

DRAWING No. I.O.S./5713-00-000

DETAIL

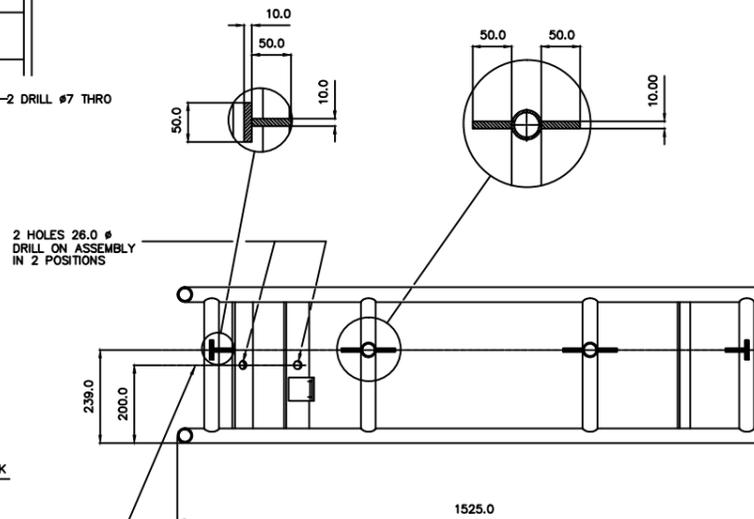
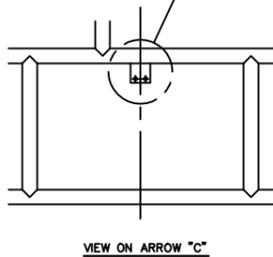
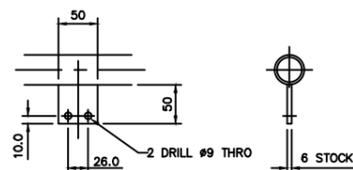
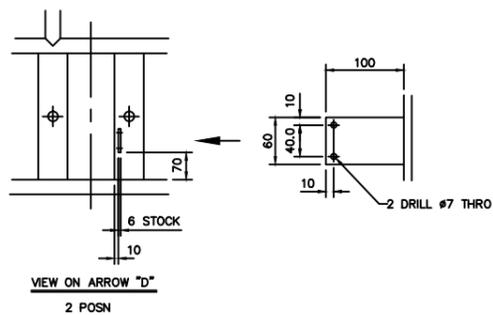
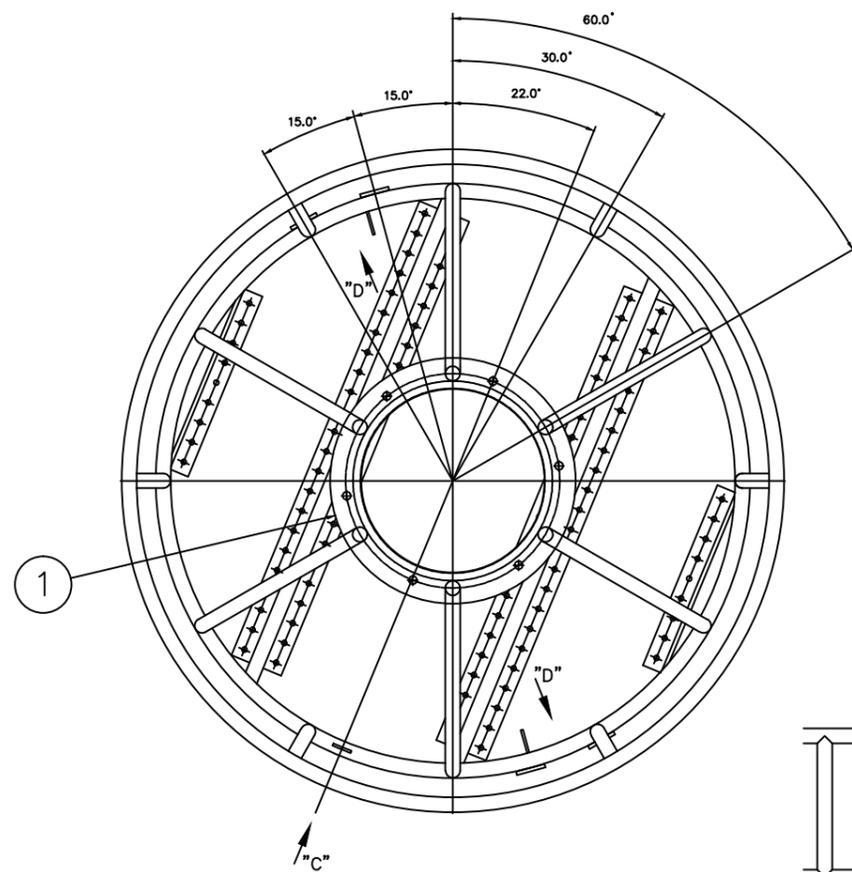
THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc.,SEE B.S.308.

ALL WELDED CONSTRUCTION

ALL TUBES 38.1 OD. X 31.74 ID.

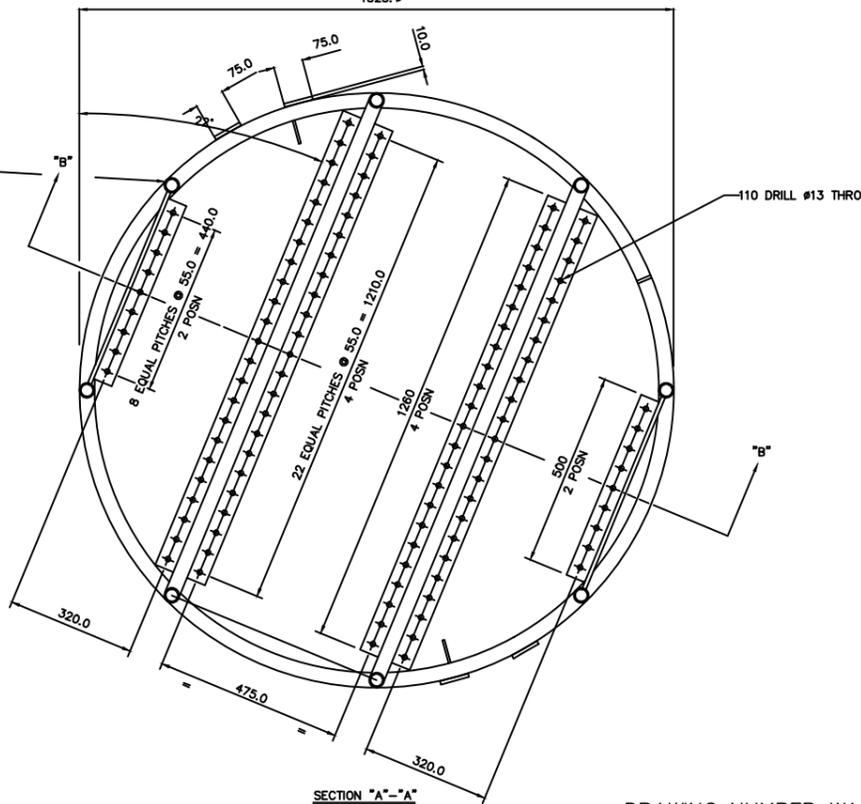
USED ON



SECTION "B"- "B"

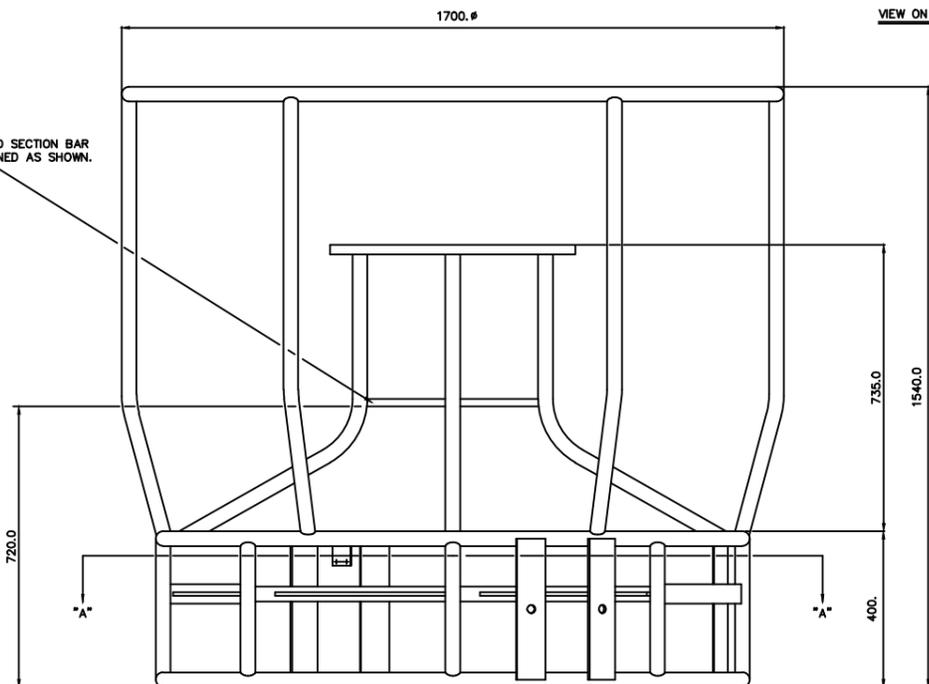
1525.0

8 UPRIGHTS EQUALLY SPACED AS SHOWN.



SECTION "A"- "A"

19.0 # ROUND SECTION BAR RING POSITIONED AS SHOWN.

