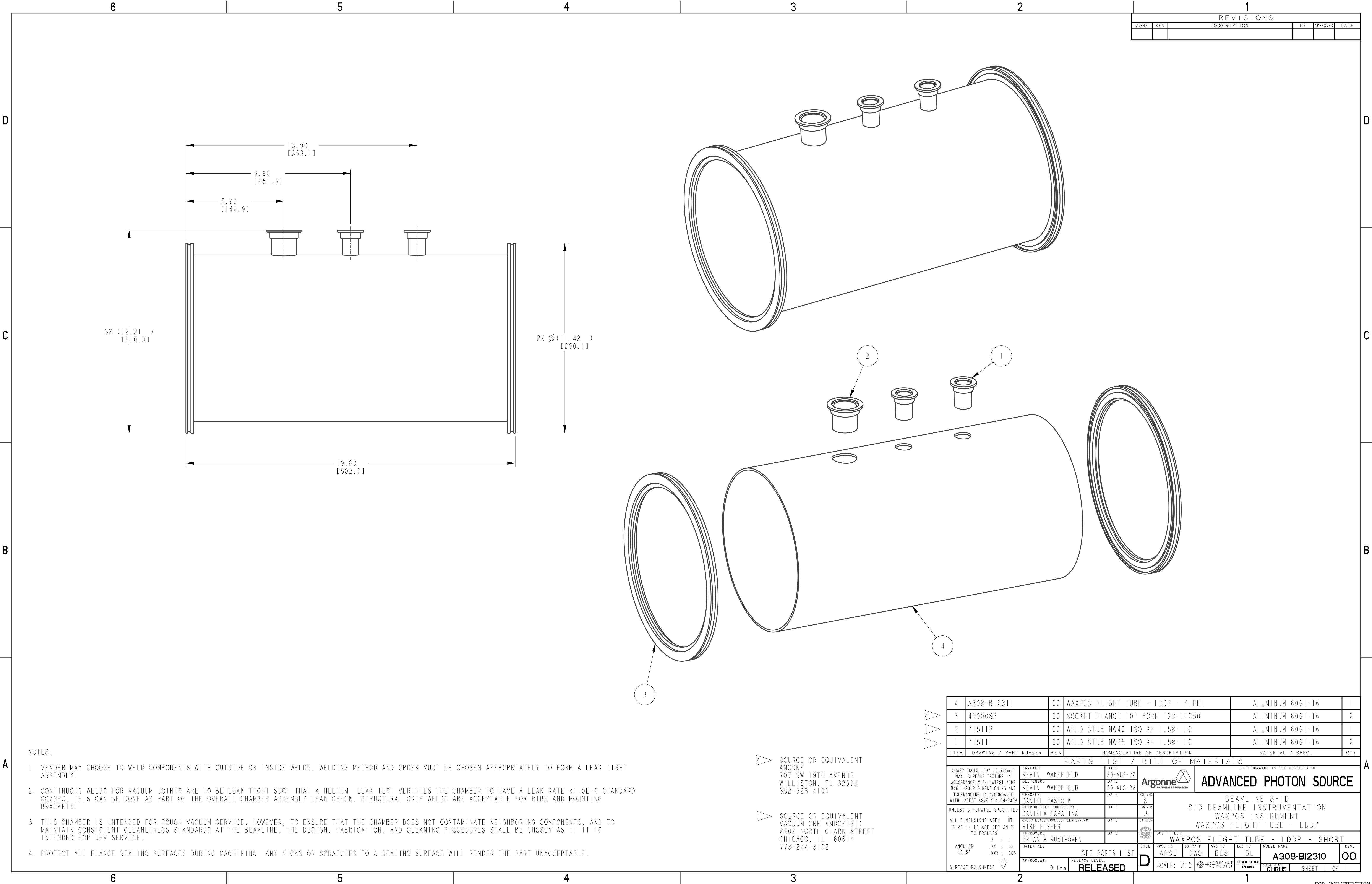


- NOTES:
- 1. THIS CHAMBER IS INTENDED FOR ROUGH VACUUM SERVICE. HOWEVER, TO ENSURE THAT THE CHAMBER DOES NOT CONTAMINATE NEIGHBORING COMPONENTS, AND TO MAINTAIN CONSISTENT CLEANLINESS STANDARDS AT THE BEAMLINE, THE DESIGN, FABRICATION, AND CLEANING PROCEDURES SHALL BE CHOSEN AS IF IT IS INTENDED FOR UHV SERVICE.
  - 2. VENDOR IS RESPONSIBLE FOR LEAK CHECKING CHAMBER ASSEMBLY TO VERIFY LEAK RATE IS <1.0E-9 STANDARD CC/SEC DURING HELIUM LEAK TEST.
  - 3. VENDOR IS RESPONSIBLE FOR PROVIDING ALL COMPONENTS LISTED IN THE BILL OF MATERIAL.
  - 4. PROTECT ALL FLANGE SEALING SURFACES DURING MACHINING AND HANDLING. ANY NICKS OR SCRATCHES TO A SEALING SURFACE WILL RENDER THE PART UNACCEPTABLE.

