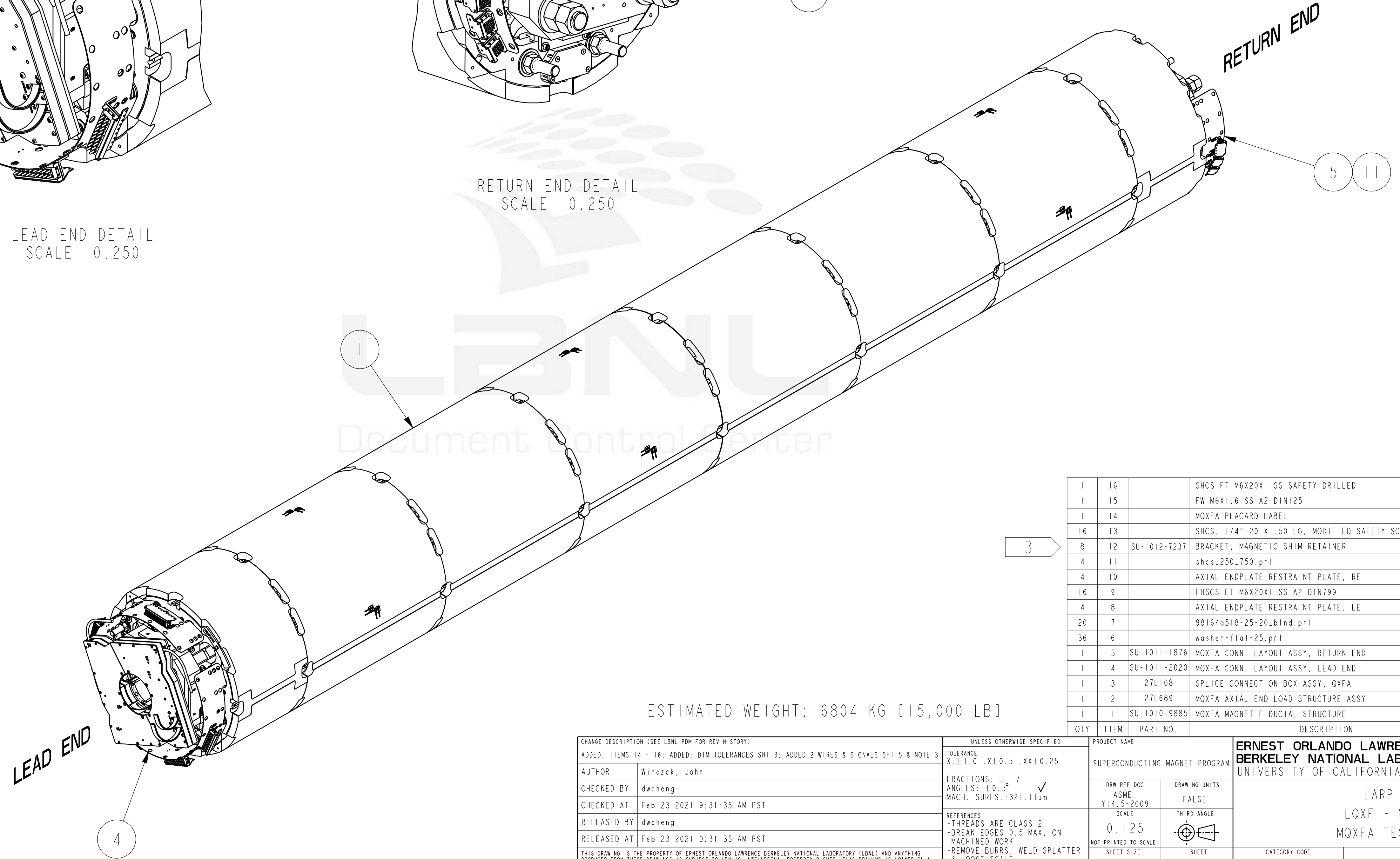
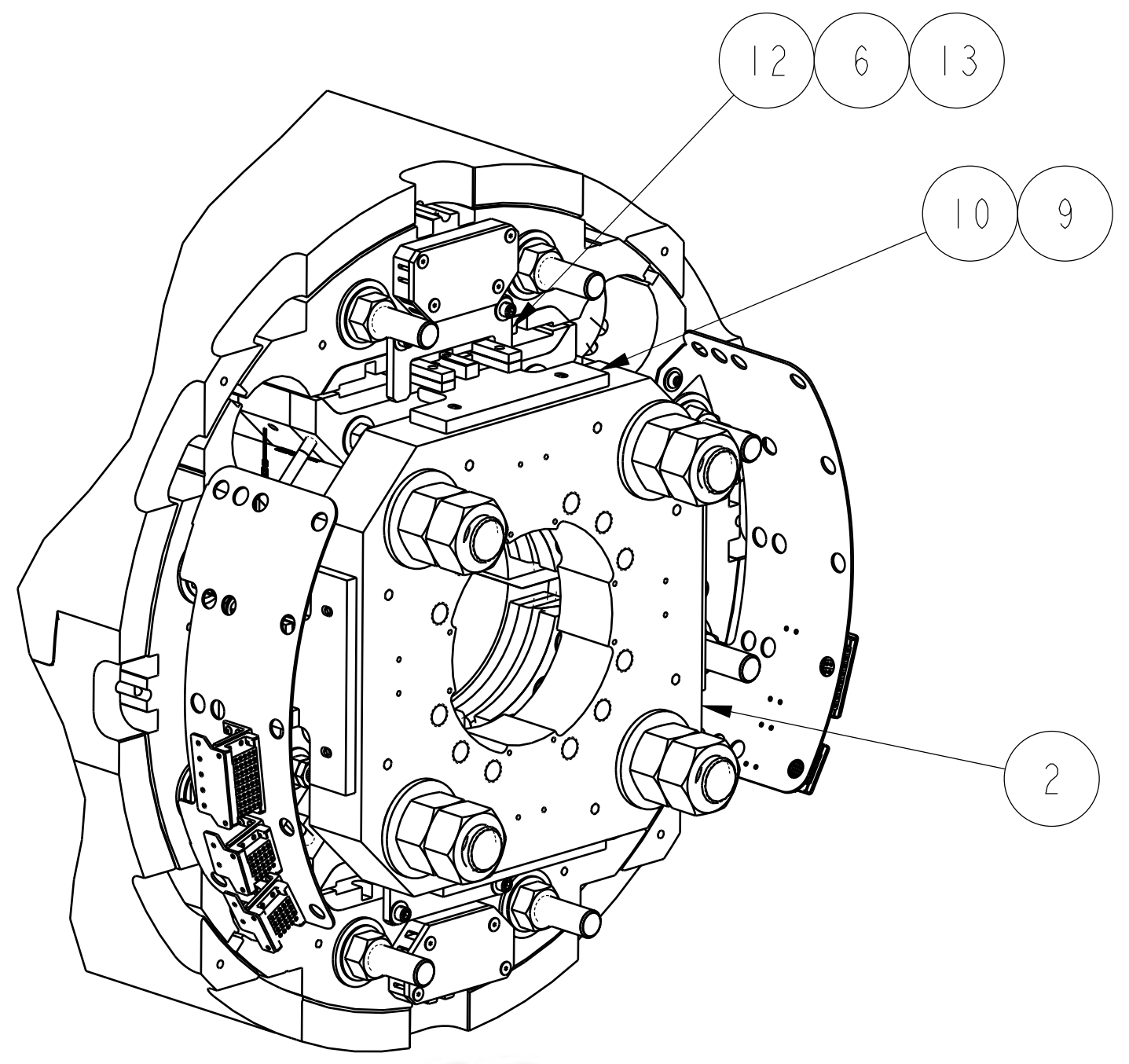
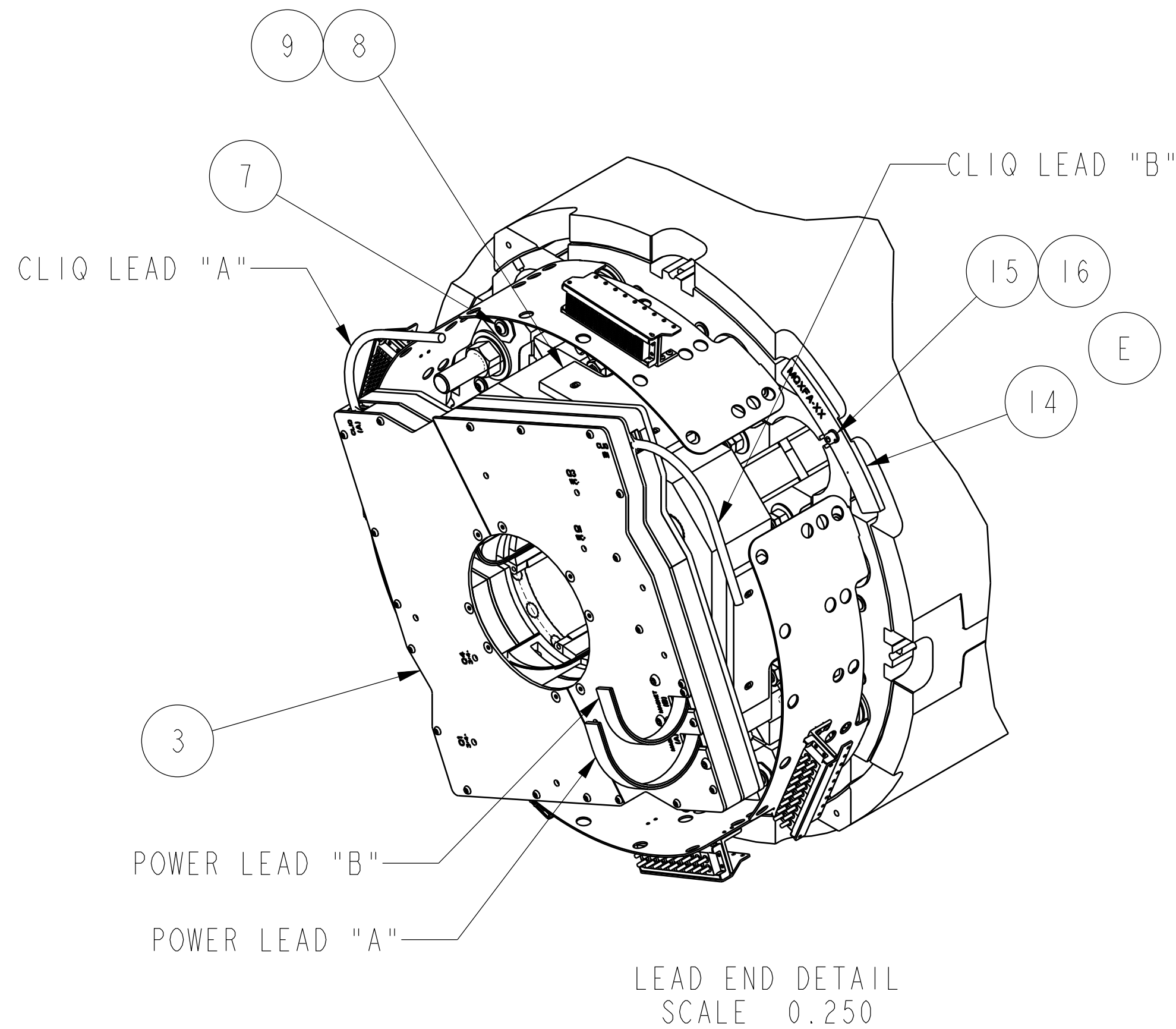


