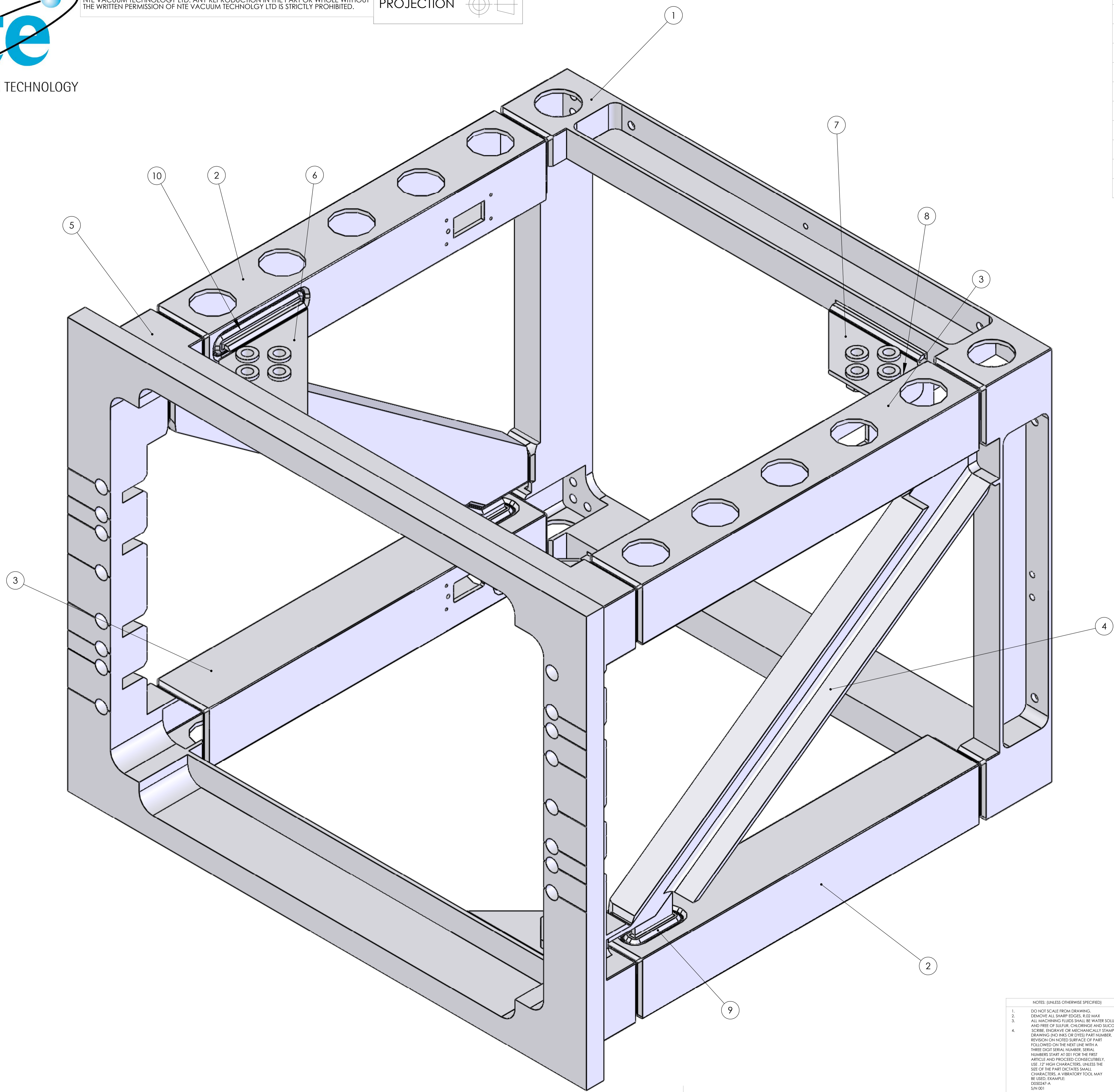




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PROJECTION

| ITEM NO. | PART NUMBER   | DESCRIPTION                 | QTY. |
|----------|---------------|-----------------------------|------|
| 1        | D060494-00-K  | BOTTOM RING                 | 1    |
| 2        | D060496-00-K  | VERTICAL BOX No1            | 2    |
| 3        | D060497-00-K  | VERTICAL BOX No2            | 2    |
| 4        | D060499-00-K  | WELDED TRUSS MEMBER No1     | 2    |
| 5        | D060493-00-K  | TOP RING                    | 1    |
| 6        | D060500-00-K  | FULL GUSSET                 | 2    |
| 7        | D060501-00-K  | SHORT GUSSET                | 2    |
| 8        | D060499-02_02 | SHORT GUSSET SUPPORT        | 2    |
| 9        | D060499-02_03 | WELDED TRUSS MEMBER SUPPORT | 4    |
| 10       | D060499-02_01 | FULL GUSSET SUPPORT         | 2    |



NOTES: (UNLESS OTHERWISE SPECIFIED)

- DO NOT SCALE FROM DRAWING.
- REMOVE ALL SHARP EDGES R.02 MAX
- ALL MACHINING FLUIDS SHALL BE WATER SOLUBLE AND FREE OF SILICONE, CHLORINE AND SULFONE. SCRIBE, ENGRAVE OR MECHANICALLY STAMP DRAWING (DO NOT USE) PART NUMBER, REVISION ON NOTED SURFACE OF PART FOLLOWED ON THE NEXT LINE WITH A THREE DIGIT SERIAL NUMBER. SERIAL NUMBERS START AT 001 FOR THE FIRST ARTICLE AND PROCEED CONSECUTIVELY. USE 12 HIGH CHARACTERS, UNLESS THE SIZE OF THE PART DICTATES SMALL CHARACTERS. A VIBRATORY TOOL MAY BE USED. EXAMPLE: D060494-001
- UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: XX ±0.01mm XX ±0.005mm ANGULAR: ±0.5°

