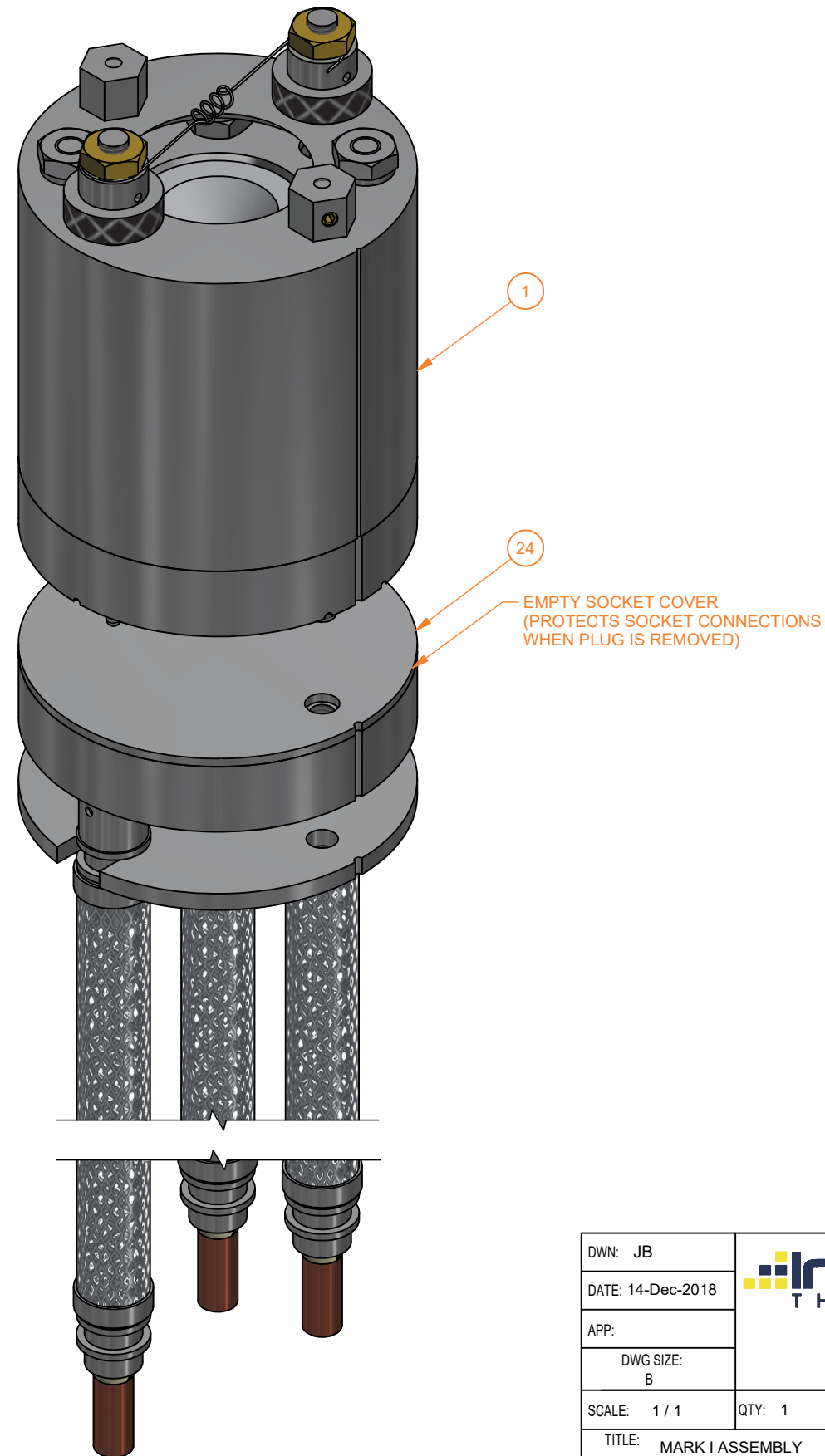
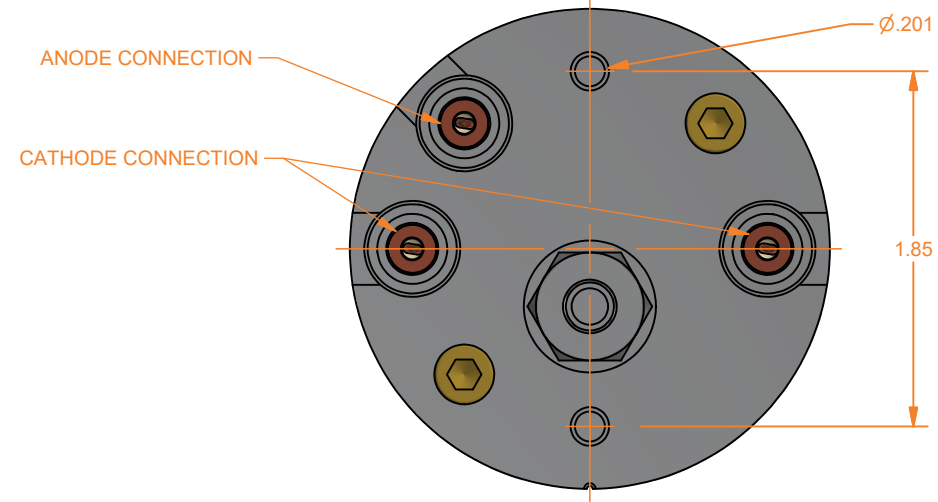
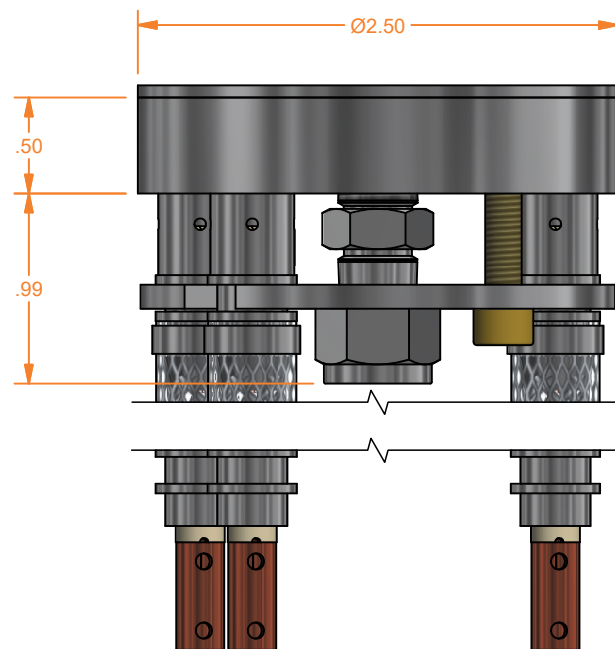
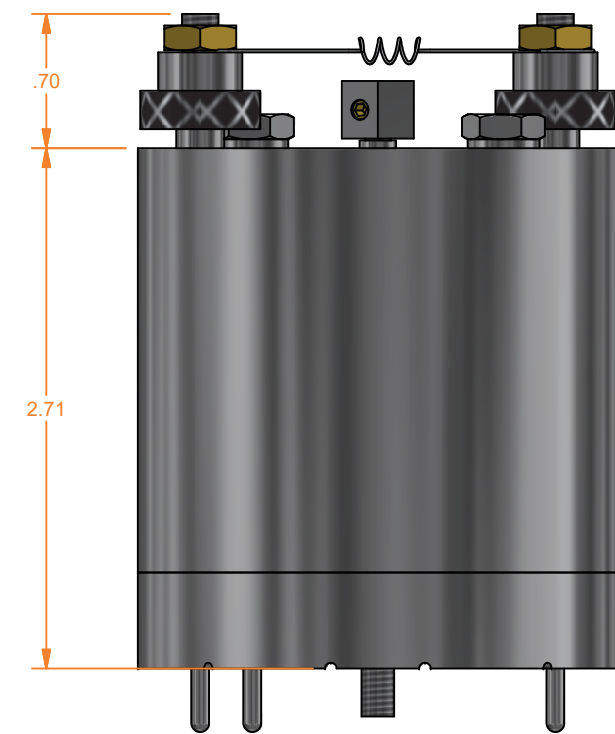
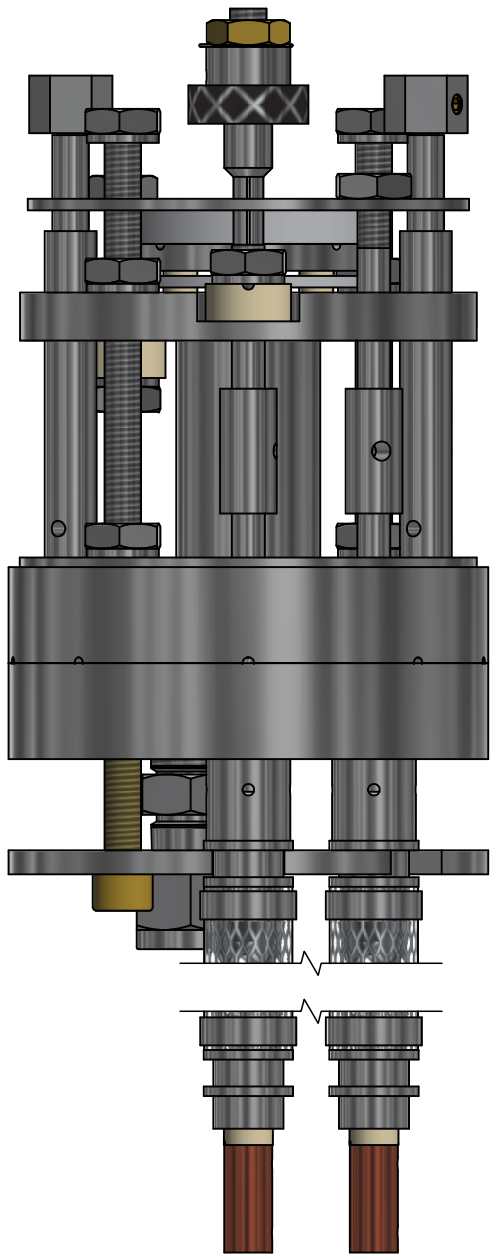
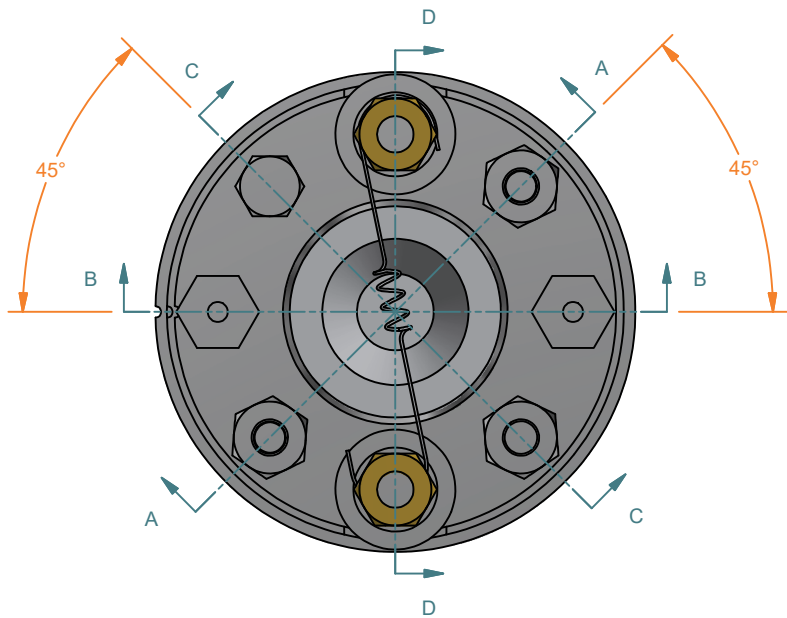
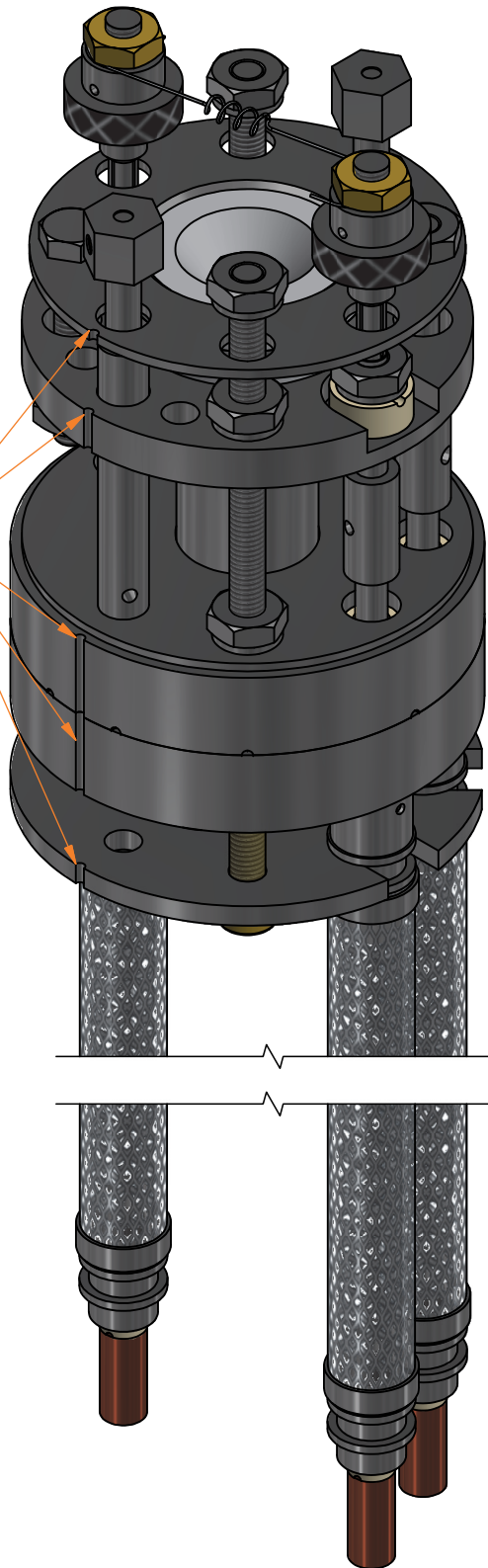




| DWN: JB                |  |         | THE INFORMATION IS CONFIDENTIAL ON THIS DRAWING WHICH IS THE PROPERTY OF INTLVAC AND MUST NOT BE COPIED OR DISCLOSED TO A THIRD PARTY.                              |        | THIRD ANGLE                                                                           |         |      |         |                                              |
|------------------------|---------------------------------------------------------------------------------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|---------------------------------------------------------------------------------------|---------|------|---------|----------------------------------------------|
| DATE: 14-Dec-2018      |                                                                                       |         | UNLESS OTHERWISE SPECIFIED, THE DIMENSIONAL TOLERANCES ARE:                                                                                                         |        |                                                                                       |         |      |         |                                              |
| APP:                   |                                                                                       |         | <table><tr><th>FRAC.</th><th>DECIMAL</th><th>ANG.</th></tr><tr><td>± 1/64"</td><td>.X ± 0.010"<br/>.XX ± 0.005"<br/>.XXX ± 0.001"</td><td>± 0.30°</td></tr></table> | FRAC.  |                                                                                       | DECIMAL | ANG. | ± 1/64" | .X ± 0.010"<br>.XX ± 0.005"<br>.XXX ± 0.001" |
| FRAC.                  |                                                                                       |         | DECIMAL                                                                                                                                                             | ANG.   |                                                                                       |         |      |         |                                              |