8 7 6 5 4 3 2 1



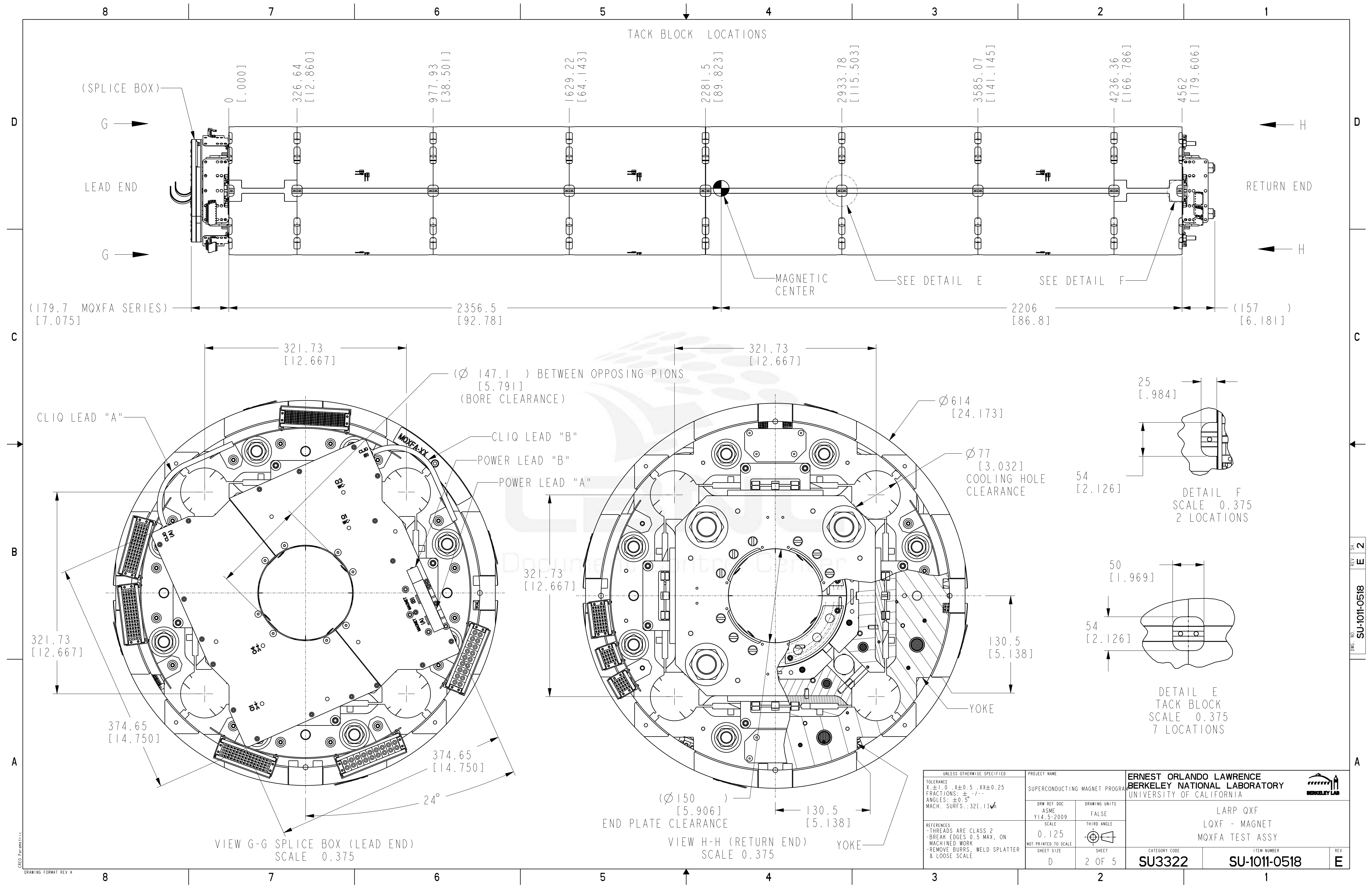
- NOTES: UNLESS OTHERWISE SPECIFIED
1. ALL DIMENSIONS ARE IN MILLIMETERS (mm) AND VALUES ARE IN SI UNITS. DIMENSIONS AND VALUES IN BRACKETS ARE U.S. CUSTOMARY UNITS (inch) CONVERTED FROM MILLIMETERS / SI UNITS.
  2. APPLICABLE STANDARDS AND SPECIFICATIONS:  
ASME Y14.5M-2009, DIMENSIONING AND TOLERANCING.
  3. ITEMS 12 & 13 TO BE INSTALLED ON 'LE' BEFORE SPLICES ARE MADE. MAGNETIC SHIMS, SU-1012-1777, AS REQUIRED, WILL BE INSTALLED BEFORE ITEMS 12 & 13 ARE INSTALLED ON 'RE'.

