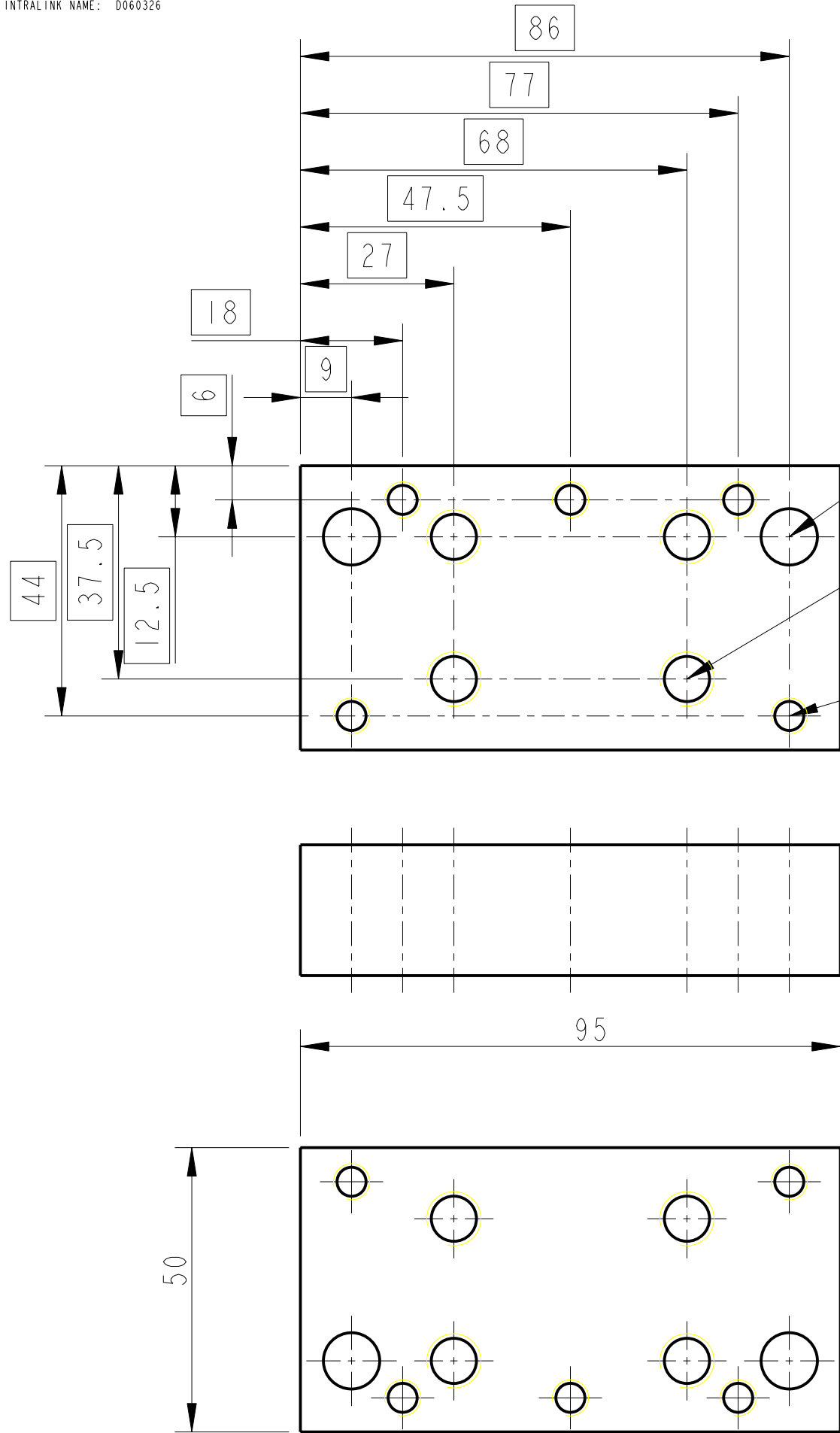


REV.	DATE	DCN #	DRAWING TREE #
A	13/OCT/06	E060238	
E	15/JULY/08	E080367	

# STAGE I MACHINING



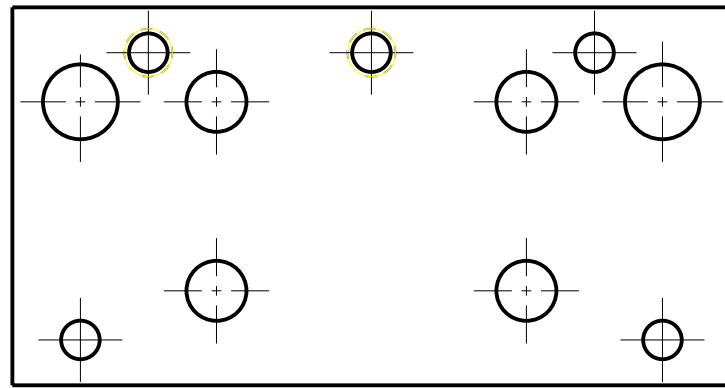
DRILL 2 HOLES  $\varnothing 9.9$   
THRO  $\varnothing 0.2$

4 HOLES FOR 3/8-16 UNC  
HELICOILS THRU, HELICOILS  
NOT TO BE FITTED  $\varnothing 0.2$

5 HOLES FOR 1/4-20 UNC  
HELICOILS THRU, HELICOILS  
NOT TO BE FITTED  $\varnothing 0.15$

NOTES: (UNLESS OTHERWISE SPECIFIED)		CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY IGR, GLASGOW UNIVERSITY GEO 600 GROUP RUTHERFORD APPLETON LABORATORIES								
<ol style="list-style-type: none"> <li>REMOVE ALL SHARP EDGES, R.02 MIN.</li> <li>DO NOT SCALE FROM DRAWING.</li> <li>ALL MACHINING FLUIDS SHALL BE WATER SOLUBLE AND FREE OF SULFUR, CHLORINE AND SILICONE, SUCH AS CINCINNATI MILACRON'S CIMTECH 410 (STAINLESS STEEL)</li> <li>SCRIBE, ENGRAVE OR STAMP DRAWING PARTNUMBER ON NOTED SURFACE OF PART AND A THREE DIGIT SERIAL NUMBER. SERIAL