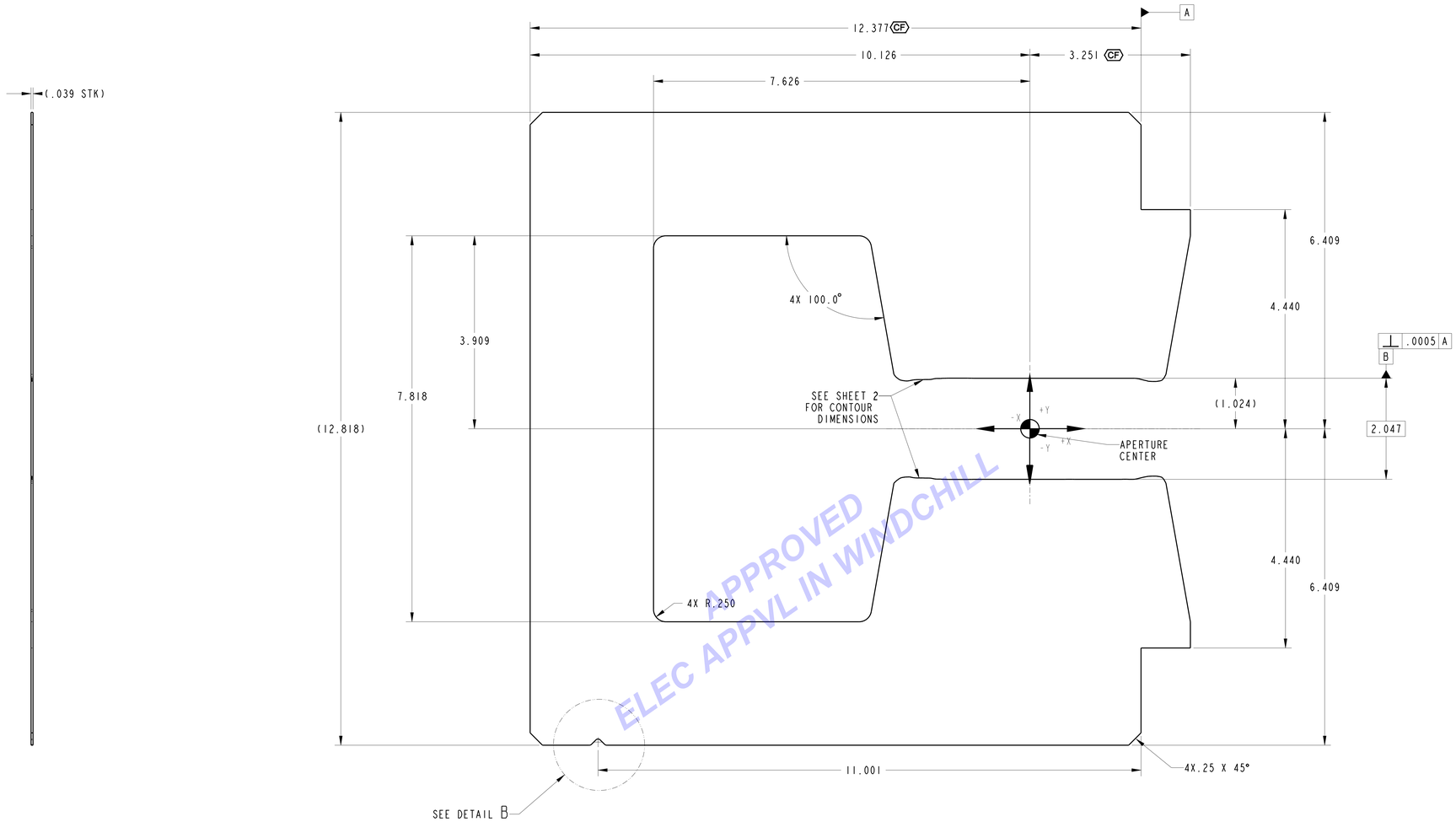
NOTES:

