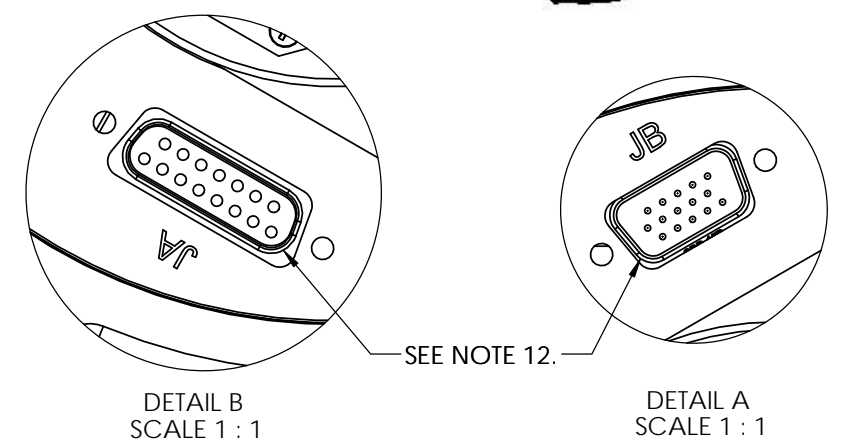
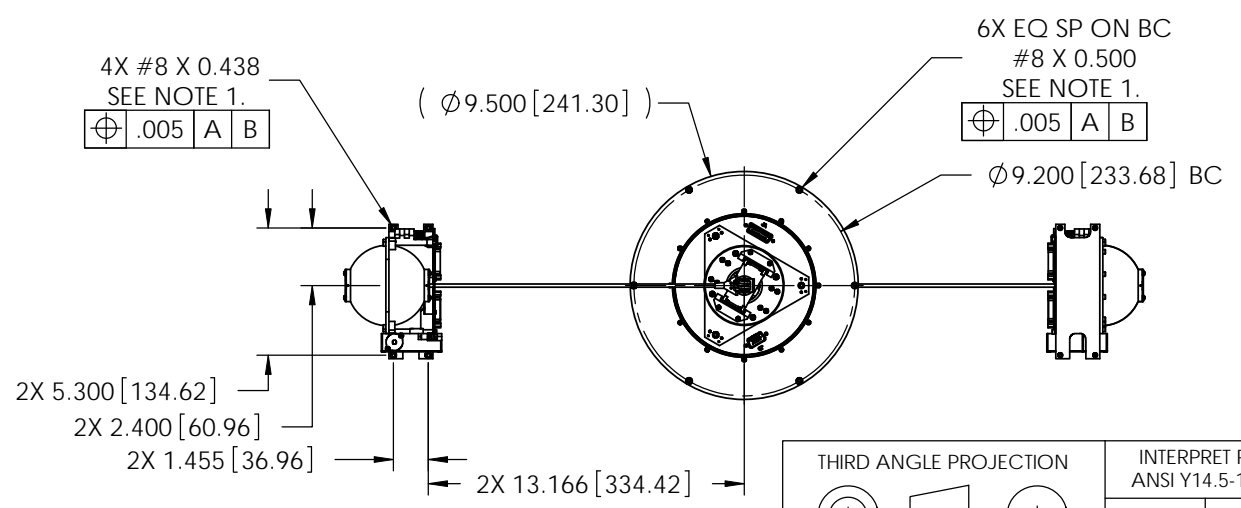
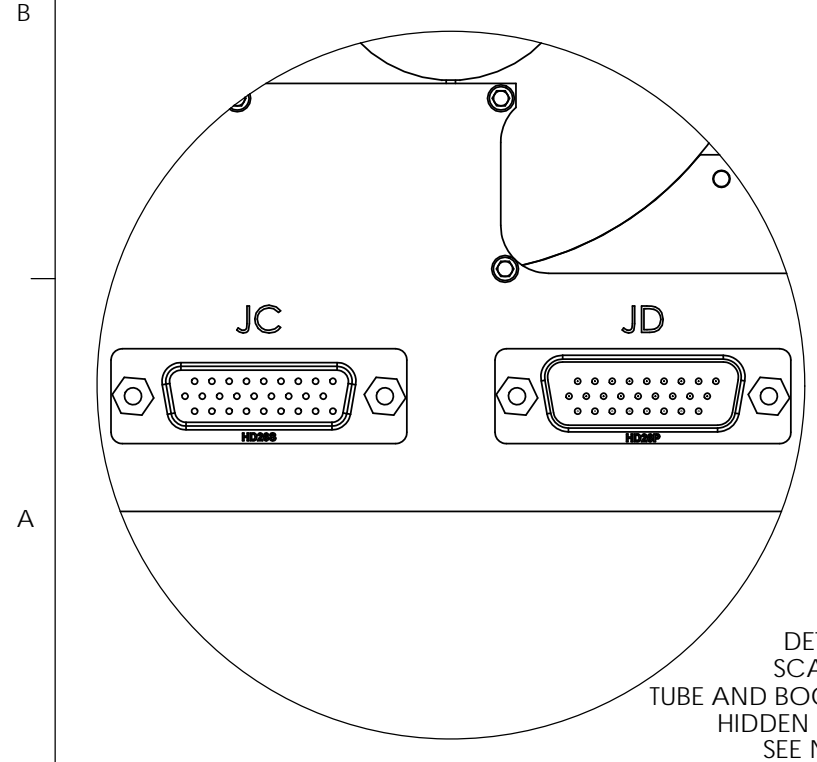