NUMBERS START AT 001 FOR THE FIRST PART AND PROCEED CONSECUTIVELY. USE .07" HIGH CHARACTERS. EXAMPLE: D020188- 001. A VIBRATORY TOOL MAY BE USED.</li> </ol>	DIMENSIONS ARE IN mm [INCHES] TOLERANCES: X.XX $\pm 0.1$ mm ANGULAR $\pm 0.25^\circ$									
	MATERIAL: ST. STEEL 304/316		SYSTEM <b>aLIGO</b>							
	FINISH: CLEAN, GREASE FREE $\sqrt{\mu m}$ [ $\mu in$ ] $R_a = 1.6$ [63]		SUB-SYSTEM <b>SUS</b>							
	<table border="1"> <thead> <tr> <th>NAME</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>DRAWN J O'DELL</td> <td>03/NOV/09</td> </tr> <tr> <td>CHECKED MB</td> <td>15/MAR/10</td> </tr> <tr> <td>APPROVED JOD</td> <td>15/MAR/10</td> </tr> </tbody> </table>		NAME	DATE	DRAWN J O'DELL	03/NOV/09	CHECKED MB	15/MAR/10	APPROVED JOD	15/MAR/10
NAME	DATE									
DRAWN J O'DELL	03/NOV/09									
CHECKED MB	15/MAR/10									
APPROVED JOD	15/MAR/10									
SCALE 1:1 PROJECTION:		DRG. NO. <b>D060326</b>	REV <b>F.</b>							
		SIZE <b>B</b>	SHEET 1 OF 3							

