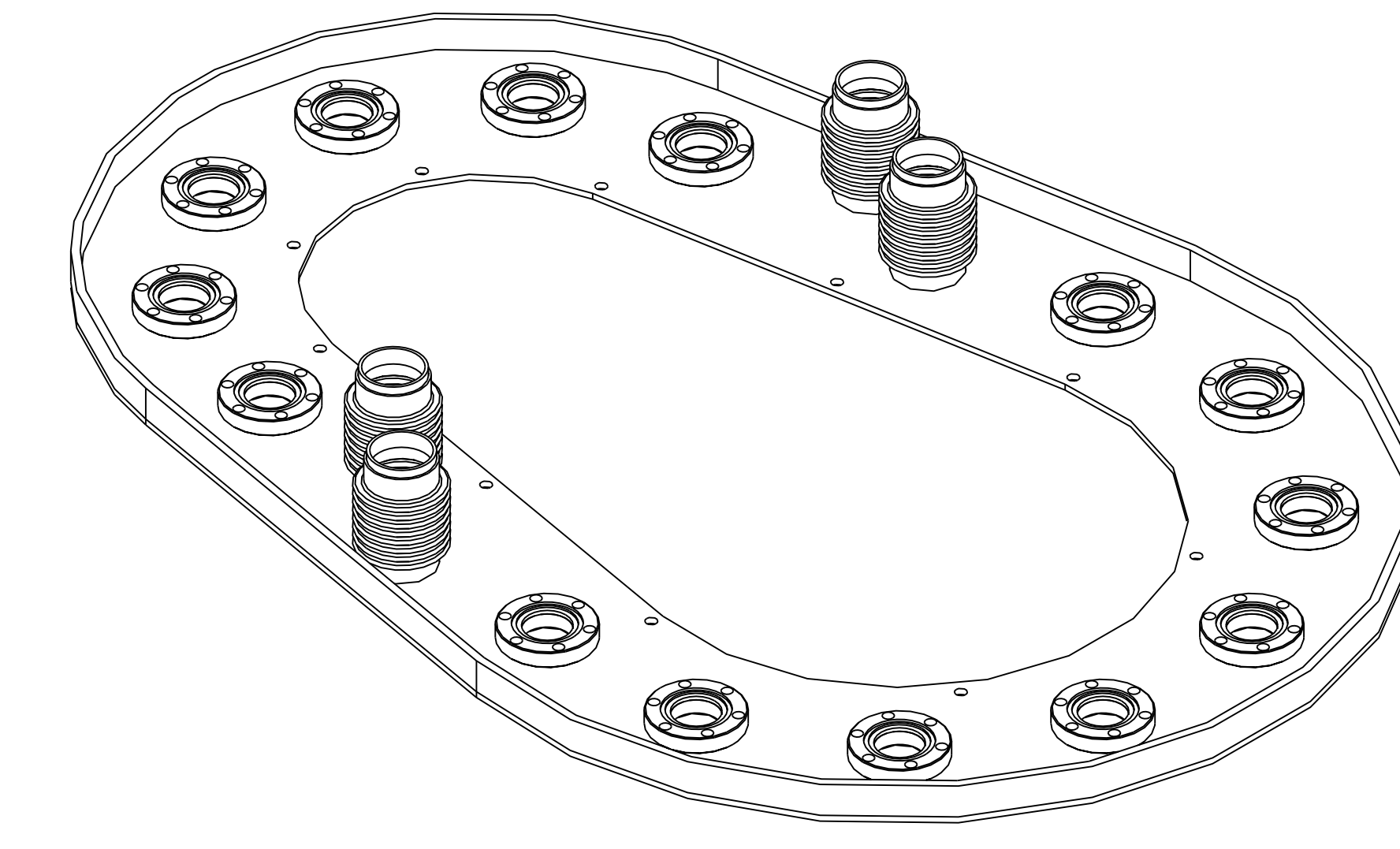