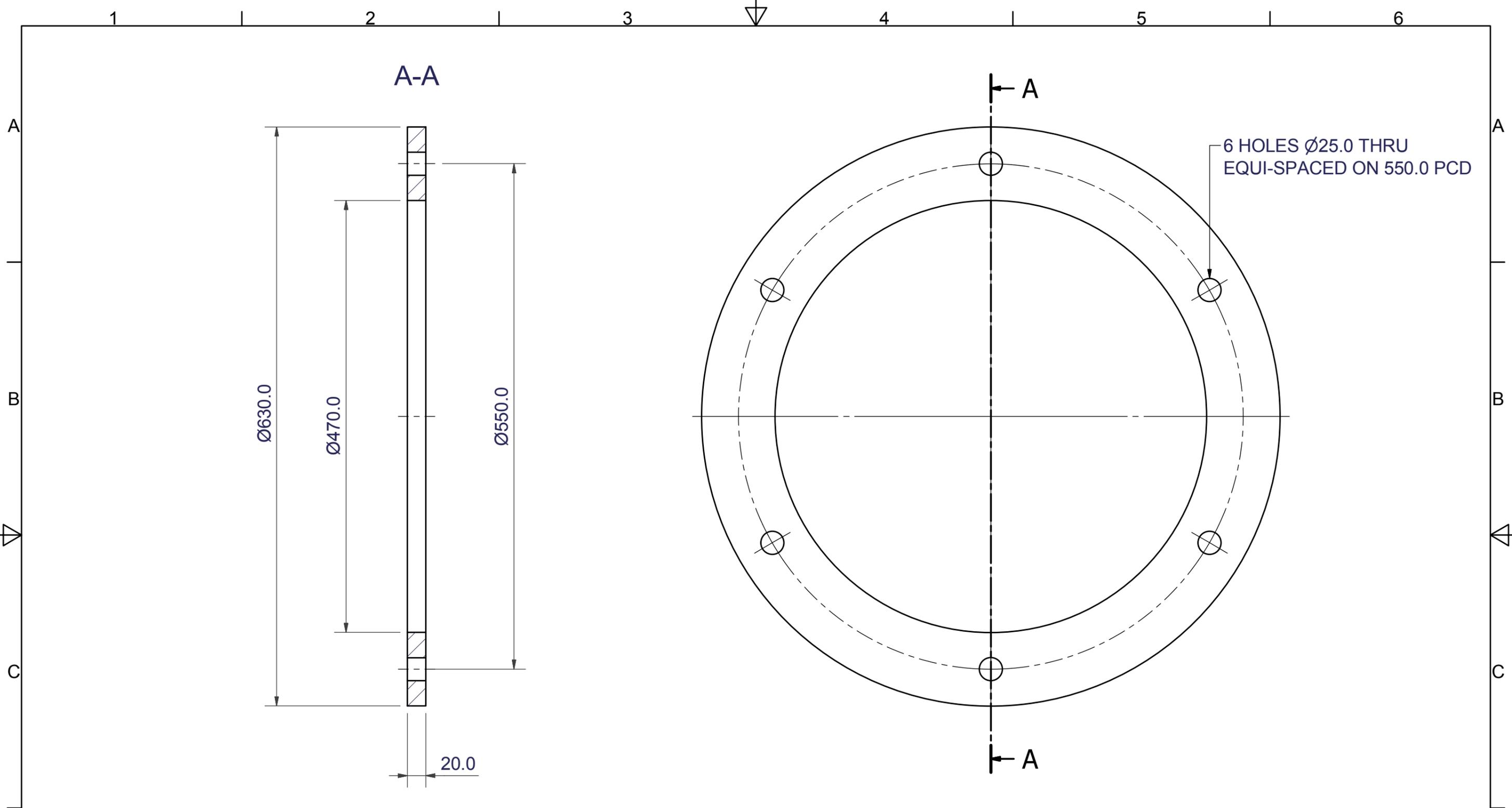


DRAWING NUMBER WAS 6893-GA

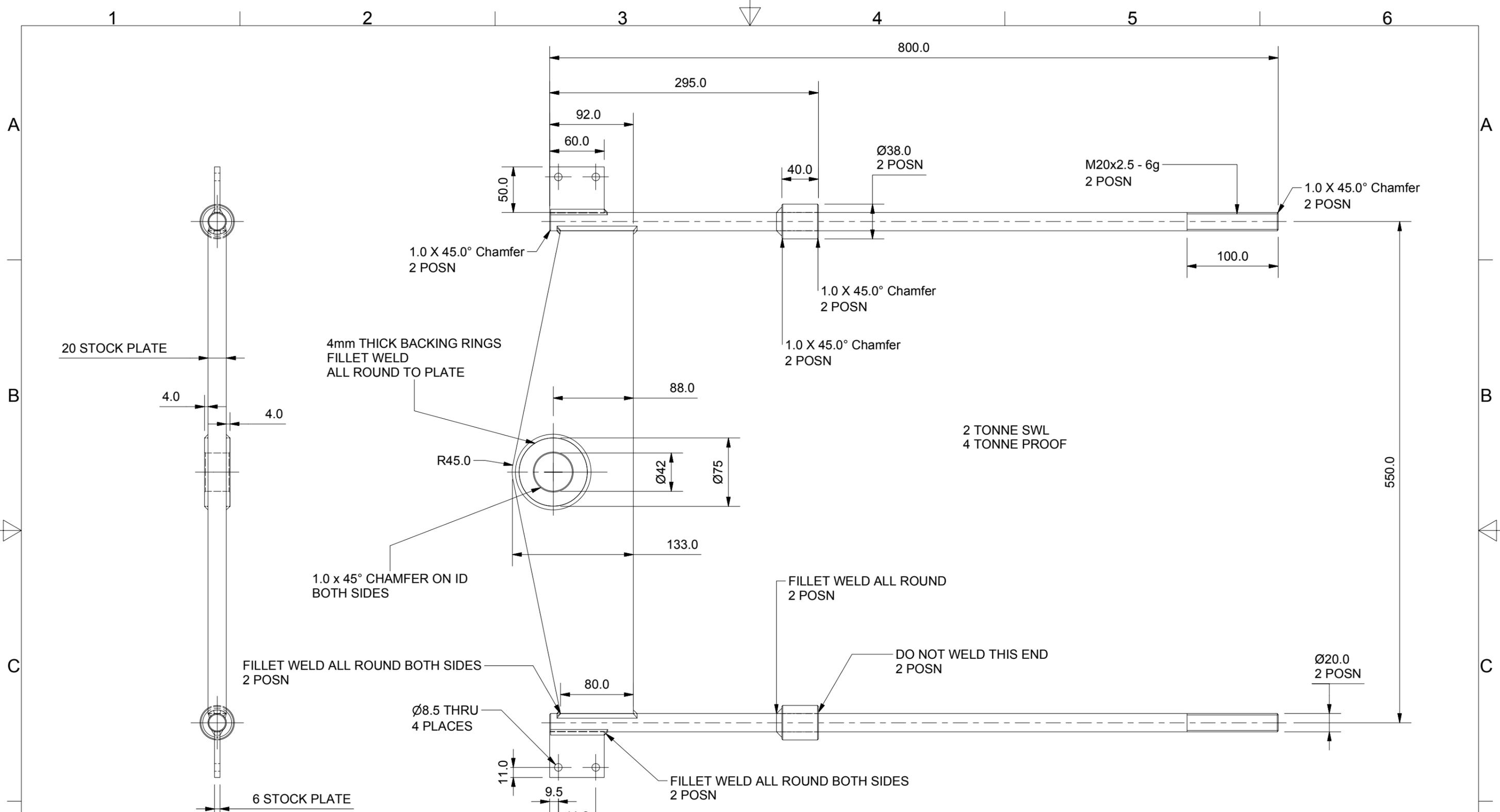
0/No. W/S  
CHECKED  
TRACED  
DRAWN  
R.N.

SIZE A

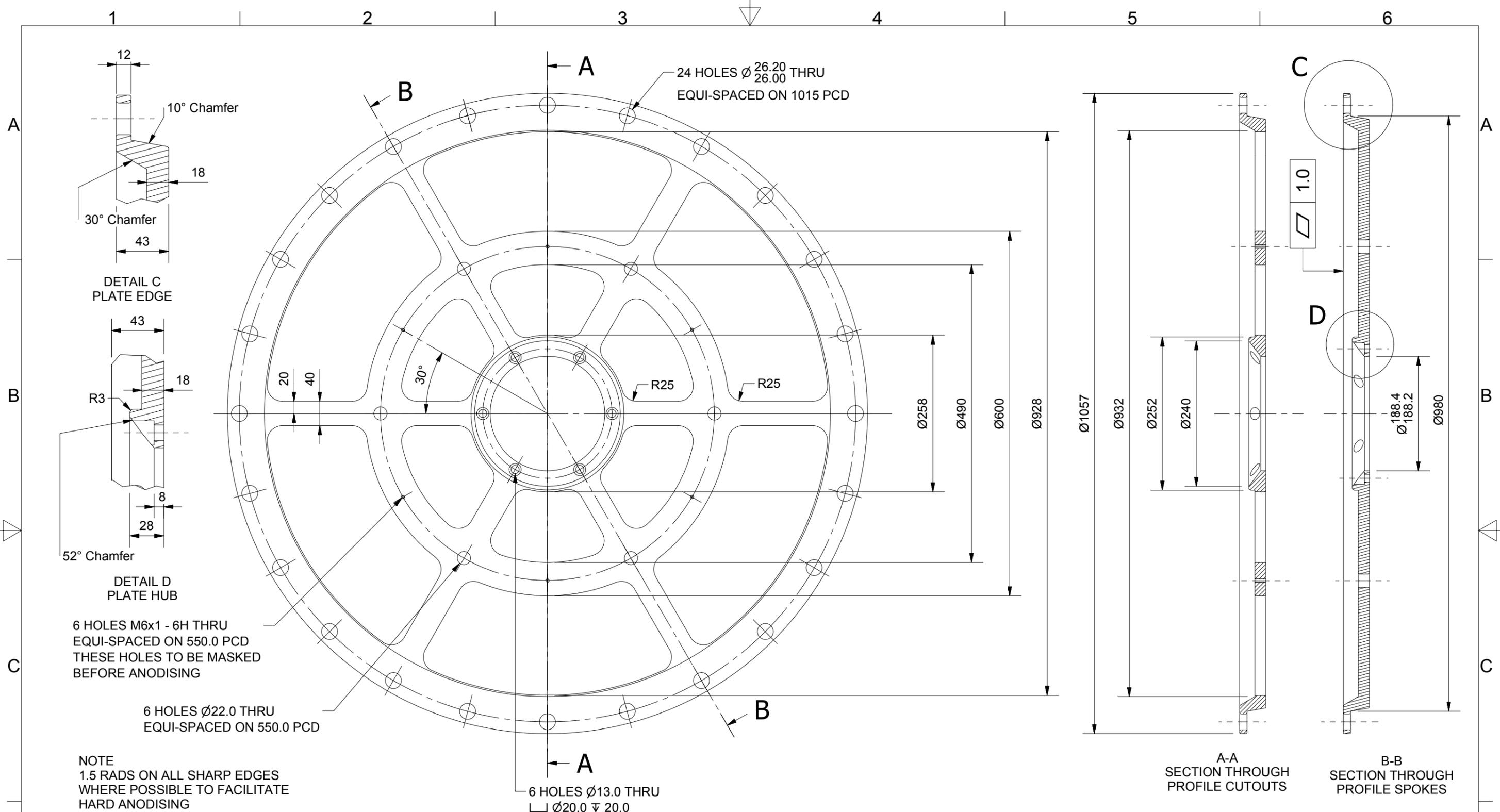
MATERIAL ST. STEEL 316-S16	PROTECTIVE FINISH	REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE			
No. OFF PER UNIT 1	TOTAL No. OFF	TOLERANCE EXCEPT WHERE OTHERWISE STATED: X.X ± 3.0 MM. DO NOT SCALE			
DIMENSIONS IN m.m. SCALE 1:6		AMENDMENT	ISSUE	DATE	B 16.01.03
		INSTITUTE OF OCEANOGRAPHIC SCIENCES			ISSUE 1 6.12.93
		TITLE STAINLESS STEEL CTD. FRAME			DRAWING No. I.O.S./5713-00-000 DETAIL



CHKD		MATERIAL <b>STAINLESS STEEL GRADE 316</b>	TOLERANCES X.=±0.5 X.X=±0.25 X.XX=±0.1 ANG=±0.25 UNLESS STATED		EST. MASS (kg) <b>21.2</b>	THIRD ANGLE PROJECTION	Drawing produced on Inventor			
DATE			FINISH <b>N/A</b>	SURFACE TEXTURE <b>3.2</b> (um) UNLESS STATED		SCALE <b>1:4</b>	REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED	 National Oceanography Centre, Southampton	Underwater Systems Laboratory	 Natural Environment Research Council
DES <b>dm1</b>		DATE <b>08/08/2013</b>		DIMS IN <b>mm</b>	DO NOT SCALE	TITLE				
DATE <b>22/08/2013</b>		NO OFF PER UNIT <b>1</b>		<b>24 Way SS CTD Frame</b>			<b>Top Ring</b>			
DRN <b>dm1</b>		UNLESS STATED								DRAWING NUMBER
DATE <b>22/08/2013</b>		UNLESS STATED		DRAWING NUMBER			A3			



CHKD		MATERIAL Default	TOLERANCES X.=±0.5 X.X=±0.25 X.XX=±0.1 ANG=±0.25 UNLESS STATED		EST. MASS (kg) 13.6	THIRD ANGLE PROJECTION	Drawing produced on Inventor		
DATE			FINISH		SCALE 1:4	REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED	National Oceanography Centre, Southampton	Underwater Systems Laboratory	Natural Environment Research Council
DES dm1		STAINLESS STEEL 316L		DIMS IN mm	DO NOT SCALE	TITLE 24 Way SS CTD Frame			
DATE 08/08/2013		SURFACE TEXTURE 3.2 (um)		NO OFF PER UNIT 1	DRAWING NUMBER Weldment		SHT OF 1 1	ISS	
DRN dm1		UNLESS STATED		A3					
DATE 08/08/2013									



