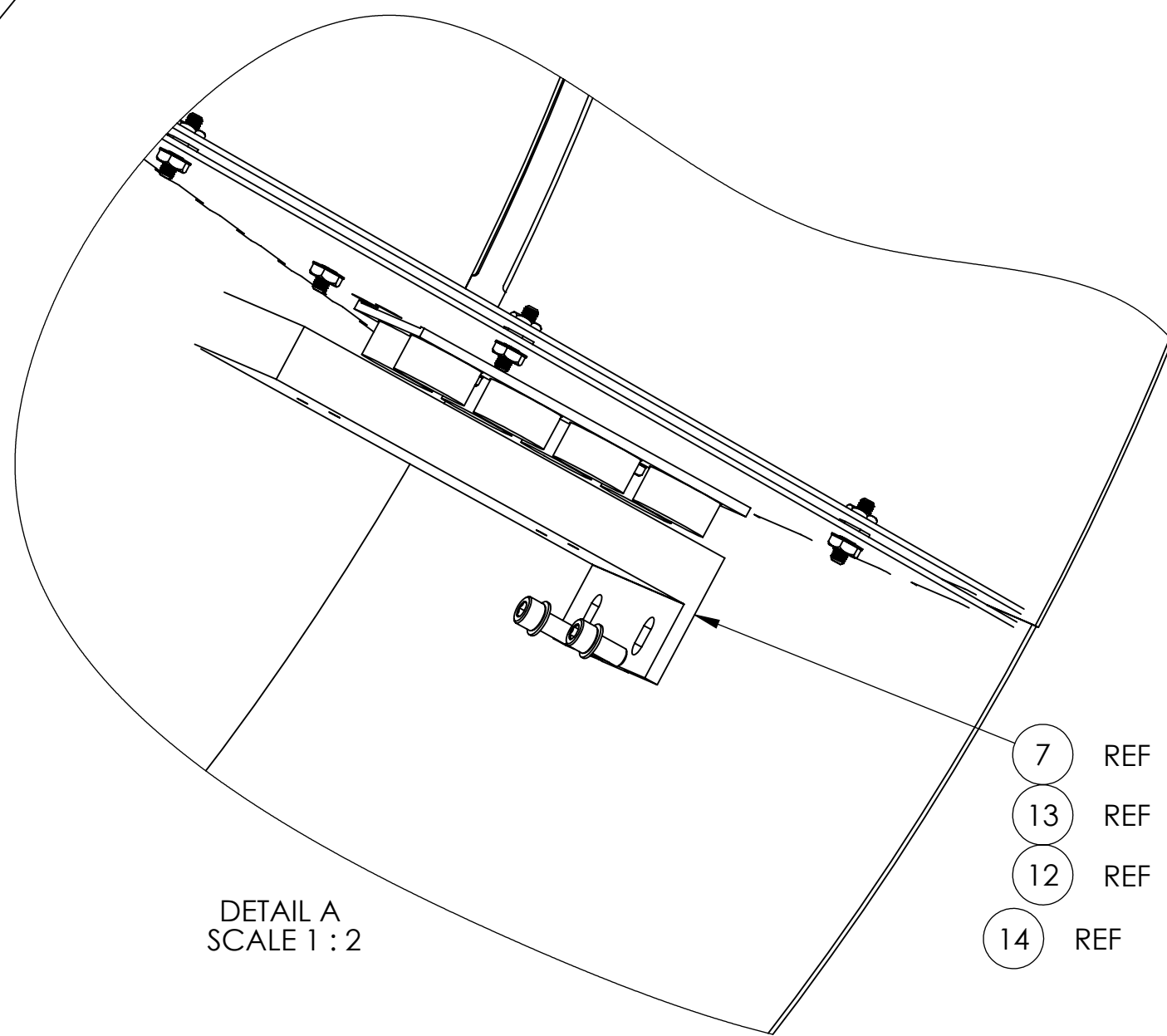
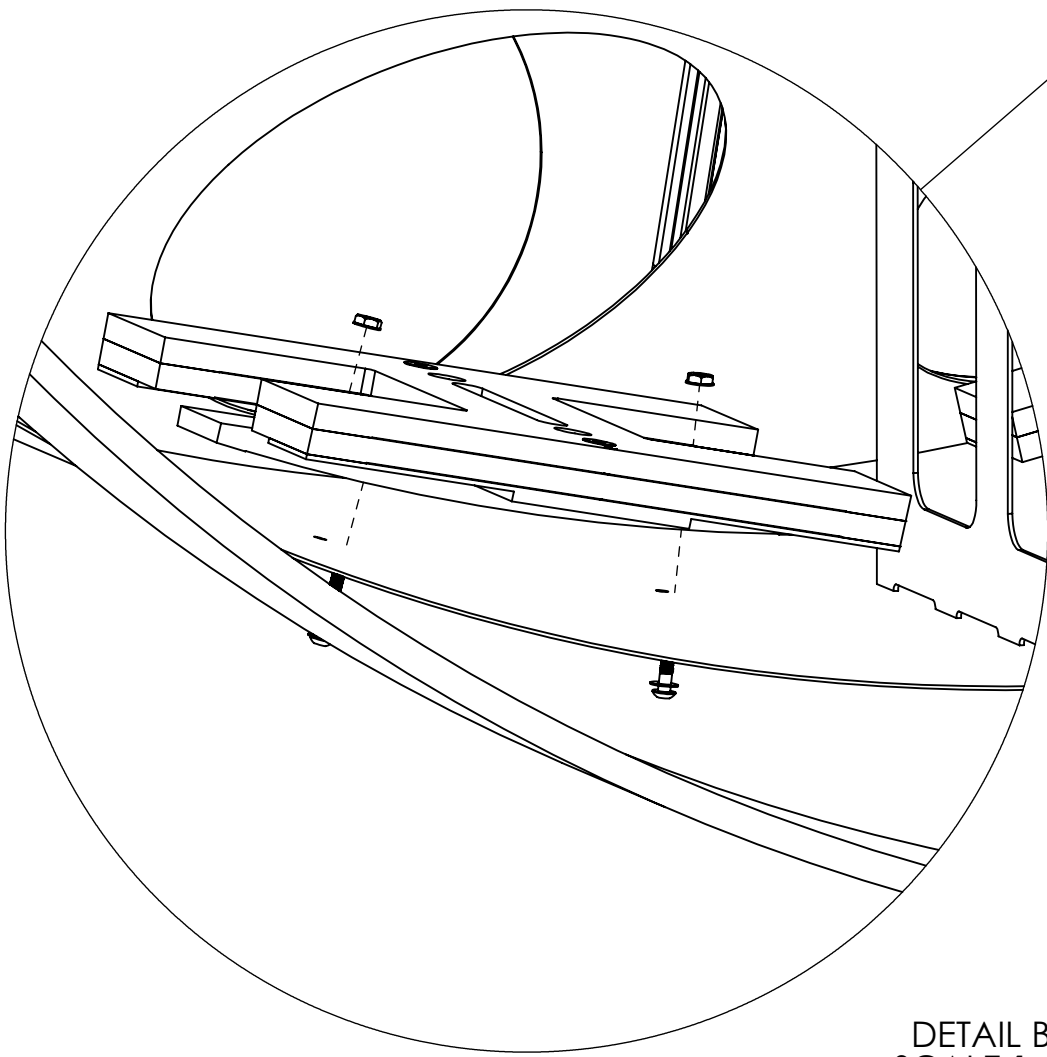
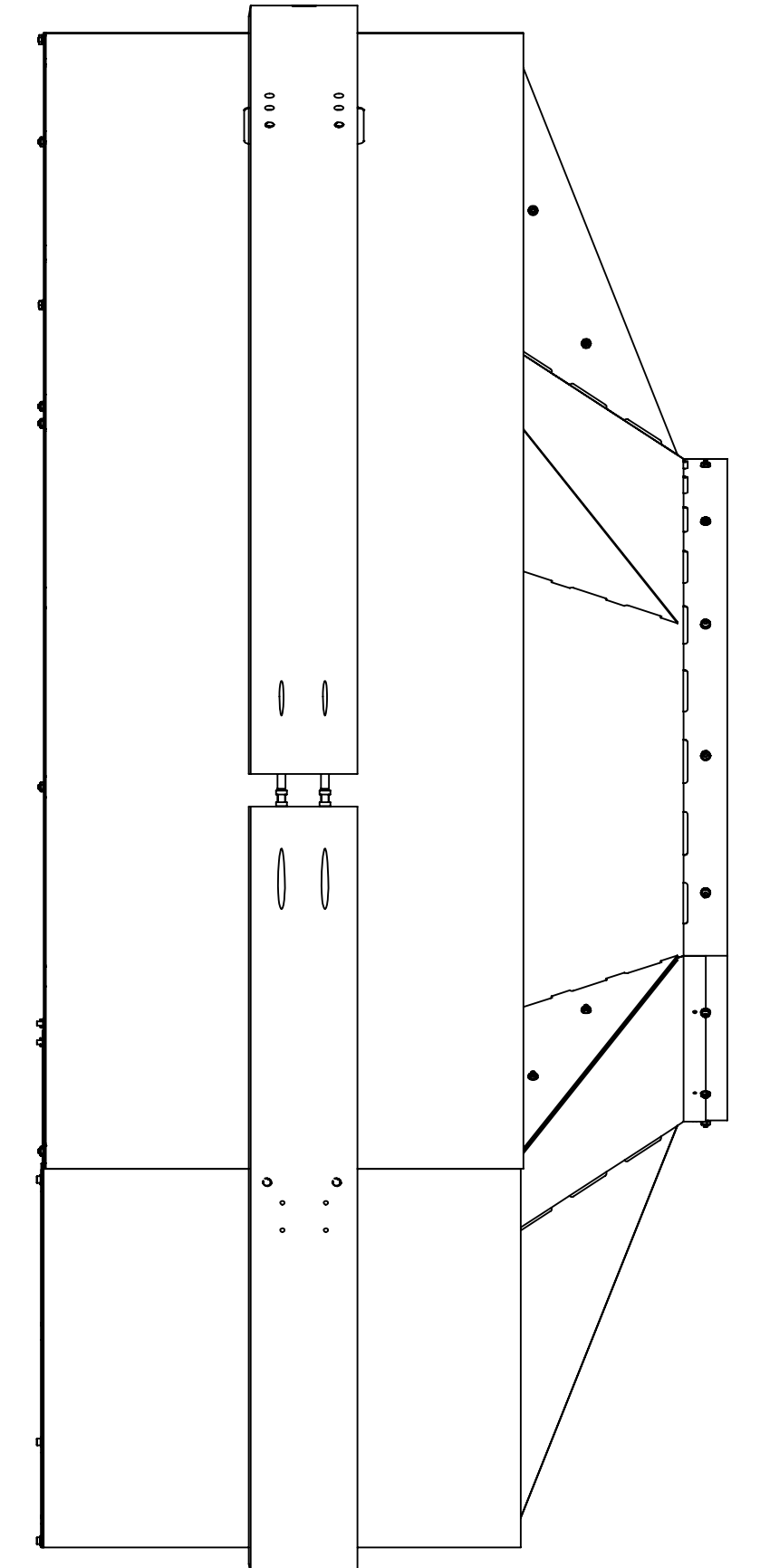
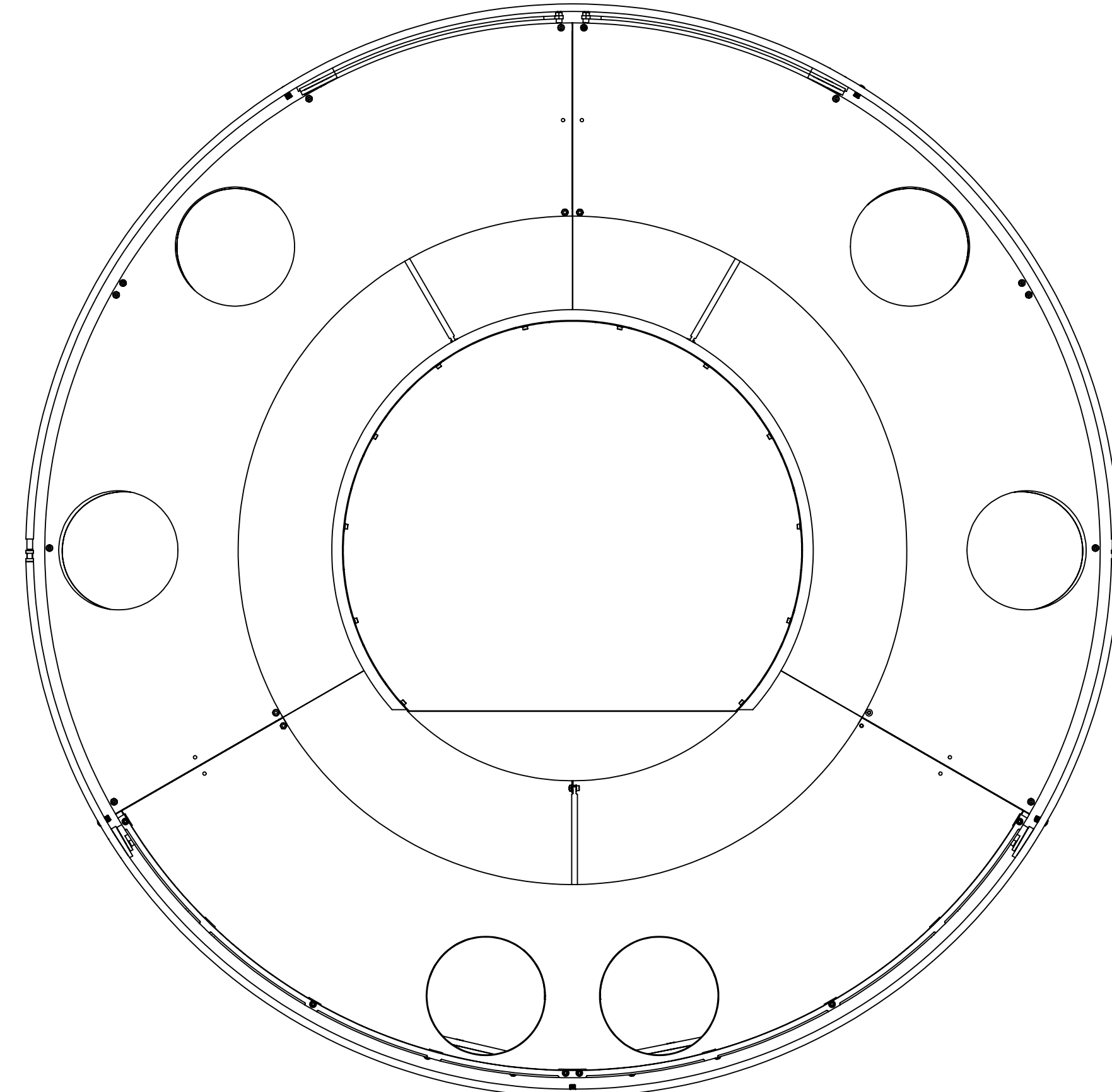
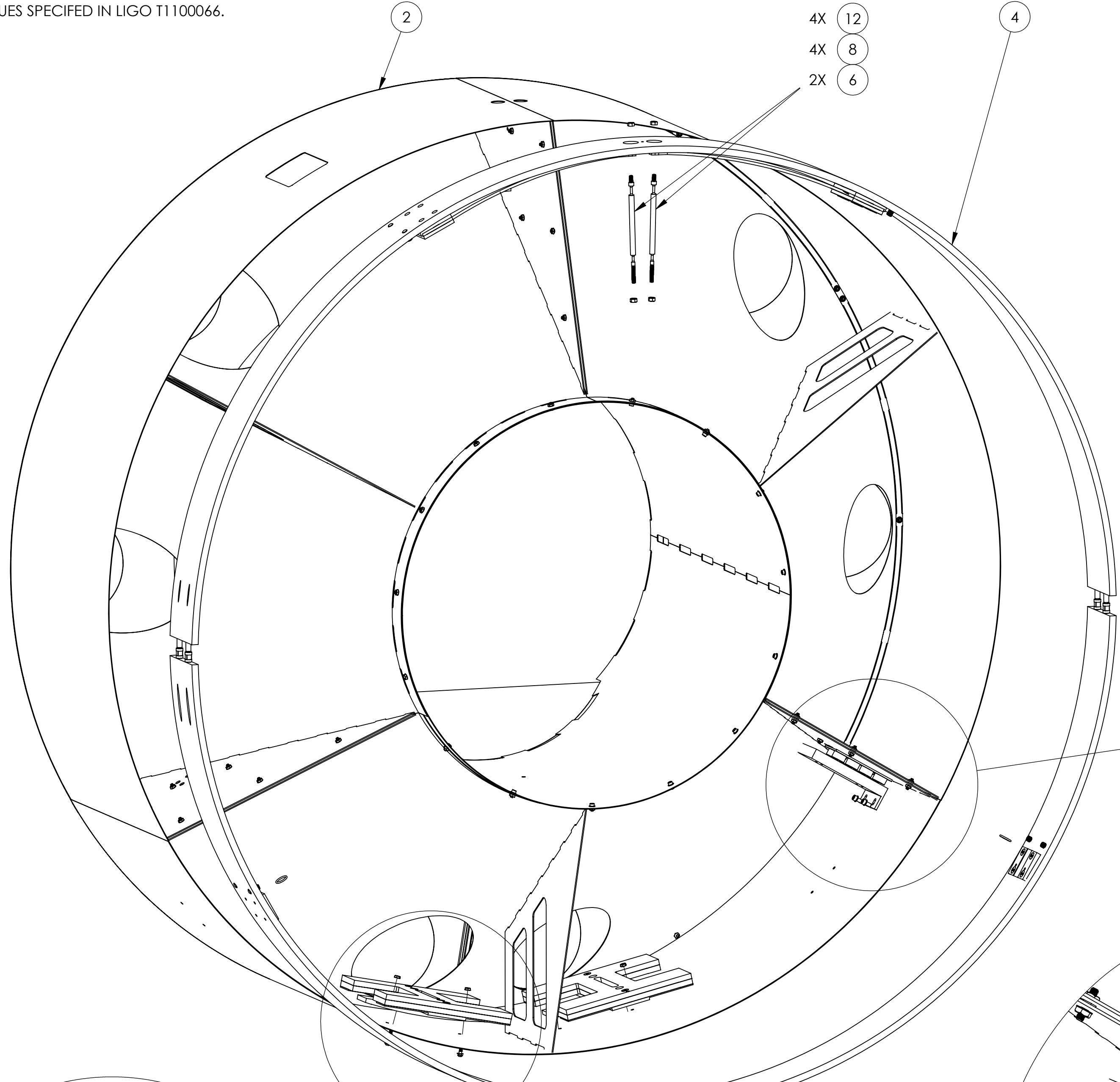