ESTIMATED WEIGHT: 6804 KG [15,000 LB]

QTY	ITEM	PART NO.	DESCRIPTION	MATERIAL
1	16		SHCS FT M6X20X1 SS SAFETY DRILLED	
1	15		FW M6X1.6 SS A2 DIN125	
1	14		MOXFA PLACARD LABEL	
16	13		SHCS, 1/4"-20 X .50 LG, MODIFIED SAFETY SCREW	
8	12	SU-1012-7237	BRACKET, MAGNETIC SHIM RETAINER	
4	11		shcs_250_750.prt	
4	10		AXIAL ENDPLATE RESTRAINT PLATE, RE	
16	9		FHSCS FT M6X20X1 SS A2 DIN7991	
4	8		AXIAL ENDPLATE RESTRAINT PLATE, LE	
20	7		98164a518-25-20_bind.prt	
36	6		washer-flat-25.prt	
1	5	SU-1011-1876	MOXFA CONN. LAYOUT ASSY, RETURN END	
1	4	SU-1011-2020	MOXFA CONN. LAYOUT ASSY, LEAD END	
1	3	27L108	SPLICE CONNECTION BOX ASSY, QXFA	
1	2	27L689	MOXFA AXIAL END LOAD STRUCTURE ASSY	
1	1	SU-1010-9885	MOXFA MAGNET FIDUCIAL STRUCTURE	

CHANGE DESCRIPTION (SEE LBNL PDM FOR REV HISTORY) ADDED: ITEMS 14 - 16; ADDED: DIM TOLERANCES SHT 3; ADDED 2 WIRES & SIGNALS SHT 5 & NOTE 3.		UNLESS OTHERWISE SPECIFIED TOLERANCE $X: \pm 1.0 \text{ } X \pm 0.5 \text{ } .XX \pm 0.25$ FRACTIONS: $\pm .1$ ANGLES: $\pm 0.5^\circ$ ✓ MACH. SURFS: .32(.11)um		PROJECT NAME SUPERCONDUCTING MAGNET PROGRAM		ERNEST ORLANDO LAWRENCE BERKELEY NATIONAL LABORATORY UNIVERSITY OF CALIFORNIA	
AUTHOR	Wirdzek, John	REFERENCES	SCALE	THIRD ANGLE	LARP QXF LOXF - MAGNET MOXFA TEST ASSY		
CHECKED BY	dwcheng	-THREADS ARE CLASS 2	0.125		CATEGORY CODE	ITEM NUMBER	REV
CHECKED AT	Feb 23 2021 9:31:35 AM PST	-BREAK EDGES 0.5 MAX, ON MACHINED WORK	NOT PRINTED TO SCALE		SU3322	SU-1011-0518	E
RELEASED BY	dwcheng	-REMOVE BURRS, WELD SPLATTER & LOOSE SCALE	SHEET SIZE		D	1 OF 5	
RELEASED AT	Feb 23 2021 9:31:35 AM PST						
THIS DRAWING IS THE PROPERTY OF ERNEST ORLANDO LAWRENCE BERKELEY NATIONAL LABORATORY (LBNL) AND ANYTHING PRODUCED FROM THESE DRAWINGS IS SUBJECT TO LBNL'S INTELLECTUAL PROPERTY RIGHTS. THIS DRAWING IS LOANED ON A CONFIDENTIAL BASIS SUBJECT TO RETURN ON DEMAND AND NOTHING HEREIN MAY BE REPRODUCED, USED OR DISCLOSED IN WHOLE OR PART WITHOUT PRIOR WRITTEN PERMISSION OF LBNL.							

DRWG. NO. SU-1011-0518 REV. SHE. 1



(179.7 MQXFA SERIES)  
[7.075]

2356.5  
[92.78]

2206  
[86.8]

(157 )  
[6.181]

( $\varnothing$  147.1 ) BETWEEN OPPOSING PIONS  
[5.791]  
(BORE CLEARANCE)

$\varnothing$  614  
[24.173]

$\varnothing$  77  
[3.032]  
COOLING HOLE CLEARANCE

25  
[.984]

54  
[2.126]

321.73  
[12.667]

130.5  
[5.138]

50  
[1.969]

54  
[2.126]

CLIQ LEAD "A"

CLIQ LEAD "B"

POWER LEAD "B"

POWER LEAD "A"

321.73  
[12.667]

374.65  
[14.750]

374.65  
[14.750]

24°

( $\varnothing$  150 )  
[5.906]  
END PLATE CLEARANCE

130.5  
[5.138]

UNLESS OTHERWISE SPECIFIED  
TOLERANCE  
X ± 1.0 X ± 0.5 .XX ± 0.25  
FRACTIONS: ± / -  
ANGLES: ± 0.5°  
MACH. SURFS: .32( .11) ✓

