

Parts List

| ITEM | QTY | PART NUMBER           | DESCRIPTION                   |
|------|-----|-----------------------|-------------------------------|
| 1    | 1   | base_plate            |                               |
| 2    | 1   | CCD_support_CCD47_20  |                               |
| 3    | 1   | PCB_support           |                               |
| 4    | 1   | CCD_spacer            |                               |
| 5    | 1   | heatsink              |                               |
| 6    | 2   | ISO 4762 - M3 x 25    | Hexagon Socket Head Cap Screw |
| 7    | 2   | ISO 4762 - M3 x 16    | Hexagon Socket Head Cap Screw |
| 8    | 1   | blank_end_plate       |                               |
| 9    | 4   | ISO 4762 - M4 x 10    | Hexagon Socket Head Cap Screw |
| 10   | 1   | lens_holder_end_plate |                               |
| 11   | 1   | LH_side_plate         |                               |
| 12   | 21  | ISO 4762 - M2.5 x 8   | Hexagon Socket Head Cap Screw |
| 13   | 1   | RH_side_plate         |                               |
| 14   | 1   | cross_bar             |                               |
| 15   | 1   | top_plate             |                               |

UNLESS OTHERWISE STATED:  
 All dimensions in mm  
 General Tol:  $\pm 0.1$   
 Angular Tol:  $\pm 0.25$   
 Surface Finish (microns): 3.2  
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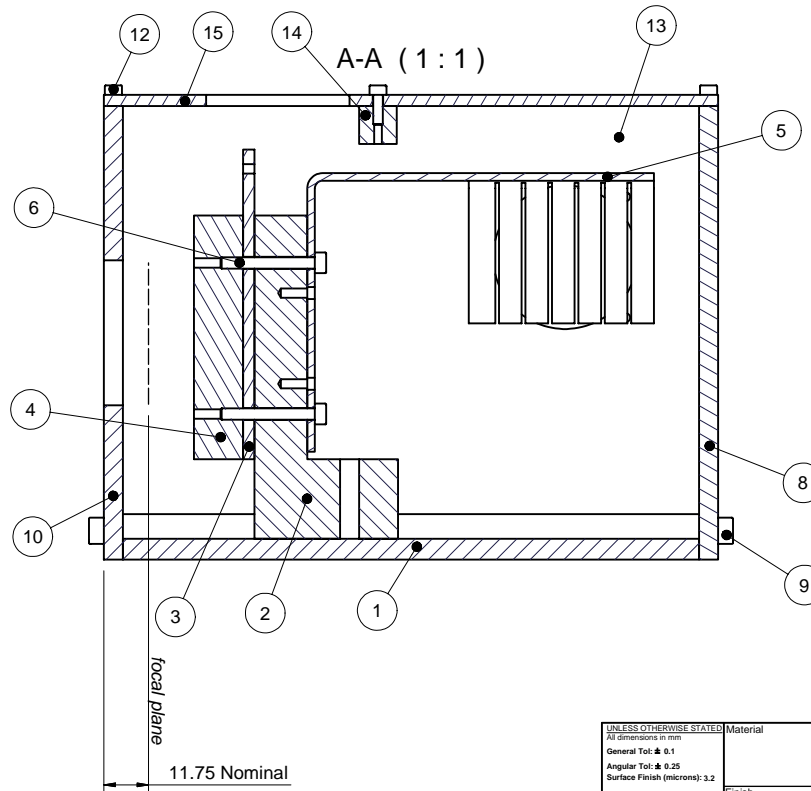
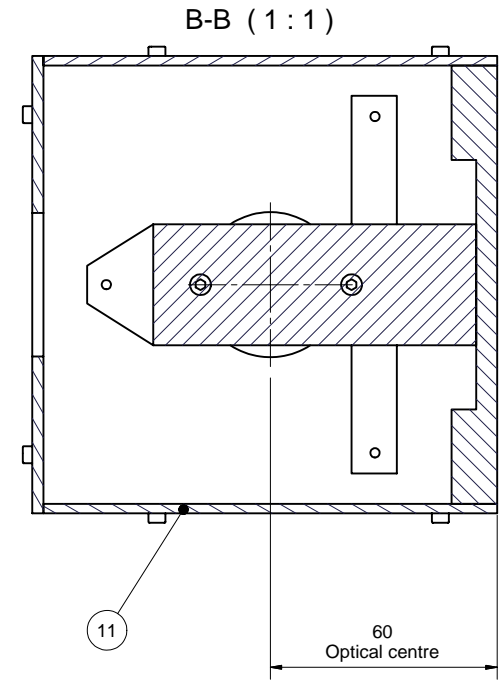
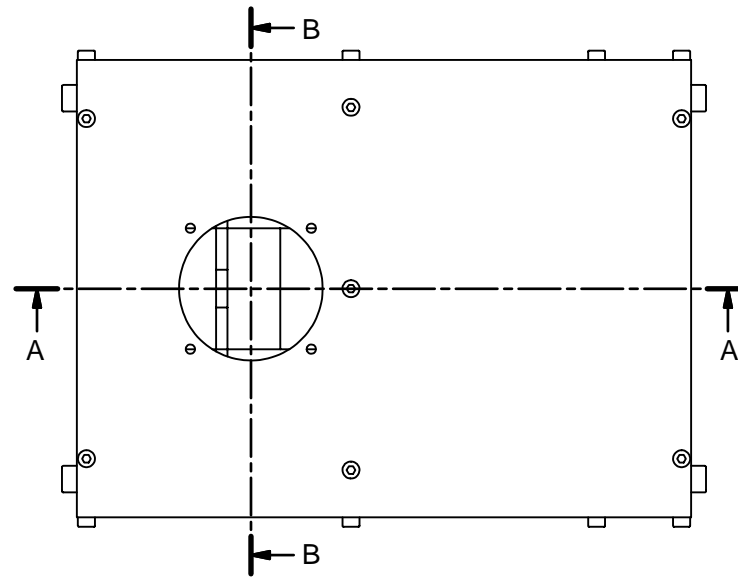
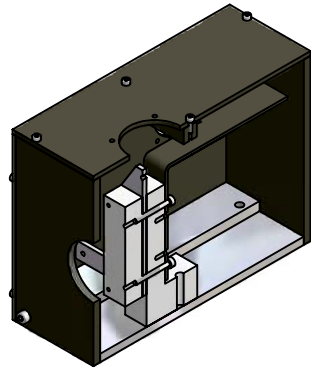
Material  
 Finish

Drawn by jolley  
 Date 30/08/2004  
 Revision 1  
 Isaac Newton Group of Telescopes  
 Apartado de Correos, 321  
 Santa Cruz de La Palma  
 +34 922 425 400

Third Angle

General assembly  
 AG head CCD47-20

File name AG\_head\_CCD47\_20  
 Sheet 1 / 1



Parts List

| ITEM | QTY | PART NUMBER           | DESCRIPTION                   |
|------|-----|-----------------------|-------------------------------|
| 1    | 1   | base_plate            |                               |
| 2    | 1   | CCD_support_CCD57_10  |                               |
| 3    | 1   | PCB_support           |                               |
| 4    | 1   | CCD_spacer            |                               |
| 5    | 1   | heatsink              |                               |
| 6    | 2   | ISO 4762 - M3 x 25    | Hexagon Socket Head Cap Screw |
| 7    | 2   | ISO 4762 - M3 x 16    | Hexagon Socket Head Cap Screw |
| 8    | 1   | blank_end_plate       |                               |
| 9    | 4   | ISO 4762 - M4 x 10    | Hexagon Socket Head Cap Screw |
| 10   | 1   | lens_holder_end_plate |                               |
| 11   | 1   | LH_side_plate         |                               |
| 12   | 21  | ISO 4762 - M2.5 x 8   | Hexagon Socket Head Cap Screw |
| 13   | 1   | RH_side_plate         |                               |
| 14   | 1   | cross_bar             |                               |
| 15   | 1   | top_plate             |                               |