| ± 1/64"                | .X ± 0.010"<br>.XX ± 0.005"<br>.XXX ± 0.001"                                          | ± 0.30° |                                                                                                                                                                     |        |                                                                                       |         |      |         |                                              |
| DWG SIZE: B            | SURFACE ROUGHNESS 32✓                                                                 |         |                                                                                                                                                                     |        |                                                                                       |         |      |         |                                              |
| SCALE: 1 / 1           | QTY: 1                                                                                | MAT'L:  |                                                                                                                                                                     |        |  |         |      |         |                                              |
| TITLE: MARK I ASSEMBLY |                                                                                       |         |                                                                                                                                                                     |        |                                                                                       |         |      |         |                                              |
| REF #                  | DWG # MARK_I                                                                          |         | SHEET. 1 / 3                                                                                                                                                        | REV. 0 |  |         |      |         |                                              |



ALIGNMENT  
GROOVES



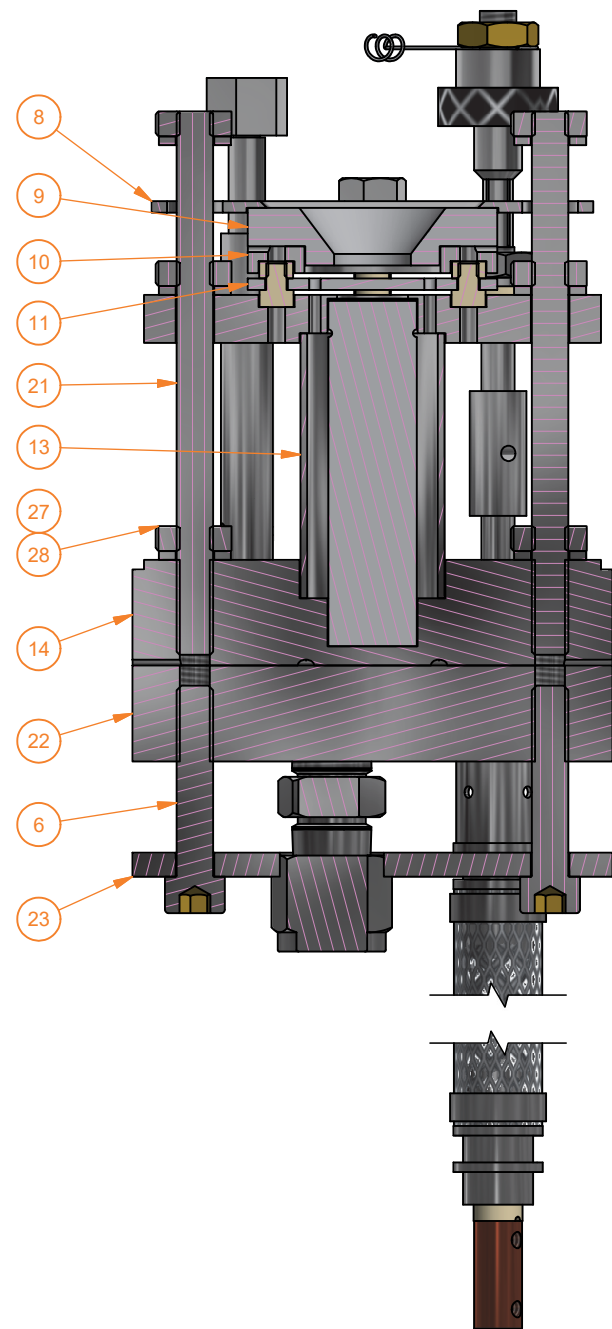
| PARTS LIST |     |                       |                                                 |               |
|------------|-----|-----------------------|-------------------------------------------------|---------------|
| ITEM       | QTY | PART NUMBER           | DESCRIPTION                                     | MATERIAL      |
| 1          | 1   | A19368_(B20479)       | MARK I SHELL                                    | 410 SS        |
| 2          | 3   | B16945                | CONNECTOR COVER                                 | 304 SS        |
| 3          | 1   | B29137_(A18026)       | RADIATION SHIELD                                | 303 SS        |
| 4          | 2   | B32257-7_(A21146-7)   | 10-32 NUT, AU PLATED                            | 18-8 SS       |
| 5          | 1   | B41385_(A30274)       | CATHODE FILAMENT                                | Tungsten      |
| 6          | 2   | C28501-6_(B17490-6)   | #10-32 X 1" SHCS, AU PLATED                     | 18-8 SS       |
| 7          | 2   | C28501-10_(B17490-10) | 6-32 SET SCREW, AU PLATED                       | 18-8 SS       |
| 8          | 1   | C29113_(B18002)       | FRONT ANODE SUPPORT                             | 304 SS        |
| 9          | 1   | C29114_(B18003)       | ANODE, VARIOUS MATERIALS                        |               |
| 10         | 1   | C29115_(B18004)       | BACK ANODE SUPPORT                              | 304 SS        |
| 11         | 1   | SEE TABLE BELOW       | GAS DISTRIBUTOR, VARIOUS MATERIALS              |               |
| 12         | 1   | C29117_(B18006)       | SUPPORT PLATE                                   | 304 SS        |
| 13         | 1   | C29118_(B18007)       | MANIFOLD                                        | 304 SS        |
| 14         | 1   | C29119_(B18008)       | PLUG                                            | 410 SS        |
| 15         | 1   | C29120_(B18019)       | MAGNET                                          | ALNICO 5      |