FINISH: CLEAN to LIGO SPEC

DEBUR AND BREAK SHARP EDGES

DO NOT SCALE DRAWING

REVISION: B

PARTS LIST CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY IGR, GLASGOW UNIVERSITY GEO 400 GROUP

TITLE: UPPER STRUCTURE ASSEMBLY

DRAWN: TOMASZ BAK DATE: 12.04.2008

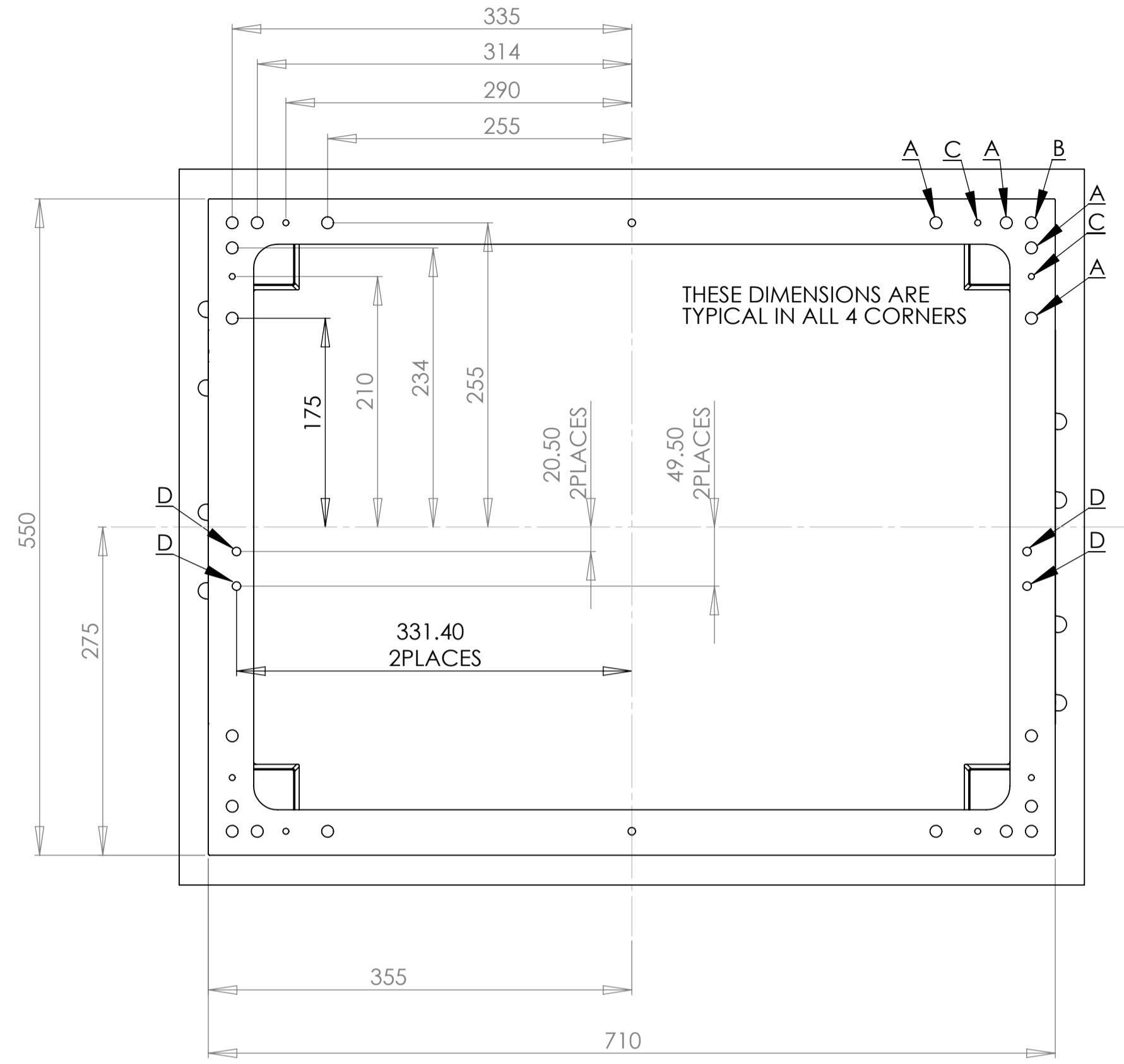
CHKD: APPVD: MFG: Q.A:

MATERIAL: Aluminium Alloy 6082

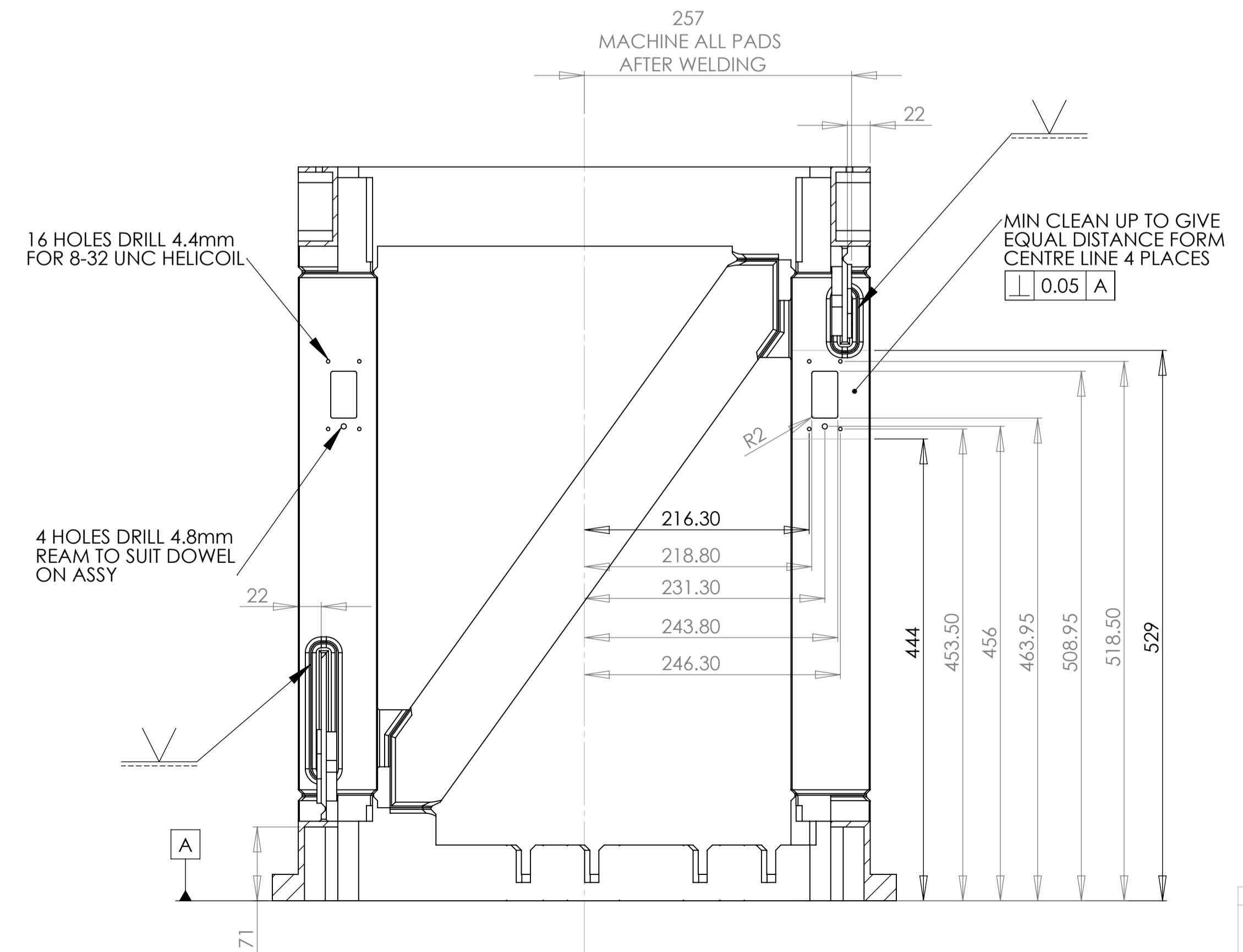
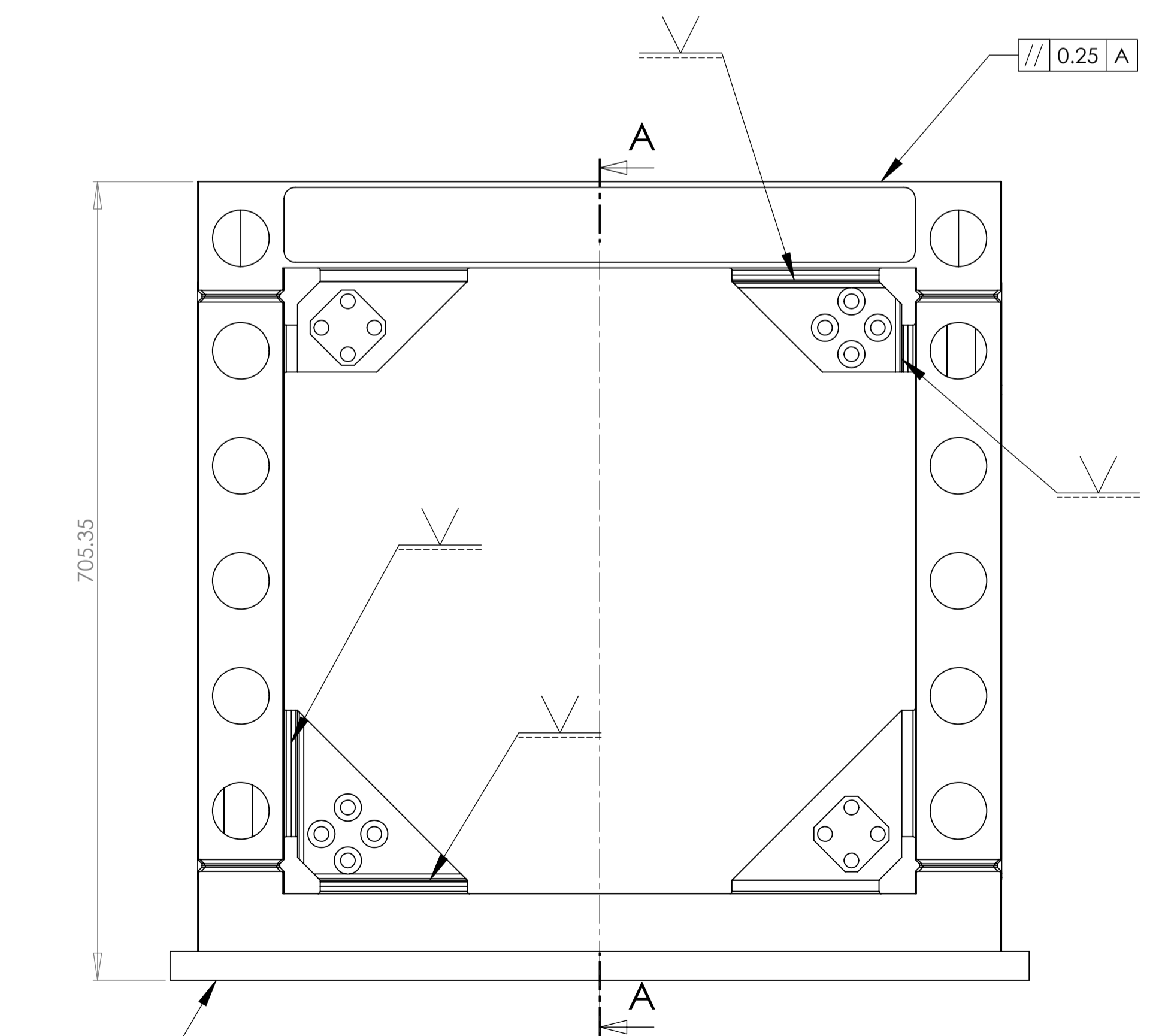