THIRD ANGLE  
PROJECTION

Drawing produced on Inventor

REMOVE ALL BURRS  
AND SHARP EDGES  
UNLESS STATED



Underwater  
Systems  
Laboratory



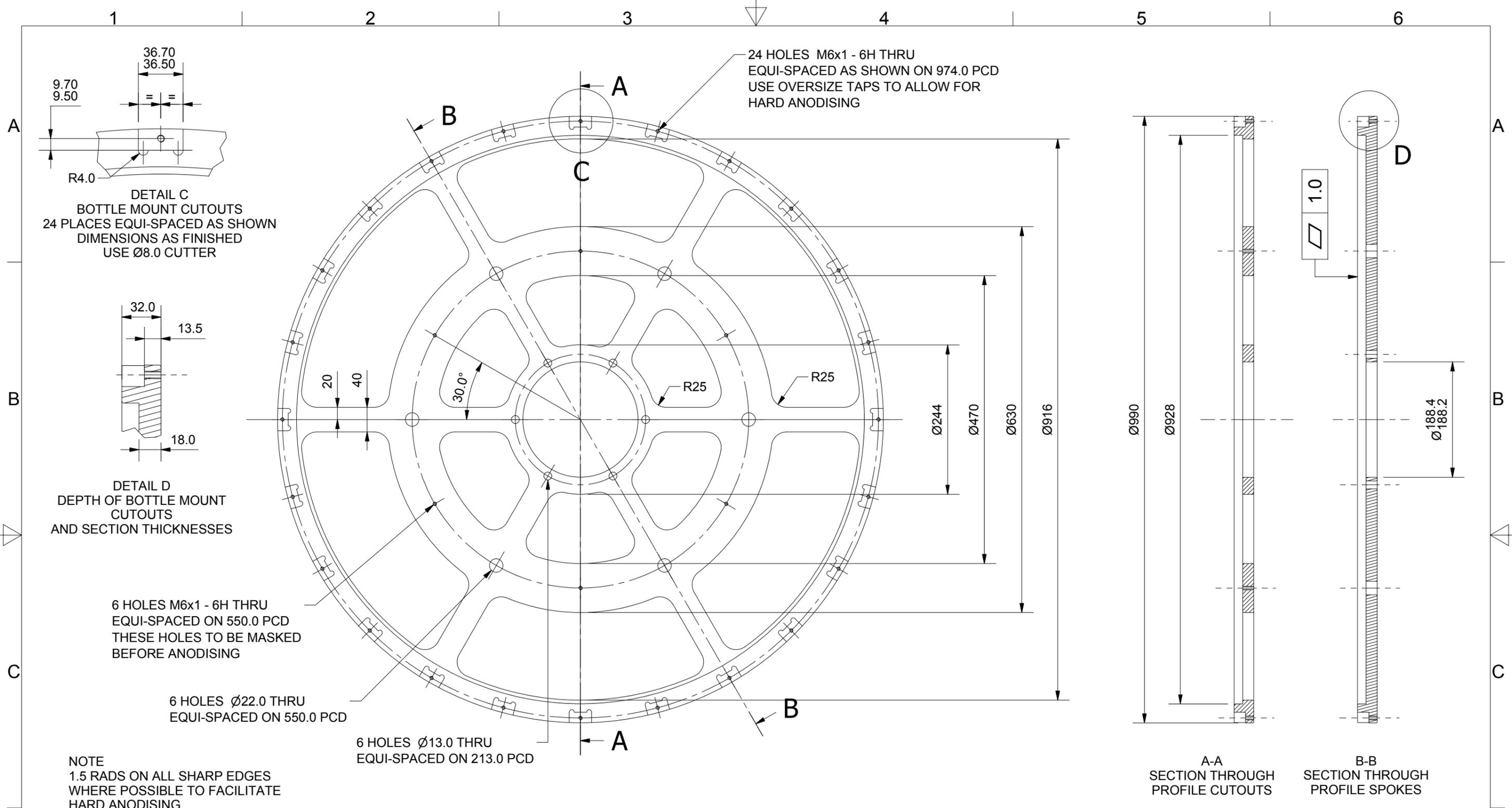
DO NOT SCALE

TITLE  
**24 Way SS CTD Frame**

NO OFF  
PER UNIT 1

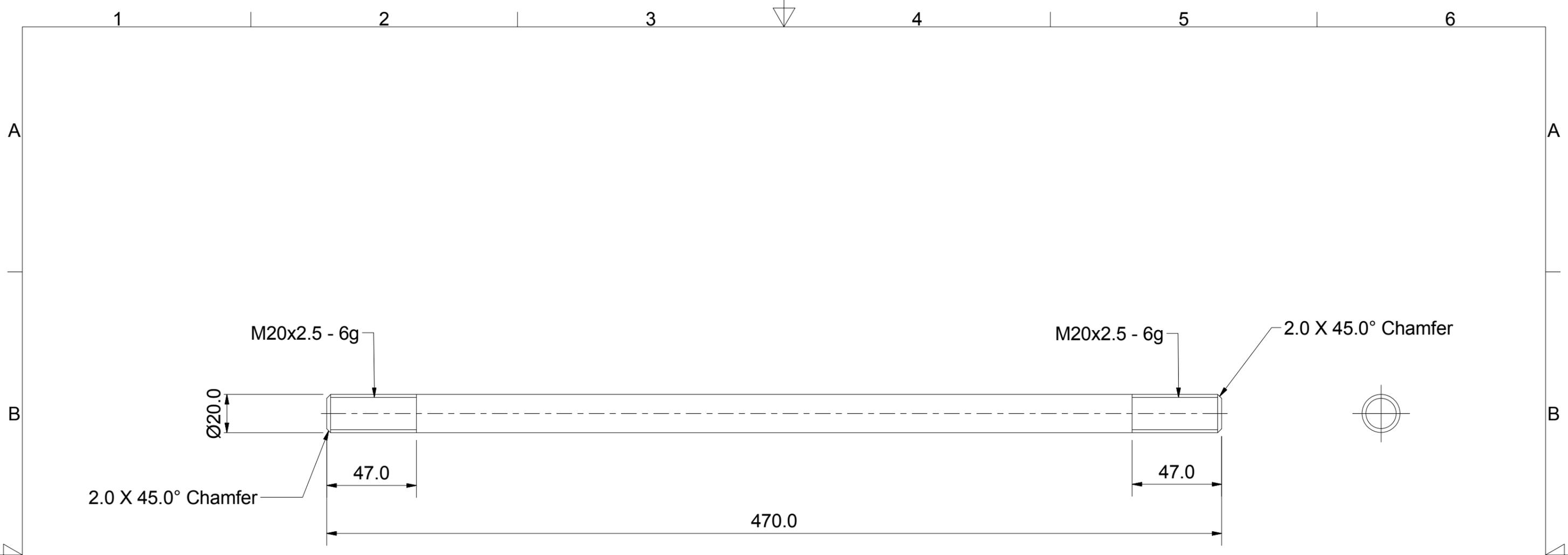
DRAWING NUMBER **Upper Adaptor Plate** SHT 1 OF 1 ISS

CHKD	MATERIAL	TOLERANCES	EST. MASS (kg)
DATE	ALUMINIUM ALLOY GRADE 6082-T6	$X.=\pm 0.5$ $X.X=\pm 0.25$ $X.XX=\pm 0.1$ $ANG=\pm 0.25$ UNLESS STATED	19
DES dm1	FINISH	SURFACE TEXTURE	SCALE
DATE 08/08/2013	HARD ANODISE NICKEL ACETATE SEAL	3.2 $\sqrt{\quad}$ (um) UNLESS STATED	1:6
DRN dm1			DIMS IN
DATE 21/08/2013			mm



NOTE  
1.5 RADS ON ALL SHARP EDGES  
WHERE POSSIBLE TO FACILITATE  
HARD ANODISING  
NOTE MASKED HOLES BEFORE  
ANODISING

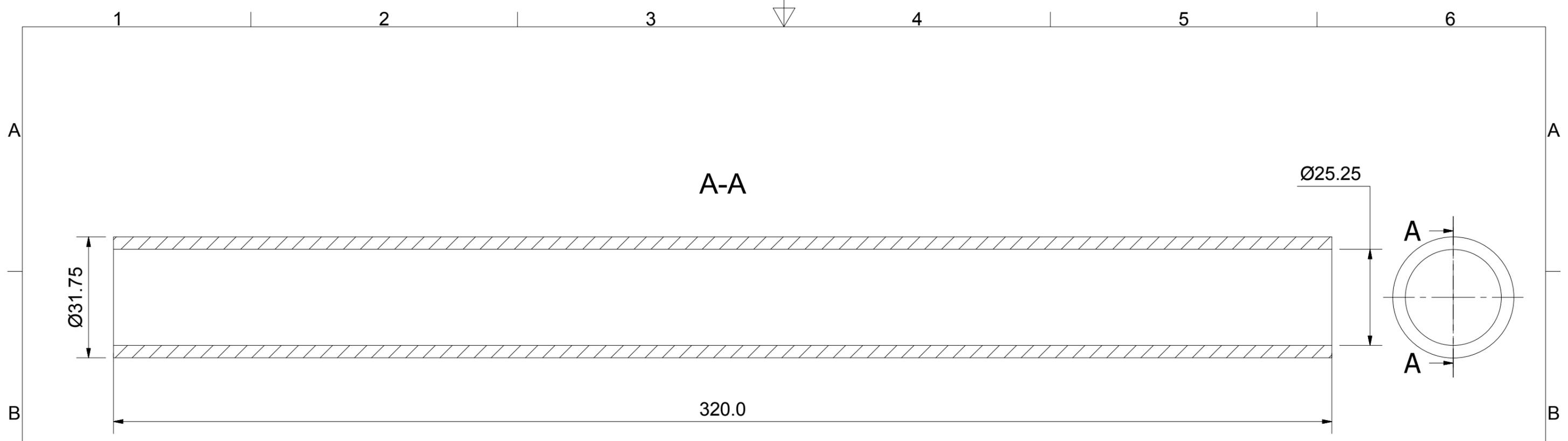
CHKD		MATERIAL ALUMINIUM ALLOY GRADE 6082-T6	TOLERANCES X.=±0.5 X.X=±0.25 X.XX=±0.1 ANG=±0.25 UNLESS STATED		EST. MASS (kg) 19	THIRD ANGLE PROJECTION	Drawing produced on Inventor		
DATE			FINISH HARD ANODISE NICKEL ACETATE SEAL	SURFACE TEXTURE 3.2 (um) UNLESS STATED		SCALE 1:6	REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED	National Oceanography Centre, Southampton	Underwater Systems Laboratory
DES dm1		DO NOT SCALE		DIMS IN mm	NO OFF PER UNIT 1	TITLE 24 Way SS CTD Frame			
DATE 19/08/2013		UNLESS STATED		DRAWING NUMBER Lower Adaptor Plate		SHT OF 1 1	ISS A		
DATE 21/08/2013									



USAGE NOTE:  
 FOR NMF-SS FRAME ONLY  
 NOT FOR USE ON BAS FRAME

				THIRD ANGLE PROJECTION		Drawing produced on Inventor			
CHKD	MATERIAL <b>STAINLESS STEEL GRADE 316</b>	TOLERANCES X.=±0.5 X.X=±0.25 X.XX=±0.1 ANG=±0.25 UNLESS STATED	EST. MASS (kg)	REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED	National Oceanography Centre, Southampton	Underwater Systems Laboratory	Natural Environment Research Council		
DATE			<b>1.156</b>					SCALE	
DES	FINISH  <b>N/A</b>	SURFACE TEXTURE  <b>3.2</b> (um) UNLESS STATED	SCALE	DO NOT SCALE	TITLE  <b>24 Way SS CTD Frame</b>				
DATE			<b>1:2</b>						
DRN			DIMS IN		NO OFF PER UNIT	DRAWING NUMBER <b>M20 Spacer Stud</b>			
DATE			<b>mm</b>	<b>4</b>					
DATE					SHT OF		ISS		
					1 1				

A3

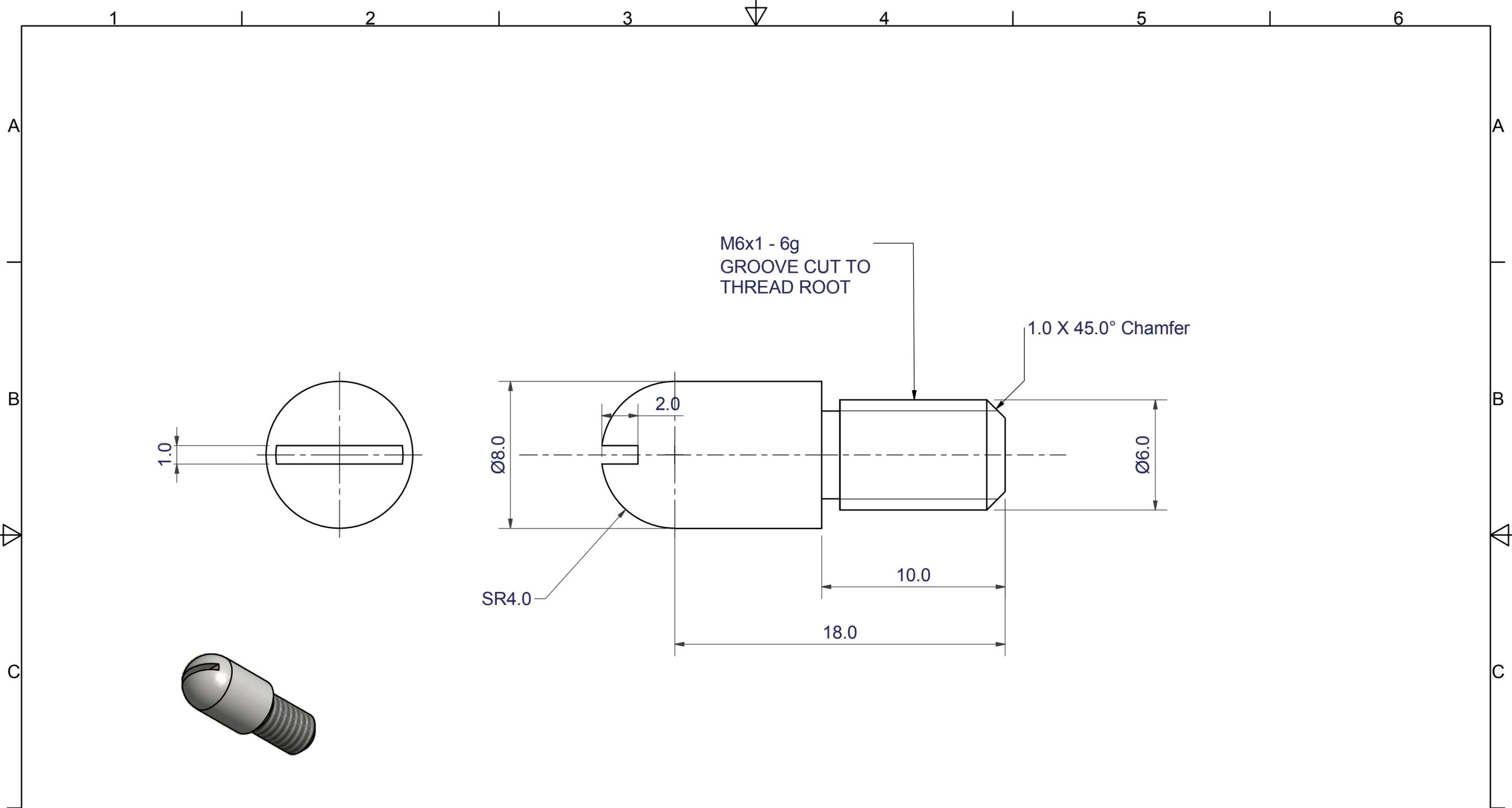


1 1/4" OD x 10 SWG (0.128") WALL TUBE  
 CUT TO LENGTH ONLY  
 NO MACHINING REQUIRED

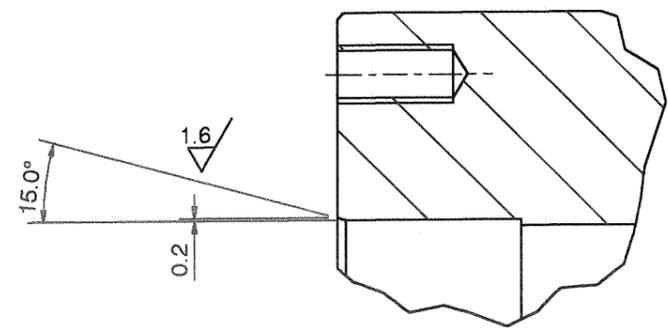
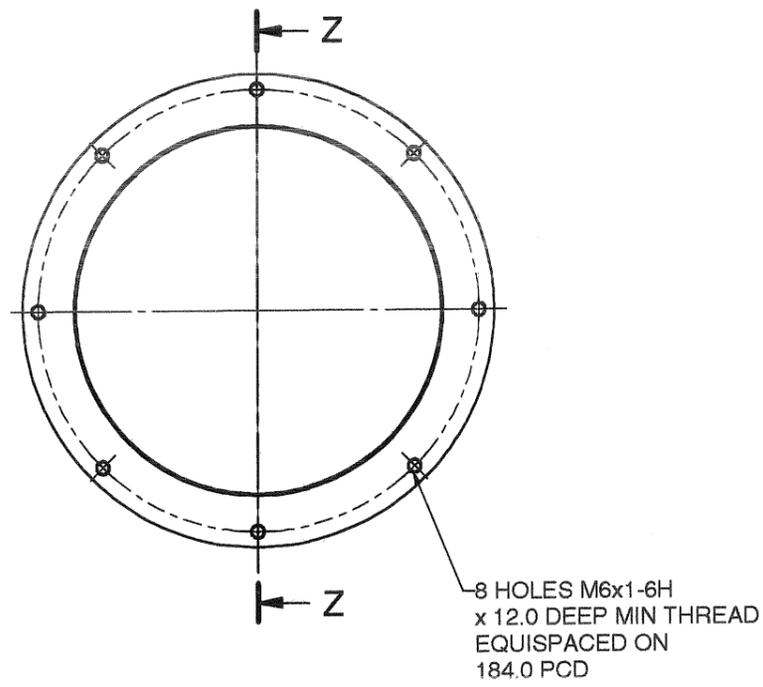
USAGE NOTE:  
 FOR USE ON NMF-SS FRAME ONLY WITH NMF-SS ADAPTOR PLATES  
 330mm ADAPTOR PLATE SPACING WITH END INSERTS FITTED