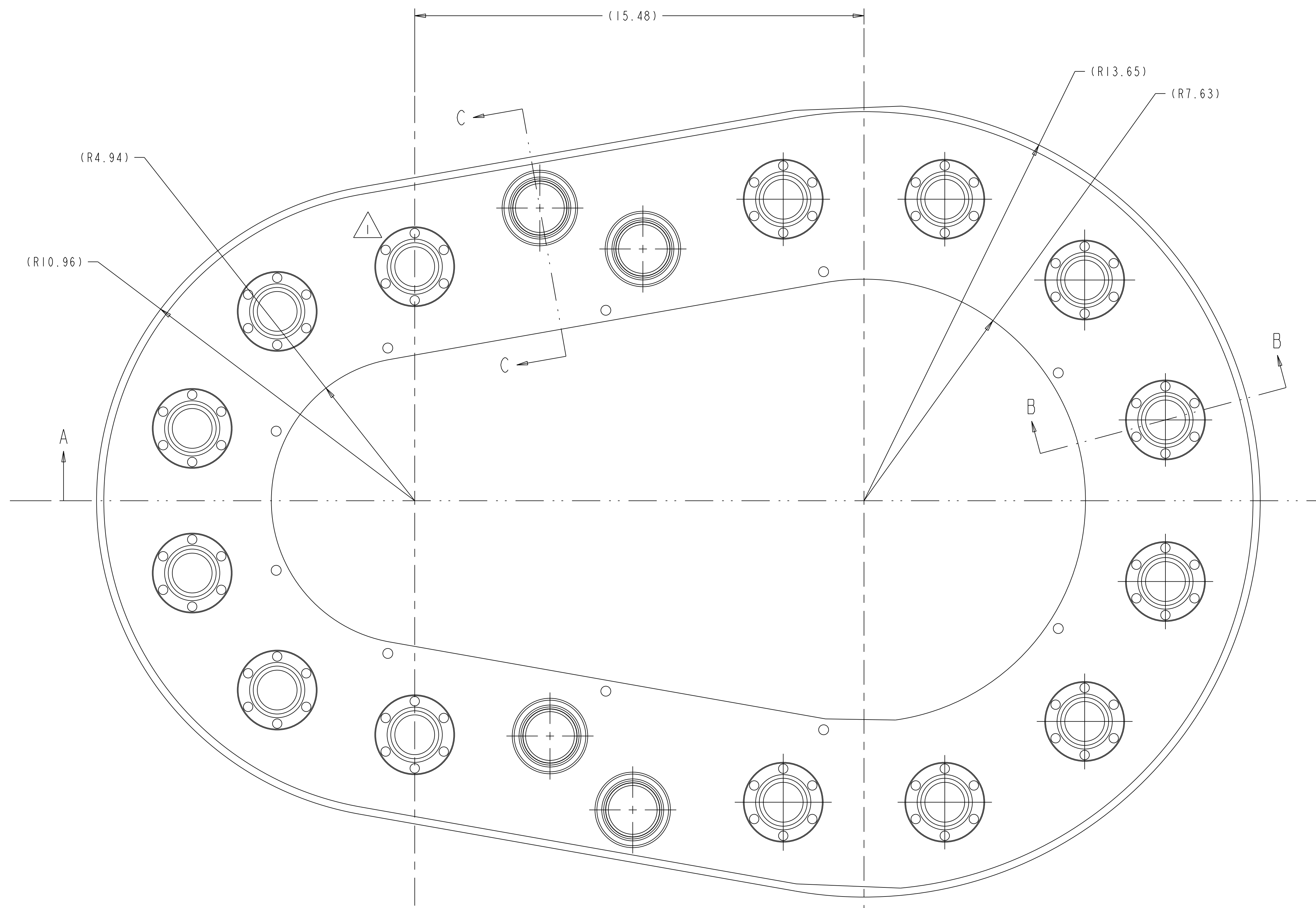
