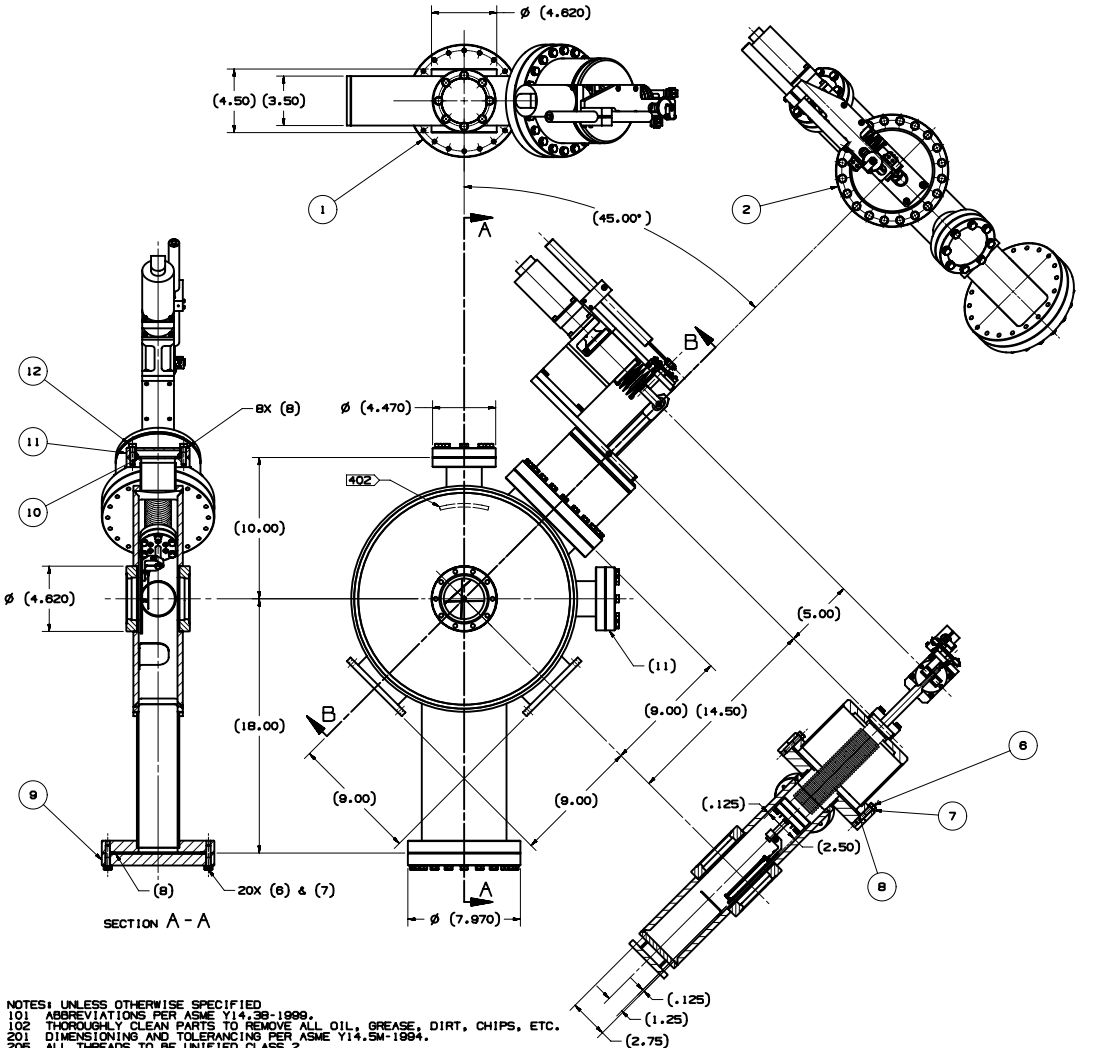
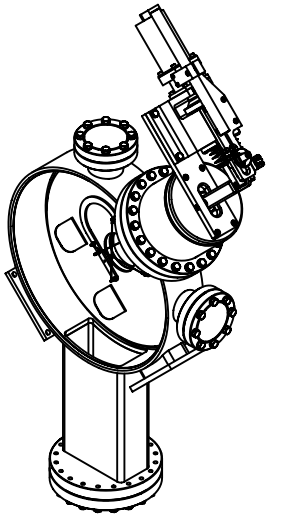
REVISIONS						
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
---	A	ORIGINAL ISSUE	-------	--------	NR	---
---	--	----------	-------	--------	NR	---





ISOMETRIC VIEW
(WELD COVER NOT SHOWN FOR CLAIRTY)
SCALE: NONE

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO
16		HEX HD CAP SCR 5/16-24 UNF X 1 1/4 LG	SST	12
2	450004	7058 GLASS VIEWPORT 4 1/2 NOM FLANGE	MDC DEL-SEAL	11
2	191017	COPPER GASKET 8.01 I.D.	MDC DEL-SEAL	10
1	110030	8" O.D. NONROTATABLE BLANK FLANGE	MDC DEL-SEAL	9
2	191009	COPPER GASKET 5.51 I.D.	MDC DEL-SEAL	8
56		FLAT WASHER .562 OD .328 ID X .053	SST	7
40		HEX HD CAP SCR 5/16-24 UNF X 1 1/2 LG	SST	6
				5
				4
				3
1	155Y520850	WIRE SCANNER ACTUATOR ASSEMBLY		2
1	155Y524302	VACUUM CHAMBER WELD ASSEMBLY		1
1	155Y524301	VACUUM CHAMBER ASSEMBLY		--

PARTS LIST/BILL OF MATERIAL

NOTES: UNLESS OTHERWISE SPECIFIED
101 ABBREVIATIONS PER ASME Y14.38-1999.
102 THOROUGHLY CLEAN PARTS TO REMOVE ALL OIL, GREASE, DIRT, CHIPS, ETC.
201 DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.
205 ALL THREADS TO BE UNIFIED CLASS 2.
402 METAL STAMP DRAWING NUMBER & REVISION LETTER, APPROXIMATELY WHERE SHOWN, IN 1/4" HIGH CHARACTERS.
901 FINAL ASSEMBLY SHALL BE LEAK TIGHT. LEAK RATE TO BE ESTABLISHED WITH A MASS SPECTROMETER TYPE LEAK DETECTOR. THE INSTRUMENT USED SHALL BE IDENTIFIED. CALIBRATION DATA SUPPLIED SHOULD INCLUDE "SENSITIVITY" AND "STANDARD LEAK SIZE" MAXIMUM DETECTABLE LEAKAGE SHALL BE NO GREATER THAN 1.0 X 10-10 STD. CC/SEC. (HELIUM)

SNS DWG No. 104090204-18D-8200-A301-R00

NEXT ASSEMBLY USED ON
APPLICATION

DRAWING LEVEL: PRODUCTION

UNCLASSIFIED

TASK CONTRACTOR

CAD SYSTEM & VER.: UNIGRAPHICS V16.0/IMAN

SEE FINAL DESIGN AUTHORIZATION SHEET FOR SIGNATURES; SHEET IS FILED BY DRAWING NUMBER AT THE SNS PROJECT OFFICE.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. TOLERANCES ARE: DECIMALS .XX: ±.1 .XXX: ±.01 .XXXX: ±.005 ANGULAR: ±.25° MACHINED: 125

	APPROVALS	DATE	GROUP
DESIGNED	D. SATTLER	06-04-01	SNS-03
DRAWN	D. SATTLER	09-06-01	SNS-03
CHECKED	C. COMBS	09-10-01	ESA-DE
ENGINEERING	L. PARIETTI	09-10-01	SNS-03
VACUUM	R. MEYER	09-10-01	SNS-03
PHYSICS	M. PLUM	09-10-01	SNS-03
APPROVED	N. BULTMAN	09-10-01	SNS-03

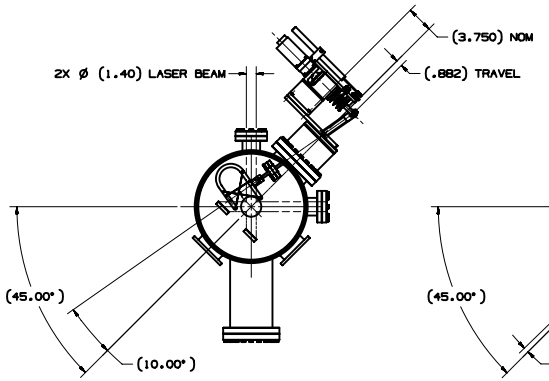
Los Alamos National Laboratory
Los Alamos, New Mexico 87545
Los Alamos SNS DIVISION

PROJECT: SNS

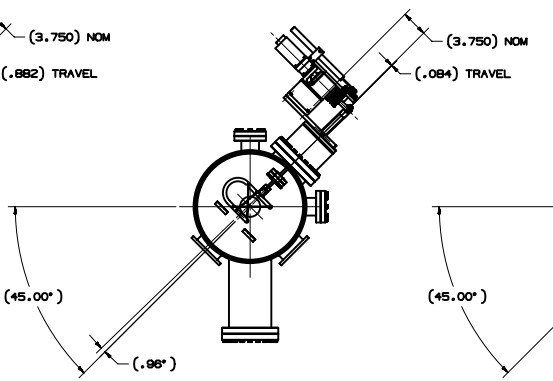
SCL WARM INSERT VACUUM CHAMBER ASSEMBLY

SIZE	CAGE CODE	DWG NO. & CAD FILENAME	REV
D	88516	155Y524301	-A

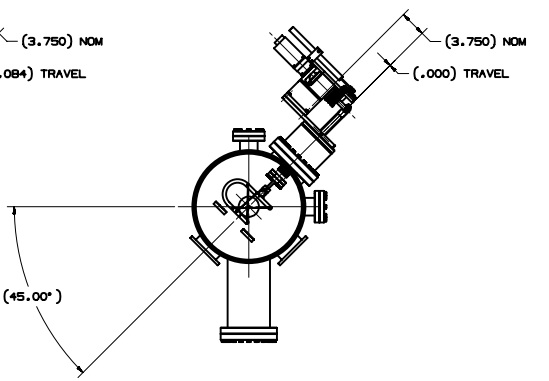
SCALE 1/4 DO NOT SCALE SHEET 1 OF 3



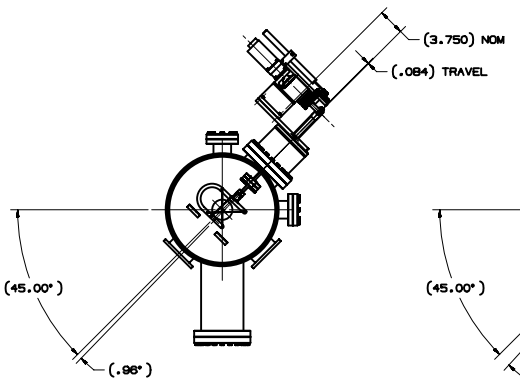
WIRE SCANNER RETRACTED
(WELD COVER NOT SHOWN FOR CLAIRTY)



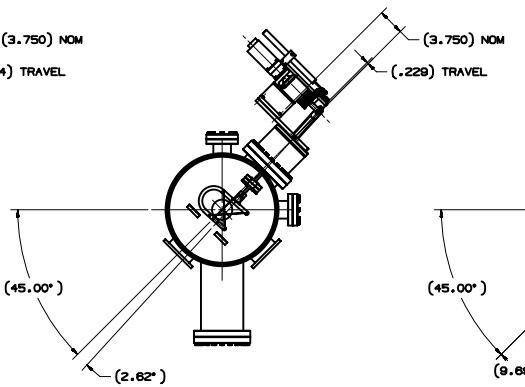
WIRE SCANNER AT 0°
(WELD COVER NOT SHOWN FOR CLAIRTY)



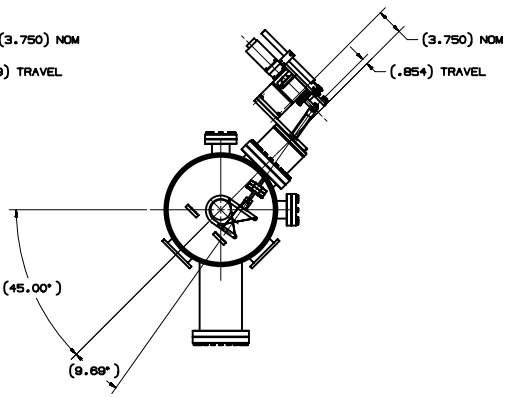
WIRE SCANNER NOMINAL
(WELD COVER NOT SHOWN FOR CLAIRTY)



WIRE SCANNER AT 90°
(WELD COVER NOT SHOWN FOR CLAIRTY)



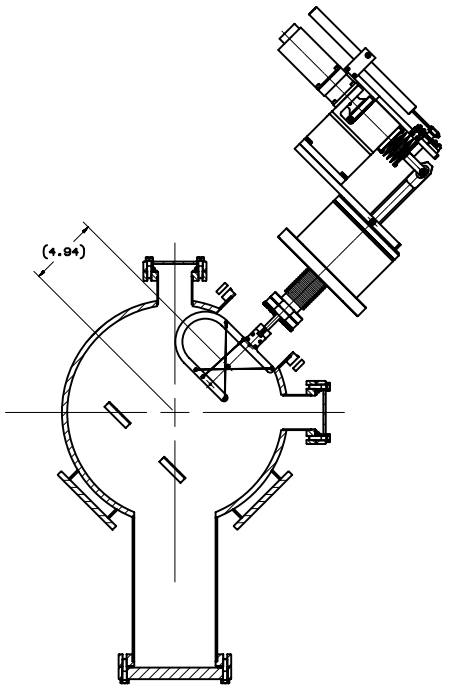
WIRE SCANNER AT 45°
(WELD COVER NOT SHOWN FOR CLAIRTY)



WIRE SCANNER EXTENDED
(WELD COVER NOT SHOWN FOR CLAIRTY)

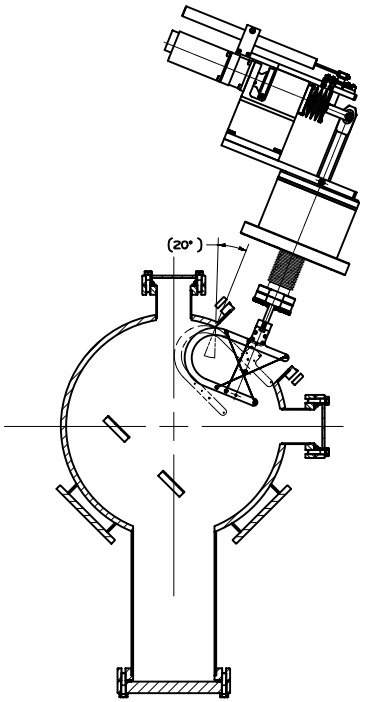
Los Alamos National Laboratory, Los Alamos, New Mexico 87545			
SNS DIVISION			
PROJECT: SNS			
TASK CONTRACTOR			
SIZE: D	CAGE CODE: 88516	DWG No.: 155Y524301	REV: -A
SCALE: 1/8	DO NOT SCALE	SHEET 2 OF 3	

SNS DWG No.: 104090204-18D-8200-A301-R00



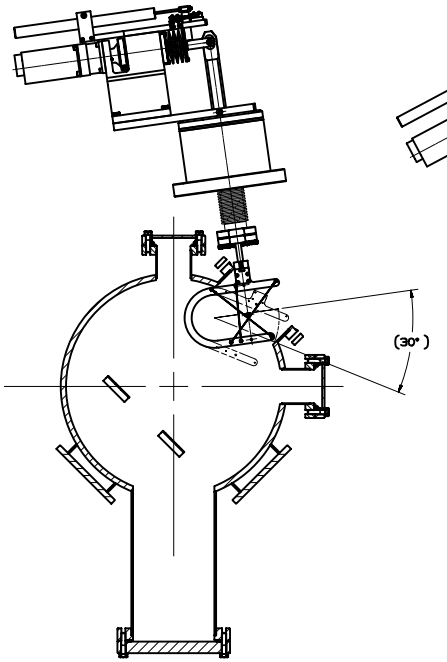
WIRE SCANNER REMOVAL

STEP 1: REMOVE BOLTS AND LIFT 4.94



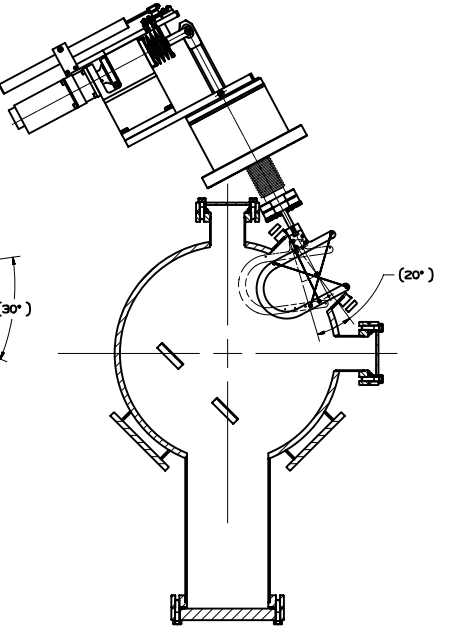
WIRE SCANNER REMOVAL

STEP 2: ROTATE 20°



WIRE SCANNER REMOVAL

STEP 3: ROTATE 30°

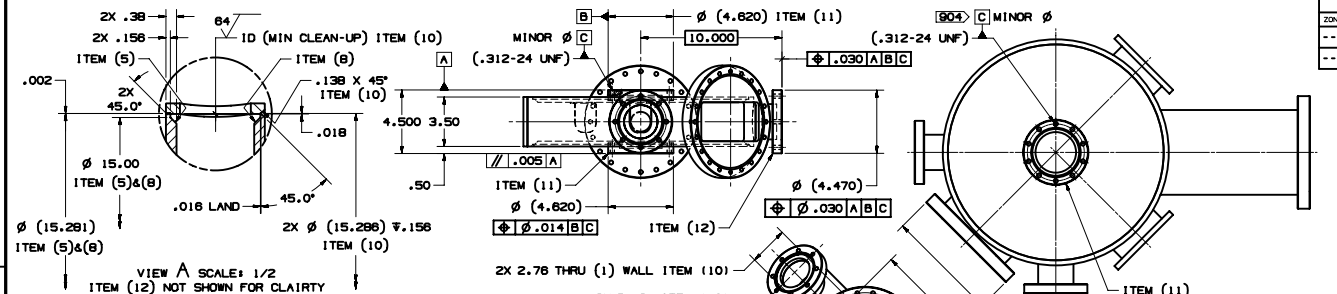


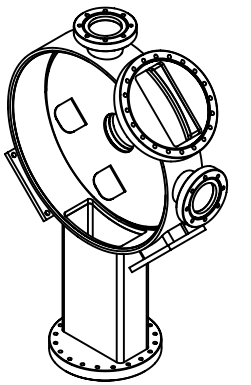
WIRE SCANNER REMOVAL

STEP 4: ROTATE 20°

Los Alamos National Laboratory, Los Alamos, New Mexico 87545			
ESA-DE	DESIGN ENGINEERING		
PROJECT: SNS			
TASK CONTRACTOR			
SIZE: D	CAGE CODE: 88516	DWG No.: 155Y524301	REV: -A
SCALE: 1/4	DO NOT SCALE	SHEET 3 OF 3	

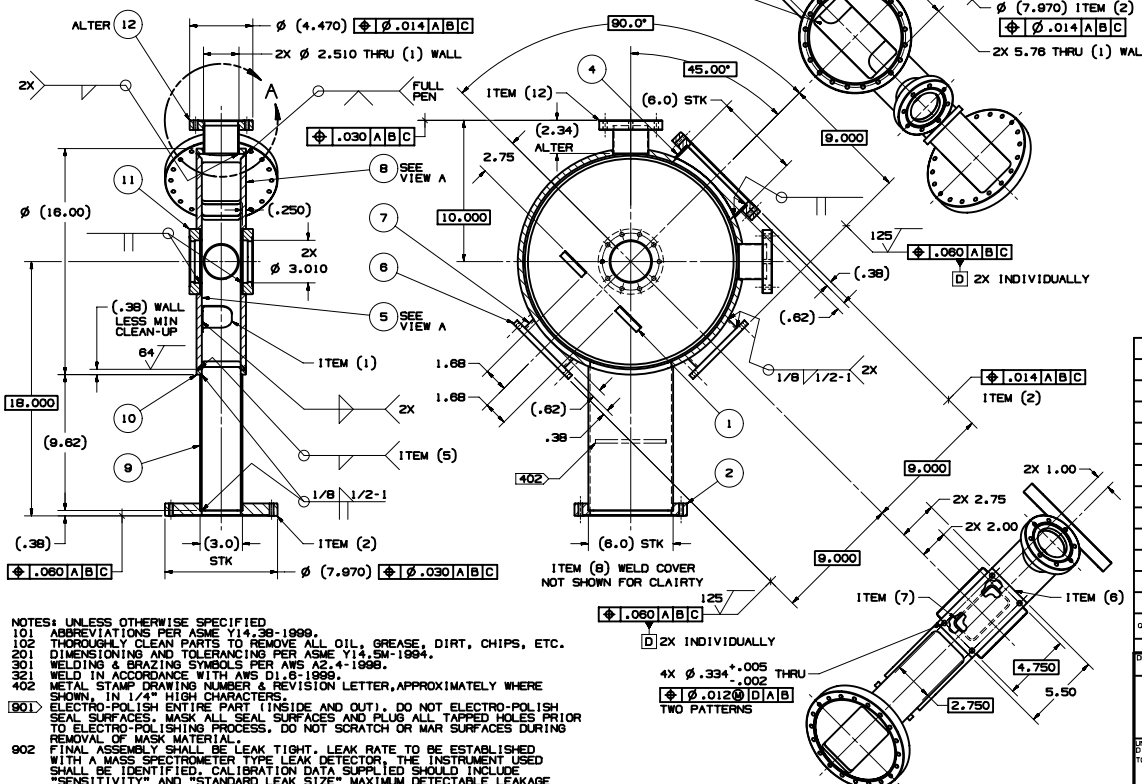
SNS DWG No.: 104090204-18D-8200-A301-R00





ISOMETRIC VIEW

ITEM (8) OUTER WELD COVER NOT SHOWN FOR CLAIRTY
SCALE: NONE



NOTES: UNLESS OTHERWISE SPECIFIED
101 ABBREVIATIONS PER ASME Y14.38-1999.
102 THOROUGHLY CLEAN PARTS TO REMOVE ALL OIL, GREASE, DIRT, CHIPS, ETC.
201 DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.
301 WELDING & BRAZING SYMBOLS PER AWS A2.4-1998.
321 WELD IN ACCORDANCE WITH AWS D1.6-1999.
402 METAL STAMP DRAWING NUMBER & REVISION LETTER, APPROXIMATELY WHERE SHOWN, IN 1/4" HIGH CHARACTERS.
901 ELECTRO-POLISH ENTIRE PART (INSIDE AND OUT). DO NOT ELECTRO-POLISH SEAL SURFACES. MASK ALL SEAL SURFACES AND PLUG ALL TAPPED HOLES PRIOR TO ELECTRO-POLISHING PROCESS. DO NOT SCRATCH OR MAR SURFACES DURING REMOVAL OF MASK MATERIAL.
902 FINAL ASSEMBLY SHALL BE LEAK TIGHT. LEAK RATE TO BE ESTABLISHED WITH A MASS SPECTROMETER TYPE LEAK DETECTOR. THE INSTRUMENT USED SHALL BE IDENTIFIED, CALIBRATION DATA SUPPLIED SHOULD INCLUDE "SENSITIVITY" AND "STANDARD LEAK SIZE" MAXIMUM DETECTABLE LEAKAGE SHALL BE NO GREATER THAN 1.0 X 10-10/ STD. CC/SEC. (HELIUM).
903 TAKE NECESSARY PRECAUTIONS TO PROTECT SEAL SURFACE OF ALL FLANGES DURING WELDING, TESTING & PACKAGING. LEAVE SEAL SURFACE SHARP.
904 INSURE ALL FLANGE BOLT PATTERNS REFERENCED TO DATUM CENTER LINES AS SHOWN.