| 16         | 2   | C29121_(B18010)       | HOLD DOWN ROD                                   | 303 SS        |
| 17         | 2   | C29122_(B18011)       | HOLD DOWN KNOB                                  | 304 SS        |
| 18         | 2   | C29123_(B18012)       | CATHODE CONNECTION                              | 303 SS        |
| 19         | 2   | C29124_(B18013)       | CATHODE SUPPORTS                                | 304 SS        |
| 20         | 1   | C29125_(B18014)       | ANODE CONNECTOR                                 | 303 SS        |
| 21         | 2   | C29126_(B18015)       | TIE ROD                                         | 303 SS        |
| 22         | 1   | C29128_(B18017)       | SOCKET                                          | 304 SS        |
| 23         | 1   | C29129_(B18018)       | CABLE RETAINER                                  | 304 SS        |
| 24         | 1   | C29133_(B18022)       | SOCKET COVER                                    | 304 SS        |
| 25         | 3   | C30068_(B29957)       | MARK I VACUUM CABLE ASSEMBLY                    |               |
| 26         | 9   | 10-32M                | #10 INSULATOR, 99% ALUMINUM OXIDE, 16RMS        | Alumina AL2O3 |
| 27         | 12  | 10-FL                 | #10 FLAT WASHER                                 | 18-8 SS       |
| 28         | 13  | 1032-H                | #10-32 HEX NUT                                  | 18-8 SS       |
| 29         | 1   | SS-400-1-2            | 1/4OD TUBE TO 1/8 NPT MALE CONNECTOR            | 316 SS        |
| 30         | 1   | 10-32 UNF x 1.25      | Plain Hex Head Machine Screw                    | SS            |
| 31         | 8   | 1451001               | RUBY SAPPHIRE BALL, DIA. 1/8",GRADE 25, (8/PKG) | Sapphire      |

| GAS DISTRIBUTOR OPTIONS |                               |                               |
|-------------------------|-------------------------------|-------------------------------|
| PART NUMBER             | MATERIAL                      | NOTES                         |
| C29114-1                | PYROLYTIC GRAPHITE            | TO BE USED WITH SAPHIRE BALLS |