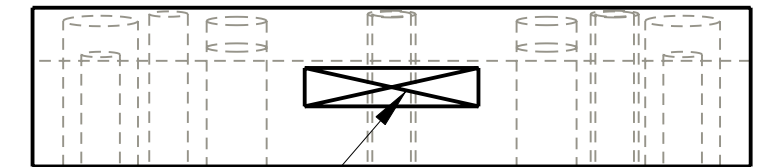
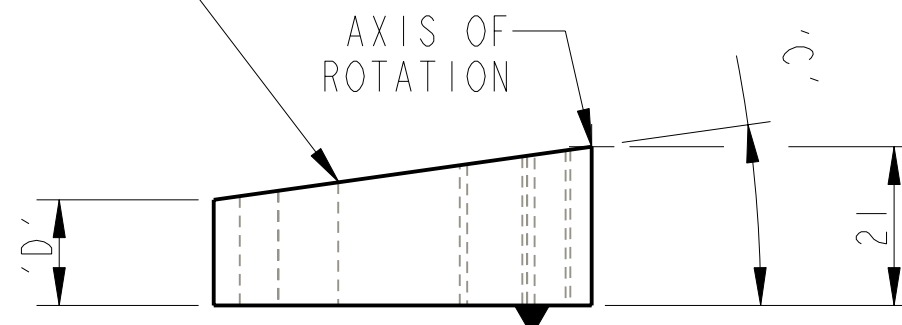
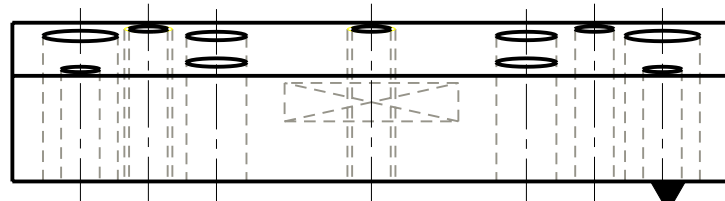
# STAGE 2 MACHINING



VARIANT	ANGLE C	DIM D
-10	-1.091°	21.95 REF
-9	-0.982°	21.86 REF
-8	-0.837°	21.73 REF
-7	-0.764°	21.67 REF
-6	-0.655°	21.57 REF
-5	-0.546°	21.48 REF
-4	-0.437°	21.38 REF
-3	-0.327°	21.29 REF
-2	-0.218°	21.2 REF
-1	-0.109°	21.1 REF

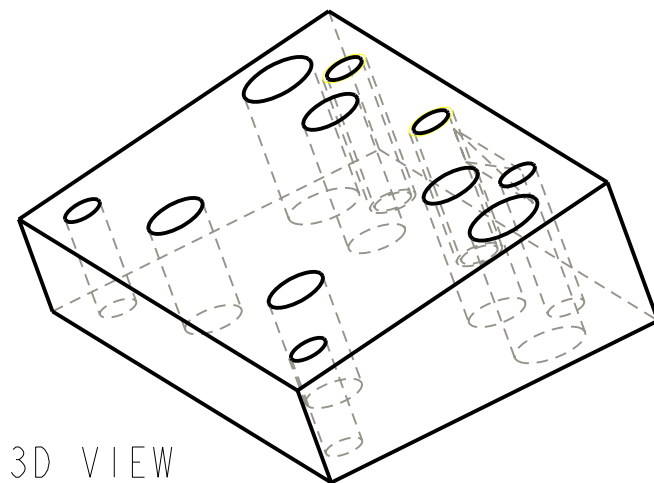
VARIANT	ANGLE C	DIM D
0	0°	21 REF
1	0.109°	20.90 REF
2	0.218°	20.80 REF
3	0.327°	20.71 REF
4	0.437°	20.62 REF
5	0.546°	20.52 REF
6	0.655°	20.43 REF
7	0.764°	20.33 REF
8	0.837°	20.27 REF
9	0.982°	20.14 REF
10	1.091°	20.05 REF