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO
2	401025	CF 4 1/2 NOM HALF NIPPLE (ALTER LENGTH)	MDC DEL-SEAL	12
2	120024	CF 4 5/8 OD NONROTATABLE TAPPED FLANGE	MDC DEL-SEAL	11
1		ROUND TUBE 18" OD X 3/8 WALL	304L SST	10
1		RECT TUBE 8 X 3 X .120 WALL	304L SST	9
1		OUTER WELD COVER	304L SST	8
2		RECT TUBE 4 X 2 X .120 WALL	304L SST	7
2		MOUNTING PLATE	304L SST	6
1		INNER WELD COVER	304L SST	5
1		RECT TUBE 8 X 3 X .120 WALL	304L SST	4
				3
2	155Y524304	MODIFIED FLANGE		2
2	155Y524303	LASER BEAM DIFFUSER		1
1	155Y524302	WELD ASSEMBLY		

PARTS LIST/BILL OF MATERIAL

REVISIONS					
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
---	A	ORIGINAL ISSUE	-------	-------	NR	---
---	--	----------	-------	-------	NR	---

DRAWING LEVEL: PRODUCTION
UNCLASSIFIED
TASK CONTRACTOR
CAD SYSTEM & VER.: UNIGRAPHICS V16.0/IMAN
SEE FINAL DESIGN AUTHORIZATION SHEET FOR SIGNATURES; SHEET IS FILED BY DRAWING NUMBER AT THE SNS PROJECT OFFICE.
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. TOLERANCES ARE: DECIMALS .XX ±.1 .XXX ±.01 .XXXX ±.005 ANGULAR: ±.25° MACHINED FINISH: 125

APPROVALS		DATE	GROUP
DESIGNED	D. SATTLER	06-04-01	SNS-03
DRAWN	D. SATTLER	09-08-01	SNS-03
CHECKED	C. COMBS	09-10-01	ESA-DE
ENGINEERING	L. PARIETTI	09-10-01	SNS-03
VACUUM	R. MEYER	09-10-01	SNS-03
PHYSICS	M. PLUM	09-10-01	SNS-03
APPROVED	N. BULTMAN	09-10-01	SNS-03

155Y524301 ----------
NEXT ASSEMBLY USED ON
APPLICATION

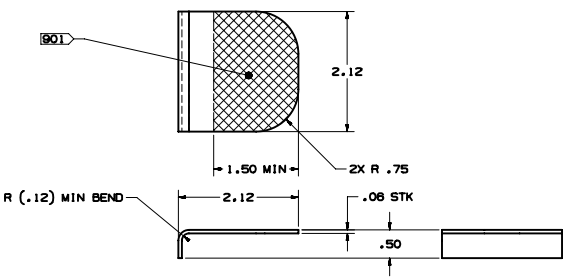
SNS DWG No. 104090204-18D-8200-A302-R00

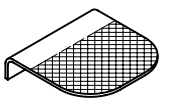
Los Alamos National Laboratory
Los Alamos, New Mexico 87545
Los Alamos SNS DIVISION
PROJECT SNS

SCL WARM INSERT
VACUUM CHAMBER
WELD ASSEMBLY

SIZE	CAGE CODE	DWG NO. & CAD FILENAME	REV
D	88516	155Y524302	-A
SCALE 1/4	DO NOT SCALE	SHEET 1 OF 1	

REVISIONS						
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
---	A	ORIGINAL ISSUE	-------	--------	NR	---
---	--	----------	-------	--------	NR	---





ISOMETRIC VIEW
SCALE: NONE

NOTES: UNLESS OTHERWISE SPECIFIED

101 ABBREVIATIONS PER ASME Y14.38-1999.

102 THOROUGHLY CLEAN PARTS TO REMOVE ALL OIL, GREASE, DIRT, CHIPS, ETC.

201 DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.

302 REMOVE BURRS AND SHARP EDGES.

401 BAG AND TAG PART WITH DRAWING NUMBER & REVISION LETTER

901 GLASS BEAD TO UNIFORM FINISH.

SNS DWG No.
104090204-18D-8200-A303-R0

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO
2	155Y524303	LASER BEAM DIFFUSER	304L SST	--

PARTS LIST/BILL OF MATERIAL

DRAWING LEVEL: PRODUCTION

UNCLASSIFIED

TASK CONTRACTOR

CAD SYSTEM & VER.: UNIGRAPHICS V16.0/IMAN

SEE FINAL DESIGN AUTHORIZATION SHEET FOR SIGNATURES; SHEET IS FILED BY DRAWING NUMBER AT THE SNS PROJECT OFFICE.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. TOLERANCES ARE:
DECIMALS .XX: ±.1 .XXX: ±.01 .XXXX: ±.005
ANGULAR: ±.25°
MACHINED FINISH: 125

APPROVALS		DATE	GROUP
DESIGNED	D. SATTLER	09-04-01	SNS-03
DRAWN	D. SATTLER	09-08-01	SNS-03
CHECKED	C. COMBS	09-10-01	ESA-DE
ENGINEERING	L. PARIETTI	09-10-01	SNS-03
VACUUM	R. MEYER	09-10-01	SNS-03
PHYSICS	M. PLUM	09-10-01	SNS-03
APPROVED	N. BULTMAN	09-10-01	SNS-03

155Y524302 ----------
NEXT ASSEMBLY USED ON
APPLICATION

Los Alamos National Laboratory
Los Alamos, New Mexico 87545
Los Alamos SNS DIVISION

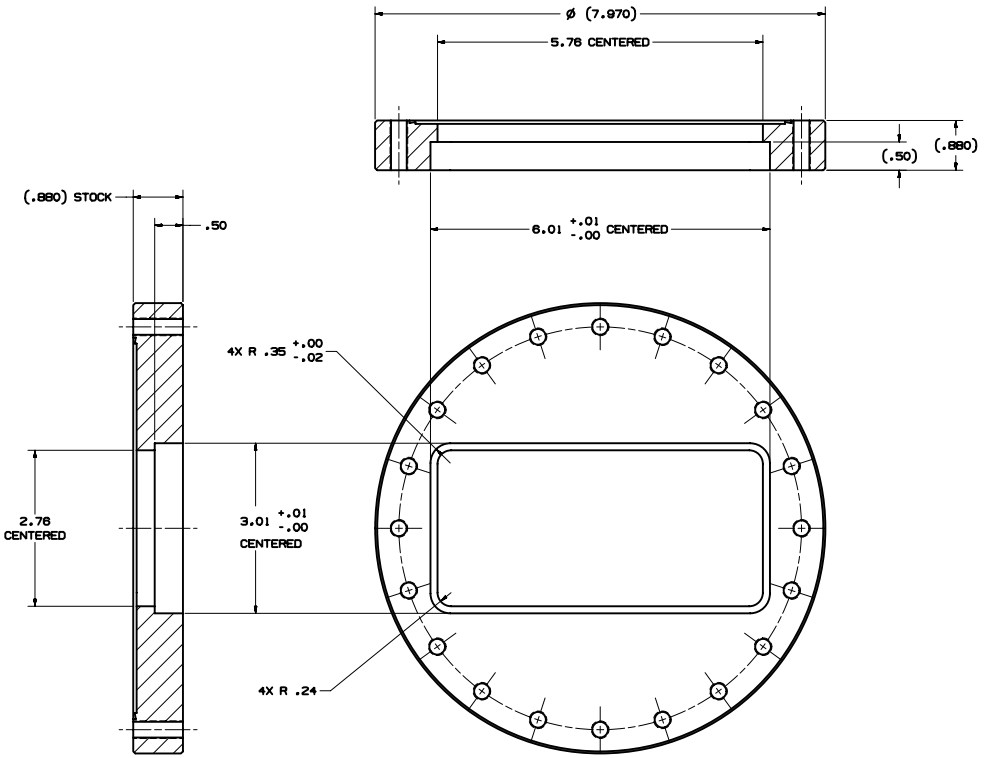
PROJECT: SNS

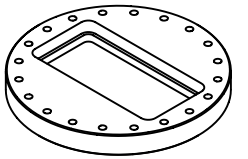
SCL WARM INSERT
VACUUM CHAMBER
LASER BEAM DIFFUSER

SIZE	CAGE CODE	DWG NO. & CAD FILENAME	REV
D	88516	155Y524303	-A

SCALE: FULL — DO NOT SCALE — SHEET 1 OF 1

REVISIONS						
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
---	A	ORIGINAL ISSUE	-------	--------	NR	---
---	--	----------	-------	--------	NR	---





ISOMETRIC VIEW
SCALE: NONE

ALTERED ITEM DRAWING

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO
1	130030	CF 8" NOM BLANK TAPPED FLANGE	MDC DEL-SEAL	1
1	155Y524304	MODIFIED FLANGE		--

PARTS LIST/BILL OF MATERIAL

NOTES: UNLESS OTHERWISE SPECIFIED

101 ABBREVIATIONS PER ASME Y14.38-1999.

102 THOROUGHLY CLEAN PARTS TO REMOVE ALL OIL, GREASE, DIRT, CHIPS, ETC.

201 DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.

302 REMOVE BURRS AND SHARP EDGES.

401 BAG AND TAG PART WITH DRAWING NUMBER & REVISION LETTER

901 TAKE NECESSARY PRECAUTIONS TO PROTECT SEAL SURFACE OF FLANGE DURING MACHINING,WELDING,TESTING & PACKAGING. LEAVE SEAL SURFACE SHARP.

SNS DWG No.
104090204-18D-8200-A304-R0

DRAWING LEVEL: PRODUCTION

UNCLASSIFIED

TASK CONTRACTOR

CAD SYSTEM & VER.: UNIGRAPHICS V16.0/IMAN

SEE FINAL DESIGN AUTHORIZATION SHEET FOR SIGNATURES,SHEET IS FILED BY DRAWING NUMBER AT THE SNS PROJECT OFFICE.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. TOLERANCES ARE:
DECIMALS .XX± ±.1 .XXX± ±.01 .XXXX± ±.005
ANGULAR: ±.25°
MACHINED FINISH: 125

APPROVALS		DATE	GROUP
DESIGNED	D. SATTLER	09-04-01	SNS-03
DRAWN	D. SATTLER	09-08-01	SNS-03
CHECKED	C. COMBS	09-10-01	ESA-DE
ENGINEERING	L. PARIETTI	09-10-01	SNS-03
VACUUM	R. MEYER	09-10-01	SNS-03
PHYSICS	M. PLUM	09-10-01	SNS-03
APPROVED	N. BULTMAN	09-10-01	SNS-03

155Y524302 ----------
NEXT ASSEMBLY USED ON
APPLICATION

Los Alamos National Laboratory
Los Alamos,New Mexico 87545
Los Alamos SNS DIVISION

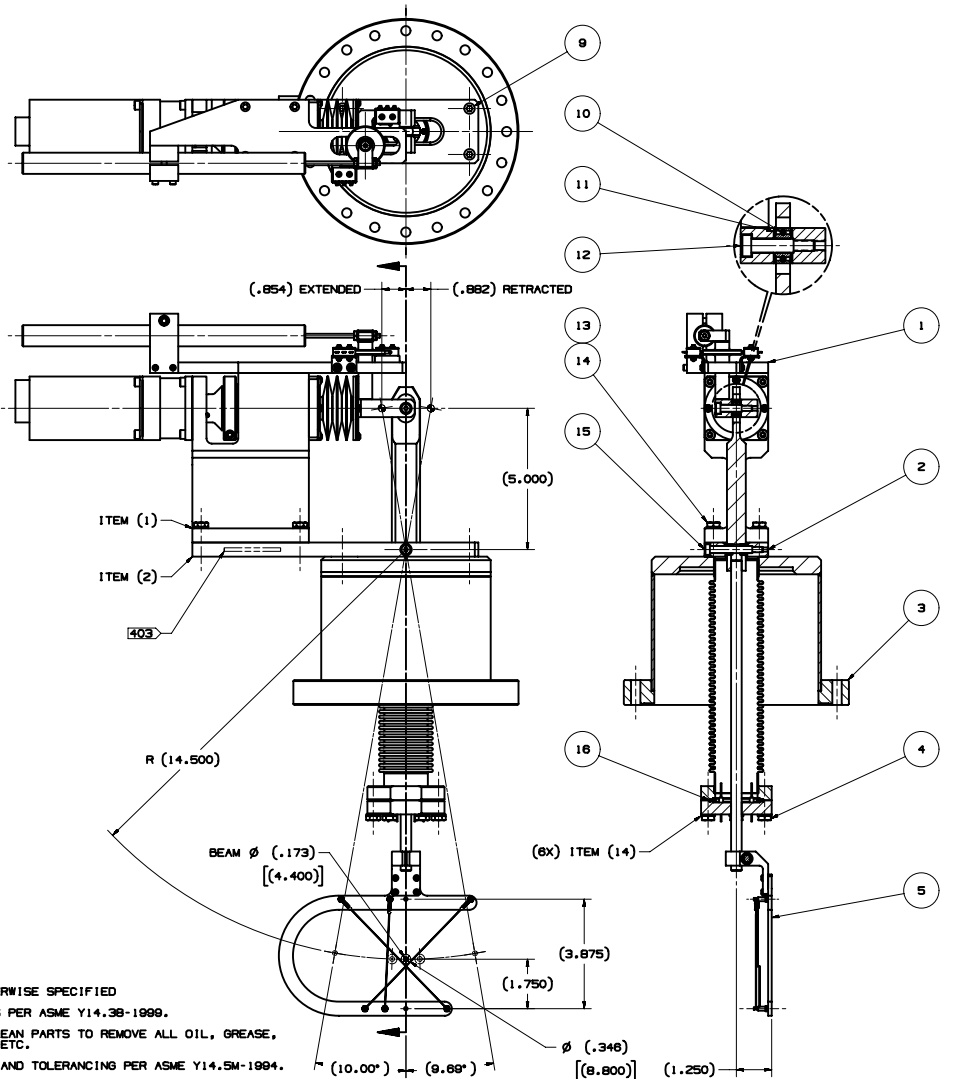
PROJECT: SNS

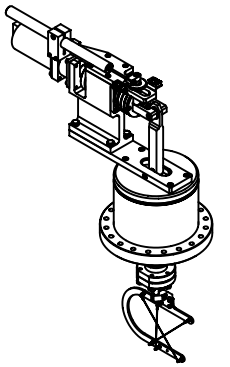
SCL WARM INSERT
VACUUM CHAMBER
MODIFIED FLANGE

SIZE	CAGE CODE	DWG NO. & CAD FILENAME	REV
D	88516	155Y524304	-A

SCALE: FULL — DO NOT SCALE — SHEET 1 OF 1

REVISIONS						
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
---	A	ORIGINAL ISSUE	-------	--------	NR	---
---	--	----------	-------	--------	NR	---





ISOMETRIC VIEW
SCALE: NONE

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO
1	191004	COPPER GASKET (1.45 ID)	MDC	16
1		SHOULDER SCR 1/4 DIA X 1 1/2 LG	SST	15
10		FLAT WASHER .265 ID X 1/2 OD X .053	SST	14
4		HEX HD CAP SCR 1/4-28 UNF X 1" LG	SST	13
1		SHOULDER SCR 1/4 DIA X 3/4 LG	SST	12
2		FLAT WASHER .265 ID X 1/2 OD X .022	SST	11
1	ASIKDD7	EXTRA SMALL RADIAL BEARING	TORRINGTON	10
4		SOC HD CAP SCR 1/4-28 UNF X 5/8 LG	SST	9
				8
				7
				6
1	155Y520877	FORK PIVOT ASSEMBLY		5
6	155Y520876	VENTED BOLT		4
1	155Y520872	BELLOWS WELDMENT		3
1	155Y520871	FORK PIVOT PLATE		2
1	155Y520851	DRIVE ASSEMBLY		1
1	155Y520850	WIRE SCANNER ACTUATOR ASSEMBLY		--

PARTS LIST/BILL OF MATERIAL

NOTES: UNLESS OTHERWISE SPECIFIED

101 ABBREVIATIONS PER ASME Y14.38-1999.

102 THOROUGHLY CLEAN PARTS TO REMOVE ALL OIL, GREASE, DIRT, CHIPS, ETC.

201 DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.

403 ENGRAVE DRAWING NUMBER & REVISION LETTER, APPROXIMATELY WHERE SHOWN IN 1/8 HIGH CHARACTERS.

902 TAKE NECESSARY PRECAUTIONS TO PROTECT BELLOWS AND SEAL SEAL SURFACE OF FLANGE DURING TESTING & PACKAGING.

SNS DWG No. 104050000-18E-8200-A850-R00

DRAWING LEVEL: PRODUCTION

UNCLASSIFIED

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. TOLERANCES ARE: DECIMALS .XX ±.1 .XXX ±.01 .XXXX ±.005 ANGULAR: ±.25° MACHINED FINISH: 125

155Y524301 ----------
NEXT ASSEMBLY USED ON
APPLICATION

TASK CONTRACTOR

CAD SYSTEM & VER. UNIGRAPHICS V16.0/IMAN

SEE FINAL DESIGN AUTHORIZATION SHEET FOR SIGNATURES; SHEET IS FILED BY DRAWING NUMBER AT THE SNS PROJECT OFFICE.

APPROVALS		DATE	GROUP
DESIGNED	D. SATTLER	04-03-01	SNS-03
DRAWN	D. SATTLER	09-08-01	SNS-03
CHECKED	C. COMBS	09-10-01	ESA-DE
ENGINEERING	R. MEYER	09-10-01	SNS-03
VACUUM	R. MEYER	09-10-01	SNS-03
PHYSICS	M. PLUM	09-10-01	SNS-03
APPROVED	N. BULTMAN	09-10-01	SNS-03

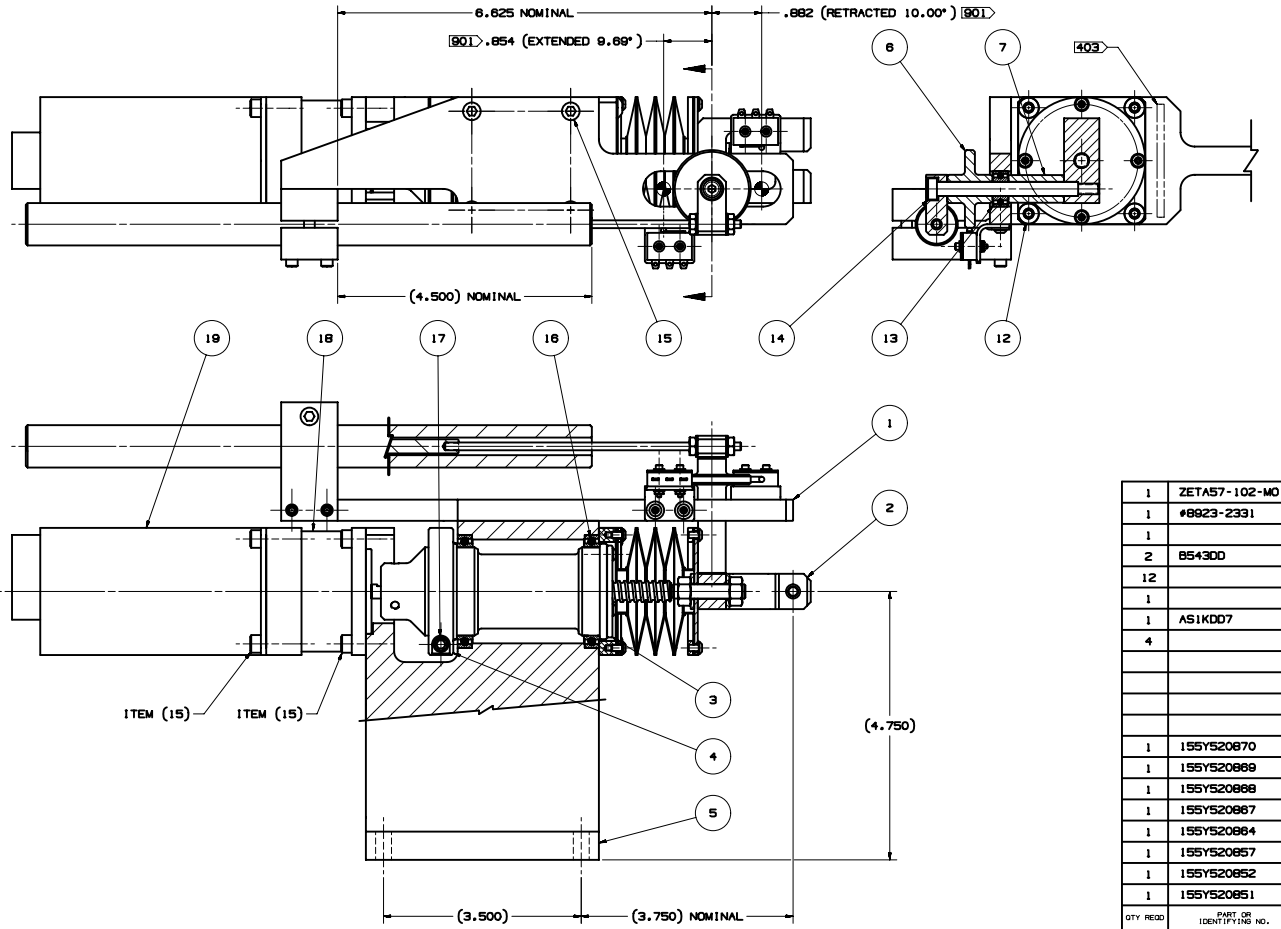
Los Alamos National Laboratory
Los Alamos, New Mexico 87545
Los Alamos SNS DIVISION

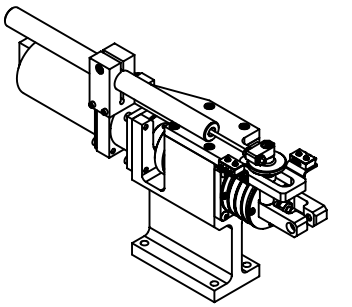
PROJECT: SNS

SUPER CONDUCTING LINAC WIRE SCANNER ACTUATOR ASSEMBLY

SIZE	CAGE CODE	DWG NO. & CAD FILENAME	REV
D	88516	155Y520850	-A

SCALE 1/2 DO NOT SCALE SHEET 1 OF 1





ISOMETRIC VIEW
SCALE: NONE

REVISIONS						
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
---	A	ORIGINAL ISSUE	-------	--------	NR	---
---	--	----------	-------	--------	NR	---

ITEM NO	QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION
19				
18				
17				
16				
15	1	155Y520870	GUIDE SPACER	
14	1	155Y520869	LIMIT SWITCH ACTUATOR	
13	1	155Y520868	ACTUATOR BRACKET	
12	1	155Y520867	CLAMP COLLAR	
11	1	155Y520864	BALL NUT ASSEMBLY	
10	1	155Y520857	CLEVIS/DUST BELLOWS ASSY	
9	1	155Y520852	LIMIT SWITCH/LVDT ASSY	
8	1	155Y520851	DRIVE ASSEMBLY	
7	1	ZETA57-102-MO	COMPUMOTOR	PARKER COMPUMOTOR DIV.
6	1	#8923-2331	BRAKE MODEL MPC23	INERTIA DYNAMICS
5	1		SOC HD CAP SCR #8-32 UNC X 5/8 LG	SST
4	2	B543DD	EXTRA LIGHT TORQUE TUBE BEARING	TORRINGTON
3	12		SOC HD CAP SCR #10-24 UNC X 1/2 LG	SST
2	1		SHOULDER SCREW 1/4 DIA X 2 1/2 LG	SST
1	1	AS1KDD7	EXTRA SMALL RADIAL BEARING	TORRINGTON

PARTS LIST/BILL OF MATERIAL

NOTES: UNLESS OTHERWISE SPECIFIED

101 ABBREVIATIONS PER ASME Y14.38-1999.

102 THOROUGHLY CLEAN PARTS TO REMOVE ALL OIL, GREASE, DIRT, CHIPS, ETC.

201 DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.

403 ENGRAVE DRAWING NUMBER & REVISION LETTER, APPROXIMATELY WHERE SHOWN, IN 1/8" HIGH CHARACTERS.

901 SET LIMIT SWITCH

SNS DWG No. 104050000-18E-8200-A851-R00

DRAWING LEVEL: PRODUCTION

UNCLASSIFIED

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. TOLERANCES ARE: DECIMALS .XX= ±.1, .XXX= ±.01, .XXXX= ±.005; ANGULAR= ±.25°; MACHINED FINISH= 125

155Y520850 ---------- NEXT ASSEMBLY USED ON APPLICATION

TASK CONTRACTOR

CAD SYSTEM & VER.: UNIGRAPHICS V16.0/IMAN

SEE FINAL DESIGN AUTHORIZATION SHEET FOR SIGNATURES; SHEET IS FILED BY DRAWING NUMBER AT THE SNS PROJECT OFFICE.