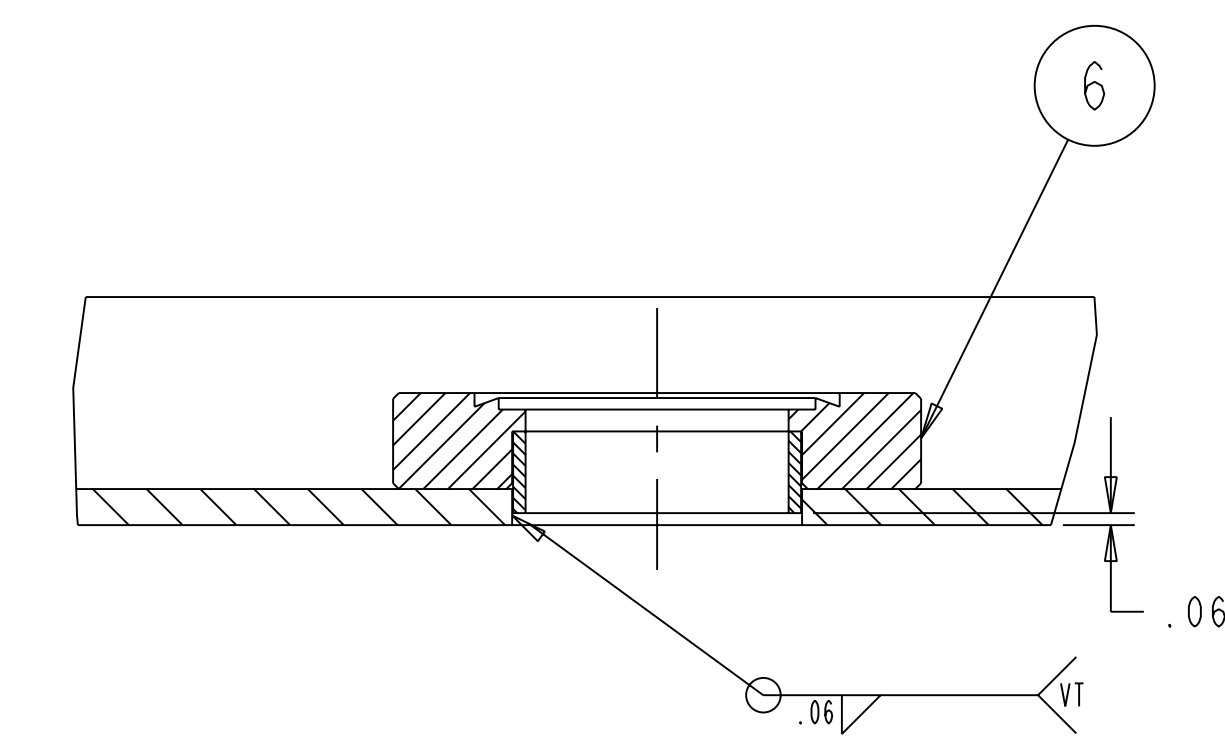