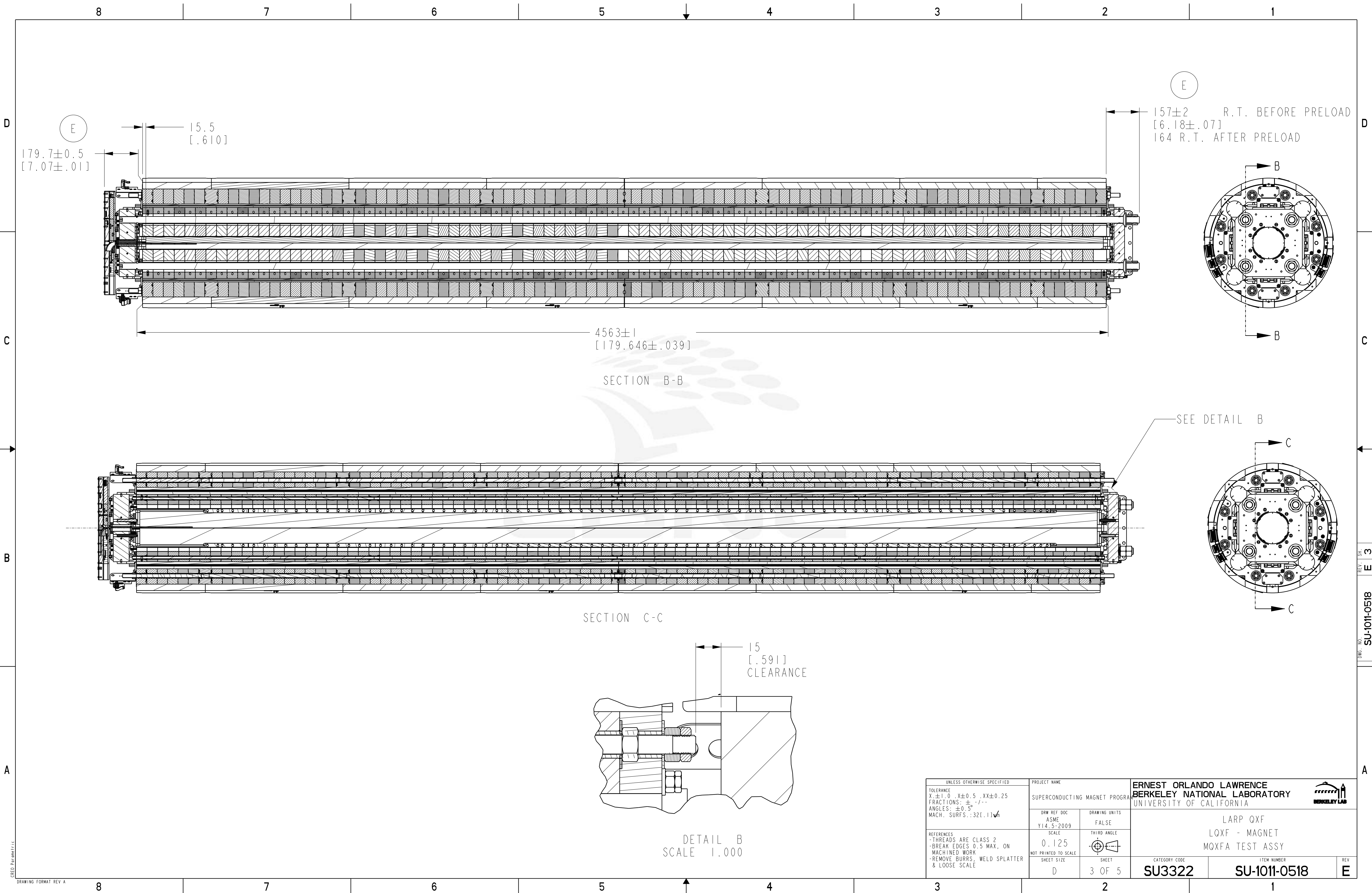
REFERENCES  
- THREADS ARE CLASS 2  
- BREAK EDGES 0.5 MAX, ON MACHINED WORK  
- REMOVE BURRS, WELD SPLATTER & LOOSE SCALE

PROJECT NAME SUPERCONDUCTING MAGNET PROGRAM		DRAWING UNITS FALSE	
DRW REF DOC ASME Y14.5-2009	SCALE 0.125 NOT PRINTED TO SCALE	THIRD ANGLE 	SHEET 2 OF 5
CATEGORY CODE <b>SU3322</b>		ITEM NUMBER <b>SU-1011-0518</b>	

ERNEST ORLANDO LAWRENCE BERKELEY NATIONAL LABORATORY UNIVERSITY OF CALIFORNIA			
LARP QXF LQXF - MAGNET MQXFA TEST ASSY			
CATEGORY CODE <b>SU3322</b>		ITEM NUMBER <b>SU-1011-0518</b>	
REV <b>E</b>			

Officially Released to the LBNL Document Control Center  
Released: February 23rd, 2021 DCC Auth Key: FOWPXs4EVT





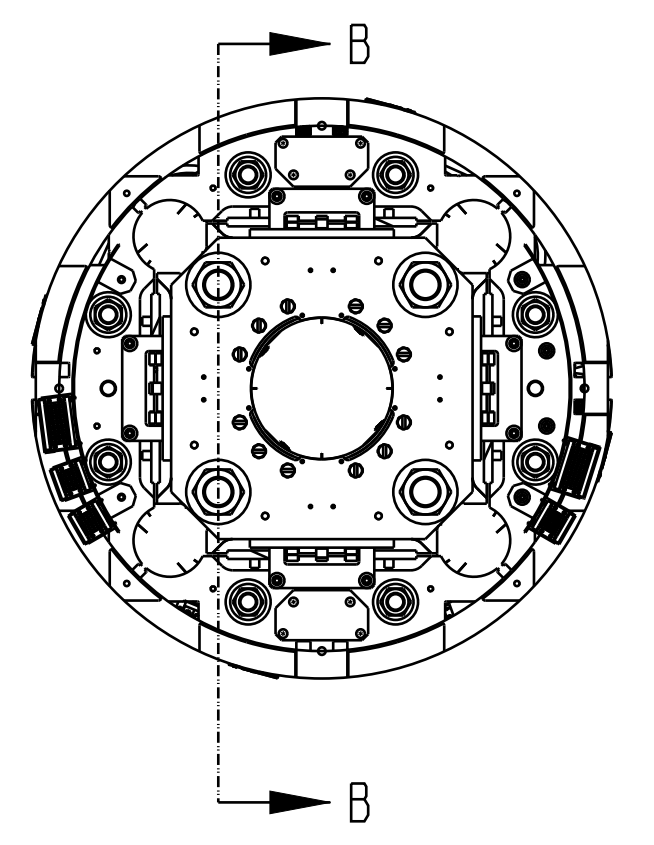
E  
179.7±0.5  
[7.07±.01]

15.5  
[.610]

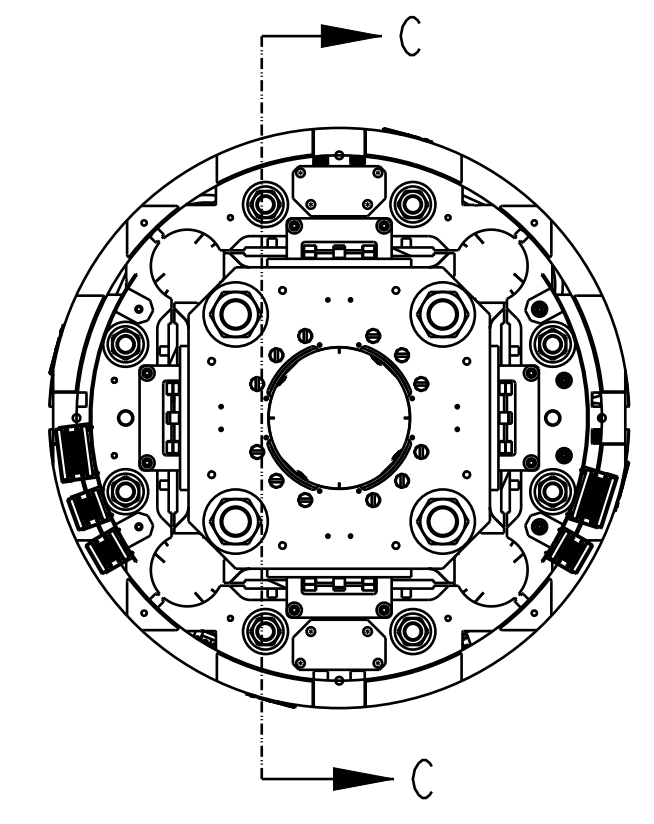
4563±1  
[179.646±.039]