APPROVALS		DATE	GROUP
DESIGNED	D. SATTLER	04-03-01	SNS-03
DRAWN	D. SATTLER	09-08-01	SNS-03
CHECKED	C. COMBS	09-10-01	ESA-DE
ENGINEERING	R. MEYER	09-10-01	SNS-03
VACUUM	R. MEYER	09-10-01	SNS-03
PHYSICS	M. PLUM	09-10-01	SNS-03
APPROVED	N. BULTMAN	09-10-01	SNS-03

Los Alamos National Laboratory
Los Alamos, New Mexico 87545
Los Alamos SNS DIVISION

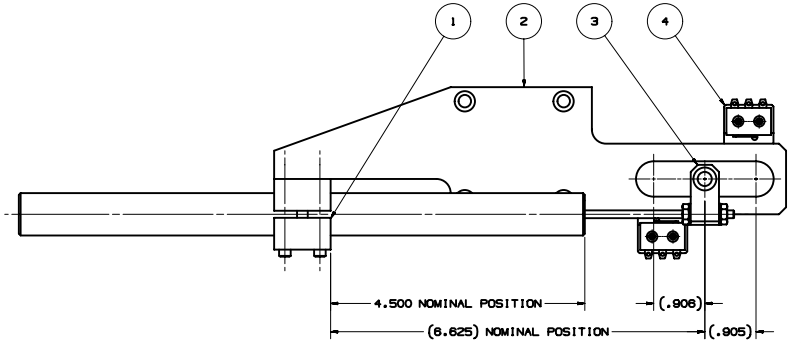
PROJECT: SNS

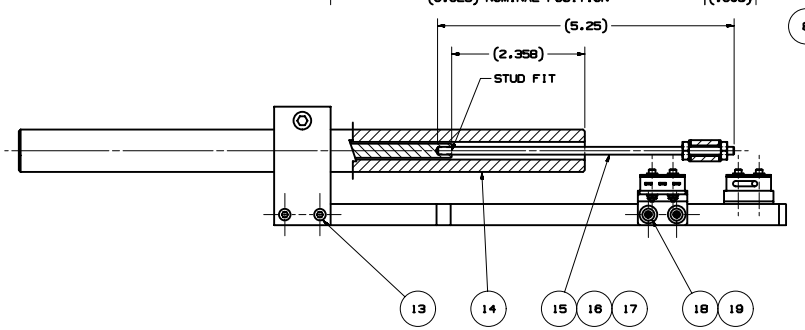
SUPER CONDUCTING LINAC WIRE SCANNER ACTUATOR DRIVE ASSEMBLY

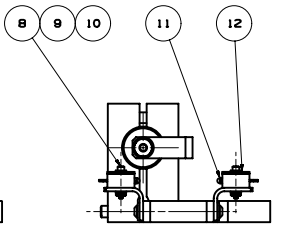
SIZE: D | CAGE CODE: 88516 | DWG NO. & CAD FILENAME: 155Y520851 | REV: -A

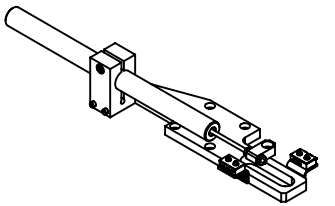
SCALE: FULL | DO NOT SCALE | SHEET 1 OF 1

REVISIONS						
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
---	A	ORIGINAL ISSUE	-------	--------	NR	---
---	--	----------	-------	--------	NR	---









ISOMETRIC VIEW
SCALE: NONE

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO
4		FLAT WASHER #4 NOM ID	SST	19
4		BUT HD CAP SCR #4-40 UNC X 1/4 LG	SST	18
2		HEX NUT #6-40 UNF	SST	17
2		FLAT WASHER #6 NOM ID	SST	16
1		THREADED STOCK #6-40 UNF X 5 1/4 LG	SST	15
1	PR-750-2000-XXXX	LVDT	MACRO SENSORS	14
2		SOC HD CAP SCR #5-40 UNC X 1 1/2 LG	STL,BLACK OXIDE FINISH	13
2	19PA137-HM	MOUNTING PLATE	HONEYWELL	12
2	11HM1	MICRO SWITCH	HONEYWELL	11
4		HEX NUT #1-64 UNC	SST	10
8		FLAT WASHER #1 NOM ID	SST	9
4		SOC HD CAP SCR #1-64 UNC X 1/2 LG	SST	8
				7
				6
				5
2	155Y520856	LIMIT SWITCH BRACKET		4
1	155Y520855	LVDT LOCATOR BRACKET		3
1	155Y520854	GUIDE BRACKET		2
1	155Y520853	MOUNTING BLOCK (ALTERED)		1
1	155Y520852	LIMIT SWITCH/LVDT ASSY		--

PARTS LIST/BILL OF MATERIAL

NOTES: UNLESS OTHERWISE SPECIFIED

101 ABBREVIATIONS PER ASME Y14.38-1999.

102 THOROUGHLY CLEAN PARTS TO REMOVE ALL OIL, GREASE, DIRT, CHIPS, ETC.

201 DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.

205 ALL THREADS TO BE UNIFIED CLASS 2.

401 BAG AND TAG PART WITH DRAWING NUMBER & REVISION LETTER.

SNS DWG No.
104050000-18E-8200-A852-R00

DRAWING LEVEL: PRODUCTION

UNCLASSIFIED

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. TOLERANCES ARE:
DECIMALS .XX ±.1 .XXX ±.01 .XXXX ±.005
ANGULAR: ±.25°
MACHINED FINISH: 125

155Y520851
NEXT ASSEMBLY USED ON
APPLICATION

TASK CONTRACTOR

CAD SYSTEM & VER.: UNIGRAPHICS V16.0/IMAN

SEE FINAL DESIGN AUTHORIZATION SHEET FOR SIGNATURES; SHEET IS FILED BY DRAWING NUMBER AT THE SNS PROJECT OFFICE.

	APPROVALS	DATE	GROUP
DESIGNED	D. SATTLER	04-03-01	SNS-03
DRAWN	D. SATTLER	09-08-01	SNS-03
CHECKED	C. COMBS	09-10-01	ESA-DE
ENGINEERING	R. MEYER	09-10-01	SNS-03
VACUUM	R. MEYER	09-10-01	SNS-03
PHYSICS	M. PLUM	09-10-01	SNS-03
APPROVED	N. BULTMAN	09-10-01	SNS-03

Los Alamos
SNS DIVISION
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

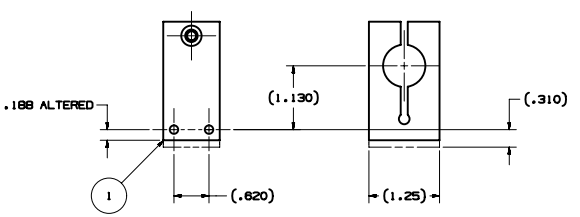
PROJECT: SNS

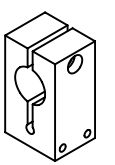
SUPER CONDUCTING LINAC WIRE SCANNER ACTUATOR LIMIT SWITHC/LVDT ASSY

SIZE: D | CAGE CODE: 88516 | DWG NO. & CAD FILENAME: 155Y520852 | REV: -A

SCALE: FULL | DO NOT SCALE | SHEET 1 OF 1

REVISIONS						
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
---	A	ORIGINAL ISSUE	-------	--------	NR	---
---	--	----------	-------	--------	NR	---





ISOMETRIC VIEW
SCALE: NONE

ALTERED ITEM DRAWING

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO
1	MTD-750	LVDT MOUNTING BLOCK	MACRO SENSORS	1
1	155Y520853	MOUNTING BLOCK		--

PARTS LIST/BILL OF MATERIAL

NOTES: UNLESS OTHERWISE SPECIFIED

101 ABBREVIATIONS PER ASME Y14.38-1999.

102 THOROUGHLY CLEAN PARTS TO REMOVE ALL OIL, GREASE, DIRT, CHIPS, ETC.

201 DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.

208 REMOVE BURRS AND SHARP EDGES TO .010 MAX.

401 BAG AND TAG PART WITH DRAWING NUMBER & REVISION LETTER.

SNS DWG No.
104050000-18E-8200-A853-R00

DRAWING LEVEL: PRODUCTION

UNCLASSIFIED

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. TOLERANCES ARE:
DECIMALS .XX: ±.1 .XXX: ±.01 .XXXX: ±.005
ANGULAR: ±.25°
MACHINED: 125

155Y520852
NEXT ASSEMBLY USED ON
APPLICATION

TASK CONTRACTOR

CAD SYSTEM & VER.: UNIGRAPHICS V16.0/IMAN

SEE FINAL DESIGN AUTHORIZATION SHEET FOR SIGNATURES; SHEET IS FILED BY DRAWING NUMBER AT THE SNS PROJECT OFFICE.

APPROVALS		DATE	GROUP
DESIGNED	D. SATTLER	04-03-01	SNS-03
DRAWN	D. SATTLER	09-06-01	SNS-03
CHECKED	C. COMBS	09-10-01	ESA-DE
ENGINEERING	R. MEYER	09-10-01	SNS-03
VACUUM	R. MEYER	09-10-01	SNS-03
PHYSICS	M. PLUM	09-10-01	SNS-03
APPROVED	N. BULTMAN	09-10-01	SNS-03

Los Alamos
SNS DIVISION
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

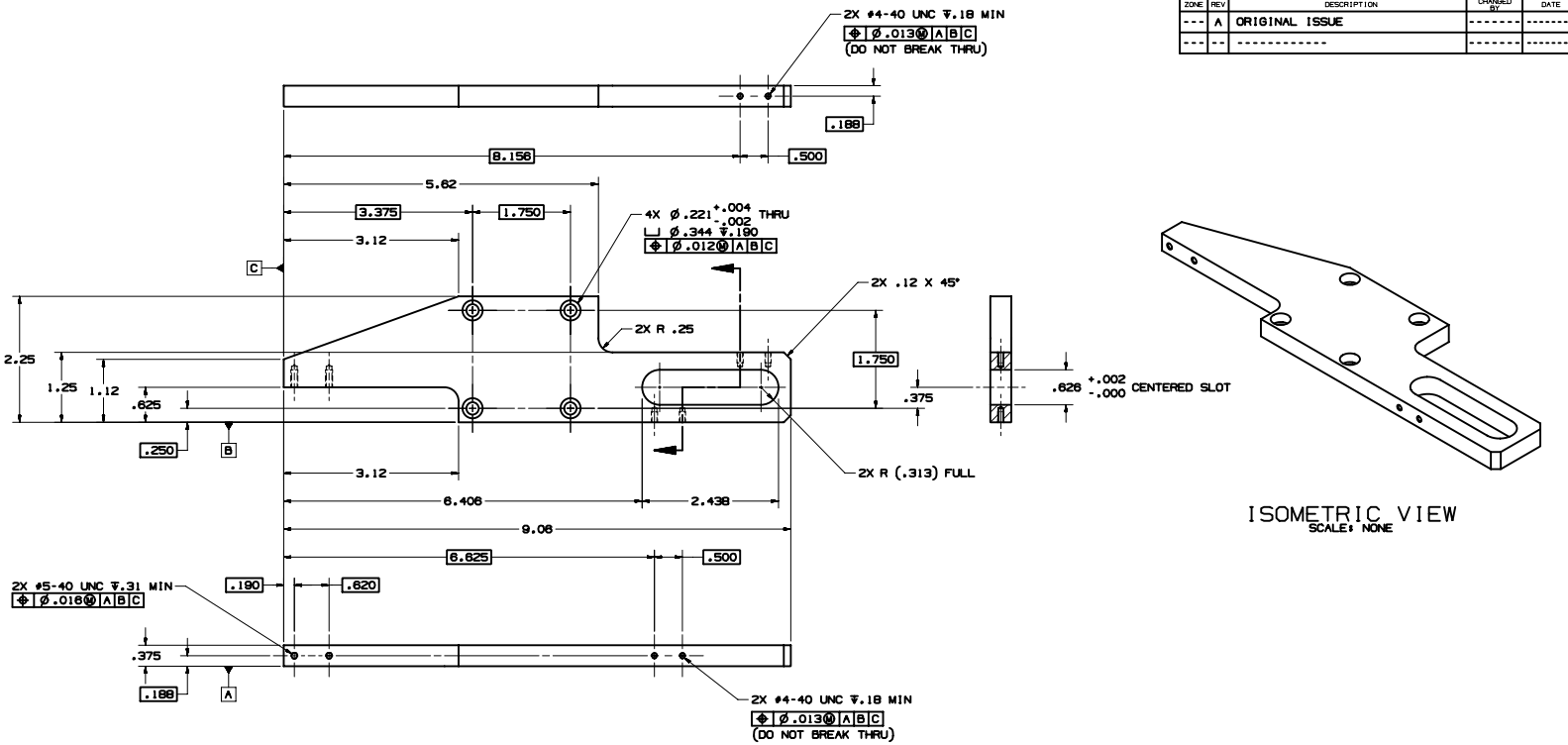
PROJECT: SNS

SUPER CONDUCTING LINAC
WIRE SCANNER ACTUATOR
MOUNTING BLOCK

SIZE	CAGE CODE	DWG NO. & CAD FILENAME	REV
D	88516	155Y520853	-A

SCALE: FULL — DO NOT SCALE — SHEET 1 OF 1

REVISIONS						
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
---	A	ORIGINAL ISSUE	-------	--------	NR	---
---	--	----------	-------	--------	NR	---



ISOMETRIC VIEW
SCALE: NONE

NOTES: UNLESS OTHERWISE SPECIFIED

101 ABBREVIATIONS PER ASME Y14.38-1999.

102 THOROUGHLY CLEAN PARTS TO REMOVE ALL OIL, GREASE, DIRT, CHIPS, ETC.

201 DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.

204 ALL INSIDE CORNERS TO BE R.015 MAX.

205 ALL THREADS TO BE UNIFIED CLASS 2.

206 C'SINK ALL TAPPED HOLES 100°, TO MAJOR DIA.

208 REMOVE BURRS AND SHARP EDGES TO .010 MAX.

401 BAG AND TAG PART WITH DRAWING NUMBER & REVISION LETTER.

SNS DWG No.
104050000-18E-8200-A854-R00

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO
1	155Y520854	GUIDE BRACKET	6061-T6 AL	--

PARTS LIST/BILL OF MATERIAL

DRAWING LEVEL: PRODUCTION

UNCLASSIFIED

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. TOLERANCES ARE: DECIMALS .XX± ±.1 .XXX± ±.01 .XXXX± ±.005 ANGULAR: ±.25° MACHINED FINISH: 125

155Y520852 ---------- NEXT ASSEMBLY USED ON

APPLICATION

TASK CONTRACTOR

CAD SYSTEM & VER.: UNIGRAPHICS V16.0/IMAN

SEE FINAL DESIGN AUTHORIZATION SHEET FOR SIGNATURES; SHEET IS FILED BY DRAWING NUMBER AT THE SNS PROJECT OFFICE.

APPROVALS		DATE	GROUP
DESIGNED	D. SATTLER	04-03-01	SNS-03
DRAWN	D. SATTLER	09-06-01	SNS-03
CHECKED	C. COMBS	09-10-01	ESA-DE
ENGINEERING	R. MEYER	09-10-01	SNS-03
VACUUM	R. MEYER	09-10-01	SNS-03
PHYSICS	M. PLUM	09-10-01	SNS-03
APPROVED	N. BULTMAN	09-10-01	SNS-03

Los Alamos National Laboratory
Los Alamos, New Mexico 87545
Los Alamos SNS DIVISION

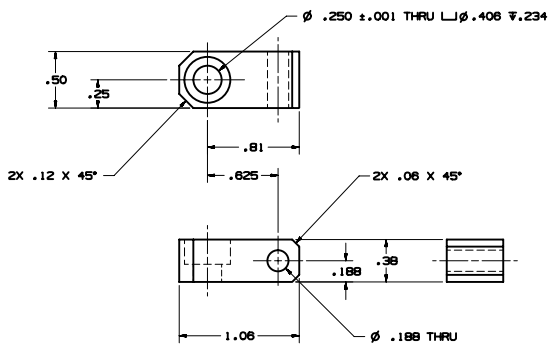
PROJECT: SNS

SUPER CONDUCTING LINAC
WIRE SCANNER ACTUATOR
GUIDE BRACKET

SIZE	CAGE CODE	DWG NO. & CAD FILENAME	REV
D	88516	155Y520854	-A

SCALE: FULL — DO NOT SCALE — SHEET 1 OF 1

REVISIONS						
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
---	A	ORIGINAL ISSUE	-------	--------	NR	---
---	--	----------	-------	--------	NR	---



ISOMETRIC VIEW

SCALE: NONE

NOTES: UNLESS OTHERWISE SPECIFIED

101 ABBREVIATIONS PER ASME Y14.38-1999.

102 THOROUGHLY CLEAN PARTS TO REMOVE ALL OIL, GREASE, DIRT, CHIPS, ETC.

201 DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.

204 ALL INSIDE CORNERS TO BE R.015 MAX.

208 REMOVE BURRS AND SHARP EDGES TO .010 MAX.

401 BAG AND TAG PART WITH DRAWING NUMBER & REVISION LETTER.

SNS DWG No.
104050000-18E-8200-A855-R00

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO
1	153Y520855	LVDT LOCATOR BRACKET	6061-T6 AL	--

PARTS LIST/BILL OF MATERIAL

DRAWING LEVEL: PRODUCTION

UNCLASSIFIED

TASK CONTRACTOR

CAD SYSTEM & VER.: UNIGRAPHICS V16.0/IMAN

SEE FINAL DESIGN AUTHORIZATION SHEET FOR SIGNATURES; SHEET IS FILED BY DRAWING NUMBER AT THE SNS PROJECT OFFICE.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. TOLERANCES ARE:

DECIMALS .XX ±.1 .XXX ±.01 .XXXX ±.005

ANGULAR: ±.25° MACHINED FINISH: 125

APPROVALS		DATE	GROUP
DESIGNED	D. SATTLER	04-03-01	SNS-03
DRAWN	D. SATTLER	09-06-01	SNS-03
CHECKED	C. COMBS	09-10-01	ESA-DE
ENGINEERING	R. MEYER	09-10-01	SNS-03
VACUUM	R. MEYER	09-10-01	SNS-03
PHYSICS	M. PLUM	09-10-01	SNS-03
APPROVED	N. BULTMAN	09-10-01	SNS-03

155Y520852 ---------- NEXT ASSEMBLY USED ON APPLICATION

Los Alamos SNS DIVISION
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

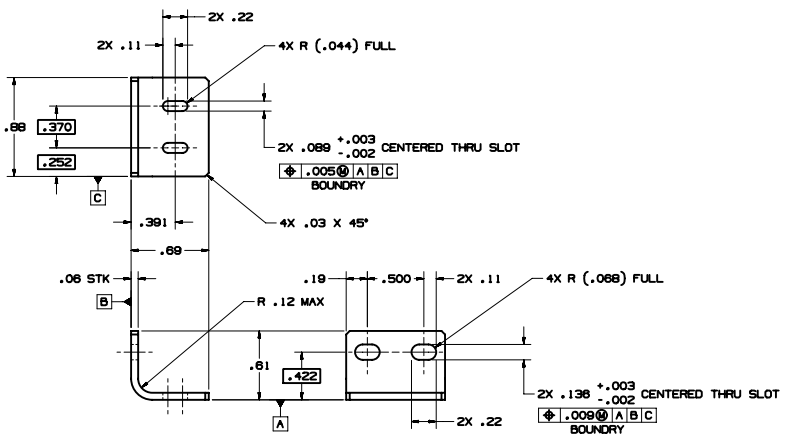
PROJECT: SNS

SUPER CONDUCTING LINAC
WIRE SCANNER ACTUATOR
LVDT LOCATOR BRACKET

SIZE	CAGE CODE	DWG NO. & CAD FILENAME	REV
D	88516	153Y520855	-A

SCALE 2/1 DO NOT SCALE SHEET 1 OF 1

REVISIONS						
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
---	A	ORIGINAL ISSUE	-------	--------	NR	---
---	--	----------	-------	--------	NR	---