NOTES

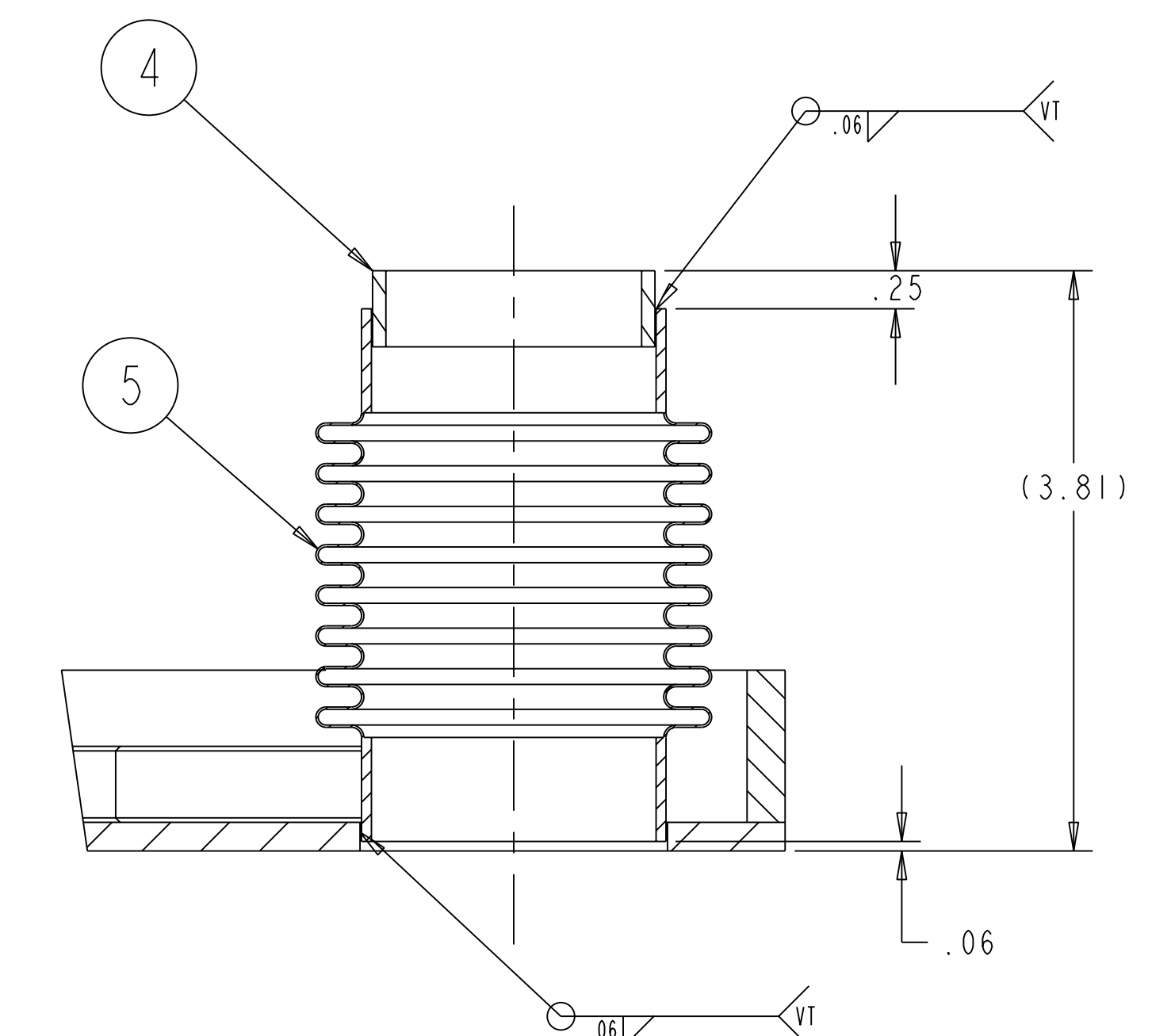
1. INTERPRET DIMENSIONS AND TOLERANCES PER ANSI Y14.5M.
2. DIMENSIONS ARE IN INCHES
3. WELDING PROCEDURES AND PERFORMANCE QUALIFICATIONS SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF ASME CODE, SECTION IX. WELDS MAY BE MADE BY THE GTAW OR GMAW PROCESSES. WELDS USING SMAW PROCESS ARE NOT PERMITTED.
4. WELD INSPECTIONS SHALL BE PERFORMED BY VISUAL EXAMINATION: ALL WELDS ARE TO BE VISUALLY INSPECTED IN ACCORDANCE WITH ARTICLE 9, SECTION V OF THE ASME CODE. WELDS DESIGNATED WITH A VT IN THE REFERENCE AREA OF A WELD SYMBOL SHALL ALSO BE VISUALLY EXAMINED WITH 8X MAGNIFICATION. IN ACCORDANCE WITH ARTICLE 6, SECTION V OF THE ASME CODE. THE ACCEPTANCE CRITERIA FOR THE VISUALLY INSPECTED WELDS IS GIVEN IN AWS D1.6, PARAGRAPH 6.29.1.