CHKD DATE DES dm1 DATE 07/08/2013 DRN dm1 DATE 22/08/2013			MATERIAL <b>ALUMINIUM ALLOY          GRADE 6082-T6</b>  FINISH <b>HARD ANODISE          AND NICKEL          ACETATE SEAL</b>		TOLERANCES X.=±0.5 X.X=±0.25 X.XX=±0.1 ANG=±0.25 UNLESS STATED  SURFACE TEXTURE (um) UNLESS STATED		EST. MASS (kg) <b>0.251</b>  SCALE <b>1:1</b>  DIMS IN <b>mm</b>		THIRD ANGLE PROJECTION   REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED  DO NOT SCALE  NO OFF PER UNIT <b>6</b>		Drawing produced on Inventor  National Oceanography Centre, Southampton Underwater Systems Laboratory Natural Environment Research Council			TITLE <b>24 Way SS CTD Frame</b>  DRAWING NUMBER <b>CTD Spacer 330mm</b>		SHT OF 1 OF 1 ISS	
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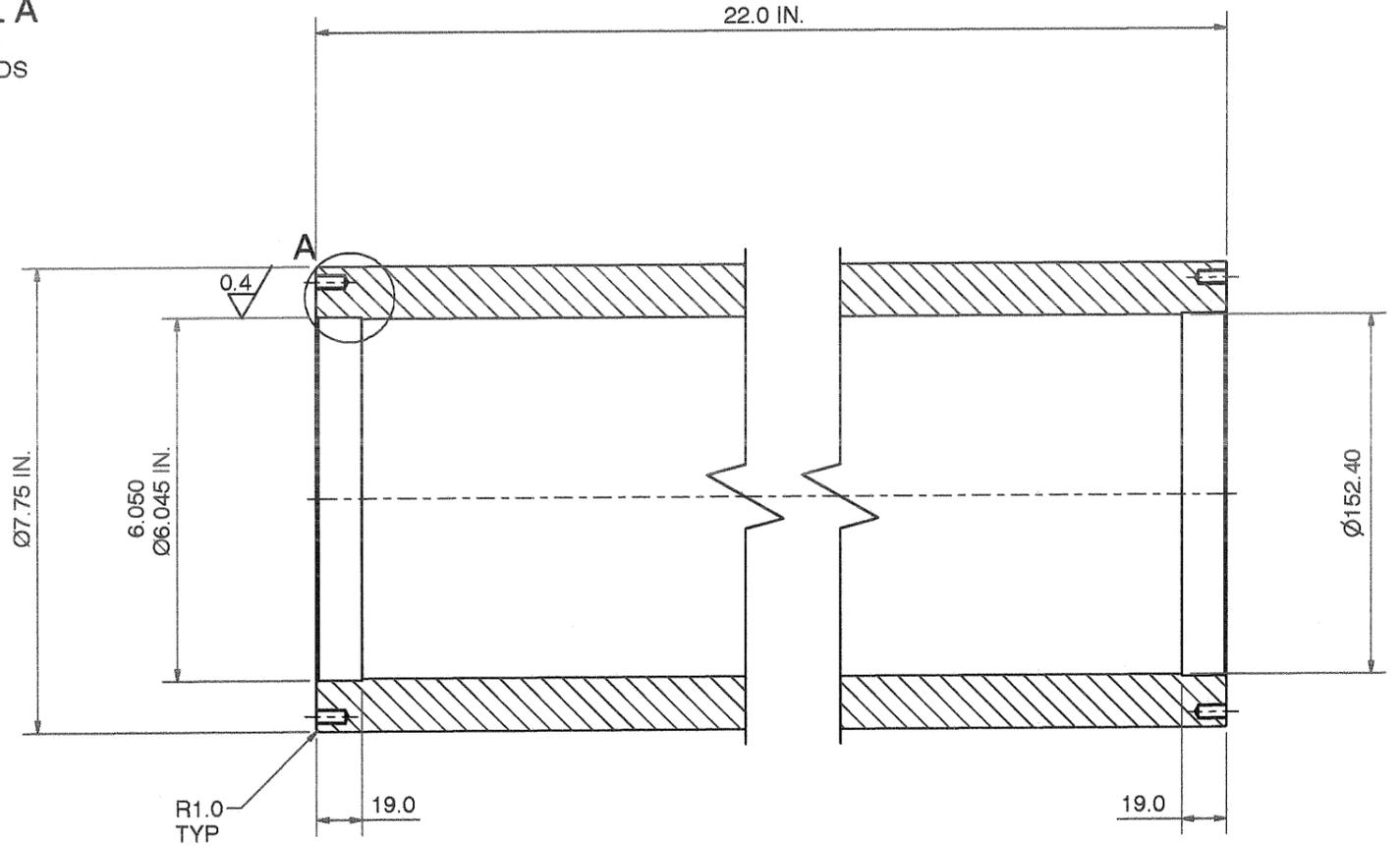
A3



CHKD		MATERIAL <b>STAINLESS STEEL GRADE 316</b>	TOLERANCES X.=±0.5 X.X=±0.25 X.XX=±0.1 ANG=±0.25 UNLESS STATED		EST. MASS (kg) <b>0.006</b>	THIRD ANGLE PROJECTION REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED	Drawing produced on Inventor			
DATE			FINISH  <b>N/A</b>	SURFACE TEXTURE  <b>1.6</b> (um) UNLESS STATED			SCALE <b>5:1</b>	DO NOT SCALE	 National Oceanography Centre, Southampton  Underwater Systems Laboratory  Natural Environment Research Council	TITLE
DES <b>dm1</b>						<b>24 Way SS CTD Frame</b>				<b>A3</b>
DATE <b>20/08/2013</b>						<b>Bottle Locating Peg</b>			SHT 1 OF 1 ISS	
DRN <b>dm1</b>						DRAWING NUMBER				SHT 1 OF 1 ISS
DATE <b>21/08/2013</b>									SHT 1 OF 1 ISS	