ISOMETRIC VIEW
SCALE: NONE

NOTES: UNLESS OTHERWISE SPECIFIED

101 ABBREVIATIONS PER ASME Y14.38-1999.

102 THOROUGHLY CLEAN PARTS TO REMOVE ALL OIL, GREASE, DIRT, CHIPS, ETC.

201 DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.

208 REMOVE BURRS AND SHARP EDGES TO .010 MAX.

401 BAG AND TAG PART WITH DRAWING NUMBER & REVISION LETTER.

SNS DWG No. 104050000-18E-8200-A856-R00

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO
2	155Y520856	LIMIT SWITCH BRACKET	5052-0 ALUM	--

PARTS LIST/BILL OF MATERIAL

DRAWING LEVEL: PRODUCTION

UNCLASSIFIED

TASK CONTRACTOR

CAD SYSTEM & VER.: UNIGRAPHICS V16.0/IMAN

SEE FINAL DESIGN AUTHORIZATION SHEET FOR SIGNATURES; SHEET IS FILED BY DRAWING NUMBER AT THE SNS PROJECT OFFICE.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. TOLERANCES ARE:
DECIMALS .XX: ±.1 .XXX: ±.01 .XXXX: ±.005
ANGULAR: ±.25°
MACHINED FINISH: 125

	APPROVALS	DATE	GROUP
DESIGNED	D. SATTLER	04-03-01	SNS-03
DRAWN	D. SATTLER	09-08-01	SNS-03
CHECKED	C. COMBS	09-10-01	ESA-DE
ENGINEERING	R. MEYER	09-10-01	SNS-03
VACUUM	R. MEYER	09-10-01	SNS-03
PHYSICS	M. PLUM	09-10-01	SNS-03
APPROVED	N. BULTMAN	09-10-01	SNS-03

155Y520852 ---------- NEXT ASSEMBLY USED ON APPLICATION

Los Alamos SNS DIVISION
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

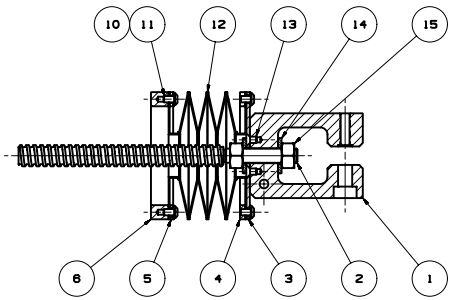
PROJECT: SNS

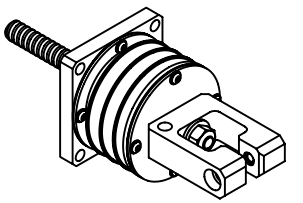
SUPER CONDUCTING LINAC
WIRE SCANNER ACTUATOR
LIMIT SWITCH BRACKET

SIZE	CAGE CODE	DWG NO. & CAD FILENAME	REV
D	88516	155Y520856	-A

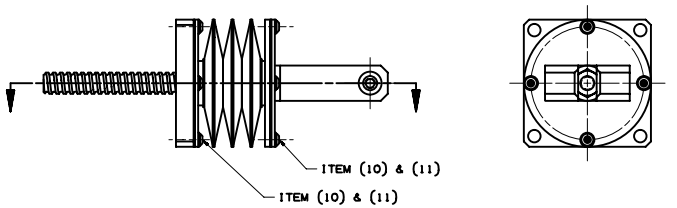
SCALE 2/1 DO NOT SCALE SHEET 1 OF 1

REVISIONS						
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
---	A	ORIGINAL ISSUE	-------	--------	NR	---
---	--	----------	-------	--------	NR	---





ISOMETRIC VIEW
SCALE: NONE



QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO
2		HEX NUT 1/4-28 UNF	SST	15
2		FLAT WASHER 1/4 NOM ID	SST	14
2		FL HD CAP SCR #4-40 UNC X 3/16 LG	SST	13
1	Q231952 REV A	SEWN COVER PHONE:(602)264-5001	GORTITE, A&A MFG CO	12
8		FLAT WASHER #4 NOM ID	SST	11
8		BUT HD CAP SCR #4-40 UNC X 3/16 LG	SST	10
				9
				8
				7
1	155Y520863	DUST BELLOWS MOUNTING PLATE		6
1	155Y520862	DUST BELLOWS CLAMP RING		5
1	155Y520861	DUST BELLOWS NUT PLATE		4
1	155Y520860	DUST BELLOWS BRACKET		3
1	155Y520859	BALL SCREW		2
1	155Y520858	CLEVIS		1
1	155Y520857	CLEVIS/DUST BELLOWS ASSY		--

PARTS LIST/BILL OF MATERIAL

NOTES: UNLESS OTHERWISE SPECIFIED

101 ABBREVIATIONS PER ASME Y14.38-1999.

102 THOROUGHLY CLEAN PARTS TO REMOVE ALL OIL, GREASE, DIRT, CHIPS, ETC.

205 ALL THREADS TO BE UNIFIED CLASS 2.

401 BAG AND TAG PART WITH DRAWING NUMBER & REVISION LETTER.

SNS DWG No. 104050000-18E-8200-A857-R00

DRAWING LEVEL: PRODUCTION

UNCLASSIFIED

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. TOLERANCES ARE: DECIMALS .XX: ±.1 .XX: ±.01 .XXX: ±.005 ANGULAR: ±.25° MACHINED: 125

155Y520851 ---------- NEXT ASSEMBLY USED ON APPLICATION

TASK CONTRACTOR

CAD SYSTEM & VER.: UNIGRAPHICS V16.0/IMAN

SEE FINAL DESIGN AUTHORIZATION SHEET FOR SIGNATURES; SHEET IS FILED BY DRAWING NUMBER AT THE SNS PROJECT OFFICE.

APPROVALS		DATE	GROUP
DESIGNED	D. SATTLER	04-03-01	SNS-03
DRAWN	D. SATTLER	09-08-01	SNS-03
CHECKED	C. COMBS	09-10-01	ESA-DE
ENGINEERING	R. MEYER	09-10-01	SNS-03
VACUUM	R. MEYER	09-10-01	SNS-03
PHYSICS	M. PLUM	09-10-01	SNS-03
APPROVED	N. BULTMAN	09-10-01	SNS-03

Los Alamos National Laboratory
Los Alamos, New Mexico 87545
Los Alamos SNS DIVISION

PROJECT: SNS

SUPER CONDUCTING LINAC WIRE SCANNER ACTUATOR CLEVIS/DUST BELLOWS ASSY

SIZE	CAGE CODE	DWG NO. & CAD FILENAME	REV
D	88516	155Y520857	-A

SCALE: FULL — DO NOT SCALE — SHEET 1 OF 1

REVISIONS						
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
---	A	ORIGINAL ISSUE	-------	--------	NR	---
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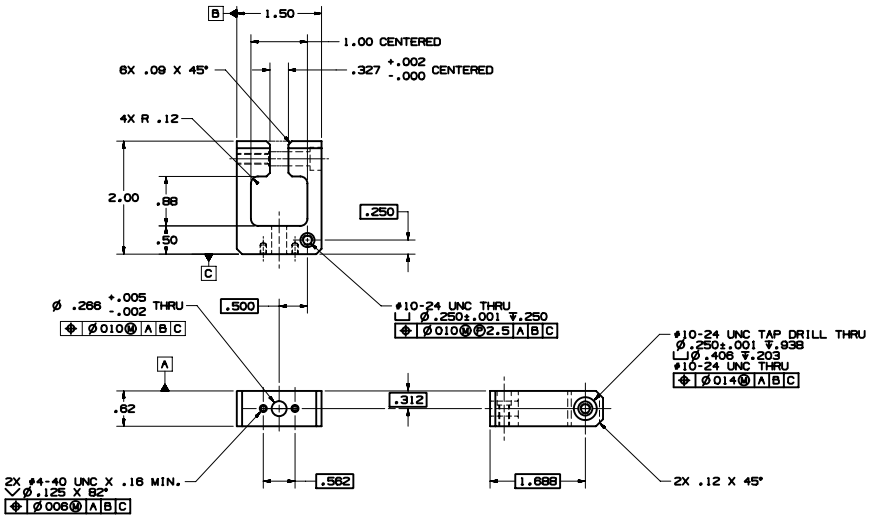
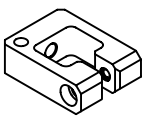




ISOMETRIC VIEW

SCALE: NONE

NOTES: UNLESS OTHERWISE SPECIFIED

101 ABBREVIATIONS PER ASME Y14.38-1999.

102 THOROUGHLY CLEAN PARTS TO REMOVE ALL OIL, GREASE, DIRT, CHIPS, ETC.

201 DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.

204 ALL INSIDE CORNERS TO BE R.015 MAX.

205 ALL THREADS TO BE UNIFIED CLASS 2.

206 C'SINK ALL TAPPED HOLES 100°, TO MAJOR DIA.

208 REMOVE BURRS AND SHARP EDGES TO .010 MAX.

401 BAG AND TAG PART WITH DRAWING NUMBER & REVISION LETTER.

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO
1	155Y520858	CLEVIS	6061-T6 AL	--

PARTS LIST/BILL OF MATERIAL

DRAWING LEVEL: PRODUCTION

UNCLASSIFIED

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. TOLERANCES ARE:

DECIMALS .XX: ±.1 .XXX: ±.01 .XXXX: ±.005

ANGULAR: ±.25°

MACHINED FINISH: 125

155Y520857 ---------- NEXT ASSEMBLY USED ON APPLICATION

SNS DWG No. 104050000-18E-8200-A858-R00

TASK CONTRACTOR

CAD SYSTEM & VER. UNIGRAPHICS V16.0/IMAN

SEE FINAL DESIGN AUTHORIZATION SHEET FOR SIGNATURES; SHEET IS FILED BY DRAWING NUMBER AT THE SNS PROJECT OFFICE.

APPROVALS		DATE	GROUP
DESIGNED	D. SATTLER	04-03-01	SNS-03
DRAWN	D. SATTLER	09-08-01	SNS-03
CHECKED	C. COMBS	09-10-01	ESA-DE
ENGINEERING	R. MEYER	09-10-01	SNS-03
VACUUM	R. MEYER	09-10-01	SNS-03
PHYSICS	M. PLUM	09-10-01	SNS-03
APPROVED	N. BULTMAN	09-10-01	SNS-03

Los Alamos National Laboratory
Los Alamos, New Mexico 87545
Los Alamos SNS DIVISION

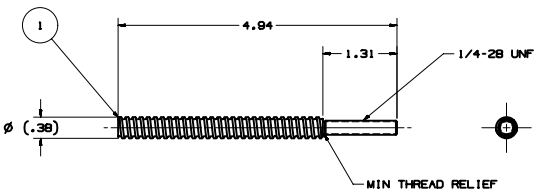
PROJECT: SNS

SUPER CONDUCTING LINAC
WIRE SCANNER ACTUATOR
CLEVIS

SIZE	CAGE CODE	DWG NO. & CAD FILENAME	REV
D	88516	155Y520858	-A

SCALE: FULL — DO NOT SCALE — SHEET 1 OF 1

REVISIONS						
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
---	A	ORIGINAL ISSUE	-------	--------	NR	---
---	--	----------	-------	--------	NR	---



ISOMETRIC VIEW
SCALE: NONE

PURCHASED PART DRAWING

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO
1	20044888 REV A	BALL SCREW PHONE (505)247-0222	THOMSON-SAGINAW	1
1	155Y520859	BALL SCREW		--

PARTS LIST/BILL OF MATERIAL

NOTES: UNLESS OTHERWISE SPECIFIED

101 ABBREVIATIONS PER ASME Y14.38-1999.

102 THOROUGHLY CLEAN PARTS TO REMOVE ALL OIL, GREASE, DIRT, CHIPS, ETC.

201 DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.

205 ALL THREADS TO BE UNIFIED CLASS 2.

208 REMOVE BURRS AND SHARP EDGES TO .010 MAX.

401 BAG AND TAG PART WITH DRAWING NUMBER & REVISION LETTER.

SNS DWG No. 104050000-18E-8200-A859-R00

DRAWING LEVEL: PRODUCTION

UNCLASSIFIED

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. TOLERANCES ARE:
DECIMALS .XX: ±.1 .XX: ±.01 .XXX: ±.005
ANGULAR: ±.25°
MACHINED FINISH: 125

155Y520857 ---------- NEXT ASSEMBLY USED ON APPLICATION

TASK CONTRACTOR

CAD SYSTEM & VER.: UNIGRAPHICS V16.0/IMAN

SEE FINAL DESIGN AUTHORIZATION SHEET FOR SIGNATURES; SHEET IS FILED BY DRAWING NUMBER AT THE SNS PROJECT OFFICE.

APPROVALS		DATE	GROUP
DESIGNED	D. SATTLER	04-03-01	SNS-03
DRAWN	D. SATTLER	09-06-01	SNS-03
CHECKED	C. COMBS	09-10-01	ESA-DE
ENGINEERING	R. MEYER	09-10-01	SNS-03
VACUUM	R. MEYER	09-10-01	SNS-03
PHYSICS	M. PLUM	09-10-01	SNS-03
APPROVED	N. BULTMAN	09-10-01	SNS-03

Los Alamos SNS DIVISION
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

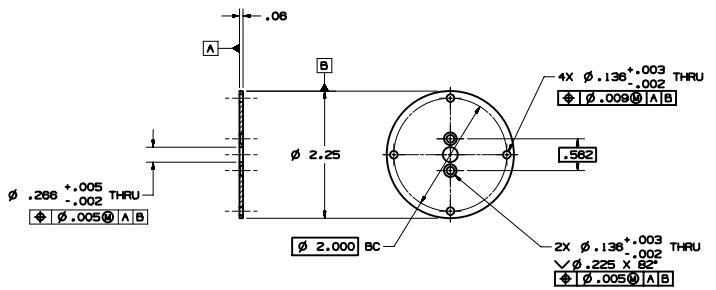
PROJECT: SNS

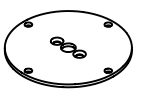
SUPER CONDUCTING LINAC
WIRE SCANNER ACTUATOR
BALL SCREW

SIZE	CAGE CODE	DWG NO. & CAD FILENAME	REV
D	88516	155Y520859	-A

SCALE: FULL — DO NOT SCALE — SHEET 1 OF 1

REVISIONS						
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
---	A	ORIGINAL ISSUE	-------	--------	NR	---
---	--	----------	-------	--------	NR	---





ISOMETRIC VIEW

SCALE: NONE

NOTES: UNLESS OTHERWISE SPECIFIED

101 ABBREVIATIONS PER ASME Y14.38-1999.

102 THOROUGHLY CLEAN PARTS TO REMOVE ALL OIL, GREASE, DIRT, CHIPS, ETC.

201 DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.

208 REMOVE BURRS AND SHARP EDGES TO .010 MAX.

401 BAG AND TAG PART WITH DRAWING NUMBER & REVISION LETTER.

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO
1	155Y520860	DUST BELLOWS BRACKET	6061-T6 AL	--

PARTS LIST/BILL OF MATERIAL

DRAWING LEVEL: PRODUCTION

UNCLASSIFIED

TASK CONTRACTOR

CAD SYSTEM & VER.: UNIGRAPHICS V16.0/IMAN

SEE FINAL DESIGN AUTHORIZATION SHEET FOR SIGNATURES; SHEET IS FILED BY DRAWING NUMBER AT THE SNS PROJECT OFFICE.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. TOLERANCES ARE:

DECIMALS .XX: ±.1 .XXX: ±.01 .XXXX: ±.005

ANGULAR: ±.25° MACHINED: 125

	APPROVALS	DATE	GROUP
DESIGNED	D. SATTLER	04-03-01	SNS-03
DRAWN	D. SATTLER	09-06-01	SNS-03
CHECKED	C. COMBS	09-10-01	ESA-DE
ENGINEERING	R. MEYER	09-10-01	SNS-03
VACUUM	R. MEYER	09-10-01	SNS-03
PHYSICS	M. PLUM	09-10-01	SNS-03
APPROVED	N. BULTMAN	09-10-01	SNS-03

155Y520857 ---------- NEXT ASSEMBLY USED ON APPLICATION

SNS DWG No. 104050000-18E-8200-A860-R00

Los Alamos SNS DIVISION

Los Alamos National Laboratory, Los Alamos, New Mexico 87545

PROJECT: SNS

SUPER CONDUCTING LINAC WIRE SCANNER ACTUATOR DUST BELLOWS BRACKET

SIZE	CAGE CODE	DWG NO. & CAD FILENAME	REV
D	88516	155Y520860	-A

SCALE: FULL — DO NOT SCALE — SHEET 1 OF 1

REVISIONS						
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
---	A	ORIGINAL ISSUE	-------	--------	NR	---
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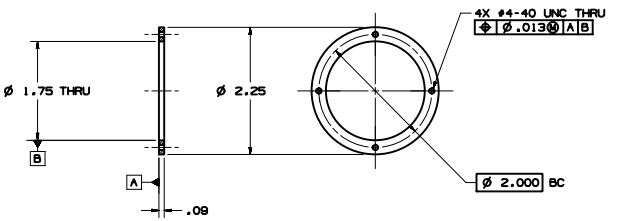

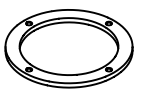

ISOMETRIC VIEW

SCALE: NONE

NOTES: UNLESS OTHERWISE SPECIFIED

101 ABBREVIATIONS PER ASME Y14.38-1999.

102 THOROUGHLY CLEAN PARTS TO REMOVE ALL OIL, GREASE, DIRT, CHIPS, ETC.

201 DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.

205 ALL THREADS TO BE UNIFIED CLASS 2.

206 C'SINK ALL TAPPED HOLES 100°, TO MAJOR DIA.

208 REMOVE BURRS AND SHARP EDGES TO .010 MAX.

401 BAG AND TAG PART WITH DRAWING NUMBER & REVISION LETTER.

SNS DWG No.
104050000-18E-8200-A861-R00

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO
1	155Y520861	DUST BELLOWS NUT PLATE	6061-T6 AL	--

PARTS LIST/BILL OF MATERIAL

DRAWING LEVEL: PRODUCTION

UNCLASSIFIED

TASK CONTRACTOR

CAD SYSTEM & VER.: UNIGRAPHICS V16.0/IMAN

SEE FINAL DESIGN AUTHORIZATION SHEET FOR SIGNATURES, SHEET IS FILED BY DRAWING NUMBER AT THE SNS PROJECT OFFICE.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. TOLERANCES ARE:

DECIMALS .XX: ±.1 .XXX: ±.01 .XXXX: ±.005

ANGULAR: ±.25° MACHINED FINISH: 125

APPROVALS		DATE	GROUP
DESIGNED	D. SATTLER	04-03-01	SNS-03
DRAWN	D. SATTLER	09-08-01	SNS-03
CHECKED	C. COMBS	09-10-01	ESA-DE
ENGINEERING	R. MEYER	09-10-01	SNS-03
VACUUM	R. MEYER	09-10-01	SNS-03
PHYSICS	M. PLUM	09-10-01	SNS-03
APPROVED	N. BULTMAN	09-10-01	SNS-03

155Y520857 ----------
NEXT ASSEMBLY USED ON
APPLICATION

Los Alamos National Laboratory
Los Alamos, New Mexico 87545
Los Alamos SNS DIVISION

PROJECT: SNS

SUPER CONDUCTING LINAC
WIRE SCANNER ACTUATOR
DUST BELLOWS NUT PLATE

SIZE	CAGE CODE	DWG NO. & CAD FILENAME	REV
D	88516	155Y520861	-A

SCALE: FULL — DO NOT SCALE — SHEET 1 OF 1

REVISIONS						
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
---	A	ORIGINAL ISSUE	-------	--------	NR	---
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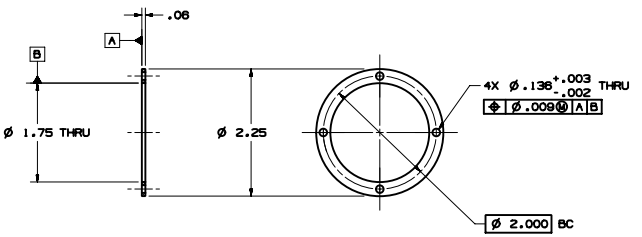
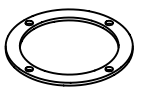




ISOMETRIC VIEW
SCALE: NONE

NOTES: UNLESS OTHERWISE SPECIFIED

101 ABBREVIATIONS PER ASME Y14.38-1999.

102 THOROUGHLY CLEAN PARTS TO REMOVE ALL OIL, GREASE, DIRT, CHIPS, ETC.

201 DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.

208 REMOVE BURRS AND SHARP EDGES TO .010 MAX.

401 BAG AND TAG PART WITH DRAWING NUMBER & REVISION LETTER.

SNS DWG No.
104050000-18E-8200-A862-R00

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO
1	155Y520862	DUST BELLOWS CLAMP RING	6061-T6 AL	--

PARTS LIST/BILL OF MATERIAL

DRAWING LEVEL: PRODUCTION

UNCLASSIFIED

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. TOLERANCES ARE:
DECIMALS .XX: ±.1 .XXX: ±.01 .XXXX: ±.005
ANGULAR: ±.25°
MACHINED FINISH: 125

155Y520857 ---------- NEXT ASSEMBLY USED ON APPLICATION

TASK CONTRACTOR

CAD SYSTEM & VER.: UNIGRAPHICS V16.0/IMAN

SEE FINAL DESIGN AUTHORIZATION SHEET FOR SIGNATURES; SHEET IS FILED BY DRAWING NUMBER AT THE SNS PROJECT OFFICE.