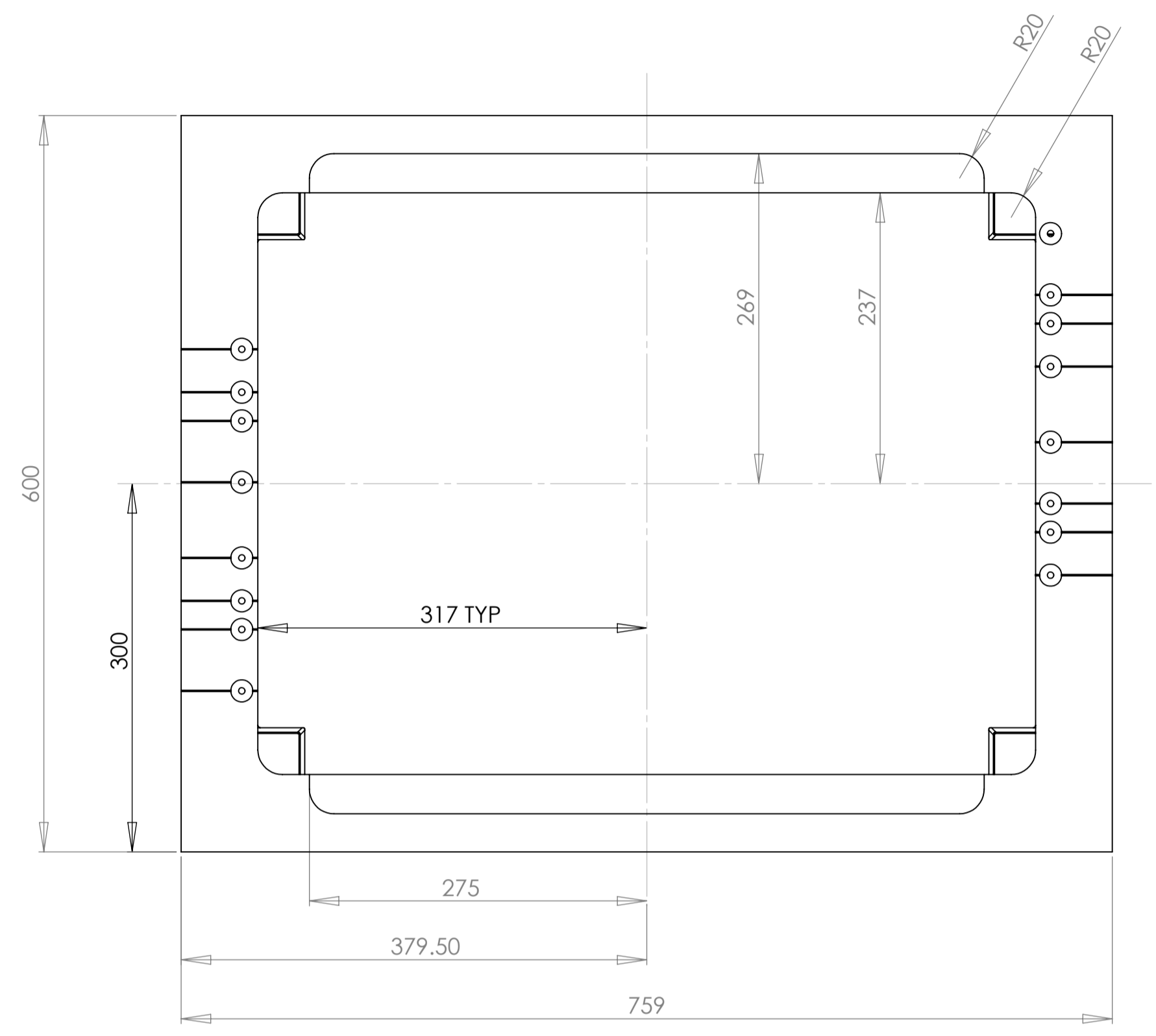
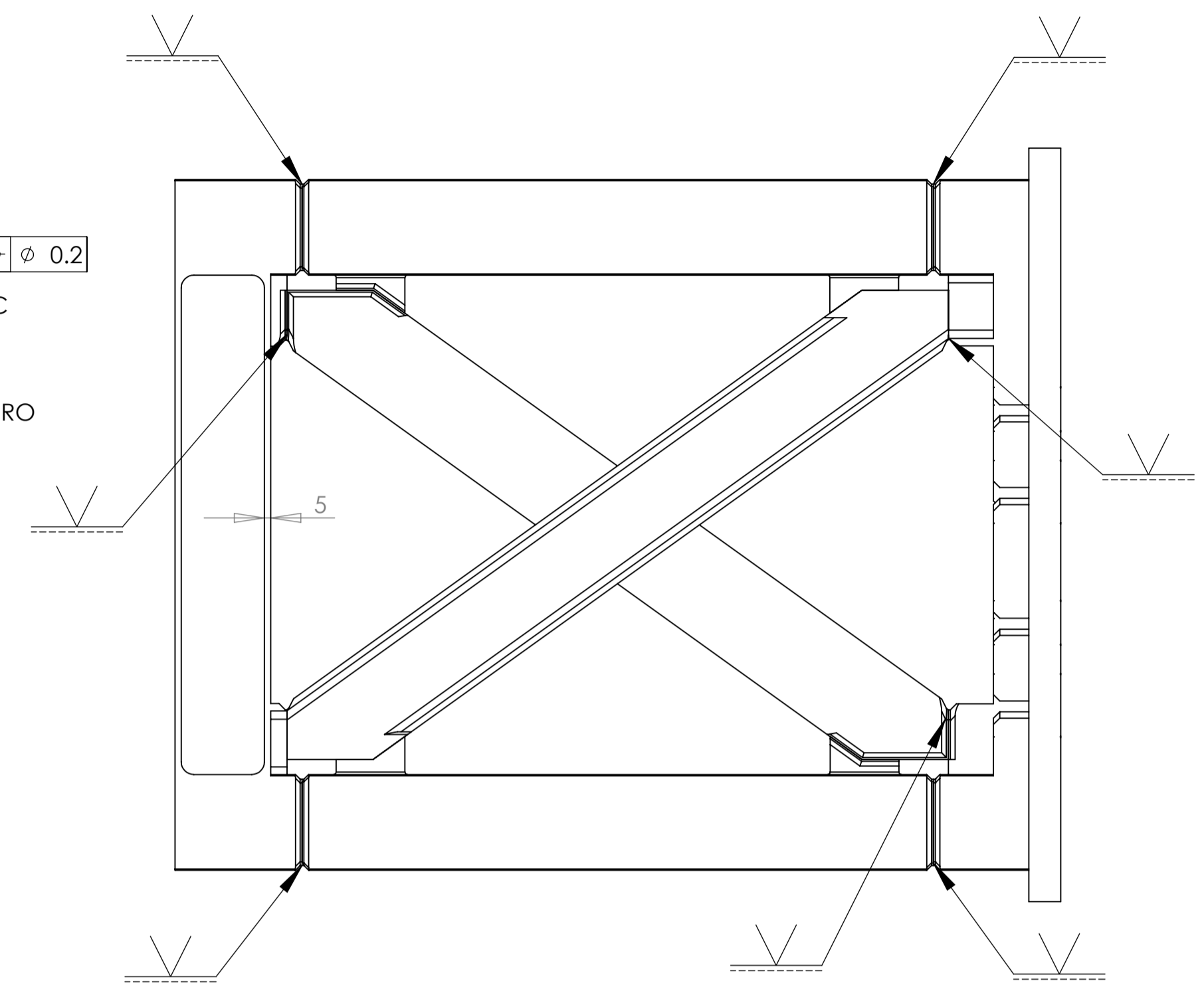
DWG NO: D060492-00-K