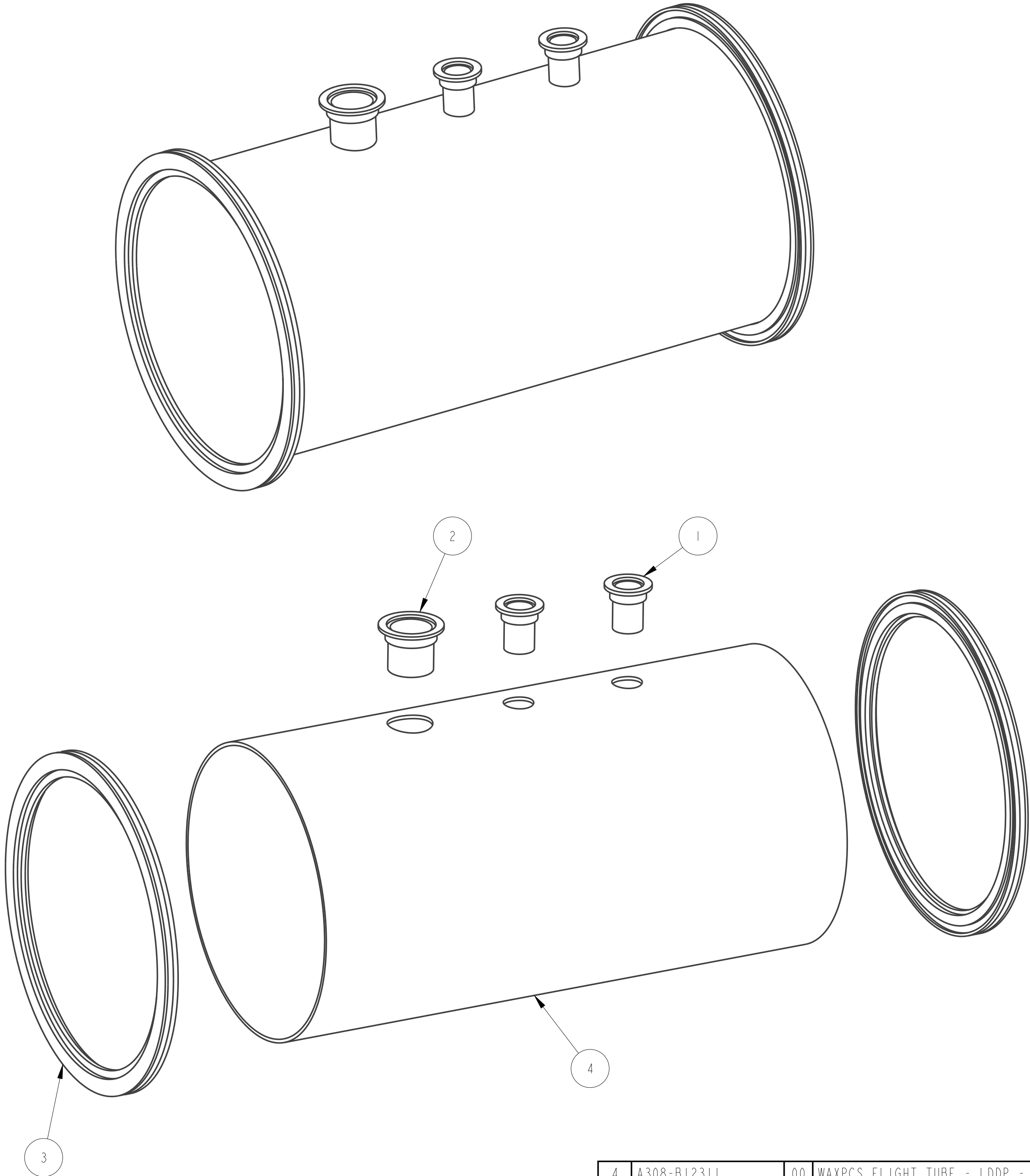
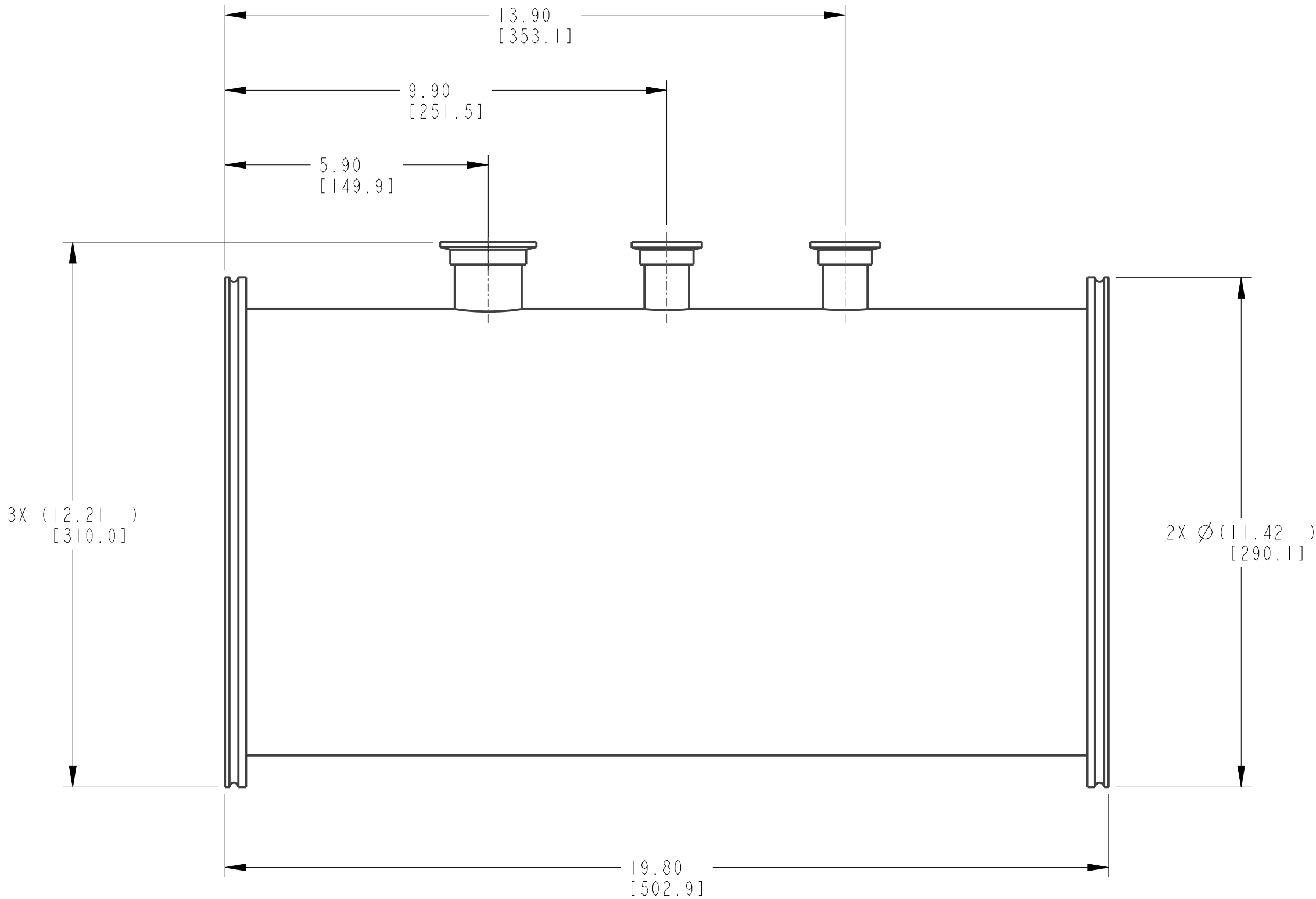
1 SOURCE OR EQUIVALENT  
VACUUM ONE (MDC/ISI)  
2502 NORTH CLARK STREET  
CHICAGO, IL 60614  
773-244-3102

