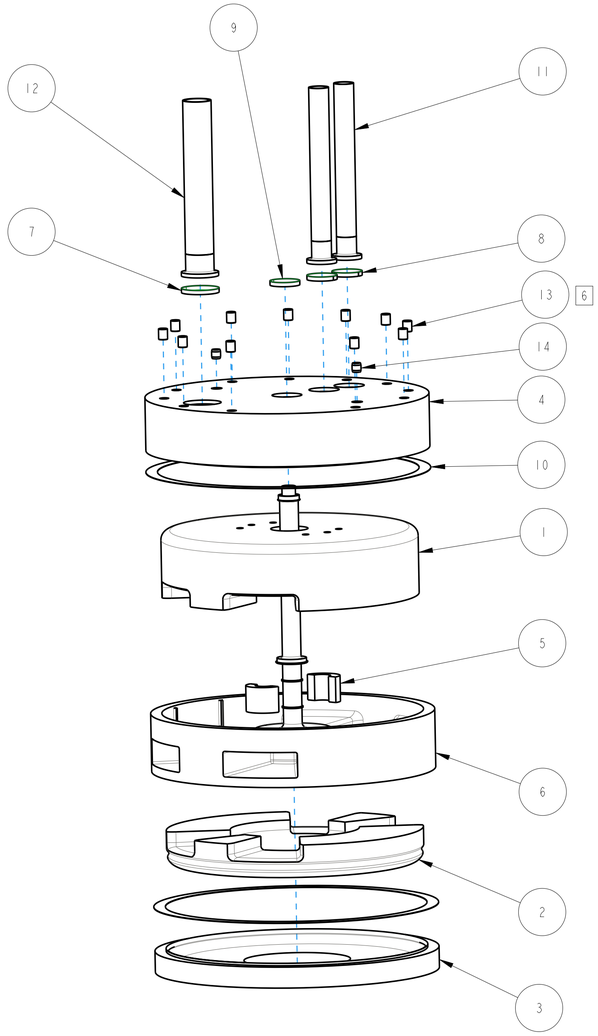
NEXT USED ASSEMBLY
0000077017

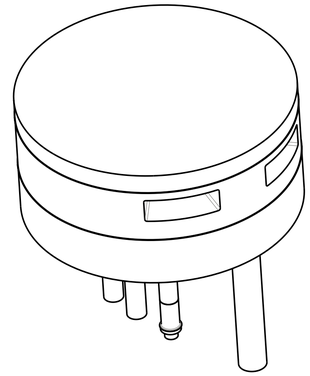
REVISION BLOCK

REV	DESCRIPTION OF CHANGE	DATE
0	ORIGINAL ISSUE	06/24/2026

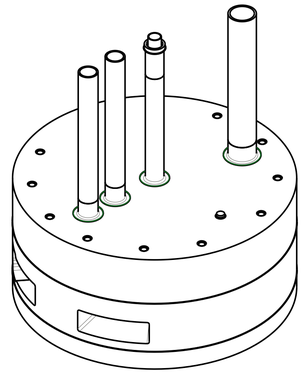


NOTES:

1. VENDORS AND VENDOR SPECIFIC ITEMS MAY NOT BE SUBSTITUTED WITHOUT PRIOR ENGINEERING APPROVAL.
2. WELD AND INSPECT PER S03040000-EQSI0000.
3. PICKLE AND BAG COMPONENTS TO BE WELDED PER S03040000-EQSI0000. DO NOT OPEN BAGS UNTIL IMMEDIATELY BEFORE WELDING.
4. PNEUMATIC TEST REFLECTOR VESSEL WITH DRY NITROGEN AT 72.5 PSIG.
5. HE LEAK CHECK TO SHOW NO DETECTABLE LEAK WITH A BACKGROUND OF 1 X 10^{-6} MBAR L/S OR LESS PER S03040000-EQSI0000.
6. INSTALL HELICOIL INSERTS PER MANUFACTURER'S SPECIFICATIONS AFTER COMPLETION OF WELDING.



REFERENCE VIEW



REFERENCE VIEW

VENDOR	MATERIAL SPECIFICATION	DESCRIPTION	PART NUMBER	QTY	FIND NO.
MCMASTER CARR MCMASTER.COM	SS 316 (S31600) ---	DOWEL, 12 X 12	93600A332	2	14
MCMASTER WWW.MCMASTER.COM	18-8 STAINLESS STL MIL MS-122	STANDARD HELICAL THREAD INSERT, 3/8-16 X .563 LG	91732A214	11	13
--- ---	--- ---	MRA BI-METAL FITTING	0000082961	1	12
--- ---	--- ---	MRA BI-METAL FITTING	0000082916	2	11
--- ---	AL 4047 (A94047) AMS 4185E, ANSI H35.2	WELD FILLER-REFLECTOR VESSEL CLOSURE	0000067840	2	10
--- ---	AL 4047 (A94047) AMS 4185E, ANSI H35.2	WELD FILLER-40MM FITTING	0000067742	1	9
--- ---	AL 4047 (A94047) AMS 4185E, ANSI H35.2	WELD FILLER	0000066327	2	8
--- ---	AL 4047 (A94047) AMS 4185E, ANSI H35.2	WELD FILLER	0000066320	1	7
--- ---	--- ---	UPPER VACUUM VESSEL	0000062525	1	6
--- ---	BERYLLIUM 106030101-TS0001	UPPER BERYLLIUM SPLIT	0000062459	2	5
--- ---	AL 6061-T6 (A96061) ASTM B247M	UPPER REFLECTOR VESSEL CAP	0000062455	1	4
--- ---	AL 6061-T6 (A96061) ASTM B247M	UPPER REFLECTOR VESSEL CAP	0000062452	1	3
--- ---	BERYLLIUM 106030101-TS0001	UPPER BERYLLIUM-SMALL	0000062450	1	2
--- ---	BERYLLIUM 106030101-TS0001	UPPER BERYLLIUM-LARGE	0000062449	1	1

WIP-NOT APPROVED FOR CONSTRUCTION

GRADE	1-SERIOUS
FACILITY	STS
BUILDING	8800-STS TARGET BUILDING II
MAJOR SYSTEM	TARGET SYSTEMS
SYSTEM	MRA
SUBSYSTEM	XXX
SUB-SUBSYSTEM	XXX

UNITS: MILLIMETERS

DEFAULT TOLERANCES
0-6 ±0.1
>6-120 ±0.2
>120 ±0.5
ANGULAR ±0.5°

BREAK ALL SHARP EDGES EXCEPT AS NOTED: 0.5 MAX

SURFACE ROUGHNESS: 1.6 Ra U.N.O.

DRAFTING STD: ASME Y14.100
GDT: ASME Y14.5
WELD SYMBOLS: AWS A2.4

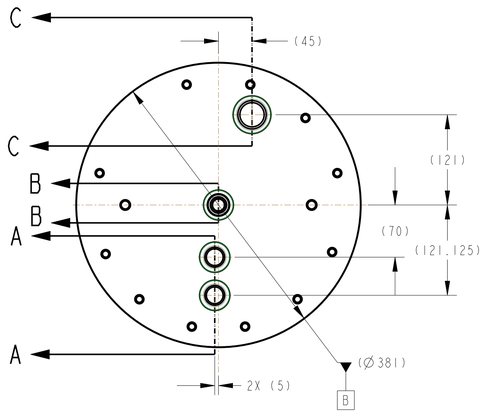
THIRD ANGLE PROJECTION

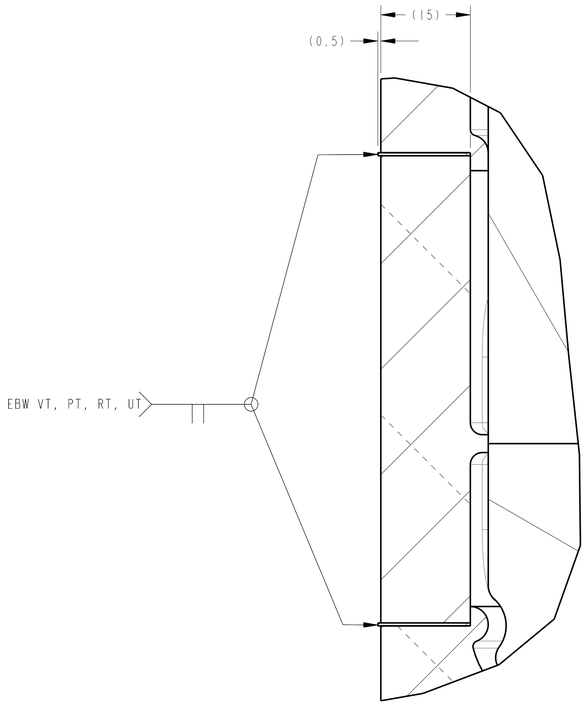
OAK RIDGE National Laboratory | HIGH FLUX ISOTOPE REACTOR | SPALLATION NEUTRON SOURCE

SECOND TARGET STATION
TARGET SYSTEMS
UPPER REFLECTOR VESSEL

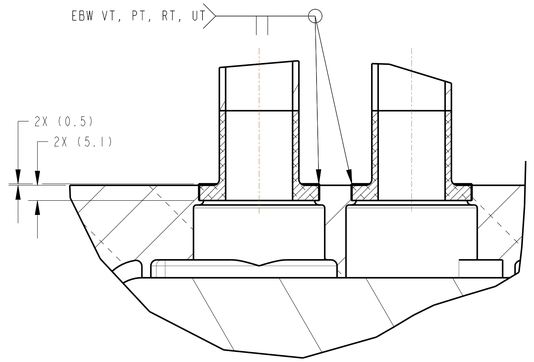
DRAWING NUMBER	REV
0000062451	0

SIZE	SCALE	WEIGHT	SHEET
D	1:4	37 KG	1 of 2

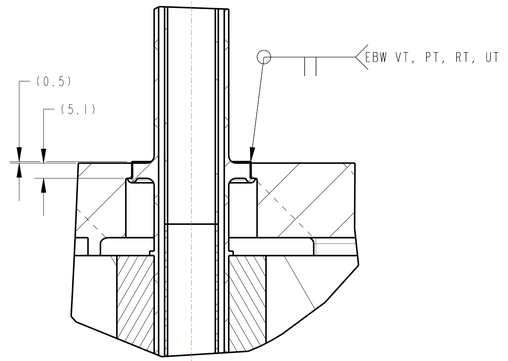




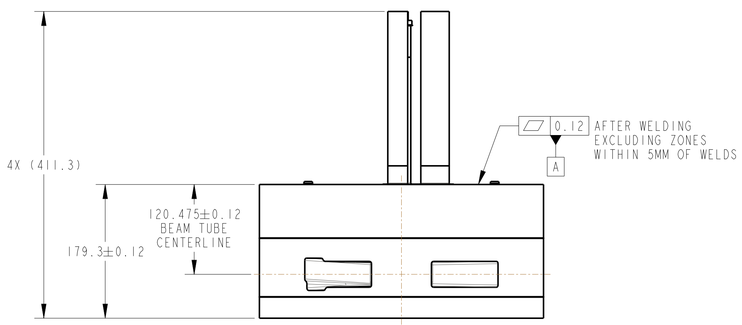
DETAIL D
SCALE 2:1

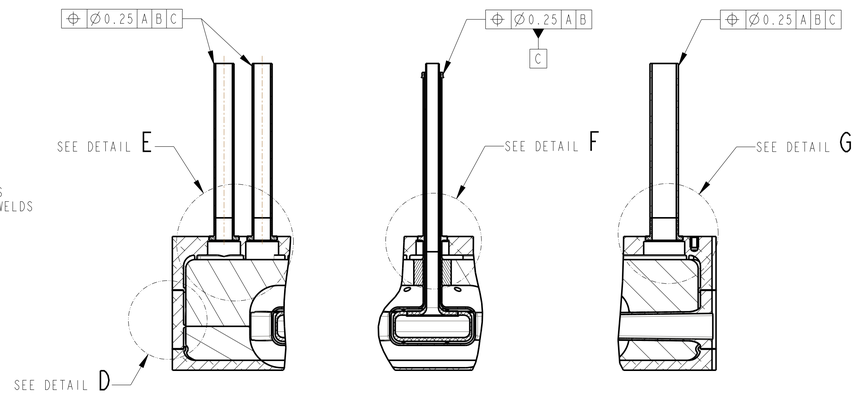


DETAIL E
SCALE 1:1



DETAIL F
SCALE 1:1

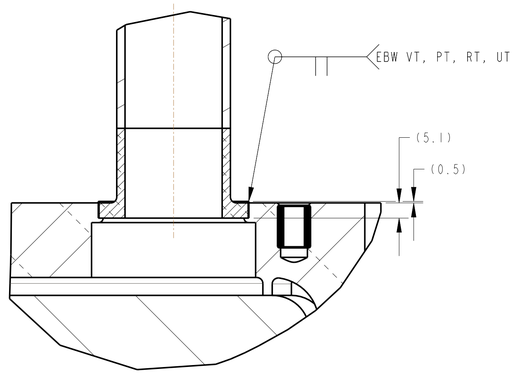




SECTION A-A

SECTION B-B

SECTION C-C

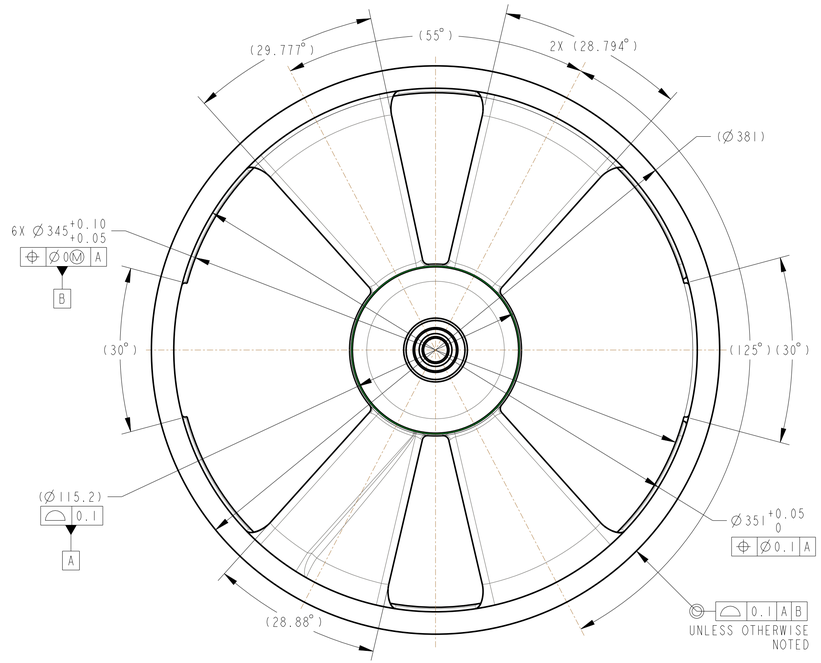


DETAIL G
SCALE 1:1

SIZE	SCALE	SHEET	DRAWING NUMBER	REV
D	1:4	2 OF 2	0000062451	0

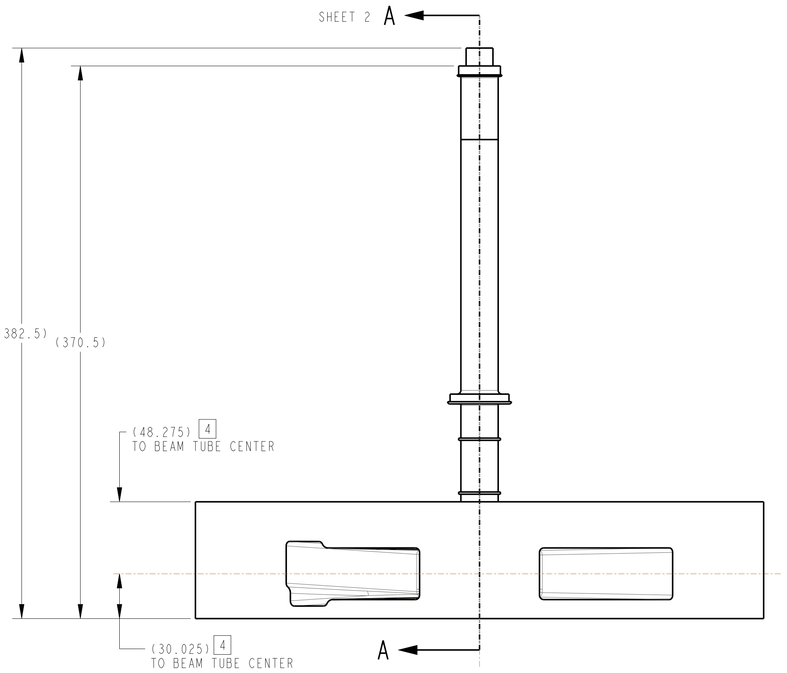
NEXT USED ASSEMBLY
0000062451

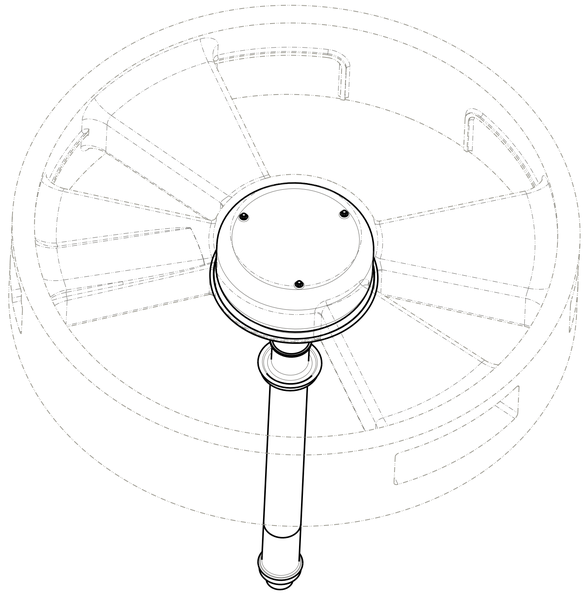
REVISION BLOCK		
REV	DESCRIPTION OF CHANGE	DATE
0	ORIGINAL ISSUE	07/01/26



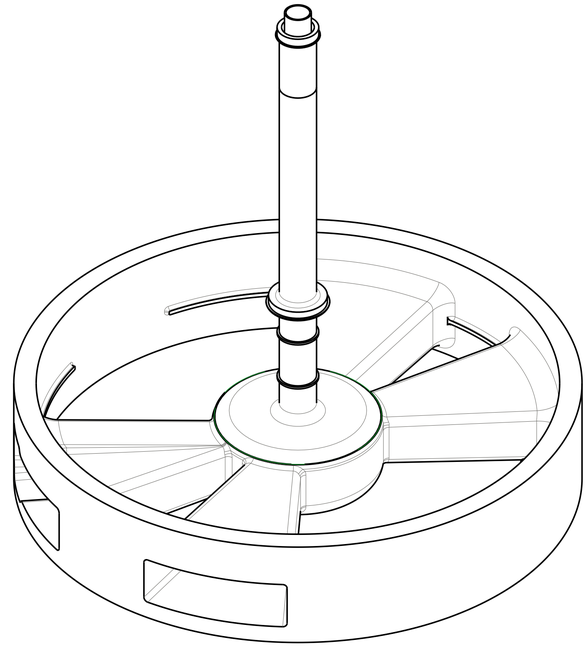
NOTES:

1. FINAL MACHINE AFTER COMPLETING ALL WELDING AND INSPECTION SHOWN ON 0000070004_PM
2. FINAL MACHINE AND INSPECT PER S03040000-EQSI0000. DO NOT MACHINE WELD JOINTS. REMOVE MATERIAL BETWEEN AND INSIDE BEAMTUBES OF 0000070002_PM. REMOVE MATERIAL FROM OUTSIDE OF 0000070003_PM.
3. UNLESS OTHERWISE SPECIFIED, NOMINAL PART GEOMETRY IS DEFINED BY THE ATTACHED MODEL.
4. ADD STOCK TO WELD SURFACES FOR WELD SHRINKAGE PER S03040000-EQSI0000.
5. 3X COLD SHOCK WITH LIQUID NITROGEN PER S03040000-EQSI0000.
6. PNEUMATIC TEST VACUUM VESSEL WITH DRY NITROGEN AT 34 PSIG PER S03040000-EQSI0000.
7. HE LEAK CHECK TO SHOW NO DETECTABLE LEAK WITH A BACKGROUND OF 1×10^{-9} TORR L/S OR LESS PER S03040000-EQSI0000.
8. HYDROGEN VESSEL SHOWN AT 20K OPERATING TEMPERATURE. REFER TO 0000077220 FOR ROOM TEMPERATURE MODEL.