∠ 0.1 A



ENGRAVE PART NUMBER  
SEE NOTE 4

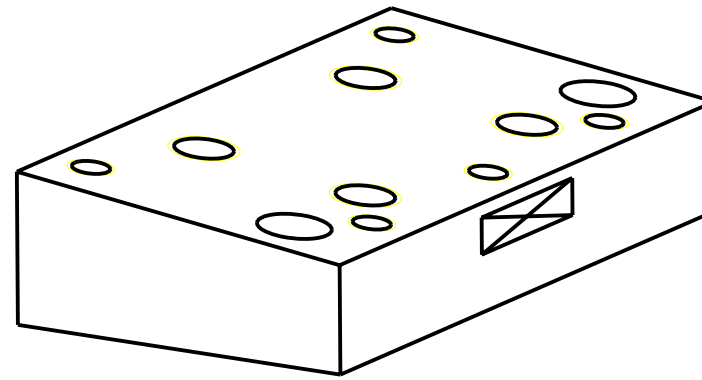
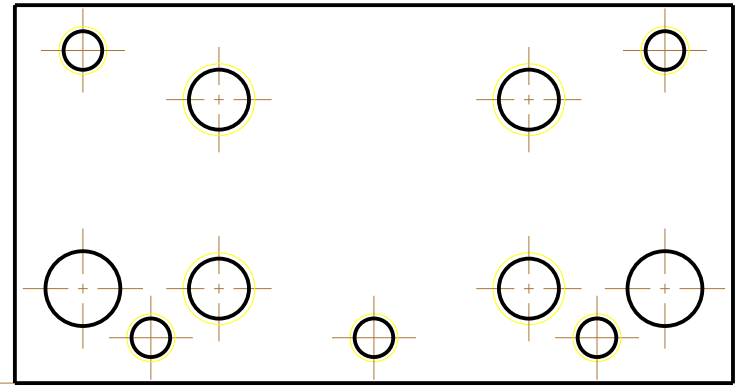
FOR DIMS C AND  
D SEE TABLE



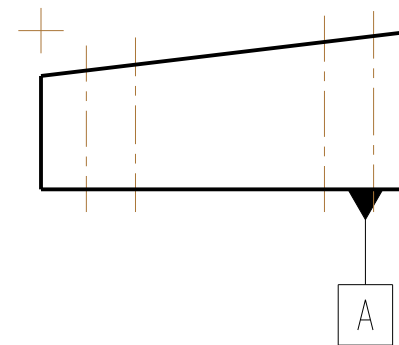
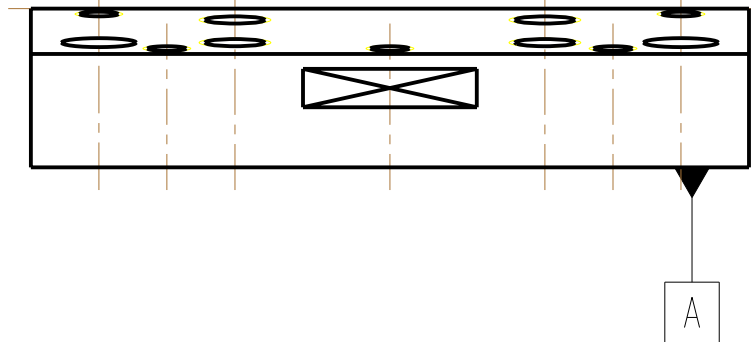
3D VIEW