2 SOURCE OR EQUIVALENT  
KURT J. LESKER  
P.O. BOX 10  
CLARTON, PA 15025-3681  
800-245-1656

5	QF250-ABK	00	FLANGE BLANK CLAMP STYLE	ALUMINUM 6061-T6	2
4	QF250-AAVR	00	CENTERING RING ISO250	ALUMINUM	3
3	A308-BI2320	00	WAXPCS FLIGHT TUBE - LDDP - LONG	SEE PARTS LIST	1
2	A308-BI2310	00	WAXPCS FLIGHT TUBE - LDDP - SHORT	SEE PARTS LIST	1
1	802002	00	CLAMP DOUBLE CLAW	ALUMINUM/304 SST	18
ITEM	DRAWING / PART NUMBER	REV	NOMENCLATURE OR DESCRIPTION	MATERIAL / SPEC.	QTY
PARTS LIST / BILL OF MATERIALS					
SHARP EDGES .03" (0.765mm) MAX. SURFACE TEXTURE IN ACCORDANCE WITH LATEST ASME B46.1-2002 DIMENSIONING AND TOLERANCING IN ACCORDANCE WITH LATEST ASME Y14.5M-2009			DRAYER: KEVIN WAKEFIELD DESIGNER: KEVIN WAKEFIELD CHECKER: DANIEL PASHOLK RESPONSIBLE ENGINEER: DANIELA CAPATINA GROUP LEADER/PROJECT LEADER/CAM: MIKE FISHER APPROVER: BRIAN M RUSTHOVEN MATERIAL: SEE PARTS LIST APPROX. WT: 37 lbm	DATE 26-AUG-22 DATE 26-AUG-22 DATE DATE DATE DATE DATE DATE RELEASE LEVEL: RELEASED	MIL. VER. 9 DWG. VER. 3 SHEET 1 OF 1
UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE: in DIMS IN ( ) ARE REF ONLY TOLERANCES .X ± .1 .XX ± .03 ANGULAR ±0.5° SURFACE ROUGHNESS 125/			THIS DRAWING IS THE PROPERTY OF <b>Argonne</b> NATIONAL LABORATORY <b>ADVANCED PHOTON SOURCE</b> BEAMLINE 8-ID 8ID BEAMLINE INSTRUMENTATION WAXPCS INSTRUMENT VACUUM CHAMBERS DOC. TITLE: WAXPCS FLIGHT TUBE - LDDP PROJ. ID APSU DWG SFS ID BLS LOC ID BL MODEL NAME A308-BI2300 REV. OO		
			SCALE: 1:5 THIRD ANGLE PROJECTION DO NOT SCALE DRAWING SHEET 1 OF 1		



