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**From:** Eric Sugalski <eric@bostondevice.com>  
**Sent:** Wednesday, May 18, 2011 1:24 PM CDT  
**To:** Nathan Moskowitz <nmosk@hotmail.com>; Andy Moskowitz <andymoskow@gmail.com>  
**CC:** David Schoon <dschoon@bostondevice.com>  
**Subject:** Fusion Device - Prototype Design & Fabrication  
**Attachments:** 110518\_Concept2\_Assembly.EASM, 110518\_Lumbar\_Fusion\_Slide2\_X1.PDF, 110518\_Lumbar\_Fusion\_Flange\_Cap\_X1.PDF, 110518\_Lumbar\_Fusion\_Slide1\_X1.PDF

Hi Nathan & Andy -

Attached is an e-drawing of the Fusion Device and drawings for the custom machined parts. We are getting a number of quotations on these parts, and we hope to have these back within a day or two. Due to the undercuts on the parts and the contour milling that will be required, we are anticipating that the machining costs may be on the high side. For evaluation purposes, do you think it would make sense to rapid prototype the parts through SLS rather than machining?

There are a few grades of SLS that are very rigid (using glass / aluminum fill). Of course, the textures and appearance would be very different than you would have with a metal, but it may be sufficient for evaluation at a much lower cost than the machining. Please let me know your thoughts on the design and the fabrication when you have a moment.

Thanks,

Eric

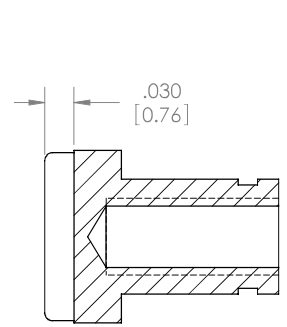
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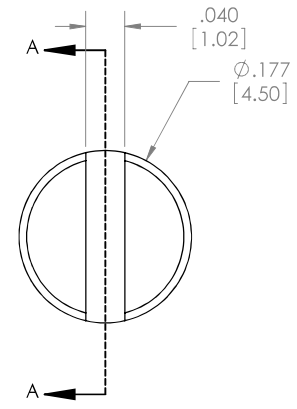
NOTES:

1.

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	X1	FILE FOR QUOTE	5/17/2011	DJS



SECTION A-A  
SCALE 8:1



$.120 \pm .002$   
[3.05 ± 0.05]

$.020 \pm .002$   
[0.50 ± 0.05]

$.079$   
[2]

$.240$   
[6.10]

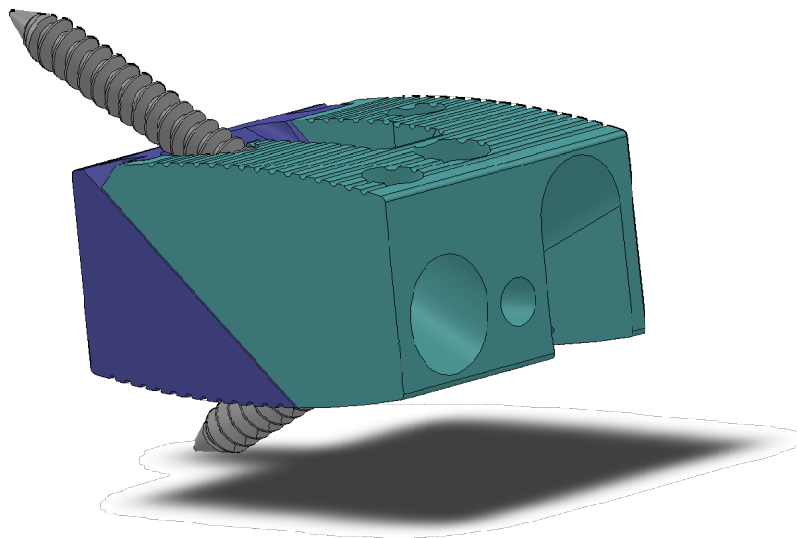
$\phi .106$   
 $\begin{matrix} +.000 \\ -.001 \\ 0 \\ 2.70 \\ -0.03 \end{matrix}$

$\phi .063$  [1.60]  $\nabla .177$  [4.50]  
M2X0.4  $\nabla .177$  [4.50]

$\phi .118 \pm .002$   
[3 ± 0.05]