NOTES CONTINUED:

1. TWO BALANCED WEIGHT ASSEMBLIES (D1002402) TO BE INSTALLED BEFORE ATTACH BAFFLE TO SUSPENSION RING.
2. TORQUE SHCS TO VALUES SPECIFIED IN LIGO T1100066.

REV.	DATE	DCN #	DRAWING TREE #
v2	09 MAY 2011	E1000360-v2	-
v3	19 AUG 2011	E1000360-v3	-
v4	28 MAY 2013	E1000360-v6	-
v5	29 JUL 2013	-	-



- 7 REF
- 13 REF
- 12 REF
- 14 REF

QTY	REV	DCN	ITEM NO.	PART NUMBER	DESCRIPTION	MATERIAL
8	2	8	14	V1156 2-116	VITON O-RING	VITON
4	4	4	13	C-2008-N	SOCKET HEAD CAP SCREW, SHC, 1/4-20 x 1/2" L	18-8 SSTL
4	4	4	12	WF-25	FLAT WASHER 1/4 SCREW SIZE	18-8 SSTL
4	4	4	11	BU-1016-N	BUTTON HEAD SOCKET CAP SCREW, #10-32 x 1" L	18-8 SSTL
4	4	4	10	N-1032-NA	HEX NUT, 10-32 THRD SIZE	Ag-PLATED 300 SSTL
8	8	8	9	WF-10	FLAT WASHER, #10 SCREW SIZE	18-8 SSTL
4	4	4	8	N-2520-A	HEX NUT, 1/4-20 THRD SIZE	Ag-PLATED 300 SSTL
2	2	2	7	D1100821	LOWER COPPER PLATE	COPPER 99.9%
2	2	2	6	D1001970	SUSPENSION ROD	304, 316 OR 302 SSTL
2	2	2	5	D1002402	BALANCE WEIGHT ASSEMBLY	N/A
1	1	1	4	D1002084	OUTER RING ASSY	N/A
1	0	0	3	D1101398	WELDMENT ASSY_3 FP	N/A
0	1	0	2	D1101397	RADIAL SEGMENT ASSY	N/A
0	0	1	1	D1002061	WELDMENT ASSY_2 FP	N/A
-03	-02	-01	ITEM NO.	PART NUMBER	DESCRIPTION	MATERIAL

NOTES AND TOLERANCES: (UNLESS OTHERWISE SPECIFIED)	
DIMENSIONS ARE IN INCHES	
TOLERANCES: .XX ± .03 .XXX ± .010	
ANGULAR ± 1.0°	
MATERIAL	N/A
FINISH	N/A μinch

**LIGO** CALIFORNIA INSTITUTE OF TECHNOLOGY  
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

SYSTEM: **ADVANCED LIGO** SUB-SYSTEM: **AOS**

**PART NAME**  
**MANIFOLD CRYO BAFFLE TOP ASSY, ITM**

DESIGNER: H. KELMAN 3 FEB 2010 SIZE DWG. NO. **D0902617** REV. **v5**  
 DRAFTER: TQ. NGUYEN 12 OCT 2010  
 CHECKER: M. SMITH  
 APPROVAL: D. COYNE