APPROVALS		DATE	GROUP
DESIGNED	D. SATTLER	04-03-01	SNS-03
DRAWN	D. SATTLER	09-06-01	SNS-03
CHECKED	C. COMBS	09-10-01	ESA-DE
ENGINEERING	R. MEYER	09-10-01	SNS-03
VACUUM	R. MEYER	09-10-01	SNS-03
PHYSICS	M. PLUM	09-10-01	SNS-03
APPROVED	N. BULTMAN	09-10-01	SNS-03

Los Alamos
SNS DIVISION
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

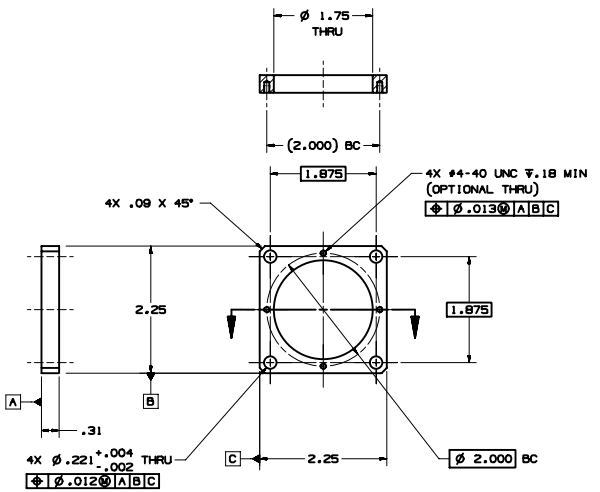
PROJECT: SNS

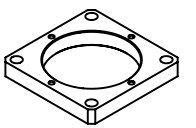
SUPER CONDUCTING LINAC WIRE SCANNER ACTUATOR DUST BELLOWS CLAMP RING

SIZE	CAGE CODE	DWG NO. & CAD FILENAME	REV
D	88516	155Y520862	-A

SCALE: FULL — DO NOT SCALE — SHEET 1 OF 1

REVISIONS						
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
---	A	ORIGINAL ISSUE	-------	--------	NR	---
---	--	----------	-------	--------	NR	---





ISOMETRIC VIEW

SCALE: NONE

NOTES: UNLESS OTHERWISE SPECIFIED

101 ABBREVIATIONS PER ASME Y14.38-1999.

102 THOROUGHLY CLEAN PARTS TO REMOVE ALL OIL, GREASE, DIRT, CHIPS, ETC.

201 DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.

205 ALL THREADS TO BE UNIFIED CLASS 2.

206 C'SINK ALL TAPPED HOLES 100°, TO MAJOR DIA.

208 REMOVE BURRS AND SHARP EDGES TO .010 MAX.

401 BAG AND TAG PART WITH DRAWING NUMBER & REVISION LETTER.

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO
1	155Y520863	DUST BELLOWS MTG PLATE	6061-T6 AL	--

PARTS LIST/BILL OF MATERIAL

DRAWING LEVEL: PRODUCTION

UNCLASSIFIED

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. TOLERANCES ARE:
DECIMALS .XX: ±.1 .XXX: ±.01 .XXXX: ±.005
ANGULAR: ±.25°
MACHINED: 125

155Y520857 ----------
NEXT ASSEMBLY USED ON
APPLICATION

SNS DWG No. 104050000-18E-8200-A863-R00

TASK CONTRACTOR

CAD SYSTEM & VER.: UNIGRAPHICS V16.0/IMAN

SEE FINAL DESIGN AUTHORIZATION SHEET FOR SIGNATURES; SHEET IS FILED BY DRAWING NUMBER AT THE SNS PROJECT OFFICE.

APPROVALS		DATE	GROUP
DESIGNED	D. SATTLER	04-03-01	SNS-03
DRAWN	D. SATTLER	09-06-01	SNS-03
CHECKED	C. COMBS	09-10-01	ESA-DE
ENGINEERING	R. MEYER	09-10-01	SNS-03
VACUUM	R. MEYER	09-10-01	SNS-03
PHYSICS	M. PLUM	09-10-01	SNS-03
APPROVED	N. BULTMAN	09-10-01	SNS-03

Los Alamos National Laboratory
Los Alamos, New Mexico 87545
Los Alamos SNS DIVISION

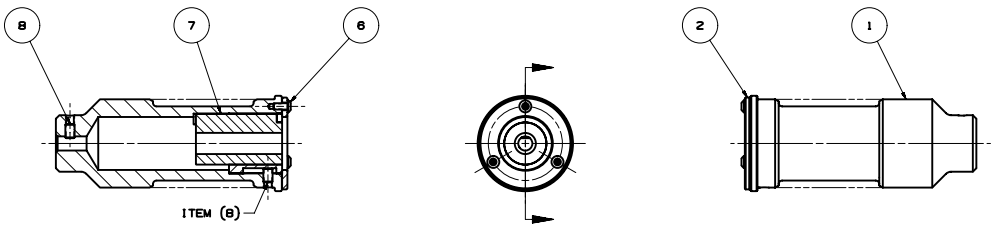
PROJECT: SNS

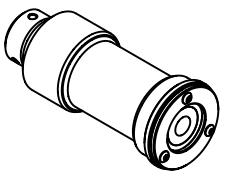
SUPER CONDUCTING LINAC
WIRE SCANNER ACTUATOR
DUST BELLOWS MTG PLATE

SIZE	CAGE CODE	DWG NO. & CAD FILENAME	REV
D	88516	155Y520863	-A

SCALE: FULL — DO NOT SCALE — SHEET 1 OF 1

REVISIONS						
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
---	A	ORIGINAL ISSUE	-------	--------	NR	---
---	--	----------	-------	--------	NR	---





ISOMETRIC VIEW

SCALE: NONE

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO
3		FL PT SET SCR #8-32 UNC X 1/4 LG	SST	8
1	7826919	DOUBLE NUT PRELOADED Ø3/8 NOM	THOMSON SAGINAW	7
3		BT HD CAP SCR #4-40 UNC X 1/4 LG	SST	6
				5
				4
				3
1	155Y520866	BALL NUT CAP		2
1	155Y520865	BALL NUT FLANGE		1
1	155Y520864	BALL NUT ASSY		--

PARTS LIST/BILL OF MATERIAL

NOTES: UNLESS OTHERWISE SPECIFIED

101 ABBREVIATIONS PER ASME Y14.38-1999.

102 THOROUGHLY CLEAN PARTS TO REMOVE ALL OIL, GREASE, DIRT, CHIPS, ETC.

205 ALL THREADS TO BE UNIFIED CLASS 2.

401 BAG AND TAG PART WITH DRAWING NUMBER & REVISION LETTER.

SNS DWG No. 104050000-18E-8200-A864-R00

DRAWING LEVEL: PRODUCTION

UNCLASSIFIED

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. TOLERANCES ARE: DECIMALS .XX: ±.1 .XXX: ±.01 .XXXX: ±.005 ANGULAR: ±.25° MACHINED FINISH: 125

155Y520851 ---------- NEXT ASSEMBLY USED ON APPLICATION

TASK CONTRACTOR

CAD SYSTEM & VER.: UNIGRAPHICS V16.0/IMAN

SEE FINAL DESIGN AUTHORIZATION SHEET FOR SIGNATURES; SHEET IS FILED BY DRAWING NUMBER AT THE SNS PROJECT OFFICE.

APPROVALS		DATE	GROUP
DESIGNED	D. SATTLER	04-03-01	SNS-03
DRAWN	D. SATTLER	09-08-01	SNS-03
CHECKED	C. COMBS	09-10-01	ESA-DE
ENGINEERING	R. MEYER	09-10-01	SNS-03
VACUUM	R. MEYER	09-10-01	SNS-03
PHYSICS	M. PLUM	09-10-01	SNS-03
APPROVED	N. BULTMAN	09-10-01	SNS-03

Los Alamos National Laboratory
Los Alamos, New Mexico 87545
Los Alamos SNS DIVISION

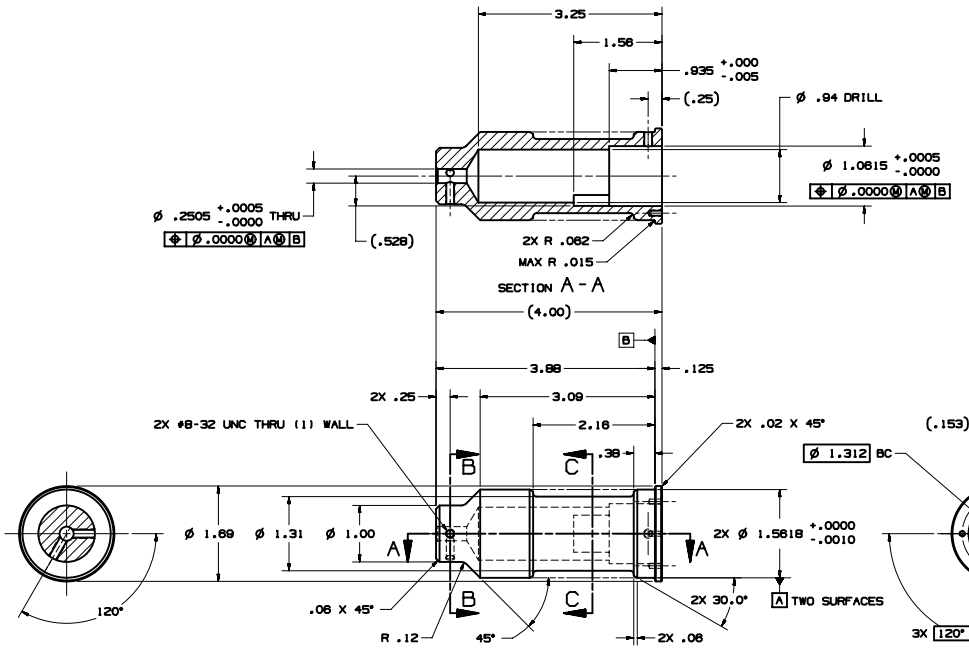
PROJECT: SNS

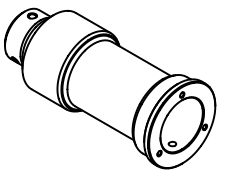
SUPER CONDUCTING LINAC WIRE SCANNER ACTUATOR BALL NUT ASSEMBLY

SIZE: D | CAGE CODE: 88516 | DWG NO. & CAD FILENAME: 155Y520864 | REV: -A

SCALE: FULL | DO NOT SCALE | SHEET 1 OF 1

REVISIONS						
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
---	A	ORIGINAL ISSUE	-------	--------	NR	---
---	--	----------	-------	--------	NR	---





ISOMETRIC VIEW

SCALE: NONE

NOTES: UNLESS OTHERWISE SPECIFIED

101 ABBREVIATIONS PER ASME Y14.38-1999.

102 THOROUGHLY CLEAN PARTS TO REMOVE ALL OIL, GREASE, DIRT, CHIPS, ETC.

201 DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.

204 ALL INSIDE CORNERS TO BE R.015 MAX.

205 ALL THREADS TO BE UNIFIED CLASS 2.

206 C'SINK ALL TAPPED HOLES 100°, TO MAJOR DIA.

208 REMOVE BURRS AND SHARP EDGES TO .010 MAX.

401 BAG AND TAG PART WITH DRAWING NUMBER & REVISION LETTER.

SNS DWG No. 104050000-18E-8200-A865-R00

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO
1	155Y520865	BALL NUT FLANGE	6061-T6 AL	--

PARTS LIST/BILL OF MATERIAL

DRAWING LEVEL: PRODUCTION

UNCLASSIFIED

TASK CONTRACTOR

CAD SYSTEM & VER.: UNIGRAPHICS V16.0/IMAN

SEE FINAL DESIGN AUTHORIZATION SHEET FOR SIGNATURES; SHEET IS FILED BY DRAWING NUMBER AT THE SNS PROJECT OFFICE.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. TOLERANCES ARE:

DECIMALS .XX ±.1 .XXX ±.01 .XXXX ±.005

ANGULAR: ±.25°

MACHINED FINISH: 125

APPROVALS		DATE	GROUP
DESIGNED	D. SATTLER	04-03-01	SNS-03
DRAWN	D. SATTLER	09-08-01	SNS-03
CHECKED	C. COMBS	09-10-01	ESA-DE
ENGINEERING	R. MEYER	09-10-01	SNS-03
VACUUM	R. MEYER	09-10-01	SNS-03
PHYSICS	M. PLUM	09-10-01	SNS-03
APPROVED	N. BULTMAN	09-10-01	SNS-03

155Y520864 ---------- NEXT ASSEMBLY USED ON

APPLICATION

Los Alamos National Laboratory, Los Alamos, New Mexico 87545

Los Alamos SNS DIVISION

PROJECT: SNS

SUPER CONDUCTING LINAC

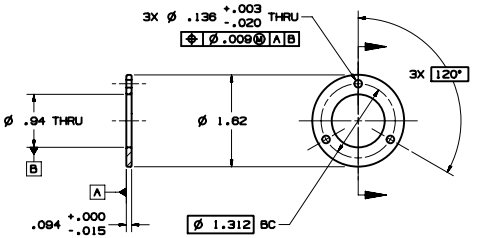
WIRE SCANNER ACTUATOR

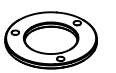
BALL NUT FLANGE

SIZE	CAGE CODE	DWG NO. & CAD FILENAME	REV
D	88516	155Y520865	-A

SCALE: FULL — DO NOT SCALE — SHEET 1 OF 1

REVISIONS						
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
---	A	ORIGINAL ISSUE	-------	--------	NR	---
---	--	----------	-------	--------	NR	---





ISOMETRIC VIEW

SCALE: NONE

NOTES: UNLESS OTHERWISE SPECIFIED

101 ABBREVIATIONS PER ASME Y14.38-1999.

102 THOROUGHLY CLEAN PARTS TO REMOVE ALL OIL, GREASE, DIRT, CHIPS, ETC.

201 DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.

208 REMOVE BURRS AND SHARP EDGES TO .010 MAX.

401 BAG AND TAG PART WITH DRAWING NUMBER & REVISION LETTER.

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO
1	155Y520866	BALL NUT CAP	6061-T6 AL	--

PARTS LIST/BILL OF MATERIAL

DRAWING LEVEL: PRODUCTION

UNCLASSIFIED

TASK CONTRACTOR

CAD SYSTEM & VER.: UNIGRAPHICS V16.0/IMAN

SEE FINAL DESIGN AUTHORIZATION SHEET FOR SIGNATURES; SHEET IS FILED BY DRAWING NUMBER AT THE SNS PROJECT OFFICE.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. TOLERANCES ARE:

DECIMALS .XX ±.1 .XXX ±.01 .XXXX ±.005

ANGULAR: ±.25°

MACHINED FINISH: 125

APPROVALS		DATE	GROUP
DESIGNED	D. SATTLER	04-03-01	SNS-03
DRAWN	D. SATTLER	09-06-01	SNS-03
CHECKED	C. COMBS	09-10-01	ESA-DE
ENGINEERING	R. MEYER	09-10-01	SNS-03
VACUUM	R. MEYER	09-10-01	SNS-03
PHYSICS	M. PLUM	09-10-01	SNS-03
APPROVED	N. BULTMAN	09-10-01	SNS-03

Los Alamos SNS DIVISION

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

PROJECT: SNS

SUPER CONDUCTING LINAC
WIRE SCANNER ACTUATOR
BALL NUT CAP

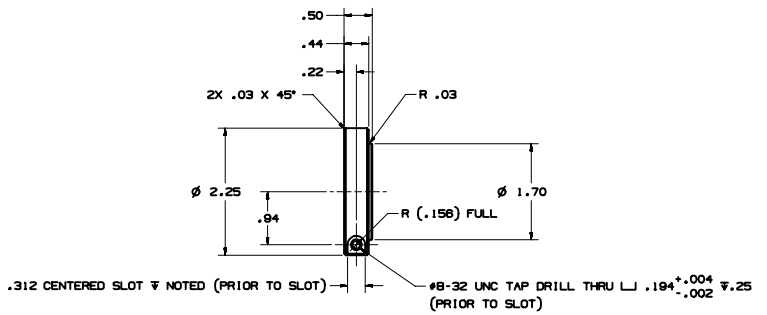
SIZE: D | CAGE CODE: 88516 | DWG NO. & CAD FILENAME: 155Y520866 | REV: -A

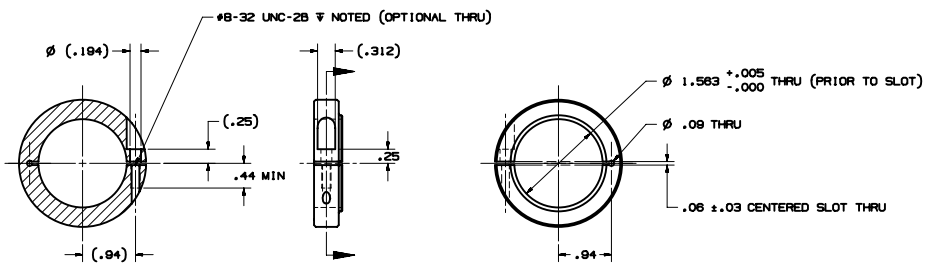
SCALE: FULL | DO NOT SCALE | SHEET 1 OF 1

SNS DWG No. 104050000-18E-8200-A866-R00

155Y520864 ----------
NEXT ASSEMBLY USED ON
APPLICATION

REVISIONS						
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
---	A	ORIGINAL ISSUE	-------	--------	NR	---
---	--	----------	-------	--------	NR	---





ISOMETRIC VIEW

SCALE: NONE

NOTES: UNLESS OTHERWISE SPECIFIED

101 ABBREVIATIONS PER ASME Y14.38-1999.

102 THOROUGHLY CLEAN PARTS TO REMOVE ALL OIL, GREASE, DIRT, CHIPS, ETC.

201 DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.

204 ALL INSIDE CORNERS TO BE R.015 MAX.

205 ALL THREADS TO BE UNIFIED CLASS 2.

206 C'SINK ALL TAPPED HOLES 100°, TO MAJOR DIA.

208 REMOVE BURRS AND SHARP EDGES TO .010 MAX.

401 BAG AND TAG PART WITH DRAWING NUMBER & REVISION LETTER.

SNS DWG No. 104050000-18E-8200-A867-R00

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO
1	155Y520867	CLAMP COLLAR	6061-T6 AL	--

PARTS LIST/BILL OF MATERIAL

DRAWING LEVEL: PRODUCTION

UNCLASSIFIED

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. TOLERANCES ARE: DECIMALS .XX ±.1 .XXX ±.01 .XXXX ±.005 ANGULAR: ±.25° MACHINED FINISH: 125

155Y520851 ---------- NEXT ASSEMBLY USED ON APPLICATION

TASK CONTRACTOR

CAD SYSTEM & VER.: UNIGRAPHICS V16.0/IMAN

SEE FINAL DESIGN AUTHORIZATION SHEET FOR SIGNATURES; SHEET IS FILED BY DRAWING NUMBER AT THE SNS PROJECT OFFICE.

APPROVALS		DATE	GROUP
DESIGNED	D. SATTLER	04-03-01	SNS-03
DRAWN	D. SATTLER	09-08-01	SNS-03
CHECKED	C. COMBS	09-10-01	ESA-DE
ENGINEERING	R. MEYER	09-10-01	SNS-03
VACUUM	R. MEYER	09-10-01	SNS-03
PHYSICS	M. PLUM	09-10-01	SNS-03
APPROVED	N. BULTMAN	09-10-01	SNS-03

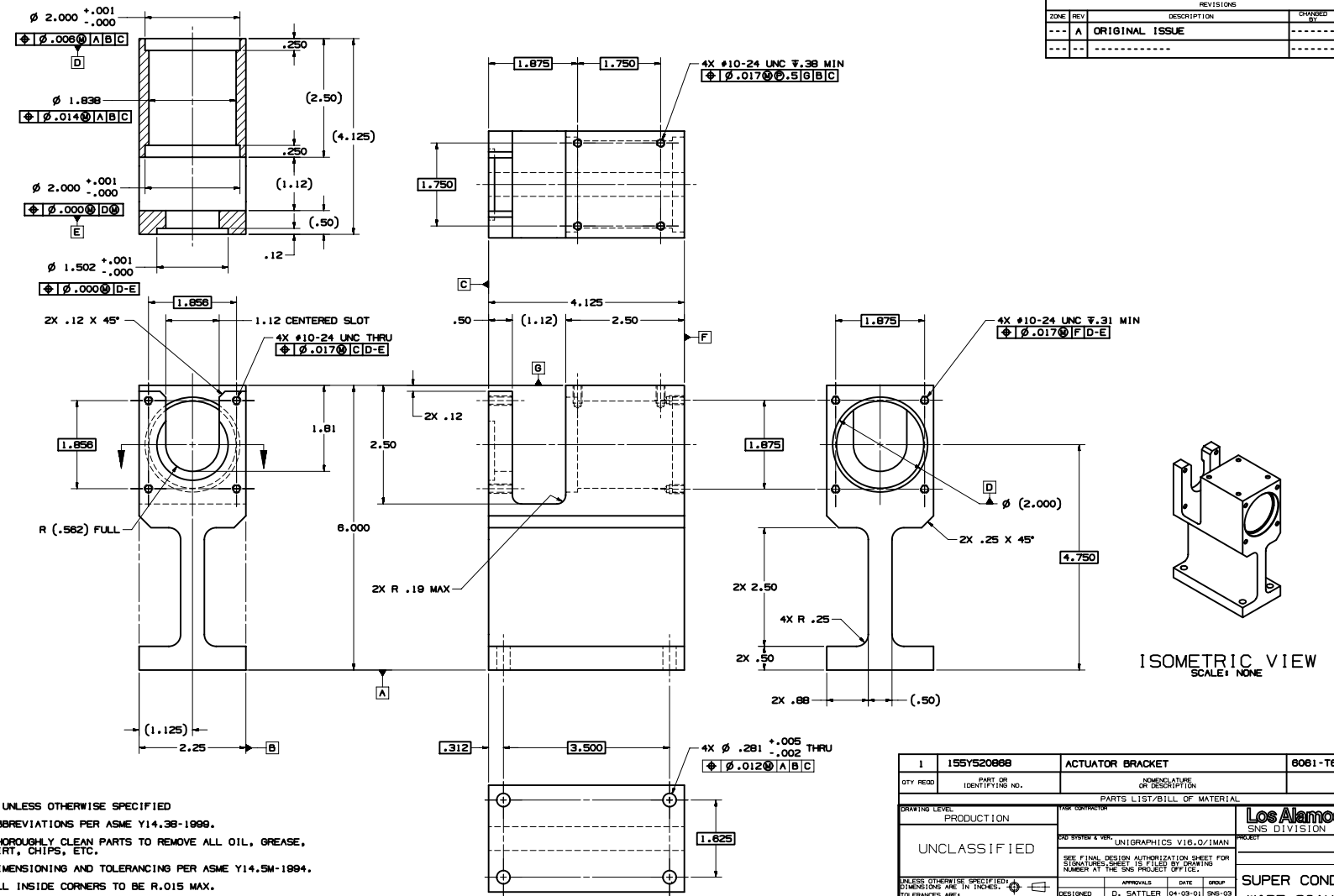
Los Alamos National Laboratory
Los Alamos, New Mexico 87545
Los Alamos SNS DIVISION