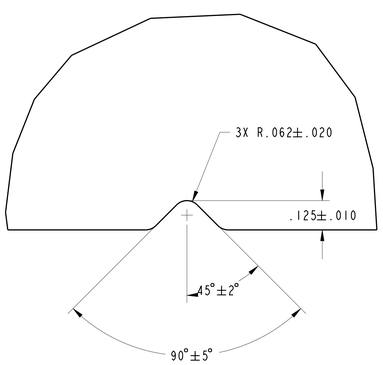
1. MATERIAL: .039 THICK MAGNET STEEL PER EIC-MSG-SOW-017 AND EIC-MSG-SPC-008.
2. BAG OR TAG PART WITH DRAWING NUMBER IN ACCORDANCE WITH MIL-STD-130.
3. MAX BURR .002 MAX TYP ALL EDGES, EXCLUDING POLE TIP REGION
4. ALL DIMENSIONS REFER TO SHEARED EDGE, PUNCH SIDE.
5. FLATNESS: AFTER PUNCHING LAMINATION SHALL HAVE NO KINKS OR CREASES. WHEN PLACED ON A SURFACE PLATE, MAX. BOW SHALL NOT EXCEED .031"
6. POINTS IN TABLE ARE BASIC DIMENSIONS.
7. FEATURES TO AID IN CORE ASSEMBLY (I.E. HOLES, WELD NOTCHES, ETC) MAY BE ADDED BY THE VENDOR WITH PRIOR REVIEW AND APPROVAL BY BNL TECHNICAL REPRESENTATIVE.

REVISION APPROVALS

REV	ECN NO.	DESCRIPTION	DATE	BY	CHK	DES	ENG	SUPV
A	-	INITIAL RELEASE	-	-	-	-	-	-
B	-	REVISED AND REDRAWN	11/22/24	DP	SR	RL	RL	GM
C	EIC0282	REVISED PER ECN	1/2025	DP	SR	RL	RL	GM
D	EIC0321	REVISED PER ECN	1/2025	DP	SN	RL	RL	GM



ELEC APPVL IN WINDCHILL
APPROVED



DETAIL B
SCALE 4/1

THIS INFORMATION IS CONTROLLED BY THE U.S. DEPARTMENT OF COMMERCE EXPORT CONTROL ADMINISTRATION REGULATIONS 15 CFR PARTS 730-774 AS EAR99 TECHNOLOGY

B	D	REV	REVISION STATUS OF SHEETS
2	1	SHEET	

2104M0000	2726
USED ON DRAWING NO.	QTY. PER ASS'Y.
APPLICATION	

INTERPRET IN GENERAL ACCORDANCE WITH ASME Y14.5 2009

UNLESS OTHERWISE SPECIFIED

DIMENSIONS ARE IN INCHES
DECIMAL TOLERANCES
.X ± .030
.XX ± .010
.XXX ± .005
ANGULAR TOLERANCE ±1°

125 FINISH — BREAK SHARP EDGES MAX. .03 MIN. .015

EIC

DRAWN BY	D. PULEO	11/21/24
CHECKED BY	S. RESTMEYER	11/22/24
DESIGN APPROVAL	R. LYNCH	11/22/24
ENG / SCI APPROVAL	R. LOVELACE	11/22/24
SUPERVISOR APPROVAL	G. MAHLER	11/22/24
CEE / CME DIVISION HEAD	J. TUOZZOLO	11/22/24
Q.A.		
SAFETY / RSC DEPARTMENT CHAIR		