REVISIONS						
ZONE	REV	DESCRIPTION			BY	DATE



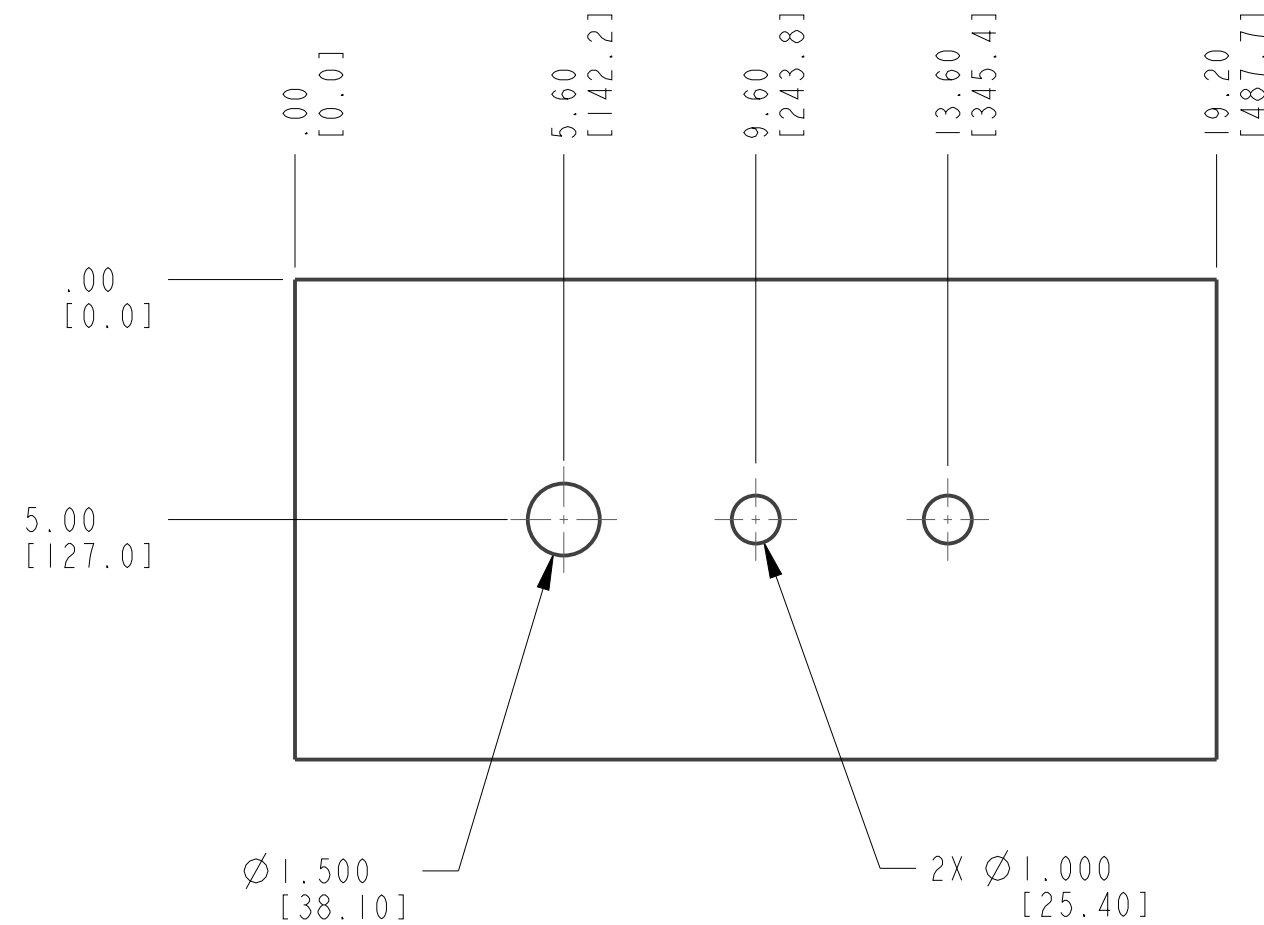
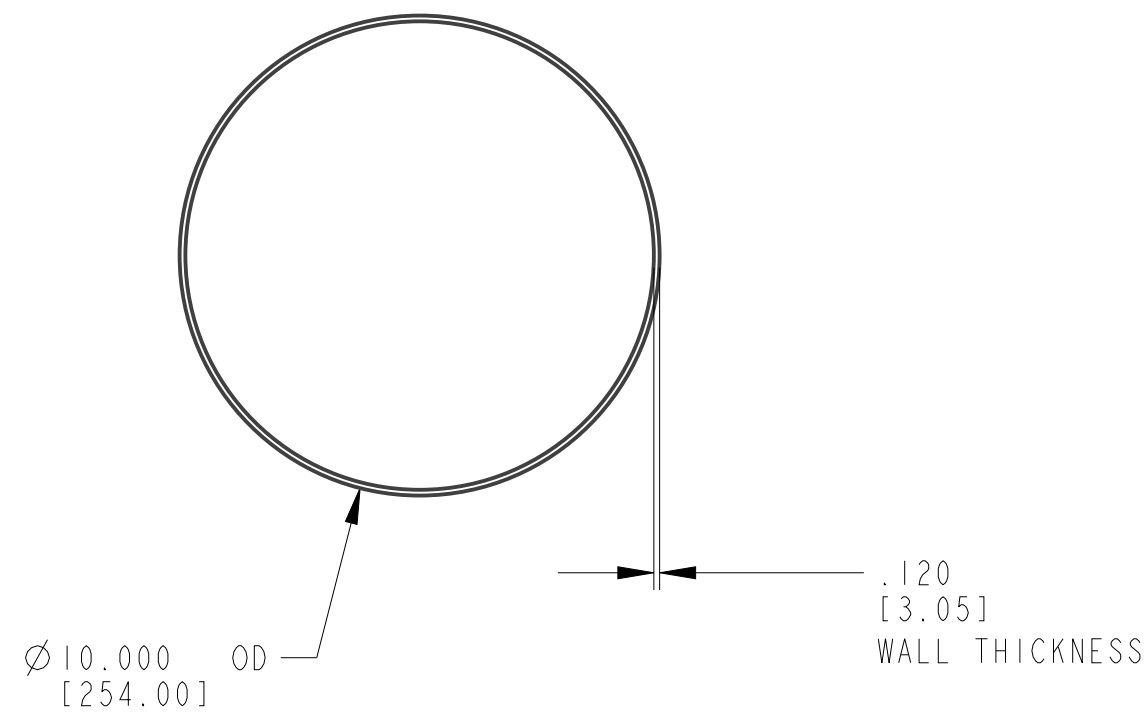
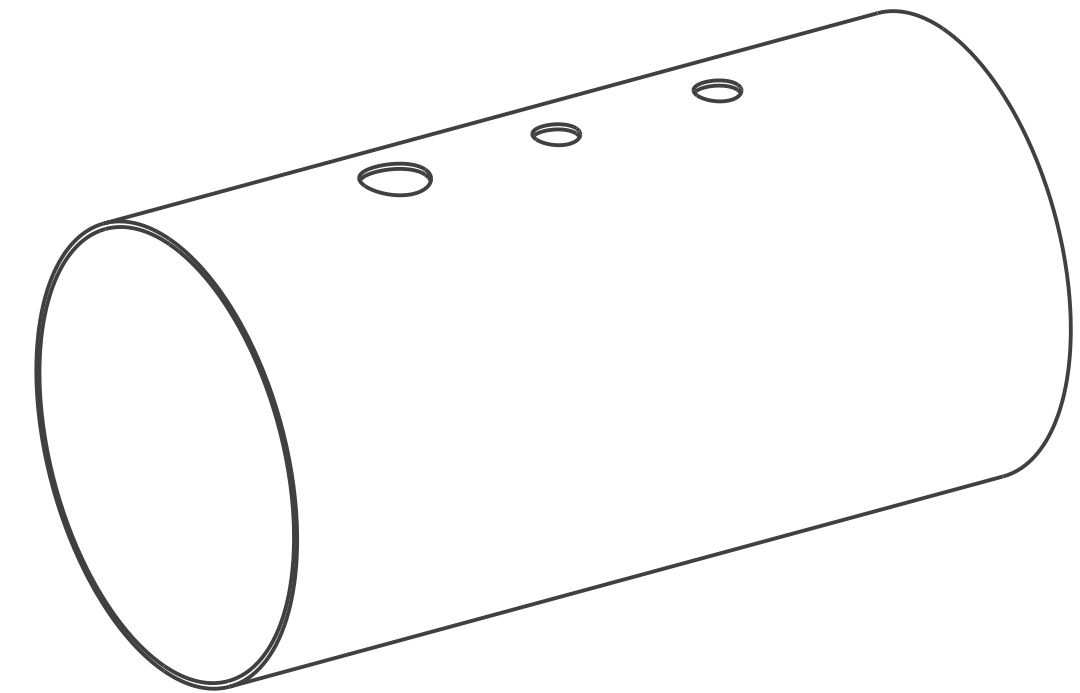
- NOTES:
- VENDER MAY CHOOSE TO WELD COMPONENTS WITH OUTSIDE OR INSIDE WELDS. WELDING METHOD AND ORDER MUST BE CHOSEN APPROPRIATELY TO FORM A LEAK TIGHT ASSEMBLY.
  - CONTINUOUS WELDS FOR VACUUM JOINTS ARE TO BE LEAK TIGHT SUCH THAT A HELIUM LEAK TEST VERIFIES THE CHAMBER TO HAVE A LEAK RATE <1.0E-9 STANDARD CC/SEC. THIS CAN BE DONE AS PART OF THE OVERALL CHAMBER ASSEMBLY LEAK CHECK. STRUCTURAL SKIP WELDS ARE ACCEPTABLE FOR RIBS AND MOUNTING BRACKETS.
  - THIS CHAMBER IS INTENDED FOR ROUGH VACUUM SERVICE. HOWEVER, TO ENSURE THAT THE CHAMBER DOES NOT CONTAMINATE NEIGHBORING COMPONENTS, AND TO MAINTAIN CONSISTENT CLEANLINESS STANDARDS AT THE BEAMLINE, THE DESIGN, FABRICATION, AND CLEANING PROCEDURES SHALL BE CHOSEN AS IF IT IS INTENDED FOR UHV SERVICE.
  - PROTECT ALL FLANGE SEALING SURFACES DURING MACHINING. ANY NICKS OR SCRATCHES TO A SEALING SURFACE WILL RENDER THE PART UNACCEPTABLE.