PROJECT: SNS

SUPER CONDUCTING LINAC
WIRE SCANNER ACTUATOR
CLAMP COLLAR

SIZE	CAGE CODE	DWG NO. & CAD FILENAME	REV
D	88516	155Y520867	-A

SCALE: FULL — DO NOT SCALE — SHEET 1 OF 1



REVISIONS					
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
---	A	ORIGINAL ISSUE	-------	--------	NR	---
---	--	----------	-------	--------	NR	---

NOTES: UNLESS OTHERWISE SPECIFIED

101 ABBREVIATIONS PER ASME Y14.38-1999.

102 THOROUGHLY CLEAN PARTS TO REMOVE ALL OIL, GREASE, DIRT, CHIPS, ETC.

201 DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.

204 ALL INSIDE CORNERS TO BE R.015 MAX.

205 ALL THREADS TO BE UNIFIED CLASS 2.

206 C'SINK ALL TAPPED HOLES 100°, TO MAJOR DIA.

208 REMOVE BURRS AND SHARP EDGES TO .010 MAX.

401 BAG AND TAG PART WITH DRAWING NUMBER & REVISION LETTER.

SNS DWG No. 104050000-18E-8200-A868-R00

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO
1	155Y520868	ACTUATOR BRACKET	6061-T6 AL	--

PARTS LIST/BILL OF MATERIAL

DRAWING LEVEL: PRODUCTION

UNCLASSIFIED

TASK CONTRACTOR

CAD SYSTEM & VER.: UNIGRAPHICS V16.0/IMAN

SEE FINAL DESIGN AUTHORIZATION SHEET FOR SIGNATURES; SHEET IS FILED BY DRAWING NUMBER AT THE SNS PROJECT OFFICE.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. TOLERANCES ARE: DECIMALS .XX± ±.1 .XXX± ±.01 .XXXX± ±.005 ANGULAR: ±.25° MACHINED: 125

APPROVALS		DATE	GROUP
DESIGNED	D. SATTLER	04-03-01	SNS-03
DRAWN	D. SATTLER	09-08-01	SNS-03
CHECKED	C. COMBS	09-10-01	ESA-DE
ENGINEERING	R. MEYER	09-10-01	SNS-03
VACUUM	R. MEYER	09-10-01	SNS-03
PHYSICS	M. PLUM	09-10-01	SNS-03
APPROVED	N. BULTMAN	09-10-01	SNS-03

155Y520851 ---------- NEXT ASSEMBLY USED ON APPLICATION

Los Alamos National Laboratory, Los Alamos, New Mexico 87545
Los Alamos SNS DIVISION

PROJECT: SNS

SUPER CONDUCTING LINAC
WIRE SCANNER ACTUATOR
ACTUATOR BRACKET

SIZE	CAGE CODE	DWG NO. & CAD FILENAME	REV
D	88516	155Y520868	-A

SCALE: FULL DO NOT SCALE SHEET 1 OF 1

REVISIONS						
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
---	A	ORIGINAL ISSUE	-------	--------	NR	---
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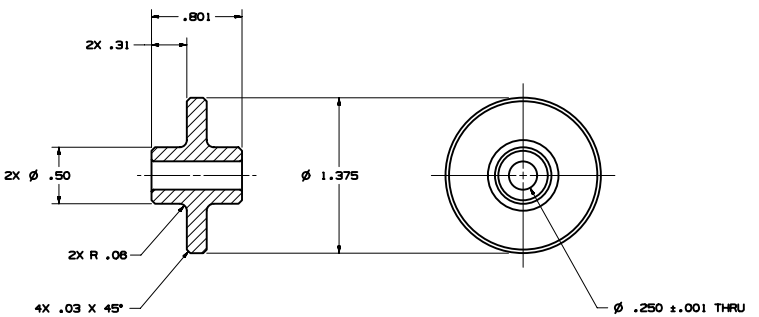

ISOMETRIC VIEW
SCALE: NONE

NOTES: UNLESS OTHERWISE SPECIFIED

101 ABBREVIATIONS PER ASME Y14.38-1999.

102 THOROUGHLY CLEAN PARTS TO REMOVE ALL OIL, GREASE, DIRT, CHIPS, ETC.

201 DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.

208 REMOVE BURRS AND SHARP EDGES TO .010 MAX.

401 BAG AND TAG PART WITH DRAWING NUMBER & REVISION LETTER.

SNS DWG No.
104050000-18E-8200-A869-R00

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO
1	155Y520869	LIMIT SWITCH ACTUATOR	6061-T6 AL	--

PARTS LIST/BILL OF MATERIAL

DRAWING LEVEL: PRODUCTION

UNCLASSIFIED

TASK CONTRACTOR

CAD SYSTEM & VER.: UNIGRAPHICS V16.0/IMAN

SEE FINAL DESIGN AUTHORIZATION SHEET FOR SIGNATURES; SHEET IS FILED BY DRAWING NUMBER AT THE SNS PROJECT OFFICE.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. TOLERANCES ARE:
DECIMALS .XX ±.1 .XXX ±.01 .XXXX ±.005
ANGULAR: ±.25°
MACHINED FINISH: 125

APPROVALS		DATE	GROUP
DESIGNED	D. SATTLER	04-03-01	SNS-03
DRAWN	D. SATTLER	09-08-01	SNS-03
CHECKED	C. COMBS	09-10-01	ESA-DE
ENGINEERING	R. MEYER	09-10-01	SNS-03
VACUUM	R. MEYER	09-10-01	SNS-03
PHYSICS	M. PLUM	09-10-01	SNS-03
APPROVED	N. BULTMAN	09-10-01	SNS-03

155Y520851 ----------
NEXT ASSEMBLY USED ON
APPLICATION

Los Alamos National Laboratory
Los Alamos, New Mexico 87545
Los Alamos SNS DIVISION

PROJECT: SNS

SUPER CONDUCTING LINAC
WIRE SCANNER ACTUATOR
LIMIT SWITCH ACTUATOR

SIZE	CAGE CODE	DWG NO. & CAD FILENAME	REV
D	88516	155Y520869	-A

SCALE 2/1 DO NOT SCALE SHEET 1 OF 1

REVISIONS						
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
---	A	ORIGINAL ISSUE	-------	--------	NR	---
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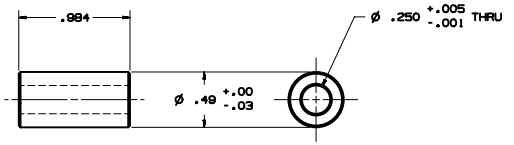


ISOMETRIC VIEW
SCALE: NONE

NOTES: UNLESS OTHERWISE SPECIFIED

101 ABBREVIATIONS PER ASME Y14.38-1999.

102 THOROUGHLY CLEAN PARTS TO REMOVE ALL OIL, GREASE, DIRT, CHIPS, ETC.

201 DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.

208 REMOVE BURRS AND SHARP EDGES TO .010 MAX.

401 BAG AND TAG PART WITH DRAWING NUMBER & REVISION LETTER.

SNS DWG No.
104050000-18E-8200-A870-R00

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO
1	155Y520870	GUIDE SPACER	6061-T6 AL	--

PARTS LIST/BILL OF MATERIAL

DRAWING LEVEL: PRODUCTION

UNCLASSIFIED

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. TOLERANCES ARE:
DECIMALS .XX: ±.1 .XXX: ±.01 .XXXX: ±.005
ANGULAR: ±.25°
MACHINED FINISH: 125

155Y520851
NEXT ASSEMBLY USED ON
APPLICATION

TASK CONTRACTOR

CAD SYSTEM & VER.: UNIGRAPHICS V16.0/IMAN

SEE FINAL DESIGN AUTHORIZATION SHEET FOR SIGNATURES; SHEET IS FILED BY DRAWING NUMBER AT THE SNS PROJECT OFFICE.

APPROVALS		DATE	GROUP
DESIGNED	D. SATTLER	04-03-01	SNS-03
DRAWN	D. SATTLER	09-06-01	SNS-03
CHECKED	C. COMBS	09-10-01	ESA-DE
ENGINEERING	R. MEYER	09-10-01	SNS-03
VACUUM	R. MEYER	09-10-01	SNS-03
PHYSICS	M. PLUM	09-10-01	SNS-03
APPROVED	N. BULTMAN	09-10-01	SNS-03

Los Alamos
SNS DIVISION
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

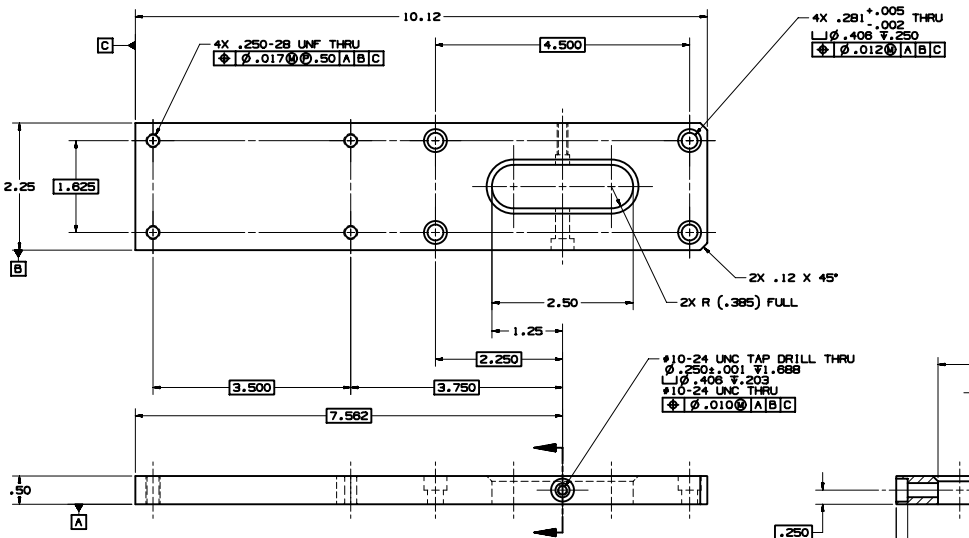
PROJECT: SNS

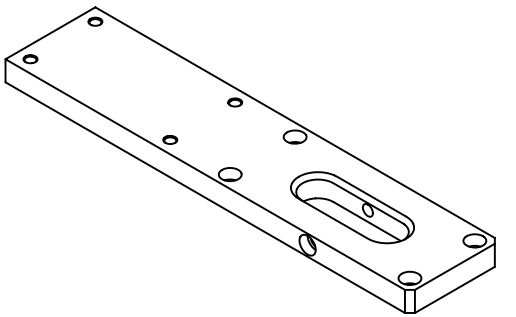
SUPER CONDUCTING LINAC WIRE SCANNER ACTUATOR GUIDE SPACER

SIZE	CAGE CODE	DWG NO. & CAD FILENAME	REV
D	88516	155Y520870	-A

SCALE 2/1 — DO NOT SCALE — SHEET 1 OF 1

REVISIONS						
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
---	A	ORIGINAL ISSUE	-------	--------	NR	---
---	--	----------	-------	--------	NR	---





ISOMETRIC VIEW
SCALE: NONE

NOTES: UNLESS OTHERWISE SPECIFIED

101 ABBREVIATIONS PER ASME Y14.38-1999.

102 THOROUGHLY CLEAN PARTS TO REMOVE ALL OIL, GREASE, DIRT, CHIPS, ETC.

201 DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.

205 ALL THREADS TO BE UNIFIED CLASS 2.

206 C'SINK ALL TAPPED HOLES 100°, TO MAJOR DIA.

208 REMOVE BURRS AND SHARP EDGES TO .010 MAX.

401 BAG AND TAG PART WITH DRAWING NUMBER AND REVISION LETTER.

SNS DWG No. 104050000-18E-8200-A871-R00

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO
1	155Y520871	FORK PIVOT PLATE	6061-T6 ALUM	--

PARTS LIST/BILL OF MATERIAL

DRAWING LEVEL: PRODUCTION

UNCLASSIFIED

TASK CONTRACTOR

CAD SYSTEM & VER.: UNIGRAPHICS V16.0/IMAN

SEE FINAL DESIGN AUTHORIZATION SHEET FOR SIGNATURES; SHEET IS FILED BY DRAWING NUMBER AT THE SNS PROJECT OFFICE.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. TOLERANCES ARE:

DECIMALS .XX ±.1 .XXX ±.01 .XXXX ±.005

ANGULAR: ±.25°

MACHINED FINISH: 125

	APPROVALS	DATE	GROUP
DESIGNED	D. SATTLER	07-25-01	SNS-03
DRAWN	D. SATTLER	09-06-01	SNS-03
CHECKED	C. COMBS	09-10-01	ESA-DE
ENGINEERING	R. MEYER	09-10-01	SNS-03
VACUUM	R. MEYER	09-10-01	SNS-03
PHYSICS	M. PLUM	09-10-01	SNS-03
APPROVED	N. BULTMAN	09-10-01	SNS-03

155Y520850 ---------- NEXT ASSEMBLY USED ON APPLICATION

Los Alamos National Laboratory, Los Alamos, New Mexico 87545
Los Alamos SNS DIVISION

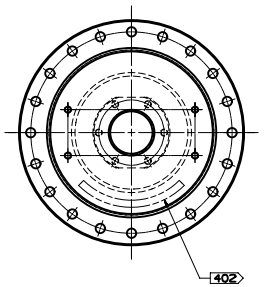
PROJECT: SNS

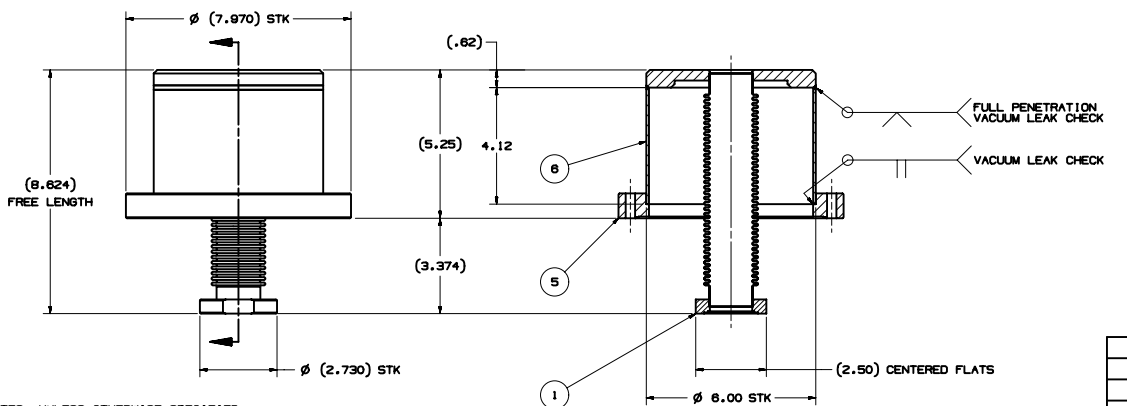
SUPER CONDUCTING LINAC
WIRE SCANNER ACTUATOR
FORK PIVOT PLATE

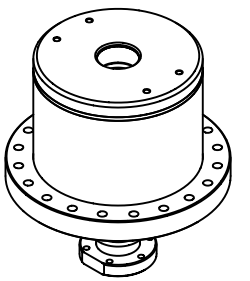
SIZE	CAGE CODE	DWG NO. & CAD FILENAME	REV
D	88516	155Y520871	-A

SCALE: FULL — DO NOT SCALE — SHEET 1 OF 1

REVISIONS						
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
---	A	ORIGINAL ISSUE	-------	--------	NR	---
---	--	----------	-------	--------	NR	---







ISOMETRIC VIEW
SCALE: NONE

NOTES: UNLESS OTHERWISE SPECIFIED:

101 ABBREVIATIONS PER ASME Y14.38-1999.

102 THOROUGHLY CLEAN PARTS TO REMOVE ALL OIL, GREASE, DIRT, CHIPS, ETC.

201 DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.

301 WELDING & BRAZING SYMBOLS PER AWS A2.4-1998.

321 WELD IN ACCORDANCE WITH AWS D1.6-1999.

402 METAL STAMP DRAWING NUMBER & REVISION LETTER APPROXIMATELY WHERE SHOWN, IN 1/4 HIGH CHARACTERS.

901 TAKE NECESSARY PRECATIONS TO PROTECT SEAL SURFACE OF FLANGE DURING WELDING,TESTING & PACKAGING. LEAVE SEAL SURFACE SHARP.

902 ELECTRO-POLISH ENTIRE PART (INSIDE AND OUT). DO NOT ELECTRO-POLISH SEAL SURFACES. MASK ALL SEAL SURFACES AND PLUG ALL TAPPED HOLES PRIOR TO ELECTRO-POLISHING PROCESS. DO NOT SCRATCH OR MAR SURFACES DURING REMOVAL OF MASK MATERIAL.

903 FINAL ASSEMBLY SHALL BE LEAK TIGHT. LEAK RATE TO BE ESTABLISHED WITH A MASS SPECTROMETER TYPE LEAK DETECTOR. THE INSTRUMENT USED SHALL BE IDENTIFIED. CALIBRATION DATA SUPPLIED SHOULD INCLUDE "SENSITIVITY" AND "STANDARD LEAK SIZE" MAXIMUM DETECTABLE LEAKAGE SHALL BE NO GREATER THAN 1.0 X 10-10/ STD. CC/SEC. (HELIUM)

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO
1		ROUND TUBE 6" OD X .12 WALL	304L SST	6
1	110031	CF 8" NOM NON-ROTATABLE FLANGE	MDC DEL-SEAL	5
				4
				3
				2
1	155Y520873	FORMED BELLOWS WELDMENT		1
1	155Y520872	BELLOWS WELDMENT		--

PARTS LIST/BILL OF MATERIAL

DRAWING LEVEL: PRODUCTION

UNCLASSIFIED

TASK CONTRACTOR

CAD SYSTEM & VER.: UNIGRAPHICS V16.0/IMAN

SEE FINAL DESIGN AUTHORIZATION SHEET FOR SIGNATURES;SHEET IS FILED BY DRAWING NUMBER AT THE SNS PROJECT OFFICE.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. TOLERANCES ARE:
DECIMALS .XX ±.1 .XXX ±.01 .XXXX ±.005
ANGULAR: ±.25°
MACHINED: 125

APPROVALS		DATE	GROUP
DESIGNED	D. SATTLER	06-04-01	SNS-03
DRAWN	D. SATTLER	09-08-01	SNS-03
CHECKED	C. COMBS	09-10-01	ESA-DE
ENGINEERING	R. MEYER	09-10-01	SNS-03
VACUUM	R. MEYER	09-10-01	SNS-03
PHYSICS	M. PLUM	09-10-01	SNS-03
APPROVED	N. BULTMAN	09-10-01	SNS-03

155Y520850 ----------
NEXT ASSEMBLY USED ON
APPLICATION

SNS DWG No. 104050000-18E-8200-A872-R00

Los Alamos National Laboratory
Los Alamos, New Mexico 87545
Los Alamos SNS DIVISION

PROJECT: SNS

SUPER CONDUCTING LINAC
WIRE SCANNER ACTUATOR
BELLOWS WELDMENT

SIZE	CAGE CODE	DWG NO. & CAD FILENAME	REV
D	88516	155Y520872	-A

SCALE 1/2 DO NOT SCALE SHEET 1 OF 1

REVISIONS						
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
---	A	ORIGINAL ISSUE	-------	--------	NR	---
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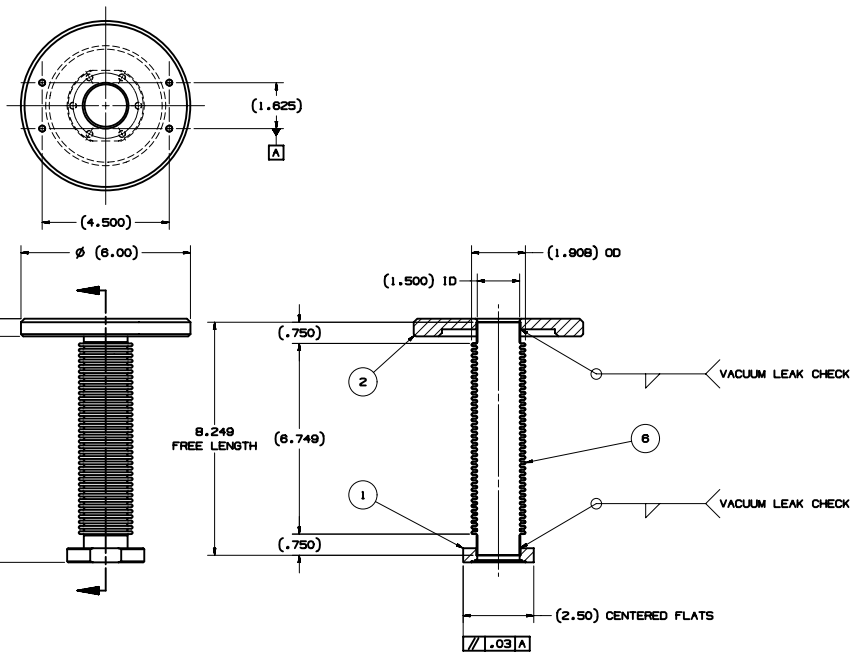
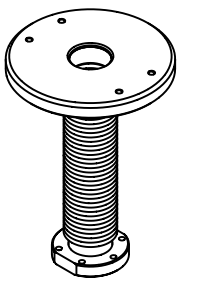




ISOMETRIC VIEW
SCALE: NONE

NOTES: UNLESS OTHERWISE SPECIFIED:

101 ABBREVIATIONS PER ASME Y14.38-1999.

102 THOROUGHLY CLEAN PARTS TO REMOVE ALL OIL, GREASE, DIRT, CHIPS, ETC.

201 DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.

301 WELDING & BRAZING SYMBOLS PER AWS A2.4-1998.

321 WELD IN ACCORDANCE WITH AWS D1.6-1999.

401 BAG AND TAG PART WITH DRAWING NUMBER AND REVISION.

901 PROTECT BELLOWS DURING VACUUM LEAK CHECK AND SHIPMENT.

902 TAKE NECESSARY PRECAUTIONS TO PROTECT SEAL SURFACE OF FLANGE DURING WELDING, TESTING & PACKAGING.

903 FINAL ASSEMBLY SHALL BE LEAK TIGHT. LEAK RATE TO BE ESTABLISHED WITH A MASS SPECTROMETER TYPE LEAK DETECTOR. THE INSTRUMENT USED SHALL BE IDENTIFIED. CALIBRATION DATA SUPPLIED SHOULD INCLUDE "SENSITIVITY" AND "STANDARD LEAK SIZE" MAXIMUM DETECTABLE LEAKAGE SHALL BE NO GREATER THAN 1.0 X 10-10/ STD. CC/SEC. (HELIUM).