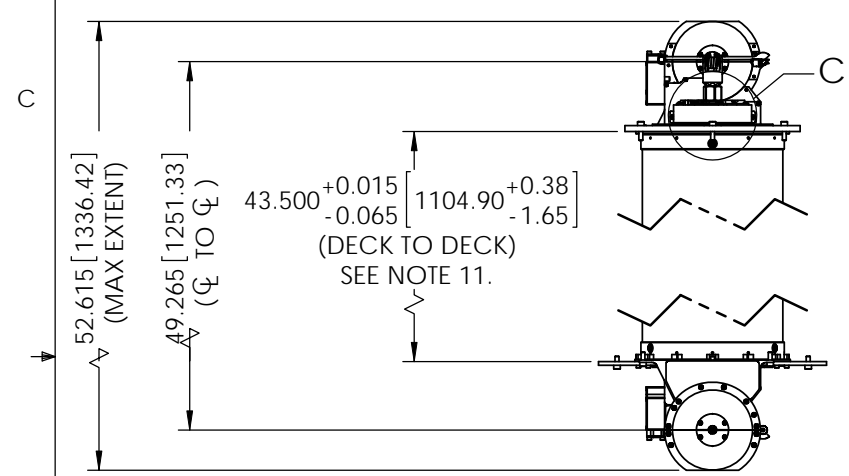
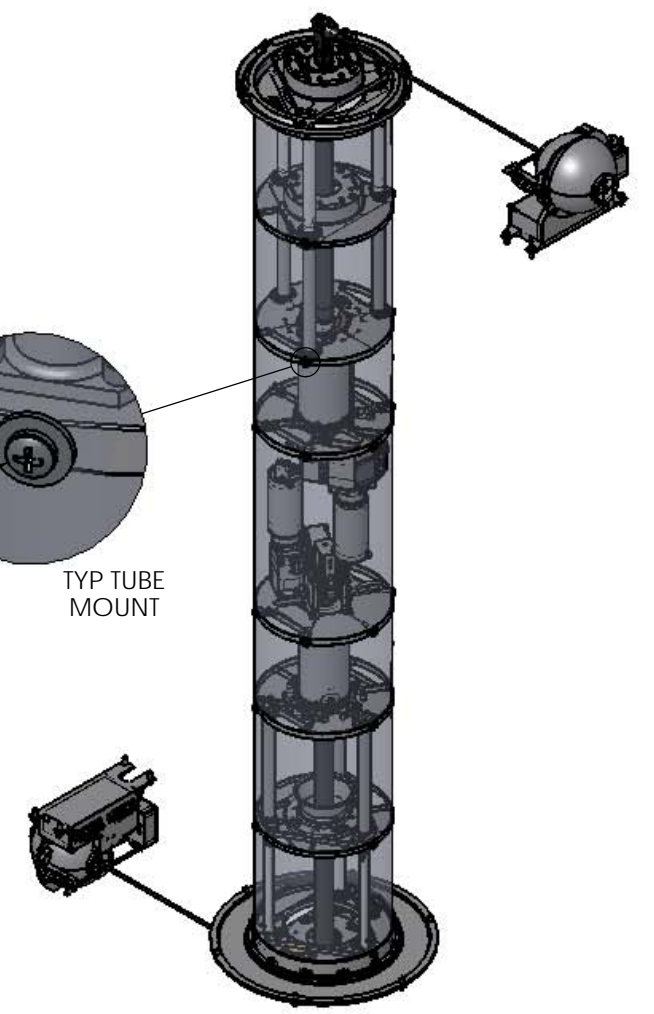
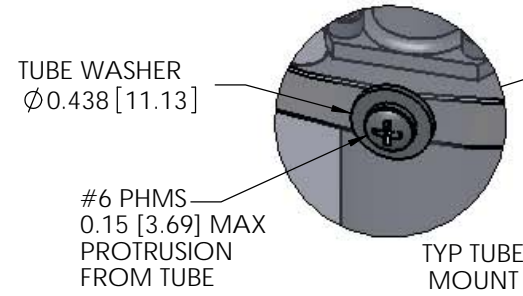