- 2 SOURCE OR EQUIVALENT ANCORP  
707 SW 19TH AVENUE  
WILLISTON, FL 32696  
352-528-4100
- 1 SOURCE OR EQUIVALENT VACUUM ONE (MDC/ISI)  
2502 NORTH CLARK STREET  
CHICAGO, IL 60614  
773-244-3102

4	A308-B12311	00	WAXPCS FLIGHT TUBE - LDDP - PIPE1	ALUMINUM 6061-T6	1
3	4500083	00	SOCKET FLANGE 10" BORE ISO-LF250	ALUMINUM 6061-T6	2
2	715112	00	WELD STUB NW40 ISO KF 1.58" LG	ALUMINUM 6061-T6	1
1	715111	00	WELD STUB NW25 ISO KF 1.58" LG	ALUMINUM 6061-T6	2
ITEM	DRAWING / PART NUMBER	REV	NOMENCLATURE OR DESCRIPTION	MATERIAL / SPEC.	QTY
PARTS LIST / BILL OF MATERIALS					
SHARP EDGES .03" (0.765mm)		DRAYER:	KEVIN WAKEFIELD	DATE	29-AUG-22
MAX. SURFACE TEXTURE IN ACCORDANCE WITH LATEST ASME B46.1-2002 DIMENSIONING AND TOLERANCING IN ACCORDANCE WITH LATEST ASME Y14.5M-2009		DESIGNER:	KEVIN WAKEFIELD	DATE	29-AUG-22
UNLESS OTHERWISE SPECIFIED		CHECKER:	DANIEL PASHOLK	DATE	29-AUG-22
ALL DIMENSIONS ARE: in		RESPONSIBLE ENGINEER:	DANIELA CAPATINA	DATE	29-AUG-22
DIMS IN [ ] ARE REF ONLY		GROUP LEADER/PROJECT LEADER/CAM:	MIKE FISHER	DATE	29-AUG-22
TOLERANCES		APPROVER:	BRIAN M RUSTHOVEN	DATE	29-AUG-22
ANGULAR .XX ± .03		MATERIAL:	SEE PARTS LIST	DATE	29-AUG-22
±0.5° .XXX ± .005		APPROX. WT:	9 lbm	RELEASE LEVEL:	RELEASED
SURFACE ROUGHNESS 125/✓		SCALE:	2:5	THIRD ANGLE PROJECTION	DO NOT SCALE DRAWING

THIS DRAWING IS THE PROPERTY OF					
ADVANCED PHOTON SOURCE					
BEAMLINE 8-ID					
8ID BEAMLINE INSTRUMENTATION					
WAXPCS INSTRUMENT					
WAXPCS FLIGHT TUBE - LDDP					
DOC TITLE:					
WAXPCS FLIGHT TUBE - LDDP - SHORT					
PROJ ID	DOC TYP ID	SYS ID	LOC ID	MODEL NAME	REV.
APSU	DWG	BLS	BL	A308-B12310	00
SCALE: 2:5					
SHEET 1 OF 1					