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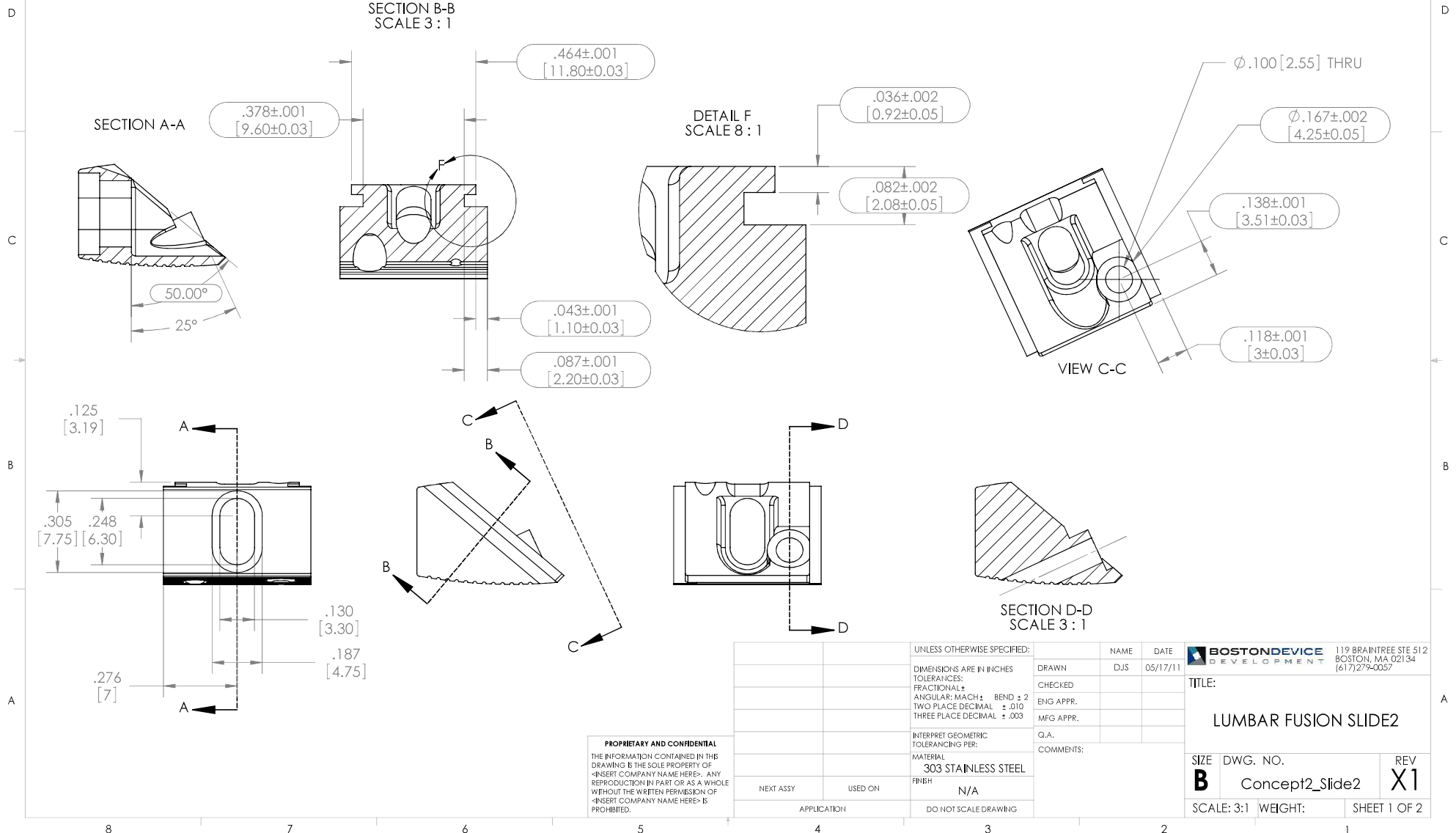
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		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ± ANGULAR: MACH ± BEND ± 2 TWO PLACE DECIMAL ± .010 THREE PLACE DECIMAL ± .003	DJS	05/18/11	
		INTERPRET GEOMETRIC TOLERANCING PER:	DRAWN		TITLE:  <b>LUMBAR FUSION FLANGE CAP</b>  SIZE DWG. NO. REV <b>B</b> Concept2_LeadScrew <b>X1</b> SCALE: 8:1 WEIGHT: SHEET 1 OF 1
NEXT ASSY	USED ON	MATERIAL	CHECKED		
		303 STAINLESS STEEL	ENG APPR.		
		FINISH	MFG APPR.		
APPLICATION		DO NOT SCALE DRAWING	COMMENTS:		