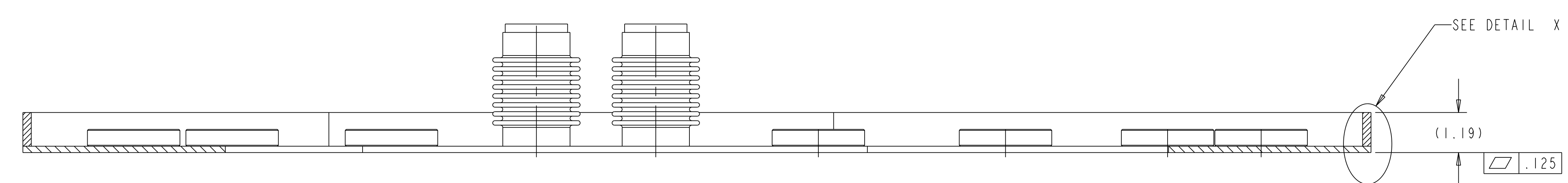
ISOMETRIC VIEW  
SCALE: 0.25



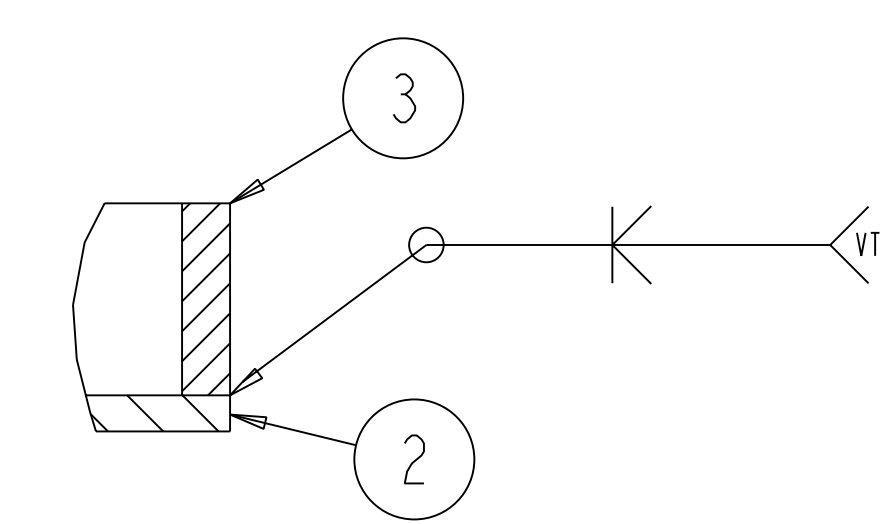
SECTION B-B  
(TYP 14X)  
SCALE: 1.00



SECTION C-C  
(TYP 4X)  
SCALE: 1.00



SECTION A-A  
SCALE: .50



DETAIL X  
SCALE: 1.00

**RELEASED FOR FABRICATION / INSTALLATION**  
PPPL Drafting:

**WELDING ENGINEER**  
APPROVED: **B. KEILBACH** DATE: 10/05

| AR        | CAGE CODE | PART OR IDENTIFYING NO | NOMENCLATURE OR DESCRIPTION              | MATERIAL   | SPECIFICATION | FIND NO |
|-----------|-----------|------------------------|--|--|---------------|---------|
|           |           | -7                     | WELD FILLER METAL                        |  |               | 7       |
|           |           | 401023                 | HALF NIPPLE, 2.75 O.D., TAPPED           |  |               | 6       |
|           |           | 470506                 | FORMED BELLOWS, WELD CUFF 2.00 O.D. TUBE | MDC VACUUM PRODUCTS CORPORATION<br>23842 CABOT BOULEVARD<br>HAYWARD, CALIFORNIA 94545-1661 |               | 5       |
|           |           | SE123-168-7            | BELLOWS RING                             |  |               | 4       |
|           |           | SE123-166              | CRYOSTAT INTERFACE FLANGE LIP WELDMENT   |  |               | 3       |
|           |           | SE123-165              | CRYOSTAT INTERFACE FLANGE DETAIL         |  |               | 2       |
|           |           | -1                     | CRYOSTAT INTERFACE FLANGE WELDMENT       |  |               | 1       |
| SE123-049 |           |                        | NEXT ASSEMBLY                            |  |               |         |