ELECTRON-ION COLLIDER
BROOKHAVEN NATIONAL LABORATORY
UPTON, N.Y. 11973

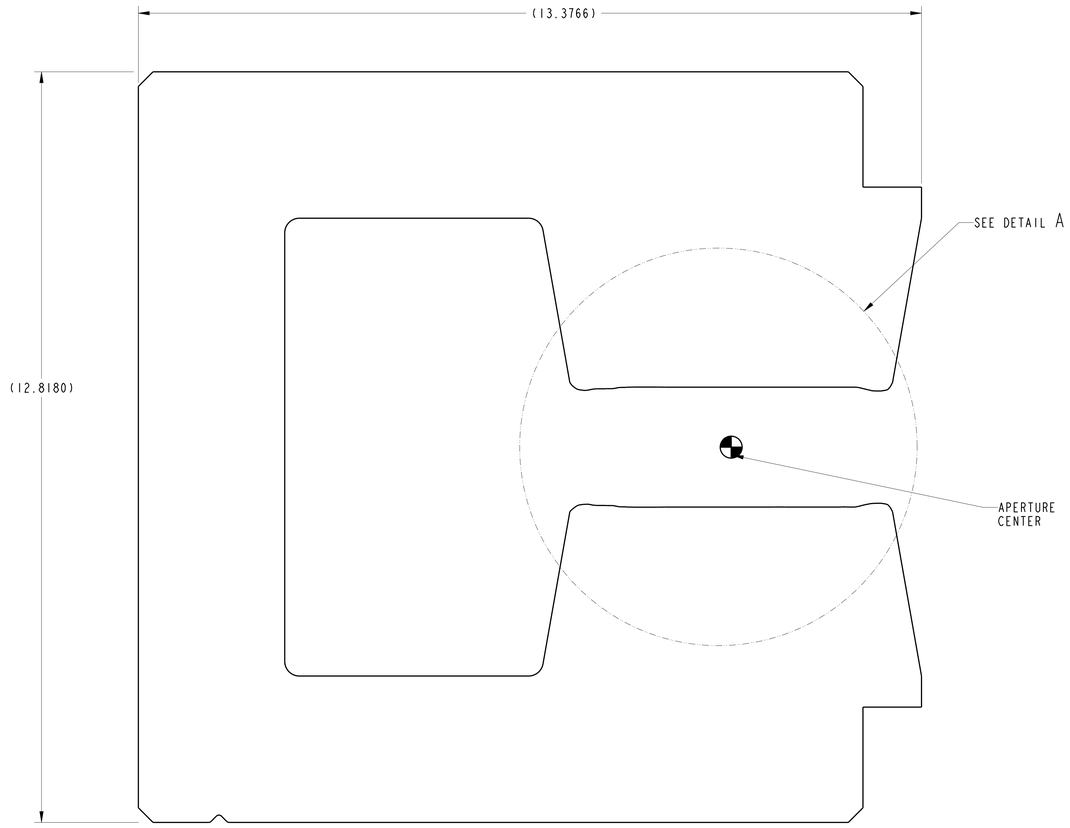
ELECTRON ION COLLIDER
D1/D3 DIPOLE MAGNET
D1/D3 MAGNET LAMINATION

SIZE	DRAWING NUMBER:	REV.
E	2104M0016	D

Q.A. CATEGORY A3 | SCALE: 1/1 | WEIGHT: | SHEET 1 OF 2

SHT 1 OF 2 | REV D | DWG NO 2104M0016

CREO



ALL DIMENSIONS IN TABLE ARE BASIC

"S" POINT
"Q" POINT

	Hole Chart
X	Y
-3.1496	-3.1496
-3.1496	3.1496
-2.7559	-1.1024
-2.7559	1.1024
-2.7165	-1.0630
-2.7165	1.0512
-2.6772	-1.0315
-2.6772	1.0197
-2.6378	-1.0039
-2.6378	0.9921
-2.5984	-0.9882
-2.5984	0.9803
-2.5591	-0.9823
-2.5591	0.9744
-2.5197	-0.9772
-2.5197	0.9693
-2.4803	-0.9764
-2.4803	0.9685
-2.4409	-0.9744
-2.4409	0.9744
-2.4016	-0.9823
-2.4016	0.9823
-2.3622	-0.9902
-2.3622	0.9902
-2.3228	-0.9941
-2.3228	0.9941
-2.2835	-0.9961
-2.2835	0.9961
-2.2441	-0.9961
-2.2441	0.9961
-2.2047	-0.9961
-2.2047	0.9961
-2.1654	-0.9961
-2.1654	0.9961
-2.1260	-0.9980
-2.1260	0.9980
-2.0866	-0.9980
-2.0866	0.9980
-2.0472	-0.9980
-2.0472	0.9980
-2.0079	-1.0000
-2.0079	1.0000
-1.9685	-1.0079
-1.9685	1.0079
-1.9291	-1.0157
-1.9291	1.0157
-1.8898	-1.0197
-1.8898	1.0197
-1.8504	-1.0197
-1.8504	1.0197

	Hole Chart
X	Y
-1.8110	-1.0197
-1.8110	1.0197
-1.7717	-1.0236
-1.7717	1.0236
-1.7323	-1.0236
-1.7323	1.0236
-1.6929	-1.0246
-1.6929	1.0248
-1.6535	-1.0256
-1.6535	1.0256
-1.6142	-1.0256
-1.6142	1.0256