SECTION B-B

E  
157±2 R.T. BEFORE PRELOAD  
[6.18±.07]  
164 R.T. AFTER PRELOAD

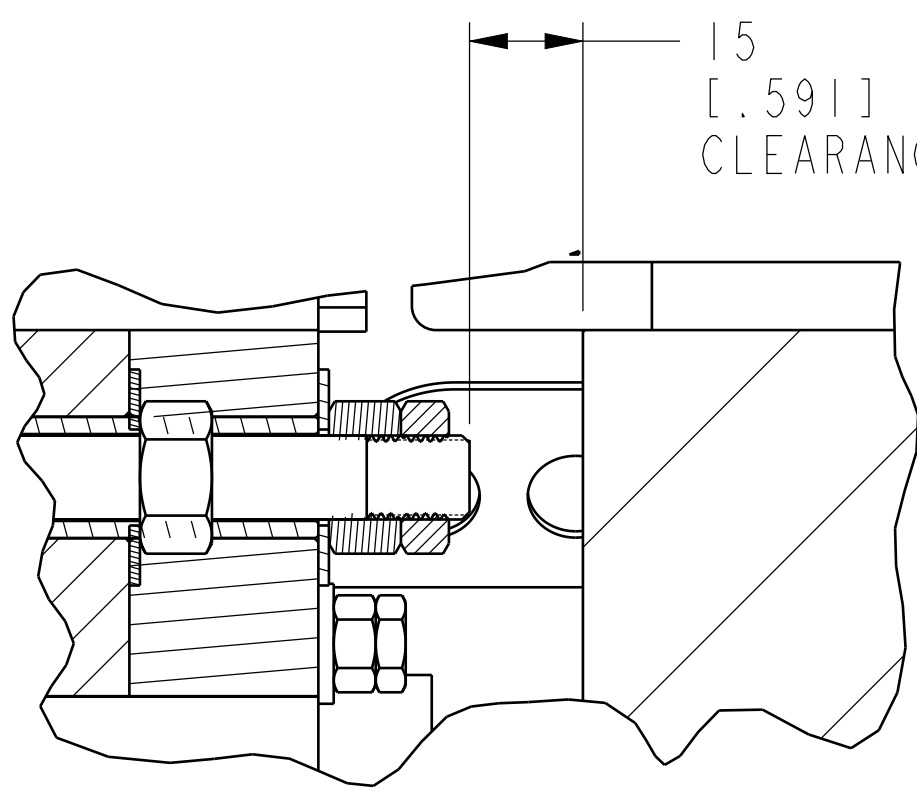


SEE DETAIL B



SECTION C-C

15  
[.591]  
CLEARANCE



DETAIL B  
SCALE 1.000

UNLESS OTHERWISE SPECIFIED		PROJECT NAME		ERNEST ORLANDO LAWRENCE BERKELEY NATIONAL LABORATORY UNIVERSITY OF CALIFORNIA	
TOLERANCE X ± 1.0, XX ± 0.5, XXX ± 0.25 FRACTIONS: ±, -/- ANGLES: ±0.5° MACH. SURFS: .32(11)✓		SUPERCONDUCTING MAGNET PROGRAM		LARP QXF LQXF - MAGNET MQXFA TEST ASSY	
REFERENCES - THREADS ARE CLASS 2 - BREAK EDGES 0.5 MAX, ON MACHINED WORK - REMOVE BURRS, WELD SPLATTER & LOOSE SCALE		DRW REF DOC ASME Y14.5-2009	DRAWING UNITS FALSE	THIRD ANGLE 	CATEGORY CODE <b>SU3322</b>
		SCALE 0.125 NOT PRINTED TO SCALE	SHEET 3 OF 5	ITEM NUMBER <b>SU-1011-0518</b>	REV <b>E</b>

