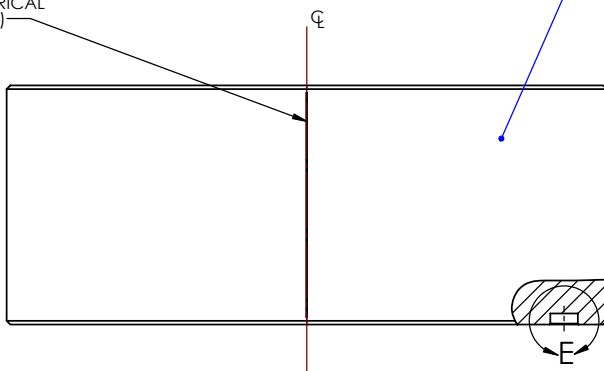


REV.	DATE	DCN #	DRAWING TREE #
A	01/2008	E040235	

PREVIOUS REVISION NOTES:

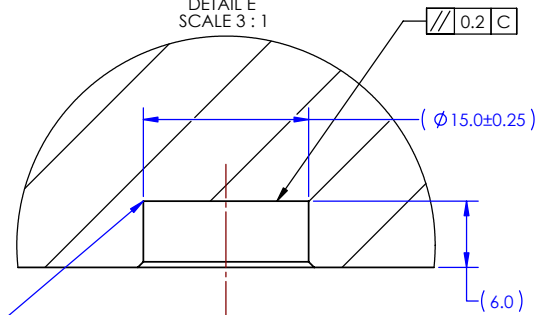
00	11/05	- LIMITED RELEASE FOR INITIAL FEEDBACK (CAC)
01	11/05	- CHANGES FOLLOWING FEEDBACK FROM JHR & IW.
02	05/06	- ADDITION OF FURTHER REFERENCE DIMPLES ON FLATS & POLISHING NOTES ADDED. (C-CANTLEY)
03	04/06	- REFERENCE DIMPLES (TO LOCATE BONDING TEMPLATE) REMOVED (DETAIL E). (R.JONES)
04	04/06	- RECESSES ADDED FOR LOCATING EQ STOPS ON A 300PCD (R.JONES)
05	07/06	- PCD & DEPTH OF RECESSES FOR LOCATING EQ STOPS REDUCED (R.JONES)
06	08/06	- RELAXED SPEC. OF REF. MARKS ON BARREL AMENDED NOTES AGREED AT ICOS MEETING, 23/08/06 (R.JONES)

ETCH, GRIND OR SANDBLAST LEGIBLE REFERENCE GROOVE (GROOVE WIDTH 0.25mm MIN, 0.5mm MAX.) ALONG ϕ , PARALLEL TO THE CYLINDRICAL AXIS (DEFINED BY DATUM FEATURE -A-)