-1.5748	-1.0256
-1.5748	1.0256
-1.5354	-1.0256
-1.5354	1.0256
-1.4961	-1.0256
-1.4961	1.0256
-1.4567	-1.0256
-1.4567	1.0256
-1.4173	-1.0256
-1.4173	1.0256
-1.3780	-1.0256
-1.3780	1.0256
-1.3386	-1.0256
-1.3386	1.0256
-1.2992	-1.0256
-1.2992	1.0256
-1.2598	-1.0256
-1.2598	1.0256
-1.2205	-1.0246
-1.2205	1.0248
-1.1811	-1.0246
-1.1811	1.0248
-1.1417	-1.0236
-1.1417	1.0236
-1.1024	-1.0236
-1.1024	1.0236
-1.0630	-1.0236
-1.0630	1.0236
-1.0236	-1.0236
-1.0236	1.0236
-0.9843	-1.0236
-0.9843	1.0236
-0.9449	-1.0236
-0.9449	1.0236
-0.9055	-1.0236
-0.9055	1.0236
-0.8661	-1.0236
-0.8661	1.0236

	Hole Chart
X	Y
-0.8268	-1.0236
-0.8268	1.0236
-0.7874	-1.0236
-0.7874	1.0236
-0.7480	-1.0236
-0.7480	1.0236
-0.7087	-1.0236
-0.7087	1.0236
-0.6693	-1.0236
-0.6693	1.0236
-0.6299	-1.0236
-0.6299	1.0236
-0.5906	-1.0236
-0.5906	1.0236
-0.5512	-1.0236
-0.5512	1.0236
-0.5118	-1.0236
-0.5118	1.0236
-0.4724	-1.0236
-0.4724	1.0236
-0.4331	-1.0236
-0.4331	1.0236
-0.3937	-1.0236
-0.3937	1.0236
-0.3543	-1.0236
-0.3543	1.0236
-0.3150	-1.0236
-0.3150	1.0236
-0.2756	-1.0236
-0.2756	1.0236
-0.2362	-1.0236
-0.2362	1.0236
-0.1969	-1.0236
-0.1969	1.0236
-0.1575	-1.0236
-0.1575	1.0236
-0.1181	-1.0236
-0.1181	1.0236
-0.0787	-1.0236
-0.0787	1.0236
-0.0394	-1.0236
-0.0394	1.0236
0.0000	-1.0236
0.0000	1.0236
0.0394	-1.0236
0.0394	1.0236
0.0787	-1.0236
0.0787	1.0236
0.1181	-1.0236
0.1181	1.0236