REFERENCE VIEW
SCALE 1:2



REFERENCE VIEW
SCALE 1:2

VENDOR 1	MATERIAL SPECIFICATION	DESCRIPTION	PART NUMBER	QTY	FIND NO.
--- ---	AL 4047 (A94047) AMS 4185E, ANSI H35.2	UPPER VACUUM VESSEL WELD FILLER	0000083445	1	5
--- ---	AL 6061-T6 (A96061) ASTM B247M	UPPER REFLECTOR VESSEL-MID	0000062525-01	1	4
--- ---	--- ---	UPPER HYDROGEN VESSEL WELDMENT	0000062524	1	3
--- ---	--- ---	CYLINDER VACUUM BODY CAP WELDMENT	0000062522	1	2
--- ---	TI 15-3-3-3 (R58153) AMS 4914	MODERATOR TITANIUM SPACER	0000062487	7	1

GRADE	1-SERIOUS
FACILITY	STS
BUILDING	8800-STS TARGET BUILDING II
MAJOR SYSTEM	TARGET SYSTEMS
SYSTEM	MRA
SUBSYSTEM	XXX
SUB-SUBSYSTEM	XXX

WIP-NOT APPROVED FOR CONSTRUCTION

UNITS: MILLIMETERS

DEFAULT TOLERANCES
0-6 ±0.1
>6-120 ±0.2
>120 ±0.5
ANGULAR ±0.5°

BREAK ALL SHARP EDGES EXCEPT AS NOTED: 0.5 MAX

SURFACE ROUGHNESS: 1.6 Ra U.N.O.

DRAFTING STD: ASME Y14.100
GDT: ASME Y14.5
WELD SYMBOLS: AWS A2.4

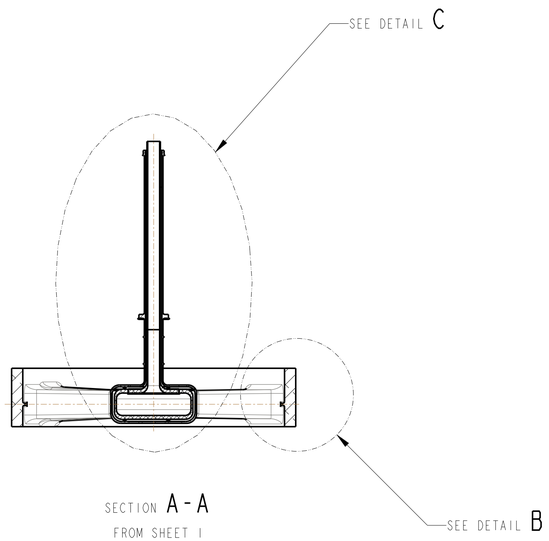
THIRD ANGLE PROJECTION

OAK RIDGE National Laboratory | HIGH FLUX ISOTOPE REACTOR | SPALLATION NEUTRON SOURCE

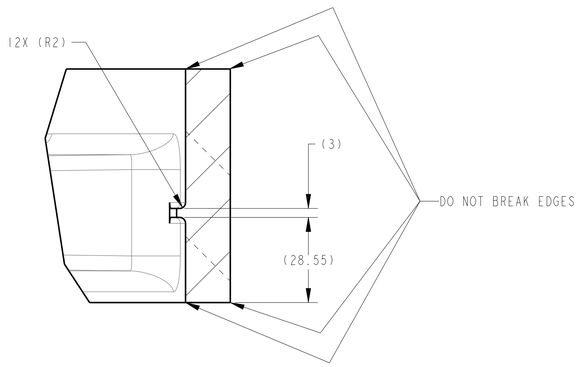
SECOND TARGET STATION
TARGET SYSTEMS
UPPER VACUUM VESSEL

DRAWING NUMBER	REV
0000062525	0

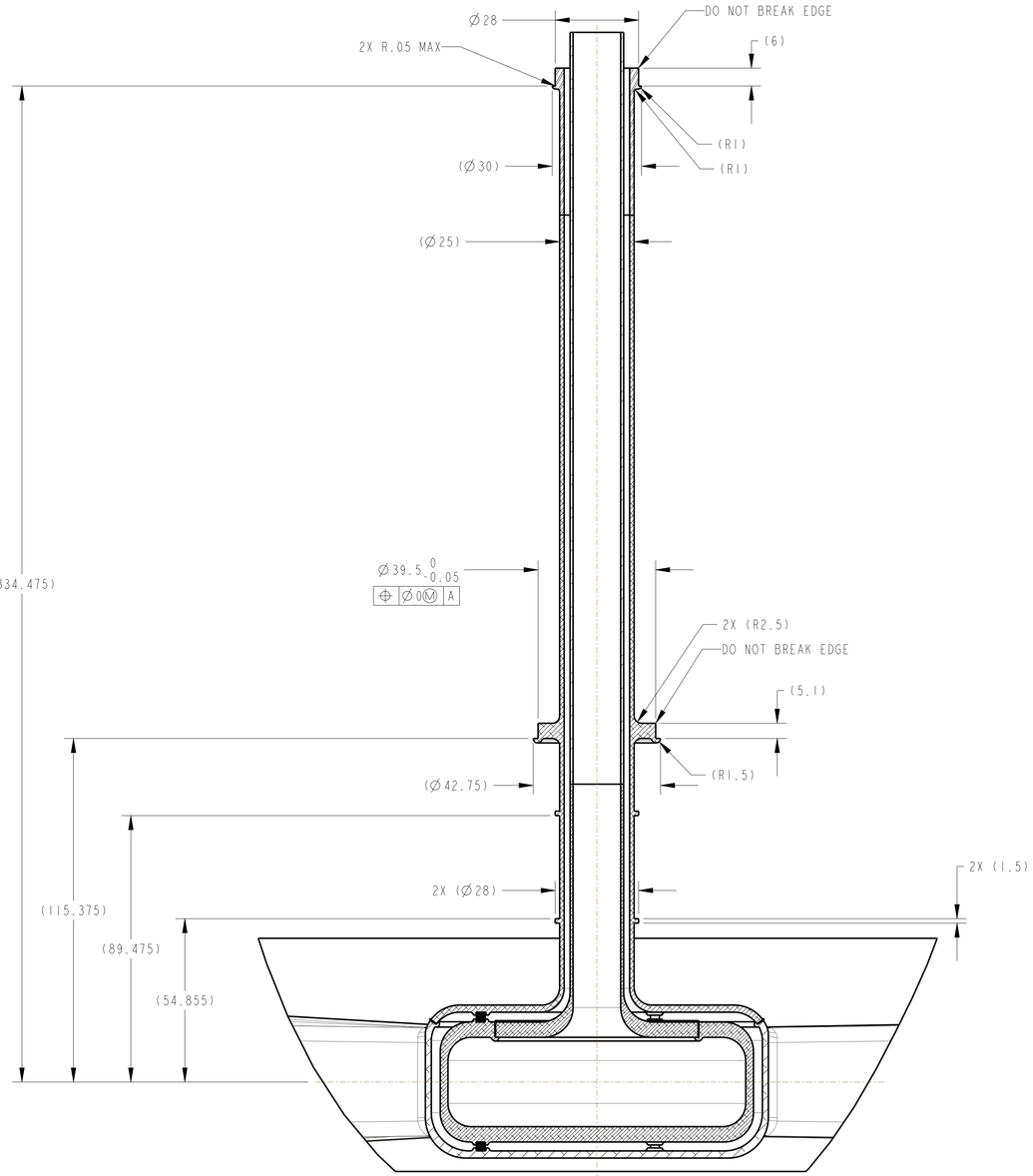
SIZE	SCALE	WEIGHT	SHEET
D	1:2	4.5 KG	1 of 2



SECTION A - A
FROM SHEET 1



DETAIL B
SCALE 1:1



DETAIL C
SCALE 1:1

SIZE	SCALE	SHEET	DRAWING NUMBER	REV
D	1:4	2 OF 2	0000062525	0

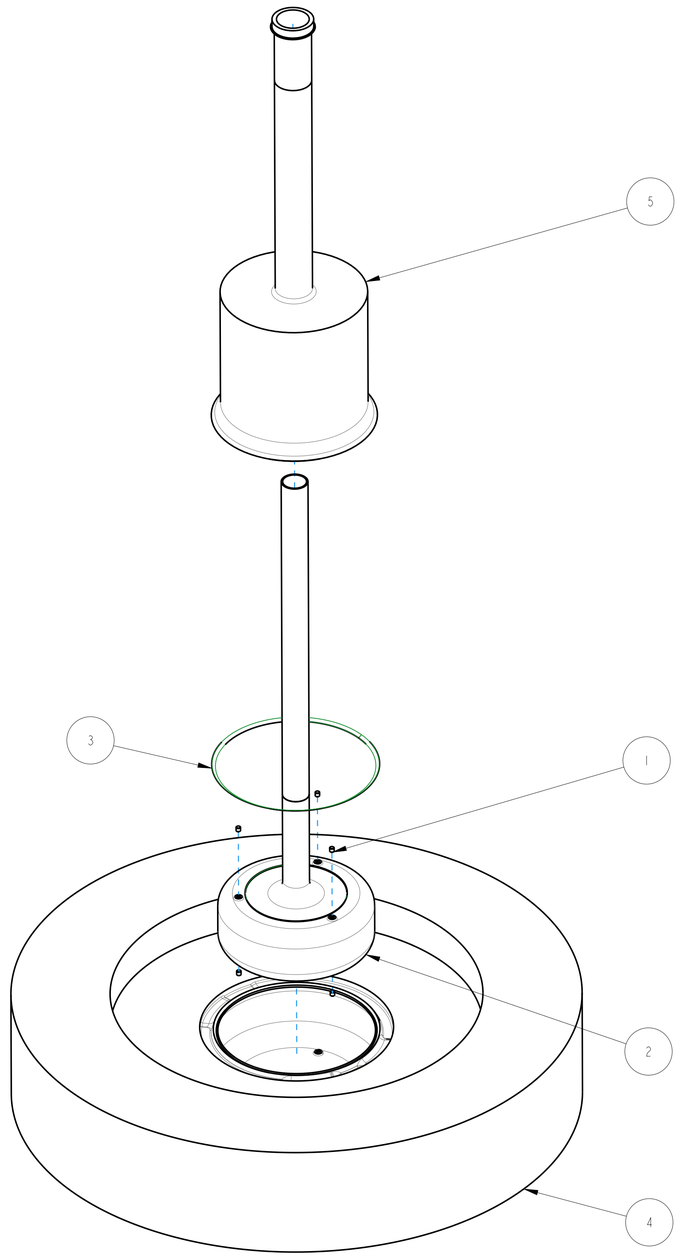
NEXT USED ASSEMBLY
0000062525

REVISION BLOCK

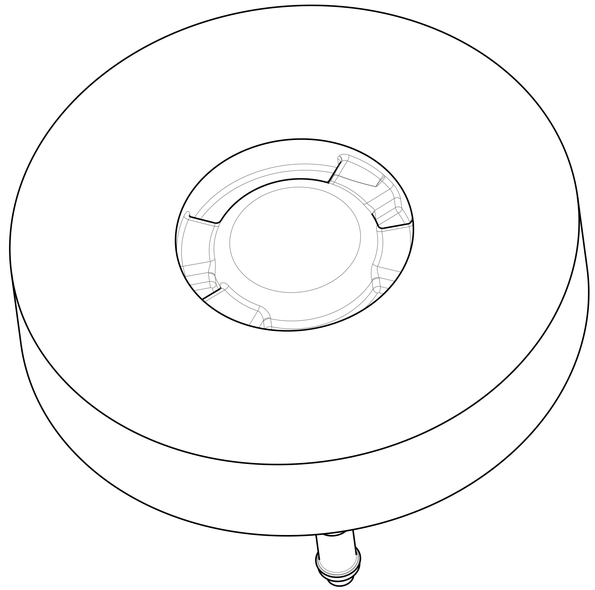
REV	DESCRIPTION OF CHANGE	DATE
0	ORIGINAL ISSUE	07/01/26

NOTES:

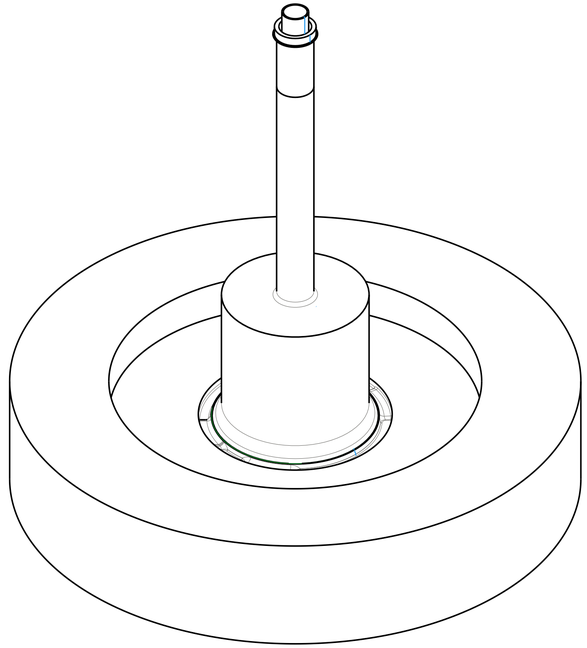
1. WELD AND INSPECT PER S03040000-EQSI0000.
2. PICKLE AND BAG PARTS TO BE WELDED PER S03040000-EQSI0000. DO NOT OPEN BAGS UNTIL IMMEDIATELY BEFORE WELDING.
3. HE LEAK CHECK TO SHOW NO DETECTABLE LEAK WITH A BACKGROUND OF 1×10^{-9} TORR L/S OR LESS PER S03040000-EQSI0000.
4. DIMENSIONAL INSPECTION PER S03040000-EQSI0000 AFTER WELDING.
5. MACHINE PER [0000070004] AFTER WELDING, INSPECTION, AND LEAK CHECKING.



REFERENCE VIEW



REFERENCE VIEW



REFERENCE VIEW

VENDOR [1]	MATERIAL SPECIFICATION	DESCRIPTION	PART NUMBER	QTY	FIND NO.
--- ---	--- ---	CYLINDER VACUUM BODY CAP PM	0000084181	1	5
--- ---	AL 6061-T6 (A96061) ASTM B247M	UPPER REFLECTOR VESSEL MID-AS WELDED	0000083571	1	4
--- ---	AL 4047 (A94047) AMS 4185E, ANSI H35.2	UPPER VACUUM VESSEL WELD FILLER	0000083445	1	3
--- ---	--- ---	UPPER HYDROGEN VESSEL WELDMENT	0000062524	1	2
--- ---	TI 15-3-3-3 (R58153) AMS 4914	MODERATOR TITANIUM SPACER	0000062487	6	1

WIP-NOT APPROVED FOR CONSTRUCTION

GRADE	1-SERIOUS
FACILITY	STS
BUILDING	8800-STS TARGET BUILDING II
MAJOR SYSTEM	TARGET SYSTEMS
SYSTEM	MRA
SUBSYSTEM	XXX
SUB-SUBSYSTEM	XXX

UNITS: MILLIMETERS

DEFAULT TOLERANCES
0-6 ±0.1
>6-120 ±0.2
>120 ±0.5
ANGULAR ±0.5°

BREAK ALL SHARP EDGES EXCEPT AS NOTED: 0.5 MAX

SURFACE ROUGHNESS: 1.6 Ra U.N.O.