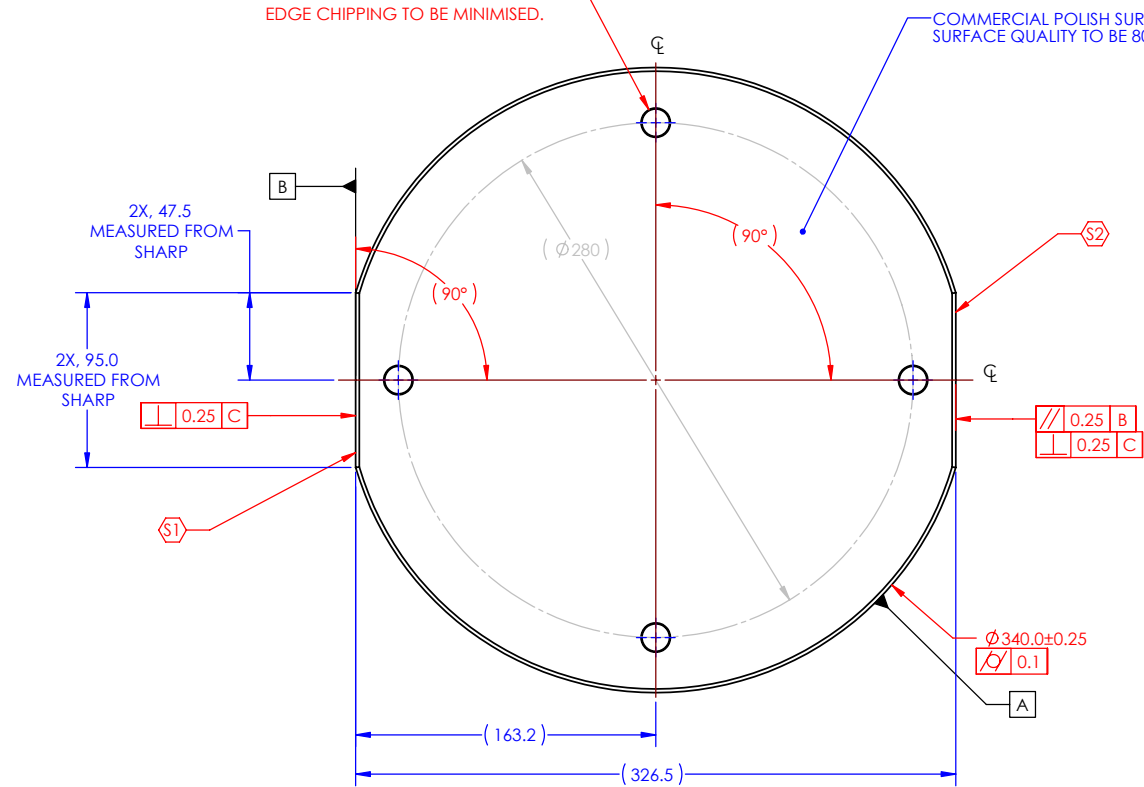
INSPECTION POLISH (SEE NOTE 2)

DETAIL E SCALE 3 : 1



RADIUS AROUND BOTTOM OF RECESS R1 MAX. GROUND FINISH ACCEPTABLE FOR BASE AND SIDES OF RECESS.

4X, $\phi 15.0 \pm 0.25 \nabla 6.0$
 $\nabla \phi 16.0 \text{ MAX} \times 90^\circ$
 EQUALLY SPACED ON A 280 ± 2 PCD. EDGE CHIPPING TO BE MINIMISED.