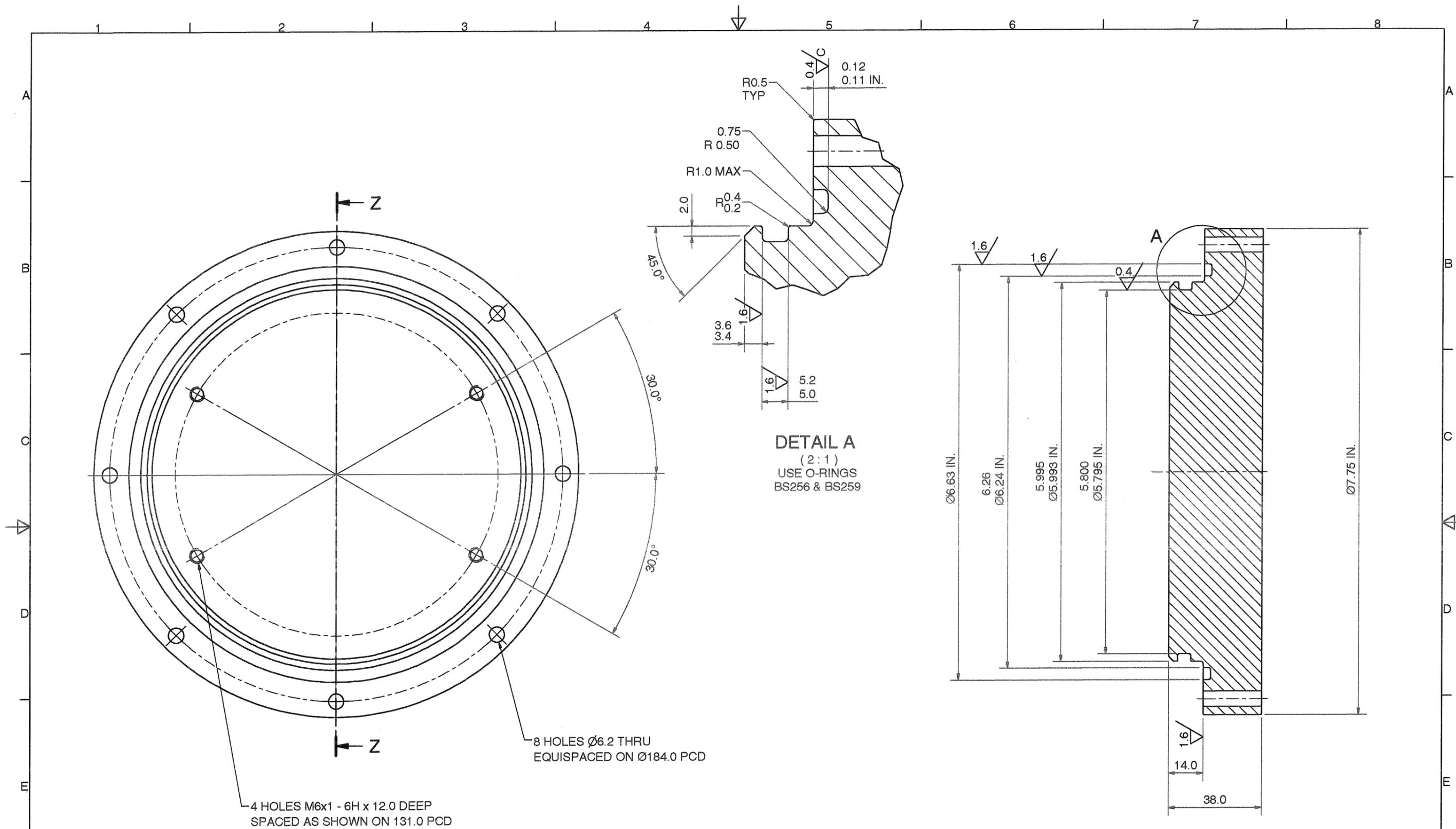


**DETAIL A**  
(2:1)  
BOTH ENDS

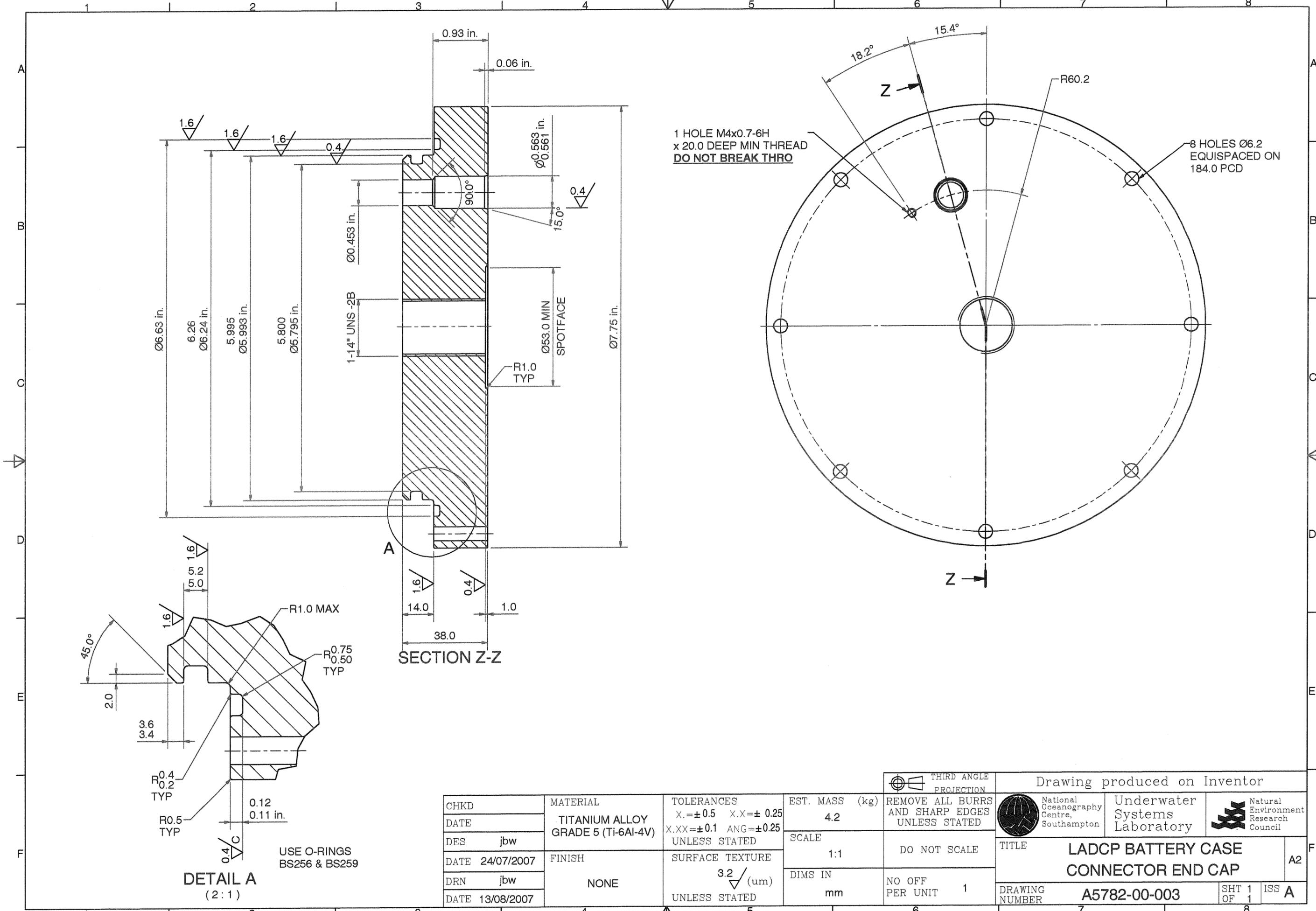


**SECTION Z-Z**

CHKD		MATERIAL <b>TITANIUM ALLOY GRADE 5 (Ti-6Al-4V)</b>	TOLERANCES X.=±0.5 X.X=±0.25 X.XX=±0.1 ANG=±0.25 UNLESS STATED		EST. MASS (kg) 30.0	THIRD ANGLE PROJECTION REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED	Drawing produced on Inventor	
DATE 24/07/2007			FINISH  NONE	SURFACE TEXTURE 3.2 (um) UNLESS STATED			SCALE 1:2	DO NOT SCALE
DES jbw		TITLE <b>LACDP BATTERY CASE PRESSURE TUBE</b>		DIMS IN mm	NO OFF PER UNIT 1	SHT 1 OF 1 ISS A		
DATE 03/08/2007		DRAWING NUMBER <b>A5782-00-001</b>						



CHKD	MATERIAL	TOLERANCES	EST. MASS (kg)	THIRD ANGLE PROJECTION	Drawing produced on Inventor		
DATE	TITANIUM ALLOY GRADE 5 (Ti-6Al-4V)	X.=±0.5 X.X=±0.25 X.XX=±0.1 ANG=±0.25 UNLESS STATED	4.3	REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED	Natural Oceanography Centre, Southampton	Underwater Systems Laboratory	Natural Environment Research Council
DES jbw	FINISH	SURFACE TEXTURE	SCALE	DO NOT SCALE	TITLE		
DATE 24/07/2007	NONE	3.2 (um) UNLESS STATED	1:1		LADCP BATTERY CASE BLANK END CAP		
DRN jbw			DIMS IN	NO OFF PER UNIT	DRAWING NUMBER	SHT 1 OF 1	ISS A
DATE 13/08/2007			mm	1	A5782-00-002		



1 HOLE M4x0.7-6H  
x 20.0 DEEP MIN THREAD  
**DO NOT BREAK THRO**

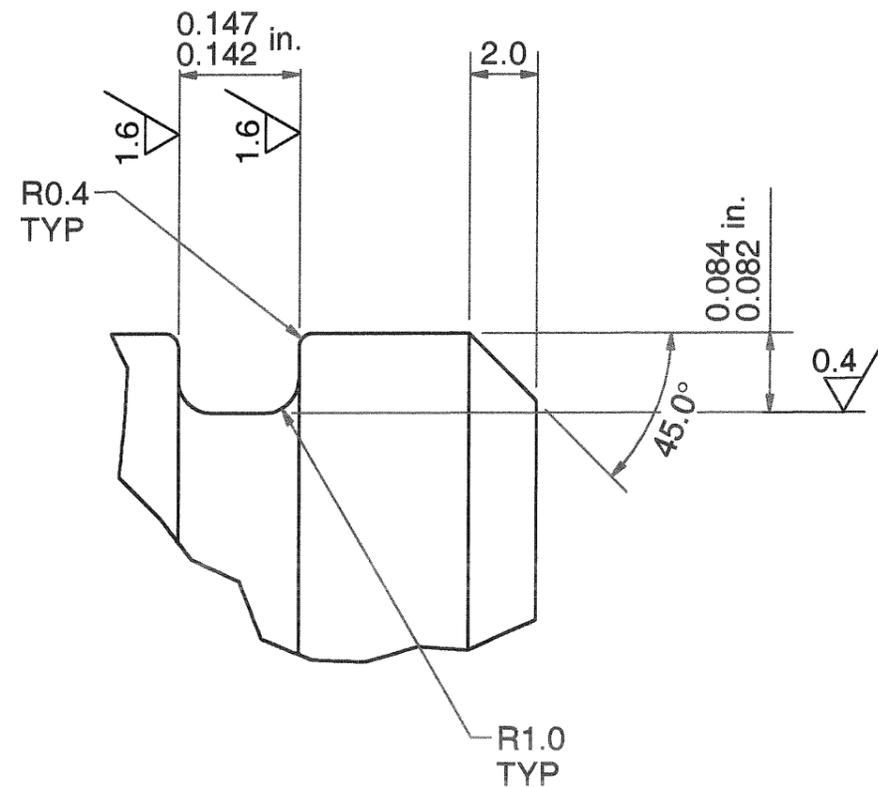
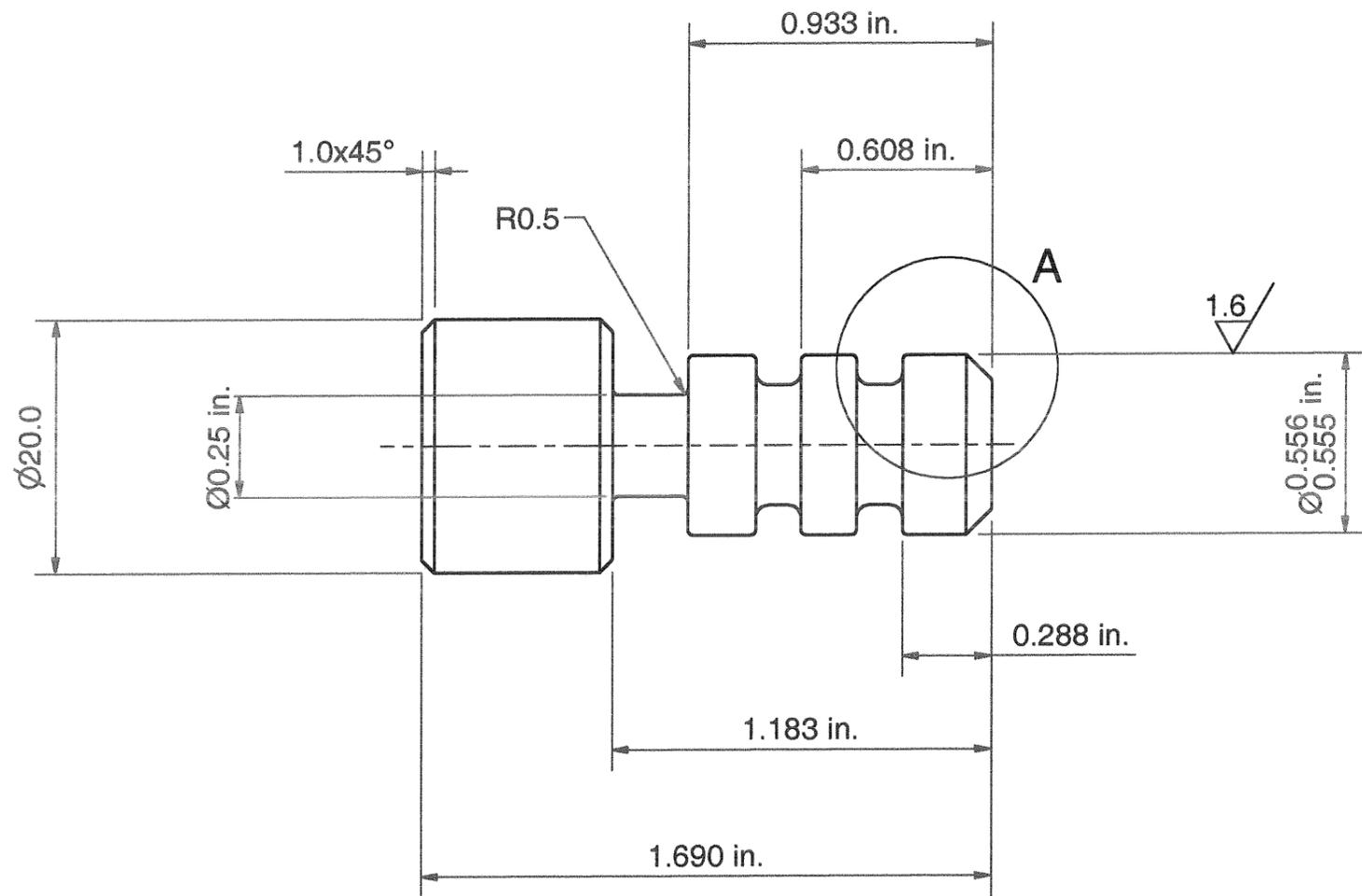
8 HOLES Ø6.2  
EQUISPACED ON  
184.0 PCD

**SECTION Z-Z**

**DETAIL A**  
(2:1)

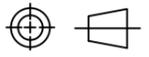
USE O-RINGS  
BS256 & BS259

CHKD	MATERIAL	TOLERANCES	EST. MASS (kg)	THIRD ANGLE PROJECTION	Drawing produced on Inventor		
DATE	TITANIUM ALLOY	X.=±0.5 X.X=±0.25	4.2	REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED	National Oceanography Centre, Southampton	Underwater Systems Laboratory	Natural Environment Research Council
DES jbw	GRADE 5 (Ti-6Al-4V)	X.XX=±0.1 ANG=±0.25 UNLESS STATED	SCALE	DO NOT SCALE			
DATE 24/07/2007	FINISH	SURFACE TEXTURE	1:1	NO OFF PER UNIT	TITLE		
DRN jbw	NONE	3.2 (um)	DIMS IN	1	LADCP BATTERY CASE CONNECTOR END CAP		
DATE 13/08/2007		UNLESS STATED	mm		DRAWING NUMBER	A5782-00-003	SHT 1 OF 1
							ISS A