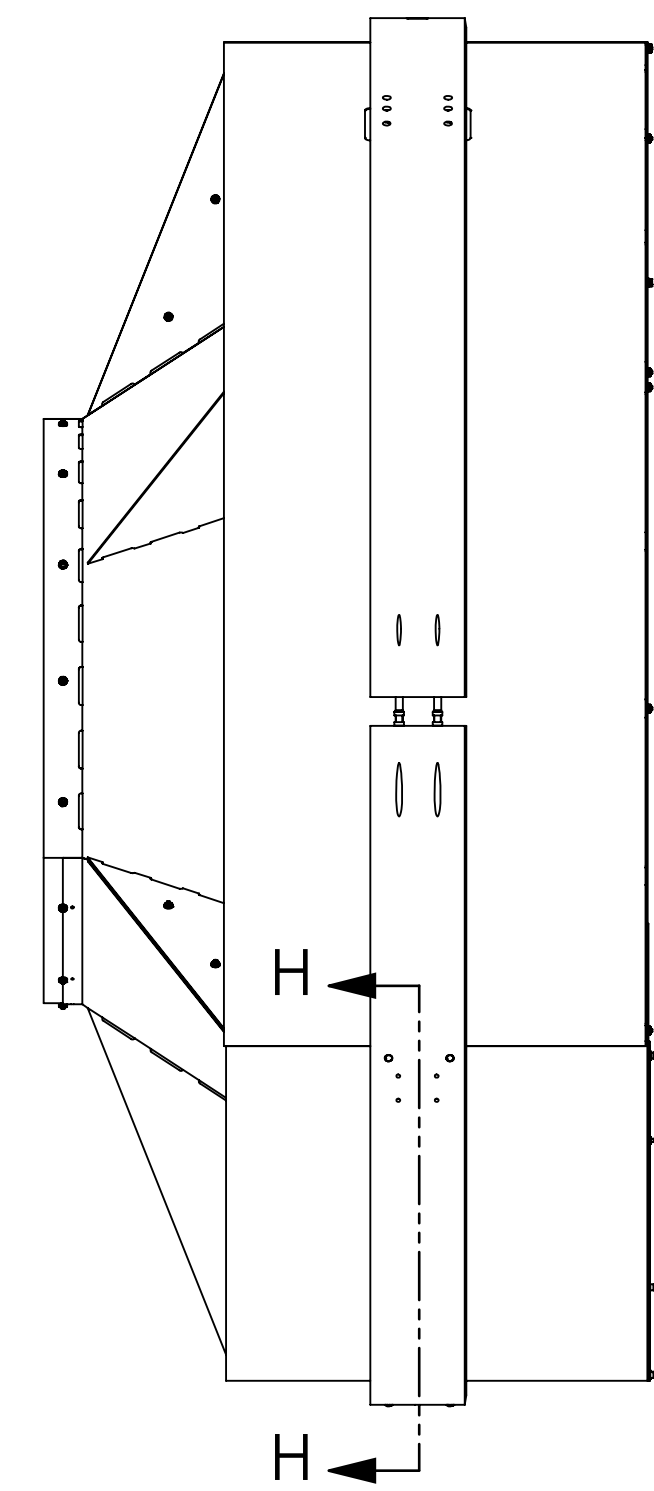
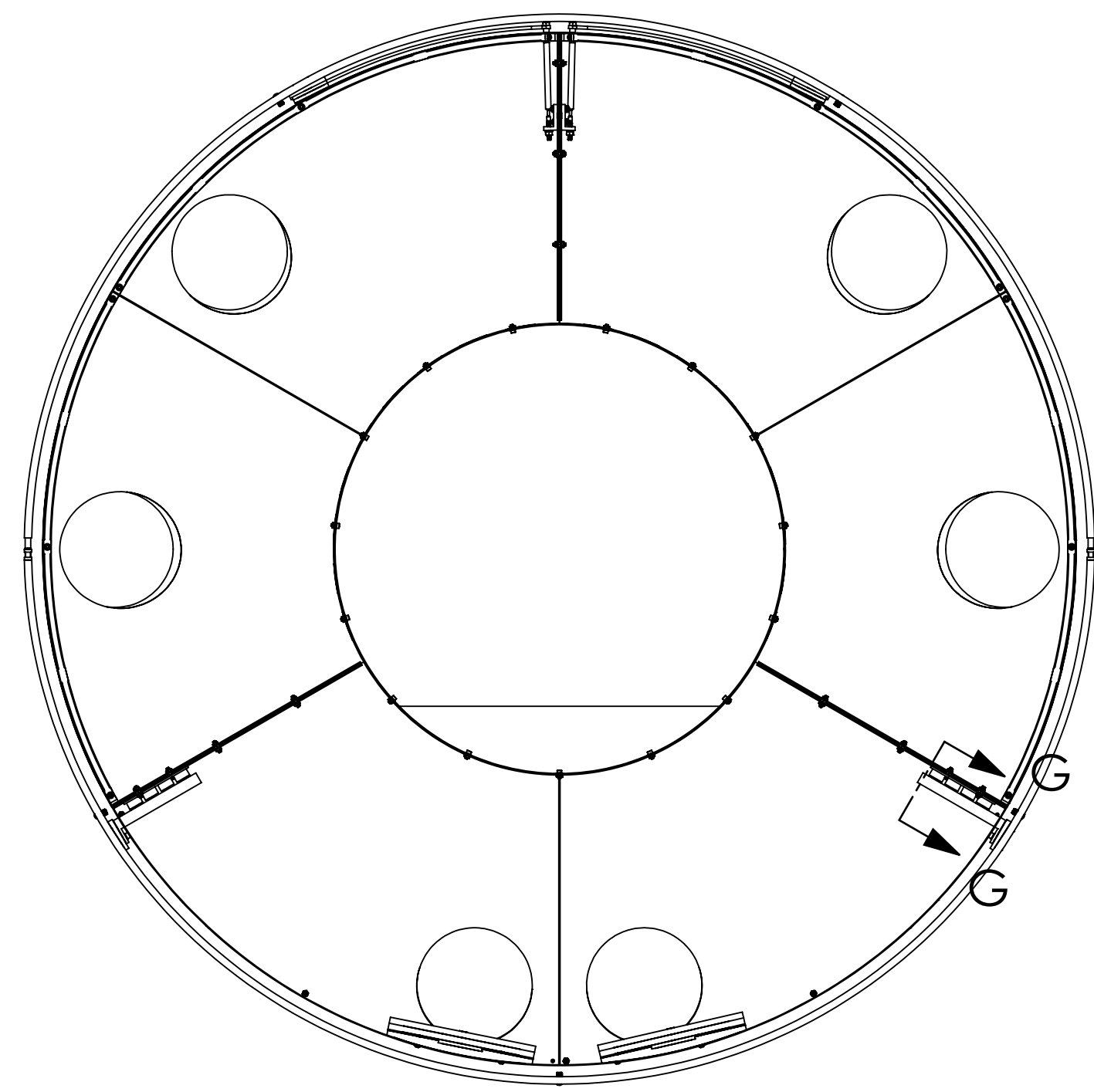
SCALE: 1:6 PROJECTION: SHEET 1 OF 5

D0902617.dwg; Manifold\_Cryo\_Baffle\_Assembly; ITM; H112; PART PDM; REV: X; 122; DRAWING PDM; REV: X; 027