SCALE: 1:3

SHEET 1 OF 3



NOTE  
 16 HOLES MARKED "A"  $\phi$  10.4mm THRO FIRST FACE ONLY  
 4 HOLES MARKED "B"  $\phi$  8.2 - 8.3  $\pm$   $\phi$  0.2  
 10 HOLES MARKED "C" 1/4-20 UNC HELICOILS THRO FIRST FACE ONLY  $\pm$   $\phi$  0.25  
 4 HOLES MARKED "D"  $\phi$  7.2mm THRO BOTH FALCES OF BOTTOM RING



0.10 A

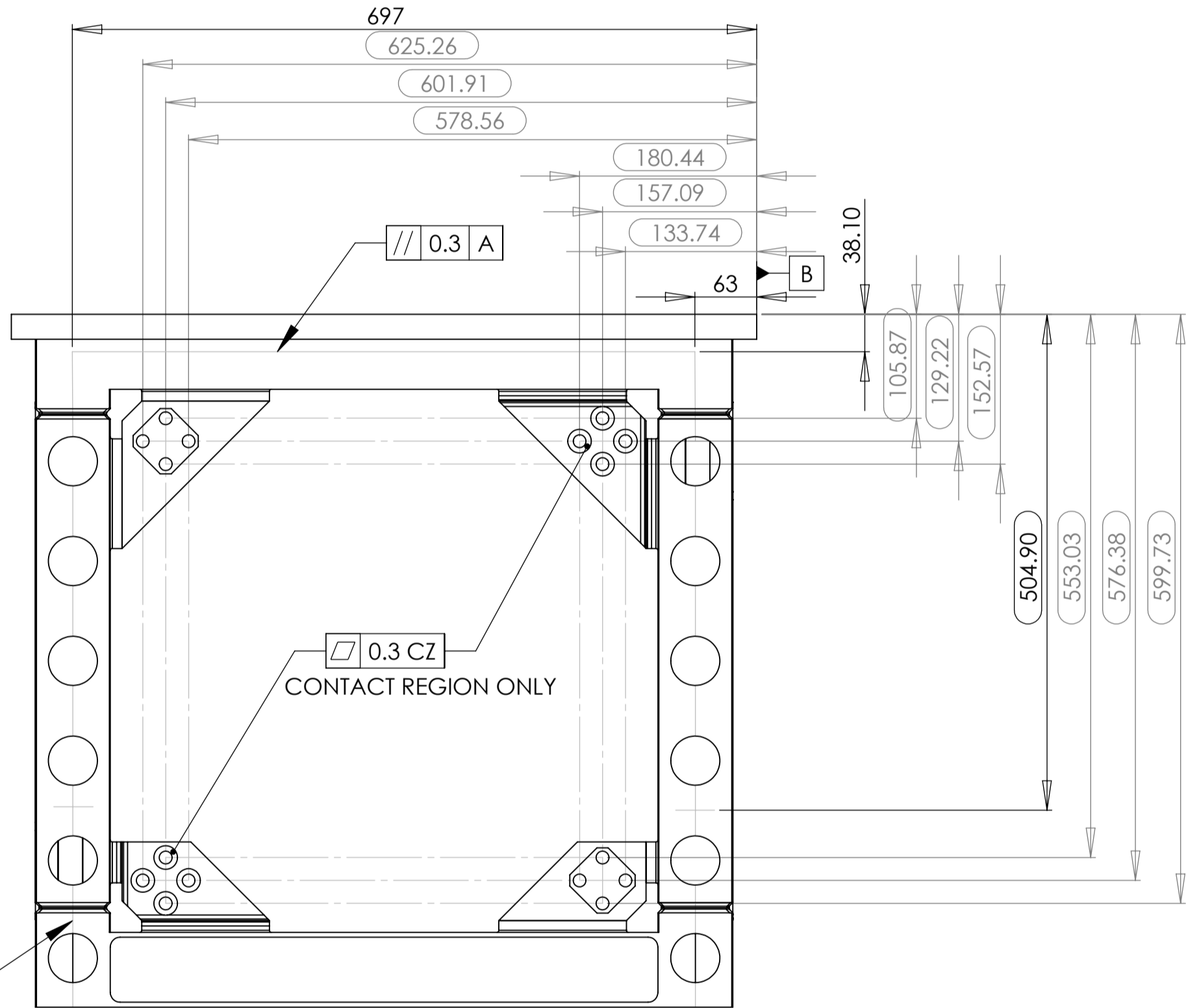
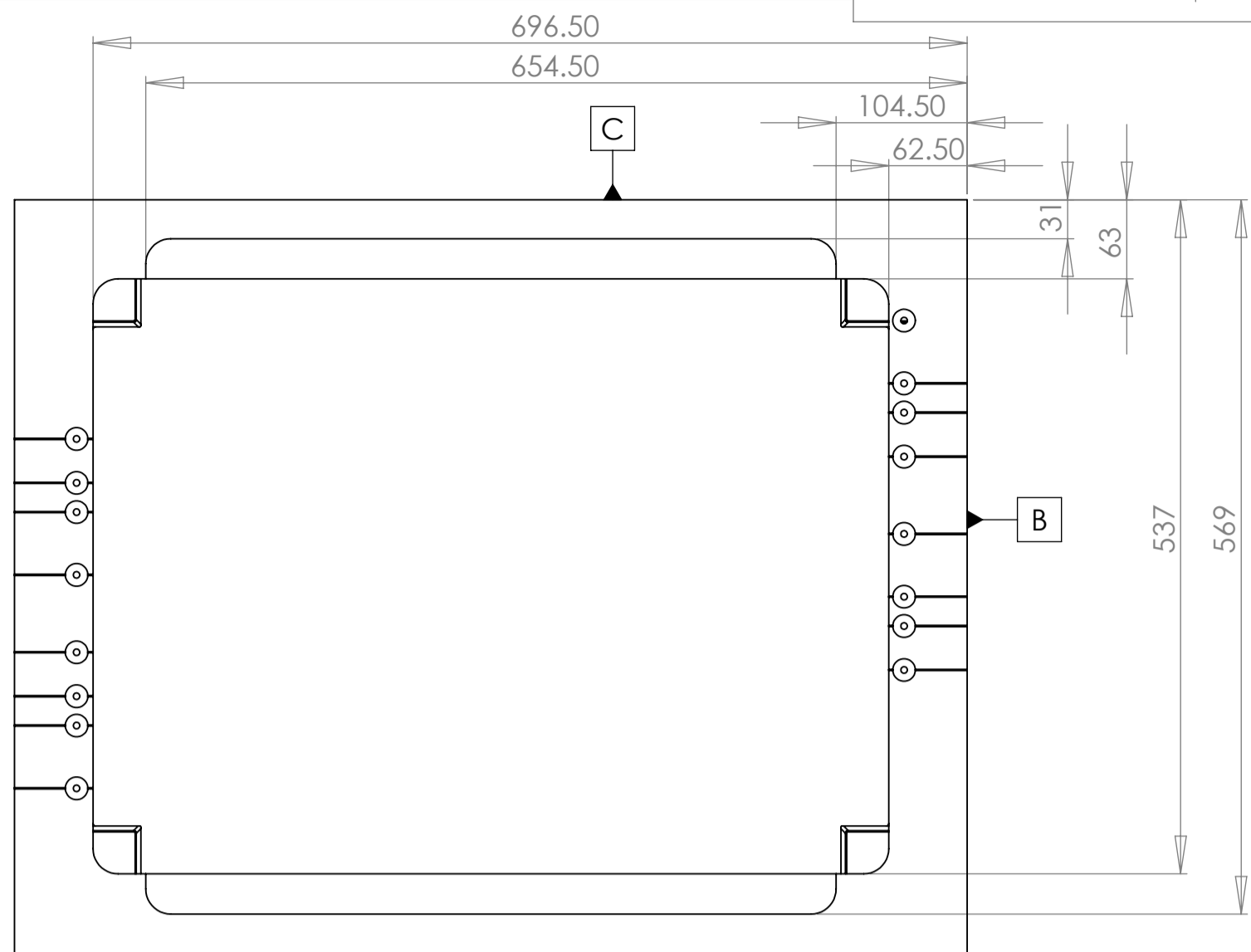
SECTION A-A