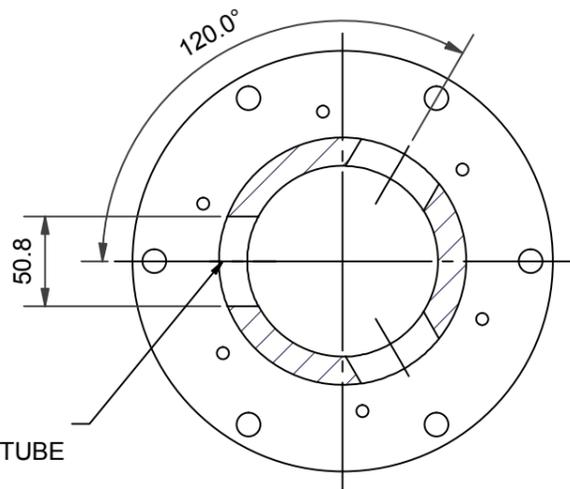


**DETAIL A**  
 TYPICAL O-RING GROOVE  
 USE O-RING BS110  
 (5:1)

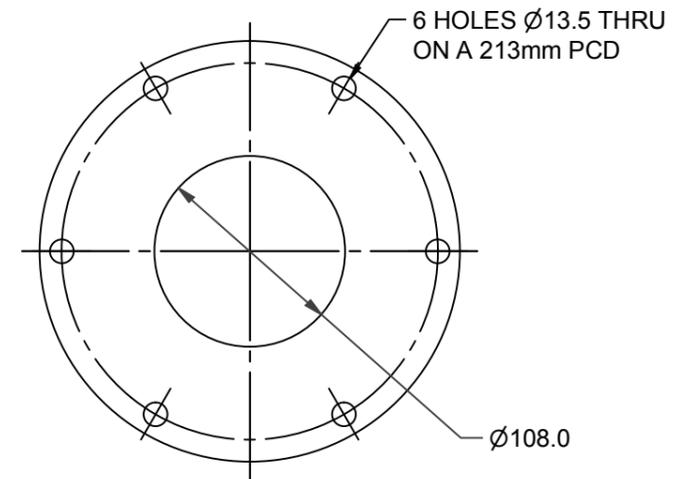
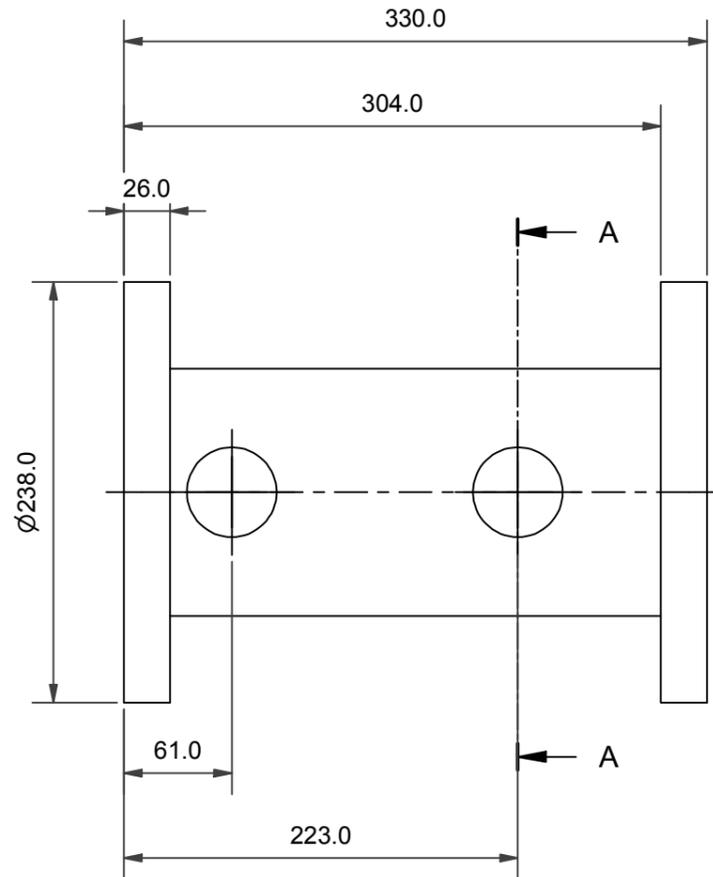
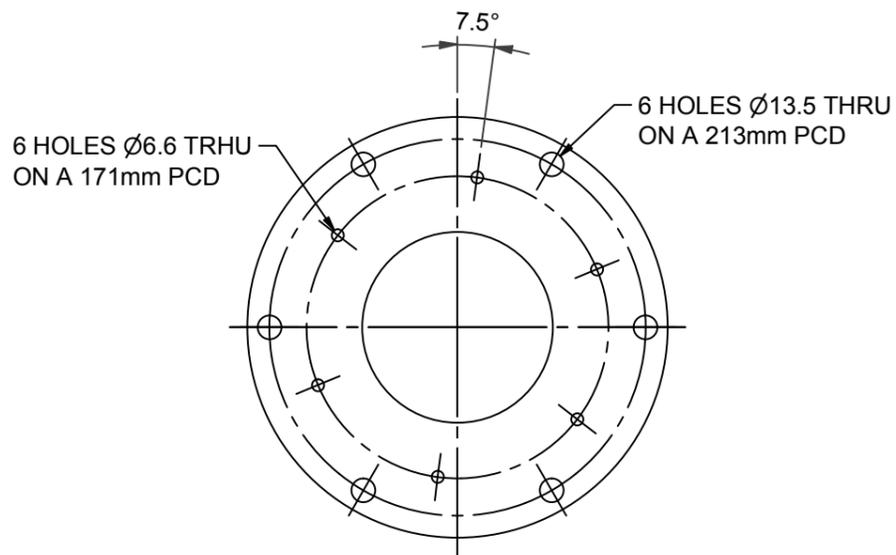
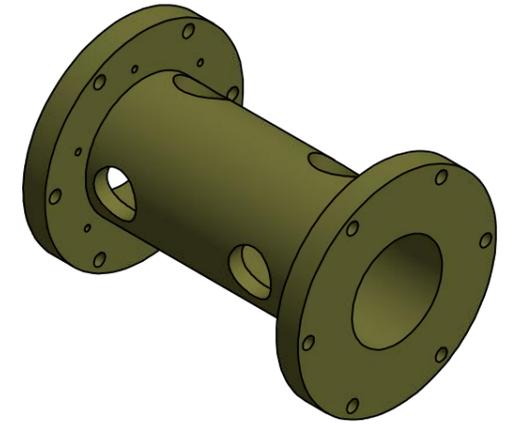
CHKD		MATERIAL <b>TITANIUM ALLOY GRADE 5 (Ti-6Al-4V)</b>	TOLERANCES X.=± 0.5 X.X=± 0.25 X.XX=± 0.1 ANG=± 0.25 UNLESS STATED		EST. MASS (kg) <b>0.04</b>	THIRD ANGLE PROJECTION	Drawing produced on Inventor		
DATE			FINISH <b>NONE</b>	SURFACE TEXTURE <b>3.2</b> (um) UNLESS STATED		SCALE <b>2:1</b>	REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED	National Oceanography Centre, Southampton	Underwater Systems Laboratory
DES <b>jbw</b>		DATE <b>25/07/2007</b>		DIMS IN <b>mm</b>	DO NOT SCALE	TITLE <b>LADCP BATTERY CASE PURGE PLUG</b>			
DRN <b>jbw</b>		DATE <b>14/08/2007</b>		NO OFF PER UNIT <b>1</b>	DRAWING NUMBER <b>A5782-00-004</b>			SHT OF <b>1 1</b>	ISS <b>A</b>



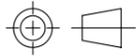
SECTION A-A



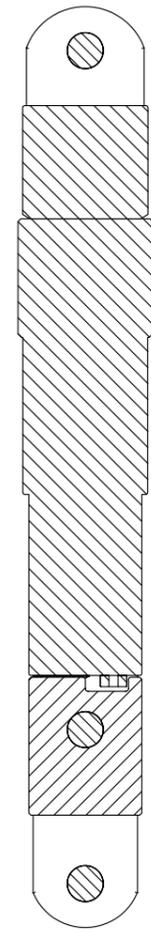
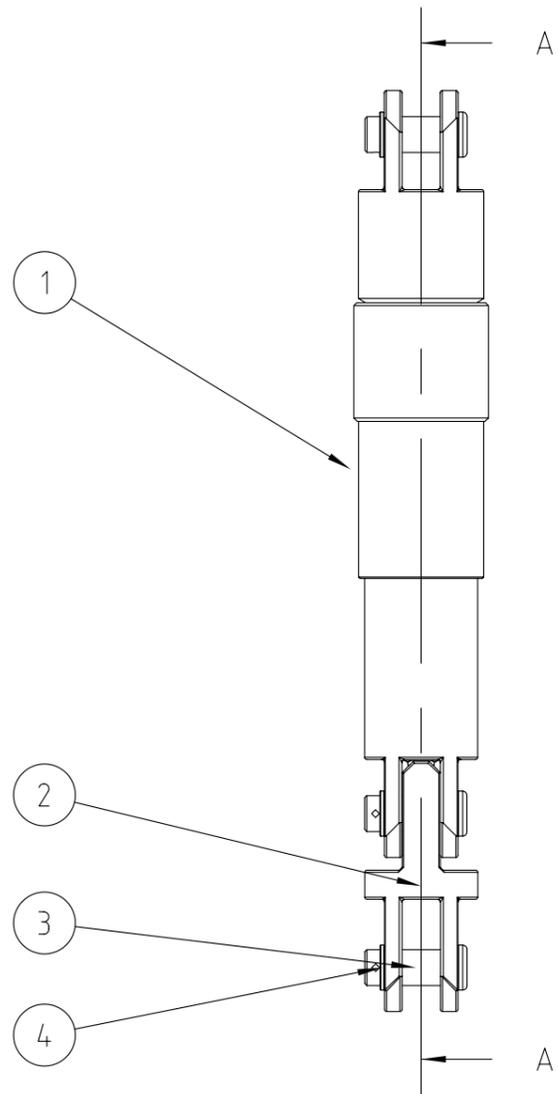
3 SETS OF HOLES  
EQUI SPACED AROUND TUBE



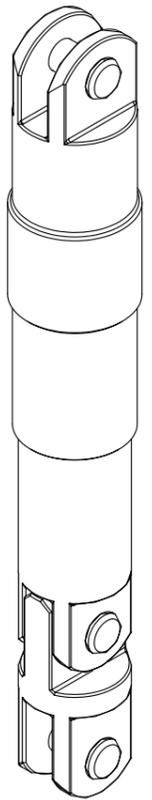
MATERIAL Titanium	EXCEPT WHERE OTHERWISE STATED GENERAL TOLERANCES TO BE ± 0.1	REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED	EST. MASS	<b>BRITISH ANTARCTIC SURVEY</b>  HIGH CROSS, MADINGLEY ROAD CAMBRIDGE CB3 0ET TEL. +44 (0)1223 221400 FAX. +44 (0) 1223 362616	DRN scopol	TITLE  Titanium CTD SBE 32 Hub	<b>A</b> <b>3</b>
FINISH	SURFACE TEXTURE  UNLESS STATED	DO NOT SCALE	SCALE 1:4		CHKD		
		NO. OFF PER UNIT	DIMS IN mm		APPR	DATE 14/05/2018	DRAWING NUMBER



FOR REFERENCE ONLY

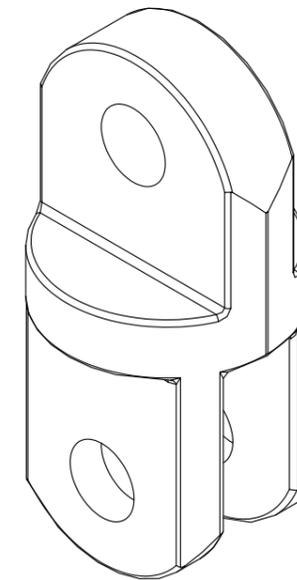
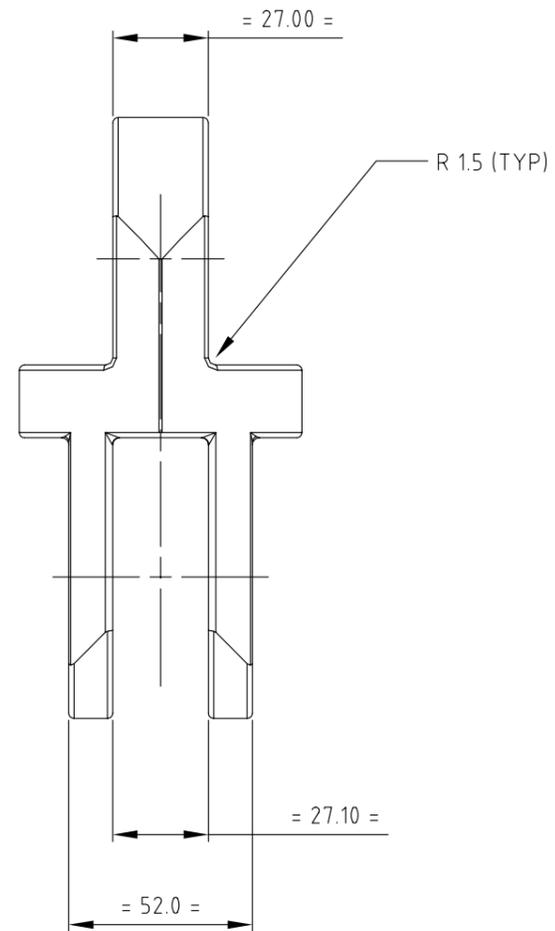
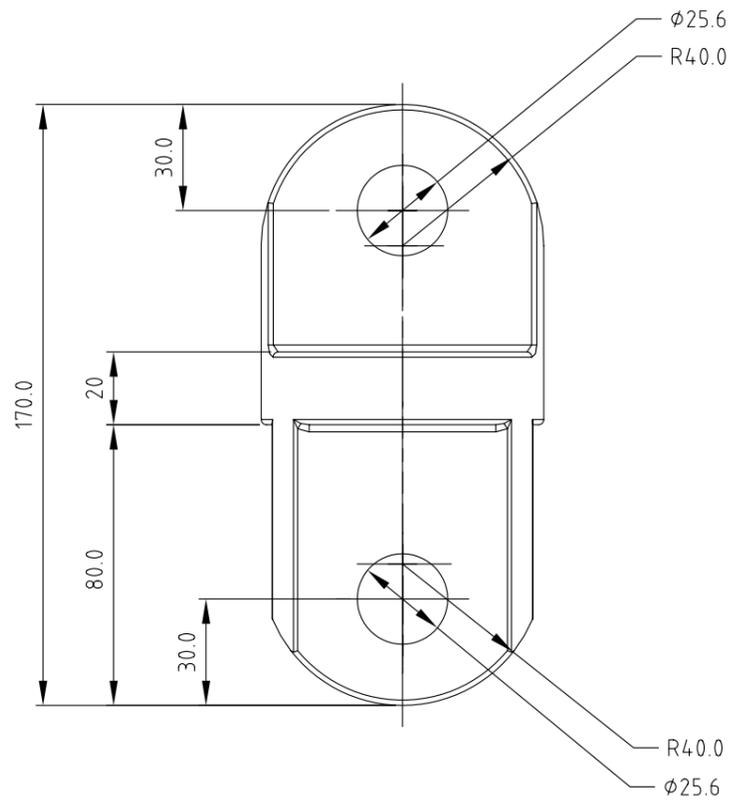
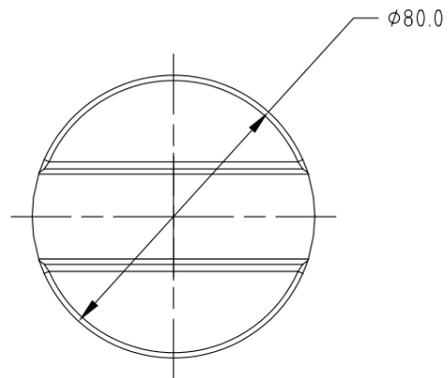
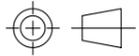