UNLESS OTHERWISE STATED:  
 All dimensions in mm  
 General Tol: ± 0.1  
 Angular Tol: ± 0.25  
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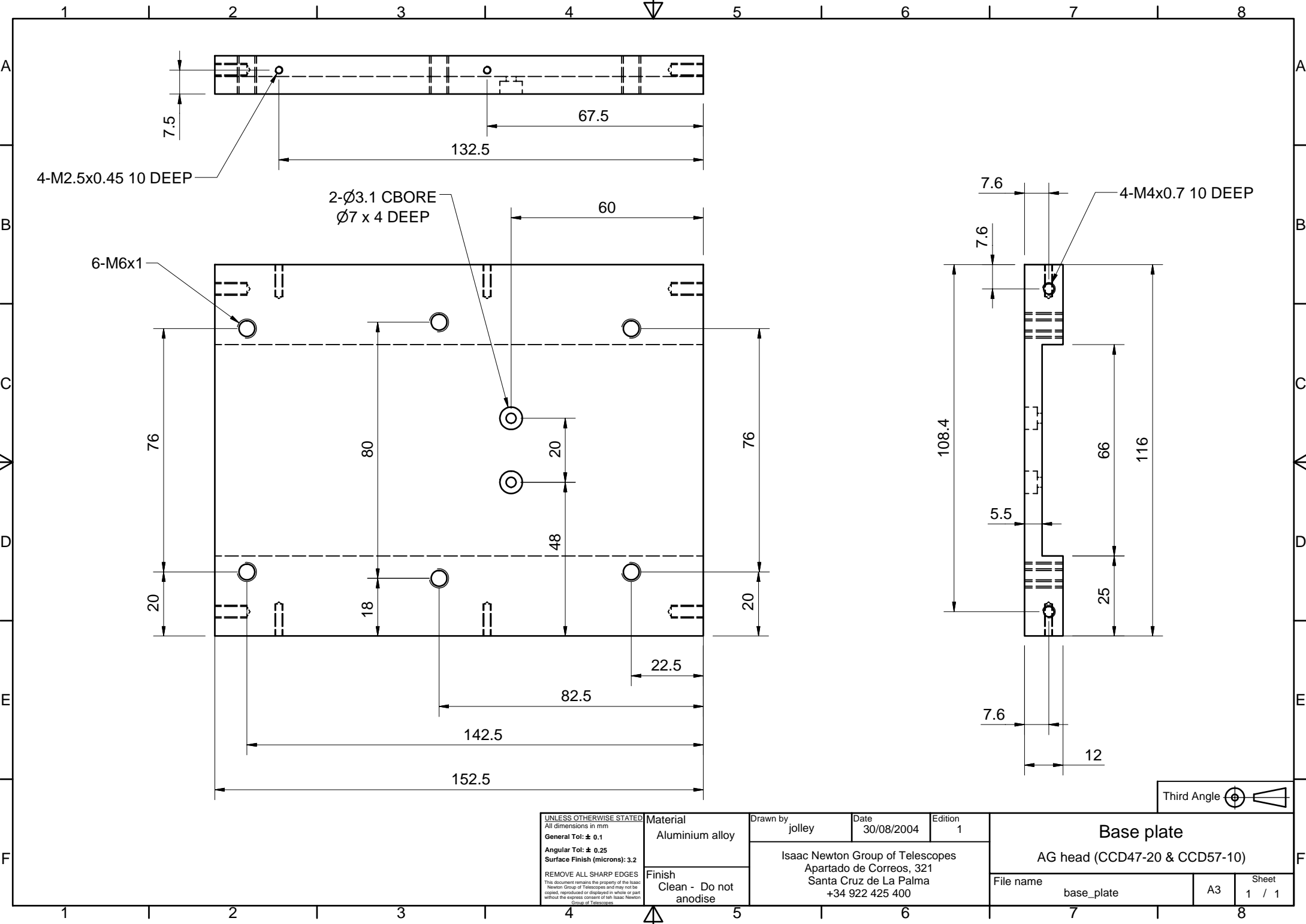
Material  
 Finish

Drawn by jolley  
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 Isaac Newton Group of Telescopes  
 Apartado de Correos, 321  
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Third Angle

General assembly  
 AG head CCD57-10

File name AG\_head\_CCD57\_10  
 Sheet 1 / 1



4-M2.5x0.45 10 DEEP

2-Ø3.1 CBORE  
Ø7 x 4 DEEP

6-M6x1

4-M4x0.7 10 DEEP

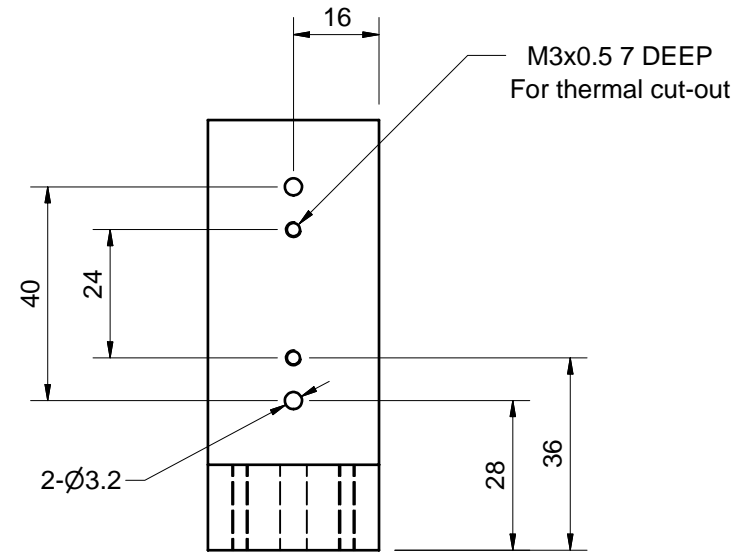
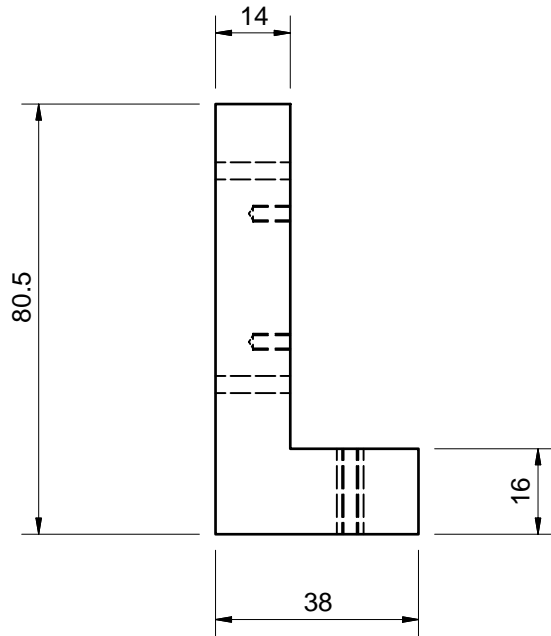
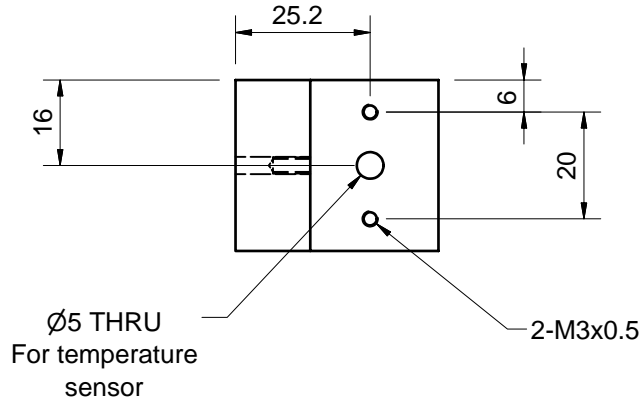
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 All dimensions in mm  
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 Angular Tol: ± 0.25  
 Surface Finish (microns): 3.2  
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**Material**  
 Aluminium alloy  
**Finish**  
 Clean - Do not  
 anodise