|  |              |  |                                |                             |                                    |
|--|--------------|--|--------------------------------|-----------------------------|------------------------------------|
| NOTES: (UNLESS OTHERWISE SPECIFIED)<br>1. DO NOT SCALE FROM DRAWING.<br>2. REMOVE ALL SHARP EDGES R0.2 MAX<br>3. ALL MACHINING FLUIDS SHALL BE WATER SOLUBLE AND FREE OF SILICONE, CHLORINE AND SILICONE.<br>4. REVISION ON NOTED SURFACE OF PART FOLLOWED ON THE NEXT LINE WITH A THREE DIGIT SERIAL NUMBER, SERIAL NUMBERS START AT 001 FOR THE FIRST ARTICLE AND PROCEED CONSECUTIVELY. USE 1/2" HIGH CHARACTERS, UNLESS THE SIZE OF THE PART DICTATES SMALL CHARACTERS. A VIBRATORY TOOL MAY BE USED. EXAMPLE: D06247-A S1N001 |              | UNLESS OTHERWISE SPECIFIED:<br>DIMENSIONS ARE IN MILLIMETERS<br>SURFACE FINISH:<br>TOLERANCES:<br>LINEAR: JX $\pm$ 0.01mm<br>XX $\pm$ 0.005mm<br>ANGULAR: $\pm$ 0.5° | FINISH:<br>CLEAN TO LIGO SPEC  | DEBUR AND BREAK SHARP EDGES | DO NOT SCALE DRAWING<br>REVISION B |
| DRAWN: TOMASZ BAK<br>DATE: 12.04.2008  | NAME:        | TITLE: UPPER STRUCTURE ASSEMBLY  | MATERIAL: Aluminium Alloy 6082 | DWG NO: D060492-00-K        | A1                                 |
| SCALE: 1:1   | SHEET 2 OF 3 | WEIGHT:  | D060492-00-K                   | A1                          | A1                                 |



