heart shaped diamonds have a range of best length to width ratio. Rectangular and square stones don’t have a length to width requirement, they do require 90 degree corners except in unusual circumstances or in special cuts.

Personal preference for a particular, odd shape, should have no effect on the grading for light performance or symmetry, but such a shape might fall out of the finest, commonly accepted, arrangement for beauty, salability or durability. This is a choice an informed consumer may choose to make, but it is not acceptable for a gemological lab or a dealer to provide incorrect data about an odd stone being “ideal” when it does completely and truly fit the category.

An Ideal Cut, whether round or fancy shaped, is the essence of beauty and proper cutting without compromise. It is tempting to promote stones that approach this goal but miss it as “ideal”, but it is not worth the damage to the industry to attempt such marketing.

For more information concerning AGA / NAJA Cut Grading, please feel free to contact

David Atlas: datlas@datlas.com www.datlas.com www.dglaservices.com