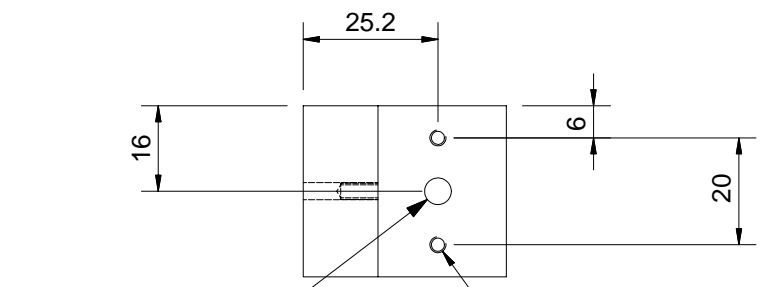
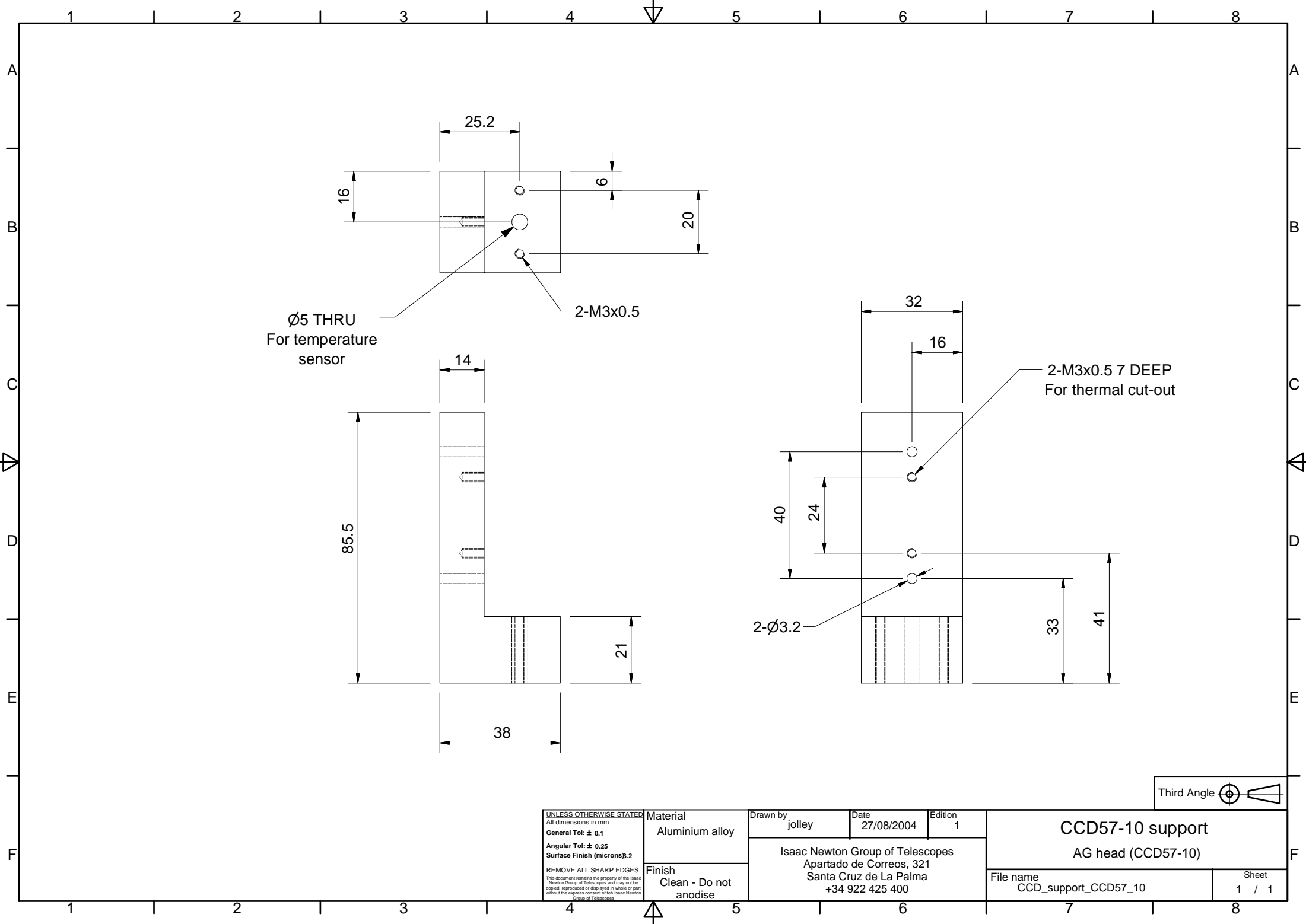
**Drawn by**  
 jolley  
**Date**  
 30/08/2004  
**Edition**  
 1  
 Isaac Newton Group of Telescopes  
 Apartado de Correos, 321  
 Santa Cruz de La Palma  
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**Base plate**  
 AG head (CCD47-20 & CCD57-10)  
**File name**  
 base\_plate  
**A3**  
**Sheet**  
 1 / 1



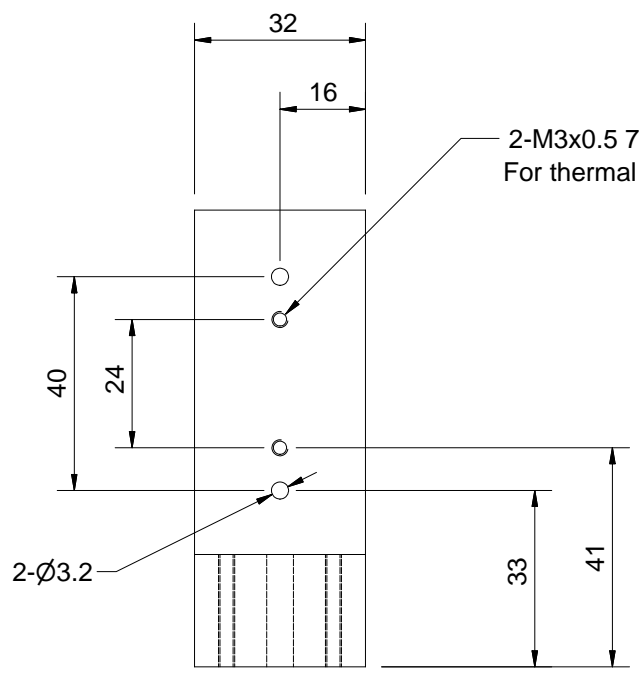
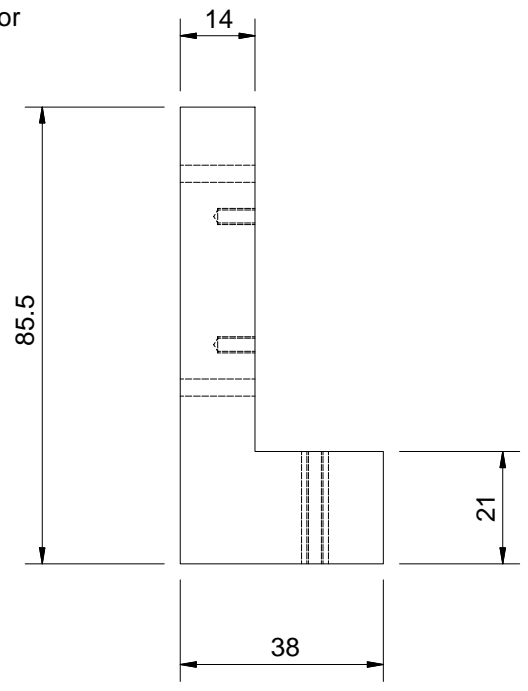