DWG. NO. SU-1011-0518  
REV. SHE. E 3

8 7 6 5 4 3 2 1

D

C

B

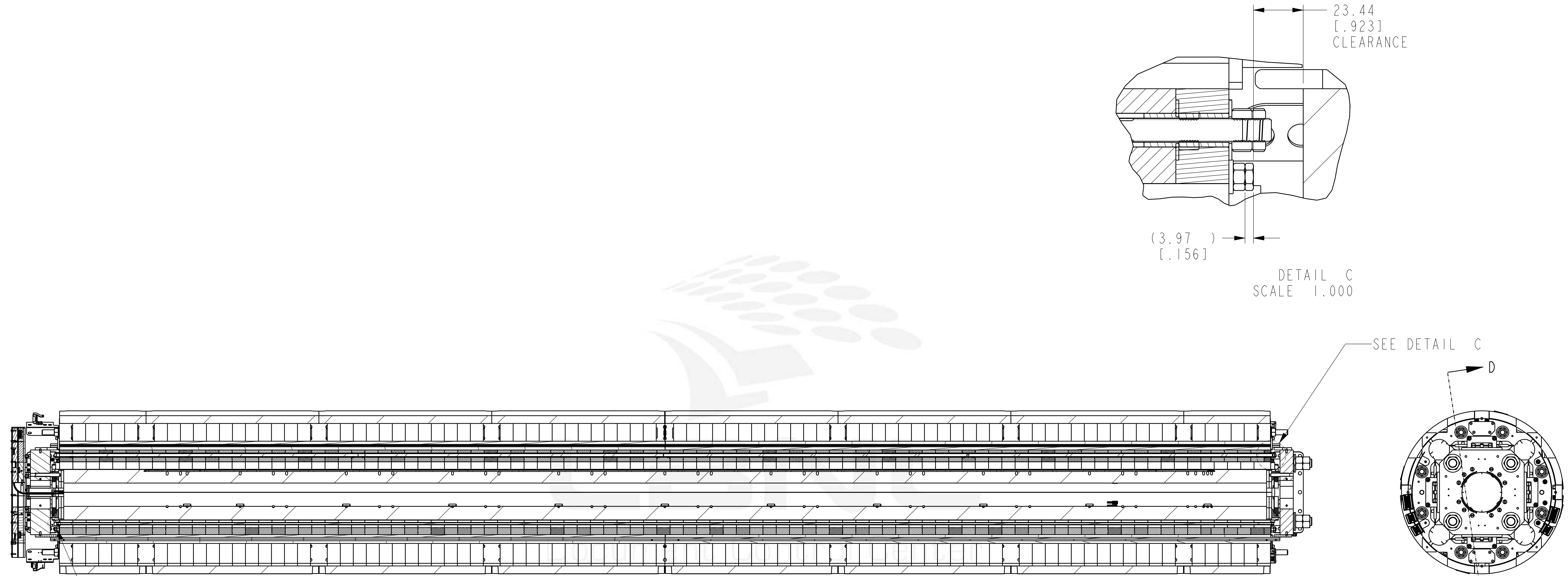
A

D

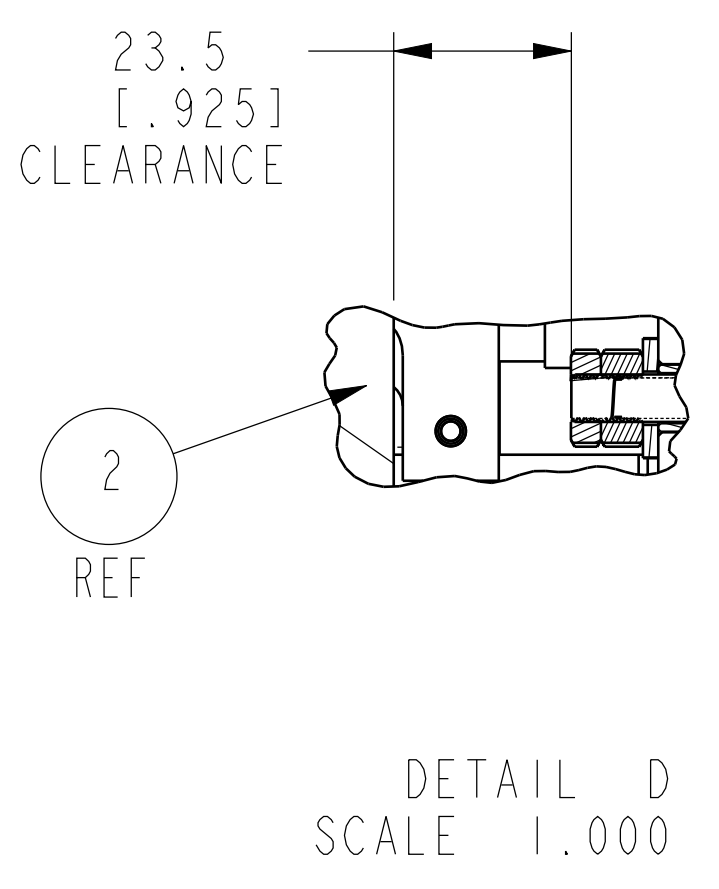
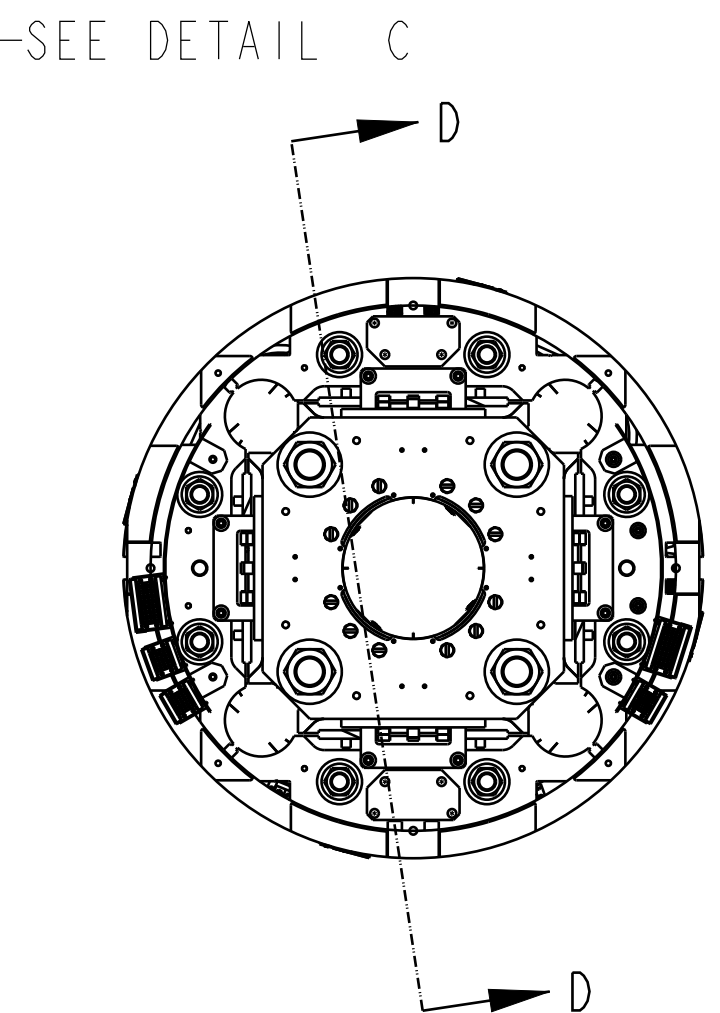
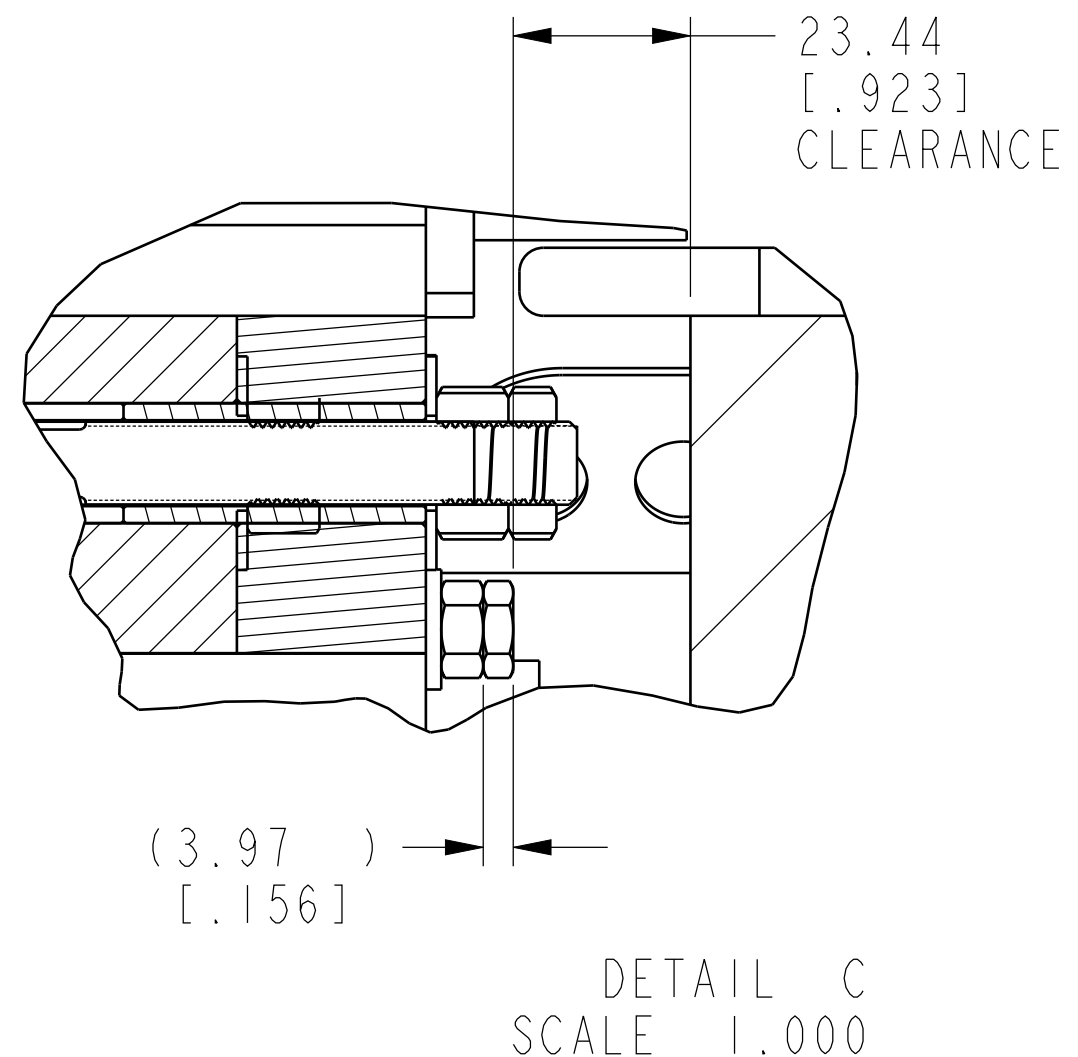
C

