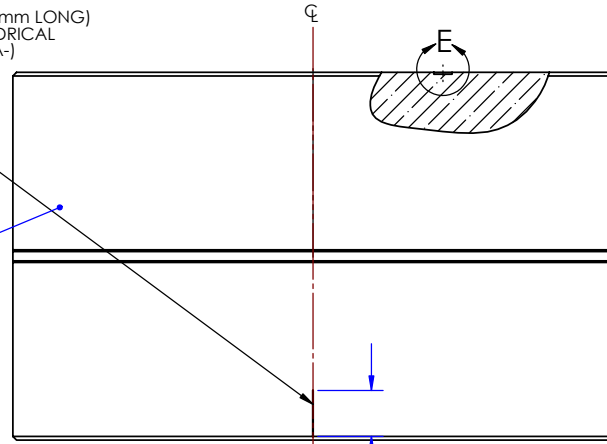
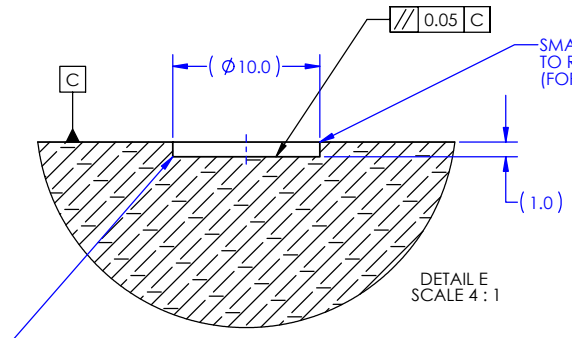


REV	DATE	DCN #	DRAWING TREE #
00	01/2008	INITIAL RELEASE BASED ON NP-type DRAWINGS	

ETCH, GRIND OR SANDBLAST LEGIBLE REFERENCE GROOVE (0.25mm ± 0.05mm WIDE X 25.0±0.5mm LONG) ALONG ϕ , PARALLEL TO THE CYLINDRICAL AXIS (DEFINED BY DATUM FEATURE -A-) WITHIN ±0.1mm

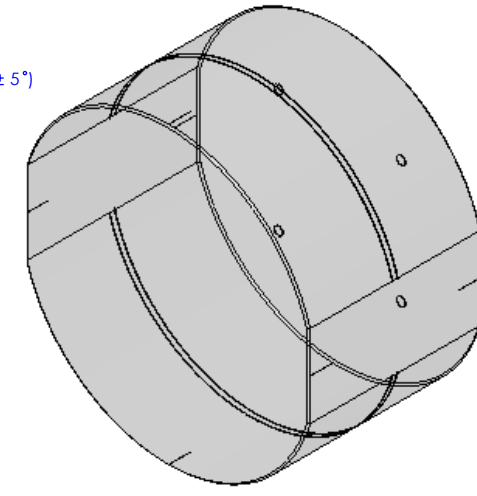


INSPECTION POLISH (SEE NOTE 3)