DRAFTING STD: ASME Y14.100
GDT: ASME Y14.5
WELD SYMBOLS: AWS A2.4

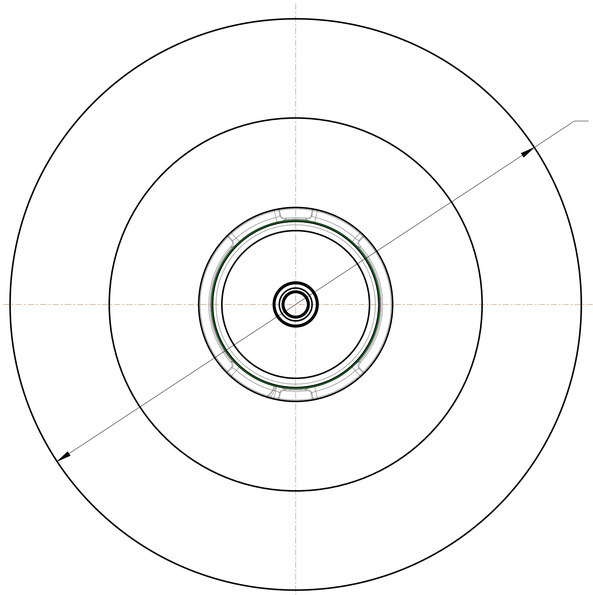
THIRD ANGLE PROJECTION

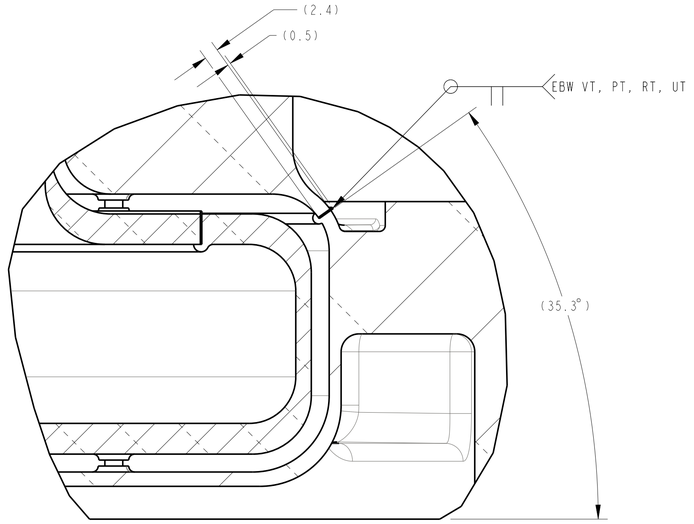
OAK RIDGE National Laboratory | HIGH FLUX ISOTOPE REACTOR | SPALLATION NEUTRON SOURCE

SECOND TARGET STATION
TARGET SYSTEMS
UPPER VACUUM VESSEL WELDMENT

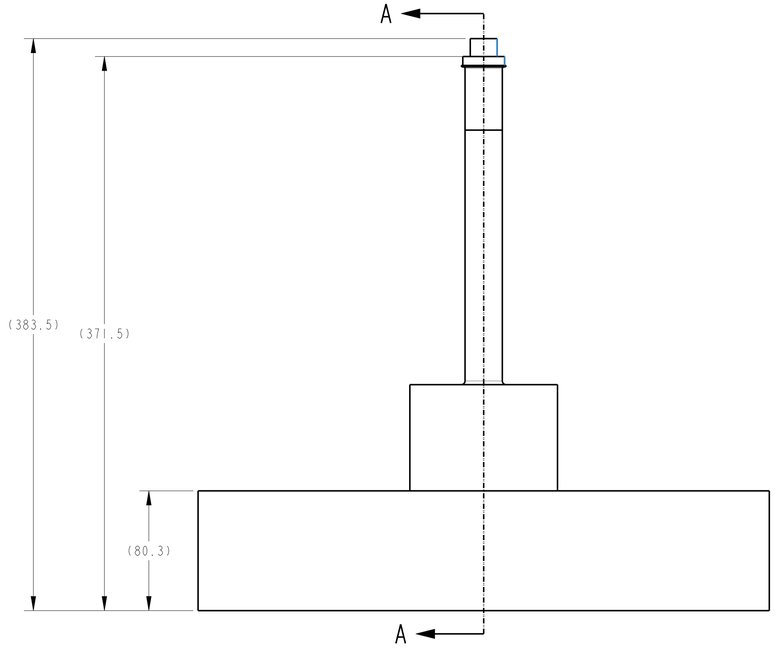
DRAWING NUMBER	REV
0000084097	0

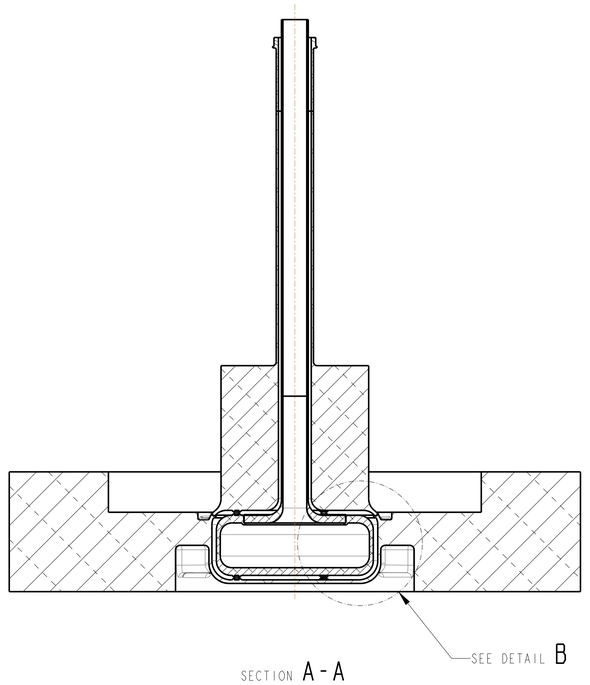
SIZE	SCALE	WEIGHT	SHEET
D	1:2	22 KG	1 of 2





DETAIL B
SCALE 2:1





SECTION A-A

SIZE	SCALE	SHEET	DRAWING NUMBER	REV
D	1:2	2 OF 2	0000084097	0

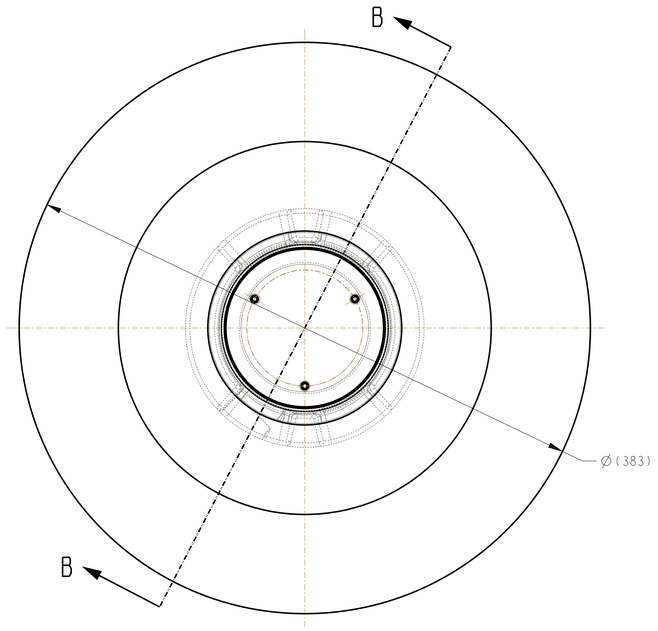
NEXT USED ASSEMBLY
0000084097

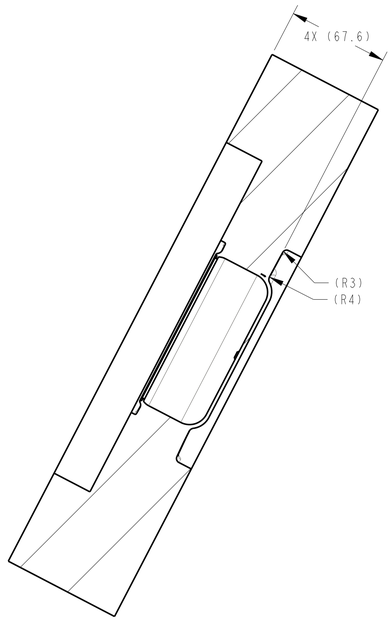
REVISION BLOCK

REV	DESCRIPTION OF CHANGE	DATE
0	ORIGINAL ISSUE	08/06/26

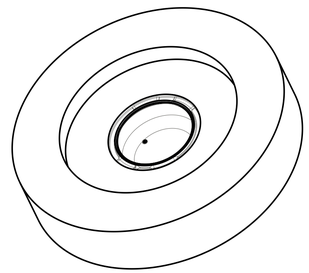
NOTES:

1. MACHINE AND INSPECT PER EQUIPMENT SPECIFICATION S03040000-EQSI0000.
2. UNLESS SPECIFIED OTHERWISE, NOMINAL PART GEOMETRY IS DEFINED BY THE MODEL.

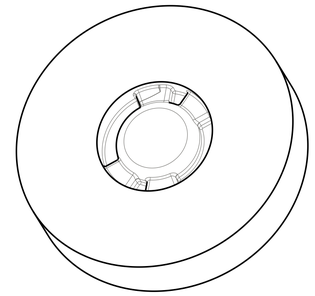




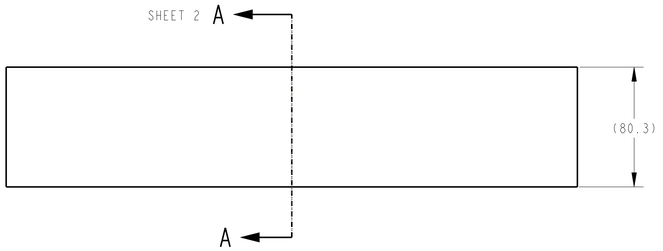
SECTION B-B



REFERENCE VIEW-TOP
SCALE 1:4



REFERENCE VIEW-BOTTOM
SCALE 1:4



WIP-NOT APPROVED FOR CONSTRUCTION

AL 6061-T6 (A96061)	ASTM B247M
MATERIAL	SPECIFICATION

GRADE	1-SERIOUS
FACILITY	STS
BUILDING	8800-STS TARGET BUILDING II
MAJOR SYSTEM	TARGET SYSTEMS
SYSTEM	MRA
SUBSYSTEM	XXX
SUB-SUBSYSTEM	XXX

UNITS: MILLIMETERS

DEFAULT TOLERANCES
0-6 ±0.1
>6-120 ±0.2
>120 ±0.5
ANGULAR ±0.5°

BREAK ALL SHARP EDGES
EXCEPT AS NOTED: 0.5 MAX

SURFACE
ROUGHNESS: 1.6 Ra U.N.O.

DRAFTING STD: ASME Y14.100
GDT: ASME Y14.5
WELD SYMBOLS: AWS A2.4

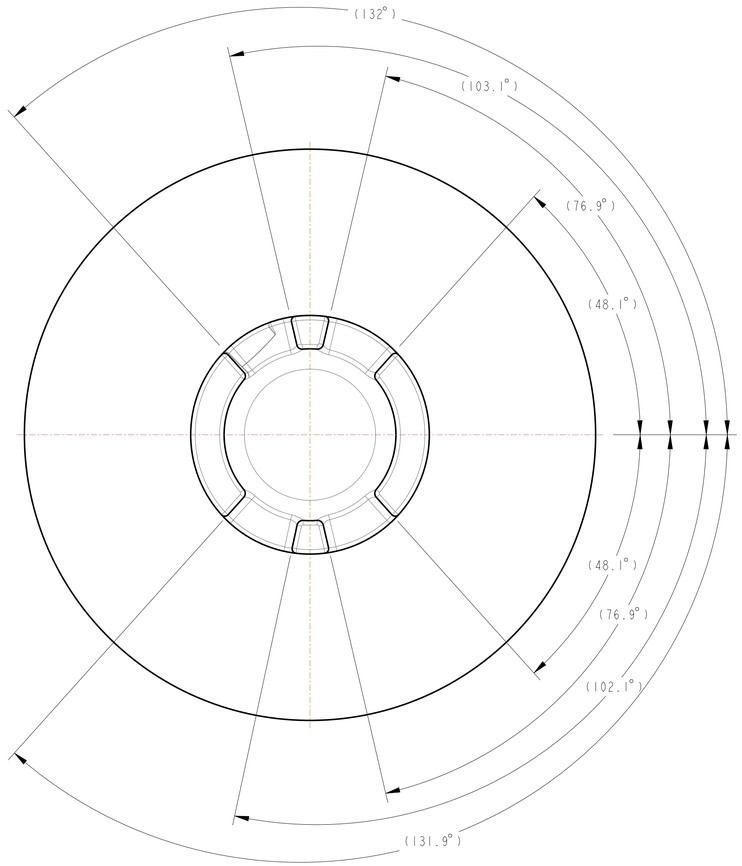
THIRD ANGLE PROJECTION

OAK RIDGE National Laboratory | HIGH FLUX ISOTOPE REACTOR | SPALLATION NEUTRON SOURCE

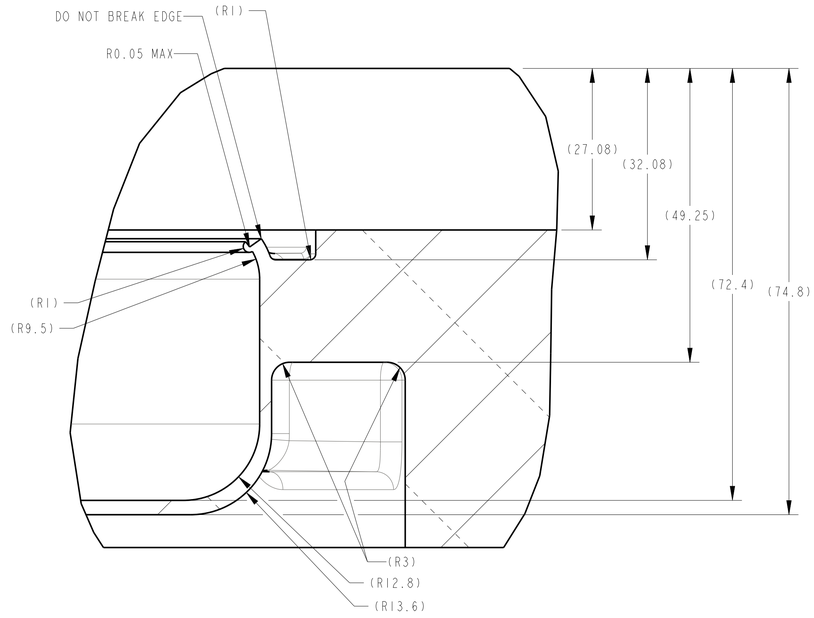
SECOND TARGET STATION
TARGET SYSTEMS
UPPER REFLECTOR VESSEL MID-AS WELDED

DRAWING NUMBER	REV
0000083571	0

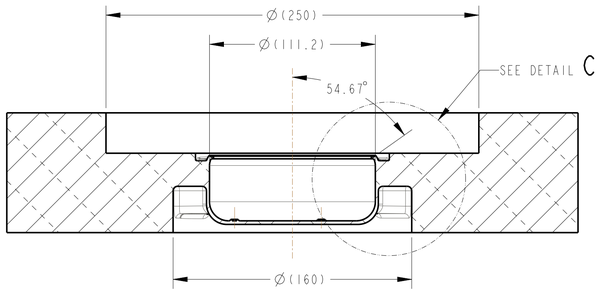
SIZE	SCALE	WEIGHT	SHEET
D	1:2	19 KG	1 of 2



REFERENCE VIEW-BOTTOM



DETAIL C
SCALE 2:1



SECTION A-A

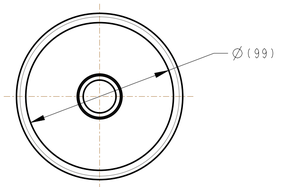
SIZE	SCALE	SHEET	DRAWING NUMBER	REV
D	1:2	2 OF 2	0000083571	0

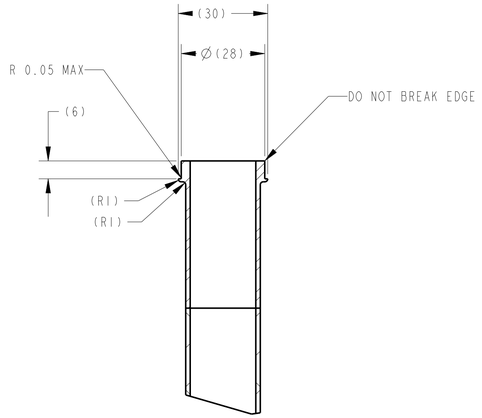
NEXT USED ASSEMBLY

REVISION BLOCK		
REV	DESCRIPTION OF CHANGE	DATE
0	ORIGINAL ISSUE	08/03/26

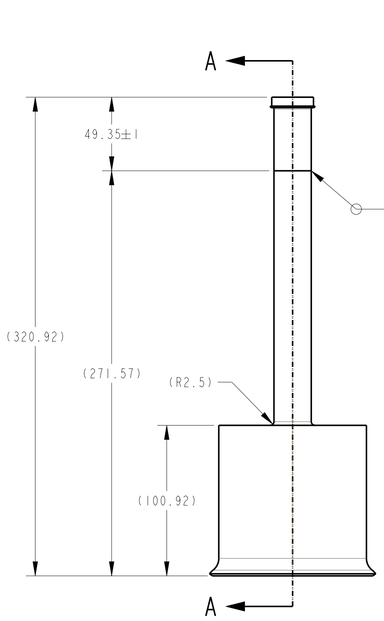
NOTES:

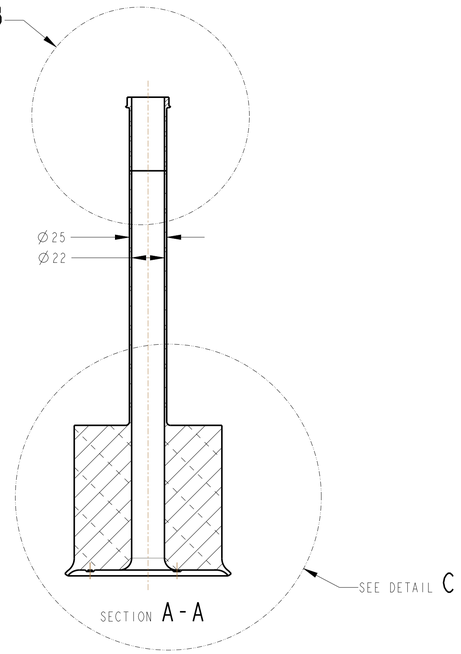
1. FABRICATE PER EQUIPMENT SPECIFICATION S03040000-EQSI0000.
2. FRICTION WELD PRIOR TO MACHINING PER MIL-STD-1252.
3. HELIUM LEAK TEST FRICTION WELD TO SHOW NO LEAK WITH A BACKGROUND LESS THAN 1×10^{-9} TORR-L/S PER S03040000-EQSI0000 AFTER MACHINING.
4. UNLESS SPECIFIED OTHERWISE, NOMINAL PART GEOMETRY IS DEFINED BY THE MODEL.



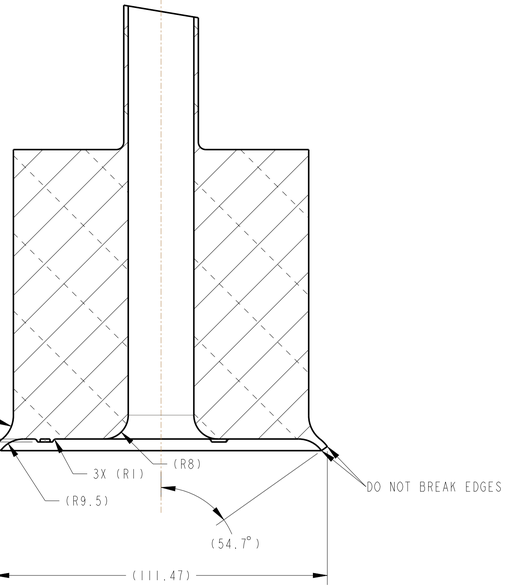


DETAIL B
SCALE 1:1

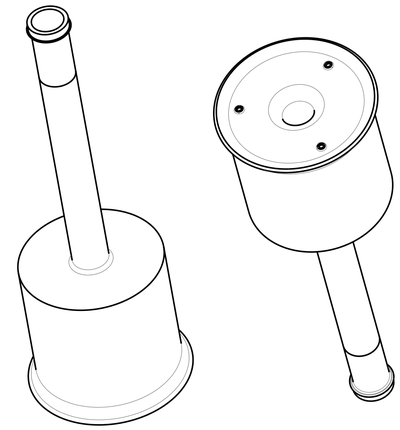




SECTION A-A

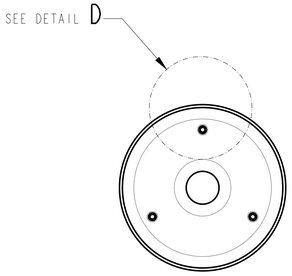


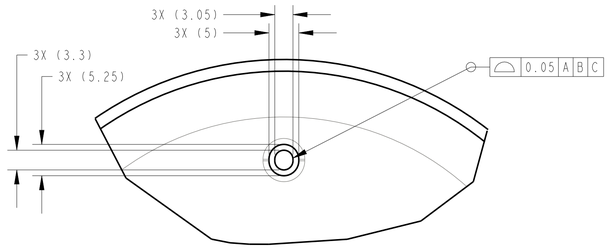
DETAIL C
SCALE 1:1



REFERENCE VIEW

REFERENCE VIEW





DETAIL D
SCALE 2:1

VENDOR 1	MATERIAL SPECIFICATION	DESCRIPTION	PART NUMBER	QTY	FIND NO.
---	SS 316L (S31603) ASTM A276	CYLINDER VACUUM BODY CAP EXTENSION	0000062522-02	1	2
---	AL 6061-T6 (A96061) ASTM B247M	UPPER VACUUM VESSEL LID-AS WELDED	0000083572	1	1

WIP-NOT APPROVED FOR CONSTRUCTION

GRADE	1-SERIOUS
FACILITY	STS
BUILDING	8800-STS TARGET BUILDING II
MAJOR SYSTEM	TARGET SYSTEMS
SYSTEM	MRA
SUBSYSTEM	XXX
SUB-SUBSYSTEM	XXX

UNITS: MILLIMETERS

DEFAULT TOLERANCES
0-6 ±0.1
>6-120 ±0.2
>120 ±0.5
ANGULAR ±0.5°

BREAK ALL SHARP EDGES EXCEPT AS NOTED: 0.5 MAX

SURFACE ROUGHNESS: 1.6 Ra U.N.O.