NOTES:

1. BREAK ALL HARD EDGES.
2. REFER TO 3D FILE FOR TRUE DIMENSIONS.

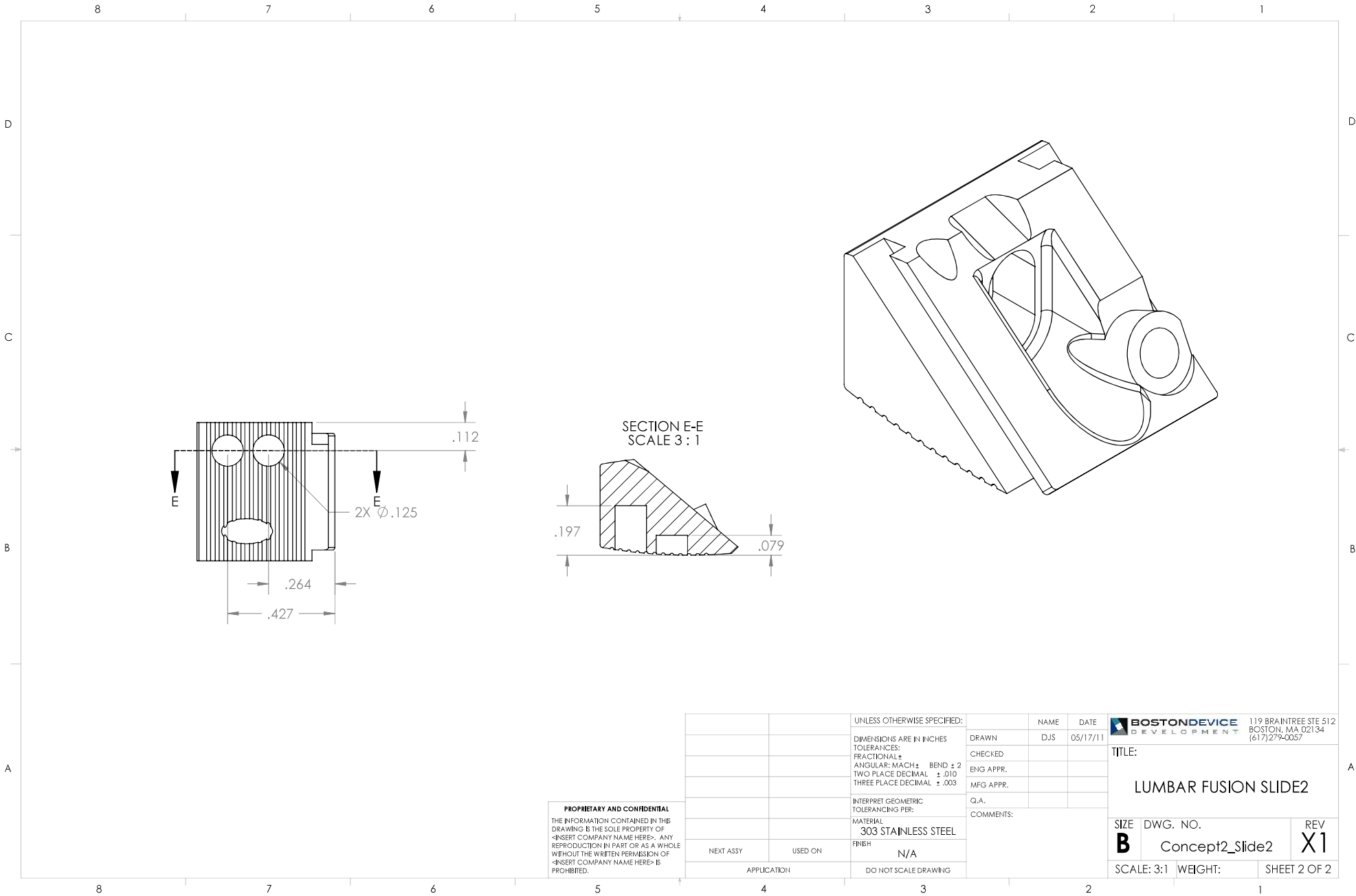
REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	X1	FILE FOR QUOTE	5/17/2011	DJS