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO
1	QUOTE BSE-01-22-C1	FORMED BELLOWS PHONE(805)648-5164	BELLOWS SYSTEMS INC.	6
				5
				4
				3
1	155Y520875	FORMED BELLOWS PLATE		2
1	155Y520874	FORMED BELLOWS FLANGE		1
1	155Y520873	FORMED BELLOWS WELDMENT		--

PARTS LIST/BILL OF MATERIAL

DRAWING LEVEL: PRODUCTION

UNCLASSIFIED

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. TOLERANCES ARE: DECIMALS .X ±.1 .XX ±.01 .XXX ±.005 ANGULAR ±.25° MACHINED 125 FINISH

155Y520872 ---------- NEXT ASSEMBLY USED ON APPLICATION

SNS DWG No. 104050000-18E-8200-A873-R00

TASK CONTRACTOR

CAD SYSTEM & VER. UNIGRAPHICS V16.0/IMAN

SEE FINAL DESIGN AUTHORIZATION SHEET FOR SIGNATURES, SHEET IS FILED BY DRAWING NUMBER AT THE SNS PROJECT OFFICE.

APPROVALS		DATE	GROUP
DESIGNED	D. SATTLER	04-03-01	SNS-03
DRAWN	D. SATTLER	09-08-01	SNS-03
CHECKED	C. COMBS	09-10-01	ESA-DE
ENGINEERING	R. MEYER	09-10-01	SNS-03
VACUUM	R. MEYER	09-10-01	SNS-03
PHYSICS	M. PLUM	09-10-01	SNS-03
APPROVED	N. BULTMAN	09-10-01	SNS-03

Los Alamos National Laboratory
Los Alamos, New Mexico 87545
Los Alamos SNS DIVISION

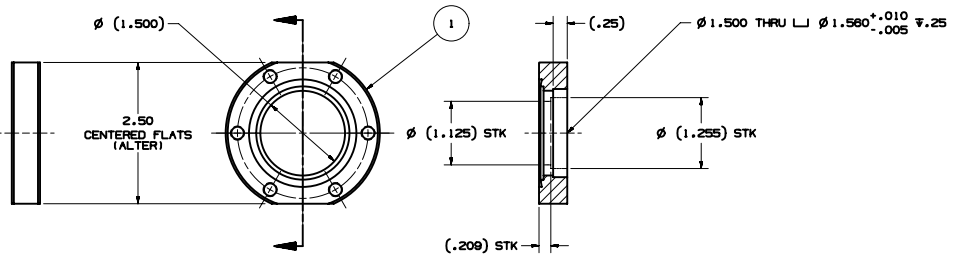
PROJECT: SNS

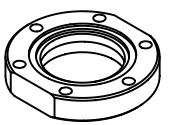
SUPER CONDUCTING LINAC WIRE SCANNER ACTUATOR FORMED BELLOWS WELDMENT

SIZE	CAGE CODE	DWG NO. & CAD FILENAME	REV
D	88516	155Y520873	-A

SCALE: FULL — DO NOT SCALE — SHEET 1 OF 1

REVISIONS						
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
---	A	ORIGINAL ISSUE	-------	--------	NR	---
---	--	----------	-------	--------	NR	---





ISOMETRIC VIEW
SCALE: NONE

ALTERED ITEM DRAWING

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO
1	130013	CF 2 3/4 OD NON-ROTATABLE TAPPED FLANGE	MDC DEL-SEAL	1
1	155Y520874	FORMED BELLOWS FLANGE		--

PARTS LIST/BILL OF MATERIAL

NOTES: UNLESS OTHERWISE SPECIFIED

101 ABBREVIATIONS PER ASME Y14.38-1999.

102 THOROUGHLY CLEAN PARTS TO REMOVE ALL OIL, GREASE, DIRT, CHIPS, ETC.

201 DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.

208 REMOVE BURRS AND SHARP EDGES TO .010 MAX.

401 BAG AND TAG PART WITH DRAWING NUMBER & REVISION LETTER.

901 TAKE NECESSARY PRECAUTIONS TO PROTECT SEAL SURFACE OF FLANGE DURING MACHINING & PACKAGING. LEAVE SEAL SURFACE SHARP

SNS DWG No.
104050000-18E-8200-A874-R00

DRAWING LEVEL: PRODUCTION

UNCLASSIFIED

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. TOLERANCES ARE:
DECIMALS .XX: ±.1 .XXX: ±.01 .XXX: ±.005
ANGULAR: ±.25°
MACHINED FINISH: 125

155Y520873
NEXT ASSEMBLY USED ON
APPLICATION

TASK CONTRACTOR

CAD SYSTEM & VER.: UNIGRAPHICS V16.0/IMAN

SEE FINAL DESIGN AUTHORIZATION SHEET FOR SIGNATURES; SHEET IS FILED BY DRAWING NUMBER AT THE SNS PROJECT OFFICE.

APPROVALS		DATE	GROUP
DESIGNED	D. SATTLER	04-03-01	SNS-03
DRAWN	D. SATTLER	09-06-01	SNS-03
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VACUUM	R. MEYER	09-10-01	SNS-03
PHYSICS	M. PLUM	09-10-01	SNS-03
APPROVED	N. BULTMAN	09-10-01	SNS-03

Los Alamos National Laboratory
Los Alamos, New Mexico 87545
Los Alamos SNS DIVISION

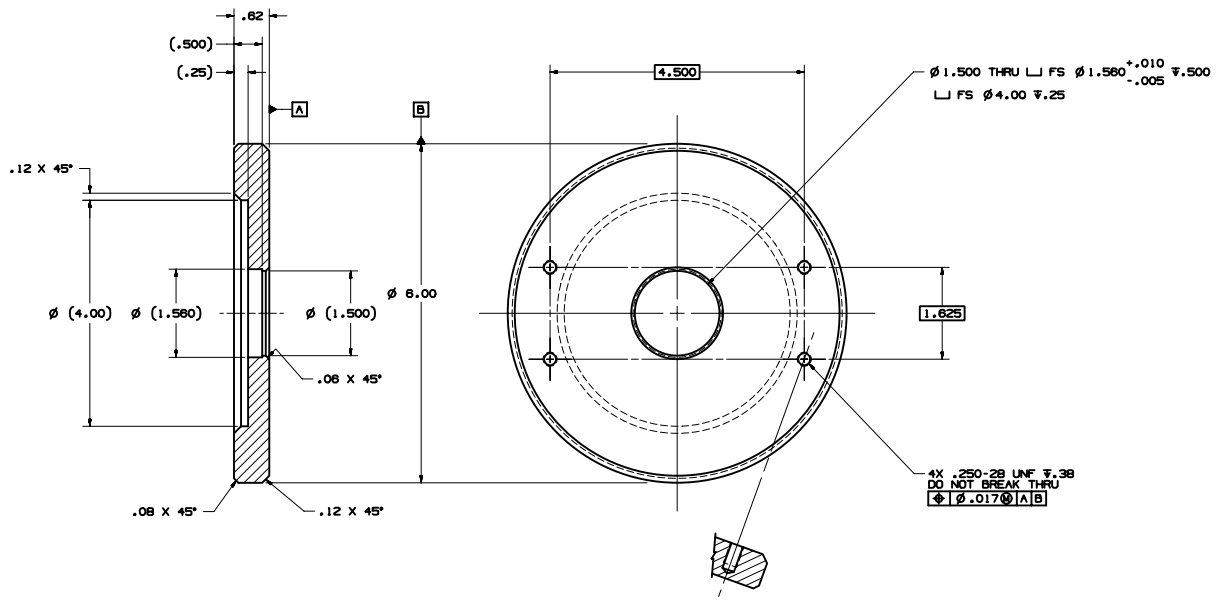
PROJECT: SNS

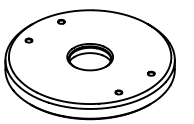
SUPER CONDUCTING LINAC
WIRE SCANNER ACTUATOR
FORMED BELLOWS FLANGE

SIZE	CAGE CODE	DWG NO. & CAD FILENAME	REV
D	88516	155Y520874	-A

SCALE: FULL — DO NOT SCALE — SHEET 1 OF 1

REVISIONS						
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
---	A	ORIGINAL ISSUE	-------	-------	NR	---
---	--	----------	-------	-------	NR	---





ISOMETRIC VIEW
SCALE: NONE

NOTES: UNLESS OTHERWISE SPECIFIED

101 ABBREVIATIONS PER ASME Y14.38-1999.

102 THOROUGHLY CLEAN PARTS TO REMOVE ALL OIL, GREASE, DIRT, CHIPS, ETC.

201 DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.

205 ALL THREADS TO BE UNIFIED CLASS 2.

206 C'SINK ALL TAPPED HOLES 100°, TO MAJOR DIA.

208 REMOVE BURRS AND SHARP EDGES TO .010 MAX.

401 BAG AND TAG PART WITH DRAWING NUMBER AND REVISION LETTER.

SNS DWG No.
104050000-18E-8200-A875-R00

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO
1	155Y520875	FORMED BELLOWS PLATE	304L SST	--

PARTS LIST/BILL OF MATERIAL

DRAWING LEVEL: PRODUCTION

UNCLASSIFIED

TASK CONTRACTOR

CAD SYSTEM & VER.: UNIGRAPHICS V16.0/IMAN

SEE FINAL DESIGN AUTHORIZATION SHEET FOR SIGNATURES; SHEET IS FILED BY DRAWING NUMBER AT THE SNS PROJECT OFFICE.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. TOLERANCES ARE:
DECIMALS .XX: ±.1 .XXX: ±.01 .XXXX: ±.005
ANGULAR: ±.25°
MACHINED FINISH: 125

APPROVALS		DATE	GROUP
DESIGNED	D. SATTLER	04-03-01	SNS-03
DRAWN	D. SATTLER	09-06-01	SNS-03
CHECKED	C. COMBS	09-10-01	ESA-DE
ENGINEERING	R. MEYER	09-10-01	SNS-03
VACUUM	R. MEYER	09-10-01	SNS-03
PHYSICS	M. PLUM	09-10-01	SNS-03
APPROVED	N. BULTMAN	09-10-01	SNS-03

155Y520873 ----------
NEXT ASSEMBLY USED ON
APPLICATION

Los Alamos National Laboratory
Los Alamos, New Mexico 87545
Los Alamos SNS DIVISION

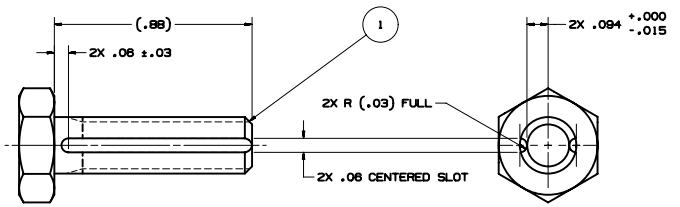
PROJECT: SNS

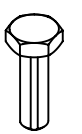
SUPER CONDUCTING LINAC
WIRE SCANNER ACTUATOR
FORMED BELLOWS PLATE

SIZE	CAGE CODE	DWG NO. & CAD FILENAME	REV
D	88516	155Y520875	-A

SCALE: 1/2 DO NOT SCALE SHEET 1 OF 1

REVISIONS						
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
---	A	ORIGINAL ISSUE	-------	--------	NR	---
---	--	----------	-------	--------	NR	---





ISOMETRIC VIEW
SCALE: NONE

ALTERED ITEM DRAWING

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO
1		HEX HD CAP SCR 1/4-28 UNF X 7/8 LG	SST	1
6	155Y520876	VENTED BOLT		--

PARTS LIST/BILL OF MATERIAL

NOTES: UNLESS OTHERWISE SPECIFIED

101 ABBREVIATIONS PER ASME Y14.38-1999.

102 THOROUGHLY CLEAN PARTS TO REMOVE ALL OIL, GREASE, DIRT, CHIPS, ETC.

201 DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.

205 ALL THREADS TO BE UNIFIED CLASS 2.

208 REMOVE BURRS AND SHARP EDGES TO .010 MAX.

401 BAG AND TAG PART WITH DRAWING NUMBER & REVISION LETTER.

SNS DWG No. 104050000-18E-8200-A876-R00

DRAWING LEVEL: PRODUCTION

UNCLASSIFIED

TASK CONTRACTOR

CAD SYSTEM & VER.: UNIGRAPHICS V16.0/IMAN

SEE FINAL DESIGN AUTHORIZATION SHEET FOR SIGNATURES; SHEET IS FILED BY DRAWING NUMBER AT THE SNS PROJECT OFFICE.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. TOLERANCES ARE:
DECIMALS .XX: ±.1 .XXX: ±.01 .XXXX: ±.005
ANGULAR: ±.25°
MACHINED FINISH: 125

APPROVALS		DATE	GROUP
DESIGNED	D. SATTLER	04-03-01	SNS-03
DRAWN	D. SATTLER	09-08-01	SNS-03
CHECKED	C. COMBS	09-10-01	ESA-DE
ENGINEERING	R. MEYER	09-10-01	SNS-03
VACUUM	R. MEYER	09-10-01	SNS-03
PHYSICS	M. PLUM	09-10-01	SNS-03
APPROVED	N. BULTMAN	09-10-01	SNS-03

155Y520850 ---------- NEXT ASSEMBLY USED ON APPLICATION

Los Alamos National Laboratory
Los Alamos, New Mexico 87545
Los Alamos SNS DIVISION

PROJECT: SNS

SUPER CONDUCTING LINAC
WIRE SCANNER ACTUATOR
VENTED BOLT

SIZE	CAGE CODE	DWG NO. & CAD FILENAME	REV
D	88516	155Y520876	-A

SCALE 4/1 DO NOT SCALE SHEET 1 OF 1

REVISIONS						
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
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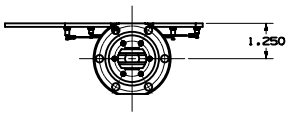

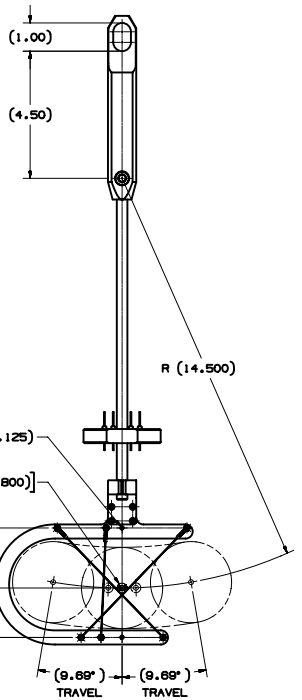

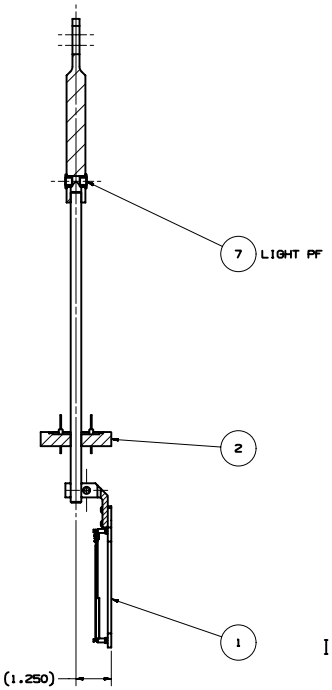

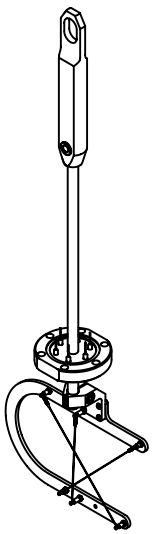

ISOMETRIC VIEW
SCALE: NONE

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO
2	A78-SF081202	OILITE BRONZE BUSHING	STERLING INSTRUMENT	6
				5
				4
				3
1	155Y520882	PIVOT ROD WELDMENT		2
1	155Y520878	SCANNER FORK ASSEMBLY		1
1	155Y520877	FORK PIVOT ASSEMBLY		--

PARTS LIST/BILL OF MATERIAL

NOTES: UNLESS OTHERWISE SPECIFIED

101 ABBREVIATIONS PER ASME Y14.38-1999.

102 THOROUGHLY CLEAN PARTS TO REMOVE ALL OIL, GREASE, DIRT, CHIPS, ETC.

201 DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.

401 BAG AND TAG PART WITH DRAWING NUMBER & REVISION LETTER.

901 TAKE NECESSARY PRECAUTIONS TO PROTECT SEAL SURFACE OF FLANGE DURING PACKAGING.

SNS DWG No.
104050000-18E-8200-A877-R00

DRAWING LEVEL: PRODUCTION

UNCLASSIFIED

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. TOLERANCES ARE:
DECIMALS .XX ±.1 .XXX ±.01 .XXXX ±.005
ANGULAR: ±.25°
MACHINED: 125 FINISH

155Y520850
NEXT ASSEMBLY USED ON
APPLICATION

TASK CONTRACTOR

CAD SYSTEM & VER.: UNIGRAPHICS V16.0/IMAN

SEE FINAL DESIGN AUTHORIZATION SHEET FOR SIGNATURES. SHEET IS FILED BY DRAWING NUMBER AT THE SNS PROJECT OFFICE.

APPROVALS		DATE	GROUP
DESIGNED	D. SATTLER	04-03-01	SNS-03
DRAWN	D. SATTLER	09-06-01	SNS-03
CHECKED	C. COMBS	09-10-01	ESA-DE
ENGINEERING	R. MEYER	09-10-01	SNS-03
VACUUM	R. MEYER	09-10-01	SNS-03
PHYSICS	M. PLUM	09-10-01	SNS-03
APPROVED	N. BULTMAN	09-10-01	SNS-03

Los Alamos National Laboratory
Los Alamos, New Mexico 87545
Los Alamos SNS DIVISION

PROJECT: SNS

SUPER CONDUCTING LINAC WIRE SCANNER ACTUATOR FORK PIVOT ASSEMBLY

SIZE: D | CAGE CODE: 88516 | DWG NO. & CAD FILENAME: 155Y520877 | REV: -A

SCALE: 1/2 | DO NOT SCALE | SHEET 1 OF 1

REVISIONS						
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
---	A	ORIGINAL ISSUE	-------	--------	NR	---
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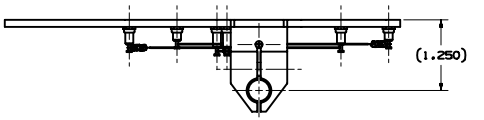

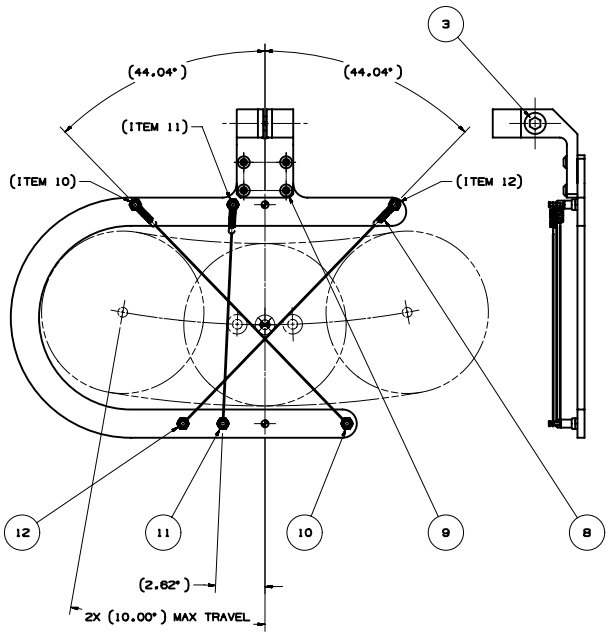

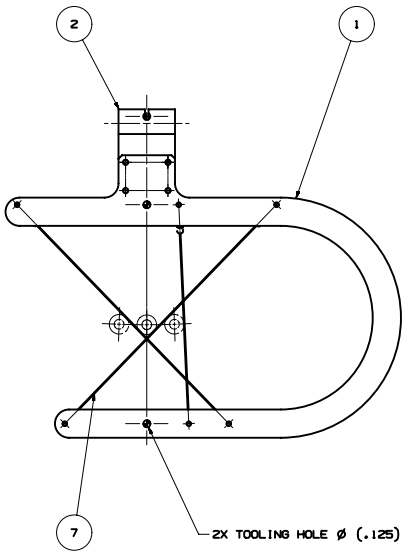

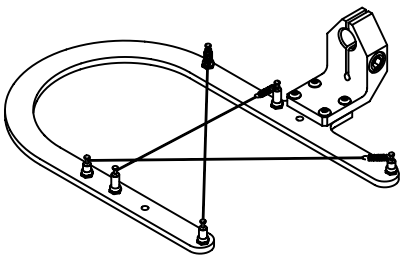

ISOMETRIC VIEW
SCALE: NONE

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO
2	570-1980-02	SOLDER TERMINAL PHONE(732)358-4555	CAMBION	12
2	570-1982-02	SOLDER TERMINAL PHONE(732)358-4555	CAMBION	11
2	570-1983-02	SOLDER TERMINAL PHONE(732)358-4555	CAMBION	10
4		BUT HD CAP SCR #4-40 UNC X 5/16 LG	SST	9
3	LE-018A-002-SS	SST SPRING PHONE(800)426-0271	LEE SPRING CO	8
A/R	FURNISHED BY LANL	WIRE INSTALLED BY LANL	GOLD-PLATED TUNGSTON	7
				6
				5
				4
1	155Y520881	VENTED SCREW		3
1	155Y520880	FORK ATTACH BRACKET		2
1	155Y520879	SCANNER FORK		1
1	155Y520878	SCANNER FORK ASSEMBLY		--

PARTS LIST/BILL OF MATERIAL

NOTES: UNLESS OTHERWISE SPECIFIED

101 ABBREVIATIONS PER ASME Y14.38-1999.

102 THOROUGHLY CLEAN PARTS TO REMOVE ALL OIL, GREASE, DIRT, CHIPS, ETC.

201 DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.

401 BAG AND TAG PART WITH DRAWING NUMBER & REVISION LETTER.

SNS DWG No. 104050000-18E-8200-A878-R00

DRAWING LEVEL: PRODUCTION

UNCLASSIFIED

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. TOLERANCES ARE: DECIMALS .XX ±.1 .XXX ±.01 .XXXX ±.005 ANGULAR: ±.25° MACHINED FINISH: 125

155Y520877 ---------- NEXT ASSEMBLY USED ON

APPLICATION

TASK CONTRACTOR

CAD SYSTEM & VER.: UNIGRAPHICS V16.0/IMAN

SEE FINAL DESIGN AUTHORIZATION SHEET FOR SIGNATURES; SHEET IS FILED BY DRAWING NUMBER AT THE SNS PROJECT OFFICE.