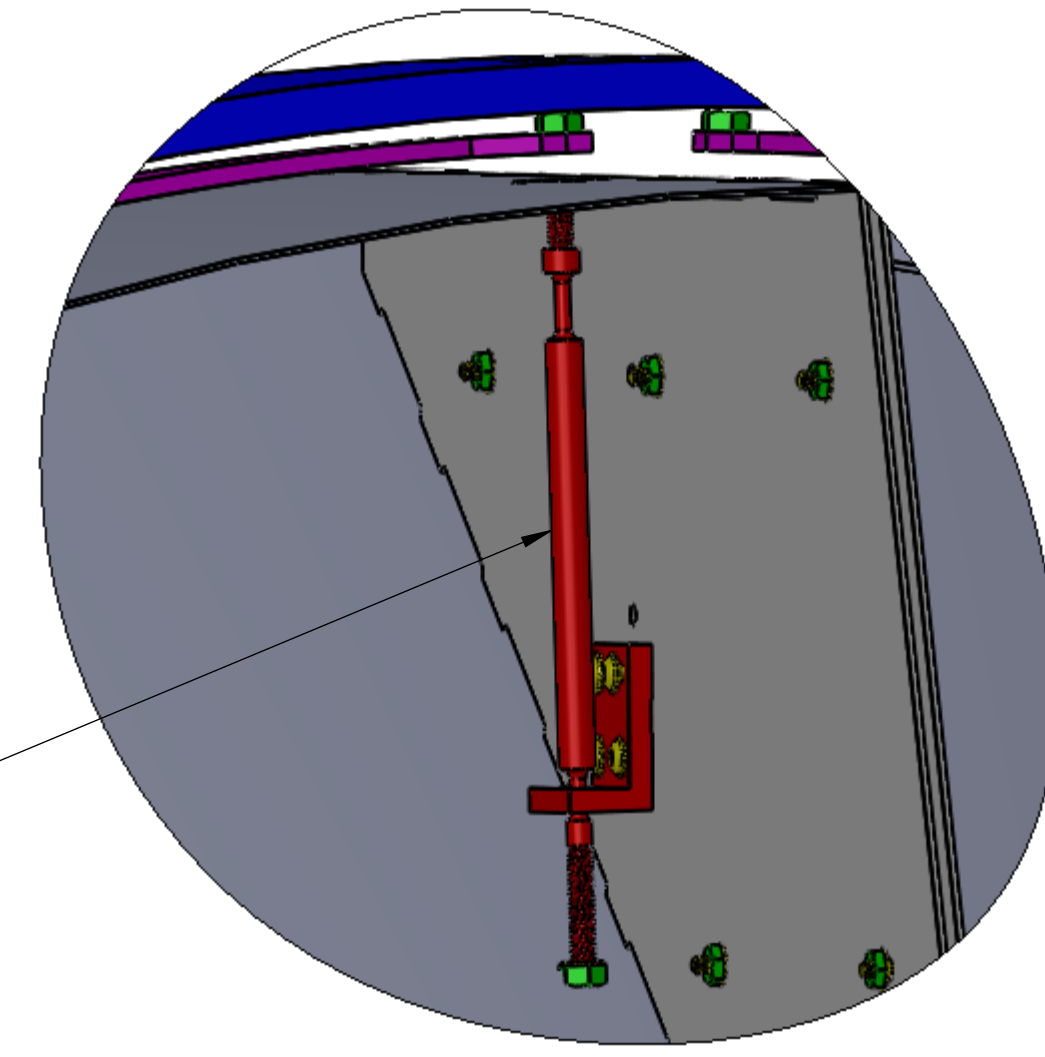
8 7 6 5 4 3 2 1

H  
G  
F  
E  
D  
C  
B  
A

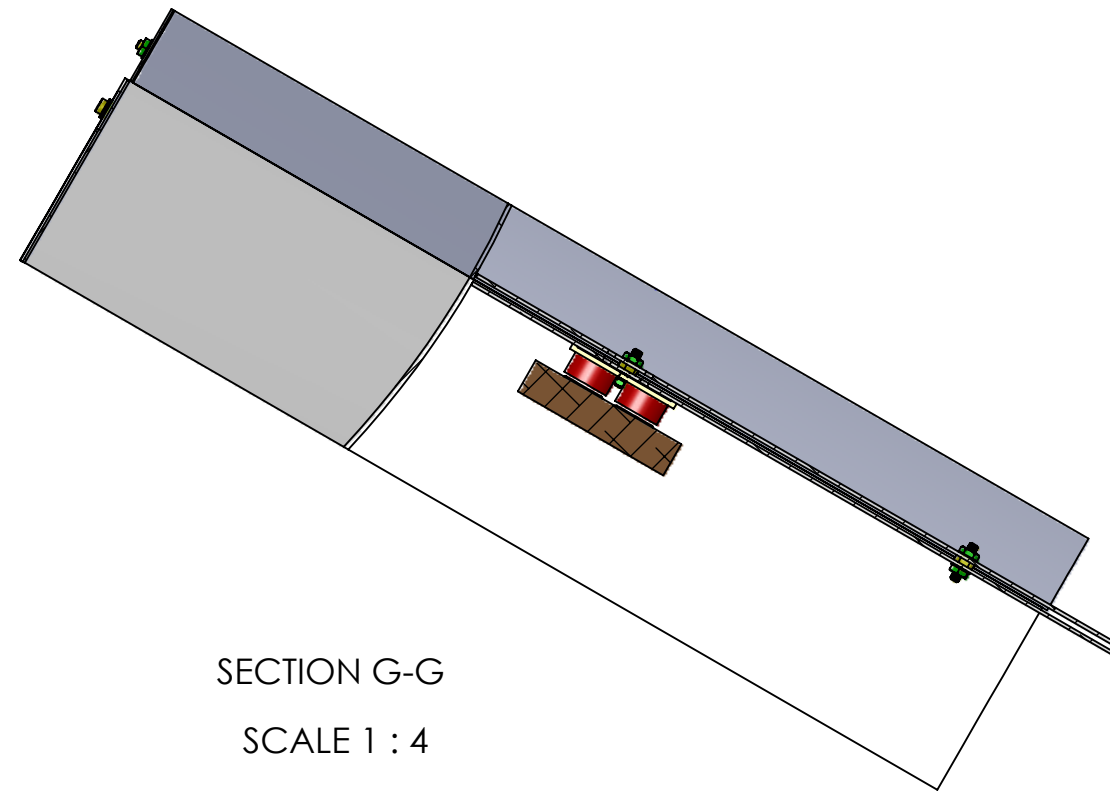
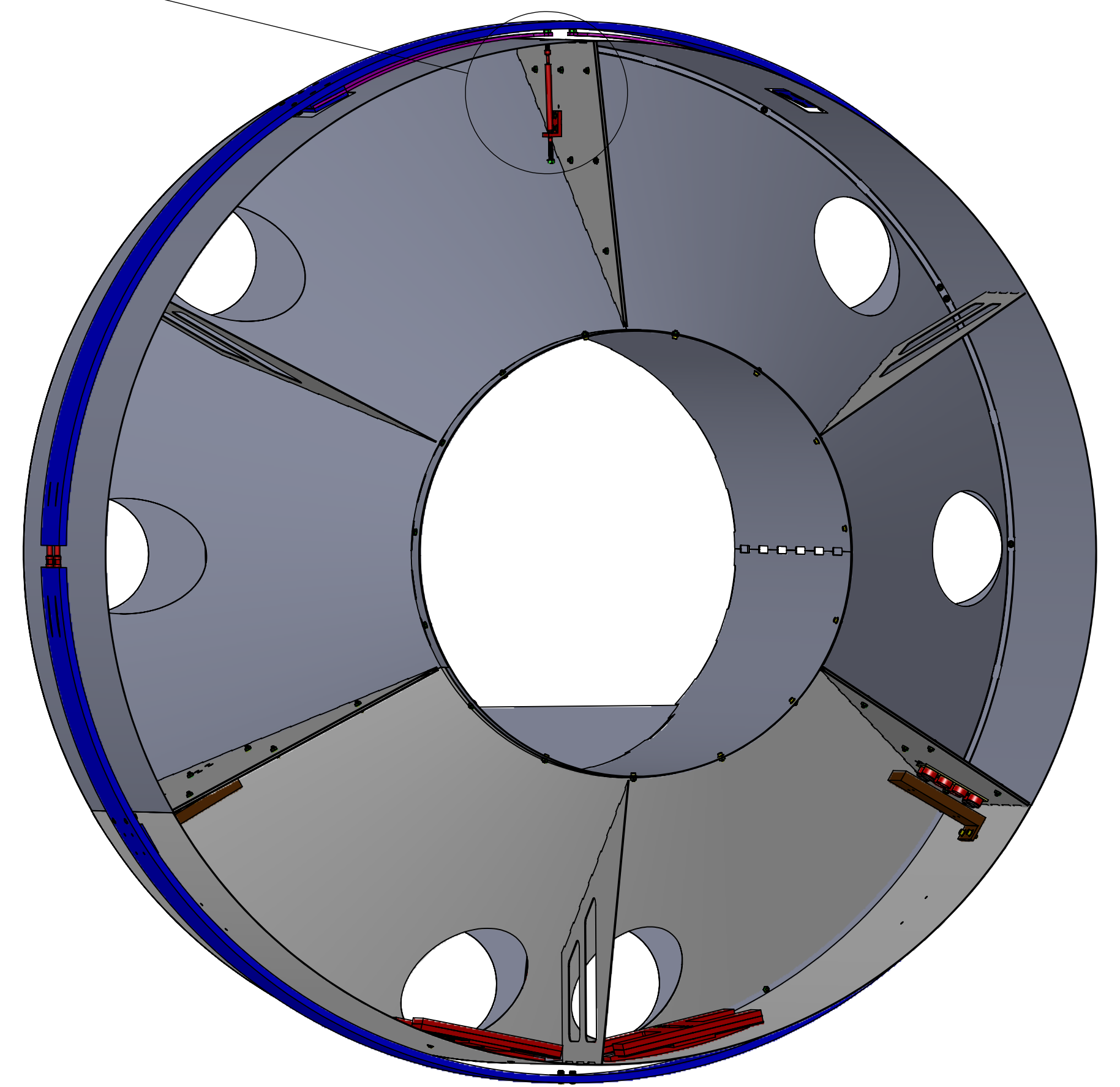
H  
G  
F  
E  
D  
C  
B  
A



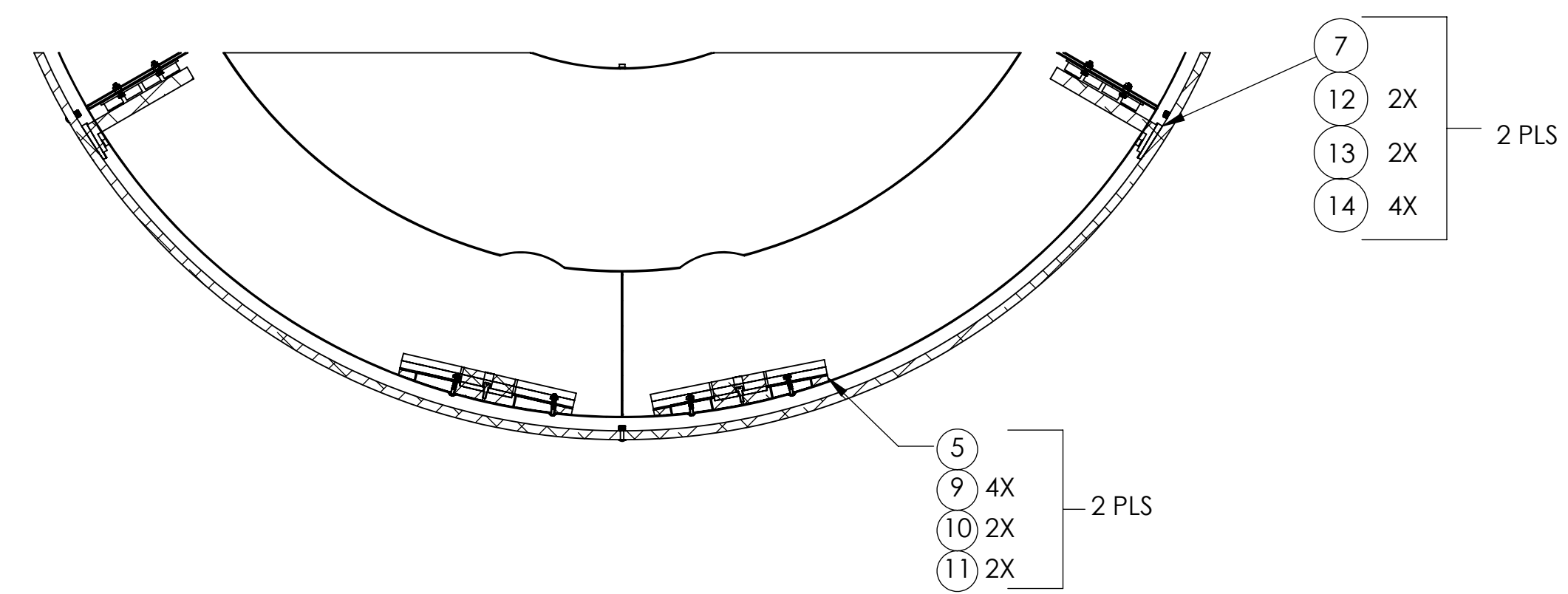
INSERT SUSPENSION ROD AND SECURE IT WITH WASHER & NUT BEFORE BRING THE BAFFLE IN TO MOUNT ON SUSPEN SPRING PLATES.



DETAIL C  
SCALE 1 : 2



SECTION G-G  
SCALE 1 : 4



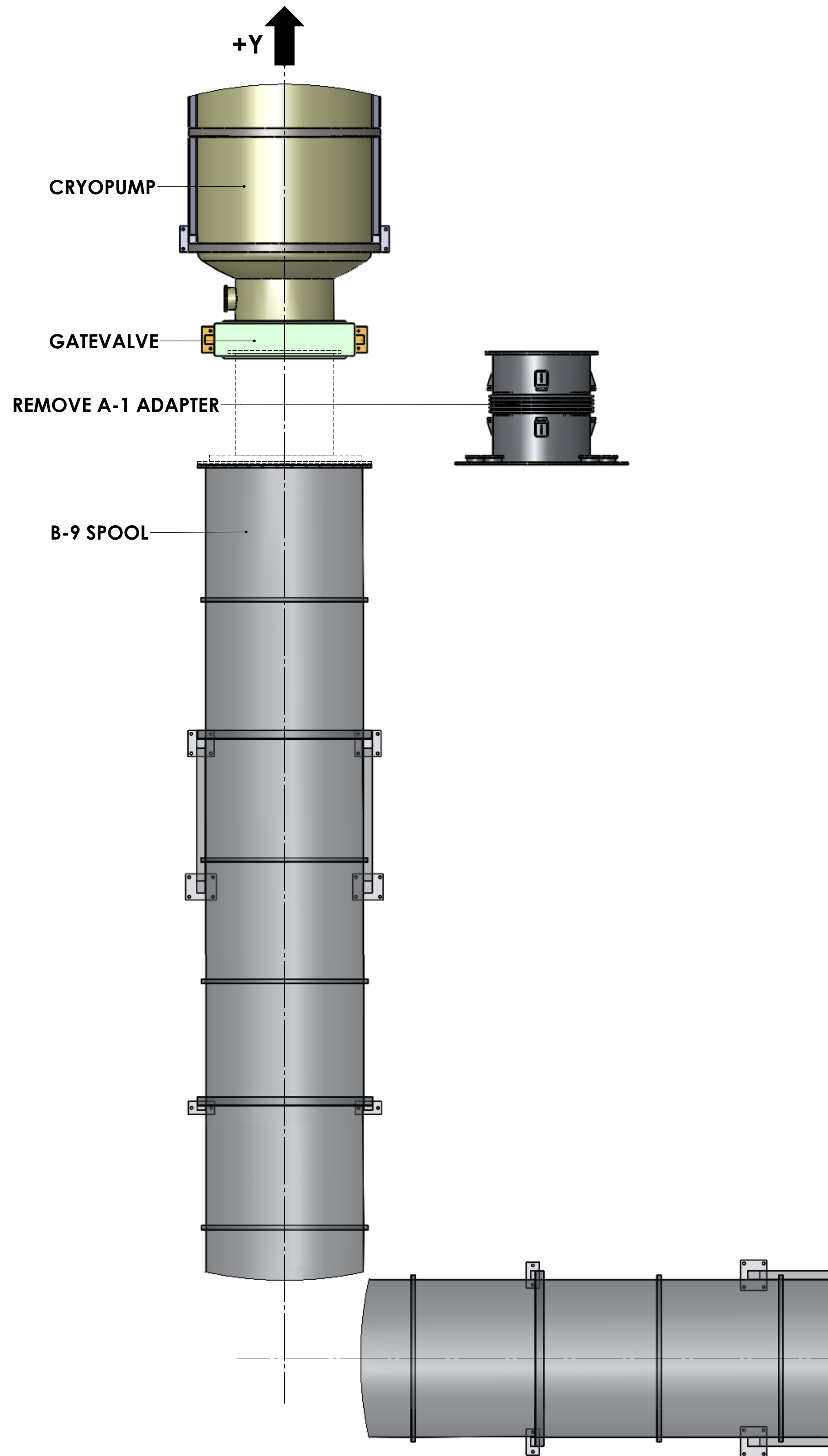
SECTION H-H  
SCALE 1 : 8

<b>LIGO</b> CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY	
SIZE DWG. NO.	REV.
<b>D</b> D0902617	v5
SCALE: 1:10	PROJECTION:
SHEET 2 OF 5	