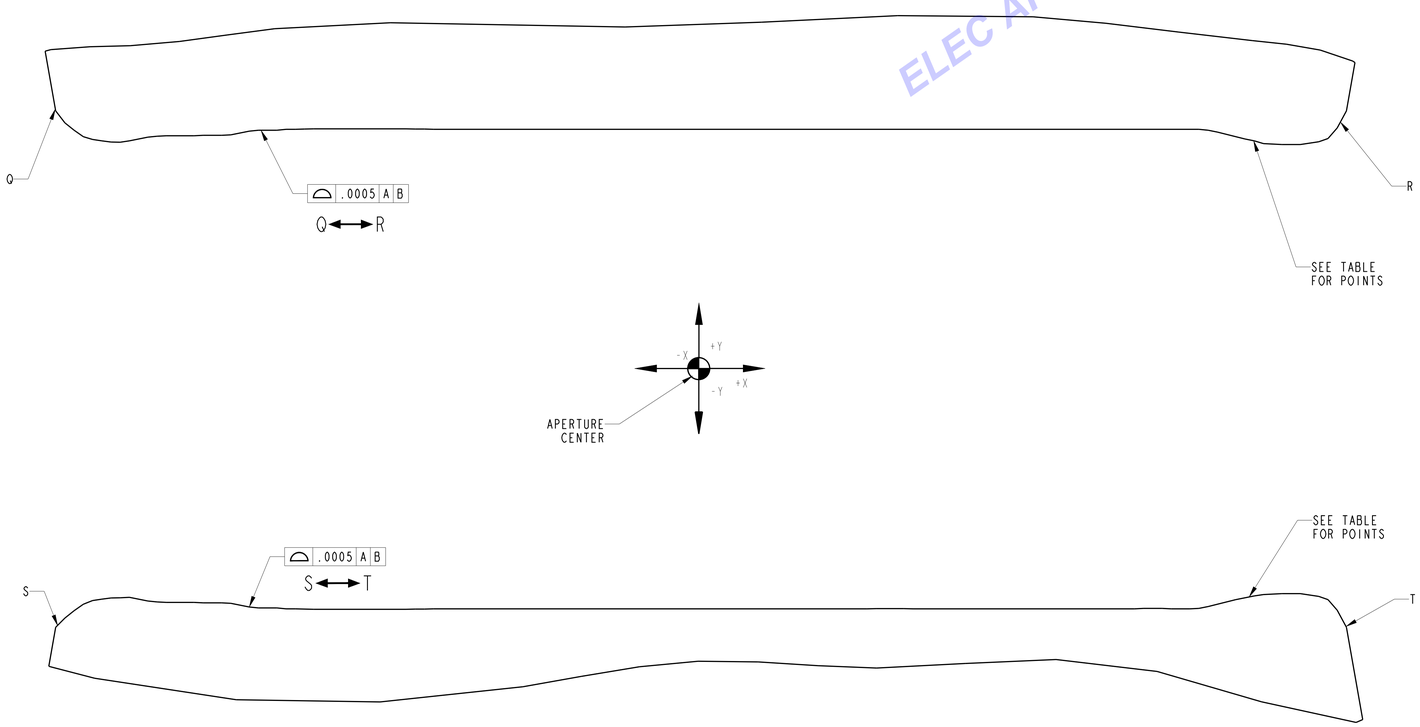
	Hole Chart
X	Y
0.1575	-1.0236
0.1575	1.0236
0.1969	-1.0236
0.1969	1.0236
0.2362	-1.0236
0.2362	1.0236
0.2756	-1.0236
0.2756	1.0236
0.3150	-1.0236
0.3150	1.0236
0.3543	-1.0236
0.3543	1.0236
0.3937	-1.0236
0.3937	1.0236
0.4331	-1.0236
0.4331	1.0236
0.4724	-1.0236
0.4724	1.0236
0.5118	-1.0236
0.5118	1.0236
0.5512	-1.0236
0.5512	1.0236
0.5906	-1.0236
0.5906	1.0236
0.6299	-1.0236
0.6299	1.0236
0.6693	-1.0236
0.6693	1.0236
0.7087	-1.0236
0.7087	1.0236
0.7480	-1.0226
0.7480	1.0236
0.7874	-1.0226
0.7874	1.0236
0.8268	-1.0226
0.8268	1.0236
0.8661	-1.0226
0.8661	1.0236
0.9055	-1.0236
0.9055	1.0236
0.9449	-1.0236
0.9449	1.0236
0.9843	-1.0236
0.9843	1.0236
1.0236	-1.0236
1.0236	1.0236
1.0630	-1.0236
1.0630	1.0236
1.1024	-1.0236
1.1024	1.0236