APPROVALS		DATE	GROUP
DESIGNED	D. SATTLER	04-03-01	SNS-03
DRAWN	D. SATTLER	09-06-01	SNS-03
CHECKED	C. COMBS	09-10-01	ESA-DE
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PHYSICS	M. PLUM	09-10-01	SNS-03
APPROVED	N. BULTMAN	09-10-01	SNS-03

Los Alamos National Laboratory
Los Alamos, New Mexico 87545
Los Alamos SNS DIVISION

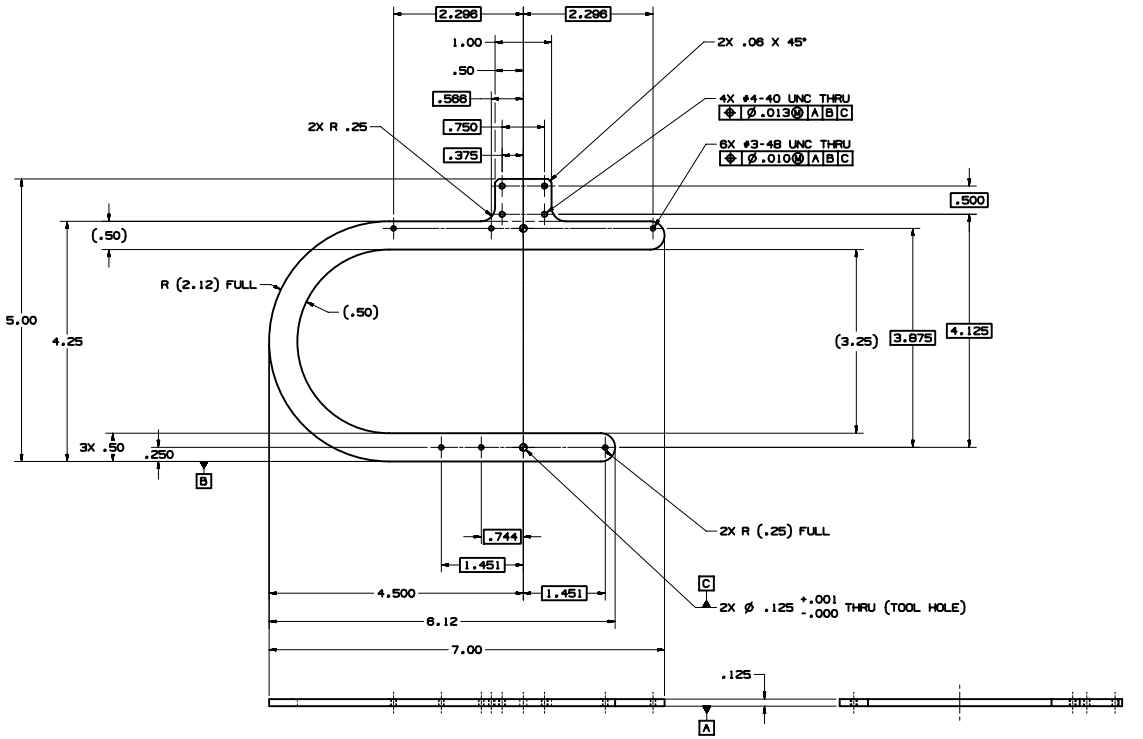
PROJECT: SNS

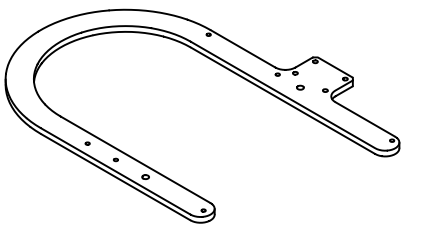
SUPER CONDUCTING LINAC WIRE SCANNER ACTUATOR SCANNER FORK ASSEMBLY

SIZE: D | CAGE CODE: 88516 | DWG NO. & CAD FILENAME: 155Y520878 | REV: -A

SCALE: FULL | DO NOT SCALE | SHEET 1 OF 1

REVISIONS						
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
---	A	ORIGINAL ISSUE	-------	--------	NR	---
---	--	----------	-------	--------	NR	---





ISOMETRIC VIEW
SCALE: NONE

NOTES: UNLESS OTHERWISE SPECIFIED

101 ABBREVIATIONS PER ASME Y14.38-1999.

102 THOROUGHLY CLEAN PARTS TO REMOVE ALL OIL, GREASE, DIRT, CHIPS, ETC.

201 DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.

205 ALL THREADS TO BE UNIFIED CLASS 2.

206 C'SINK ALL TAPPED HOLES 100°, TO MAJOR DIA.

208 REMOVE BURRS AND SHARP EDGES TO .010 MAX.

401 BAG AND TAG PART WITH DRAWING NUMBER & REVISION LETTER.

SNS DWG No.
104050000-18E-8200-A879-R00

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO
1	155Y520879	SCANNER FORK	6061-T6 AL	--

PARTS LIST/BILL OF MATERIAL

DRAWING LEVEL: PRODUCTION

UNCLASSIFIED

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. TOLERANCES ARE:
DECIMALS .XX: ±.1 .XXX: ±.01 .XXXX: ±.005
ANGULAR: ±.25°
MACHINED FINISH: 125

155Y520878 ---------- NEXT ASSEMBLY USED ON APPLICATION

TASK CONTRACTOR

CAD SYSTEM & VER.: UNIGRAPHICS V16.0/IMAN

SEE FINAL DESIGN AUTHORIZATION SHEET FOR SIGNATURES; SHEET IS FILED BY DRAWING NUMBER AT THE SNS PROJECT OFFICE.

APPROVALS		DATE	GROUP
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ENGINEERING	R. MEYER	09-10-01	SNS-03
VACUUM	R. MEYER	09-10-01	SNS-03
PHYSICS	M. PLUM	09-10-01	SNS-03
APPROVED	N. BULTMAN	09-10-01	SNS-03

Los Alamos National Laboratory
Los Alamos, New Mexico 87545
Los Alamos SNS DIVISION

PROJECT: SNS

SUPER CONDUCTING LINAC WIRE SCANNER ACTUATOR SCANNER FORK

SIZE	CAGE CODE	DWG NO. & CAD FILENAME	REV
D	88516	155Y520879	-A

SCALE: FULL — DO NOT SCALE — SHEET 1 OF 1

REVISIONS						
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
---	A	ORIGINAL ISSUE	-------	--------	NR	---
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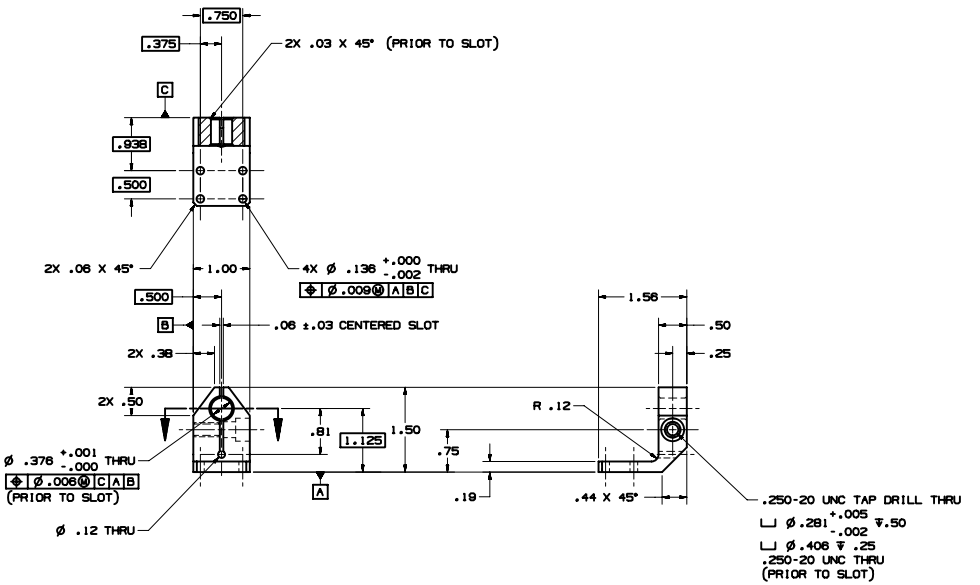
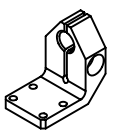




ISOMETRIC VIEW
SCALE: NONE

NOTES: UNLESS OTHERWISE SPECIFIED

101 ABBREVIATIONS PER ASME Y14.38-1999.

102 THOROUGHLY CLEAN PARTS TO REMOVE ALL OIL, GREASE, DIRT, CHIPS, ETC.

201 DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.

205 ALL THREADS TO BE UNIFIED CLASS 2.

206 C'SINK ALL TAPPED HOLES 100°, TO MAJOR DIA.

208 REMOVE BURRS AND SHARP EDGES TO .010 MAX.

401 BAG AND TAG PART WITH DRAWING NUMBER & REVISION LETTER.

SNS DWG No.
104050000-18E-8200-A880-R00

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO
1	155Y520880	FORK ATTACH BRACKET	6061-T6 AL	--

PARTS LIST/BILL OF MATERIAL

DRAWING LEVEL: PRODUCTION

UNCLASSIFIED

TASK CONTRACTOR

CAD SYSTEM & VER.: UNIGRAPHICS V16.0/IMAN

SEE FINAL DESIGN AUTHORIZATION SHEET FOR SIGNATURES; SHEET IS FILED BY DRAWING NUMBER AT THE SNS PROJECT OFFICE.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. TOLERANCES ARE:
DECIMALS .XX± ±.1 .XXX± ±.01 .XXXX± ±.005
ANGULAR: ±.25°
MACHINED FINISH: 125

APPROVALS		DATE	GROUP
DESIGNED	D. SATTLER	04-03-01	SNS-03
DRAWN	D. SATTLER	09-06-01	SNS-03
CHECKED	C. COMBS	09-10-01	ESA-DE
ENGINEERING	R. MEYER	09-10-01	SNS-03
VACUUM	R. MEYER	09-10-01	SNS-03
PHYSICS	M. PLUM	09-10-01	SNS-03
APPROVED	N. BULTMAN	09-10-01	SNS-03

155Y520878 ----------
NEXT ASSEMBLY USED ON
APPLICATION

Los Alamos National Laboratory
Los Alamos, New Mexico 87545
Los Alamos SNS DIVISION

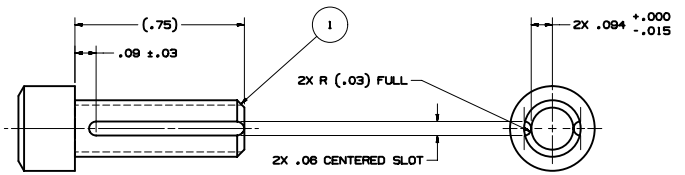
PROJECT: SNS

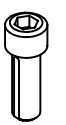
SUPER CONDUCTING LINAC
WIRE SCANNER ACTUATOR
FORK ATTACH BRACKET

SIZE	CAGE CODE	DWG NO. & CAD FILENAME	REV
D	88516	155Y520880	-A

SCALE: FULL — DO NOT SCALE — SHEET 1 OF 1

REVISIONS						
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
---	A	ORIGINAL ISSUE	-------	--------	NR	---
---	--	----------	-------	--------	NR	---





ISOMETRIC VIEW
SCALE: NONE

ALTERED ITEM DRAWING

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO
1		SOC HD CAP SCR 1/4-20 UNC X 3/4 LG	SST	1
1	155Y520881	VENTED SCREW		

PARTS LIST/BILL OF MATERIAL

NOTES: UNLESS OTHERWISE SPECIFIED

101 ABBREVIATIONS PER ASME Y14.38-1999.

102 THOROUGHLY CLEAN PARTS TO REMOVE ALL OIL, GREASE, DIRT, CHIPS, ETC.

201 DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.

205 ALL THREADS TO BE UNIFIED CLASS 2.

208 REMOVE BURRS AND SHARP EDGES TO .010 MAX.

401 BAG AND TAG PART WITH DRAWING NUMBER & REVISION LETTER.

SNS DWG No. 104050000-18E-8200-A881-R00

DRAWING LEVEL: PRODUCTION

UNCLASSIFIED

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. TOLERANCES ARE: DECIMALS .XX: ±.1 .XXX: ±.01 .XXXX: ±.005 ANGULAR: ±.25° MACHINED: 125 FINISH

155Y520878 ---------- NEXT ASSEMBLY USED ON APPLICATION

TASK CONTRACTOR

CAD SYSTEM & VER.: UNIGRAPHICS V16.0/IMAN

SEE FINAL DESIGN AUTHORIZATION SHEET FOR SIGNATURES; SHEET IS FILED BY DRAWING NUMBER AT THE SNS PROJECT OFFICE.

APPROVALS		DATE	GROUP
DESIGNED	D. SATTLER	04-03-01	SNS-03
DRAWN	D. SATTLER	09-08-01	SNS-03
CHECKED	C. COMBS	09-10-01	ESA-DE
ENGINEERING	R. MEYER	09-10-01	SNS-03
VACUUM	R. MEYER	09-10-01	SNS-03
PHYSICS	M. PLUM	09-10-01	SNS-03
APPROVED	N. BULTMAN	09-10-01	SNS-03

Los Alamos SNS DIVISION
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

PROJECT: SNS

SUPER CONDUCTING LINAC WIRE SCANNER ACTUATOR VENTED SCREW

SIZE	CAGE CODE	DWG NO. & CAD FILENAME	REV
D	88516	155Y520881	-A

SCALE 4/1 DO NOT SCALE SHEET 1 OF 1

REVISIONS						
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
---	A	ORIGINAL ISSUE	-------	--------	NR	---
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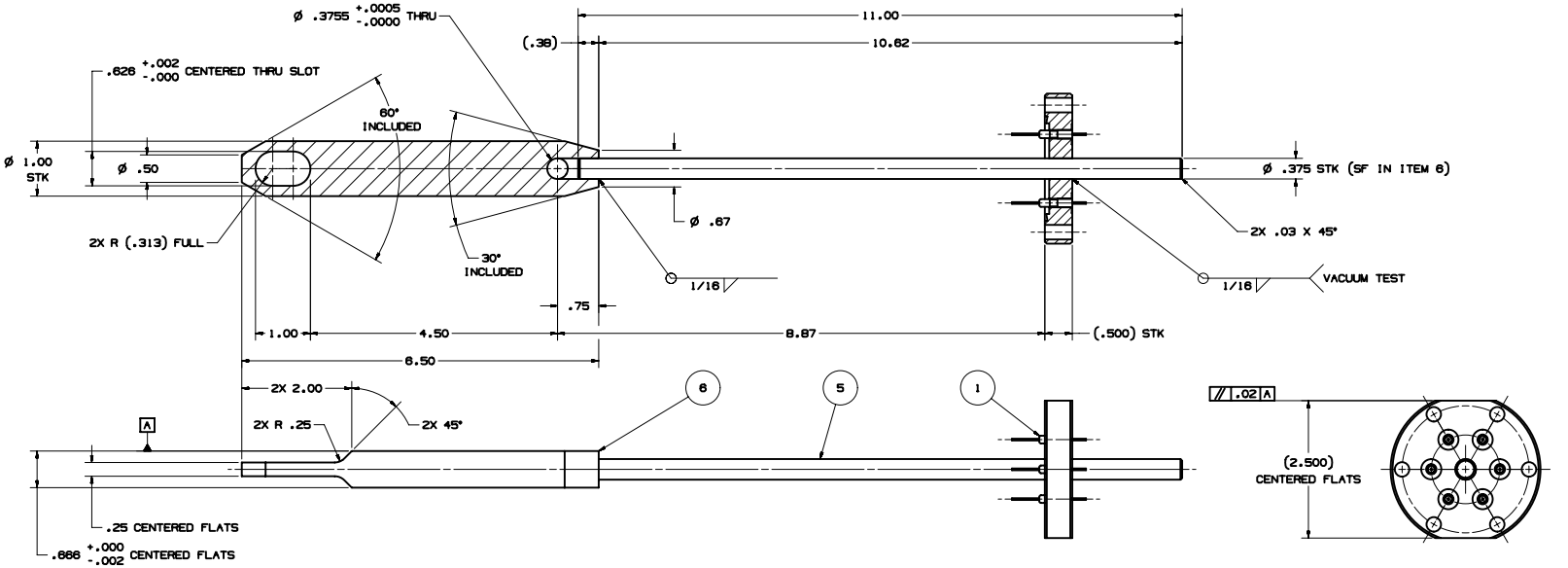
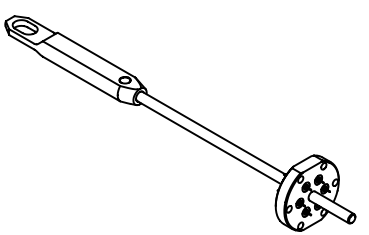




ISOMETRIC VIEW
SCALE: NONE

NOTES: UNLESS OTHERWISE SPECIFIED:

101 ABBREVIATIONS PER ASME Y14.38-1999.

102 THOROUGHLY CLEAN PARTS TO REMOVE ALL OIL, GREASE, DIRT, CHIPS, ETC.

201 DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.

208 REMOVE BURRS AND SHARP EDGES TO .010 MAX.

301 WELDING & BRAZING SYMBOLS PER AWS A2.4-1998.

321 WELD IN ACCORDANCE WITH AWS D1.6-1999.

401 BAG AND TAG PART WITH DRAWING NUMBER & REVISION LETTER.

901 FINAL ASSEMBLY SHALL BE LEAK TIGHT. LEAK RATE TO BE ESTABLISHED WITH A MASS SPECTROMETER TYPE LEAK DETECTOR. THE INSTRUMENT USED SHALL BE IDENTIFIED. CALIBRATION DATA SUPPLIED SHOULD INCLUDE "SENSITIVITY" AND "STANDARD LEAK SIZE" MAXIMUM DETECTABLE LEAKAGE SHALL BE NO GREATER THAN 1.0 X 10-10/ STD. CC/SEC. (HELIUM)

902 TAKE NECESSARY PRECAUTIONS TO PROTECT SEAL SURFACE OF FLANGE DURING WELDING,TESTING & PACKAGING. LEAVE SEAL SURFACE SHARP.

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO
1		BODY	304L SST	6
1		SHAFT	304L SST	5
				4
				3
				2
1	155Y520883	FEEDTHRU FLANGE		1
1	155Y520882	PIVOT ROD WELDMENT		--

PARTS LIST/BILL OF MATERIAL

DRAWING LEVEL: PRODUCTION

UNCLASSIFIED

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. TOLERANCES ARE:
DECIMALS .XX ±.1 .XXX ±.01 .XXXX ±.005
ANGULAR: ±.25°
MACHINED FINISH: 125

155Y520877
NEXT ASSEMBLY USED ON

SNS DWG No. 104050000-18E-8200-A882-R00
APPLICATION

TASK CONTRACTOR

CAD SYSTEM & VER.: UNIGRAPHICS V16.0/IMAN

SEE FINAL DESIGN AUTHORIZATION SHEET FOR SIGNATURES; SHEET IS FILED BY DRAWING NUMBER AT THE SNS PROJECT OFFICE.

APPROVALS		DATE	GROUP
DESIGNED	D. SATTLER	04-03-01	SNS-03
DRAWN	D. SATTLER	09-08-01	SNS-03
CHECKED	C. COMBS	09-10-01	ESA-DE
ENGINEERING	R. MEYER	09-10-01	SNS-03
VACUUM	R. MEYER	09-10-01	SNS-03
PHYSICS	M. PLUM	09-10-01	SNS-03
APPROVED	N. BULTMAN	09-10-01	SNS-03

Los Alamos National Laboratory
Los Alamos, New Mexico 87545
Los Alamos SNS DIVISION

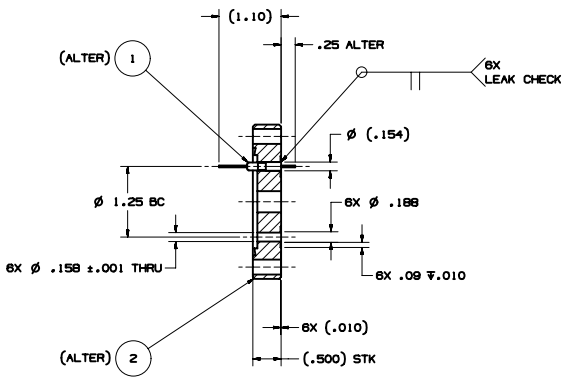
PROJECT: SNS

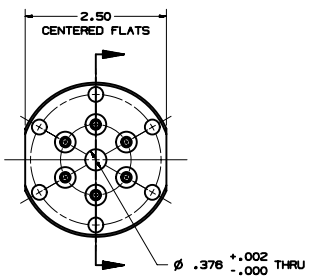
SUPER CONDUCTING LINAC WIRE SCANNER ACTUATOR PIVOT ROD WELDMENT

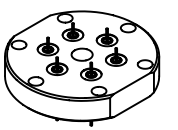
SIZE	CAGE CODE	DWG NO. & CAD FILENAME	REV
D	88516	155Y520882	-A

SCALE: FULL — DO NOT SCALE — SHEET 1 OF 1

REVISIONS						
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
---	A	ORIGINAL ISSUE	-------	--------	NR	---
---	--	----------	-------	--------	NR	---







ISOMETRIC VIEW
SCALE: NONE

ALTERED ITEM DRAWING

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO
1	110008	CF 2 3/4 NON-ROTATABLE BLANK FLANGE	MDC DEL-SEAL (ALTER)	2
6	9411003	500 VOLT POWER FEEDTHRU (ALTER)	ISI PH(800)548-9509	1
1	155Y520883	FEEDTHRU FLANGE		--

PARTS LIST/BILL OF MATERIAL

NOTES: UNLESS OTHERWISE SPECIFIED:

101 ABBREVIATIONS PER ASME Y14.38-1999.

102 THOROUGHLY CLEAN PARTS TO REMOVE ALL OIL, GREASE, DIRT, CHIPS, ETC.

201 DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.

208 REMOVE BURRS AND SHARP EDGES TO .010 MAX.

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311 WELD IN ACCORDANCE WITH AWS D1.6-1999.

401 BAG AND TAG PART WITH DRAWING NUMBER & REVISION LETTER.

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DRAWING LEVEL: PRODUCTION

UNCLASSIFIED

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ANGULAR: ±.25°
MACHINED FINISH: 125

155Y520882 ----------
NEXT ASSEMBLY USED ON
APPLICATION

SNS DWG No. 104050000-18E-8200-A883-R00

TASK CONTRACTOR

CAD SYSTEM & VER. UNIGRAPHICS V16.0/IMAN

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PHYSICS	M. PLUM	09-10-01	SNS-03
APPROVED	N. BULTMAN	09-10-01	SNS-03

Los Alamos National Laboratory
Los Alamos, New Mexico 87545
Los Alamos SNS DIVISION

PROJECT: SNS

SUPER CONDUCTING LINAC
WIRE SCANNER ACTUATOR
FEEDTHRU FLANGE

SIZE	CAGE CODE	DWG NO. & CAD FILENAME	REV
D	88516	155Y520883	-A

SCALE: FULL — DO NOT SCALE — SHEET 1 OF 1