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UNLESS OTHERWISE SPECIFIED:		NAME	DATE
DIMENSIONS ARE IN INCHES		DJS	05/17/11
TOLERANCES:			
FRACTIONAL ±		DRAWN	
ANGULAR: MACH ± BEND ± 2		CHECKED	
TWO PLACE DECIMAL ± .010		ENG APPR.	
THREE PLACE DECIMAL ± .003		MFG APPR.	
INTERPRET GEOMETRIC TOLERANCING PER:		Q.A.	
MATERIAL		COMMENTS:	
303 STAINLESS STEEL			
FINISH			
N/A			
NEXT ASSY	USED ON		
APPLICATION		DO NOT SCALE DRAWING	

<b>BOSTONDEVICE</b> DEVELOPMENT		119 BRAintree STE 512 BOSTON, MA 02134 (617)279-0057	
TITLE: <b>LUMBAR FUSION SLIDE2</b>			
SIZE	DWG. NO.	REV	
<b>B</b>	Concept2_Slide2	<b>X1</b>	
SCALE: 3:1	WEIGHT:	SHEET 1 OF 2	



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		UNLESS OTHERWISE SPECIFIED:	NAME	DATE
		DIMENSIONS ARE IN INCHES	DJS	05/17/11
		TOLERANCES:		
		FRACTIONAL $\pm$	CHECKED	
		ANGULAR: MACH $\pm$ BEND $\pm$ 2	ENG APPR.	
		TWO PLACE DECIMAL $\pm$ .010	MFG APPR.	
		THREE PLACE DECIMAL $\pm$ .003	Q.A.	
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:	
		MATERIAL		
		303 STAINLESS STEEL		
		FINISH		
		N/A		
NEXT ASSY	USED ON			
		APPLICATION		
		DO NOT SCALE DRAWING		