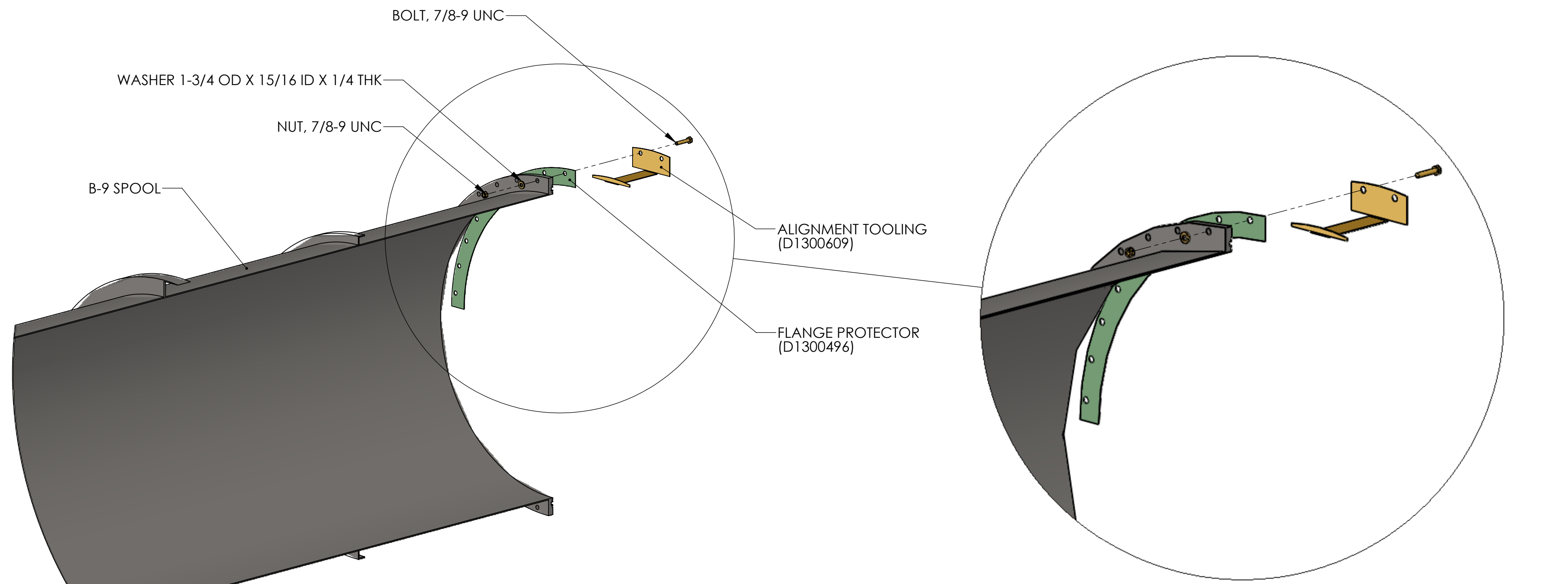
D0902617.dwg; Montfield\_Cryo\_Baffle\_Assembly; IMX-H1H2\_PART\_PDM\_REV-X:122\_DRAWING\_PDM\_REV-X:027

**INSTALLATION OF MANIFOLD CRYOPUMP BAFFLE INTO B-9 SPOOL (LHO & LLO CORNER STATION)**

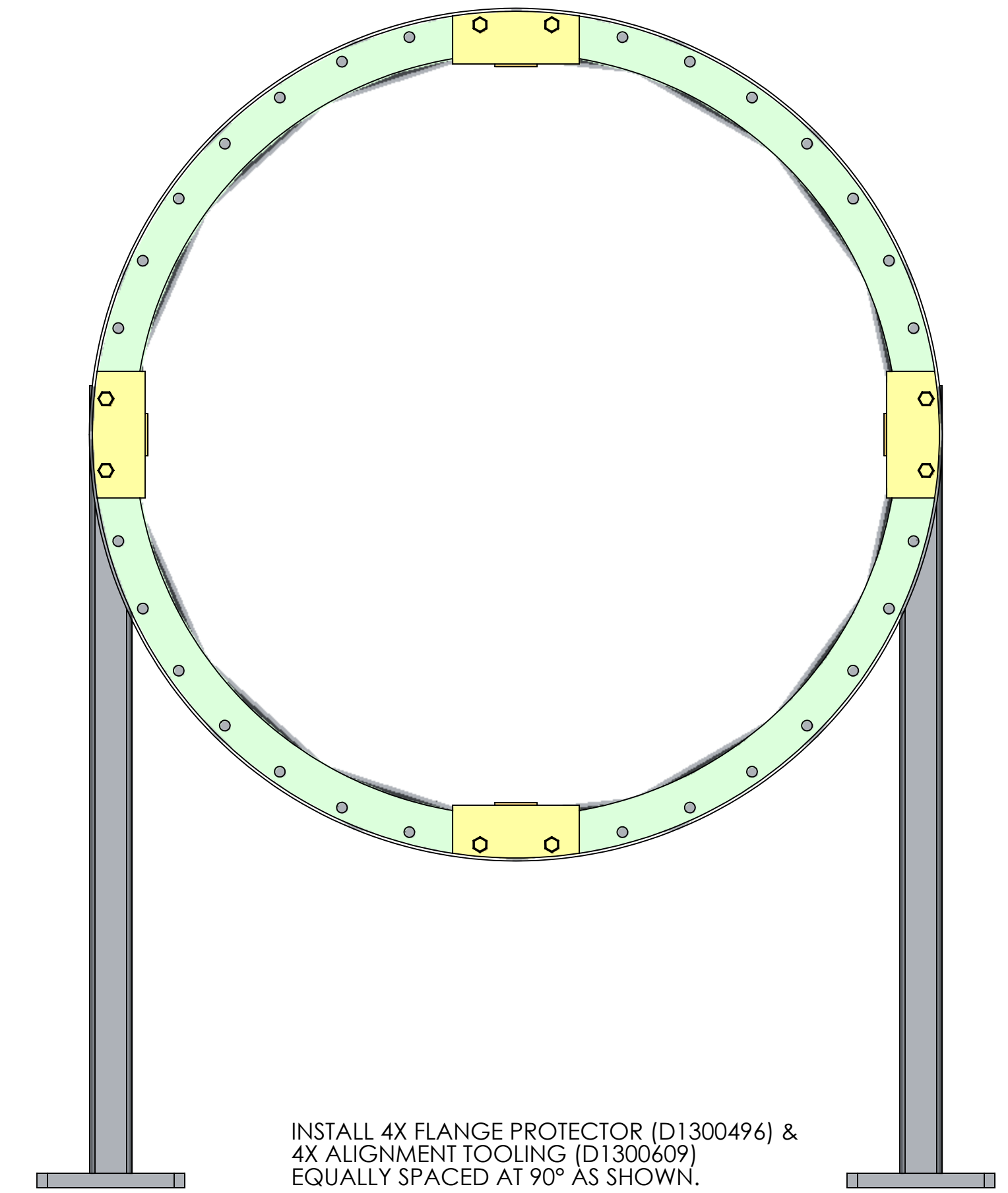
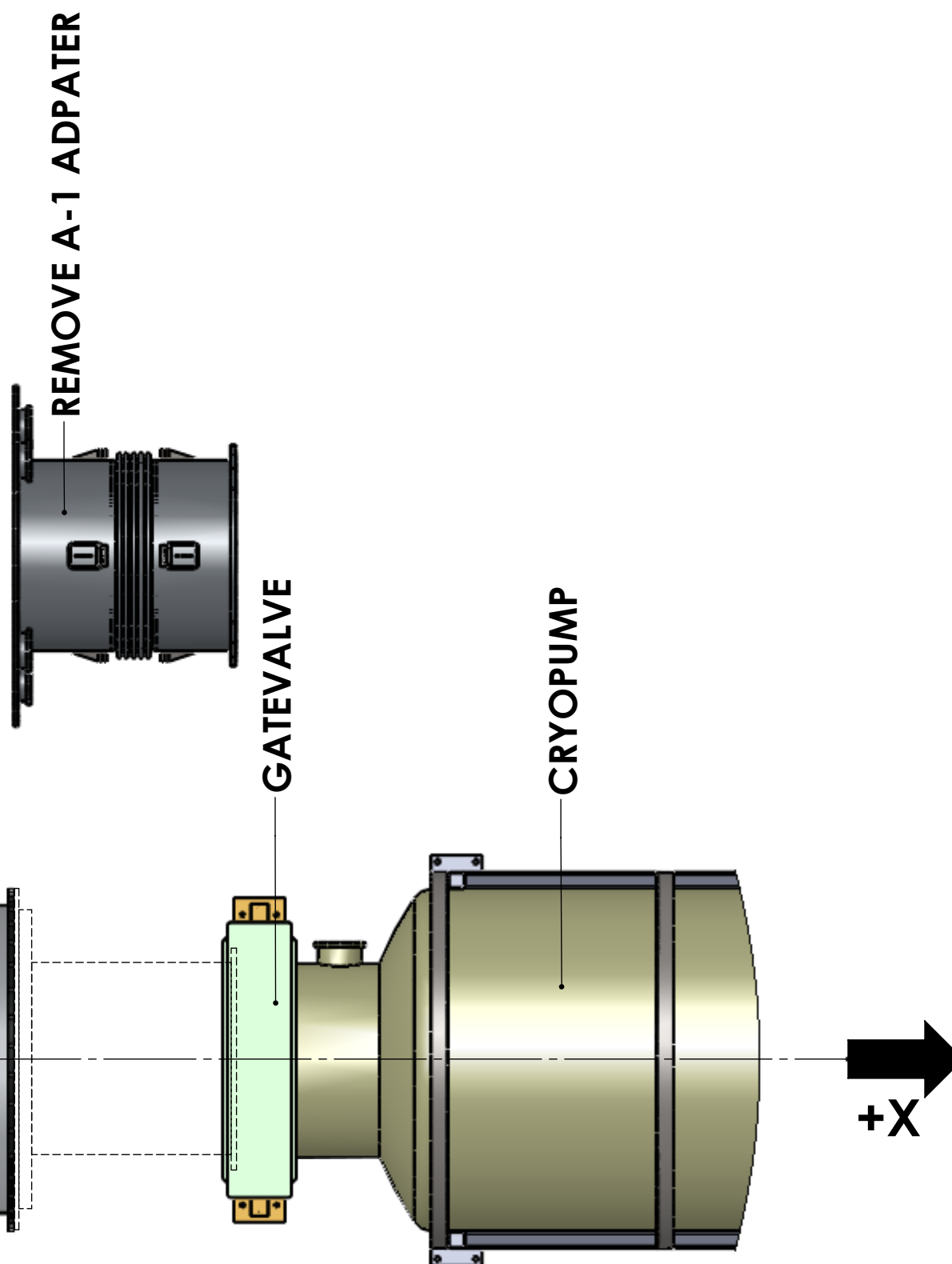
**1) PARTIAL VE LAYOUT+X & +Y ARM (LHO & LLO CORNER STATION)**