E

A



SECTION D-D

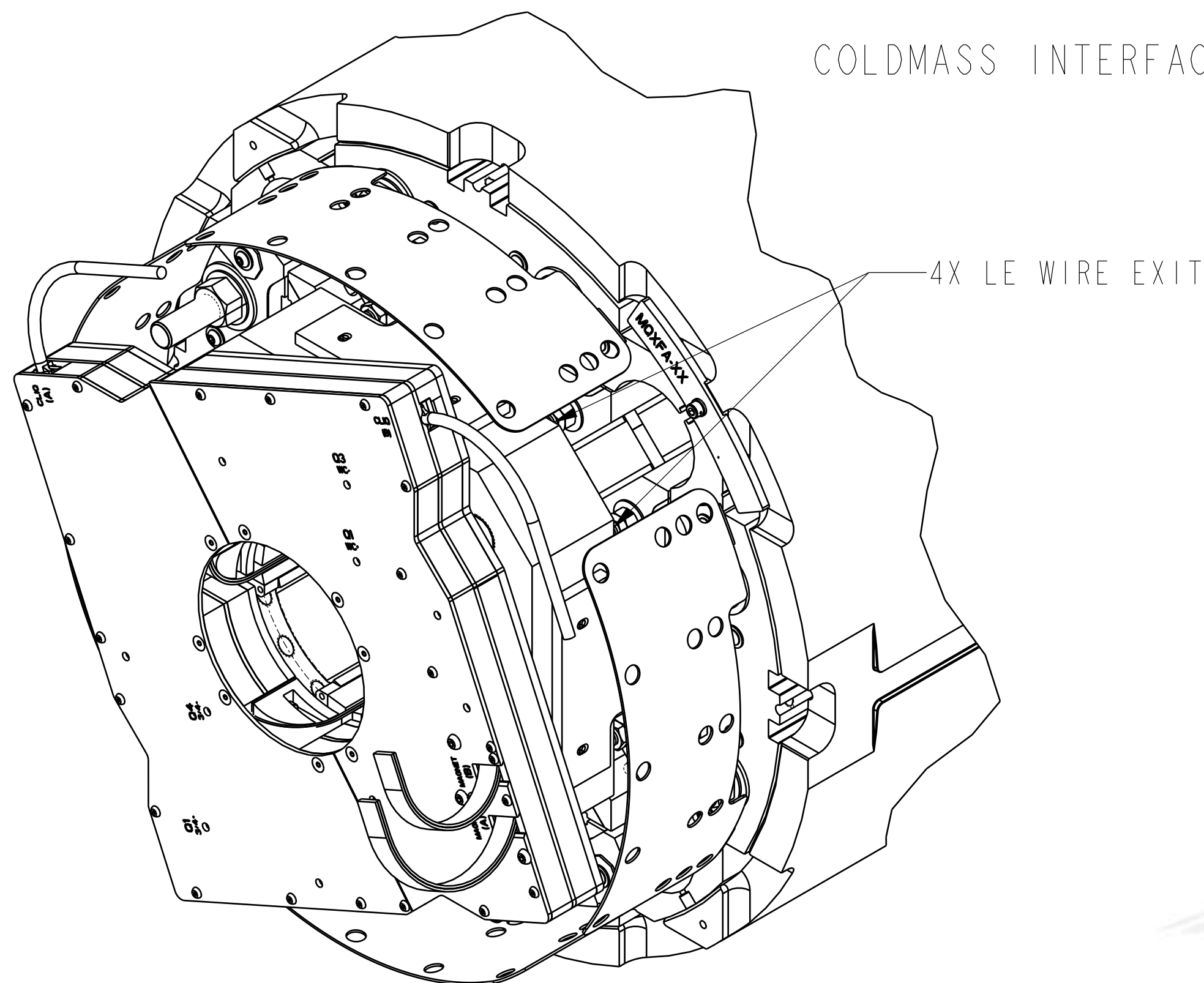


UNLESS OTHERWISE SPECIFIED		PROJECT NAME		ERNEST ORLANDO LAWRENCE BERKELEY NATIONAL LABORATORY UNIVERSITY OF CALIFORNIA	
TOLERANCE X: ±1.0, X±0.5, XX±0.25 FRACTIONS: ±, -/- ANGLES: ±0.5° MACH. SURFS: .32(11)√		SUPERCONDUCTING MAGNET PROGRAM		LARP QXF LQXF - MAGNET MQXFA TEST ASSY	
REFERENCES - THREADS ARE CLASS 2 - BREAK EDGES 0.5 MAX, ON MACHINED WORK - REMOVE BURRS, WELD SPLATTER & LOOSE SCALE		DRW REF DOC ASME Y14.5-2009	DRAWING UNITS FALSE	THIRD ANGLE ⊕	CATEGORY CODE <b>SU3322</b>
		SCALE 0.125 NOT PRINTED TO SCALE	SHEET 4 OF 5	ITEM NUMBER <b>SU-1011-0518</b>	REV <b>E</b>