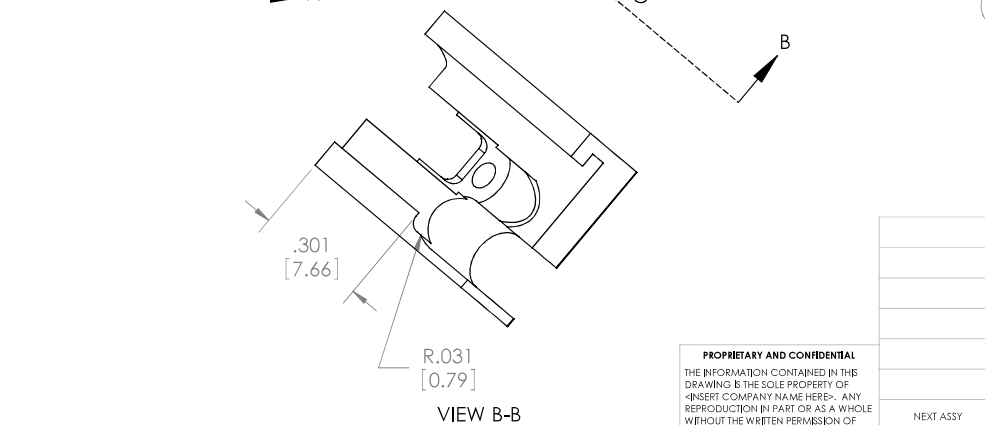
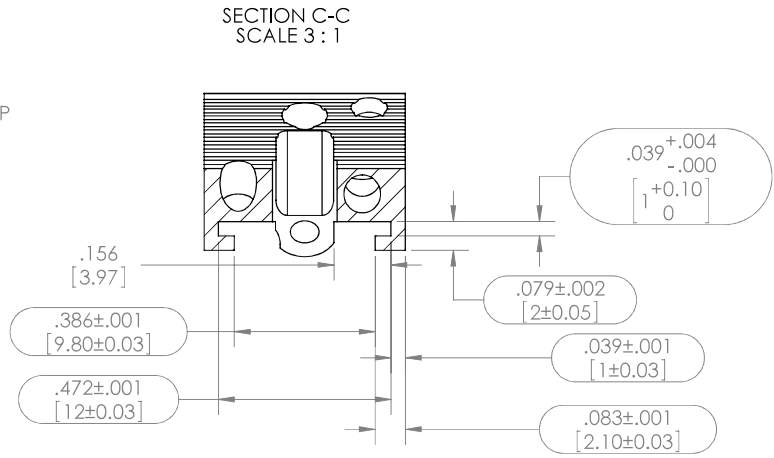
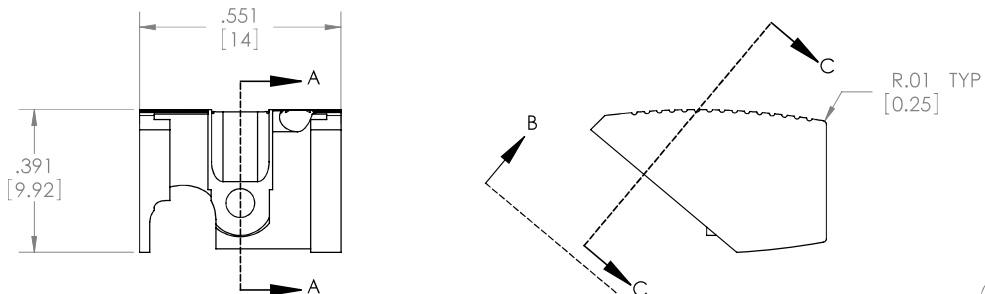
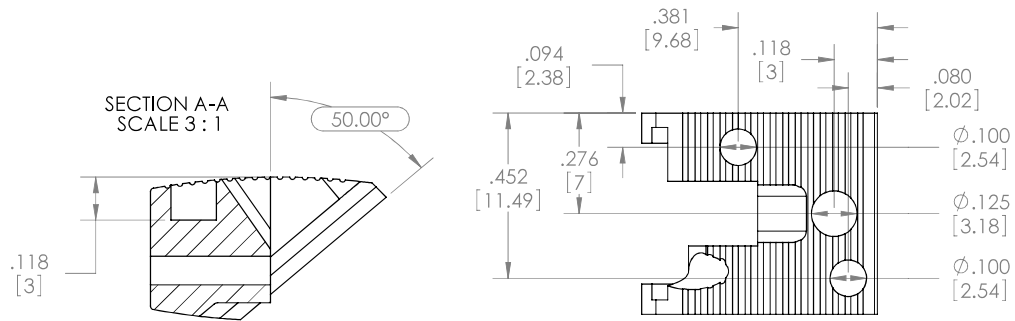
	119 BRAINTREE STE 512 BOSTON, MA 02134 (617)279-0057
TITLE: <b>LUMBAR FUSION SLIDE2</b>	
SIZE <b>B</b>	DWG. NO. Concept2_Slide2
SCALE: 3:1	WEIGHT:
REV <b>X1</b>	SHEET 2 OF 2

NOTES:

1. BREAK ALL SHARP EDGES.
2. REFER TO 3D FILE FOR TRUE DIMENSIONS.



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ZONE	REV.	DESCRIPTION	DATE	APPROVED
	X1	FILE FOR QUOTE	5/17/2011	DJS