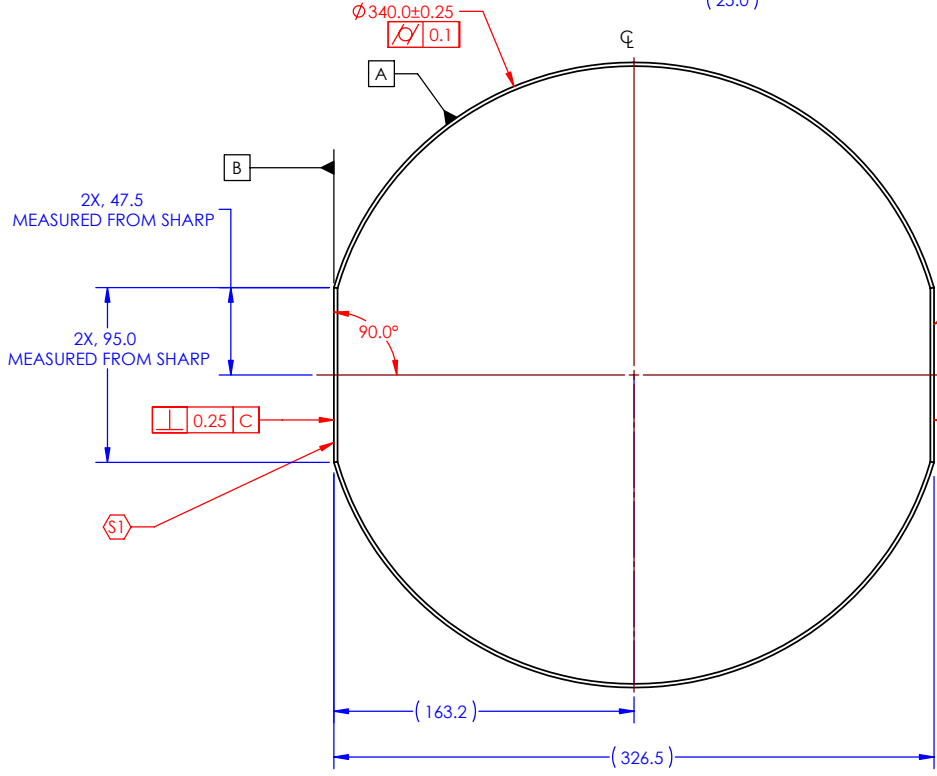


SMALL CHAMFER ACCEPTABLE TO REDUCE EDGE CHIPPING. (FOR EXAMPLE, $\nabla \phi 10.5 \text{ MAX.} \times 90^\circ \pm 5^\circ$)

RADIUS AROUND BOTTOM OF RECESS SHOULD BE NO GREATER THAN R1. GROUND FINISH ACCEPTABLE FOR BASE AND SIDES OF RECESS.



4X, $\phi 10.0 \pm 1.0$ EQUALLY SPACED ON A $\phi 200$ BOLT CIRCLE. EDGE CHIPPING TO BE MINIMISED. (SEE ALSO DETAIL 'E' ABOVE)



2X, 47.5 MEASURED FROM SHARP

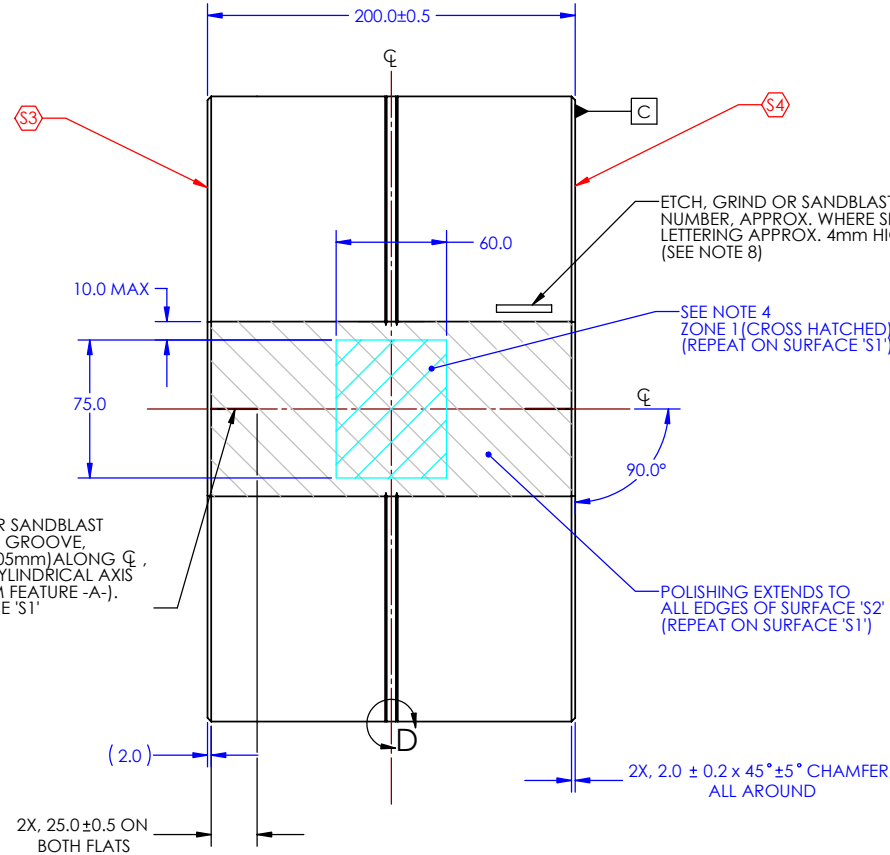
2X, 95.0 MEASURED FROM SHARP

0.25 C

S1

0.25 B
0.25 C

2X, ETCH, GRIND OR SANDBLAST LEGIBLE REFERENCE GROOVE (WIDTH 0.25mm ± 0.05mm) ALONG ϕ , PARALLEL TO THE CYLINDRICAL AXIS (DEFINED BY DATUM FEATURE -A-). REPEAT ON SURFACE 'S1'



