

| ITEM NO. | PART NUMBER                             | DESCRIPTION   | QTY. |
|----------|---|---|------|
| 1        | Pressure Vessel                         | Where the burn is conducted, must be able to withstand high pressures       | 1    |
| 2        | Strand Landing Platform                 | Where the test strand is connected to the support wire                      | 1    |
| 3        | Strand                                  | Small 3inx0.25in cast of propellant meant to burn inside the vessel         | 1    |
| 4        | Strand Support Wire                     | Attached to 3/4in NPT plug to be able to be taken out of vessel             | 1    |
| 5        | 3/4in NPT Pipe Cross                    | Expands number of connection points to vessel                               | 1    |
| 6        | 3/4in NPT Plug with 1/4in Counterbore   | Attaches strand support wire to plug to be able to get strand out of vessel | 1    |
| 7        | 3/4in NPT Plug with 1/4in NPT Thru Hole | For Pressure Transducer and Pressure Relief Valve to connect to vessel      | 2    |
| 8        | Pressure Transducer                     | Measures internal pressure of vessel when strand is burned                  | 1    |
| 9        | 3/4in NPT Pipe Nipple                   | Attaches two female NPT threads, from the cross to the vessel               | 3    |
| 10       | Pressure Relief Valve                   | Pressure release valve to expell excess vessel pressure                     | 1    |
| 11       | 4513K44                                 | High-Pressure Steel Pipe Fitting  | 1    |
| 12       | 47865K24                                | Brass On/Off Valve  | 1    |

SECTION A-A  
SCALE 1 : 3

|  |  |           |  |                                    |  |                                |  |          |  |
|--|--|-----------|--|------------------------------------|--|--------------------------------|--|----------|--|
| UNLESS OTHERWISE SPECIFIED:<br>DIMENSIONS ARE IN MILLIMETERS |  | FINISH:   |  | DEBURR AND<br>BREAK SHARP<br>EDGES |  | DO NOT SCALE DRAWING           |  | REVISION |  |
| DRAWN<br>RLD <3  |  | SIGNATURE |  | DATE<br>11/30/23                   |  | TITLE:<br><b>Strand Burner</b> |  |          |  |
| CHK'D  |  |           |  |                                    |  | DWG NO.                        |  |          |  |
| APPV'D   |  |           |  |                                    |  | A3                             |  |          |  |
| MFG  |  |           |  |                                    |  | SCALE: 1:3                     |  |          |  |
| Q.A  |  |           |  | MATERIAL:                          |  | SHEET 1 OF 1                   |  |          |  |
|  |  |           |  | WEIGHT:                            |  |                                |  |          |  |