**2) INSTALL FLANGE PROTECTOR AND ALIGNMENT TOOLING AT B-9 SPOOL**

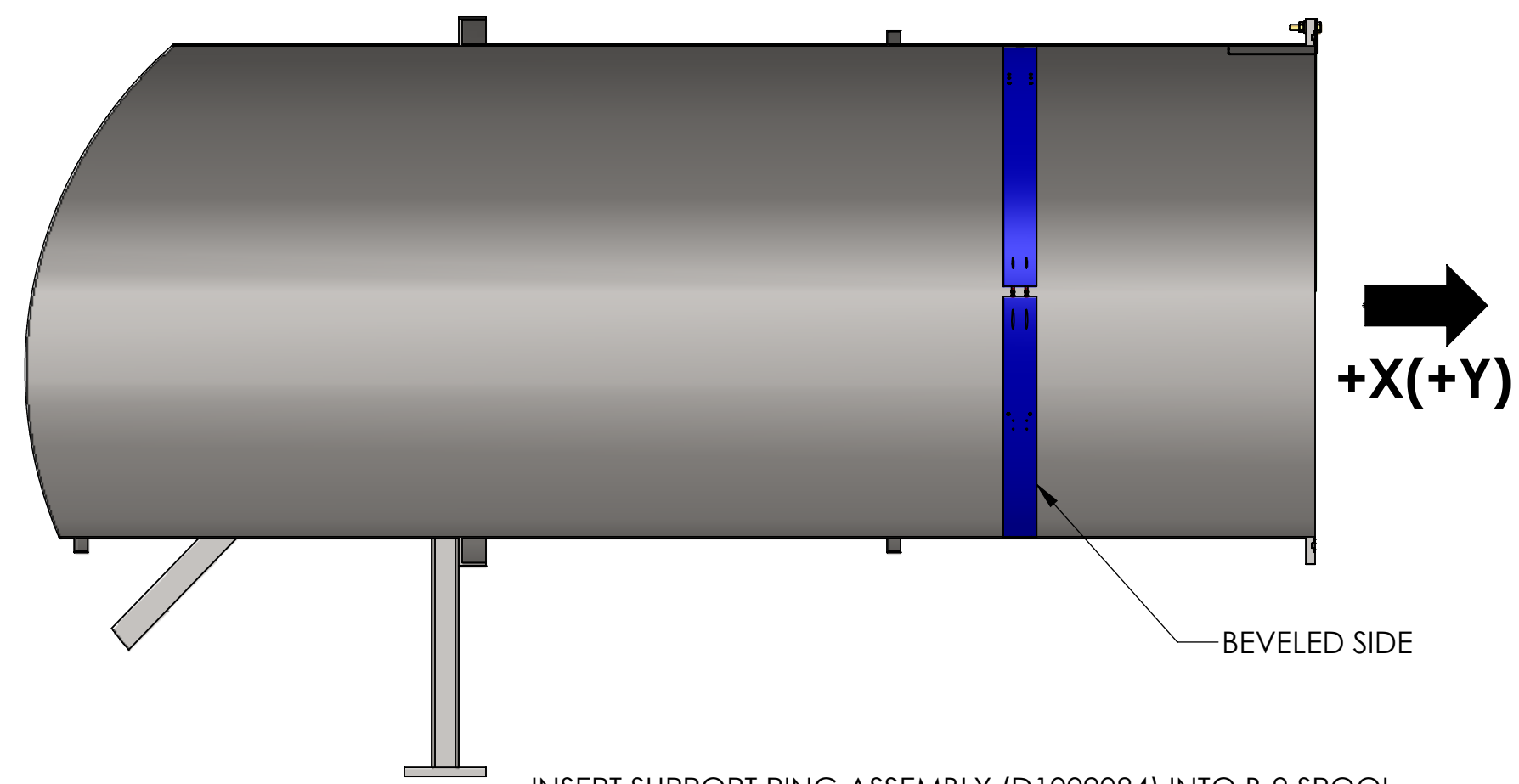


USING TEMPORARLY THE SAME HARDWARE (BOLT, NUT & WASHER) USED WHEN A-1 ADAPTER IS ATTACHED TO B-9 SPOOL, INSTALL FLANGE PROTECTOR AND ALIGNMENT TOOLING AS SHOWN IN DETAIL VIEW



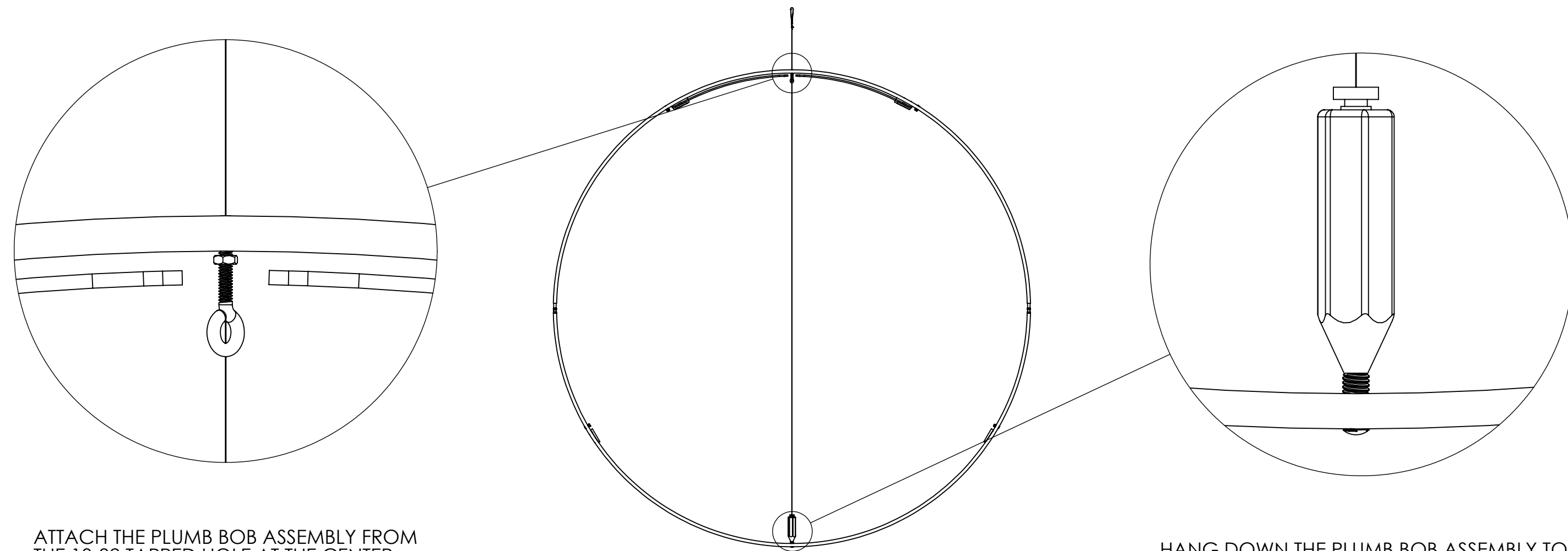
D0902617.dwg; Manifold\_Cryo\_Baffle\_Assembly; DIM: H1H2; PART PDM; REV: X006; DRAWING PDM; REV: X027

### 3) INSERT SUPPORT RING ASSEMBLY (D1002084) INSIDE B-9 SPOOL



INSERT SUPPORT RING ASSEMBLY (D1002084) INTO B-9 SPOOL. SET IT UP FAR ENOUGH INSIDE THE SPOOL SO THERE IS ROOM TO ALIGN IT TO THE ALIGNMENT TOOLING.  
NOTE: MAKE SURE THE BEVELED SIDE OF THE SUPPORT RING FACE AWAY FROM THE ITMX.

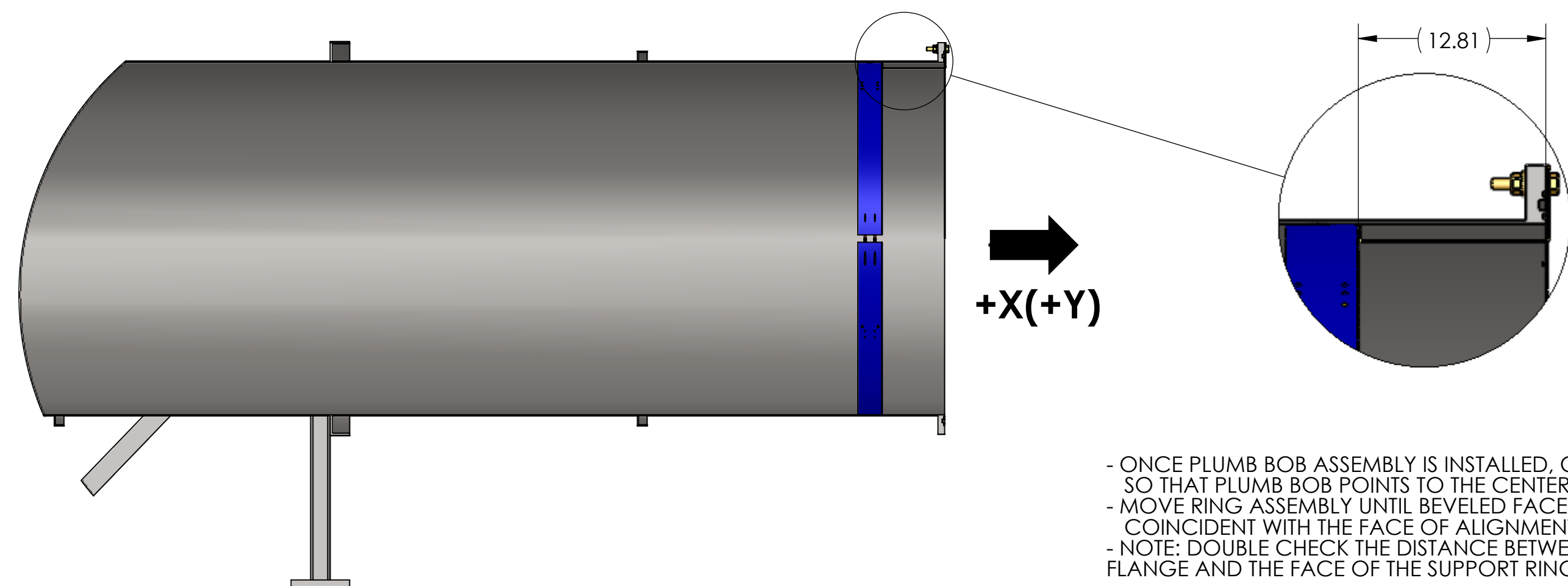
### 4) INSTALL PLUMB BOB ALIGNMENT ASSEMBLY (D1102170)



ATTACH THE PLUMB BOB ASSEMBLY FROM THE 10-32 TAPPED HOLE AT THE CENTER OF THE TOP RIN.

