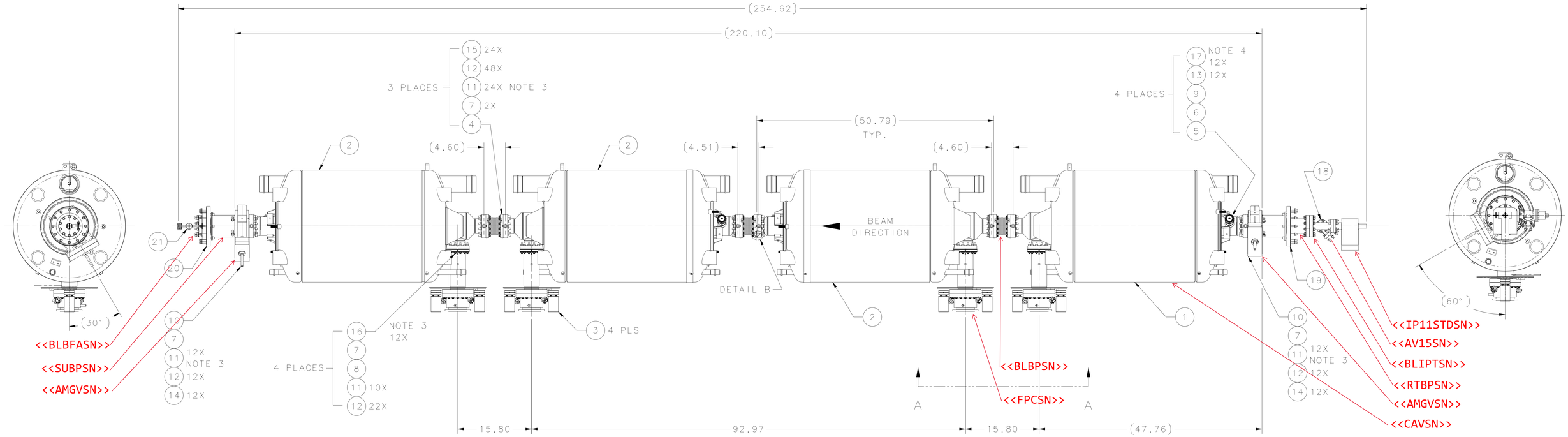
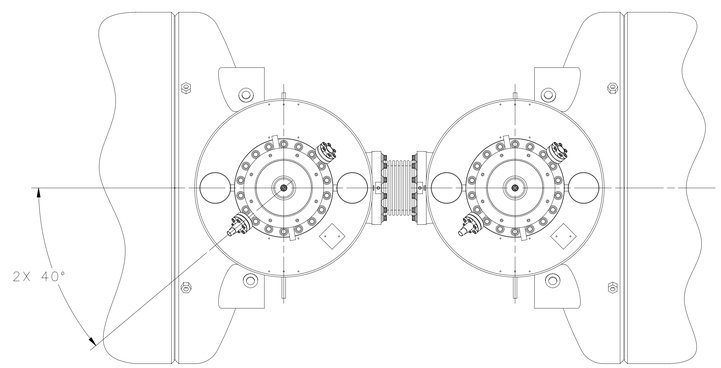
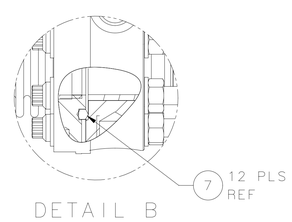
REVISION HISTORY			
ZONE	REV	DESCRIPTION	DATE/REVISER





SECTION A-A
SCALE 1:4
2 PLACES



DETAIL B
SCALE 1:1

NOTES:
1. APPROXIMATE WEIGHT: 1200 POUNDS
2. PROTECT FLANGE FACES DURING ALL PHASES OF ASSEMBLY.
3. TORQUE TO 205-210 IN-LB.
4. TORQUE TO 40-45 IN-LB.
5. CAVITY STRING ASSEMBLY SHALL BE LEAK CHECKED WITH VALVES (ITEM 10) OPEN.
6. RESTRAIN BELLOWS ASSEMBLY (ITEM 4) AND HELIUM VESSEL BELLOWS PRIOR TO PUMPING DOWN CAVITY STRING.
7. SUGGESTED SOURCE:
   VAT COMPANY
   655 RIVER OAKS PARKWAY
   SAN JOSE, CA 95134
   PHONE: 1-800-935-1446
   www.vatvalve.com
   OR EQUIVALENT
8. SUGGESTED SOURCE:
   MDC VACUUM PRODUCTS
   30962 SANTANA STREET
   HAYWOOD, CA 94545
   PHONE: 510-265-3500
   www.mdcvacuum.com
   OR EQUIVALENT
9. SUGGESTED SOURCE:
   THE FEDERAL GROUP USA
   21126 BRIDGE STREET
   SOUTHFIELD, MI 48033
   PHONE: 800-759-2658
   OR EQUIVALENT
10. SUGGESTED SOURCE:
   ASSOCIATED SPRING
   370 W. DUSSEL DRIVE, SUITE A
   MAUMEE, OH 43537-1604
   PHONE: 419-891-9292
   www.asraymond.com
   OR EQUIVALENT
11. FIELD PROBE CONNECTOR (ITEM 5) IS NOT A PURCHASED PART