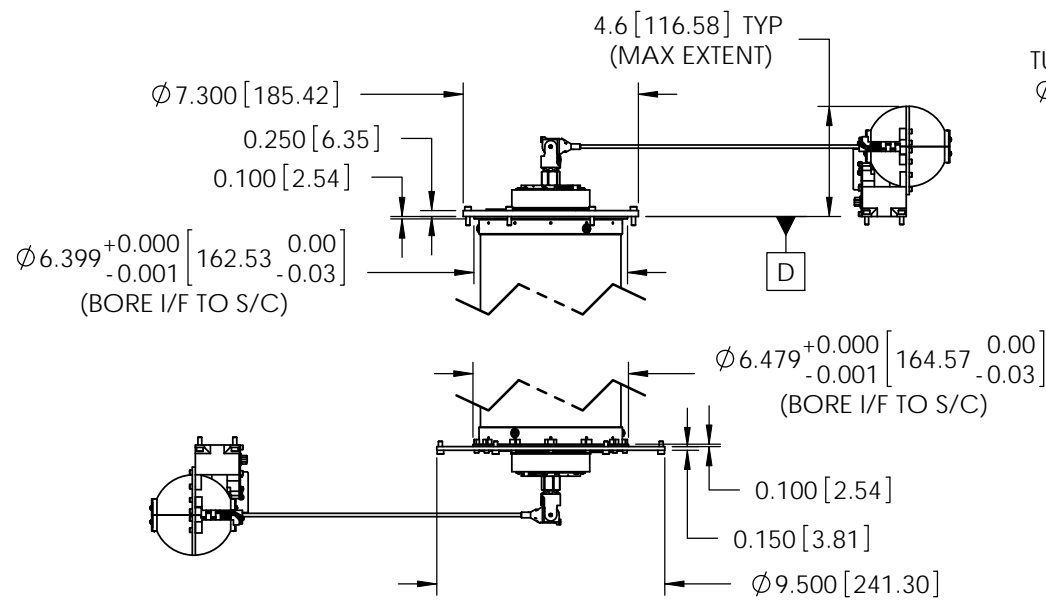
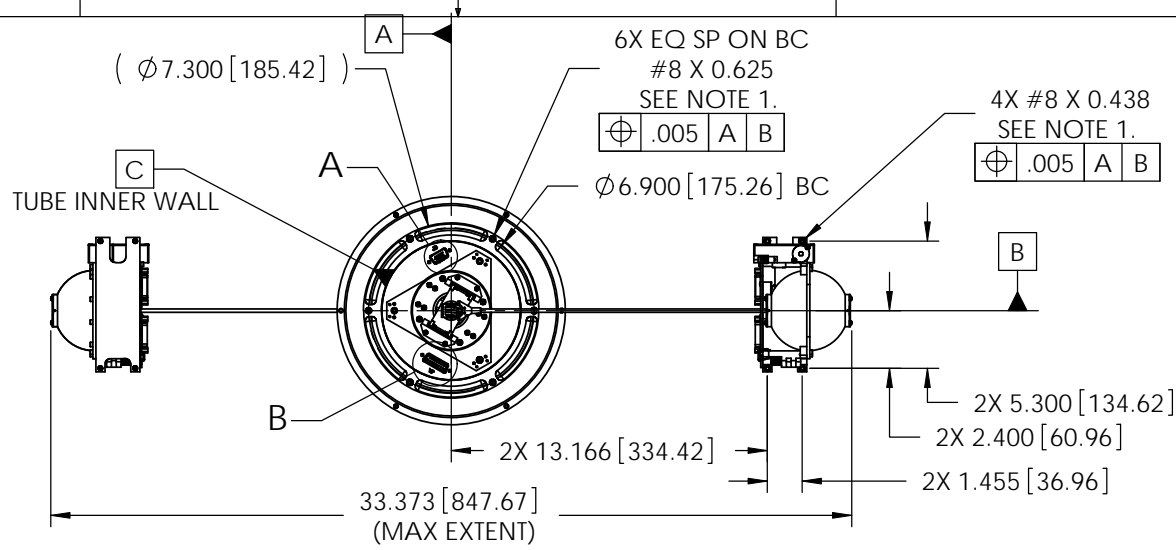
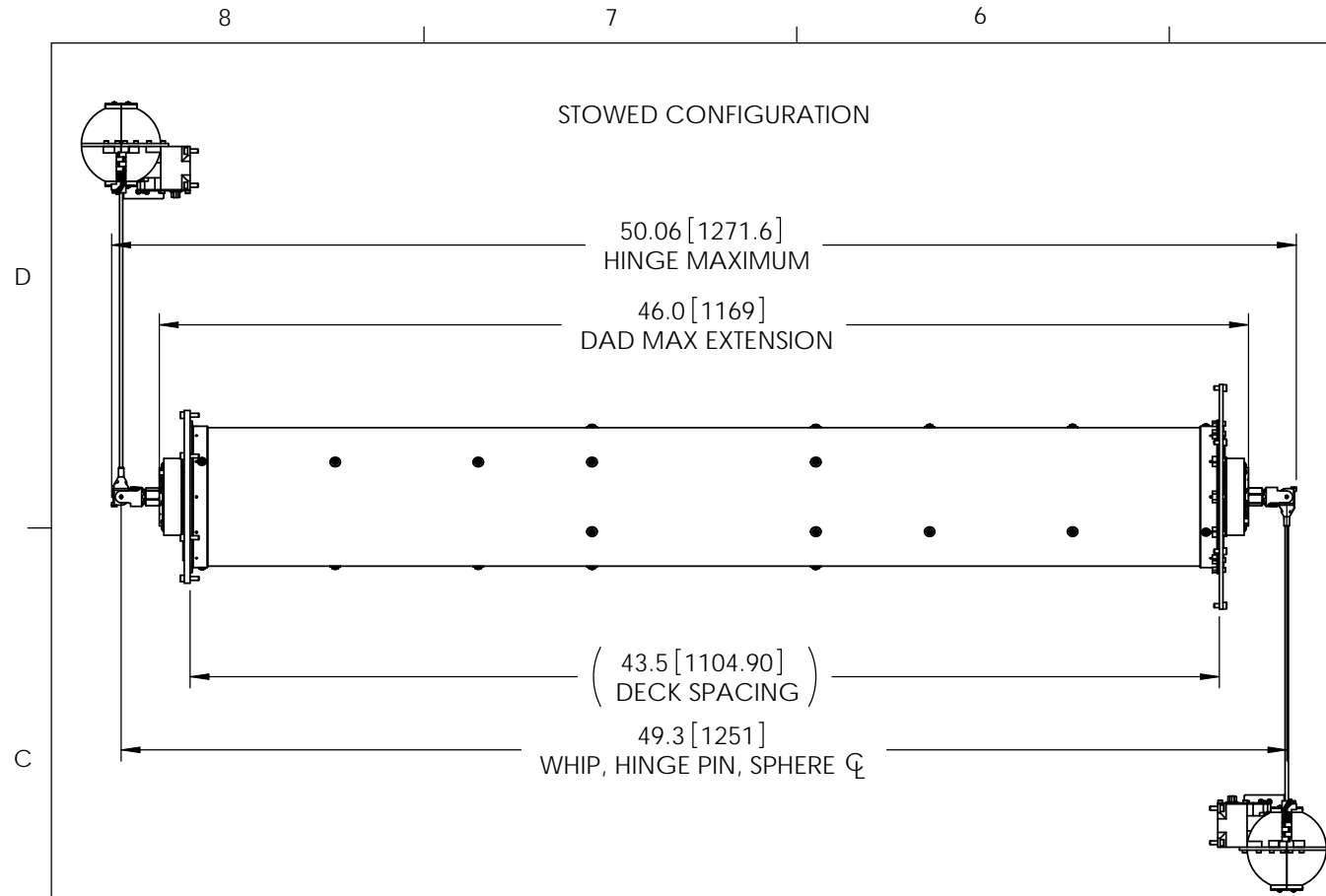