DRAFTING STD: ASME Y14.100
GDT: ASME Y14.5
WELD SYMBOLS: AWS A2.4

THIRD ANGLE PROJECTION

OAK RIDGE National Laboratory | HIGH FLUX ISOTOPE REACTOR | SPALLATION NEUTRON SOURCE

SECOND TARGET STATION
TARGET SYSTEMS
CYLINDER VACUUM BODY CAP PM

DRAWING NUMBER	REV
0000084181	0

SIZE	SCALE	WEIGHT	SHEET
D	1:2	2 KG	1 of 1

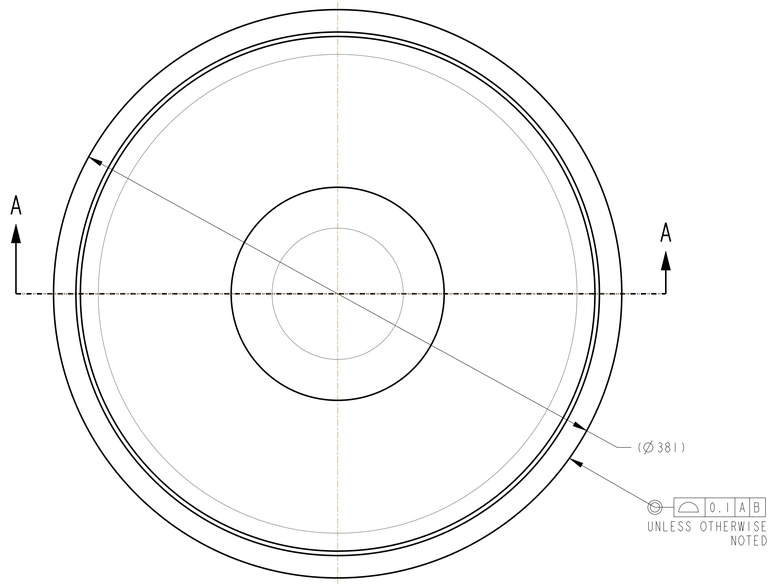
NEXT USED ASSEMBLY
0000062451

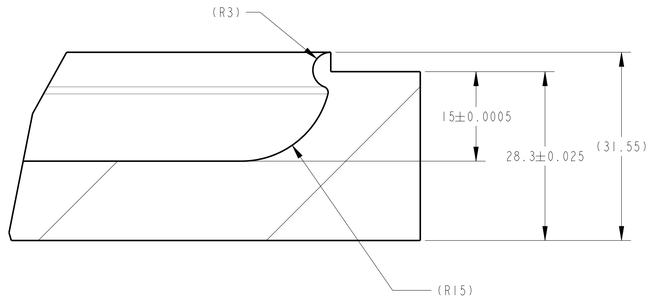
REVISION BLOCK

REV	DESCRIPTION OF CHANGE	DATE
0	ORIGINAL ISSUE	06/25/2026

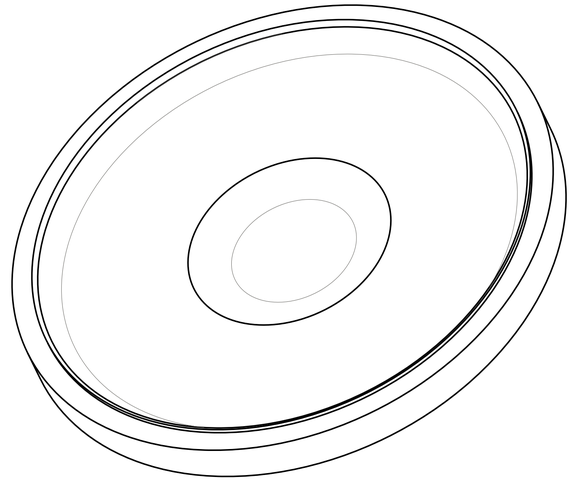
NOTES:

1. MACHINE AND INSPECT PER S03040000-EQS10000.
2. UNLESS OTHERWISE SPECIFIED, NOMINAL PART GEOMETRY IS DEFINED BY ATTACHED MODEL.

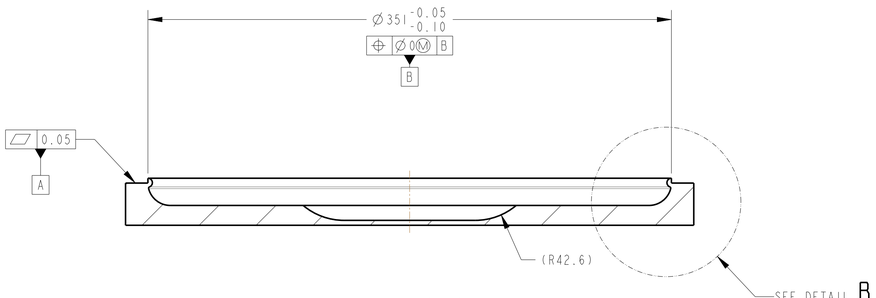




DETAIL B
SCALE 2:1



REFERENCE VIEW



SECTION A - A

WIP-NOT APPROVED FOR CONSTRUCTION

AL 6061-T6 (A96061)	ASTM B247M
MATERIAL	SPECIFICATION

GRADE	1-SERIOUS
FACILITY	STS
BUILDING	8800-STS TARGET BUILDING II
MAJOR SYSTEM	TARGET SYSTEMS
SYSTEM	MRA
SUBSYSTEM	XXX
SUB-SUBSYSTEM	XXX

UNITS: MILLIMETERS

DEFAULT TOLERANCES
0-6 ±0.1
>6-120 ±0.2
>120 ±0.5
ANGULAR ±0.5°

BREAK ALL SHARP EDGES
EXCEPT AS NOTED: 0.5 MAX

SURFACE
ROUGHNESS: 1.6 Ra U.N.O.

DRAFTING STD: ASME Y14.100
GDT: ASME Y14.5
WELD SYMBOLS: AWS A2.4

THIRD ANGLE PROJECTION

OAK RIDGE National Laboratory | HIGH FLUX ISOTOPE REACTOR | SPALLATION NEUTRON SOURCE

SECOND TARGET STATION
TARGET SYSTEM
UPPER REFLECTOR VESSEL CAP

DRAWING NUMBER	REV
0000062452	0

SIZE	SCALE	WEIGHT	SHEET
D	1:2	4.64 KG	1 of 1

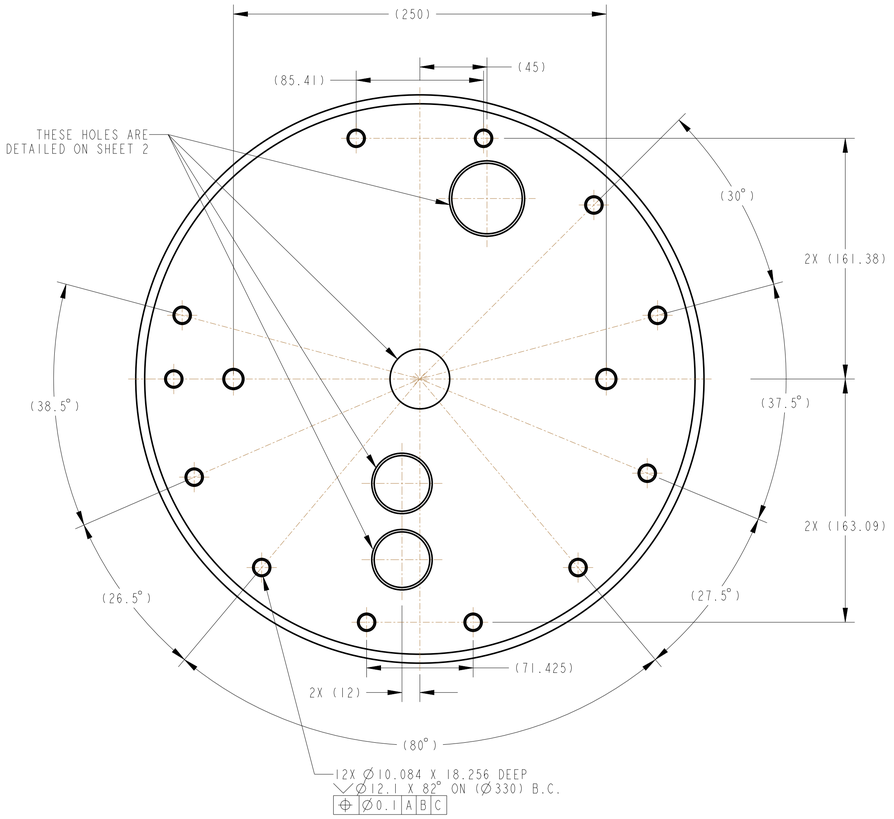
NEXT USED ASSEMBLY
0000062541

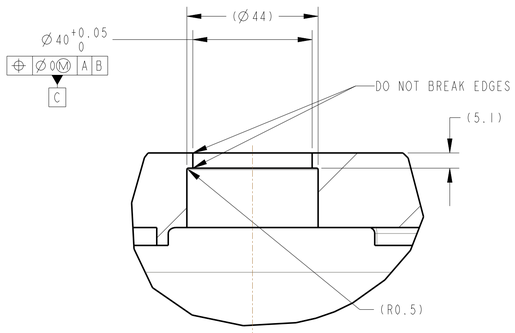
REVISION BLOCK

REV	DESCRIPTION OF CHANGE	DATE
0	ORIGINAL ISSUE	6/17/25

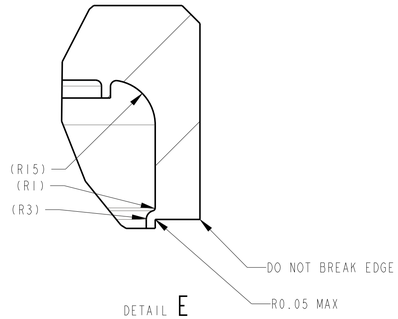
NOTES:

1. MACHINE AND INSPECT PER S03040000-EQSI0000.
2. UNLESS OTHERWISE SPECIFIED, NOMINAL PART GEOMETRY IS DEFINED BY ATTACHED MODEL.

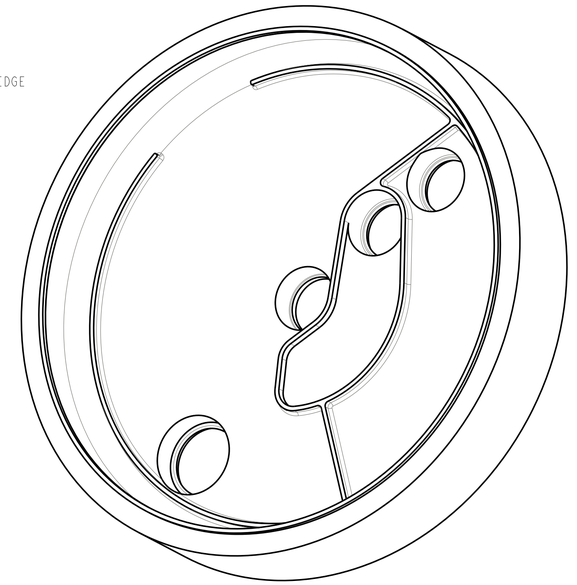




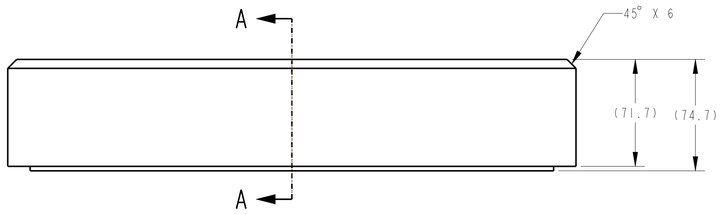
DETAIL D
SCALE 1:1



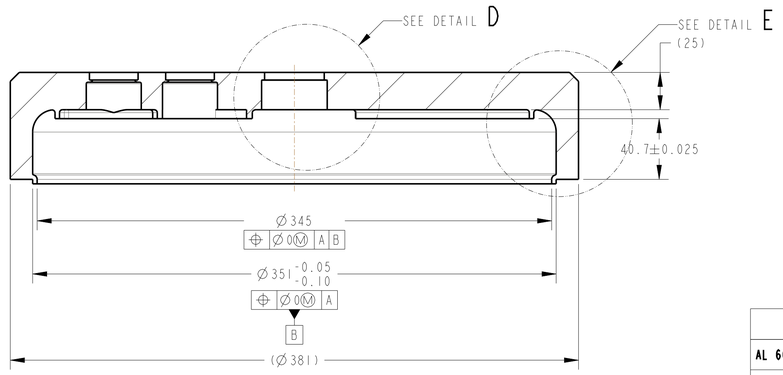
DETAIL E
SCALE 1:1



REFERENCE VIEW



SECTION A - A



WIP-NOT APPROVED FOR CONSTRUCTION

MATERIAL	SPECIFICATION
AL 6061-T6 (A96061)	ASTM B247M

GRADE	1-SERIOUS
FACILITY	STS
BUILDING	8800-STS TARGET BUILDING II
MAJOR SYSTEM	TARGET SYSTEMS
SYSTEM	MRA
SUBSYSTEM	XXX
SUB-SUBSYSTEM	XXX

UNITS: MILLIMETERS

DEFAULT TOLERANCES
0-6 ±0.1
>6-120 ±0.2
>120 ±0.5
ANGULAR ±0.5°

BREAK ALL SHARP EDGES
EXCEPT AS NOTED: 0.5 MAX

SURFACE
ROUGHNESS: 1.6 Ra U.N.O.

DRAFTING STD: ASME Y14.100
GDT: ASME Y14.5
WELD SYMBOLS: AWS A2.4

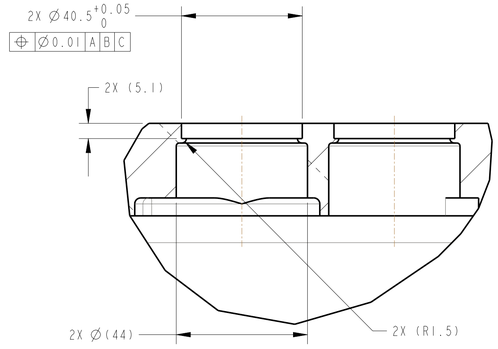
THIRD ANGLE PROJECTION

OAK RIDGE National Laboratory | HIGH FLUX ISOTOPE REACTOR | SPALLATION NEUTRON SOURCE