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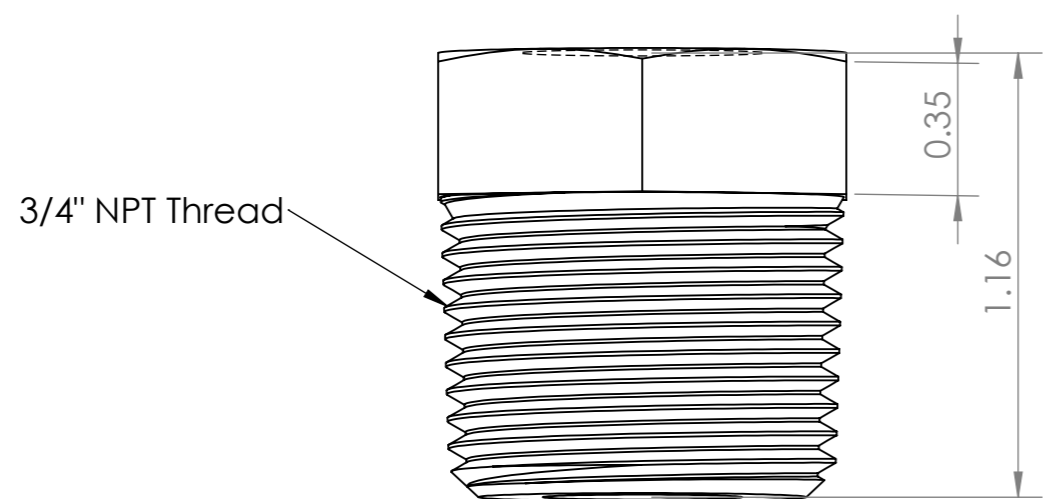
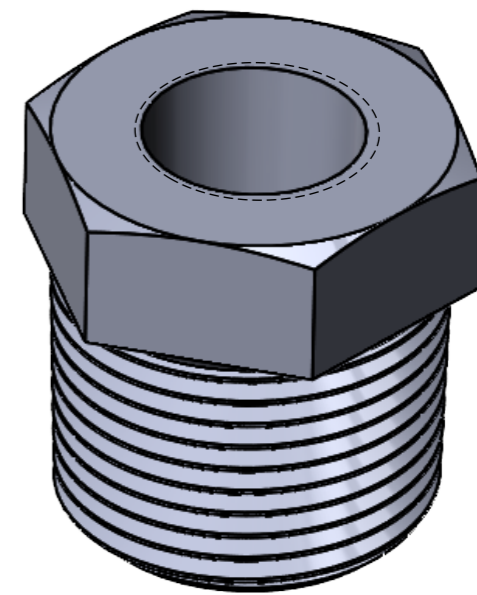
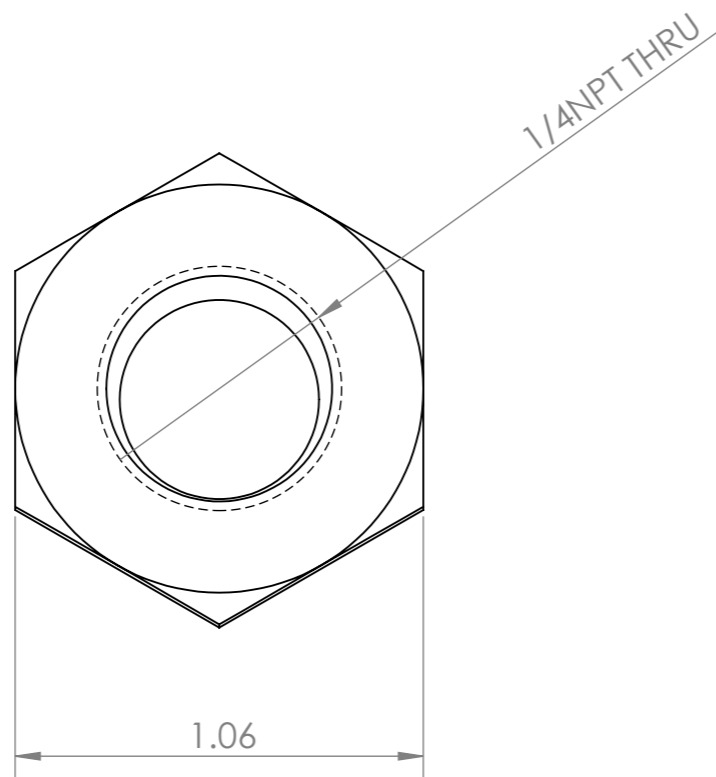
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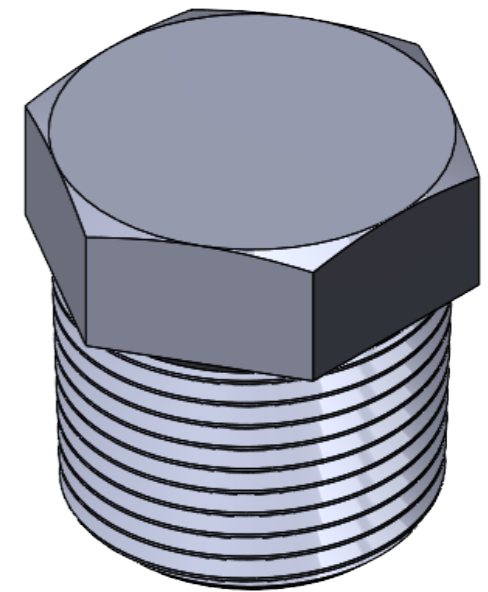
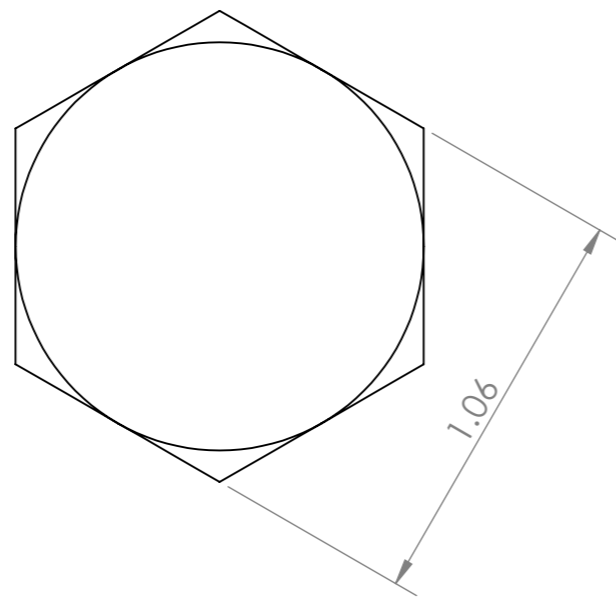
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|--|--|------|--|-----------|--|------------------------------------|--|--|--|----------|--|
| UNLESS OTHERWISE SPECIFIED:<br>DIMENSIONS ARE IN MILLIMETERS |  |      |  | FINISH:   |  | DEBURR AND<br>BREAK SHARP<br>EDGES |  | DO NOT SCALE DRAWING   |  | REVISION |  |
| SURFACE FINISH:  |  |      |  |           |  |                                    |  | TITLE:<br><b>0.75" NPT Plug With<br/>                 1/4" NPT Thru Hole</b> |  |          |  |
| TOLERANCES:  |  |      |  |           |  |                                    |  |  |  |          |  |
| LINEAR:  |  |      |  |           |  |                                    |  |  |  |          |  |
| ANGULAR:   |  |      |  |           |  |                                    |  |  |  |          |  |
|  |  |      |  |           |  |                                    |  |  |  |          |  |
| DRAWN  |  | NAME |  | SIGNATURE |  | DATE                               |  | DWG NO.  |  |          |  |
| CHK'D  |  | RLD  |  |           |  | 12/1/23                            |  | A3   |  |          |  |
| APPV'D   |  |      |  |           |  |                                    |  | SCALE:2:1  |  |          |  |
| MFG  |  |      |  |           |  |                                    |  | SHEET 1 OF 1   |  |          |  |
| Q.A  |  |      |  |           |  |                                    |  | MATERIAL:<br>Steel   |  |          |  |
|  |  |      |  |           |  |                                    |  | WEIGHT:  |  |          |  |