- NOTES:
1. APL TO PROVIDE QTY:20 (PER SC) #8 A286 MOUNTING FASTENERS FOR UPPER AND LOWER DECK MOUNTING. #8 LENGTH SHOWN FOR DECK PENETRATION TO BE MIN 2D (0.328"), ROUNDED TO NEXT HIGHER 1/16". #8 FASTENERS TO BE TORQUED TO 44 IN-LBS.
 2. THERMAL BLANKETS AND EXTERNAL TAPING ARE PER SHEET 3. EXTERNAL COATINGS ARE PER SHEET 3.
 3. DWG UNITS DUAL DIMENSIONED AS: INCHES [MM].
 4. EFI AXB ASSEMBLY ASSIGNED UCB PART NUMBER RBSP-AXB-MEC-001.
 5. RED TAG/GREEN TAG ITEMS (TWO ENABLE PLUGS AND TWO REMOVABLE SAFETY PROTECTIVE COVERS AND TWO WHIP COVERS) PER SHEET 4.
 6. SPACECRAFT BUS LOWER DECK GENERAL MOUNTING FLATNESS TO BE 0.005".
 7. SPACECRAFT BUS UPPER DECK GENERAL MOUNTING FLATNESS TO BE 0.005".
 8. THE BOOM COORDINATE SYSTEM [BCS] IS USED ON ALL DRAWINGS.
 9. BSP REFERS TO BOOM SYMMETRY PLANE - PLANE LOCATED MIDWAY BETWEEN UPPER AND LOWER BOOMS.
 10. BCS Z-AXIS ZERO IS AT BSP. BCS X- AND Y-AXIS ZERO ARE AT TUBE ϕ .
 11. TOLERANCE DENOTES SHIMABLE RANGE.
 12. TOP BOOM SHOWN; BOTTOM BOOM SIMILAR. REFER TO RBSP_EFW_AXB_002W WIRING SCHEMATIC FOR CONNECTOR DESIGNATIONS AND TYPES.