| C29114-2                | WROUGHT (NON MAGNETIC) 304 SS | TO BE USED WITH SAPHIRE BALLS |
| C29114-3                | TITANIUM, 99.8% PURE          | TO BE USED WITH SAPHIRE BALLS |
| C29116-1AC              | PYROLYTIC GRAPHITE            | COMES WITH CERMIC SPACERS     |
| C29116-3AC              | WROUGHT (NON MAGNETIC) 304 SS | COMES WITH CERMIC SPACERS     |
| C29116-5AC              | TITANIUM, 99.8% PURE          | COMES WITH CERMIC SPACERS     |

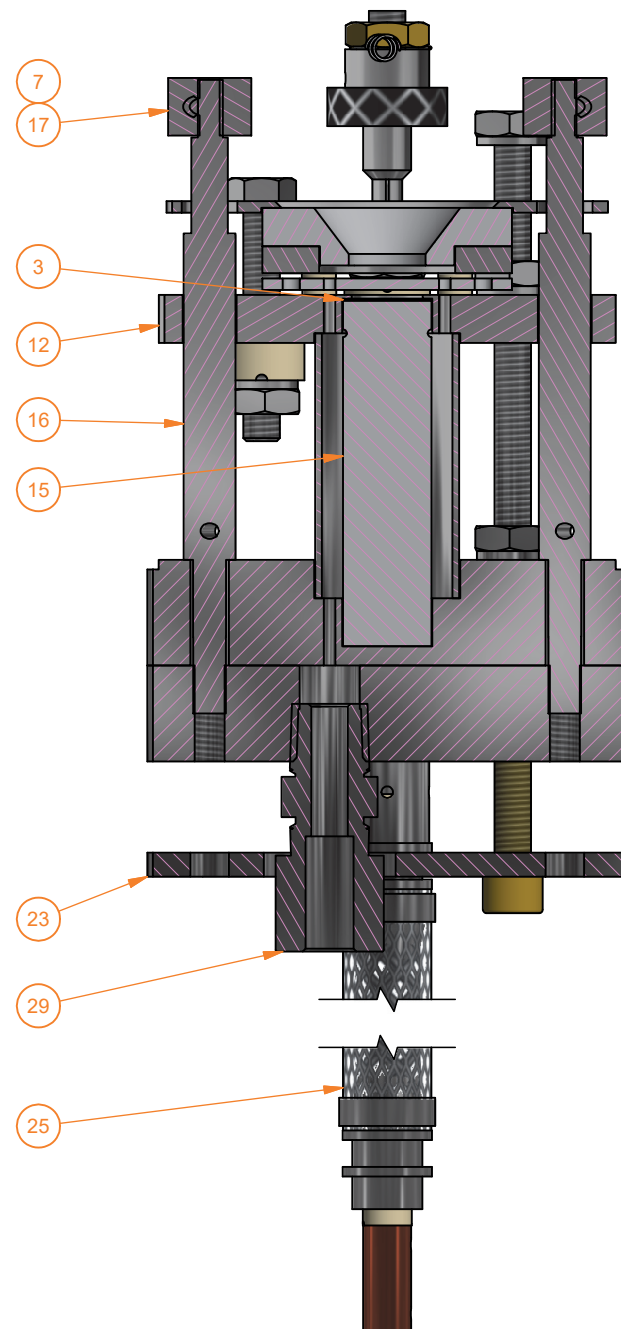
|                                                             |                                                                                       |                |                                                                                                                                        |         |
|-------------------------------------------------------------|---------------------------------------------------------------------------------------|----------------|----------------------------------------------------------------------------------------------------------------------------------------|---------|
| DWN: JB                                                     |  |                | THE INFORMATION IS CONFIDENTIAL ON THIS DRAWING WHICH IS THE PROPERTY OF INTLVAC AND MUST NOT BE COPIED OR DISCLOSED TO A THIRD PARTY. |         |
| UNLESS OTHERWISE SPECIFIED, THE DIMENSIONAL TOLERANCES ARE: |                                                                                       |                |                                                                                                                                        |         |
| FRAC.                                                       |                                                                                       |                | DECIMAL                                                                                                                                | ANG.    |
| ± 1/64"                                                     |                                                                                       |                | X ± 0.010"<br>XX ± 0.005"<br>XXX ± 0.001"                                                                                              | ± 0.30' |