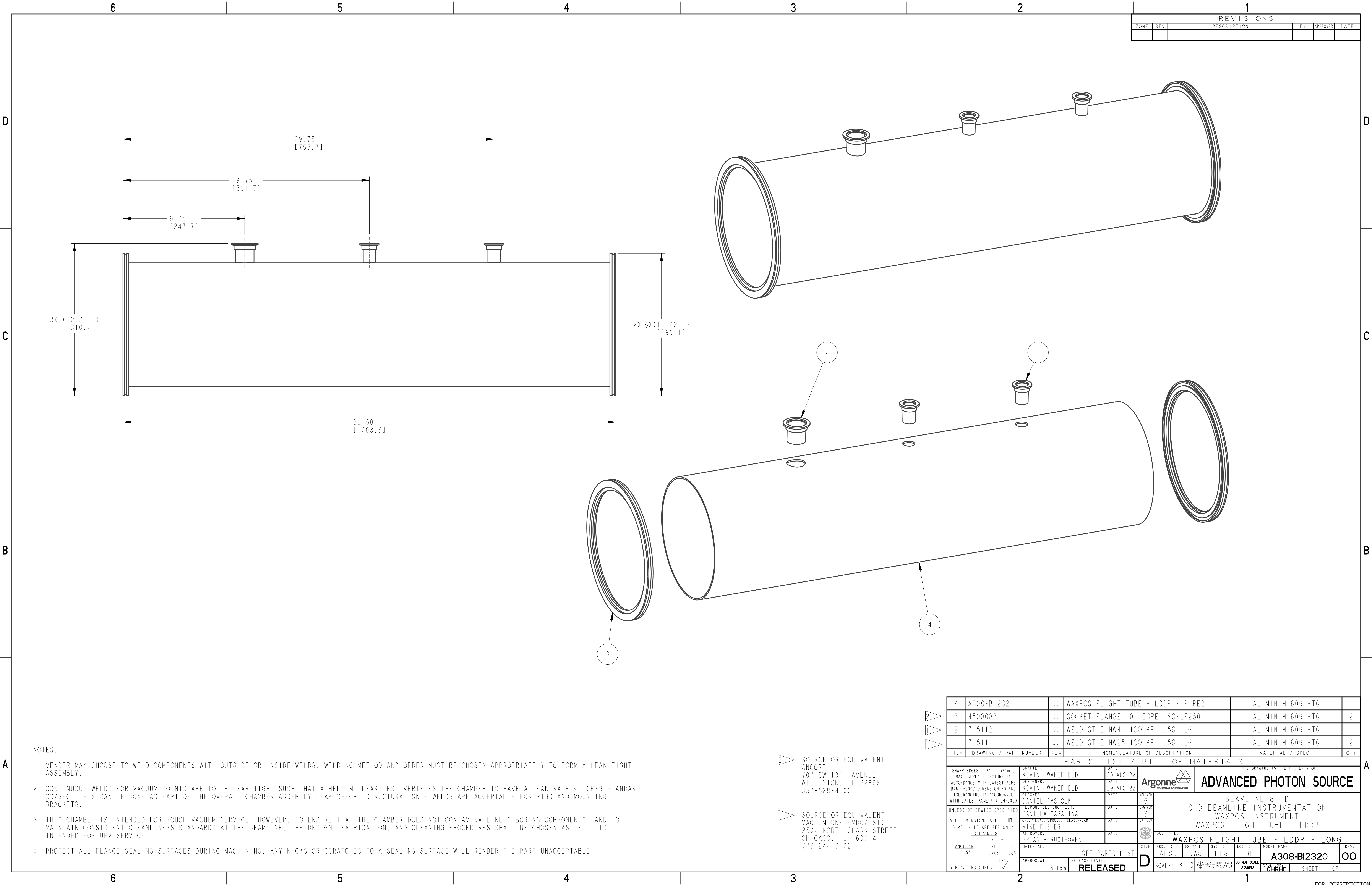
REVISIONS					
ZONE	REV	DESCRIPTION	BY	APPROVED	DATE