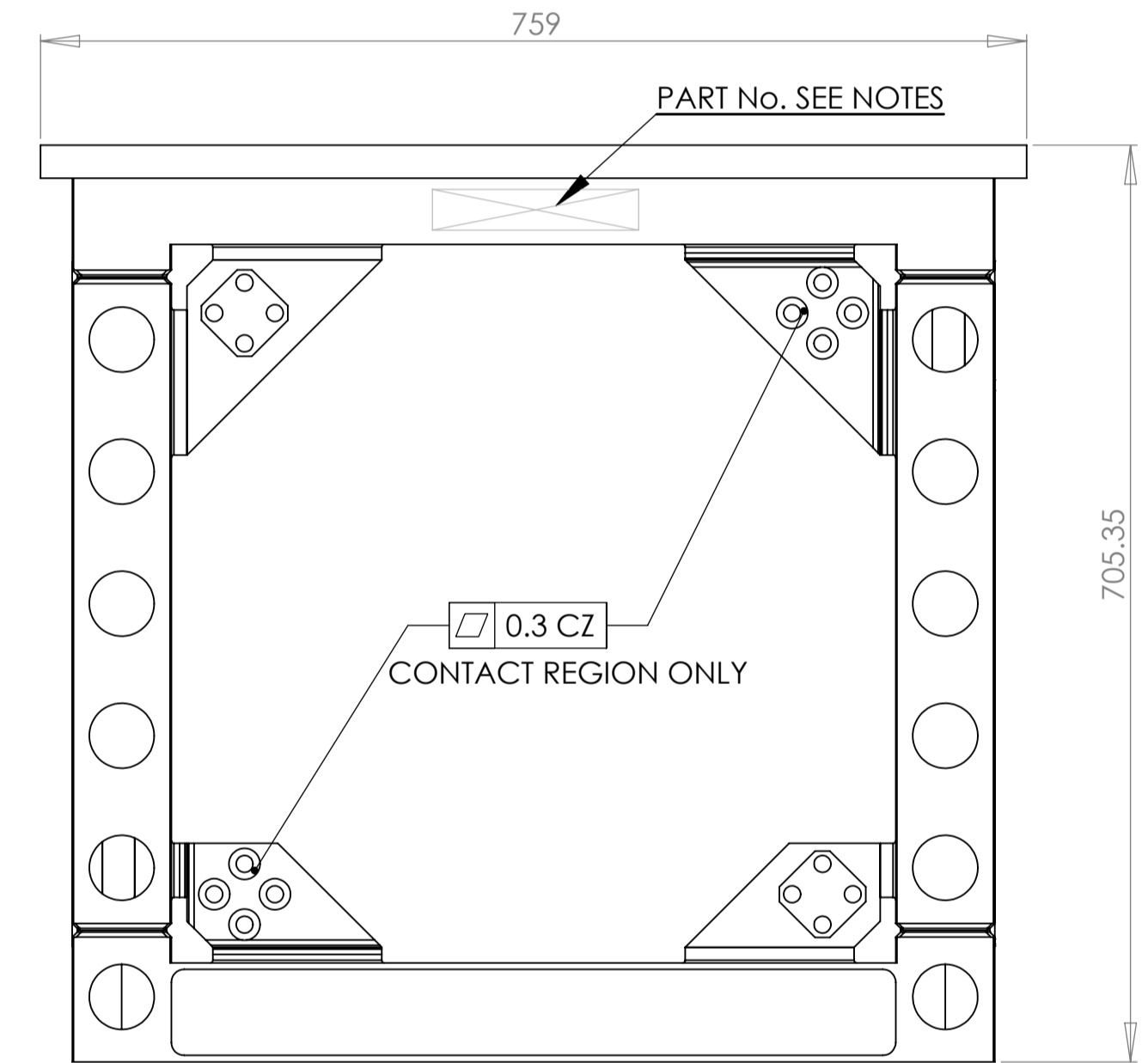
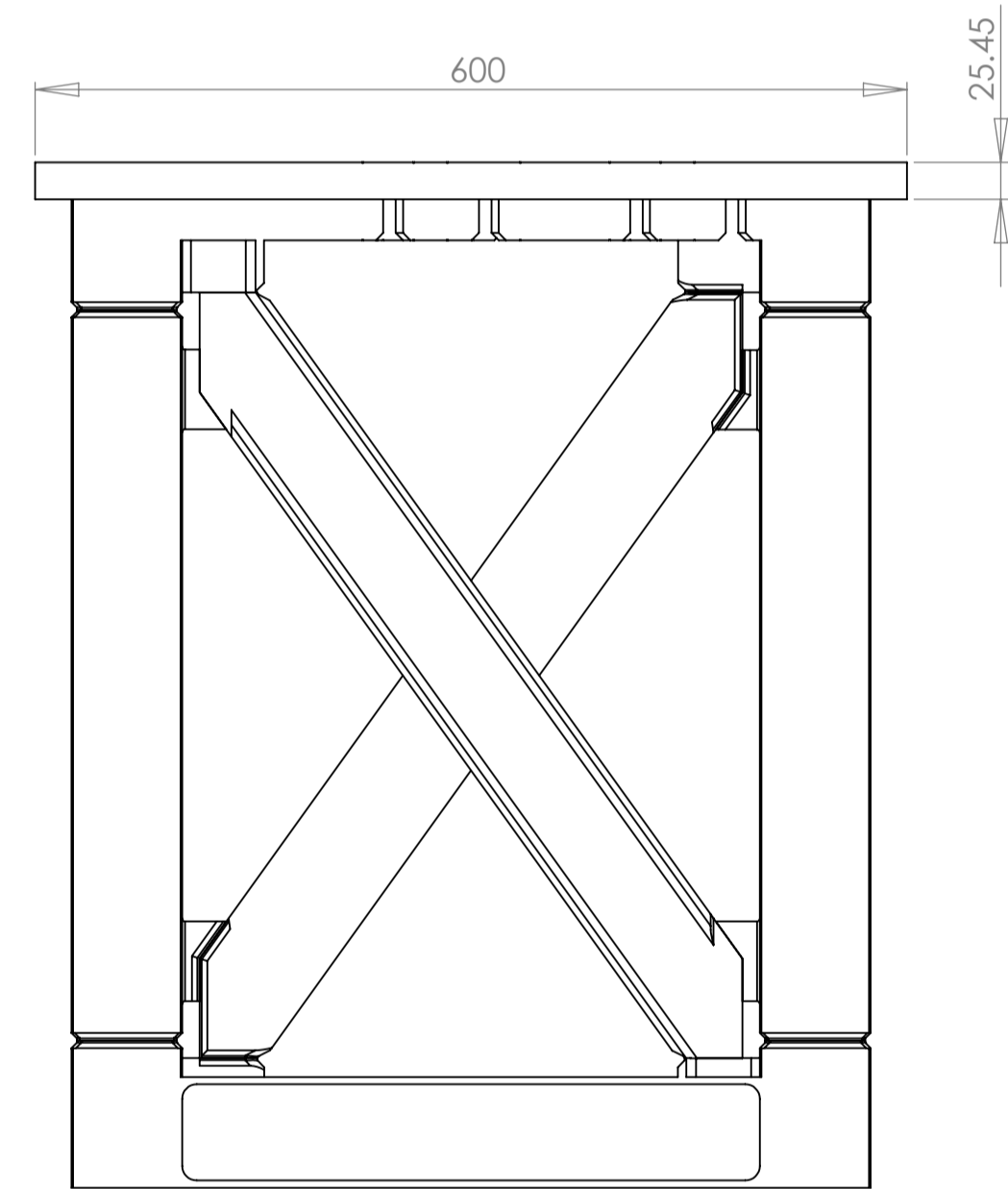
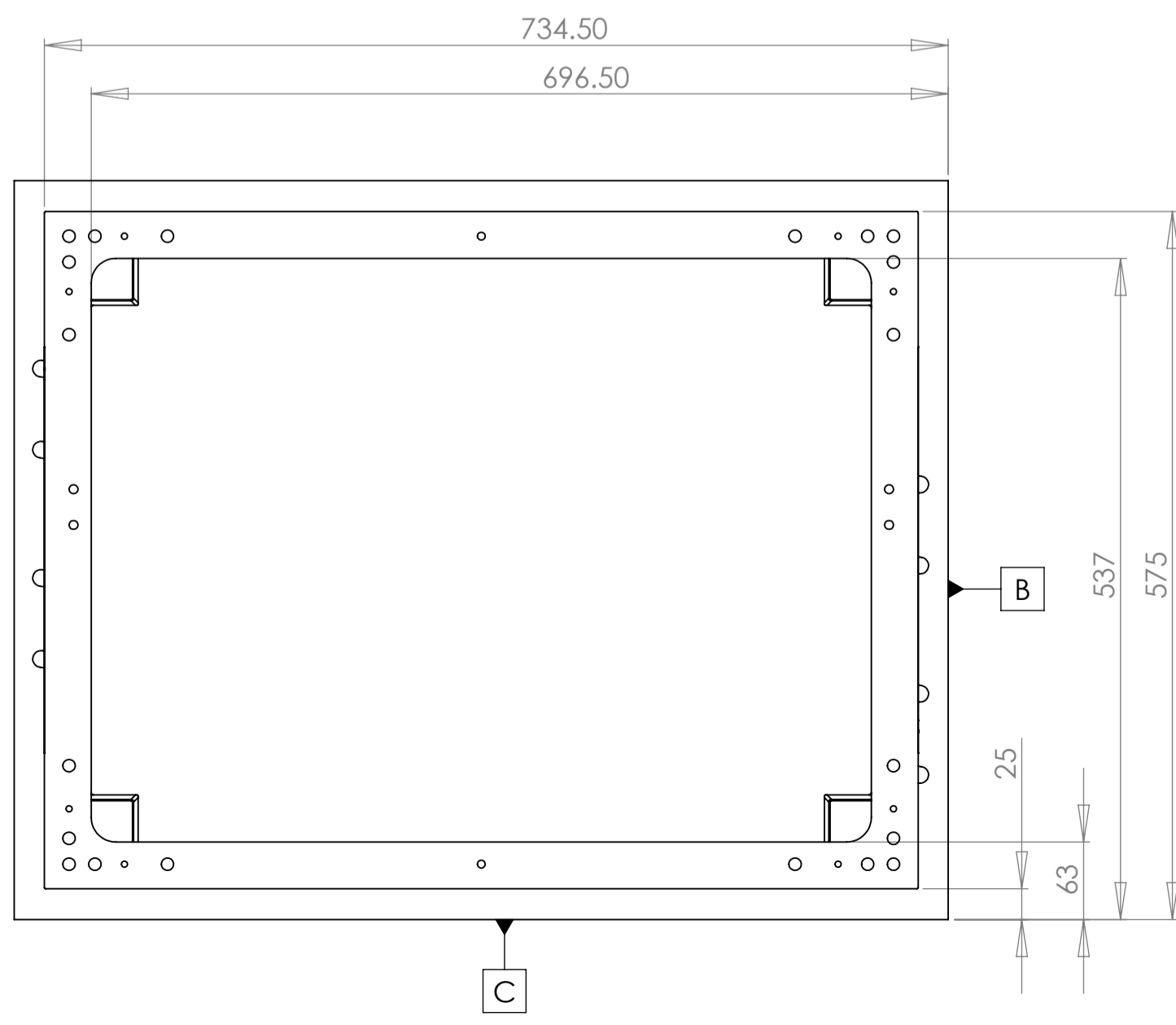
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PROJECTION