| DWG SIZE: B                                                 |                                                                                       |                | SURFACE ROUGHNESS 32/√                                                                                                                 |         |
| SCALE: 1 / 1                                                | QTY: 1                                                                                | MAT'L: SEE BOM |                                                                                                                                        |         |
| TITLE: MARK I ASSEMBLY                                      |                                                                                       |                |                                                                                                                                        |         |
| REF #                                                       | DWG # MARK_I                                                                          |                | SHEET. 2 / 3                                                                                                                           | REV. 0  |

THIRD ANGLE

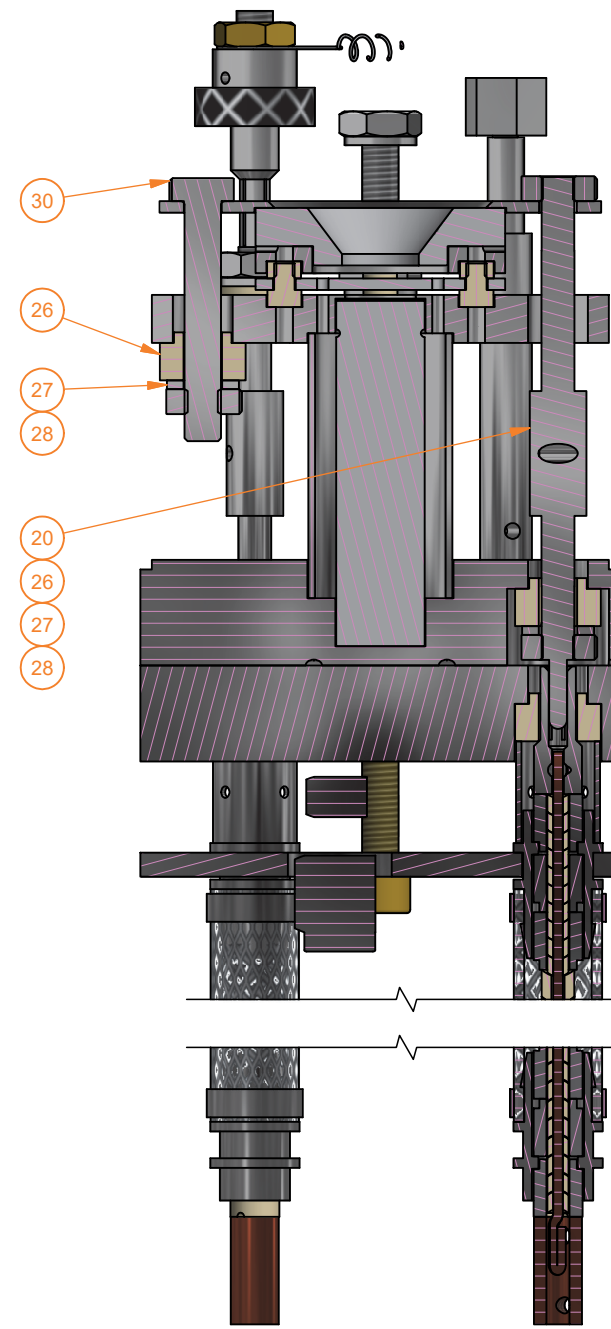
  

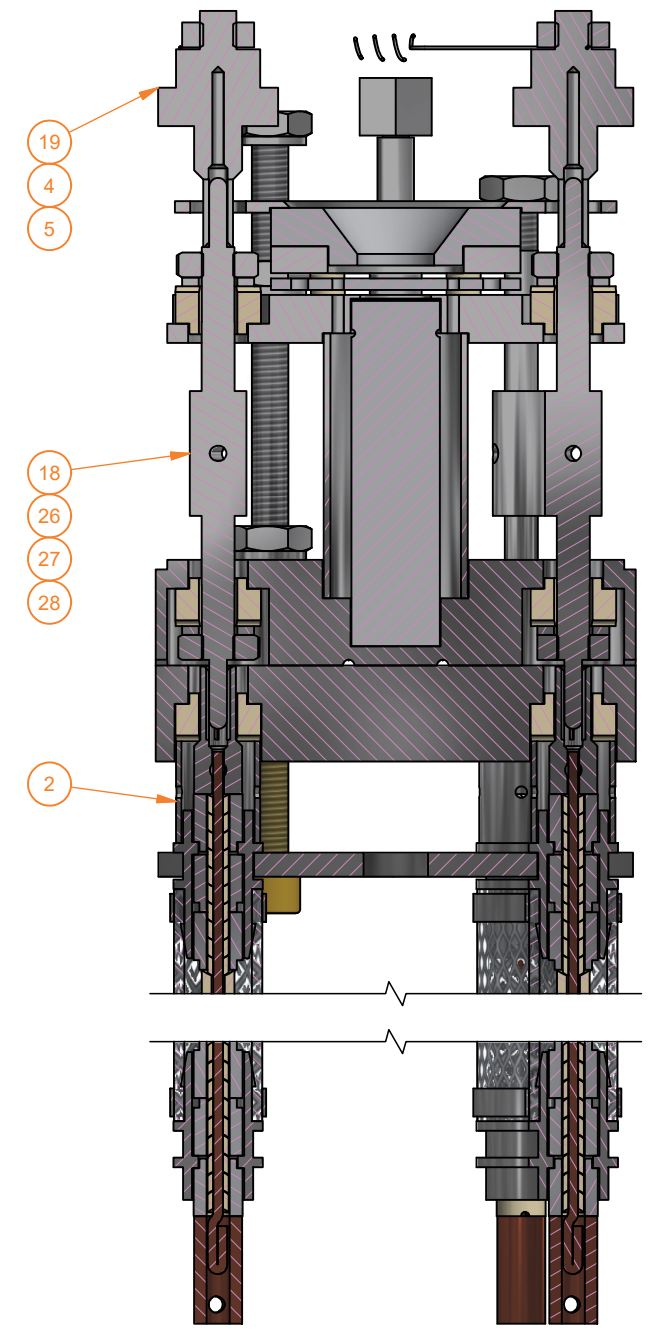
SECTION A-A  
SCALE 1 / 1



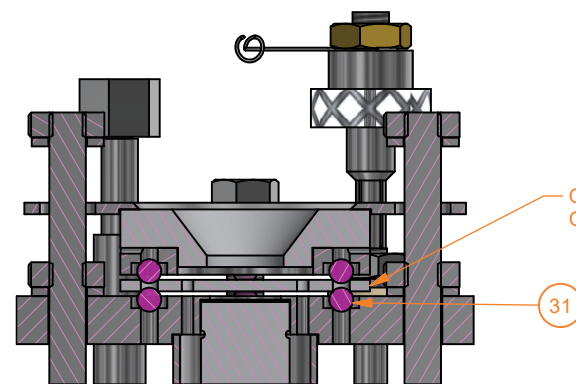
SECTION B-B  
SCALE 1 / 1



SECTION C-C  
SCALE 1 / 1



SECTION D-D  
SCALE 1 / 1



OPTION:  
GAS DISTRIBUTOR WITH SAPPHIRE BALLS

|                        |                                                                                       |        |                                                                                                                                        |                                                                                                         |                                                                                                                                                                                |  |