← PARTS LIST

NO REPRESENTATION OR WARRANTY, EXPRESSED OR IMPLIED, IS MADE AS TO THE ACCURACY, COMPLETENESS OR USEFULNESS OF THE INFORMATION OR STATEMENTS CONTAINED IN THESE DRAWINGS, OR THAT THE USE OR DISCLOSURE OF ANY INFORMATION, APPARATUS, METHOD OR PROCESS DISCLOSED IN THESE DRAWINGS MAY NOT INFRINGE PRIVATE RIGHTS OF OTHERS. NO LIABILITY IS ASSUMED WITH RESPECT TO THE USE OF, OR FOR DAMAGES RESULTING FROM THE USE OF, ANY INFORMATION, APPARATUS, METHOD OR PROCESS DISCLOSED IN THESE DRAWINGS. DRAWINGS MADE AVAILABLE FOR PURPOSES, AND ARE TO BE RETURNED UPON REQUEST OF THE FORWARDING CONTRACTOR.

**P** THIS DRAWING PRODUCED ON PRO-ENGINEER

| REV                       | DESCRIPTION      | BY  | DATE     | CHK | DEPT | DATE  | PE | REQ | DATE | ORNL | DOE | DATE |
|---------------------------|------------------|-----|----------|-----|------|-------|----|-----|------|------|-----|------|
| 1                         | PER FCN NO. 5055 | MTB | 12/15/88 | MJC |      | 12/05 |    |     |      |      |     |      |
| REVISION OR ISSUE PURPOSE |                  |     |          |     |      |       |    |     |      |      |     |      |

|  |                              |                           |                      |
|--|------------------------------|---------------------------|----------------------|
| SCALE NOTED  | DES: P. L. GORANSON 04/07/05 | DRW: G. H. JONES 04/07/05 | CHK: S. PARSON 05/05 |
| TOLERANCES UNLESS OTHERWISE SPECIFIED                            |                              |                           |                      |
| FRACTIONS: .   |                              |                           |                      |
| XX DECIMALS: ±.03  |                              |                           |                      |
| XXX DECIMALS: ±.005  |                              |                           |                      |
| ANGLES: ±0°15'   |                              |                           |                      |
| BREAK SHARP EDGES OR MAX FINISH: .125 UNLESS OTHERWISE SPECIFIED |                              |                           |                      |

|                          |             |               |           |    |     |    |      |       |
|--------------------------|-------------|---------------|-----------|----|-----|----|------|-------|
| PPPL DRFT J SIEGEL 10/05 | VERSION NO. | PLANT         | BLDG      | FL | SHT | OF | TYPE | CLASS |
|                          | 1           | X10           | 5700      | 3  | 1   | 1  | B    | U     |
| DRAWING APPROVALS        | DATE        | RELEASE LEVEL | SE123-164 |    |     |    |      |       |
|                          |             | Fabrication   |           |    |     |    |      |       |

Oak Ridge National Laboratory managed for the DEPARTMENT OF ENERGY under U.S. GOVERNMENT CONTRACT DE-AC05-00OR22725 UT-BATTELLE, LLC. Oak Ridge, Tennessee  
PROJECT NAME: NATIONAL COMPACT STELLARATOR EXPERIMENT  
VACUUM VESSEL HEATING/COOLING CRYOSTAT INTERFACE FLANGE WELDMENT

SE123-164