SECTION A-A

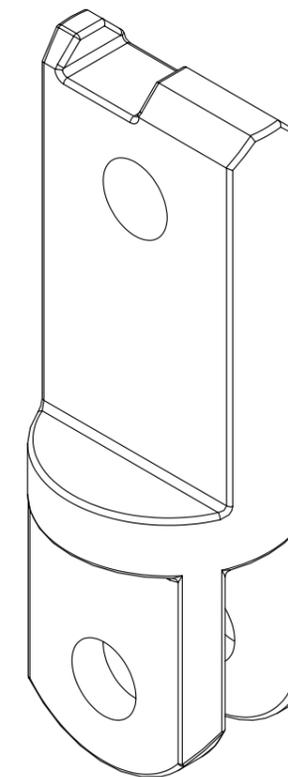
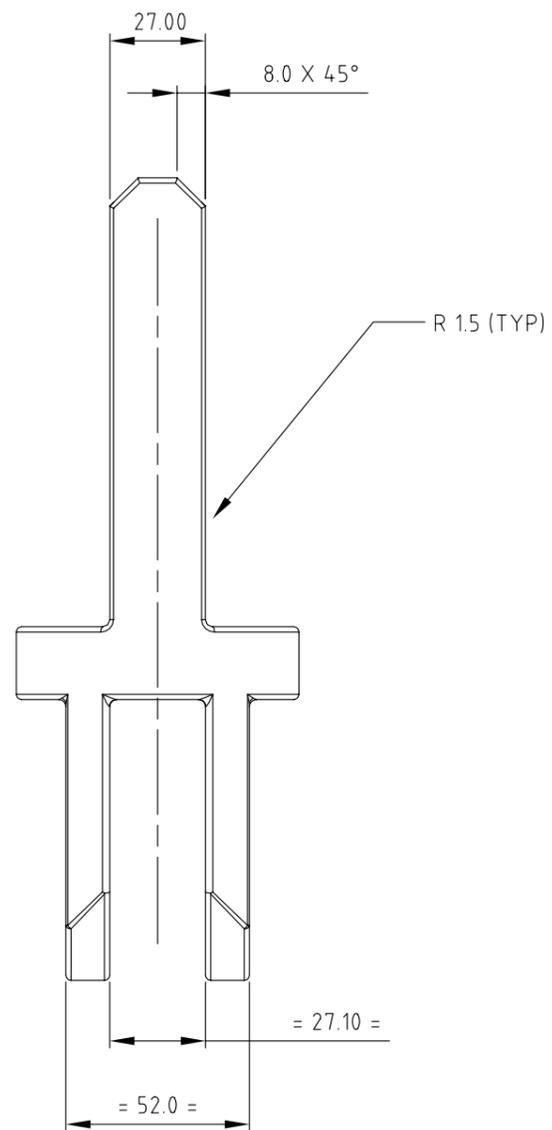
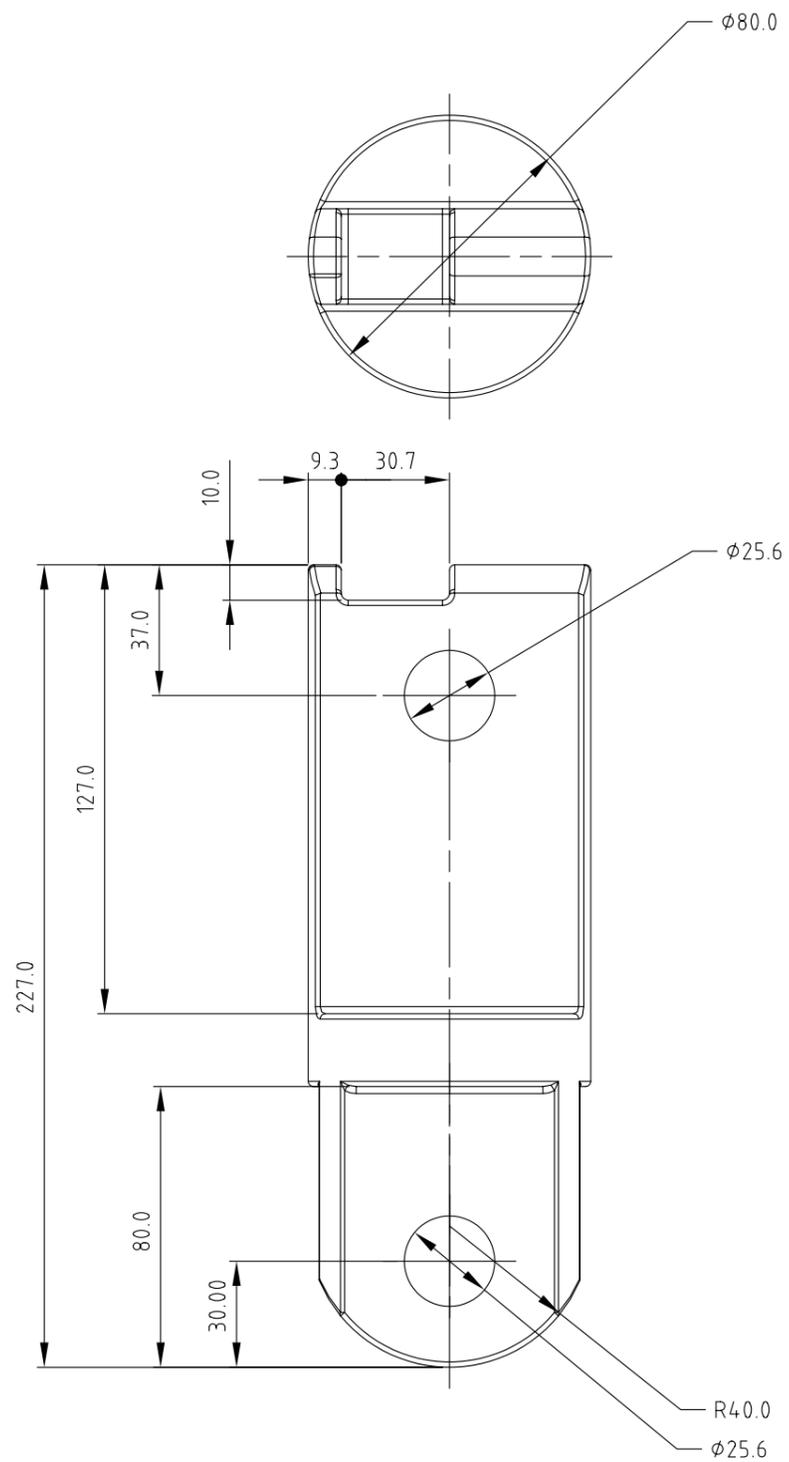
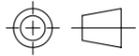


4	3	PIN SPACER	DWG No. ETS/CTD/004	316 S/STEEL
3	3	LIFTING PIN	DWG No. ETS/CTD/003	316 S/STEEL
2	1	SWIVEL ADAPTOR	DWG No. ETS/CTD/002	316 S/STEEL
1	1	CTD SWIVEL		316 S/STEEL
Item	Qty	Description	Standard	Material

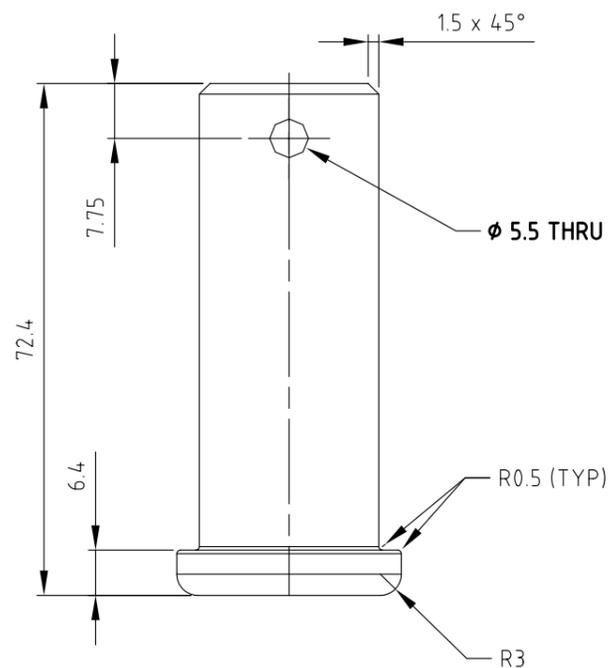
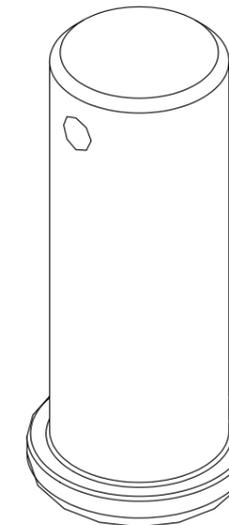
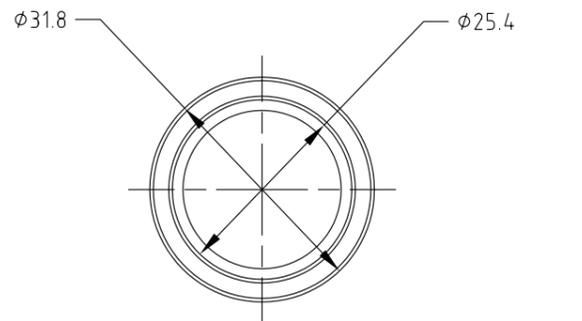
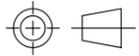
MATERIAL	TOLERANCES 2 DEC PLACE ±0.1 1 DEC PLACE ±0.3 OTHERS ±1.0 UNLESS STATED	REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED	EST. MASS (Kg)	<b>BRITISH ANTARCTIC SURVEY</b>  HIGH CROSS, MADINGLEY ROAD CAMBRIDGE CB3 0ET TEL: (01223) 221400 FAX: (01223) 362616	DRN	<b>CTD ACCESSORY</b>  <b>SWIVEL ADAPTOR ASSEMBLY</b>	<b>A</b> <b>3</b>
		DO NOT SCALE	SCALE 1:5		CHKD		
FINISH	SURFACE TEXTURE  (Um) UNLESS STATED	NO OFF PER UNIT	DIMS IN mm		APPR		
					DATE 08-08-02		



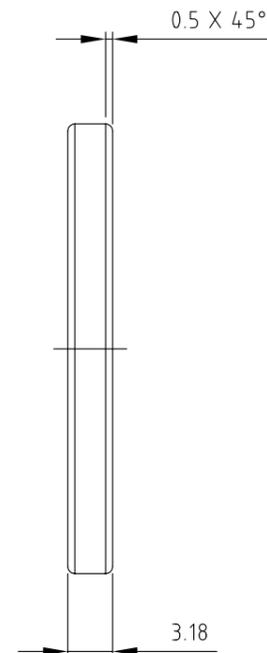
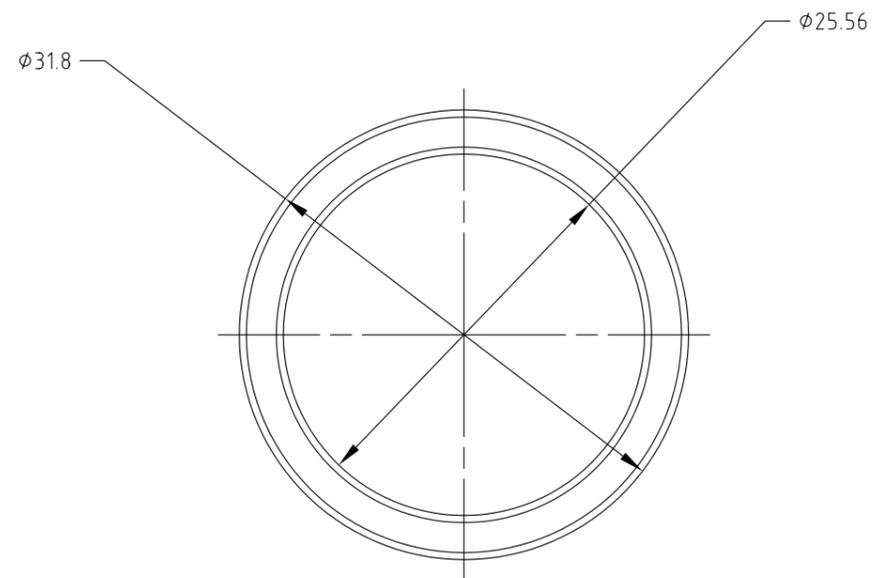
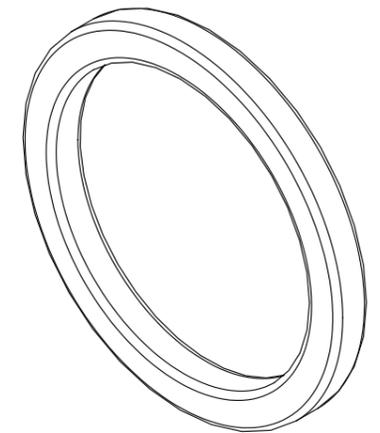
MATERIAL 316 STAINLESS STEEL	TOLERANCES 2 DEC PLACE ±0.1 1 DEC PLACE ±0.3 OTHERS ±1.0 UNLESS STATED	REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED	EST. MASS (Kg) 2.65	BRITISH ANTARCTIC SURVEY  HIGH CROSS, MADINGLEY ROAD CAMBRIDGE CB3 0ET TEL: (01223) 221400 FAX: (01223) 362616	DRN AMT	TITLE  CTD ACCESSORY SWIVEL ADAPTOR (ARTICULATED)	A 3
		DO NOT SCALE	SCALE 1:2		CHKD AMT		
FINISH	SURFACE TEXTURE  ✓ (Um) UNLESS STATED	NO OFF PER UNIT	DIMS IN mm		APPR AMT		