|------------------------|---------------------------------------------------------------------------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| DWN: JB                |  |        | THE INFORMATION IS CONFIDENTIAL ON THIS DRAWING WHICH IS THE PROPERTY OF INTIVAC AND MUST NOT BE COPIED OR DISCLOSED TO A THIRD PARTY. |                                                                                                         |                                                                                                                                                                                |  |
| DATE: 14-Dec-2018      |                                                                                       |        | UNLESS OTHERWISE SPECIFIED, THE DIMENSIONAL TOLERANCES ARE:                                                                            |                                                                                                         |                                                                                                                                                                                |  |
| APP:                   |                                                                                       |        | FRAC.                                                                                                                                  | DECIMAL                                                                                                 | ANG.                                                                                                                                                                           |  |
| DWG SIZE: B            |                                                                                       |        | ± 1/64"                                                                                                                                | .X ± 0.010"<br>.XX ± 0.005"<br>.XXX ± 0.001"                                                            | ± 0.30'                                                                                                                                                                        |  |
| SCALE: 1 / 1           | QTY: 1                                                                                | MAT'L: |                                                                                                                                        | SURFACE ROUGHNESS  |                                                                                                                                                                                |  |
| TITLE: MARK I ASSEMBLY |                                                                                       |        |                                                                                                                                        |                                                                                                         | <br> |  |
| REF #                  | DWG # MARK_I                                                                          |        | SHEET. 3 / 3                                                                                                                           | REV. 0                                                                                                  |                                                                                                                                                                                |  |

|                                                             |                                             |         |
|-------------------------------------------------------------|---------------------------------------------|---------|
| UNLESS OTHERWISE SPECIFIED, THE DIMENSIONAL TOLERANCES ARE: |                                             |         |
| FRAC.                                                       | DECIMAL                                     | ANG.    |
| ± 1/64"                                                     | X ± 0.010"<br>.XX ± 0.005"<br>.XXX ± 0.001" | ± 0.30° |
| SURFACE ROUGHNESS 32                                        |                                             |         |