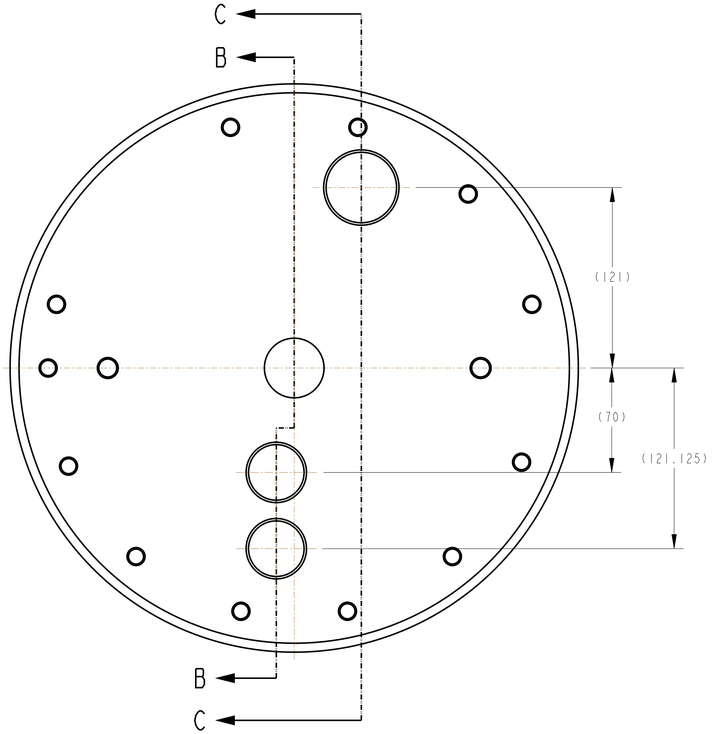
SECOND TARGET STATION
TARGET SYSTEMS
UPPER REFLECTOR VESSEL CAP

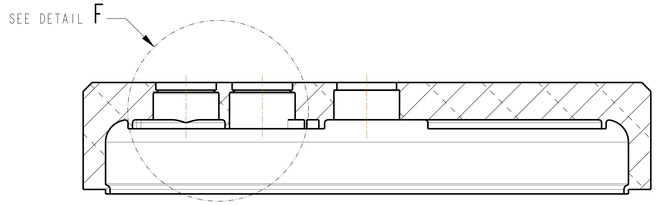
DRAWING NUMBER	REV
0000062455	0

SIZE	SCALE	WEIGHT	SHEET
D	1:2	10 KG	1 of 2

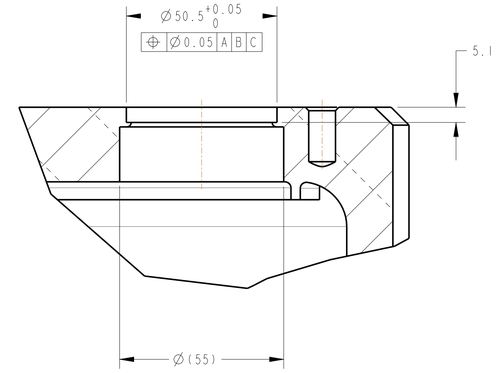


DETAIL F
SCALE 1:1

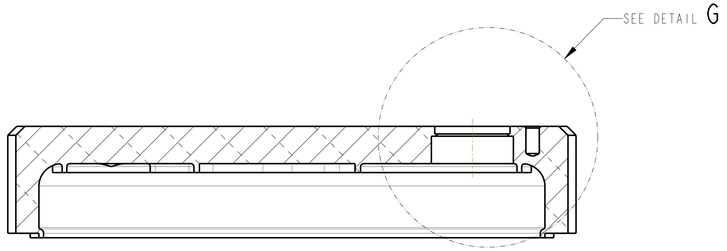




SECTION B-B



DETAIL G
SCALE 1:1



SECTION C-C

SIZE	SCALE	SHEET	DRAWING NUMBER	REV
D	1:2	2 OF 2	0000062455	0

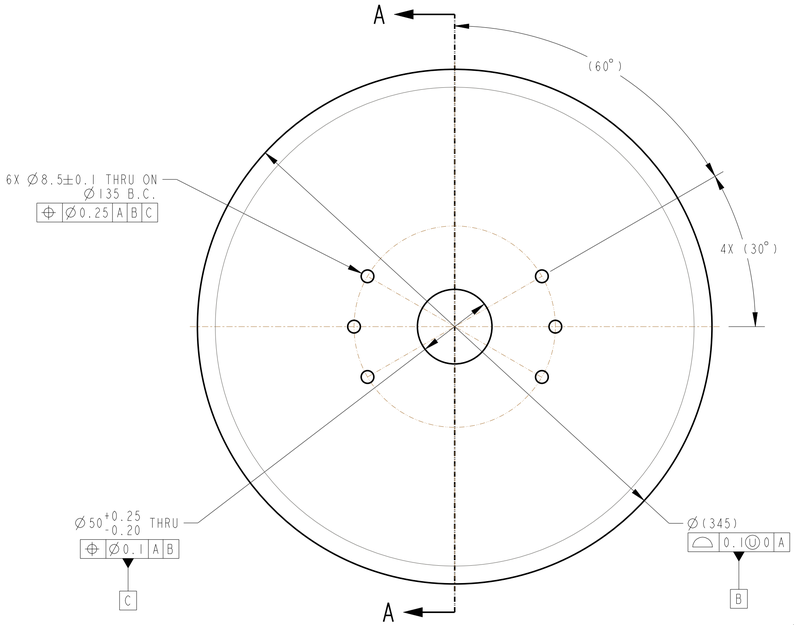
NEXT USED ASSEMBLY
0000062451

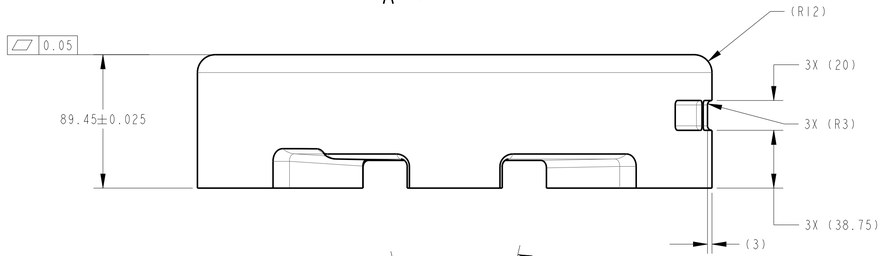
REVISION BLOCK

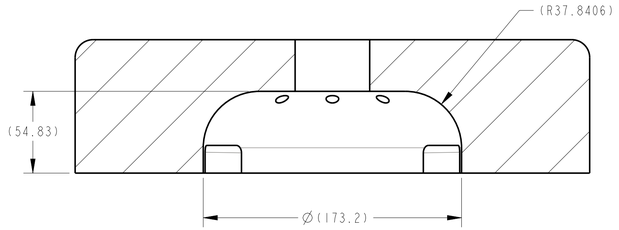
REV	DESCRIPTION OF CHANGE	DATE
0	ORIGINAL ISSUE	02/24/2026

NOTES:

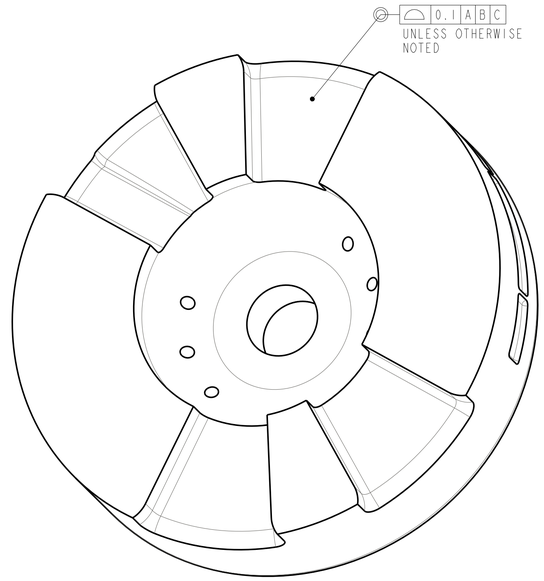
1. CAUTION!! BERYLLIUM DUST IS HAZARDOUS. DO NOT MACHINE OR GRIND BERYLLIUM WITHOUT APPROPRIATE CONTROLS.
2. MACHINE AND INSPECT PER S03040000-EQS10000.
3. UNLESS OTHERWISE SPECIFIED, NOMINAL PART GEOMETRY IS DEFINED BY ATTACHED MODEL.



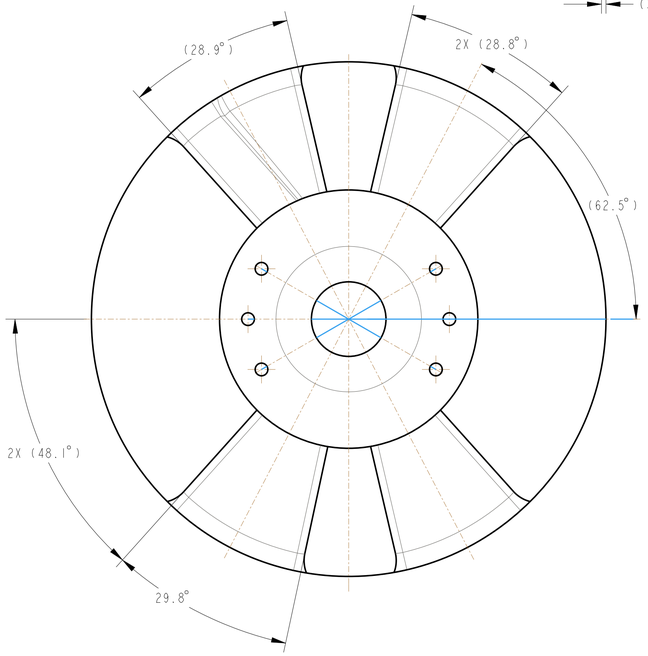




SECTION A - A



REFERENCE VIEW



WIP-NOT APPROVED FOR CONSTRUCTION

BERYLLIUM	106030101-TS0001
MATERIAL	SPECIFICATION

GRADE	1-SERIOUS
FACILITY	STS
BUILDING	8800-STS TARGET BUILDING II
MAJOR SYSTEM	TARGET SYSTEMS
SYSTEM	MRA
SUBSYSTEM	XXX
SUB-SUBSYSTEM	XXX

UNITS: MILLIMETERS

DEFAULT TOLERANCES
0-6 ±0.1
>6-120 ±0.2
>120 ±0.5
ANGULAR ±0.5°

BREAK ALL SHARP EDGES
EXCEPT AS NOTED: 0.5 MAX

SURFACE ROUGHNESS: 1.6 Ra U.N.O.

DRAFTING STD: ASME Y14.100
GDT: ASME Y14.5
WELD SYMBOLS: AWS A2.4

THIRD ANGLE PROJECTION

OAK RIDGE National Laboratory | HIGH FLUX ISOTOPE REACTOR | SPALLATION NEUTRON SOURCE

SECOND TARGET STATION
TARGET SYSTEMS
UPPER BERYLLIUM-LARGE

DRAWING NUMBER	REV
0000062449	0

SIZE	SCALE	WEIGHT	SHEET
D	1:2	12 KG	1 of 1

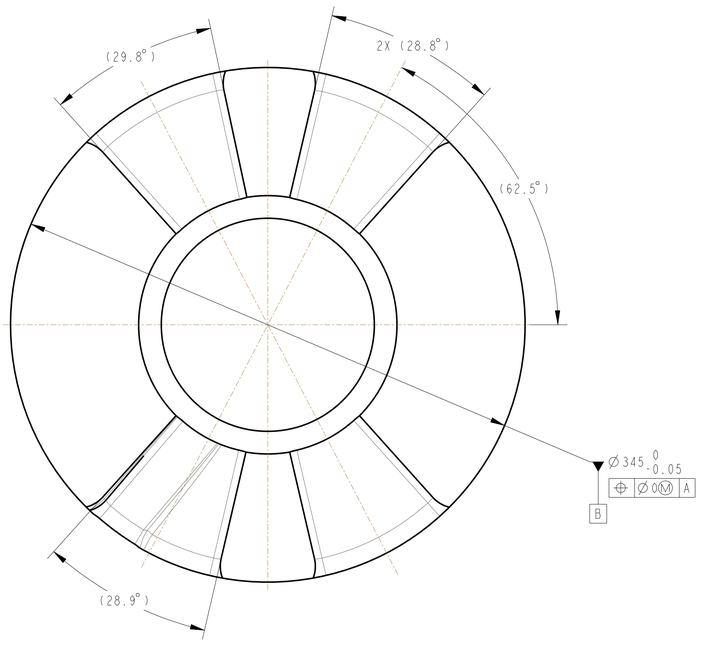
NEXT USED ASSEMBLY
0000062451

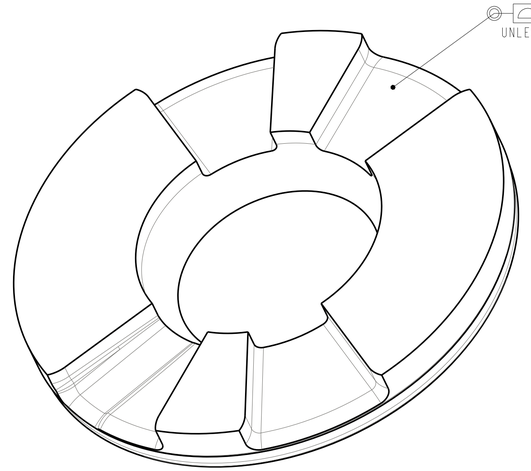
REVISION BLOCK

REV	DESCRIPTION OF CHANGE	DATE
0	ORIGINAL ISSUE	02/24/2026

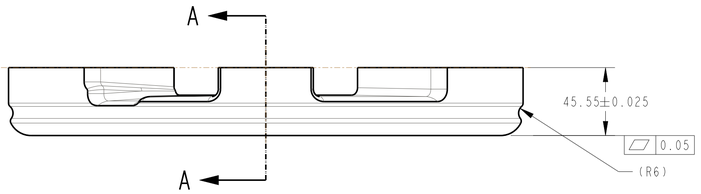
NOTES:

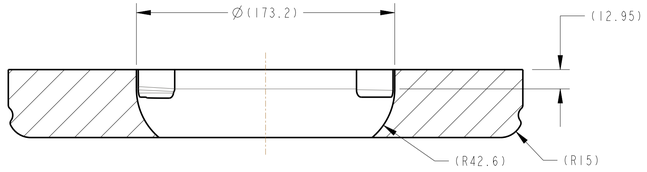
1. CAUTION!! BERYLLIUM DUST IS HAZARDOUS. DO NOT MACHINE OR GRIND BERYLLIUM WITHOUT APPROPRIATE CONTROLS.
2. MACHINE AND INSPECT PER S03040000-EQS10000.
3. UNLESS OTHERWISE SPECIFIED, NOMINAL PART GEOMETRY IS DEFINED BY ATTACHED MODEL.





REFERENCE VIEW





SECTION A - A

WIP-NOT APPROVED FOR CONSTRUCTION

MATERIAL	SPECIFICATION
BERYLLIUM	106030101-TS0001

GRADE	1-SERIOUS
FACILITY	STS
BUILDING	8800-STS TARGET BUILDING II
MAJOR SYSTEM	TARGET SYSTEMS
SYSTEM	MRA
SUBSYSTEM	XXX
SUB-SUBSYSTEM	XXX

UNITS: MILLIMETERS

DEFAULT TOLERANCES
0-6 ±0.1
>6-120 ±0.2
>120 ±0.5
ANGULAR ±0.5°

BREAK ALL SHARP EDGES EXCEPT AS NOTED: 0.5 MAX

SURFACE ROUGHNESS: 1.6 Ra U.N.O.

DRAFTING STD: ASME Y14.100
GDT: ASME Y14.5
WELD SYMBOLS: AWS A2.4

THIRD ANGLE PROJECTION

OAK RIDGE National Laboratory | HIGH FLUX ISOTOPE REACTOR | SPALLATION NEUTRON SOURCE

SECOND TARGET STATION
TARGET SYSTEMS
UPPER BERYLLIUM-SMALL

DRAWING NUMBER	REV
0000062450	0

SIZE	SCALE	WEIGHT	SHEET
D	1:2	4.95 KG	1 of 1

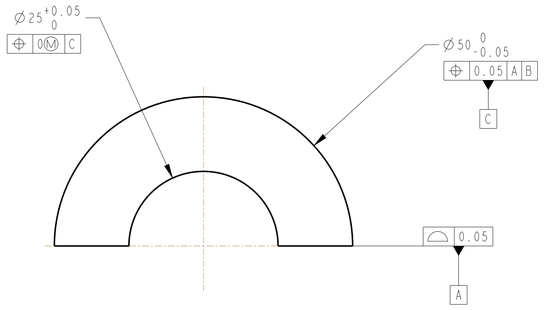
NEXT USED ASSEMBLY
0000062451

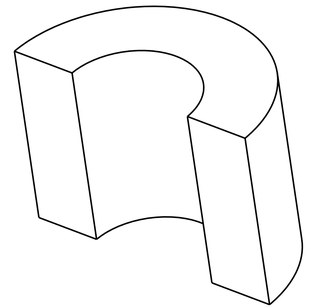
REVISION BLOCK

REV	DESCRIPTION OF CHANGE	DATE
0	ORIGINAL ISSUE	06/29/26

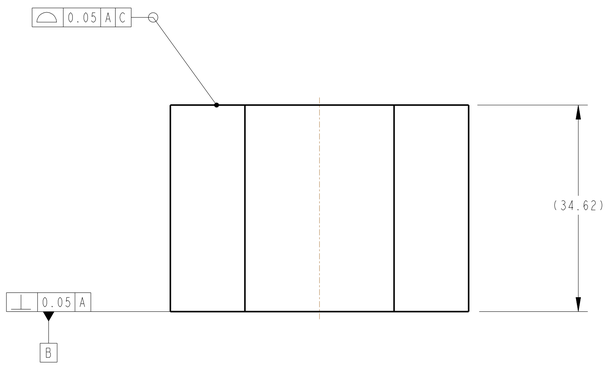
NOTES:

1. CAUTION!! BERYLLIUM DUST IS HAZARDOUS. DO NOT MACHINE OR GRIND BERYLLIUM WITHOUT APPROPRIATE CONTROLS.
2. MACHINE AND INSPECT PER S03040000-EQS10000.
3. UNLESS OTHERWISE SPECIFIED, NOMINAL PART GEOMETRY IS DEFINED BY ATTACHED MODEL.





REFERENCE VIEW



WIP-NOT APPROVED FOR CONSTRUCTION

MATERIAL	SPECIFICATION
BERYLLIUM	106030101-TS0001

GRADE	1-SERIOUS
FACILITY	STS
BUILDING	8800-STS TARGET BUILDING II
MAJOR SYSTEM	TARGET SYSTEMS
SYSTEM	MRA
SUBSYSTEM	XXX
SUB-SUBSYSTEM	XXX

UNITS: MILLIMETERS

DEFAULT TOLERANCES
0-6 ±0.1
>6-120 ±0.2
>120 ±0.5
ANGULAR ±0.5°

BREAK ALL SHARP EDGES EXCEPT AS NOTED: 0.5 MAX

SURFACE ROUGHNESS: 1.6 Ra U.N.O.

DRAFTING STD: ASME Y14.100
GDT: ASME Y14.5
WELD SYMBOLS: AWS A2.4

THIRD ANGLE PROJECTION

OAK RIDGE National Laboratory | HIGH FLUX ISOTOPE REACTOR | SPALLATION NEUTRON SOURCE

SECOND TARGET STATION
TARGET SYSTEMS
UPPER BERYLLIUM SPLIT

DRAWING NUMBER	REV
0000062459	0

SIZE	SCALE	WEIGHT	SHEET
D	2:1	0.05 KG	1 of 1

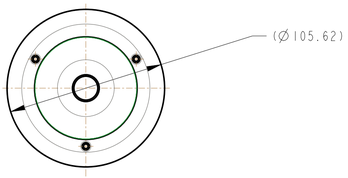
NEXT USED ASSEMBLY
0000084097

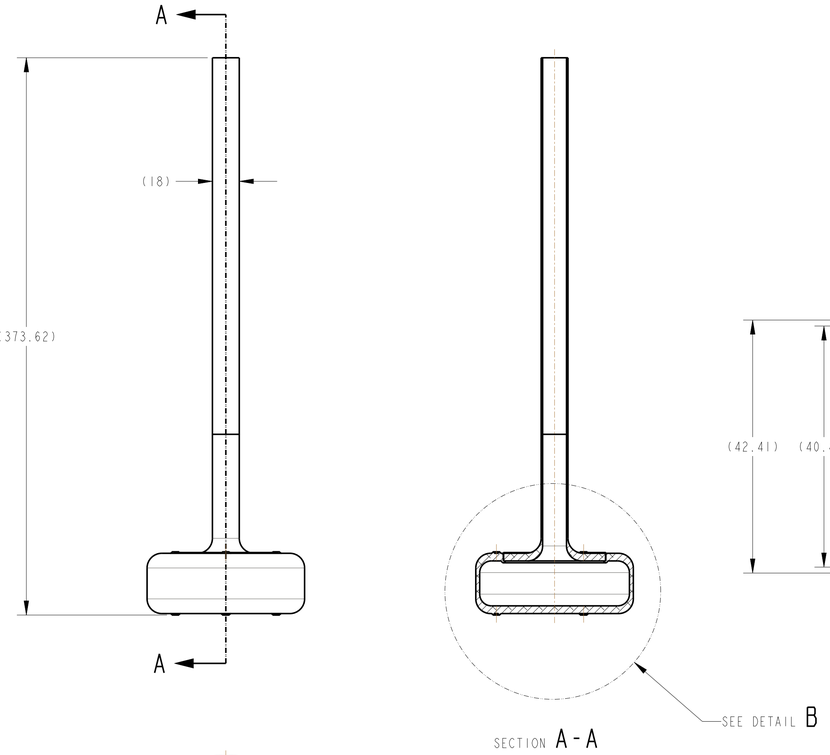
REVISION BLOCK

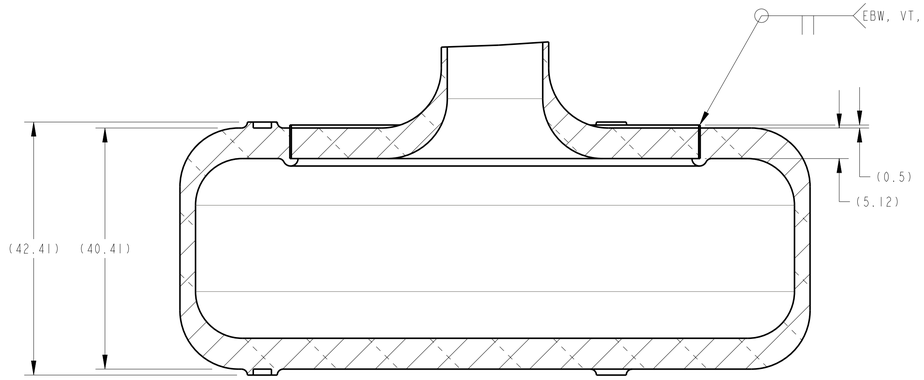
REV	DESCRIPTION OF CHANGE	DATE
0	ORIGINAL ISSUE	07/06/26

NOTES:

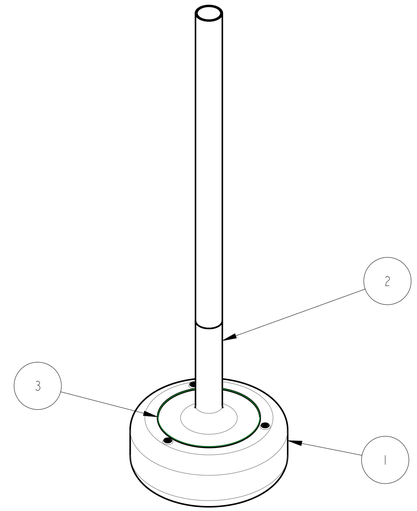
1. WELD AND INSPECT PER S03040000-EQSI0000.
2. PICKLE AND BAG PARTS TO BE WELDED PER S03040000-EQSI0000. DO NOT OPEN BAGS UNTIL IMMEDIATELY BEFORE WELDING.
3. DIMENSIONAL INSPECTION AFTER WELDING PER S03040000-EQSI0000.
4. 3X COLD SHOCK WITH LIQUID NITROGEN PER S03040000-EQSI0000.
5. PNEUMATIC TEST WITH DRY NITROGEN AT 317 PSIG PER S03040000-EQSI0000.
6. HE LEAK CHECK TO SHOW NO DETECTABLE LEAK WITH A BACKGROUND OF 1×10^{-9} TORR L/S OR LESS PER S03040000-EQSI0000.
7. THE MODEL DEPICTED ON SHEET 2 (0000062524) REPRESENTS THE MODEL ON THIS SHEET (0000084105) AT 20K OPERATING TEMPERATURE. NO TESTING OR INSPECTION IS REQUIRED AT OPERATING TEMPERATURE.



