APPENDIX

STRUCTURAL ANALYSIS OF THE LIFTING DEVICE DETECTOR SUPPORTS FOR THE LHC\textsubscript{b} VERTEX LOCATOR (VELO)
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APPENDIX A

TECHNICAL DRAWINGS
Project: LHCb Vertex Locator

Title: Spacer

Lifting device detector support

Scale: 1:1

Drawn: L v Diepen

Date: 13-04-'04

Checked: MJ Kraan

Dimension in mm

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PART NO. | TITLE | MATERIAL | SIZE/NOTE | I.D. NO./NORM
--- | --- | --- | --- | ---
St47 | Lifting device Detector support |  |  |  

Date: 08-04-'04
Checked: MJ Kraan

General tolerances unless otherwise stated according to ISO-2768-mK-E
Geometrical tolerances unless otherwise stated according to ISO-8015-E
Roughness unless otherwise stated according to DIN 1302

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Project: LHCb Vertex Locator

Title: Washer 2
Lifting device Detector support

Scale: 2:1
Drawn: L v Diepen
Date: 19-04-'04
Checked: MJ Kraan

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**Title:** Washer 1  
Lifting device Detector supports

**Project:** LHCb VERTex LOcator

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APPENDIX B

More FEA results
Von Misses stress results. Limited at 200 MPa

Von Misses stress results. Limited at 150 MPa
Von Misses stress results. Limited at 100 MPa

Von Misses stress results. Limited at 50 MPa
SECOND buckling mode. Buckling factor = 10.3

THIRD buckling mode. Buckling factor = 11.5
FOURTH buckling mode. Buckling factor = 14.3

FIFTH buckling mode. Buckling factor = 14.9.