NOTES: (UNLESS OTHERWISE SPECIFIED)		CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY IGR, GLASGOW UNIVERSITY GEO 600 GROUP RUTHERFORD APPLETON LABORATORIES	
1. REMOVE ALL SHARP EDGES, R.02 MIN.	DIMENSIONS ARE IN mm [INCHES] TOLERANCES: X.XX ±0.1 mm ANGULAR ±0.25 °	SYSTEM	aLIGO
2. DO NOT SCALE FROM DRAWING.		SUB-SYSTEM	SUS
3. ALL MACHINING FLUIDS SHALL BE WATER SOLUBLE AND FREE OF SULFUR, CHLORINE AND SILICONE, SUCH AS CINCINNATI MILACRON'S CIMTECH 410 (STAINLESS STEEL)	MATERIAL: ST. STEEL 304/316	NEXT ASSY	QUAD TOP STAGE
4. SCRIBE, ENGRAVE OR STAMP DRAWING PART NUMBER ON NOTED SURFACE OF PART AND A THREE DIGIT SERIAL NUMBER. SERIAL NUMBERS START AT 001 FOR THE FIRST PART AND PROCEED CONSECUTIVELY. USE .07" HIGH CHARACTERS. EXAMPLE: D020188- 001. A VIBRATORY TOOL MAY BE USED.	FINISH: CLEAN, GREASE FREE √μm [μin] Ra = 1.6 [63]	PART NAME	BLADE CLAMP (TOP HALF)
	DRAWN J O'DELL 03/NOV/09	SIZE	B
	CHECKED MB 15/MAR/10	DRG. NO.	D060326
	APPROVED JOD 15/MAR/10	REV	F.
		SCALE 1:1	PROJECTION:  SHEET 2 OF 3

REV.	DATE	DCN #	DRAWING TREE #



VARIANT	ANGLE C	DIM D
0	0°	21 REF
1	0.109°	20.90 REF
2	0.218°	20.80 REF
3	0.327°	20.71 REF
4	0.437°	20.62 REF
5	0.546°	20.52 REF
6	0.655°	20.43 REF
7	0.764°	20.33 REF
8	0.837°	20.27 REF
9	0.982°	20.14 REF
10	1.091°	20.05 REF



NOTES: (UNLESS OTHERWISE SPECIFIED)

- REMOVE ALL SHARP EDGES, R.02 MIN.
- DO NOT SCALE FROM DRAWING.
- ALL MACHINING FLUIDS SHALL BE WATER SOLUBLE AND FREE OF SULFUR, CHLORINE AND SILICONE, SUCH AS CINCINNATI MILACRON'S CIMTECH 410 (STAINLESS STEEL)
- SCRIBE, ENGRAVE OR STAMP DRAWING PARTNUMBER ON NOTED SURFACE OF PART AND A THREE DIGIT SERIAL NUMBER. SERIAL NUMBERS START AT 001 FOR THE FIRST PART AND PROCEED CONSECUTIVELY. USE .07" HIGH CHARACTERS. EXAMPLE: D020188- 001. A VIBRATORY TOOL MAY BE USED.

DIMENSIONS ARE IN mm [INCHES]  
TOLERANCES:  
X.XX ±0.1 mm  
ANGULAR ±0.25 °

MATERIAL: ST. STEEL 304/316

FINISH: CLEAN, GREASE FREE  
√μm [μin] Ra = 1.6 [63]

NAME	DATE
DRAWN J O'DELL	03/NOV/09
CHECKED MB	15/MAR/10
APPROVED JOD	15/MAR/10

CALIFORNIA INSTITUTE OF TECHNOLOGY  
MASSACHUSETTS INSTITUTE OF TECHNOLOGY  
IGR, GLASGOW UNIVERSITY GEO 600 GROUP  
RUTHERFORD APPLETON LABORATORIES

SYSTEM **aLIGO**

SUB-SYSTEM **SUS**

NEXT ASSY **QUAD TOP STAGE**

PART NAME **BLADE CLAMP (TOP HALF)**

SIZE **B** DRG. NO. **D060326** REV **F.**

SCALE 1:1 PROJECTION: SHEET 3 OF 3