	Hole Chart
X	Y
1.1417	-1.0236
1.1417	1.0236
1.1811	-1.0236
1.1811	1.0236
1.2205	-1.0236
1.2205	1.0236
1.2598	-1.0236
1.2598	1.0236
1.2992	-1.0236
1.2992	1.0236
1.3386	-1.0236
1.3386	1.0236
1.3780	-1.0236
1.3780	1.0236
1.4173	-1.0236
1.4173	1.0236
1.4567	-1.0236
1.4567	1.0236
1.4961	-1.0236
1.4961	1.0236
1.5354	-1.0236
1.5354	1.0236
1.5748	-1.0236
1.5748	1.0236
1.6142	-1.0236
1.6142	1.0236
1.6535	-1.0236
1.6535	1.0236
1.6929	-1.0236
1.6929	1.0236
1.7323	-1.0236
1.7323	1.0236
1.7717	-1.0236
1.7717	1.0236
1.8110	-1.0236
1.8110	1.0236
1.8504	-1.0236
1.8504	1.0236
1.8898	-1.0217
1.8898	1.0236
1.9291	-1.0217
1.9291	1.0236
1.9685	-1.0217
1.9685	1.0236
2.0079	-1.0236
2.0079	1.0236
2.0472	-1.0236
2.0472	1.0236
2.0866	-1.0236
2.0866	1.0236

	Hole Chart
X	Y
2.1260	-1.0217
2.1260	1.0236
2.1654	-1.0138
2.1654	1.0197
2.2047	-1.0039
2.2047	1.0118
2.2441	-0.9941
2.2441	1.0020
2.2835	-0.9843
2.2835	0.9921
2.3228	-0.9764
2.3228	0.9823
2.3622	-0.9685
2.3622	0.9744
2.4016	-0.9626
2.4016	0.9626
2.4409	-0.9606
2.4409	0.9606
2.4803	-0.9587
2.4803	0.9587
2.5197	-0.9587
2.5197	0.9587
2.5591	-0.9587
2.5591	0.9587
2.5984	-0.9646
2.5984	0.9646
2.6378	-0.9705
2.6378	0.9705
2.6772	-0.9843
2.6772	0.9843
2.7165	-1.0295
2.7165	1.0295
2.7559	-1.1024
2.7559	1.1024
3.3465	-3.1496
3.3465	3.1496

"T" POINT
"R" POINT

APPROVED FOR MANUFACTURE
ELEC APPVL IN MANUFACTURE



DETAIL A
SCALE 4/1
POLE TIP REGION

THIS INFORMATION IS CONTROLLED BY THE U.S. DEPARTMENT OF COMMERCE EXPORT CONTROL ADMINISTRATION REGULATIONS 15 CFR PARTS 730-774 AS EAR99 TECHNOLOGY

ELECTRON-ION COLLIDER
BROOKHAVEN NATIONAL LABORATORY
UPTON, N.Y. 11973

SIZE	DRAWING NUMBER:	REV.
E	2104M0016	B
Q.A. CATEGORY: A3	SCALE: 1/1	WEIGHT: -	SHEET 2 OF 2

DWG NO 2104M0016 SHT 2 OF 2 REV B