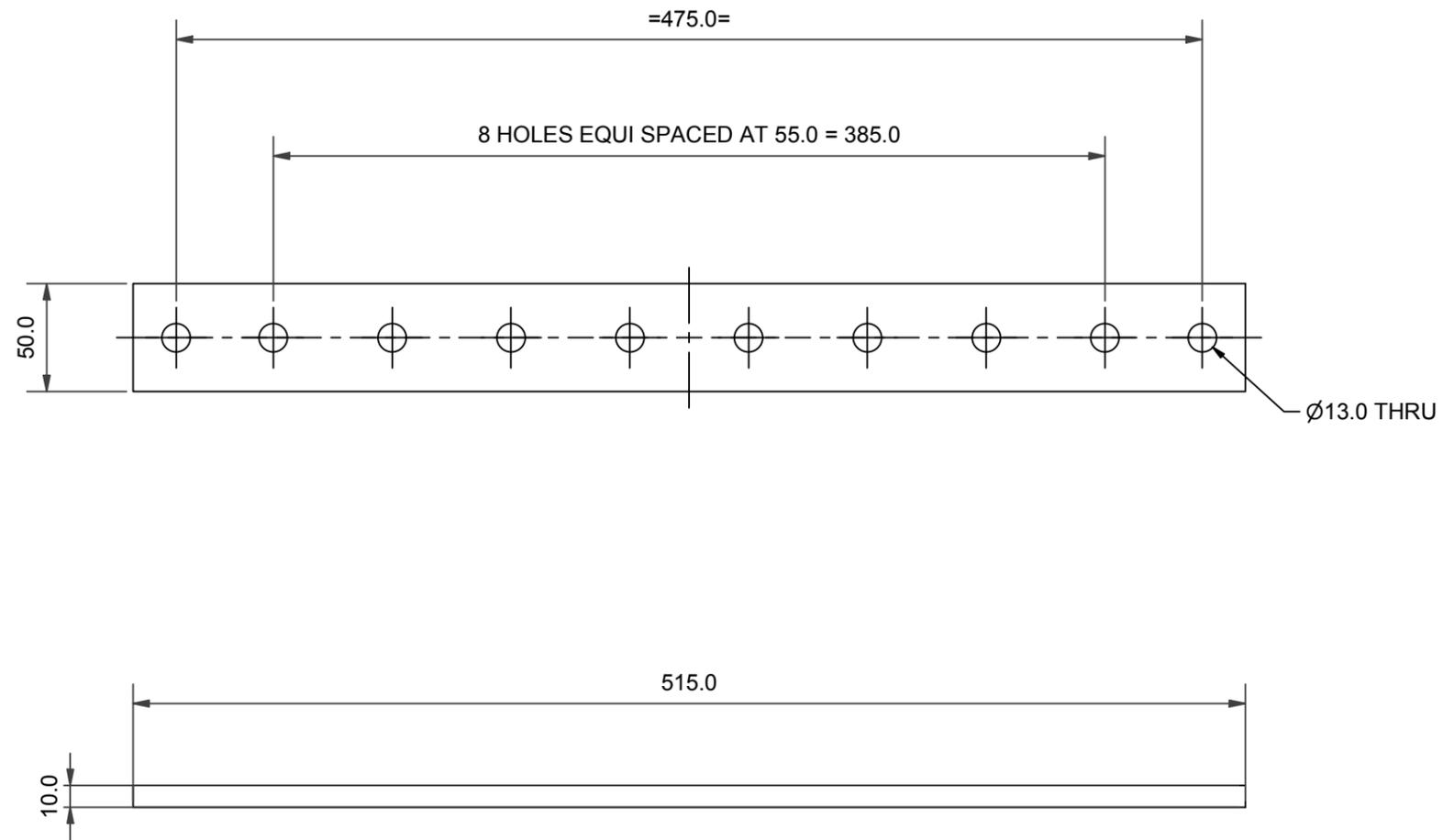
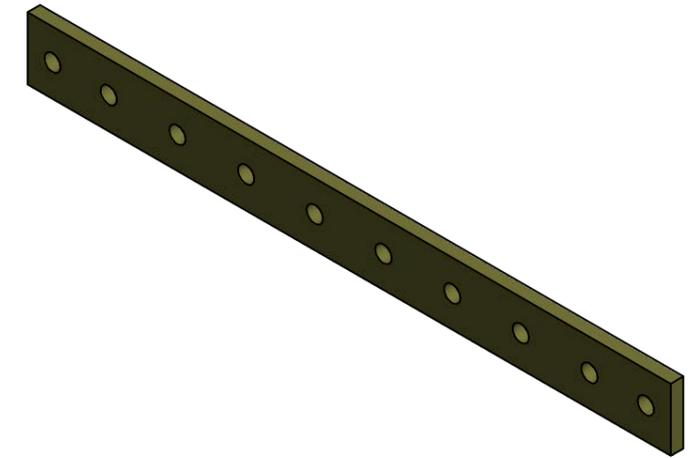
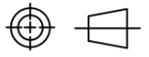
MATERIAL	TOLERANCES	REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED	EST. MASS (Kg)	<b>BRITISH ANTARCTIC SURVEY</b> HIGH CROSS, MADINGLEY ROAD CAMBRIDGE CB3 0ET TEL: (01223) 221400 FAX: (01223) 362616	DRN	<b>CTD ACCESSORY</b> <b>SWIVEL ADAPTOR (FIXED)</b>	<b>A</b> <b>3</b>
316 STAINLESS STEEL	2 DEC PLACE ±0.1 1 DEC PLACE ±0.3 OTHERS ±1.0 UNLESS STATED	DO NOT SCALE	SCALE		AMT		
FINISH	SURFACE TEXTURE ✓ (Um) UNLESS STATED	NO OFF PER UNIT	DIMS IN		AMT		
			3.65	1:2	DATE	DRAWING NUMBER	ISS
					07-08-02	ETS/CTD/005	B



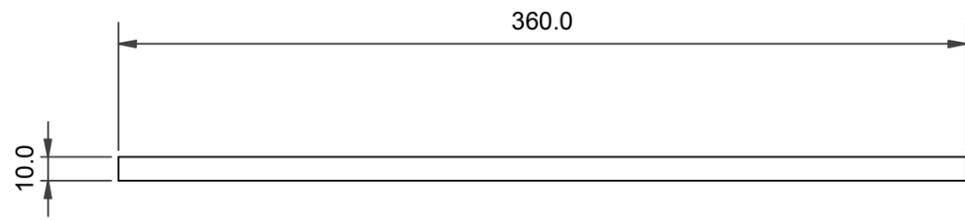
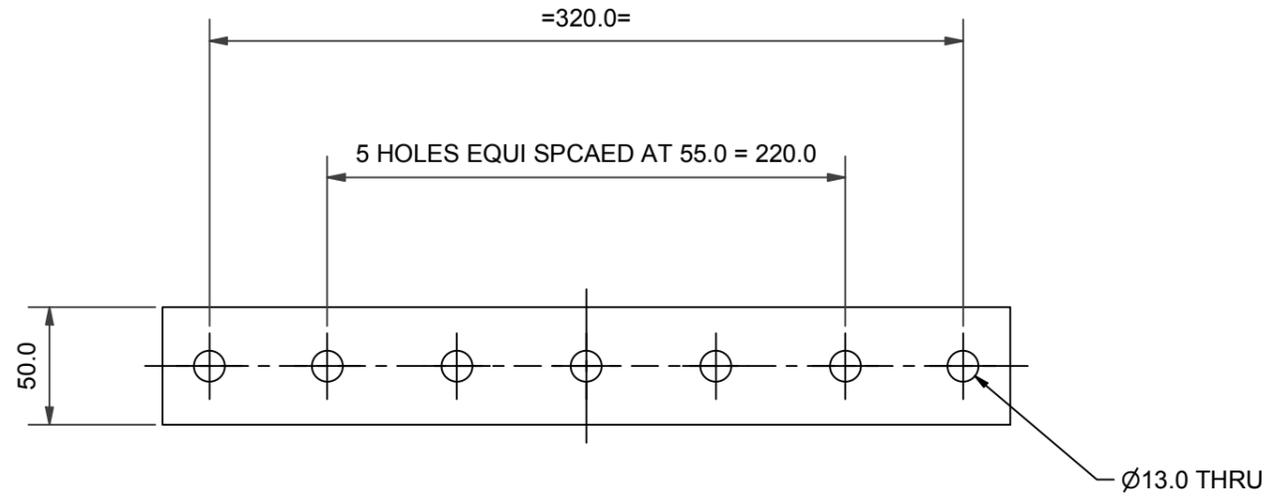
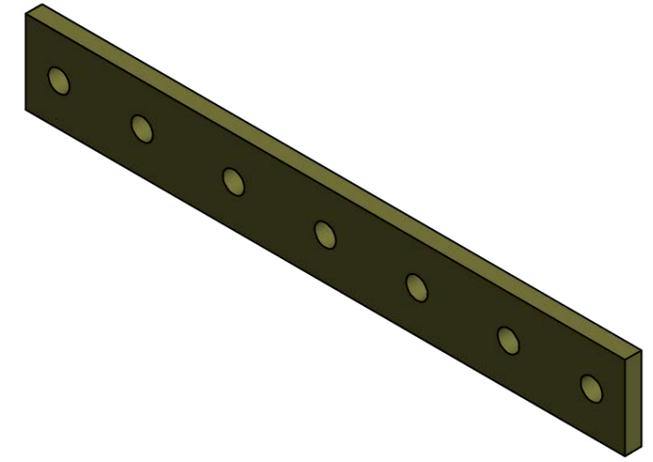
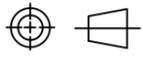
MATERIAL 316 STAINLESS STEEL	TOLERANCES 2 DEC PLACE ±0.1 1 DEC PLACE ±0.3 OTHERS ±1.0 UNLESS STATED	REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED	EST. MASS (Kg) 0.3	<b>BRITISH ANTARCTIC SURVEY</b> HIGH CROSS, MADINGLEY ROAD CAMBRIDGE CB3 0ET TEL: (01223) 221400 FAX: (01223) 362616	DRN AMT	TITLE <b>CTD ACCESSORY          LIFTING PIN</b>	A 3
	FINISH	SURFACE TEXTURE  ✓ (Um) UNLESS STATED	DO NOT SCALE		SCALE 1:1		
NO OFF PER UNIT			DIMS IN mm		APPR AMT		



MATERIAL 316 STAINLESS STEEL	TOLERANCES 2 DEC PLACE ±0.1 1 DEC PLACE ±0.3 OTHERS ±1.0 UNLESS STATED	REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED	EST. MASS (Kg) 0.007	<b>BRITISH ANTARCTIC SURVEY</b> HIGH CROSS, MADINGLEY ROAD CAMBRIDGE CB3 0ET TEL: (01223) 221400 FAX: (01223) 362616	DRN AMT	TITLE <b>CTD ACCESSORY PIN SPACER</b>	A 3
	FINISH	SURFACE TEXTURE  ✓ (Um) UNLESS STATED	DO NOT SCALE		SCALE 2:1		
NO OFF PER UNIT			DIMS IN mm		APPR AMT		
					DATE 08-08-02	DRAWING NUMBER ETS/CTD/004	ISS A



MATERIAL	EXCEPT WHERE OTHERWISE STATED GENERAL TOLERANCES TO BE $\pm 0.1$	REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED	EST. MASS	<b>BRITISH ANTARCTIC SURVEY</b>  HIGH CROSS, MADINGLEY ROAD CAMBRIDGE CB3 0ET TEL. +44 (0)1223 221400 FAX. +44 (0) 1223 362616	DRN scopol	<b>Titanium CTD</b>  <b>475mm Mounting Bracket</b>	<b>A</b> <b>3</b>
Titanium		DO NOT SCALE	SCALE 1:3		CHKD		
FINISH	SURFACE TEXTURE UNLESS STATED	NO. OFF PER UNIT	DIMS IN mm		APPR		
					DATE 15/05/2018	DRAWING NUMBER	ISS <b>A</b>



MATERIAL Titanium	EXCEPT WHERE OTHERWISE STATED GENERAL TOLERANCES TO BE $\pm 0.1$	REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED	EST. MASS	<b>BRITISH ANTARCTIC SURVEY</b>  HIGH CROSS, MADINGLEY ROAD CAMBRIDGE CB3 0ET TEL. +44 (0)1223 221400 FAX. +44 (0) 1223 362616	DRN scopol	<b>Titanium CTD</b>  <b>320mm Mounting Bracket</b>	<b>A</b> <b>3</b>
FINISH	SURFACE TEXTURE	DO NOT SCALE	SCALE 1:3		CHKD		
	UNLESS STATED	NO. OFF PER UNIT	DIMS IN mm		APPR	DATE 15/05/2018	DRAWING NUMBER