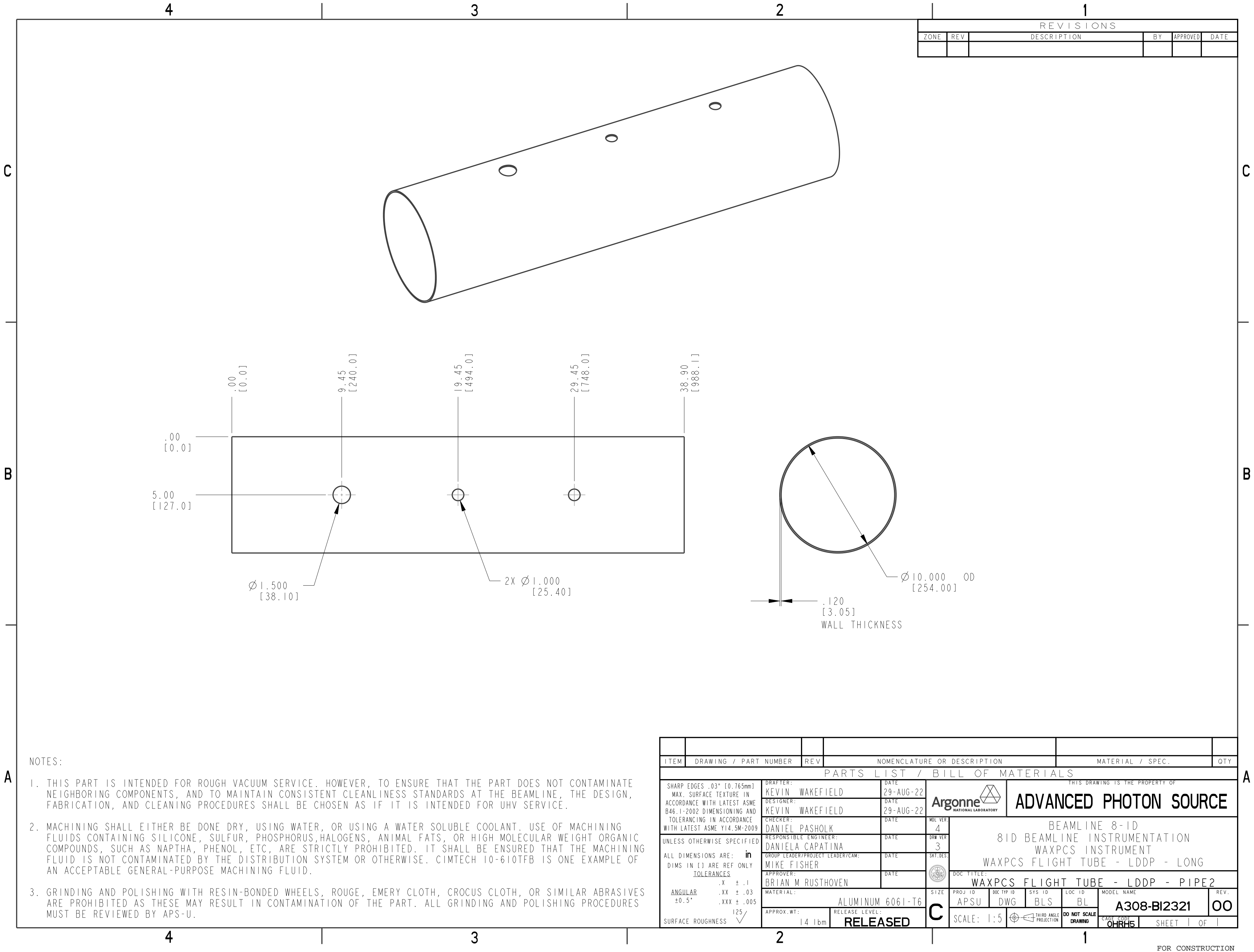


NOTES:

1. THIS PART IS INTENDED FOR ROUGH VACUUM SERVICE. HOWEVER, TO ENSURE THAT THE PART DOES NOT CONTAMINATE NEIGHBORING COMPONENTS, AND TO MAINTAIN CONSISTENT CLEANLINESS STANDARDS AT THE BEAMLINE, THE DESIGN, FABRICATION, AND CLEANING PROCEDURES SHALL BE CHOSEN AS IF IT IS INTENDED FOR UHV SERVICE.
2. MACHINING SHALL EITHER BE DONE DRY, USING WATER, OR USING A WATER SOLUBLE COOLANT. USE OF MACHINING FLUIDS CONTAINING SILICONE, SULFUR, PHOSPHORUS, HALOGENS, ANIMAL FATS, OR HIGH MOLECULAR WEIGHT ORGANIC COMPOUNDS, SUCH AS NAPHTHA, PHENOL, ETC, ARE STRICTLY PROHIBITED. IT SHALL BE ENSURED THAT THE MACHINING FLUID IS NOT CONTAMINATED BY THE DISTRIBUTION SYSTEM OR OTHERWISE. CIMTECH 10-610TFB IS ONE EXAMPLE OF AN ACCEPTABLE GENERAL-PURPOSE MACHINING FLUID.
3. GRINDING AND POLISHING WITH RESIN-BONDED WHEELS, ROUGE, EMERY CLOTH, CROCUS CLOTH, OR SIMILAR ABRASIVES ARE PROHIBITED AS THESE MAY RESULT IN CONTAMINATION OF THE PART. ALL GRINDING AND POLISHING PROCEDURES MUST BE REVIEWED BY APS-U.

[illegible]





NOTES:

1. THIS PART IS INTENDED FOR ROUGH VACUUM SERVICE. HOWEVER, TO ENSURE THAT THE PART DOES NOT CONTAMINATE NEIGHBORING COMPONENTS, AND TO MAINTAIN CONSISTENT CLEANLINESS STANDARDS AT THE BEAMLINE, THE DESIGN, FABRICATION, AND CLEANING PROCEDURES SHALL BE CHOSEN AS IF IT IS INTENDED FOR UHV SERVICE.

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ITEM	DRAWING / PART NUMBER		REV	NOMENCLATURE OR DESCRIPTION			MATERIAL / SPEC.		QTY		
PARTS LIST / BILL OF MATERIALS											
SHARP EDGES .03" [0.765mm] MAX. SURFACE TEXTURE IN ACCORDANCE WITH LATEST ASME B46.1-2002 DIMENSIONING AND TOLERANCING IN ACCORDANCE WITH LATEST ASME Y14.5M-2009  UNLESS OTHERWISE SPECIFIED  ALL DIMENSIONS ARE: in DIMS IN [ ] ARE REF ONLY TOLERANCES  ANGULAR ±0.5° XXX ±.005  SURFACE ROUGHNESS 125 ✓			DRAFTER: KEVIN WAKEFIELD		DATE 29-AUG-22	<div>Argonne NATIONAL LABORATORY</div> <div>ADVANCED PHOTON SOURCE</div> <div>BEAMLINE 8-ID 8ID BEAMLINE INSTRUMENTATION WAXPCS INSTRUMENT WAXPCS FLIGHT TUBE - LDDP - LONG</div>					
			DESIGNER: KEVIN WAKEFIELD		DATE 29-AUG-22						
			CHECKER: DANIEL PASHOLK		DATE	MDL VER. 4					
			RESPONSIBLE ENGINEER: DANIELA CAPATINA		DATE	DRW VER. 3					
			GROUP LEADER/PROJECT LEADER/CAM: MIKE FISHER		DATE	SKT.DES.					
			APPROVER: BRIAN M RUSTHOVEN		DATE	DOC TITLE: WAXPCS FLIGHT TUBE - LDDP - PIPE2					
			MATERIAL: ALUMINUM 6061-T6		SIZE C	PROJ ID APSU	DOC TYP ID DWG	SYS ID BLS	LOC ID BL	MODEL NAME A308-BI2321	REV. 00
			APPROX.WT: 14 lbm		RELEASE LEVEL: RELEASED		SCALE: 1:5		THIRD ANGLE PROJECTION		DO NOT SCALE DRAWING
							CAGE CODE OHRH5		SHEET 1 OF 1		