REVISION				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	BASELINE RELEASE	20-Aug-2008	JM
	C	UPDATED FOR MOUNT DISC	20-Mar-2009	JM
	D	DAG 213 WAS DAG 154	27-Mar-2009	JM
	E	UPDATED FOR CDR	24-Sep-2009	JM



THIRD ANGLE PROJECTION 	INTERPRET PER ANSI Y14.5-1994	UNLESS SPECIFIED OTHERWISE DIMENSIONS ARE IN IN [mm] TOLERANCES: LINEAR ANGLES SURFACE X = ±0.1 X = ±0.5 0.8 [32] .X = ±0.04 X = ±0.1 .XX = ±0.01 .XXX = ±0.005	NAME	DATE	Space Sciences Lab UC Berkeley
			DRAWN	20AUG2008	
PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SPACE SCIENCES LAB, UCB. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SPACE SCIENCES LAB, UCB IS PROHIBITED.	NEXT ASSY	USED ON	CHECKED		RBSP AXB INTERFACE CONTROL DRAWING
	APPLICATION	DO NOT SCALE DRAWING	ENG APPR		
	QTY:		CONTRACT		
		COMMENTS:			SIZE B DWG NO RBSP-AXB-ICD-001 SCALE:1:8 WEIGHT: lb SHEET 1 OF 4