QTY. REQD	ITEM NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	NOTES
1	21	104211500-M8U-8200-A021	BLANK FLANGE ASSY		
1	20	104210300-M8U-8200-A100	SUPPLY WARM - COLD BEAMPIPE ASSY		
1	19	104210300-M8U-8200-A200	RETURN WARM - COLD BEAMPIPE ASSY		
1	18	104211500-M8U-8200-A035	ION PUMP ASSY		
48	17		HEX SOCKET HD CAP SCREW #8-32 UNC X 1.00 LG	STAINLESS STEEL ASTM A-286	
48	16		.312-24 UNF X2.00 LG 12 PT BOLT	STAINLESS STEEL A-286	
72	15		BOLT 12 POINT .3125-24 UNF X 2.25 LG	STAINLESS STEEL A-286	
24	14		THREADED STUD .3125-24 UNF X 2.25 LG	STAINLESS STEEL A-286 SILVER PLATED	
48	13		BELLEVILLE SPRING WASHER .35 O.D. X .17 I.D. X .031 THK	300 SERIES SSTL	9
256	12	ASSOCIATED SPRING B0625-047-S	BELLEVILLE SPRING WASHER .62 O.D. X .32 I.D.	302 STAINLESS STEEL	10
136	11		NUT-HEX (.3125-24 UNF)	SILICON BRONZE	
2	10	VAT P/N 482XX-XE01-ACB3	GATE VALVE-MANUAL		7
4	9	CRM9007000-1045	PROBE NUT PLATE		
4	8	CRM9007000-1079	FPC NUT PLATE		
12	7	CRM9007010-1051	BEAM TUBE/FPC FLANGE SEAL		
4	6	CRM9007010-1053	PROBE FLANGE SEAL		
4	5	104211800-M8U-8330-A005	FIELD PROBE CONNECTOR ASSY		11
3	4	104211500-M8U-8200-A029	BELLOWS ASSEMBLY		
4	3	104211600-M8U-8200-A023	FUNDAMENTAL POWER COUPLER ASSY		
3	2	104211700-M8U-8200-A002	HELIUM VESSEL W/O LIQUID LEVEL PROBES		
1	1	104211700-M8U-8200-A001	HELIUM VESSEL WITH LIQUID LEVEL PROBES		

PARTS LIST

EACH SHEET OF MULTI-SHEET DRAWINGS SHALL ALWAYS HAVE THE SAME REVISION LEVEL.

DIM & TOL PER ASME Y14.5 2009. - UNLESS OTHERWISE SPECIFIED - DIMENSIONS ARE IN INCHES. TOLERANCES ARE:
FRACTIONS ± 1/8 | DECIMAL .X ±.1, .XX ±.01, .XXX ±.005 | ANGLES ± .50°

THIRD ANGLE PROJECTION

MATERIAL: SEE PARTS LIST

FINISH MACHINED SURFACES NA UNLESS OTHERWISE NOTED
DEBURR & BREAK ALL SHARP EDGES

DO NOT SCALE DRAWING

DRAWN J. HOERGER | DATE 30OCT19

United States Department of Energy
Jefferson Lab
Thomas Jefferson National Accelerator Facility
Newport News Virginia

CRM
SPALLATION NEUTRON SOURCE
CAVITY STRING
CLEAN ROOM ASSY

SIZE E | DWG. NO. 104211500-M8U-8200-A001 | REV. –
SCALE 1:8 | USED ON ASSY NO. 104211500-M8U-8200-A002 | SHEET 1 OF 1

Approved: 11/18/2019; E-Sign ID: 404429; Signed By: Approver 1: J. Henry; Approver 2: M. Wiseman; Checker: K. Wilson; DCG: A. Barron