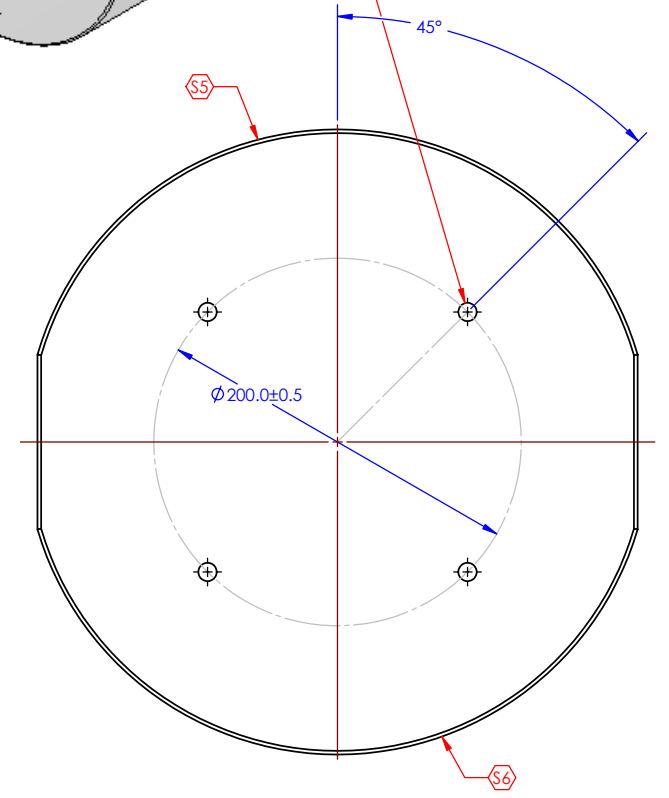
ETCH, GRIND OR SANDBLAST PART AND SERIAL NUMBER, APPROX. WHERE SHOWN, LETTERING APPROX. 4mm HIGH (SEE NOTE 8)

SEE NOTE 4 ZONE 1 (CROSS HATCHED) (REPEAT ON SURFACE 'S1')

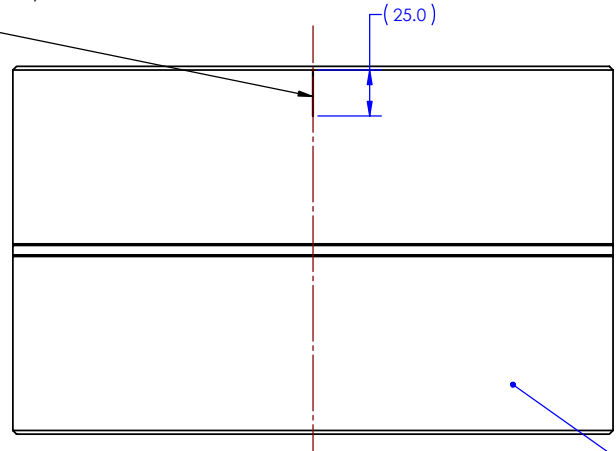
POLISHING EXTENDS TO ALL EDGES OF SURFACE 'S2' (REPEAT ON SURFACE 'S1')

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

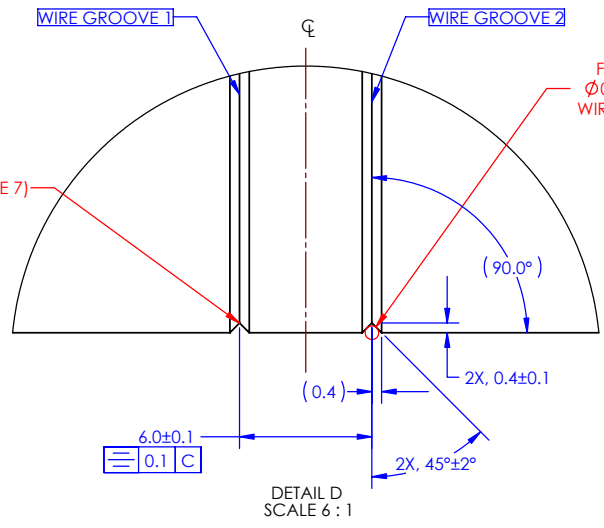
2X, 25.0 ± 0.5 ON BOTH FLATS



ETCH, GRIND OR SANDBLAST LEGIBLE REFERENCE GROOVE (0.25mm ± 0.05mm WIDE X 25.0±0.5mm LONG) ALONG ϕ , PARALLEL TO THE CYLINDRICAL AXIS (DEFINED BY DATUM FEATURE -A-) WITHIN ±0.1mm