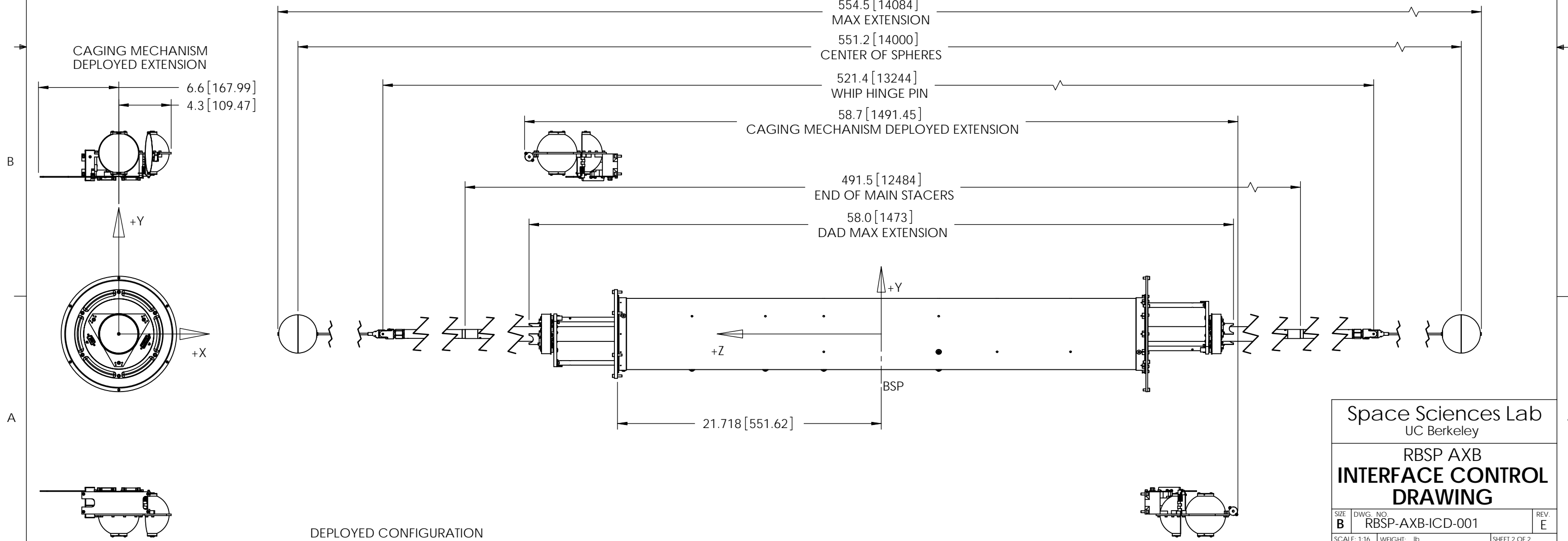


AXIAL BOOM MASS PROPERTIES (CALCULATED)													
	MASS [kg]	STOWED COM WRT TCS			STOWED MOI WRT COM			DEPLOYED COM WRT TCS			DEPLOYED MOI WRT COM		
		X [m]	Y [m]	Z [m]	XX [kg/m ²]	YY [kg/m ²]	ZZ [kg/m ²]	X [m]	Y [m]	Z [m]	XX [kg/m ²]	YY [kg/m ²]	ZZ [kg/m ²]
COMPLETE BOOM ASSEMBLY	7.160	0.003	0.002	-0.004	7.34E-01	6.60E-01	8.78E-02	0.001	0.015	-0.004	43.011	42.975	0.036
TUBE ASSEMBLY	1.030	0.000	0.000	-0.027	7.51E-04	7.51E-04	0.00E+00	0.000	0.000	-0.027	7.67E-04	5.51E-04	2.18E-04
UPPER BOOM													
STATIONARY COMPONENTS	1.377	0.002	0.013	0.235	7.63E-02	7.60E-02	2.38E-04	0.002	0.013	0.235	7.86E-02	7.86E-02	5.12E-06
MOVING COMPONENTS	0.234	0.000	0.000	0.548	7.03E-02	7.03E-02	0.00E+00	0.000	0.000	0.677	1.08E-01	1.08E-01	4.94E-05
CAGING MECHANISM	0.292	-0.016	0.357	0.598	1.41E-01	1.04E-01	3.72E-02	0.000	0.357	0.604	1.42E-01	1.08E-01	3.42E-02
MAIN STACER	1.012	0.000	0.000	0.182	3.70E-02	3.68E-02	8.12E-04	0.000	0.000	3.244	1.44E+01	1.44E+01	3.50E-04
STACER TIP PEICE AND EXTENDER	0.076	0.000	0.000	0.360	1.16E-02	1.16E-02	2.17E-05	0.000	0.000	6.568	3.28E+00	3.28E+00	2.17E-05
WHIP HINGE	0.028	0.000	0.002	0.612	1.06E-02	1.06E-02	1.34E-05	0.000	0.000	6.611	1.23E+00	1.23E+00	1.49E-05
WHIP TUBE	0.007	0.000	0.187	0.626	3.07E-03	2.86E-03	2.08E-04	0.000	0.000	6.809	3.25E-01	3.25E-01	1.49E-06
SPHERE AND PREAMP	0.040	0.006	0.369	0.630	2.11E-02	1.61E-02	5.04E-03	0.006	-0.004	6.992	1.96E+00	1.96E+00	3.05E-05
LOWER BOOM													
STATIONARY COMPONENTS	1.377	0.002	-0.013	-0.235	7.63E-02	7.60E-02	2.38E-04	0.002	-0.013	-0.235	7.46E-02	7.35E-02	1.04E-03
MOVING COMPONENTS	0.234	0.000	0.000	-0.548	7.03E-02	7.03E-02	0.00E+00	0.000	0.000	-0.677	1.06E-01	1.06E-01	4.94E-05
CAGING MECHANISM	0.292	0.016	-0.357	-0.598	1.41E-01	1.04E-01	3.72E-02	0.000	0.000	-0.604	1.05E-01	1.05E-01	6.16E-05
MAIN STACER	1.012	0.000	0.000	-0.182	3.42E-02	3.39E-02	8.12E-04	0.000	0.000	-3.244	1.44E+01	1.44E+01	3.50E-04
STACER TIP PEICE AND EXTENDER	0.076	0.000	0.000	-0.360	1.11E-02	1.11E-02	2.17E-05	0.000	0.000	-6.568	3.28E+00	3.28E+00	2.17E-05
WHIP HINGE	0.028	0.000	0.000	-0.612	1.04E-02	1.04E-02	1.49E-05	0.000	0.000	-6.611	1.22E+00	1.22E+00	1.49E-05
WHIP TUBE	0.007	0.189	0.000	-0.626	2.80E-03	3.04E-03	2.49E-04	0.000	0.000	-6.809	3.24E-01	3.24E-01	1.49E-06
SPHERE AND PREAMP	0.040	0.378	0.000	-0.630	1.57E-02	2.14E-02	5.72E-03	0.000	0.000	-6.992	1.95E+00	1.95E+00	2.42E-05