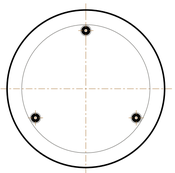




DETAIL B
SCALE 2:1



REFERENCE VIEW



VENDOR [1]	MATERIAL SPECIFICATION	DESCRIPTION	PART NUMBER	QTY	FIND NO.
--- / ---	AL 4047 (A94047) AMS 4185E, ANSI H35.2	WELD FILLER	0000084242	1	3
--- / ---	--- / ---	UPPER HYD VESSEL CAP WELDMNT-WARM	0000084084	1	2
--- / ---	AL 6061-T6 (A96061) ASTM B247M	UPPER HYDROGEN VESSEL-WARM	0000084056	1	1

WIP-NOT APPROVED FOR CONSTRUCTION

GRADE	1-SERIOUS
FACILITY	STS
BUILDING	8800-STS TARGET BUILDING II
MAJOR SYSTEM	TARGET SYSTEMS
SYSTEM	MRA
SUBSYSTEM	XXX
SUB-SUBSYSTEM	XXX

UNITS: MILLIMETERS
DEFAULT TOLERANCES
0-6 ±0.1
>6-120 ±0.2
>120 ±0.5
ANGULAR ±0.5°

BREAK ALL SHARP EDGES EXCEPT AS NOTED: 0.5 MAX

SURFACE ROUGHNESS: 1.6 Ra U.N.O.

DRAFTING STD: ASME Y14.100
GDT: ASME Y14.5
WELD SYMBOLS: AWS A2.4

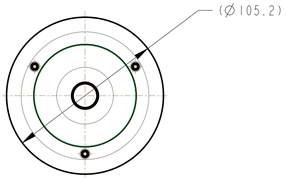
THIRD ANGLE PROJECTION

OAK RIDGE National Laboratory | HIGH FLUX ISOTOPE REACTOR | SPALLATION NEUTRON SOURCE

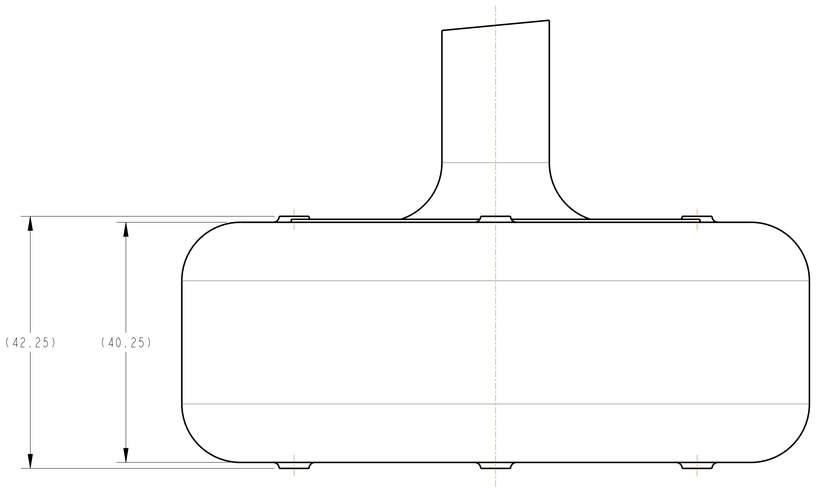
SECOND TARGET STATION
TARGET SYSTEMS
UPPER HYDROGEN VESSEL WELDMENT-WARM

DRAWING NUMBER	REV
0000084105	0

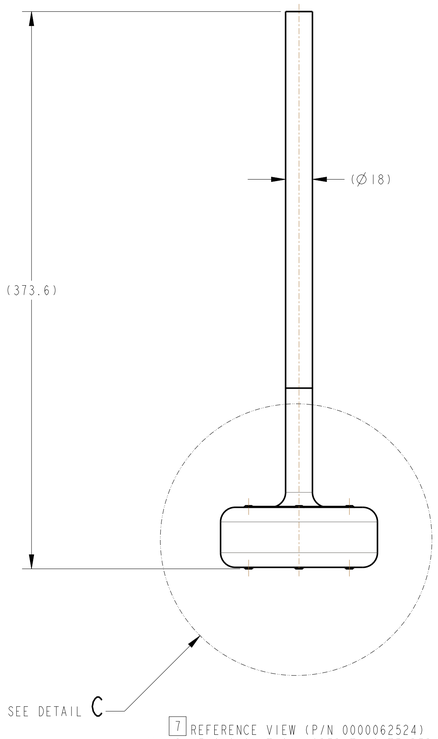
SIZE	SCALE	WEIGHT	SHEET
D	1:2	0.42 KG	1 of 2



7 REFERENCE VIEW (P/N 0000062524)
ALL DIMENSIONS AT 20K OPERATING TEMPERATURE



DETAIL C
SCALE 2:1
7 REFERENCE VIEW (P/N 0000062524)
ALL DIMENSIONS AT 20K OPERATING TEMPERATURE

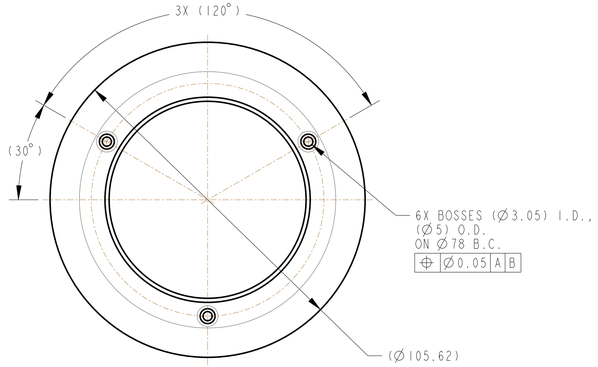


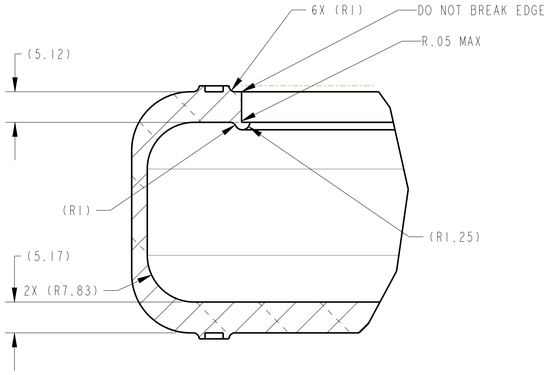
7 REFERENCE VIEW (P/N 0000062524)
ALL DIMENSIONS AT 20K OPERATING TEMPERATURE

SIZE	SCALE	SHEET	DRAWING NUMBER	REV
D	1:2	2 OF 2	0000084105	0

NEXT USED ASSEMBLY
0000084105

REVISION BLOCK		
REV	DESCRIPTION OF CHANGE	DATE
0	ORIGINAL ISSUE	07/07/26

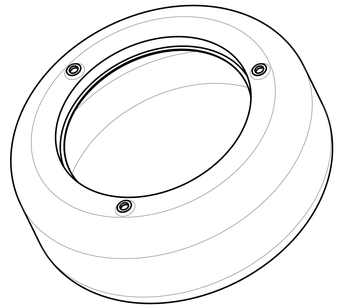




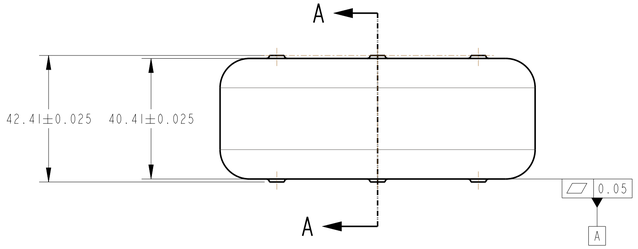
DETAIL B
SCALE 2:1

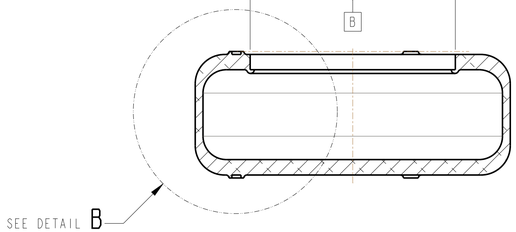
NOTES:

1. MACHINE AND INSPECT PER S03040000-EQS10000.
2. UNLESS OTHERWISE SPECIFIED, NOMINAL PART GEOMETRY IS DEFINED BY ATTACHED MODEL.

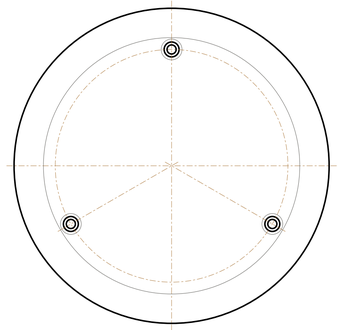


REFERENCE VIEW





SECTION A-A



WIP-NOT APPROVED FOR CONSTRUCTION

AL 6061-T6 (A96061)	ASTM B247M
MATERIAL	SPECIFICATION

GRADE	1-SERIOUS
FACILITY	STS
BUILDING	8800-STS TARGET BUILDING II
MAJOR SYSTEM	TARGET SYSTEMS
SYSTEM	MRA
SUBSYSTEM	XXX
SUB-SUBSYSTEM	XXX

UNITS: MILLIMETERS

DEFAULT TOLERANCES
0-6 ±0.1
>6-120 ±0.2
>120 ±0.5
ANGULAR ±0.5°

BREAK ALL SHARP EDGES
EXCEPT AS NOTED: 0.5 MAX

SURFACE
ROUGHNESS: 1.6 Ra U.N.O.

DRAFTING STD: ASME Y14.100
GDT: ASME Y14.5
WELD SYMBOLS: AWS A2.4

THIRD ANGLE PROJECTION

OAK RIDGE National Laboratory | HIGH FLUX ISOTOPE REACTOR | SPALLATION NEUTRON SOURCE

SECOND TARGET STATION
TARGET SYSTEMS
UPPER HYDROGEN VESSEL-WARM

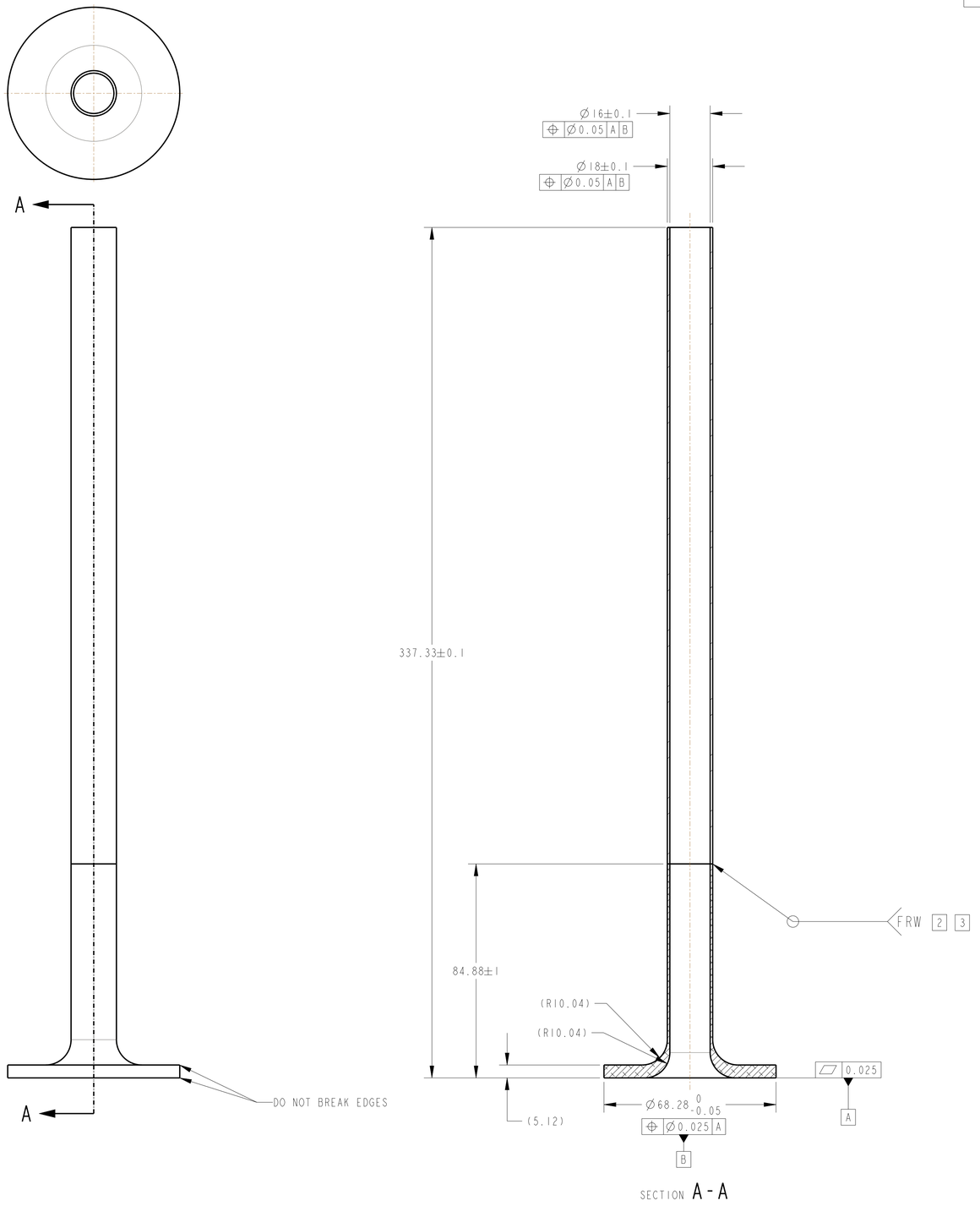
DRAWING NUMBER	REV
0000084056	0

SIZE	SCALE	WEIGHT	SHEET
D	1:1	0.25 KG	1 of 1

NEXT USED ASSEMBLY
0000084105

REVISION BLOCK

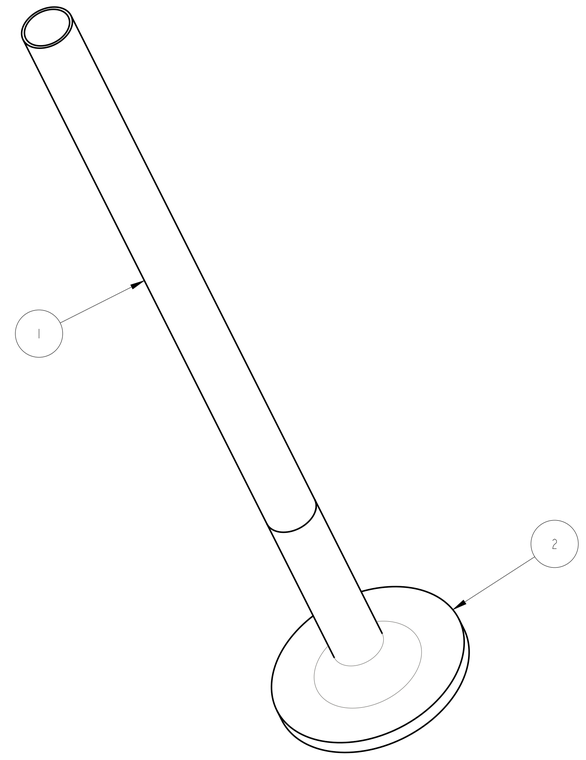
REV	DESCRIPTION OF CHANGE	DATE
0	ORIGINAL ISSUE	07/07/26



SECTION A - A

NOTES:

1. MACHINE & INSPECT PER EQUIPMENT SPECIFICATION S03040000-EQS10000.
2. FRICTION WELD PRIOR TO MACHINING PER MIL-STD-1252.
3. HELIUM LEAK TEST FRICTION WELD TO SHOW NO LEAK WITH A BACKGROUND LESS THAN 1 X 10^{-9} TORR-L/S PER S03040000-EQS10000 AFTER MACHINING.
4. UNLESS OTHERWISE SPECIFIED, NOMINAL PART GEOMETRY IS DEFINED BY THE ATTACHED MODEL.



REFERENCE VIEW

VENDOR 1	MATERIAL SPECIFICATION	DESCRIPTION	PART NUMBER	QTY	FIND NO.
---	AL 6061-T6 (A96061) ASTM B274M	UPPER HYDROGEN VESSEL CAP-WARM	0000084055	1	2
---	SS 316L (S31603) ASTM A312	UPPER HYDROGEN VESSEL CAP EXTENSION	0000062526	1	1

GRADE	1-SERIOUS
FACILITY	STS
BUILDING	8800-STS TARGET BUILDING II
MAJOR SYSTEM	TARGET SYSTEMS
SYSTEM	MRA
SUBSYSTEM	XXX
SUB-SUBSYSTEM	XXX

WIP-NOT APPROVED FOR CONSTRUCTION

UNITS: MILLIMETERS

DEFAULT TOLERANCES
0-6 ±0.1
>6-120 ±0.2
>120 ±0.5
ANGULAR ±0.5°

BREAK ALL SHARP EDGES EXCEPT AS NOTED: 0.5 MAX

SURFACE ROUGHNESS: 1.6 Ra U.N.O.