COMMERCIAL POLISH SURFACE 'S3' SURFACE QUALITY TO BE 80/50 SCRATCH/DIG

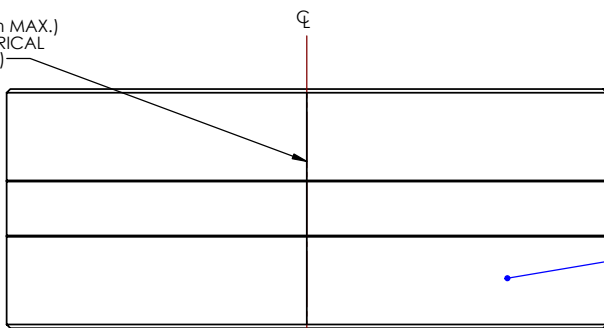
2X, 47.5 MEASURED FROM SHARP

2X, 95.0 MEASURED FROM SHARP

0.25 C

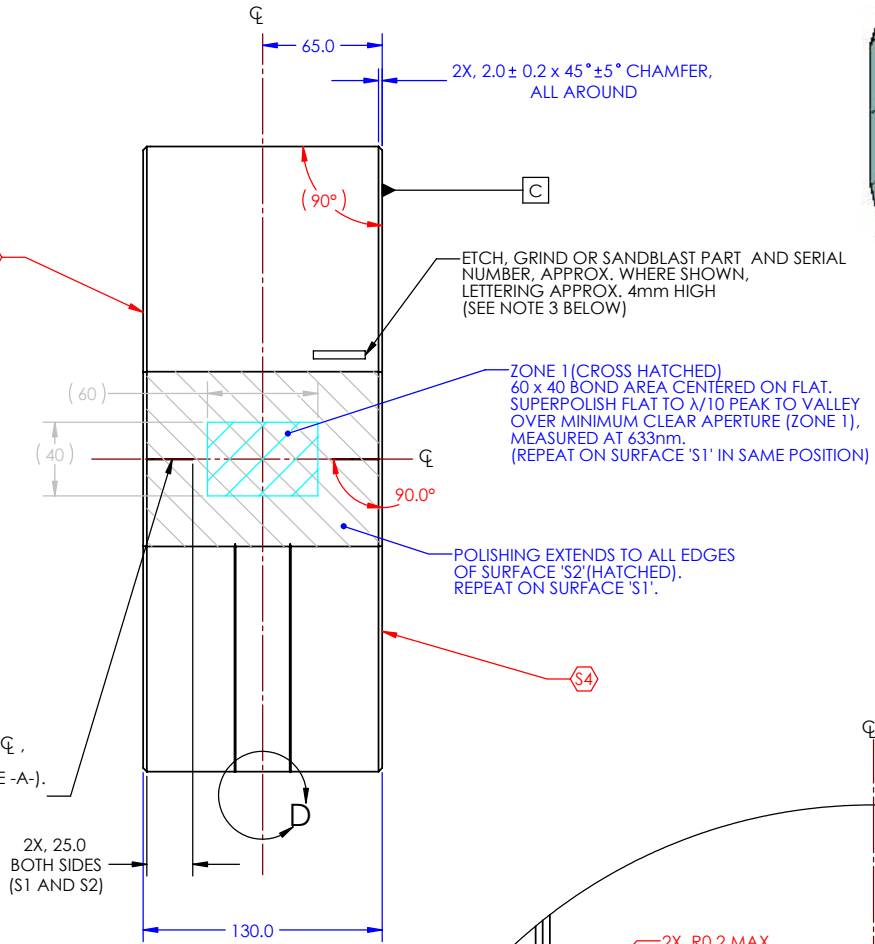
S1

ETCH, GRIND OR SANDBLAST LEGIBLE REFERENCE GROOVE (GROOVE WIDTH 0.25mm MIN, 0.5mm MAX.) ALONG ϕ , PARALLEL TO THE CYLINDRICAL AXIS (DEFINED BY DATUM FEATURE -A-)



INSPECTION POLISH (SEE NOTE 2)

2X, ETCH, GRIND OR SANDBLAST LEGIBLE REFERENCE GROOVE (WIDTH $0.25 \text{mm} \pm 0.1 \text{mm}$) ALONG ϕ , PARALLEL TO THE CYLINDRICAL AXIS (DEFINED BY DATUM FEATURE -A-). REPEAT ON SURFACE 'S1'



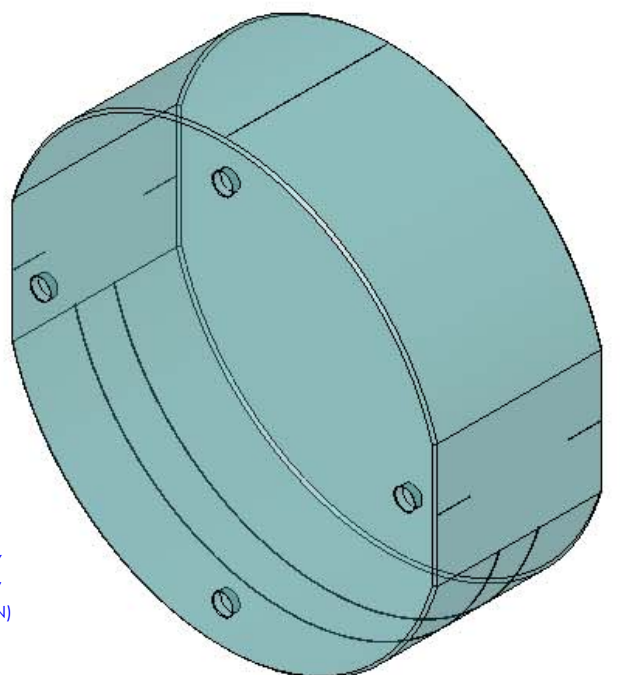
2X, $2.0 \pm 0.2 \times 45^\circ \pm 5^\circ$ CHAMFER, ALL AROUND

ETCH, GRIND OR SANDBLAST PART AND SERIAL NUMBER, APPROX. WHERE SHOWN, LETTERING APPROX. 4mm HIGH (SEE NOTE 3 BELOW)

ZONE 1 (CROSS HATCHED) 60 x 40 BOND AREA CENTERED ON FLAT. SUPERPOLISH FLAT TO $\lambda/10$ PEAK TO VALLEY OVER MINIMUM CLEAR APERTURE (ZONE 1), MEASURED AT 633nm. (REPEAT ON SURFACE 'S1' IN SAME POSITION)