NOTES:

1. DATA FOR STATIONARY COMPONENTS, MOVING COMPONENTS, STACER AND CABLE ARE PROVIDED BY ANALYSIS ONLY.
2. COMPLETE BOOM ASSEMBLY INCLUDES ALL COMPONENTS.
3. TUBE ASSEMBLY INCLUDES TUBE, END FITTINGS, FLEXURE MOUNT, AND FASTENERS.
4. STATIONARY COMPONENTS INCLUDES FIXED DADs, DIRECT DRIVE MECHANISM AND STACER CANISTER.
5. MOVING COMPONENTS INCLUDES MOVING DAD.
6. CAGING MECHANISM INCLUDES STATIONARY AND MOVING COMPONENTS OF THE CAGING MECHANISM.
7. STATIONARY COMPONENTS, STACER, WHIP HINGE AND WHIP COMPONENTS INCLUDE CORRESPONDING CABLE MASS.

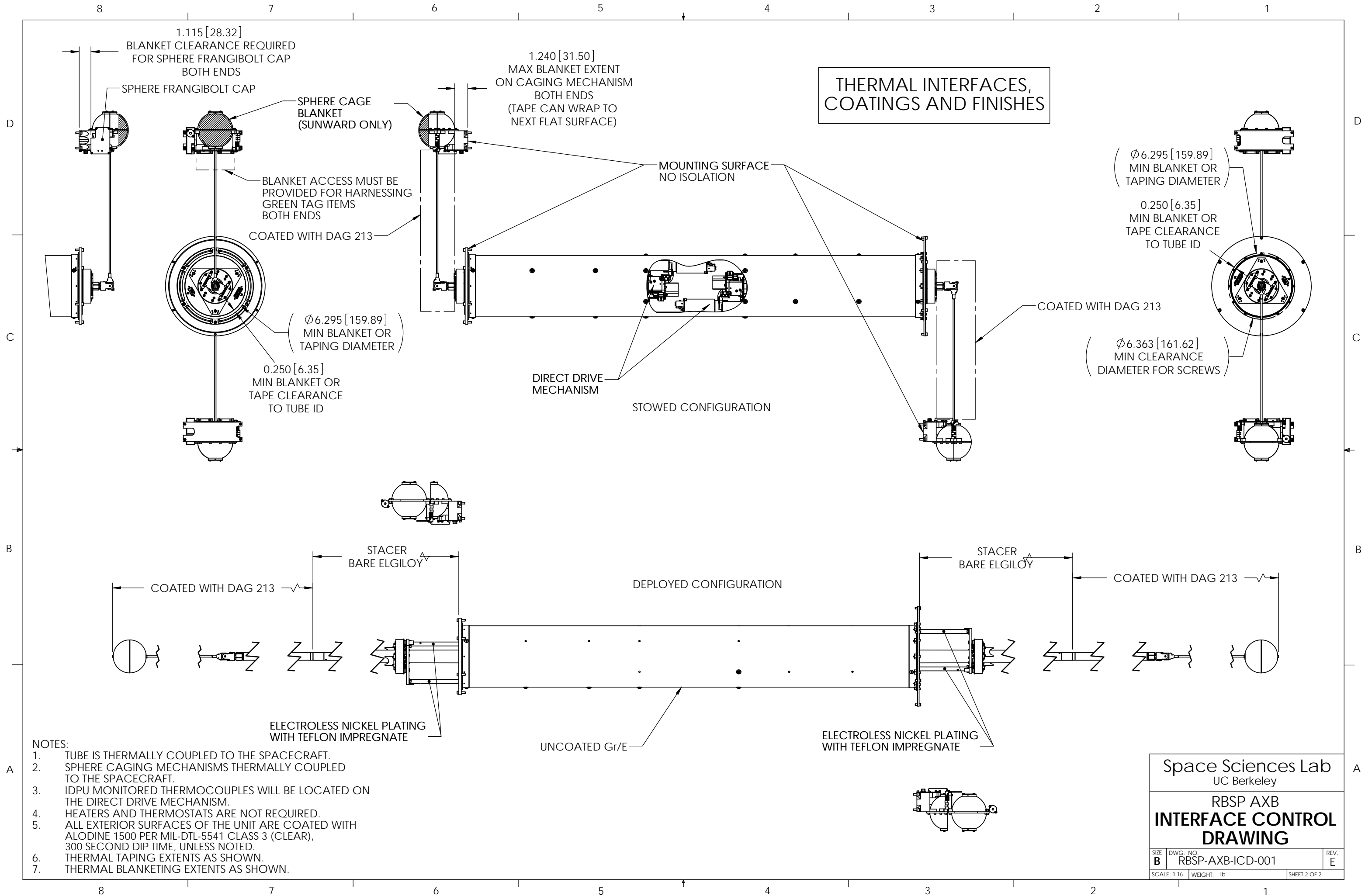
MAIN STACER PROPERTIES		
	[in]	[mm]
STRIP THICKNESS	0.004	0.10
STRIP WIDTH	5.000	127.00
TIP DIAMETER	0.700	17.78
BASE DIAMETER	1.126	28.60
EQUIVALENT DIAMETER	1.004	25.51