DRAFTING STD: ASME Y14.100
GDT: ASME Y14.5
WELD SYMBOLS: AWS A2.4

THIRD ANGLE PROJECTION

OAK RIDGE National Laboratory | HIGH FLUX ISOTOPE REACTOR | SPALLATION NEUTRON SOURCE

SECOND TARGET STATION
TARGET SYSTEMS
UPPER HYD VESSEL CAP WELDMNT-WARM

DRAWING NUMBER	REV
0000084084	0

SIZE	SCALE	WEIGHT	SHEET
D	1:1	0.17 KG	1 of 1

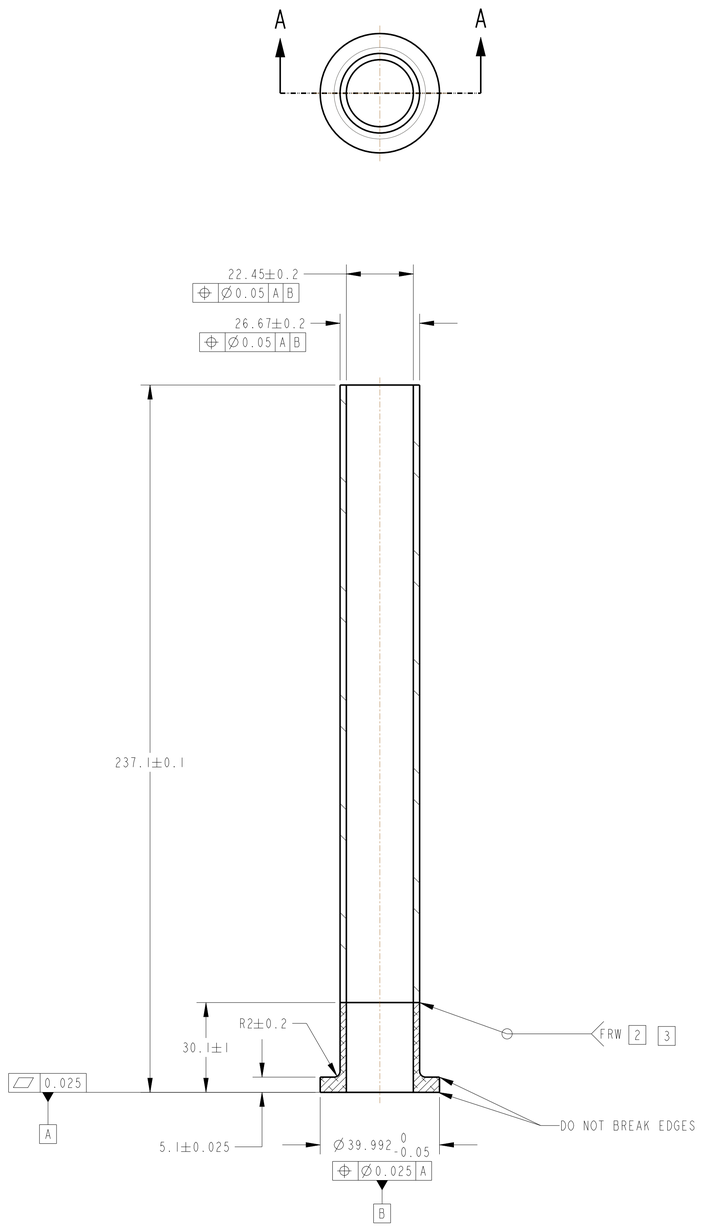
NEXT USED ASSEMBLY
0000062451

REVISION BLOCK

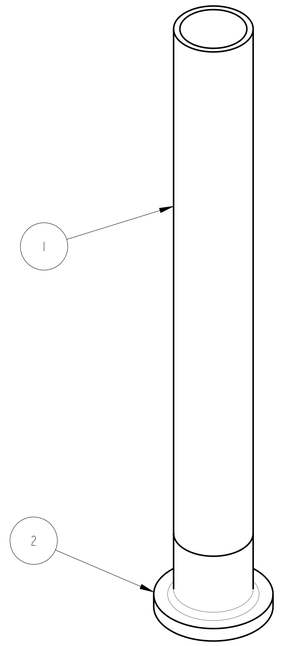
REV	DESCRIPTION OF CHANGE	DATE
0	ORIGINAL ISSUE	06/26/26

NOTES:

1. FABRICATE PER EQUIPMENT SPECIFICATION S03040000-EQS10000.
2. FRICTION WELD PRIOR TO MACHINING PER MIL-STD-1252.
3. HELIUM LEAK TEST FRICTION WELD TO SHOW NO LEAK WITH A BACKGROUND LESS THAN 1 X 10^{-8} TORR-L/S PER S03040000-EQS10000 AFTER MACHINING.
4. NOMINAL PART GEOMETRY IS DEFINED BY THE MODEL.



SECTION A - A



REFERENCE VIEW

VENDOR 1	MATERIAL SPECIFICATION	DESCRIPTION	PART NUMBER	QTY	FIND NO.
--- ---	AL 6061-T6 (A96061) ASTM B247M	BI-METAL FITTING-AL	0000082916-02	1	2
--- ---	SS 316L (S31603) ASTM A312	BI-METAL FITTING-SS	0000082916-01	1	1

WIP-NOT APPROVED FOR CONSTRUCTION

GRADE	1-SERIOUS
FACILITY	STS
BUILDING	8800-STS TARGET BUILDING II
MAJOR SYSTEM	TARGET SYSTEMS
SYSTEM	MRA
SUBSYSTEM	XXX
SUB-SUBSYSTEM	XXX

UNITS: MILLIMETERS

DEFAULT TOLERANCES
0-6 ±0.1
>6-120 ±0.2
>120 ±0.5
ANGULAR ±0.5°

BREAK ALL SHARP EDGES EXCEPT AS NOTED: 0.5 MAX

SURFACE ROUGHNESS: 1.6 Ra U.N.O.

DRAFTING STD: ASME Y14.100
GDT: ASME Y14.5
WELD SYMBOLS: AWS A2.4

THIRD ANGLE PROJECTION

OAK RIDGE National Laboratory | HIGH FLUX ISOTOPE REACTOR | SPALLATION NEUTRON SOURCE

FIRST TARGET STATION
TARGET SYSTEMS
MRA BI-METAL FITTING

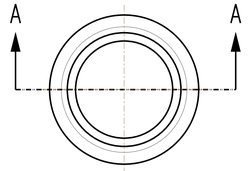
DRAWING NUMBER	REV
0000082916	0

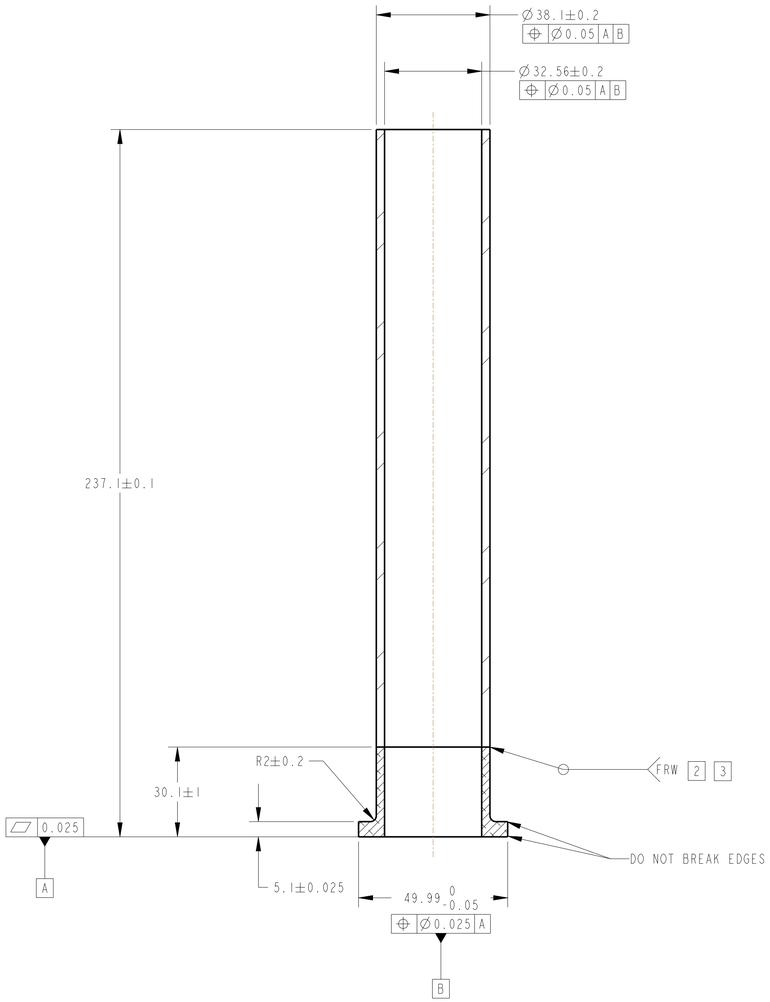
SIZE	SCALE	WEIGHT	SHEET
D	1:1	0.29 KG	1 of 1

NEXT USED ASSEMBLY
0000062451

REVISION BLOCK

REV	DESCRIPTION OF CHANGE	DATE
0	ORIGINAL ISSUE	06/25/26

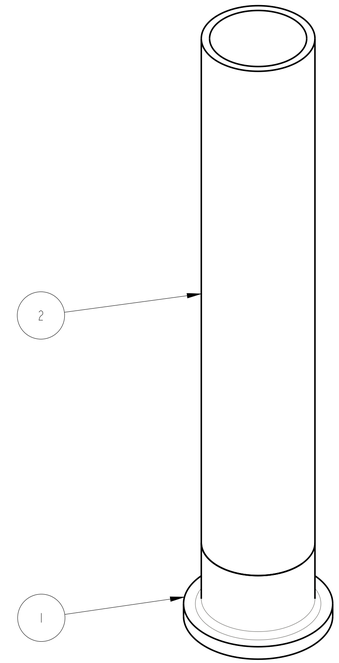




SECTION A - A

NOTES:

1. FABRICATE PER EQUIPMENT SPECIFICATION S03040000-EQS10000.
2. FRICTION WELD PRIOR TO MACHINING PER MIL-STD-1252.
3. HELIUM LEAK TEST FRICTION WELD TO SHOW NO LEAK WITH A BACKGROUND LESS THAN 1 X 10^{-8} TORR-L/S PER S03040000-EQS10000 AFTER MACHINING.
4. NOMINAL PART GEOMETRY IS DEFINED BY THE MODEL.



REFERENCE VIEW

VENDOR 1	MATERIAL SPECIFICATION	DESCRIPTION	PART NUMBER	QTY	FIND NO.
--- ---	SS 316L (S31603) ASTM A312	BI-METAL FITTING-SS	0000082961-02	1	2
--- ---	AL 6061-T6 (A96061) ASTM B247M	BI-METAL FITTING-AL	0000082961-01	1	1

GRADE	1-SERIOUS
FACILITY	STS
BUILDING	8800-STS TARGET BUILDING II
MAJOR SYSTEM	TARGET SYSTEMS
SYSTEM	MRA
SUBSYSTEM	XXX
SUB-SUBSYSTEM	XXX

WIP-NOT APPROVED FOR CONSTRUCTION

UNITS: MILLIMETERS

DEFAULT TOLERANCES
0-6 ±0.1
>6-120 ±0.2
>120 ±0.5
ANGULAR ±0.5°

BREAK ALL SHARP EDGES EXCEPT AS NOTED: 0.5 MAX

SURFACE ROUGHNESS: 1.6 Ra U.N.O.

DRAFTING STD: ASME Y14.100
GDT: ASME Y14.5
WELD SYMBOLS: AWS A2.4

THIRD ANGLE PROJECTION

OAK RIDGE National Laboratory | HIGH FLUX ISOTOPE REACTOR | SPALLATION NEUTRON SOURCE

SECOND TARGET STATION
TARGET SYSTEMS
MRA BI-METAL FITTING

DRAWING NUMBER	REV
0000082961	0

SIZE	SCALE	WEIGHT	SHEET
D	1:1	0.55 KG	1 of 1

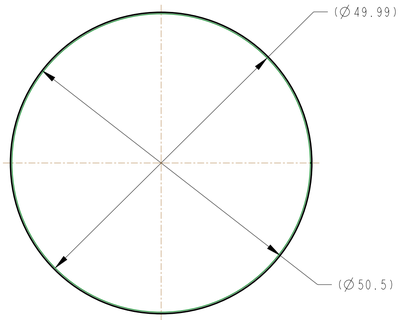
NEXT USED ASSEMBLY
0000062451

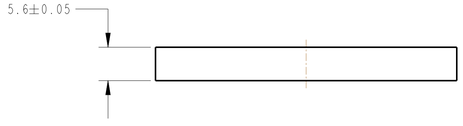
REVISION BLOCK

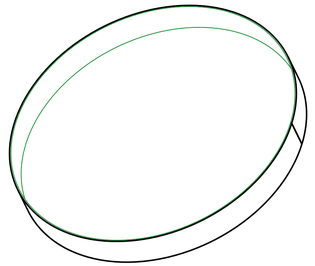
REV	DESCRIPTION OF CHANGE	DATE
0	ORIGINAL ISSUE	06/26/26

NOTES:

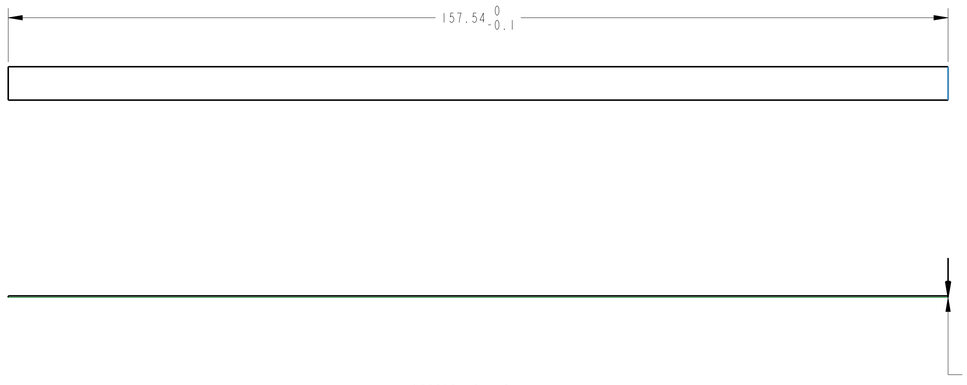
1. MACHINE AND INSPECT PER S0304000-EQSI0000.
2. DO NOT BEND PRIOR TO INSTALLATION AT NEXT ASSEMBLY.







REFERENCE VIEW



REFERENCE VIEW
FLAT LAYOUT

WIP-NOT APPROVED FOR CONSTRUCTION

MATERIAL	SPECIFICATION
AL 4047 (A94047)	AMS 4185E, ANSI H35.2

GRADE	1-SERIOUS
FACILITY	STS
BUILDING	8800-STS_TARGET_BUILDING_II
MAJOR SYSTEM	TARGET_SYSTEMS
SYSTEM	MRA
SUBSYSTEM	XXX
SUB-SUBSYSTEM	XXX

UNITS: MILLIMETERS

DEFAULT TOLERANCES
0-6 ±0.1
>6-120 ±0.2
>120 ±0.5
ANGULAR ±0.5°

DO NOT BREAK EDGES

SURFACE ROUGHNESS: 1.6 Ra U.N.O.

DRAFTING STD: ASME Y14.100
GDT: ASME Y14.5
WELD SYMBOLS: AWS A2.4

THIRD ANGLE PROJECTION

OAK RIDGE National Laboratory | HIGH FLUX ISOTOPE REACTOR | SPALLATION NEUTRON SOURCE

SECOND TARGET STATION
TARGET SYSTEMS
WELD FILLER

DRAWING NUMBER	REV
0000066320	0

SIZE	SCALE	WEIGHT	SHEET
D	2:1	0.0006 KG	1 of 1

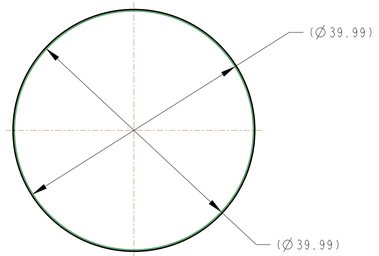
NEXT USED ASSEMBLY
0000062451

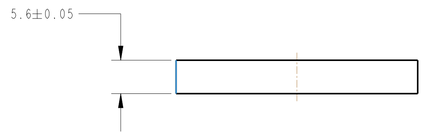
REVISION BLOCK

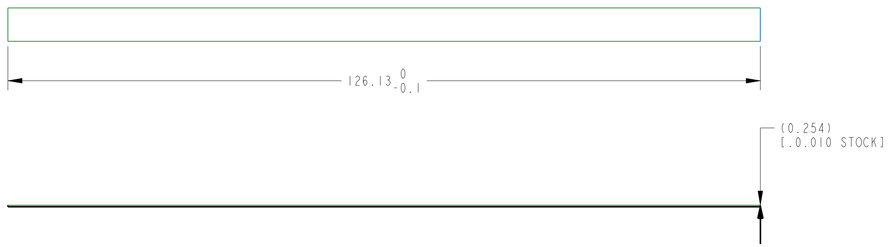
REV	DESCRIPTION OF CHANGE	DATE
0	ORIGINAL ISSUE	06/26/26

NOTES:

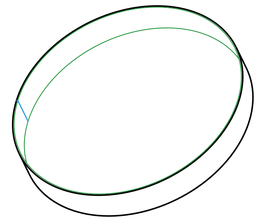
1. MACHINE AND INSPECT PER S0304000-EQSI0000.
2. DO NOT BEND PRIOR TO INSTALLATION AT NEXT ASSEMBLY.







REFERENCE VIEW
FLAT LAYOUT



REFERENCE VIEW

WIP-NOT APPROVED FOR CONSTRUCTION

MATERIAL	SPECIFICATION
AL 4047 (A94047)	AMS 4185E, ANSI H35.2

GRADE	1-SERIOUS
FACILITY	STS
BUILDING	8800-STS_TARGET_BUILDING_II
MAJOR SYSTEM	TARGET_SYSTEMS
SYSTEM	MRA
SUBSYSTEM	XXX
SUB-SUBSYSTEM	XXX

UNITS: MILLIMETERS

DEFAULT TOLERANCES
0-6 ±0.1
>6-120 ±0.2
>120 ±0.5
ANGULAR ±0.5°

DO NOT BREAK EDGES

SURFACE ROUGHNESS: 1.6 Ra U.N.O.