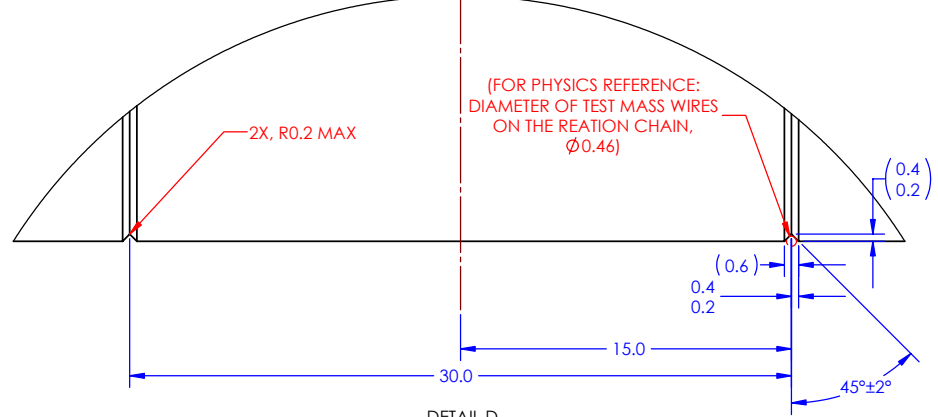
POLISHING EXTENDS TO ALL EDGES OF SURFACE 'S2' (HATCHED). REPEAT ON SURFACE 'S1'.

2X, 25.0 BOTH SIDES (S1 AND S2)



THE GROOVES SHOWN IN DETAIL 'D' ARE REQUIRED TO LOCATE TWO STEEL WIRE LOOPS, $\phi 0.46 \text{mm}$. THE SEPARATION OF THE GROOVES FROM THE ϕ , AND EACH OTHER IS CRITICAL. GROOVES SHOULD BE APPROXIMATELY "V-SHAPED" WITH A MAX. RADIUS OF 0.2mm AT THE BASE OF EACH GROOVE.

(FOR PHYSICS REFERENCE: DIAMETER OF TEST MASS WIRES ON THE REACTION CHAIN, $\phi 0.46$)



DETAIL D SCALE 6 : 1

MANUFACTURING NOTES (UNLESS OTHERWISE SPECIFIED)		PARTS LIST	
1. DO NOT SCALE FROM DRAWING.	DIMENSIONS ARE IN MILLIMETERS	SYSTEM	CALIFORNIA INSTITUTE OF TECHNOLOGY
2. INSPECTION POLISH ALL FACES, EDGES AND CHAMFERS. THIS INCLUDES BOTH CURVED SIDES OF THE MASS. ALL SURFACES SHALL APPEAR TRANSPARENT.	TOLERANCES: X ± 0.1	SUB-SYSTEM	MASSACHUSETTS INSTITUTE OF TECHNOLOGY
3. SURFACE QUALITY ON SURFACE 'S3' TO BE 80/50 SCRATCH/DIG (AS PER MIL-PRF-13830B) ANGULARITY 0.1	XX ± 0.05	PART NAME	IGR, GLASGOW UNIVERSITY GEO 400 GROUP
4. ETCH, GRIND OR SANDBLAST PART AND SERIAL NUMBER, APPROX. WHERE SHOWN, USE LETTERING APPROX. 4mm HIGH SERIAL NUMBERS START AT 1001 FOR THE FIRST PART, AND PROCEED CONSECUTIVELY (EXAMPLE: 0004001001)	MATERIAL	NEXT ASSY	ADVANCED LIGO
5. MATERIAL TO BE SUPPLIED WITH CERTIFICATE OF CONFORMITY	F2	PART NAME	SUS
6. A = 633nm FOR SURFACE MEASUREMENTS	FINISH	NEXT ASSY	N-PTYPE QUAD ETM
	SEE HERE	PART NAME	REACTION TEST MASS
	NAME	DATE	
	DESIGNED	PROVISED	
	CHECKED	DATE	
	APPROVED	DWG. NO.	
		D050420	
		SCALE: 1:2	
		PROJECTION:	