|   |                 |   |            |                      |   |       |  |
|---|-----------------|---|------------|----------------------|---|-------|--|
| <small>UNLESS OTHERWISE STATED</small><br>All dimensions in mm<br>General Tol: $\pm 0.1$<br>Angular Tol: $\pm 0.25$<br>Surface Finish (microns): 3.2<br>REMOVE ALL SHARP EDGES<br><small>This document remains the property of the Isaac Newton Group of Telescopes and may not be copied, reproduced or displayed in whole or part without the express consent of the Isaac Newton Group of Telescopes</small> | Material        | Drawn by  | Date       | Edition              | <b>CCD47-20 support</b><br>AG head (CCD47-20) |       |  |
|   | Aluminium alloy | jolley  | 27/08/2004 | 1                    |   |       |  |
|   | Finish          | Isaac Newton Group of Telescopes<br>Apartado de Correos, 321<br>Santa Cruz de La Palma<br>+34 922 425 400 |            |                      | File name                                     | Sheet |  |
| Clean - Do not anodise  |                 |   |            | CCD_support_CCD47_20 | A3  | 1 / 1 |  |



Ø5 THRU  
For temperature  
sensor

2-M3x0.5



2-M3x0.5 7 DEEP  
For thermal cut-out

2-Ø3.2

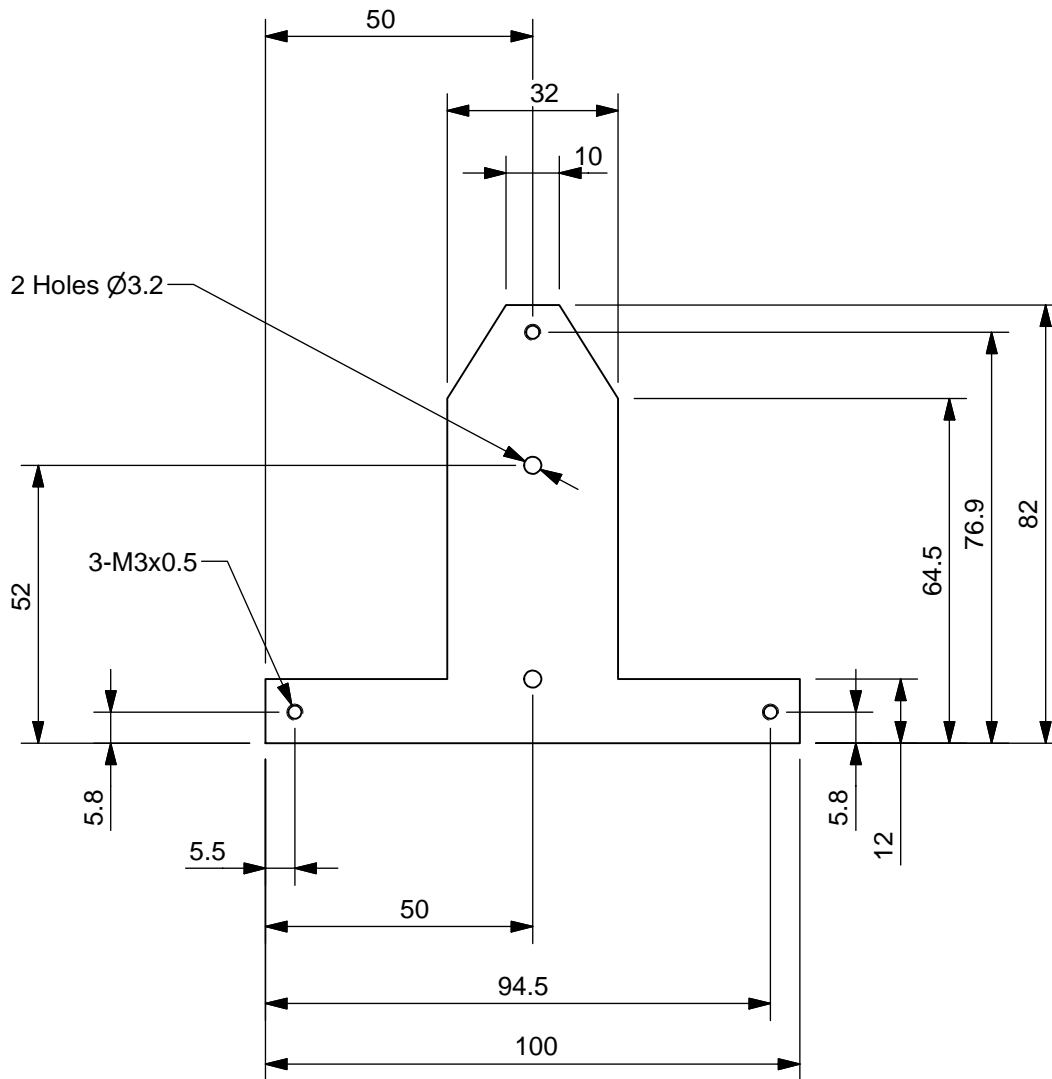


**UNLESS OTHERWISE STATED**  
All dimensions in mm  
General Tol: ± 0.1  
Angular Tol: ± 0.25  
Surface Finish (microns): 3.2  
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**Material**  
Aluminium alloy  
**Finish**  
Clean - Do not anodise

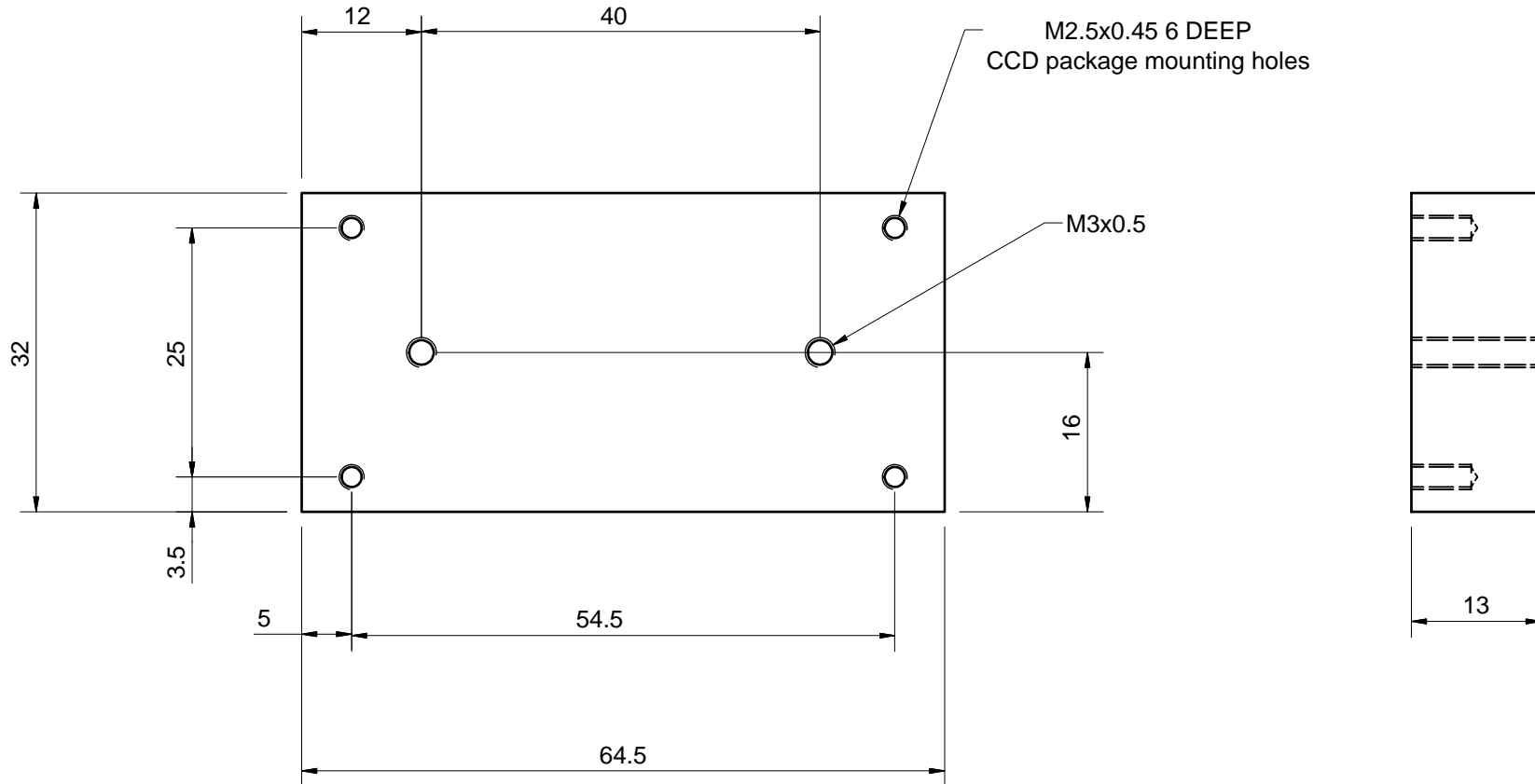
**Drawn by**  
jolley  
**Date**  
27/08/2004  
**Edition**  
1  
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**CCD57-10 support**  
AG head (CCD57-10)  
**File name**  
CCD\_support\_CCD57\_10  
**Sheet**  
1 / 1