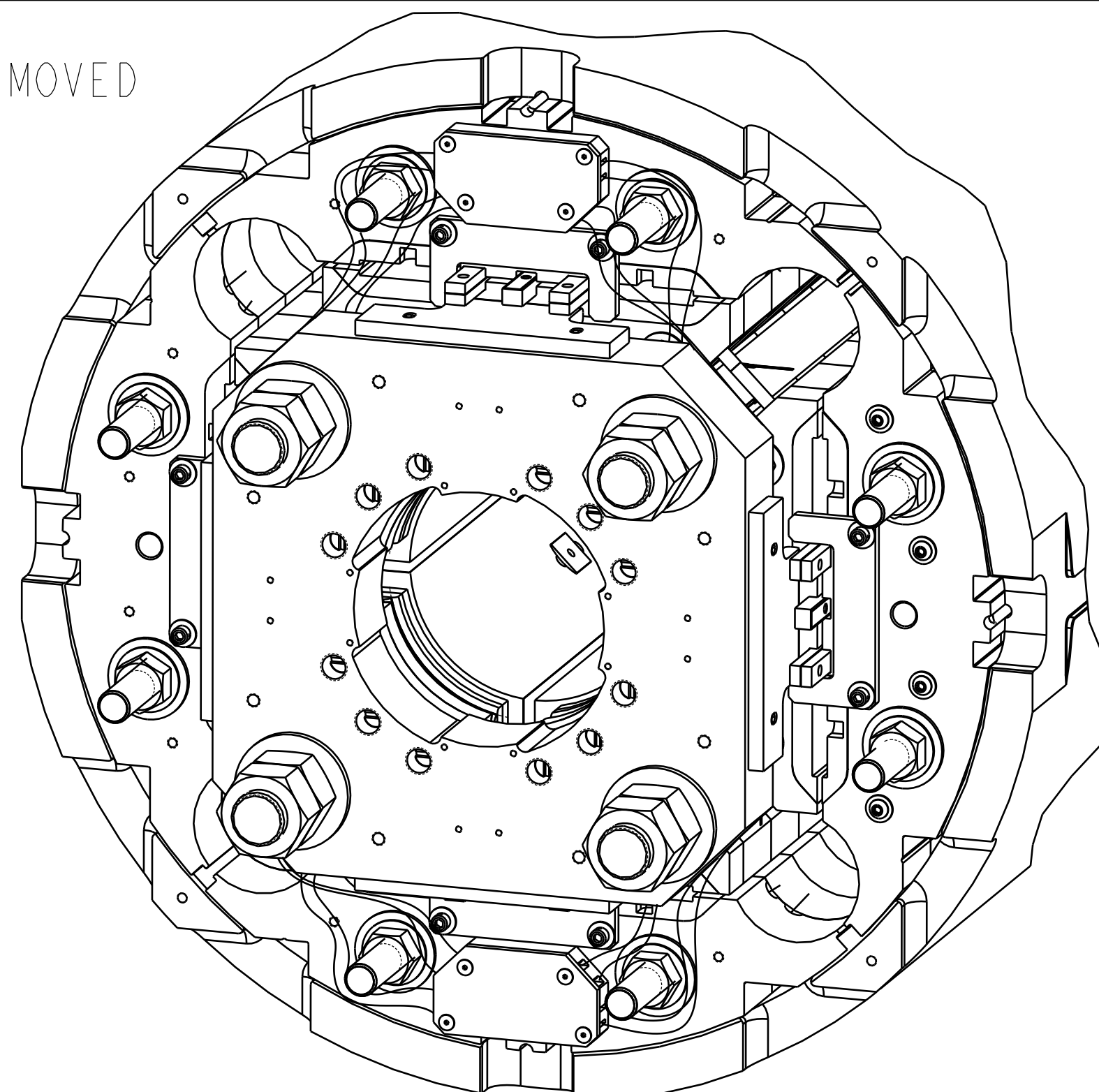
DWG. NO. SU-1011-0518  
REV. SH. 4

8 7 6 5 4 3 2 1

COLDMASS INTERFACE WITH CONNECTORS AND SKIRTS REMOVED



LEAD END



RETURN END

Q2 PHB03a, PHB04a, 4.5m  
 Q2 VTA01a/b, VTA02, 4.5m  
 Q2 VTB01a/b, VTB02, 4.5m  
 Q2 PHB01a, PHB02a, 4.5m

Q1 VTB01a, VTB02, 4.5m  
 Q1 PHB01a, PHB02a, 4.5m

Q1 VTA01a/b, VTA02, 4.5m  
 Q1 PHB03a, PHB04a, 4.5m

Q3 VTA01a, VTA02, 4.5m  
 Q3 PHB03a, PHB04a, 4.5m

Q4 VTB01a/b, VTB02, 4.5m  
 Q4 PHB01a, PHB02a, 4.5m

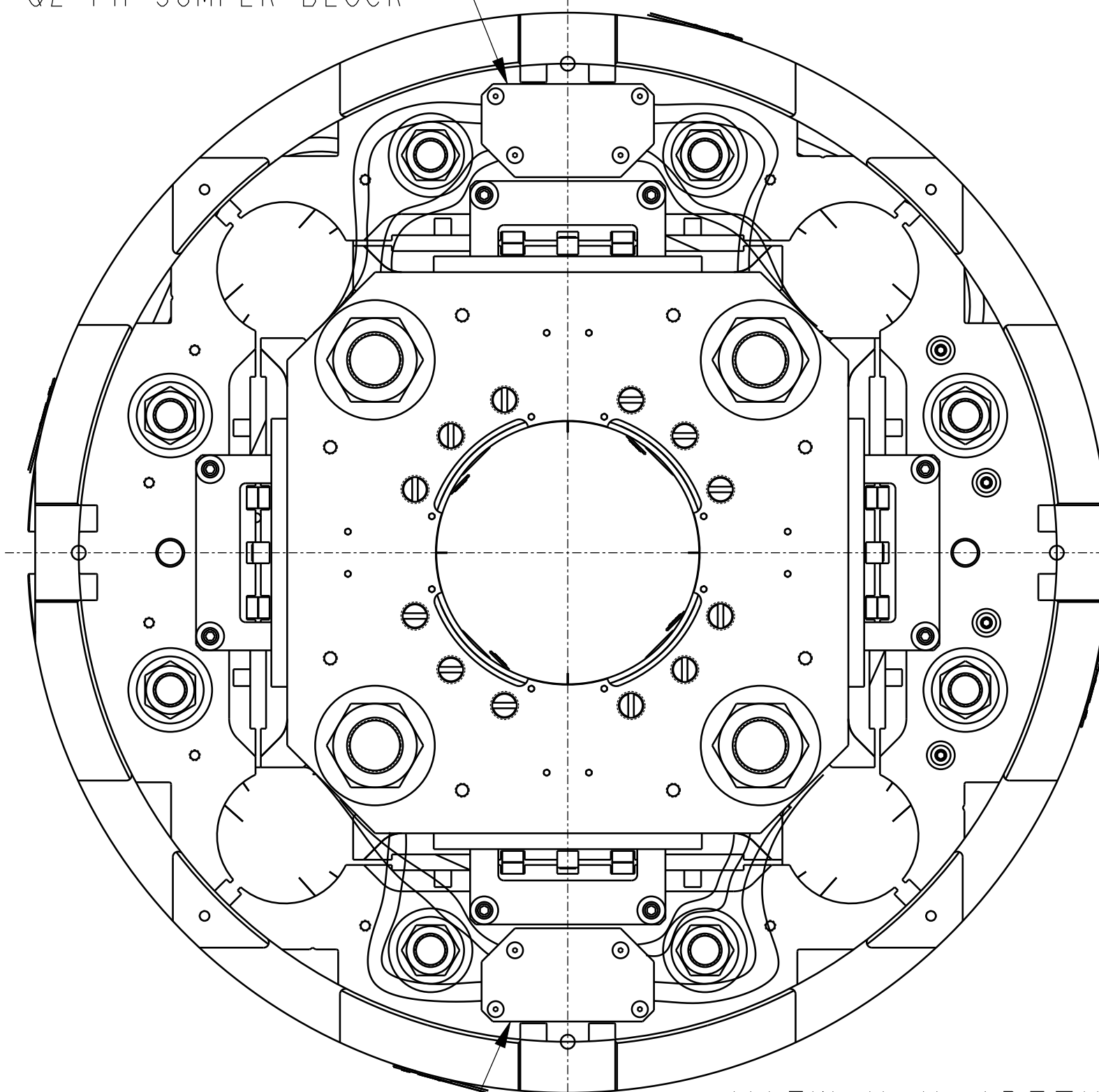
(E) WC†, WC-4.5m

Q3 VTB01a/b, VTB02, 4.5m  
 Q3 PHB01a, PHB02a, 4.5m

Q4 VTA01a/b, VTA02, 4.5m  
 Q4 PHB01a, PHB02a, 4.5m  
 Q4 PHB03a, PHB04a, 4.5m

VIEW G-G (LEAD END)

Q1-Q2 PH JUMPER BLOCK



Q4-Q3 PH JUMPER BLOCK

VIEW H-H (RETURN END)

UNLESS OTHERWISE SPECIFIED		PROJECT NAME		ERNEST ORLANDO LAWRENCE BERKELEY NATIONAL LABORATORY UNIVERSITY OF CALIFORNIA	
TOLERANCE X: ±1.0, X±0.5, XX±0.25 FRACTIONS: ±, -/- ANGLES: ±0.5° MACH. SURFS: .3.2um ✓		SUPERCONDUCTING MAGNET PROGRAM		LARP QXF LQXF - MAGNET MQXFA TEST ASSY	
REFERENCES - THREADS ARE CLASS 2 - BREAK EDGES 0.5 MAX, ON MACHINED WORK - REMOVE BURRS, WELD SPLATTER & LOOSE SCALE		DRW REF DOC ASME Y14.5-2009	DRAWING UNITS mm-kg-s	CATEGORY CODE <b>SU3322</b>	
		SCALE 0.333 NOT PRINTED TO SCALE	THIRD ANGLE 	ITEM NUMBER <b>SU-1011-0518</b>	REV <b>E</b>
		SHEET D	SHEET 5 OF 5		