Space Sciences Lab
UC Berkeley

**RBSP AXB
INTERFACE CONTROL
DRAWING**

SIZE B	DWG. NO. RBSP-AXB-ICD-001	REV. E
SCALE: 1:16 WEIGHT: lb		SHEET 2 OF 2



- NOTES:
1. TUBE IS THERMALLY COUPLED TO THE SPACECRAFT.
 2. SPHERE CAGING MECHANISMS THERMALLY COUPLED TO THE SPACECRAFT.
 3. IDPU MONITORED THERMOCOUPLES WILL BE LOCATED ON THE DIRECT DRIVE MECHANISM.
 4. HEATERS AND THERMOSTATS ARE NOT REQUIRED.
 5. ALL EXTERIOR SURFACES OF THE UNIT ARE COATED WITH ALODINE 1500 PER MIL-DTL-5541 CLASS 3 (CLEAR), 300 SECOND DIP TIME, UNLESS NOTED.
 6. THERMAL TAPING EXTENTS AS SHOWN.
 7. THERMAL BLANKETING EXTENTS AS SHOWN.

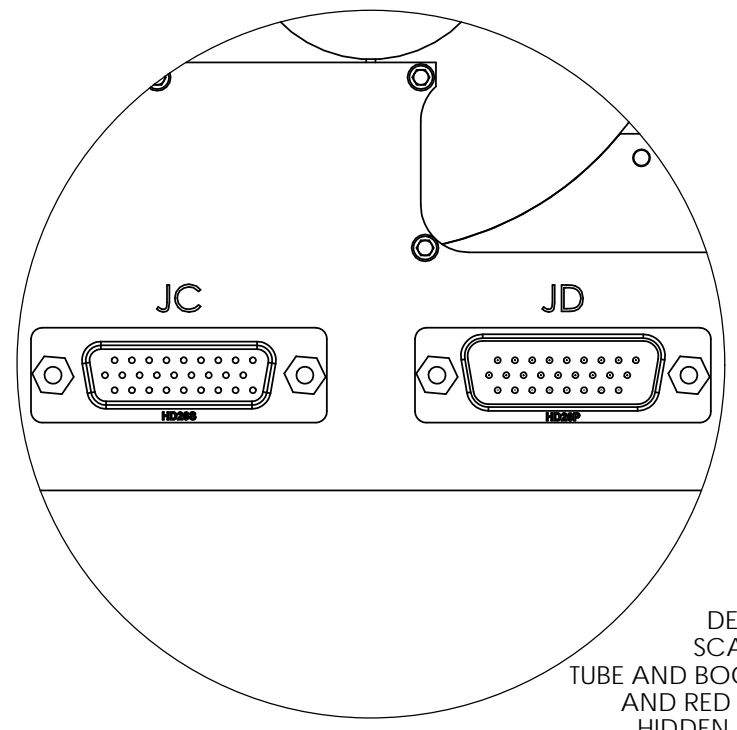
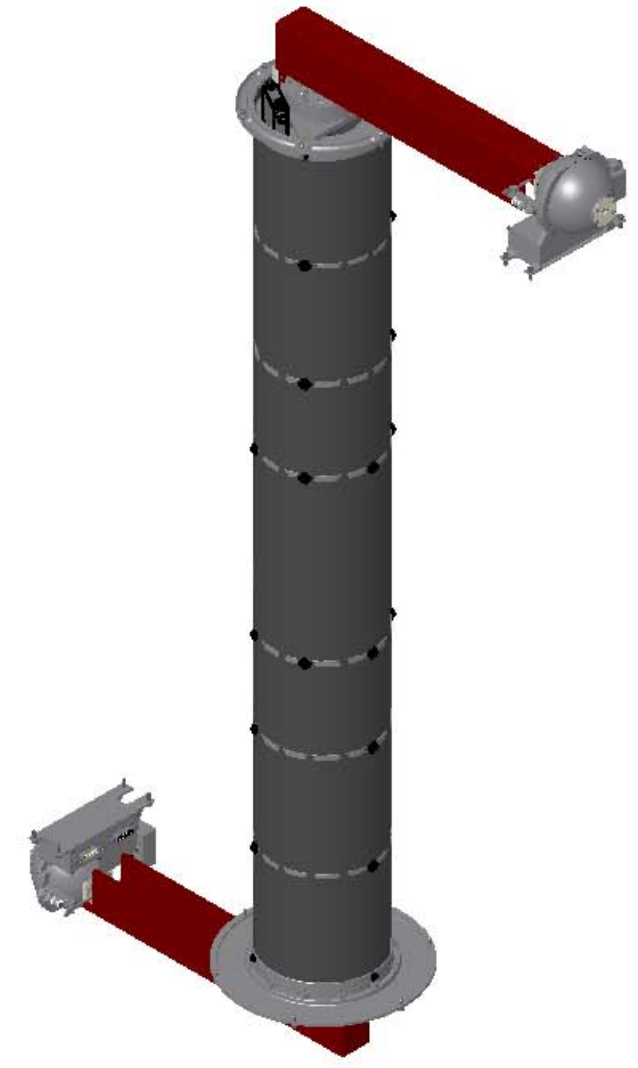
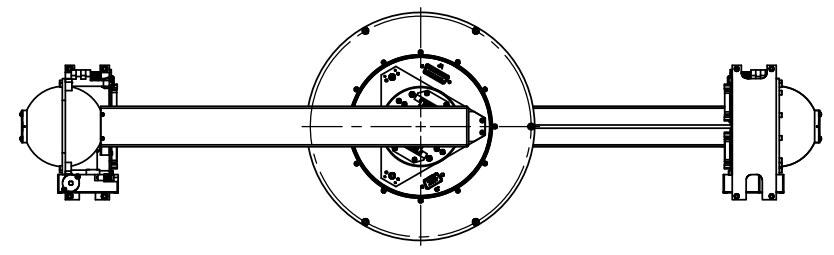
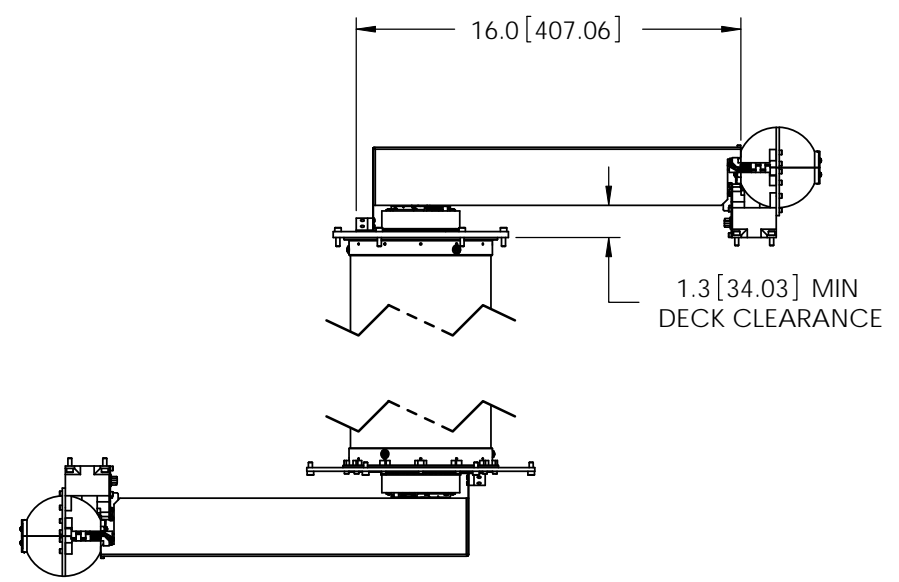
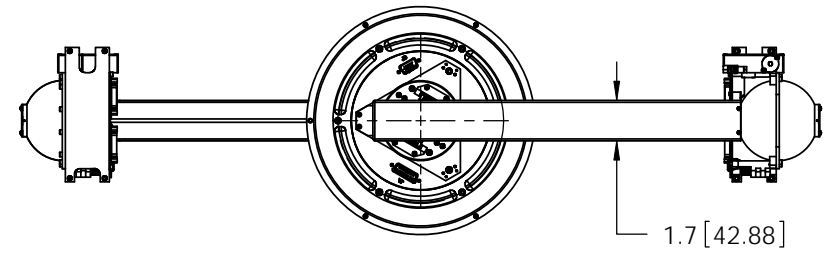
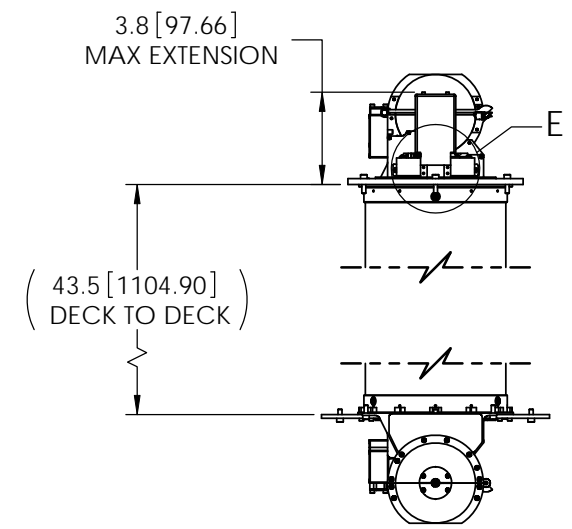
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**RBSP AXB
INTERFACE CONTROL
DRAWING**

SIZE B	DWG. NO. RBSP-AXB-ICD-001	REV. E
SCALE: 1:16	WEIGHT: lb	SHEET 2 OF 2

RED TAG ITEMS

- NOTES:
1. RED TAG COVERS TO BE REMOVED BEFORE FLIGHT.
 2. RED TAG COVERS TO MOUNT TO INSTRUMENT.
 3. RED TAG DISABLE PLUGS (NOT SHOWN) TO BE REMOVED FROM JC BEFORE FLIGHT.
 4. GREEN TAG ENABLE PLUGS (NOT SHOWN) TO BE INSTALLED IN JC BEFORE FLIGHT.



DETAIL E
SCALE 1 : 1
TUBE AND BOOM DEPLOY UNITS
AND RED TAG COVERS
HIDDEN IN THIS VIEW

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**RBSP AXB
INTERFACE CONTROL
DRAWING**

SIZE B	DWG. NO. RBSP-AXB-ICD-001	REV. E
SCALE: 1:8	WEIGHT: lb	SHEET 4 OF 4