ENGRAVED LINES AS DETAIL A  
 $\phi$  0.3 A

TAP ALL HOLES DIMENSIONED ON THIS VIEW  
 3/8-16 UNC THRO 0.005" OBERSIZE  $\phi$  0.3 B A



DRAWING SHOWING FULL UPPER STRUCTURE WELDMENT  
 DRAWING NOT INTENDED FOR MANUFACTURE  
 DETAIL OF WELD PREPS, TOOLING RADS, FAB STEPS EXCLUDED  
 SHEET 1 SHOWS ASSEMBLY  
 SHEET 2,3 & 4 SHOW FULL WELDMENT DETAIL

|  |  |  |                               |                                    |                                    |
|--|--|--|-------------------------------|------------------------------------|------------------------------------|
| NOTES: (UNLESS OTHERWISE SPECIFIED)<br>1. DO NOT SCALE FROM DRAWING.<br>2. REMOVE ALL SHARP EDGES R.02 MAX<br>ALL MACHINING FLUIDS SHALL BE WATER SOLUBLE AND FREE OF SILICONE, CHLORINE AND SULFONE.<br>3. SCRIBE, ENGRAVE OR MECHANICALLY STAMP DRAWING (DO NOT USE) PART NUMBER, REVISION ON NOTED SURFACE OF PART FOLLOWED ON THE NEXT LINE WITH A THREE DIGIT SERIAL NUMBER, SERIAL NUMBER START AT 001 FOR THE FIRST ARTICLE AND PROCEED CONSECUTIVELY. USE 12 HIGH CHARACTERS, UNLESS THE SIZE OF THE PART DICTATES SMALL CHARACTERS. A VIBRATORY TOOL MAY BE USED. EXAMPLE: D060492-A S/N001<br>4. |  | UNLESS OTHERWISE SPECIFIED:<br>DIMENSIONS ARE IN MILLIMETERS<br>SURFACE FINISH:<br>TOLERANCES:<br>LINEAR: XX $\pm$ 0.01mm<br>XX $\pm$ 0.005mm<br>ANGULAR: $\pm$ 0.5° | FINISH:<br>CLEAN to LIGO SPEC | DEBUR AND BREAK SHARP EDGES        | DO NOT SCALE DRAWING<br>REVISION B |
| DRAWN: TOMASZ BAK<br>DATE: 12.04.2008  |  | CALIFORNIA INSTITUTE OF TECHNOLOGY<br>MASSACHUSETTS INSTITUTE OF TECHNOLOGY<br>IOR, GLASGOW UNIVERSITY GEO 400 GROUP   |                               | TITLE:<br>UPPER STRUCTURE WELDMENT |                                    |
| MATERIAL:<br>Aluminium Alloy 6082  |  | DWG NO:<br>D060492-00-K  |                               | A1                                 |                                    |
| WEIGHT:  |  | SCALE: 1:3   |                               | SHEET 3 OF 3                       |                                    |