



LIGO Laboratory / LIGO Scientific Collaboration

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Mode Cleaner Controls Prototype Blade Length
Measurements

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LIGO Science Collaboration

This is an internal working note
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1.1 Summary of experiment

2 sets of cantilever blades from 2 different manufacturers were compared. The length, B and height, A was measured, as shown in figure 1 below. The length was measured by clamping one end of the blade and loading the other end with the desired mass measured each blade. All of the measurements were carried out on a Granite Table.

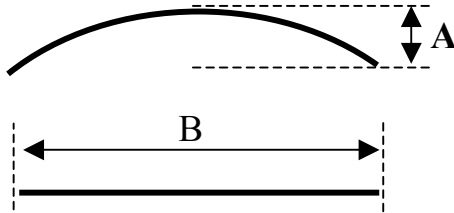


Figure: 1 Sketch showing the length, B and the height, A.

1.2 Results

Blade #	MEASURED		SPECIFICATION		Distance wire breaks		
	A (inches)	B (inches)	Overall Length (inches)	B (mm)	Overall Length (mm)	off the end of the blade (mm)	Clamping Distance (inches)
MODE CLEANER UPPER BLADES, D020201-01							
4S	1.807	10.599	10.58	269.21	268.73	3.0	0.79
5L	1.749	10.569	10.58	268.45	268.73	3.0	0.79
8S	1.823	10.595	10.58	269.11	268.73	3.0	0.79
1L	1.72	10.562	10.58	268.27	268.73	3.0	0.79
MODE CLEANER LOWER BLADES, D020205-01							
6L	0.543	5.087	5.10	129.21	129.54	1.5	0.39
5S	0.556	5.097	5.10	129.46	129.54	1.5	0.39
15S	0.589	5.098	5.10	129.49	129.54	1.5	0.39
16L	0.558	5.088	5.10	129.24	129.54	1.5	0.39

KEY: - LOBART: - L and SUPERIOR JIG: - S

1.3 Conclusions

It can be seen in the results section that the two sets of Superior Jig cantilever blades are very well matched.