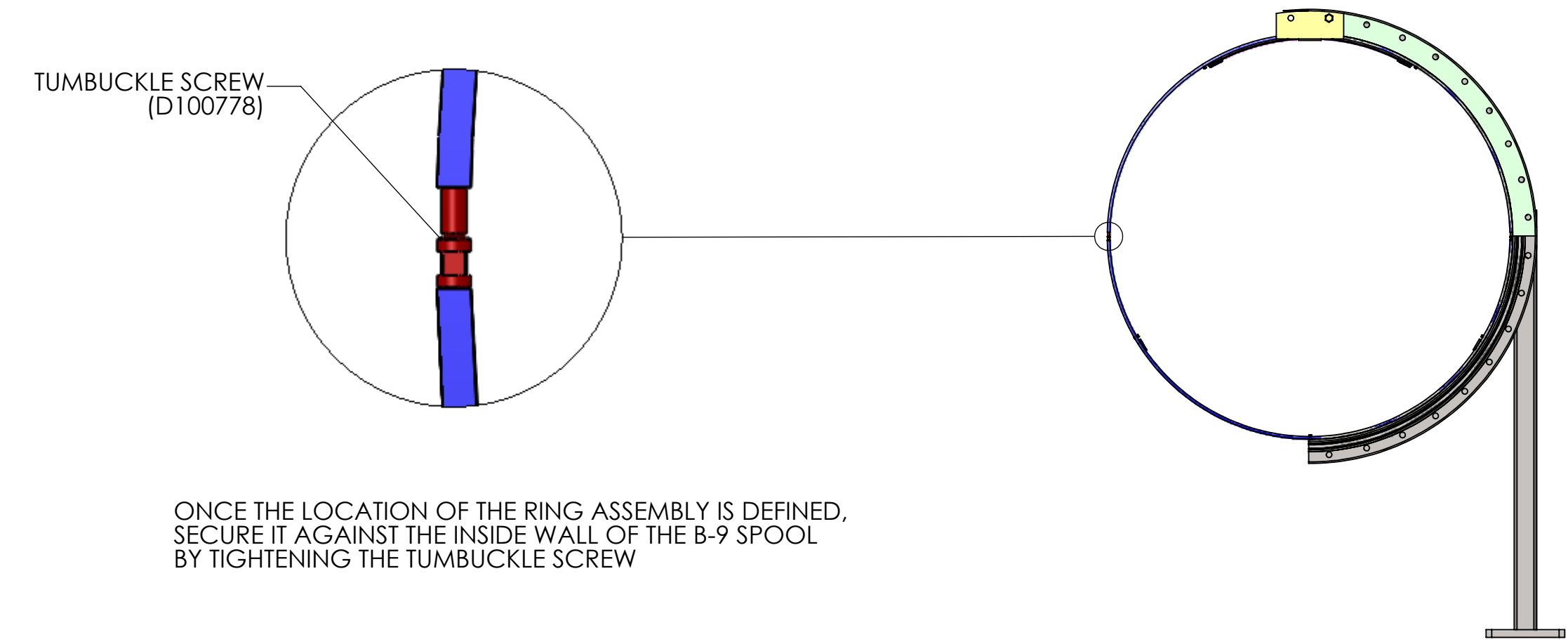
HANG DOWN THE PLUMB BOB ASSEMBLY TO JUST ABOVE THE .25" CLEARANCE HOLE AT THE CENTER OF THE BOTTOM RING

### 5) DEFINE LOCATION OF SUPPORT ASSEMBLY (D1002084)



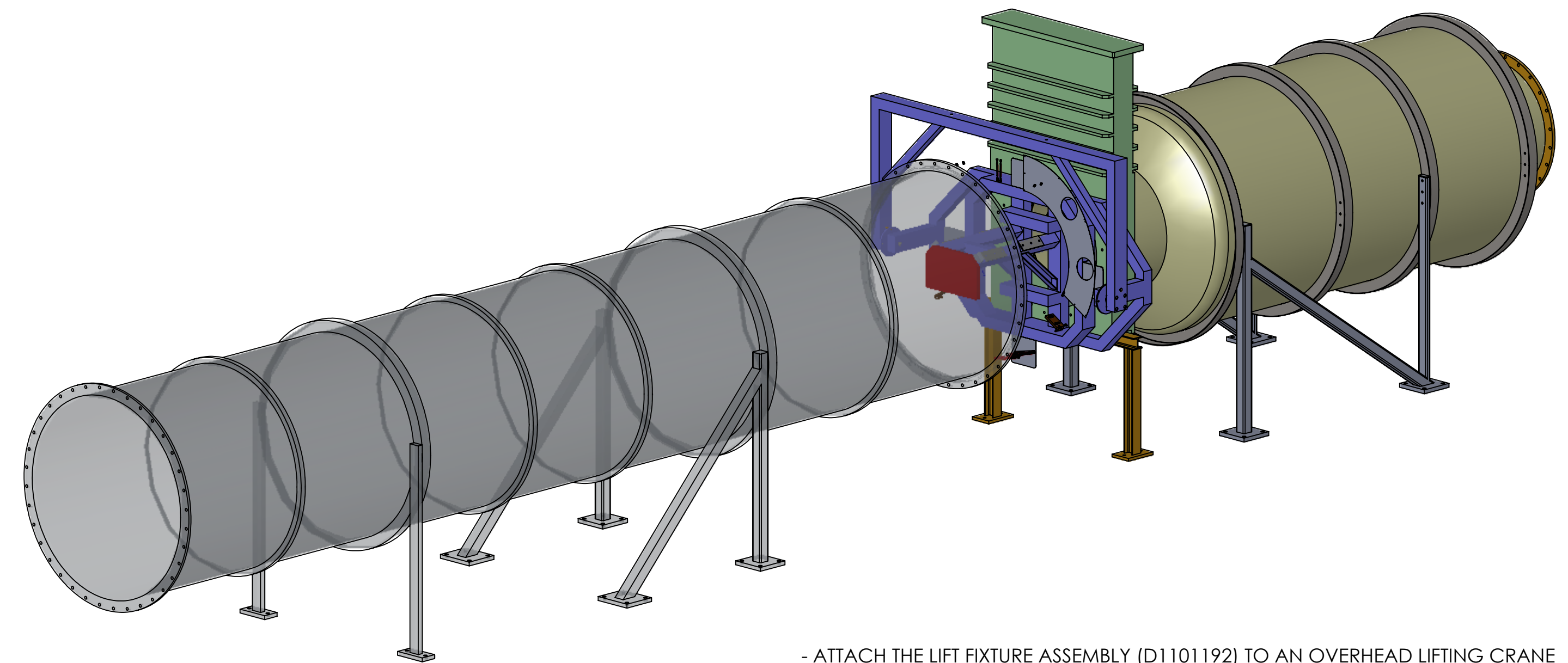
- ONCE PLUMB BOB ASSEMBLY IS INSTALLED, CLOCK RING ASSEMBLY SO THAT PLUMB BOB POINTS TO THE CENTER OF HOLE  
- MOVE RING ASSEMBLY UNTIL BEVELED FACE OF RING ASSEMBLY IS COINCIDENT WITH THE FACE OF ALIGNMENT TOOLING.  
- NOTE: DOUBLE CHECK THE DISTANCE BETWEEN THE FACE OF THE FLANGE AND THE FACE OF THE SUPPORT RING ASSEMBLY IS 12.81"

### 6) SECURE THE SUPPORT RING ASSEMBLY

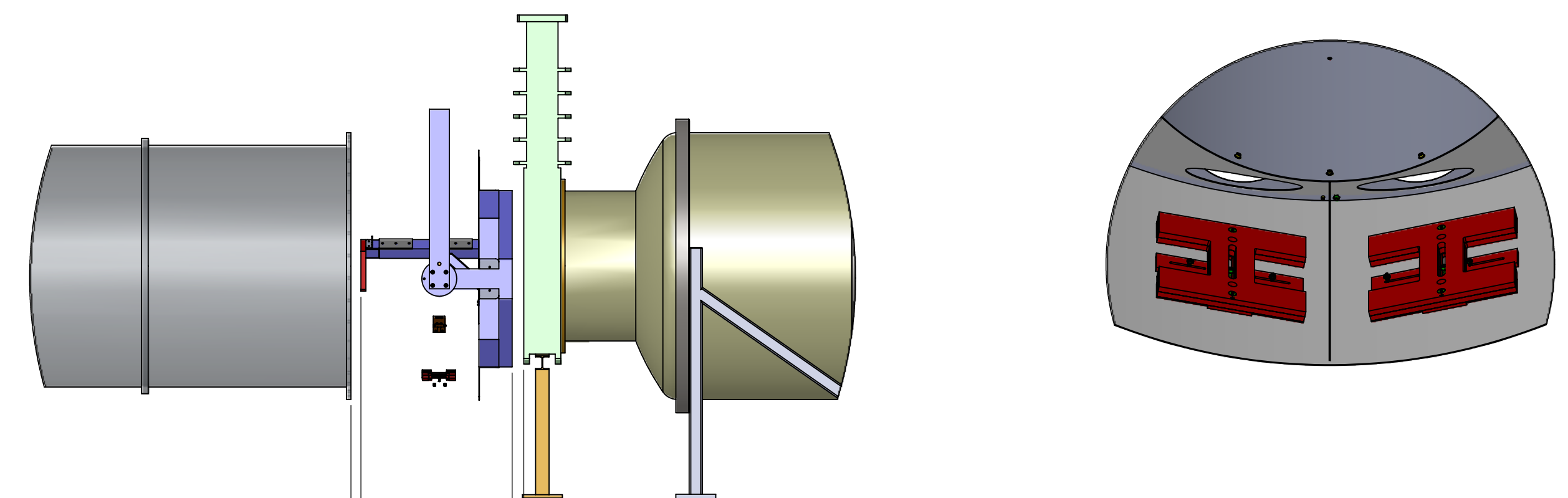


ONCE THE LOCATION OF THE RING ASSEMBLY IS DEFINED, SECURE IT AGAINST THE INSIDE WALL OF THE B-9 SPOOL BY TIGHTENING THE TUMBUCKLE SCREW

### 7) COMPLETE INSTALLATION OF MANIFOLD CRYOPUMP BAFFLE ASSEMBLY



- ATTACH THE LIFT FIXTURE ASSEMBLY (D1101192) TO AN OVERHEAD LIFTING CRANE BY MEANS OF LIFTING STRAPS.  
- NOTE: FOR A DETAILED INSTALLATION PROCEDURE OF THE MANIFOLD CRYOPUMP BAFFLE REFER TO INSTALLATION DOCUMENT E1300607