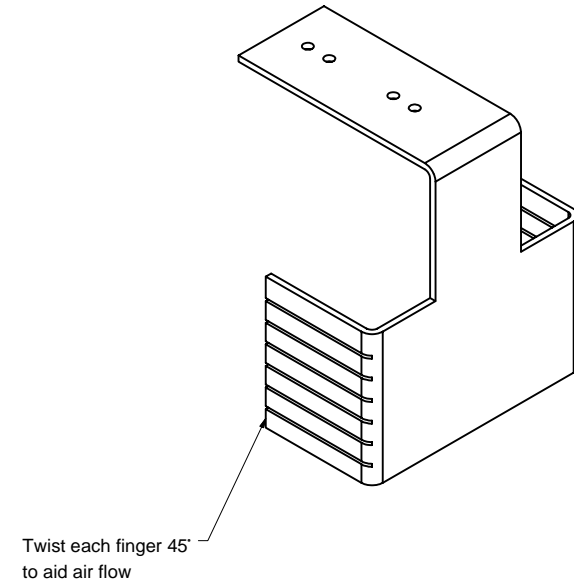
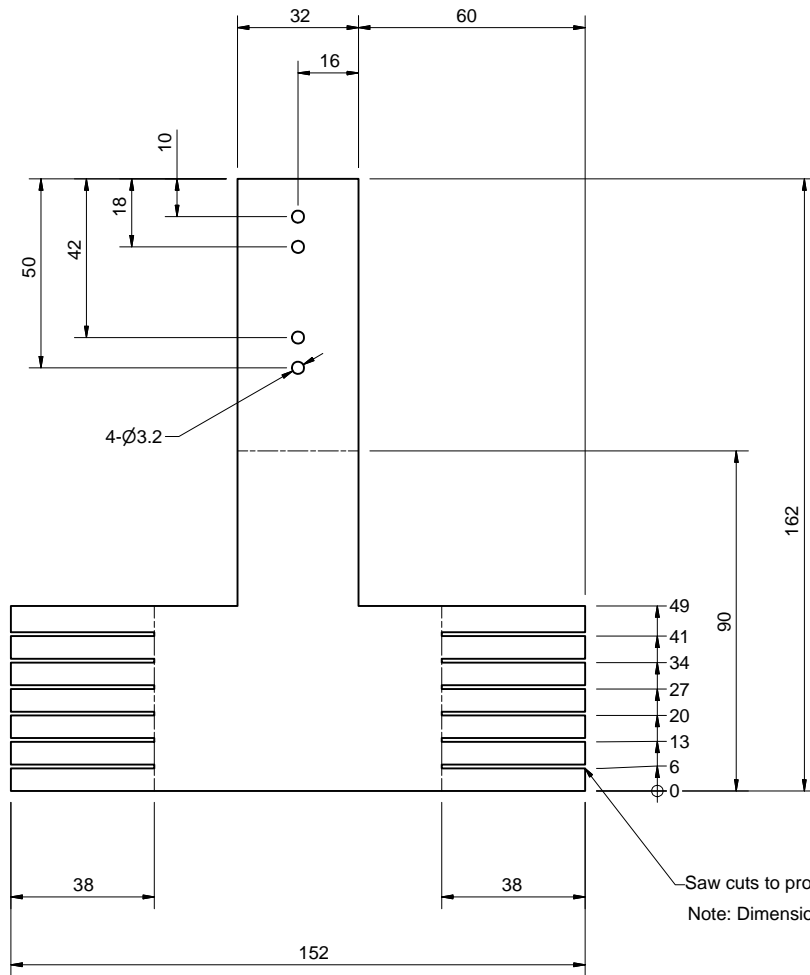
Third Angle 

|  |   |          |            |             |   |  |
|--|---|----------|------------|-------------|---|--|
| <small>UNLESS OTHERWISE STATED</small><br>All dimensions in mm<br><b>General Tol: <math>\pm 0.1</math></b><br><b>Angular Tol: <math>\pm 0.25</math></b><br><b>Surface Finish (microns): 3.2</b><br>REMOVE ALL SHARP EDGES<br><small>This document remains the property of the Isaac Newton Group of Telescopes and may not be copied, reproduced or displayed in whole or part without the express consent of the Isaac Newton Group of Telescopes</small> | Material  | Drawn by | Date       | Edition     | <b>PCB support plate</b><br>AG Head (CCD47-20 & CCD57-10) |  |
|  | Aluminium Alloy   | jolley   | 27/08/2004 | 1           |   |  |
| Finish   | Isaac Newton Group of Telescopes<br>Apartado de Correos, 321<br>Santa Cruz de La Palma<br>+34 922 425 400 |          |            | File name   | Sheet   |  |
| Clean  |   |          |            | PCB_support | 1 / 1   |  |