DRAFTING STD: ASME Y14.100
GDT: ASME Y14.5
WELD SYMBOLS: AWS A2.4

THIRD ANGLE PROJECTION

OAK RIDGE National Laboratory | HIGH FLUX ISOTOPE REACTOR | SPALLATION NEUTRON SOURCE

SECOND TARGET STATION
TARGET SYSTEMS
WELD FILLER

DRAWING NUMBER	REV
0000066327	0

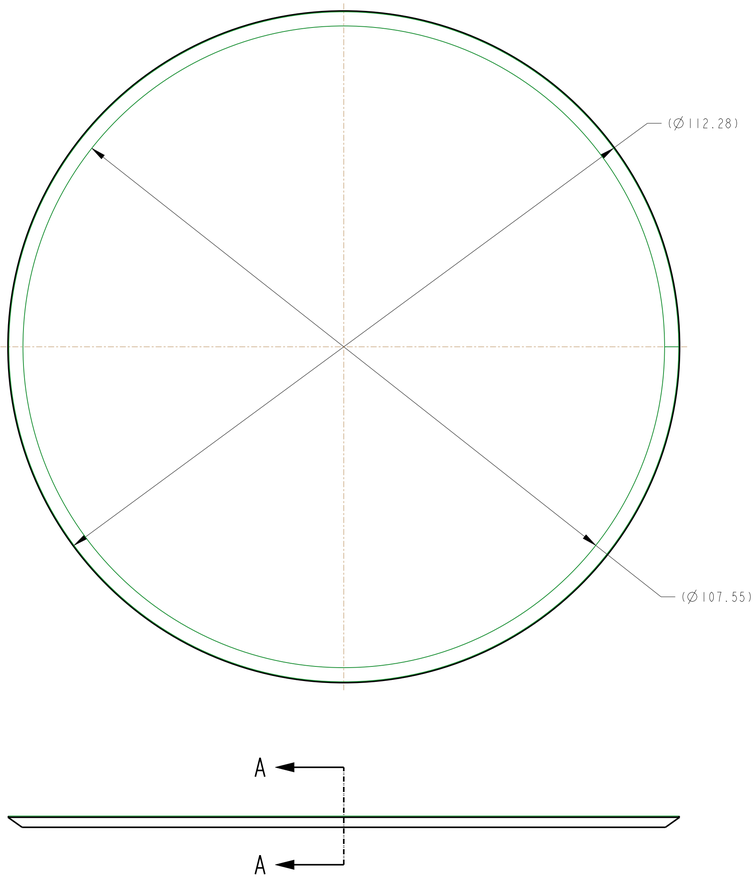
SIZE	SCALE	WEIGHT	SHEET
D	2:1	0.0005 KG	1 of 1

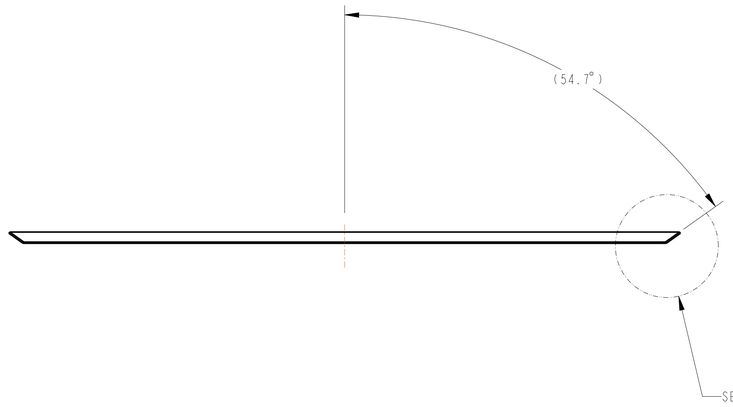
NEXT USED ASSEMBLY
0000062451

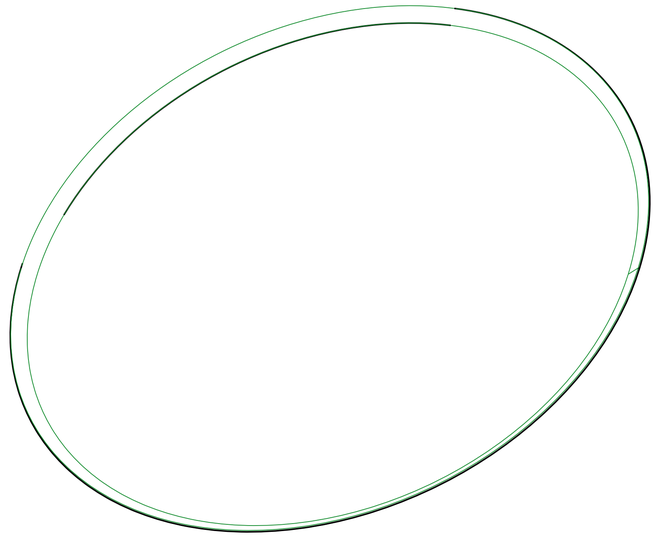
REVISION BLOCK		
REV	DESCRIPTION OF CHANGE	DATE
0	ORIGINAL ISSUE	06/26/26

NOTES:

1. MACHINE AND INSPECT PER S0304000-EQS10000.
2. DO NOT BEND PRIOR TO INSTALLATION AT NEXT ASSEMBLY.

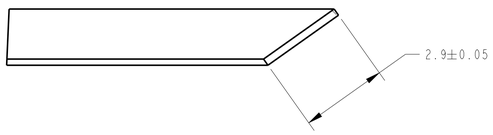






REFERENCE VIEW

SECTION A - A



DETAIL B
SCALE 10:1

WIP-NOT APPROVED FOR CONSTRUCTION

AL 4047 (A94047)	AMS 4185E, ANSI H35.2
MATERIAL	SPECIFICATION

GRADE	1-SERIOUS
FACILITY	STS
BUILDING	8800-STS TARGET BUILDING II
MAJOR SYSTEM	TARGET SYSTEMS
SYSTEM	MRA
SUBSYSTEM	XXX
SUB-SUBSYSTEM	XXX

UNITS: MILLIMETERS

DEFAULT TOLERANCES
0-6 ±0.1
>6-120 ±0.2
>120 ±0.5
ANGULAR ±0.5°

DO NOT BREAK EDGES

SURFACE ROUGHNESS: 1.6 Ra U.N.O.

DRAFTING STD: ASME Y14.100
GDT: ASME Y14.5
WELD SYMBOLS: AWS A2.4

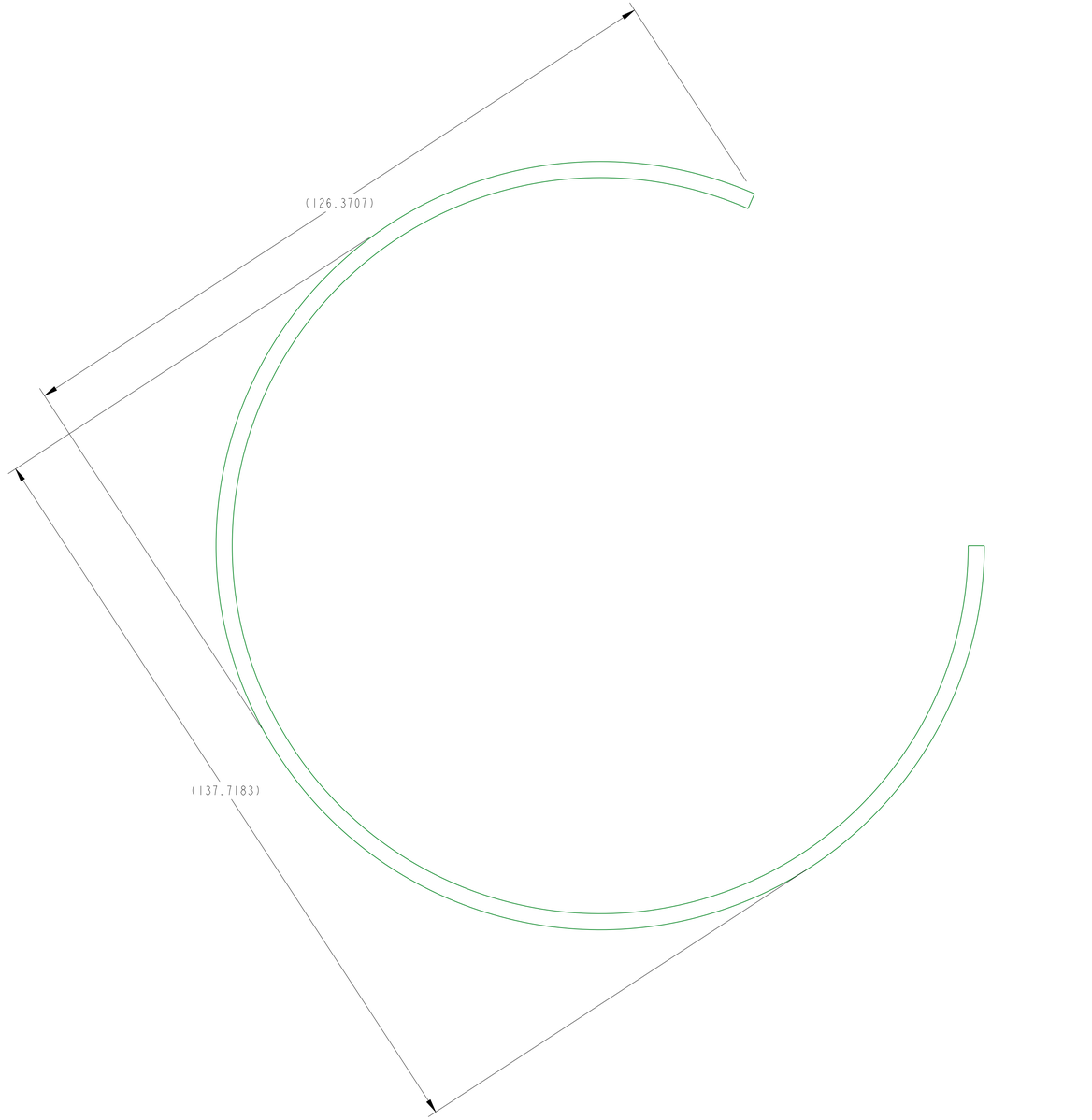
THIRD ANGLE PROJECTION

OAK RIDGE National Laboratory | HIGH FLUX ISOTOPE REACTOR | SPALLATION NEUTRON SOURCE

SECOND TARGET STATION
TARGET SYSTEMS
UPPER VACUUM VESSEL WELD FILLER

DRAWING NUMBER	REV
0000083445	0

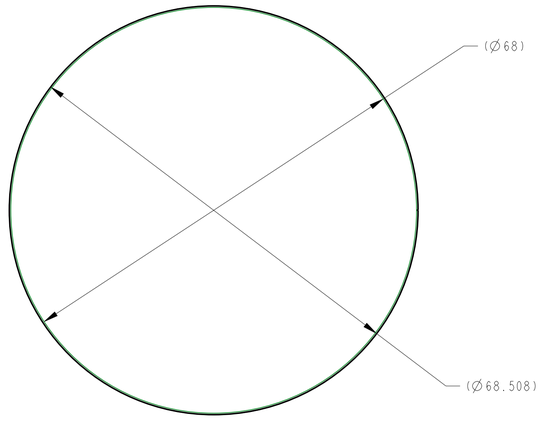
SIZE	SCALE	WEIGHT	SHEET
D	2:1	0.001 KG	1 of 2

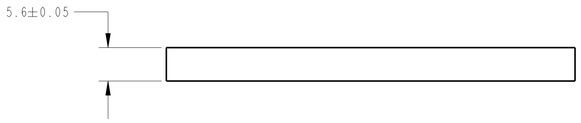


SIZE	SCALE	SHEET	DRAWING NUMBER	REV
D	2:1	2 OF 2	0000083445	0

NEXT USED ASSEMBLY
0000062451

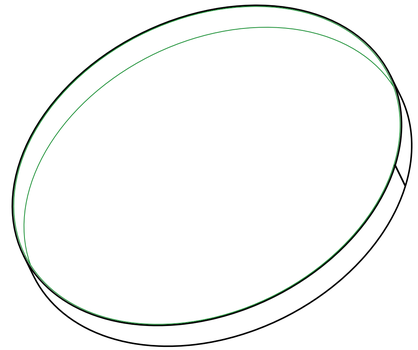
REVISION BLOCK		
REV	DESCRIPTION OF CHANGE	DATE
0	ORIGINAL ISSUE	06/26/26



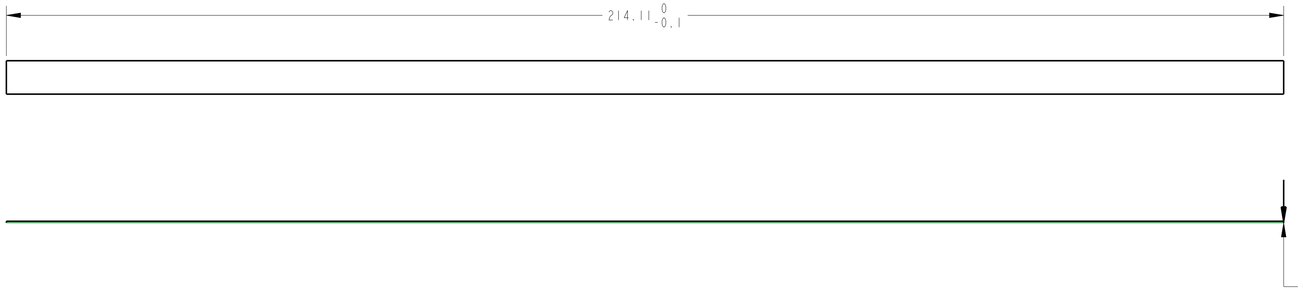


NOTES:

1. MACHINE AND INSPECT PER S0304000-EQS10000.
2. DO NOT BEND PRIOR TO INSTALLATION AT NEXT ASSEMBLY.



REFERENCE VIEW



REFERENCE VIEW
FLAT LAYOUT

WIP-NOT APPROVED FOR CONSTRUCTION

MATERIAL	SPECIFICATION
AL 4047 (A94047)	AMS 4185E, ANSI H35.2

GRADE	1-SERIOUS
FACILITY	STS
BUILDING	8800-STS_TARGET_BUILDING_II
MAJOR SYSTEM	TARGET_SYSTEMS
SYSTEM	MRA
SUBSYSTEM	XXX
SUB-SUBSYSTEM	XXX

UNITS: MILLIMETERS

DEFAULT TOLERANCES
0-6 ±0.1
>6-120 ±0.2
>120 ±0.5
ANGULAR ±0.5°

DO NOT BREAK EDGES

SURFACE ROUGHNESS: 1.6 Ra U.N.O.

DRAFTING STD: ASME Y14.100
GDT: ASME Y14.5
WELD SYMBOLS: AWS A2.4

THIRD ANGLE PROJECTION

OAK RIDGE National Laboratory | HIGH FLUX ISOTOPE REACTOR | SPALLATION NEUTRON SOURCE

SECOND TARGET STATION
TARGET SYSTEMS
UPPER HYDROGEN VESSEL WELD FILLER

DRAWING NUMBER	REV
0000083449	0

SIZE	SCALE	WEIGHT	SHEET
D	2:1	0.001 KG	1 of 1

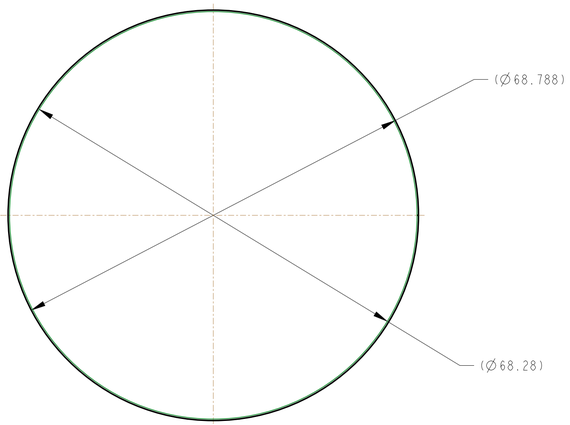
NEXT USED ASSEMBLY
0000084105

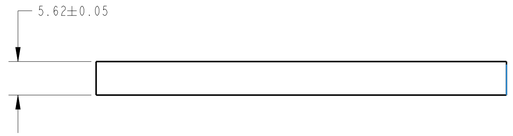
REVISION BLOCK

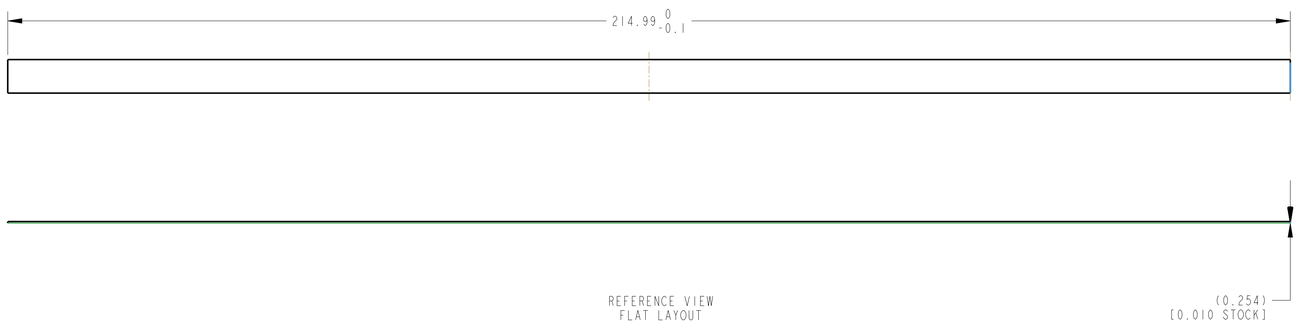
REV	DESCRIPTION OF CHANGE	DATE
0	ORIGINAL ISSUE	07/06/26

NOTES:

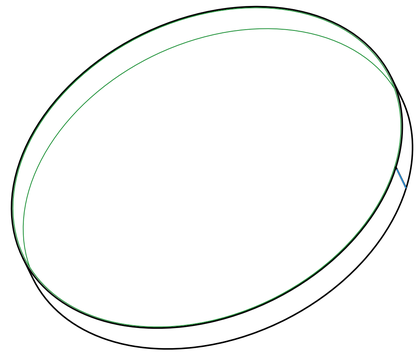
1. MACHINE AND INSPECT PER S0304000-EQS10000.
2. DO NOT BEND PRIOR TO INSTALLATION AT NEXT ASSEMBLY.







REFERENCE VIEW
FLAT LAYOUT



REFERENCE VIEW

WIP-NOT APPROVED FOR CONSTRUCTION

MATERIAL	SPECIFICATION
AL 4047 (A94047)	AMS 4185E, ANSI H35.2

GRADE	1-SERIOUS
FACILITY	STS
BUILDING	8800-STS_TARGET_BUILDING_II
MAJOR SYSTEM	TARGET_SYSTEMS
SYSTEM	MRA
SUBSYSTEM	XXX
SUB-SUBSYSTEM	XXX

UNITS: MILLIMETERS

DEFAULT TOLERANCES
0-6 ±0.1
>6-120 ±0.2
>120 ±0.5
ANGULAR ±0.5°

BREAK ALL SHARP EDGES
EXCEPT AS NOTED: 0.5 MAX

SURFACE
ROUGHNESS: 1.6 Ra U.N.O.

DRAFTING STD: ASME Y14.100
GDT: ASME Y14.5
WELD SYMBOLS: AWS A2.4

THIRD ANGLE PROJECTION

OAK RIDGE National Laboratory | HIGH FLUX ISOTOPE REACTOR | SPALLATION NEUTRON SOURCE

SECOND TARGET STATION
TARGET SYSTEMS
WELD FILLER

DRAWING NUMBER	REV
0000084242	0

SIZE	SCALE	WEIGHT	SHEET
D	2:1	0.001 KG	1 of 1