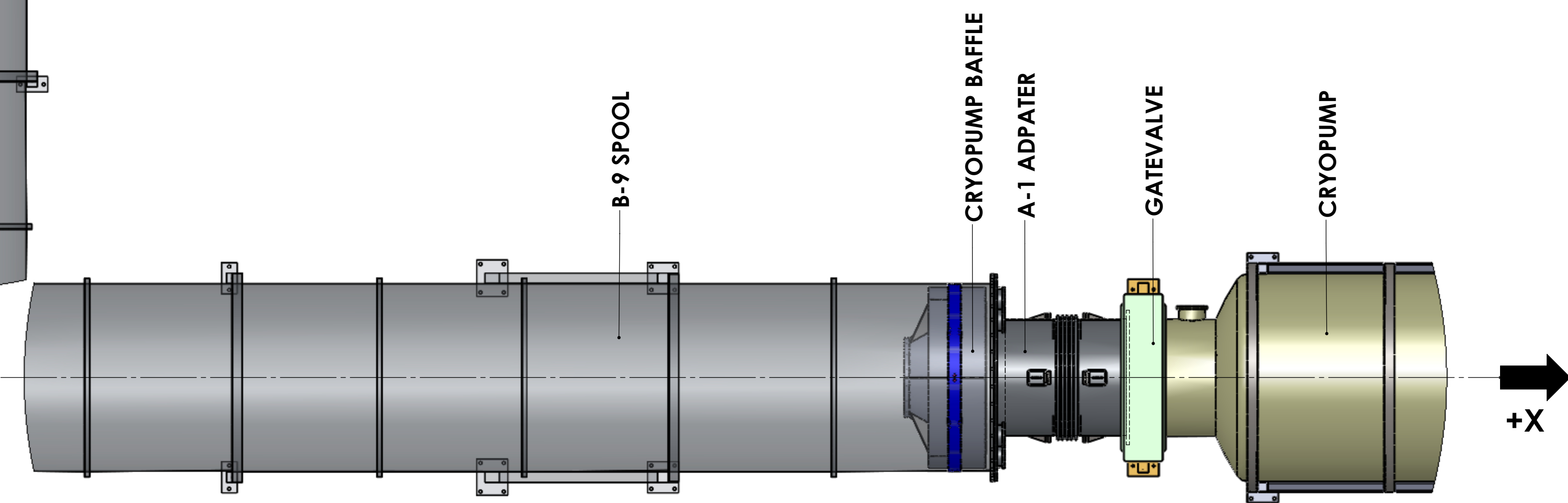
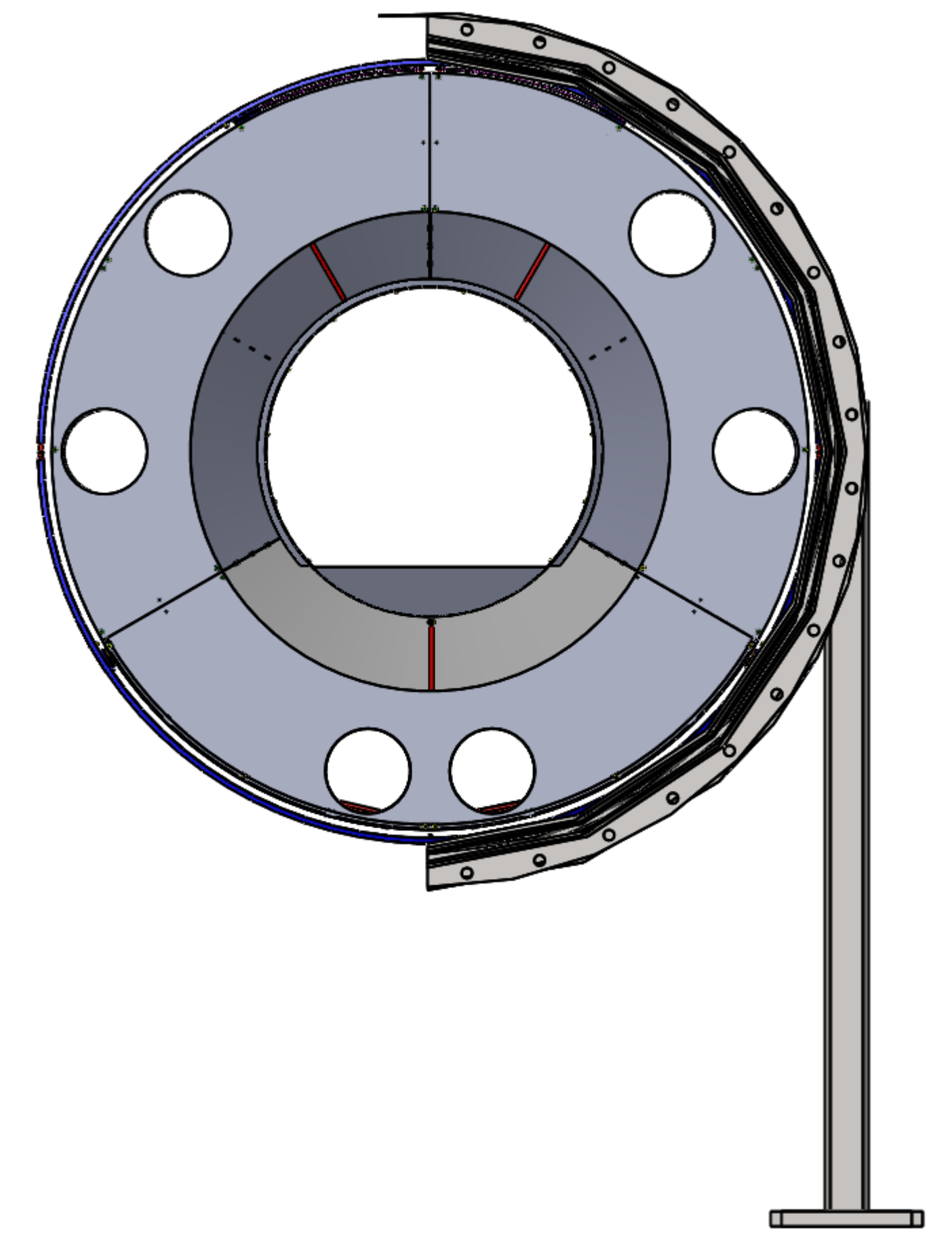
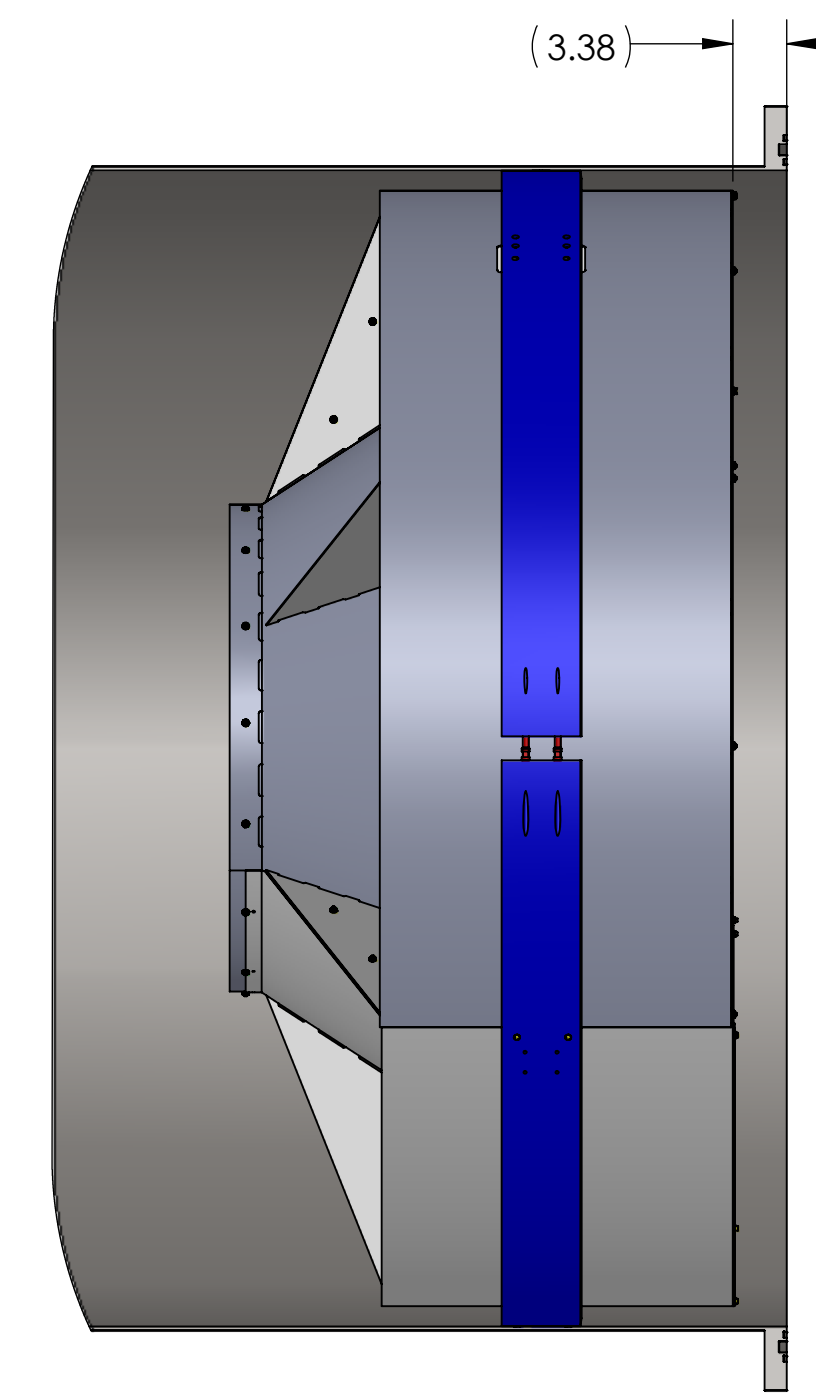
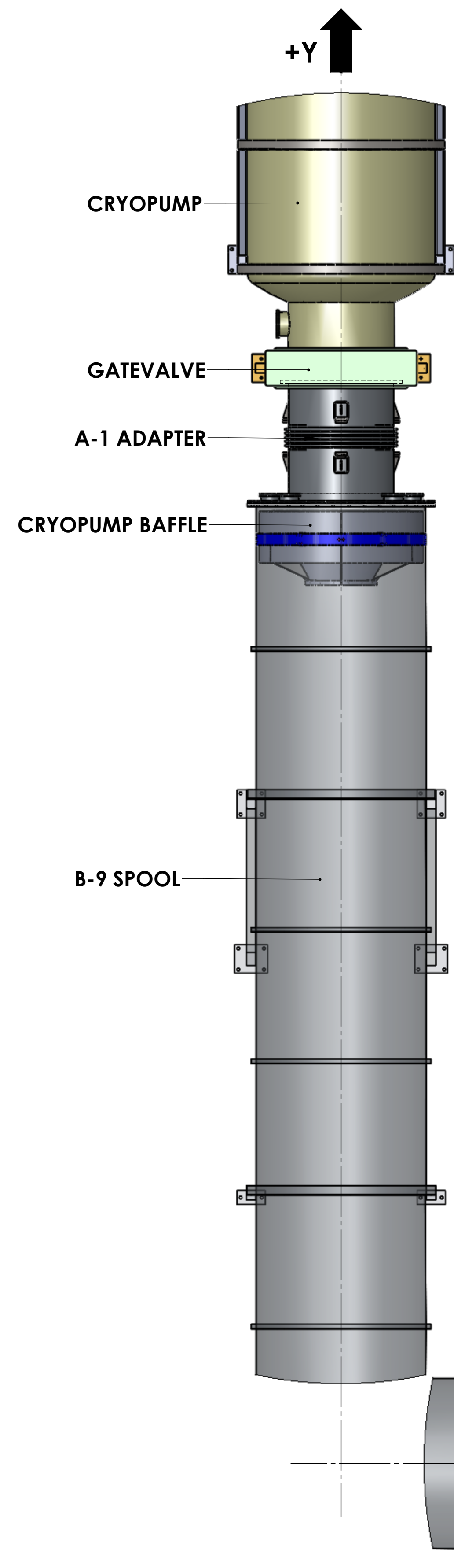


MAKE SURE THE BALANCE WEIGHT ASSEMBLY (D1002402) IS THE CORRECT ORIENTATION OF THE ARROWS.

THERE IS A CLEARANCE OF ABOUT 6.5 BETWEEN THE GATE VALVE AND THE B-9 SPOOL TO MANIPULATE THE LIFT FIXTURE WITH THE CRYOPUMP BAFFLE ASSEMBLY

8) TOP VIEW WITH CRYOPUMP BAFFLE FINAL LOCATION AT +X & +Y ARM (LHO & LLO CORNER STATION)

9) CRYOPUMP BAFFLE FINAL LOCATION INSIDE B-9 SPOOL AT LHO & LLO CORNER STATION



D0902617.dwg; Montfield\_Cryo\_Baffle\_Assembly; IMX-H1H2\_PART\_PDM\_REV-X-006\_DRAWING\_PDM\_REV-X-027