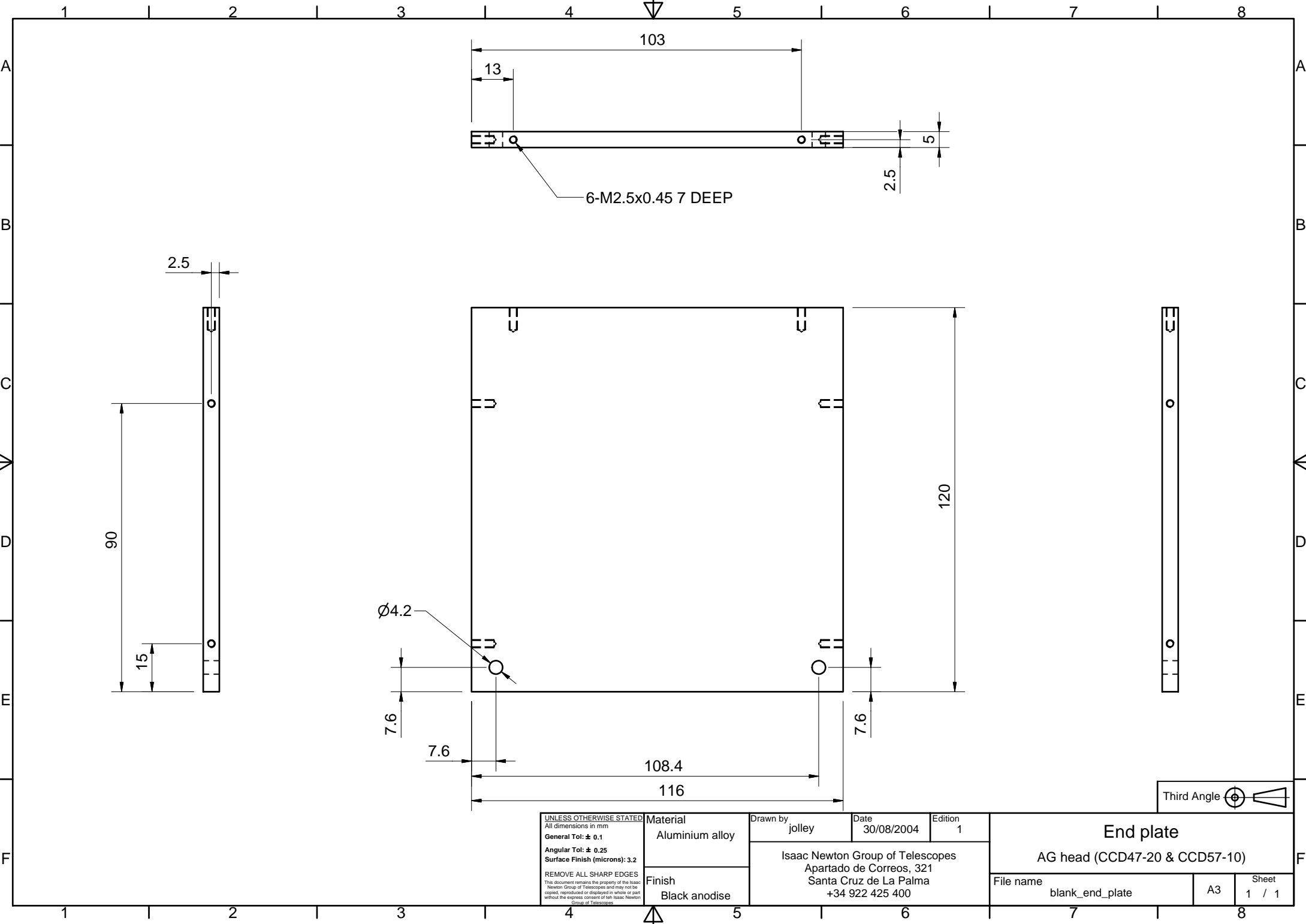
Third Angle

|   |                 |   |            |            |  |       |  |
|---|-----------------|---|------------|------------|--|-------|--|
| <small>UNLESS OTHERWISE STATED</small><br>All dimensions in mm<br>General Tol: $\pm 0.1$<br>Angular Tol: $\pm 0.25$<br>Surface Finish (microns): 3.2<br>REMOVE ALL SHARP EDGES<br><small>This document remains the property of the Isaac Newton Group of Telescopes and may not be copied, reproduced or displayed in whole or part without the express consent of the Isaac Newton Group of Telescopes</small> | Material        | Drawn by  | Date       | Edition    | <b>CCD spacer</b><br>AG Head (CCD47-20 & CCD57-20) |       |  |
|   | Aluminium Alloy | jolley  | 30/08/2004 | 1          |  |       |  |
|   | Finish          | Isaac Newton Group of Telescopes<br>Apartado de Correos, 321<br>Santa Cruz de La Palma<br>+34 922 425 400 |            |            | File name  | Sheet |  |
| Clean - Do not anodise  |                 |   |            | CCD_spacer | A3   | 1 / 1 |  |



|   |           |                 |                           |   |      |            |           |          |  |  |
|---|-----------|-----------------|---------------------------|---|------|------------|-----------|----------|--|--|
| <small>UNLESS OTHERWISE STATED:<br/>All dimensions in mm<br/>General Tol: <math>\pm</math> 0.1<br/>Angular Tol: <math>\pm</math> 0.25<br/>Surface Finish (microns): 3.2<br/>REMOVE ALL SHARP EDGES<br/><small>This document remains the property of the Isaac Newton Group of Telescopes and may not be copied, reproduced or distributed in any form without the written consent of the Isaac Newton Group of Telescopes.</small> </small> | Material  | Aluminium alloy | Drawn by                  | jolley  | Date | 30/08/2004 | Edition   | 1        | <b>Heatsink</b><br>AG head (CCD47-20 & CCD57-10) |  |
|   | 2mm thick | Finish          | Sandblast and paint black | Isaac Newton Group of Telescopes<br>Apartado de Correos, 321<br>Santa Cruz de La Palma<br>+34 922 425 400 |      |            | File name | heatsink |  |  |





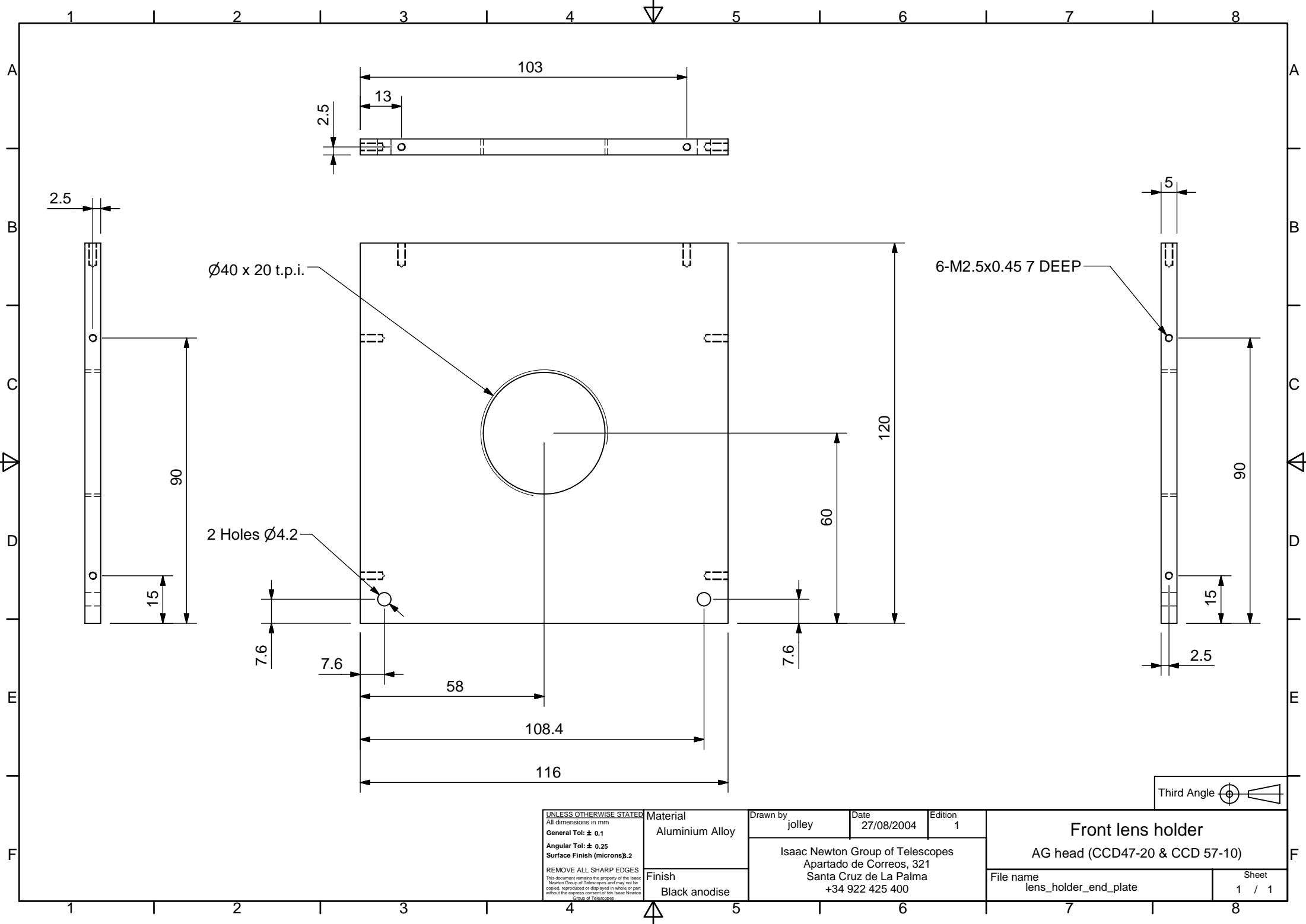
UNLESS OTHERWISE STATED  
 All dimensions in mm  
 General Tol:  $\pm 0.1$   
 Angular Tol:  $\pm 0.25$   
 Surface Finish (microns): 3.2  
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Material  
 Aluminium alloy  
 Finish  
 Black anodise