INSPECTION POLISH (SEE NOTE 3)



FOR PHYSICS REFERENCE ONLY: $\phi 0.62$ (DIAMETER OF PENULTIMATE WIRES - AS TAKEN FROM T010103-05)

DETAIL D SCALE 6:1

- MANUFACTURE NOTES:
- DO NOT SCALE FROM DRAWING.
 - THIS DRAWING IS ACCOMPANIED BY LIGO SPECIFICATION 'E080090'
 - INSPECTION POLISH ALL FACES (SURFACES S3, S4, S5, AND S6). EDGES AND CHAMFERS, SURFACES SHALL APPEAR TRANSPARENT WITH NO GREY, SCUFFS OR SCRATCHES VISIBLE.
 - SURFACE S2: SUPERPOLISH FLAT TO $\lambda/10$ PEAK TO VALLEY OVER APERTURE ZONE 1 (60mm x 75mm BOND AREA CENTERED ON FLAT). ANY AREA: 15mm WIDE x 30mm DEEP WITHIN APERTURE ZONE 1. MUST BE AT LEAST FLAT TO $\lambda/10$ DURING INSPECTION.
 - $\lambda = 633\text{nm}$ FOR SURFACE MEASUREMENTS
 - SURFACE S1: ADD FEATURES AND POLISH AS PER INSTRUCTIONS FOR SURFACE S2.
 - WIRE GROOVES 1 and 2, SHOWN IN DETAIL 'D' ARE REQUIRED TO LOCATE TWO STEEL WIRE LOOPS ($\phi 0.62\text{mm}$). GROOVES MUST EXTEND AROUND THE FULL CIRCUMFERENCE OF THE MASS IN THE POSITIONS SHOWN. THE SEPARATION OF THE GROOVES FROM THE CENTRE OF MASS (ϕ), AND EACH OTHER'S, CRITICAL. GROOVES SHOULD BE APPROXIMATELY 'V-SHAPE' WITH A MAX. RADIUS OF 0.25mm AT THE BASE OF EACH GROOVE.
 - ETCH, GRIND OR SANDBLAST PART AND SERIAL NUMBER, APPROX. WHERE SHOWN, USE LETTERING APPROX. 4mm HIGH. THE SERIAL NUMBER SHOULD BE OF THE FORMAT: D080117-YY-Z WHERE: 'YY' IS INCREMENTAL FOR EACH SUBSTRATE, STARTING AT '01', AND 'Z' IS THE CURRENT REVISION LETTER OF THIS SPECIFICATION. EXAMPLES: D080117-01-A, D080117-02-A, ...D080117-09-A, ...AND SO ON.

PARTS LIST													
NOTES: (UNLESS OTHERWISE SPECIFIED):	<table border="1"> <tr> <td colspan="2">DIMENSIONS ARE IN MILLIMETERS</td> </tr> <tr> <td>TOLERANCES:</td> <td></td> </tr> <tr> <td>X ± 0.1</td> <td></td> </tr> <tr> <td>XX ± 0.05</td> <td></td> </tr> <tr> <td>ANGLES ± 0.1°</td> <td></td> </tr> </table>	DIMENSIONS ARE IN MILLIMETERS		TOLERANCES:		X ± 0.1		XX ± 0.05		ANGLES ± 0.1°			
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FINISH: SEE NOTES	<table border="1"> <tr> <td>DRAWN:</td> <td>NAME:</td> <td>DATE:</td> <td>REV:</td> </tr> <tr> <td>CHECKED:</td> <td>D:</td> <td>080117</td> <td>00</td> </tr> <tr> <td>APPROVED:</td> <td></td> <td></td> <td></td> </tr> </table>	DRAWN:	NAME:	DATE:	REV:	CHECKED:	D:	080117	00	APPROVED:			
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