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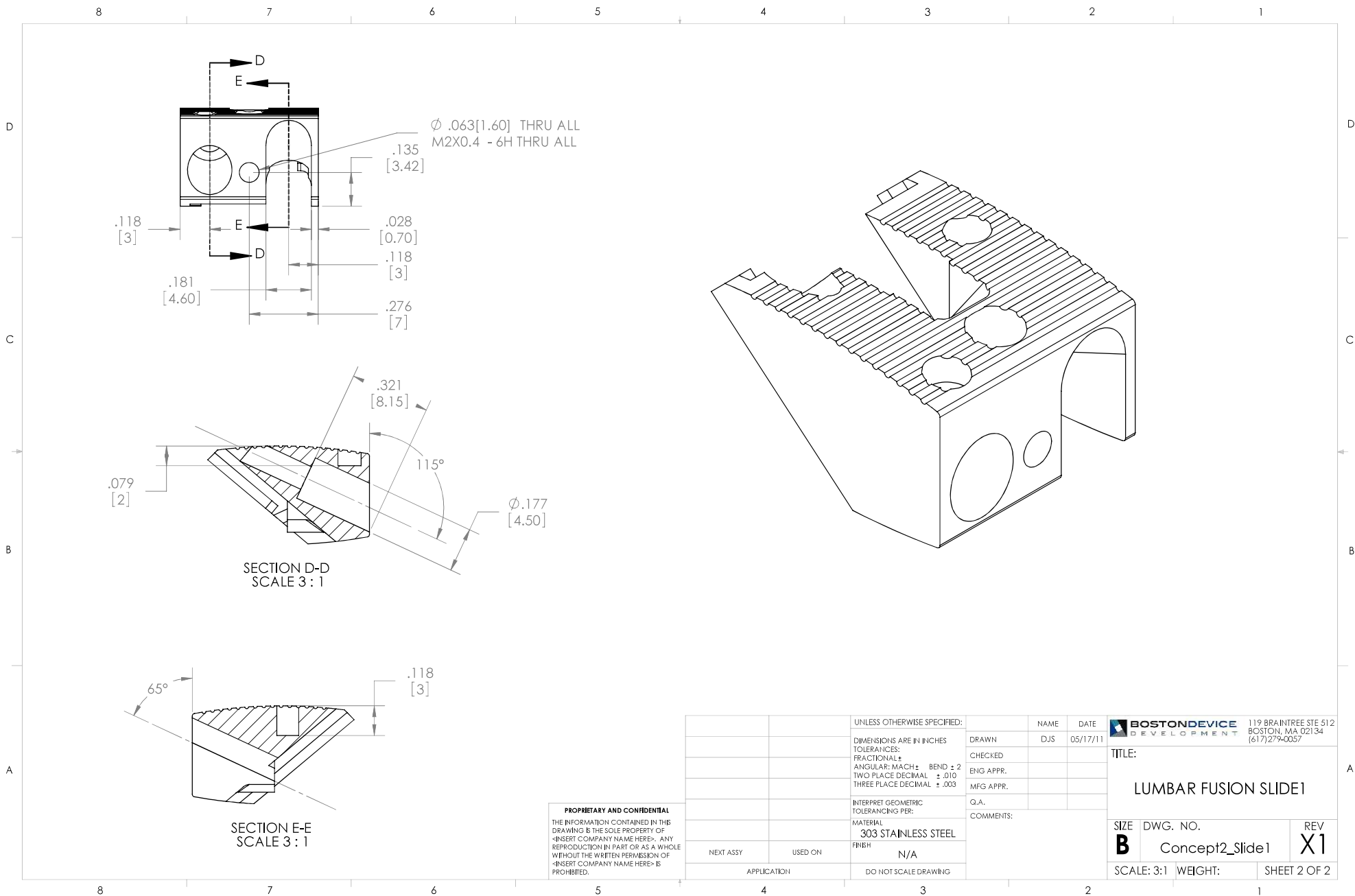
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		TWO PLACE DECIMAL ± .010	MFG APPR.	
		THREE PLACE DECIMAL ± .003	Q.A.	
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:	
		MATERIAL		
		303 STAINLESS STEEL		
		FINISH		
		N/A		
NEXT ASSY	USED ON	APPLICATION		
		DO NOT SCALE DRAWING		

**BOSTONDEVICE DEVELOPMENT** 119 BRAintree STE 512 BOSTON, MA 02134 (617)279-0057

TITLE: **LUMBAR FUSION SLIDE1**

SIZE **B** DWG. NO. **Concept2\_Slide1** REV **X1**

SCALE: 3:1 WEIGHT: SHEET 1 OF 2



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		UNLESS OTHERWISE SPECIFIED:	NAME	DATE	BOSTONDEVICE DEVELOPMENT 119 BRAintree STE 512 BOSTON, MA 02134 (617)279-0057
		DIMENSIONS ARE IN INCHES	DJS	05/17/11	
		TOLERANCES:			TITLE:
		FRACTIONAL ±			LUMBAR FUSION SLIDE1
		ANGULAR: MACH ± BEND ± 2			SIZE DWG. NO.
		TWO PLACE DECIMAL ± .010			B Concept2_Slide1
		THREE PLACE DECIMAL ± .003			REV X1
		INTERPRET GEOMETRIC TOLERANCING PER:			SCALE: 3:1 WEIGHT:
		MATERIAL			SHEET 2 OF 2
		303 STAINLESS STEEL			
		FINISH			
		N/A			
NEXT ASSY	USED ON				
APPLICATION					
		DO NOT SCALE DRAWING			