Drawn by  
 jolley  
 Date  
 30/08/2004  
 Edition  
 1  
 Isaac Newton Group of Telescopes  
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End plate  
 AG head (CCD47-20 & CCD57-10)  
 File name  
 blank\_end\_plate  
 A3  
 Sheet  
 1 / 1





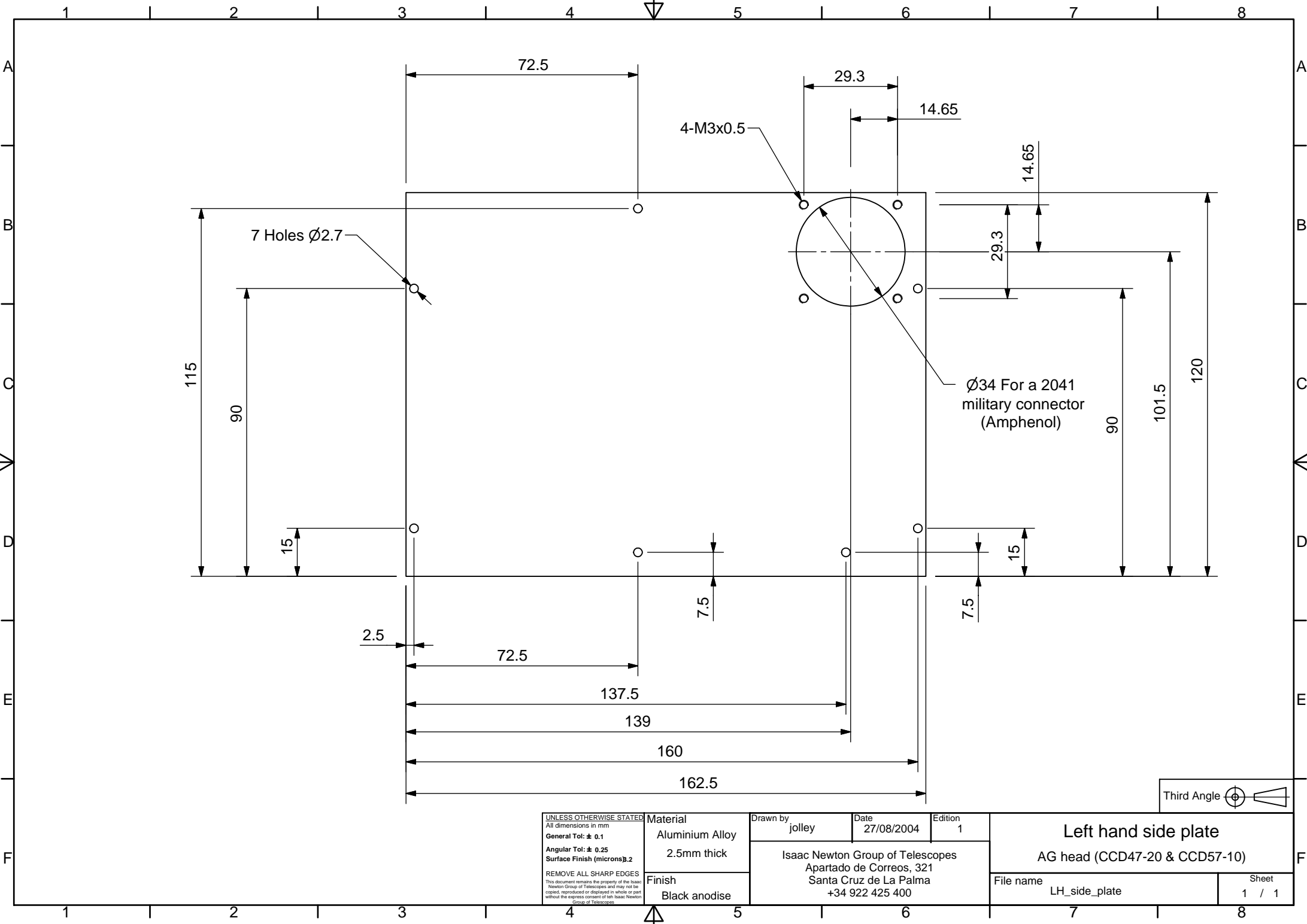
UNLESS OTHERWISE STATED  
 All dimensions in mm  
 General Tol: ± 0.1  
 Angular Tol: ± 0.25  
 Surface Finish (microns) 3.2  
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Material  
 Aluminium Alloy  
 Finish  
 Black anodise

Drawn by  
 jolley  
 Date  
 27/08/2004  
 Edition  
 1  
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Front lens holder  
 AG head (CCD47-20 & CCD 57-10)  
 File name  
 lens\_holder\_end\_plate  
 Sheet  
 1 / 1





UNLESS OTHERWISE STATED  
 All dimensions in mm  
 General Tol: ± 0.1  
 Angular Tol: ± 0.25  
 Surface Finish (microns): 3.2  
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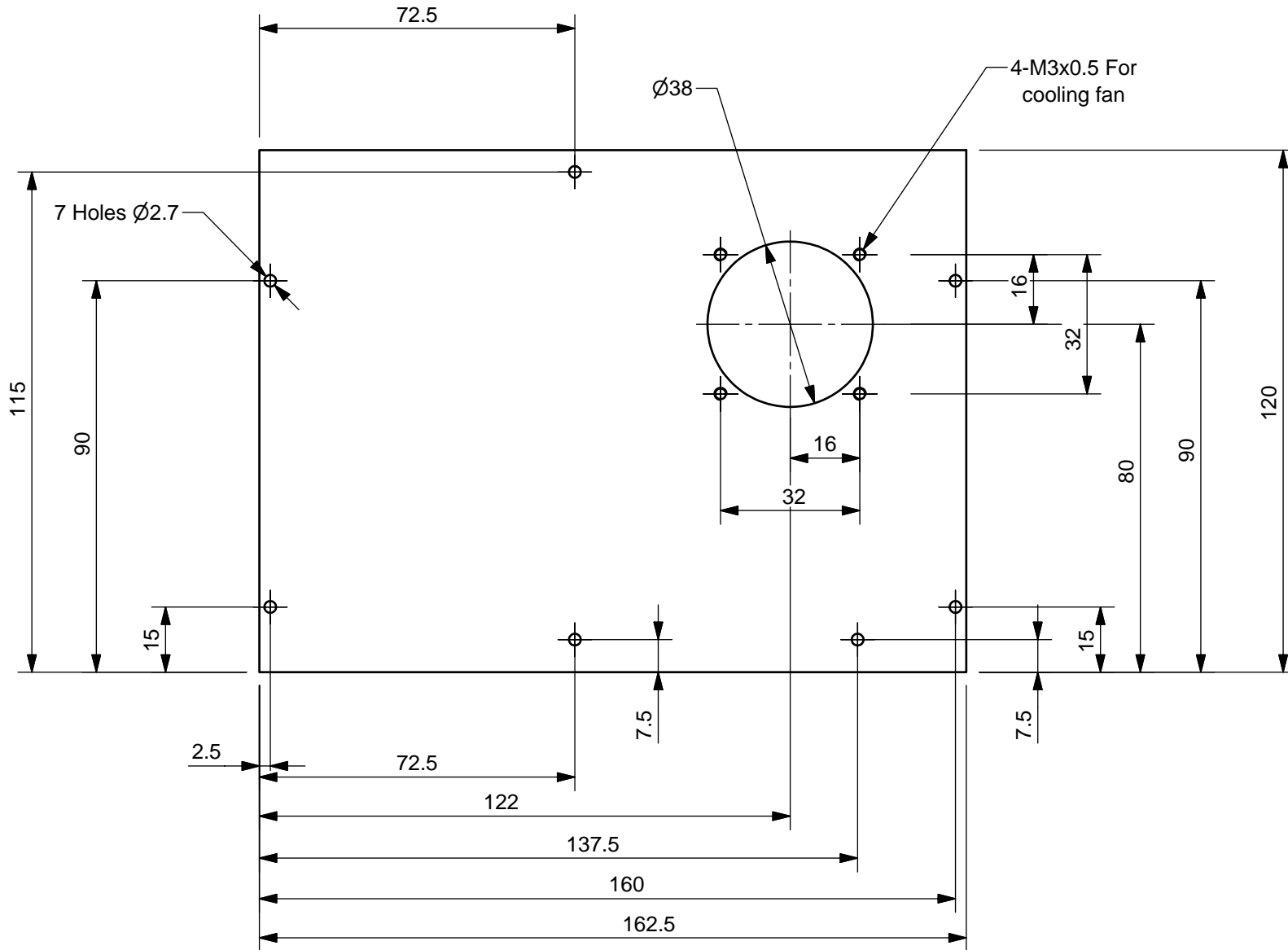
Material  
 Aluminium Alloy  
 2.5mm thick  
 Finish  
 Black anodise

Drawn by  
 jolley  
 Isaac Newton Group of Telescopes  
 Apartado de Correos, 321  
 Santa Cruz de La Palma  
 +34 922 425 400

Date  
 27/08/2004  
 Edition  
 1

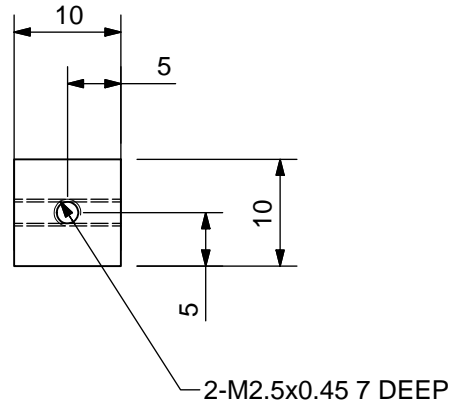
Left hand side plate  
 AG head (CCD47-20 & CCD57-10)  
 File name  
 LH\_side\_plate  
 Sheet  
 1 / 1



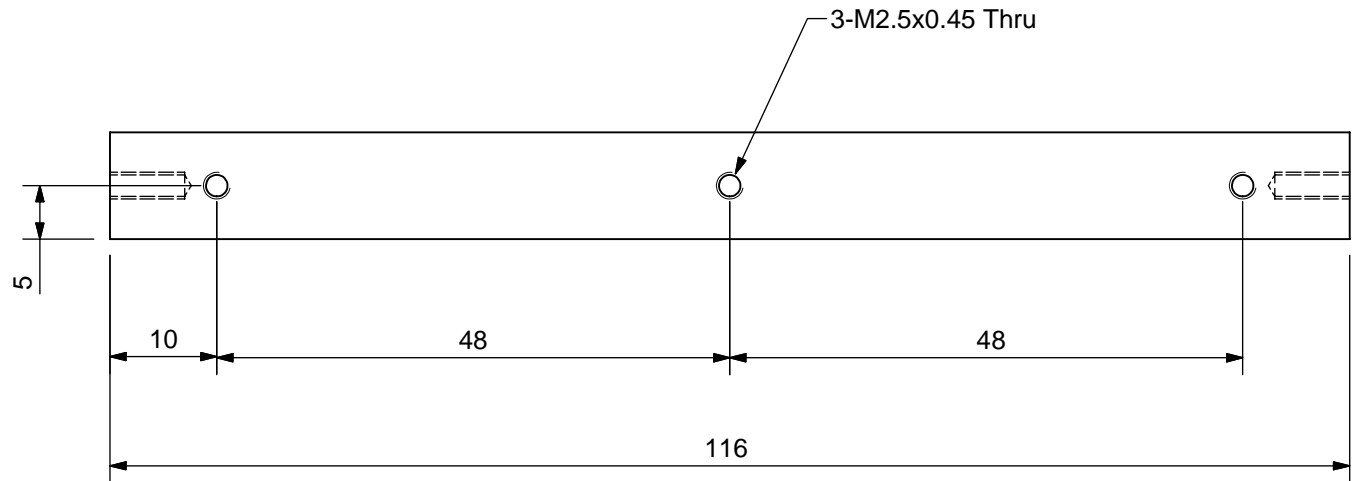


Third Angle

|   |                 |   |            |         |   |       |
|---|-----------------|---|------------|---------|---|-------|
| <small>UNLESS OTHERWISE STATED</small><br>All dimensions in mm<br>General Tol: $\pm 0.1$<br>Angular Tol: $\pm 0.25$<br>Surface Finish (microns): 3.2<br>REMOVE ALL SHARP EDGES<br><small>This document remains the property of the Isaac Newton Group of Telescopes and may not be copied, reproduced or displayed in whole or part without the express consent of the Isaac Newton Group of Telescopes</small> | Material        | Drawn by  | Date       | Edition | <b>Right hand side plate</b><br>AG Head (CCD47-20 & CCD57-10) |       |
|   | Aluminium Alloy | jolley  | 27/08/2004 | 1       |   |       |
|   | 2.5mm thick     | Isaac Newton Group of Telescopes<br>Apartado de Correos, 321<br>Santa Cruz de La Palma<br>+34 922 425 400 |            |         | File name   | Sheet |
| Finish  | Black anodise   |   |            |         | RH_side_plate-1   | 1 / 1 |



(2 : 1)



|   |                 |   |            |         |   |       |
|---|-----------------|---|------------|---------|---|-------|
| <small>UNLESS OTHERWISE STATED</small><br>All dimensions in mm<br>General Tol: $\pm 0.1$<br>Angular Tol: $\pm 0.25$<br>Surface Finish (microns): 3.2<br>REMOVE ALL SHARP EDGES<br><small>This document remains the property of the Isaac Newton Group of Telescopes and may not be copied, reproduced or displayed in whole or part without the express consent of the Isaac Newton Group of Telescopes</small> | Material        | Drawn by  | Date       | Edition | <b>Cross bar</b><br>AG head (CCD47-20 & CCD57-20) |       |
|   | Aluminium alloy | jolley  | 27/08/2004 | 1       |   |       |
|   | Finish          | Isaac Newton Group of Telescopes<br>Apartado de Correos, 321<br>Santa Cruz de La Palma<br>+34 922 425 400 |            |         | File name   | Sheet |
|   | Black anodise   |   |            |         | cross_bar   | 1 / 1 |