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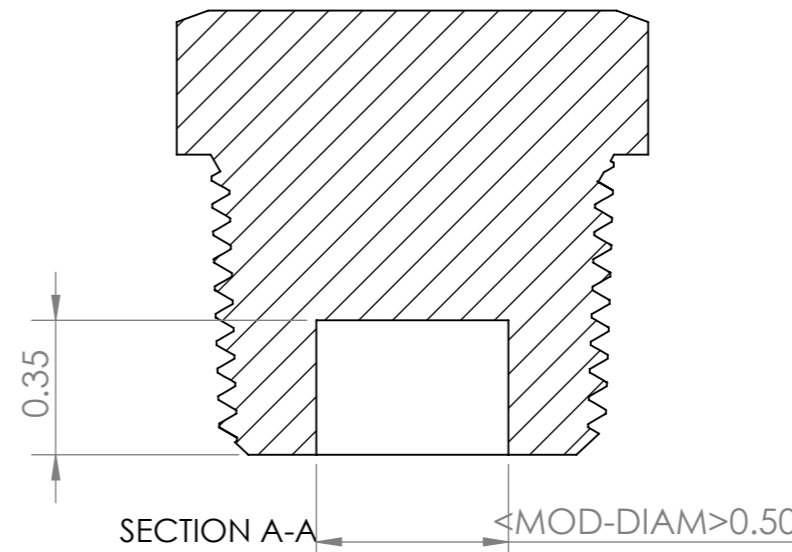
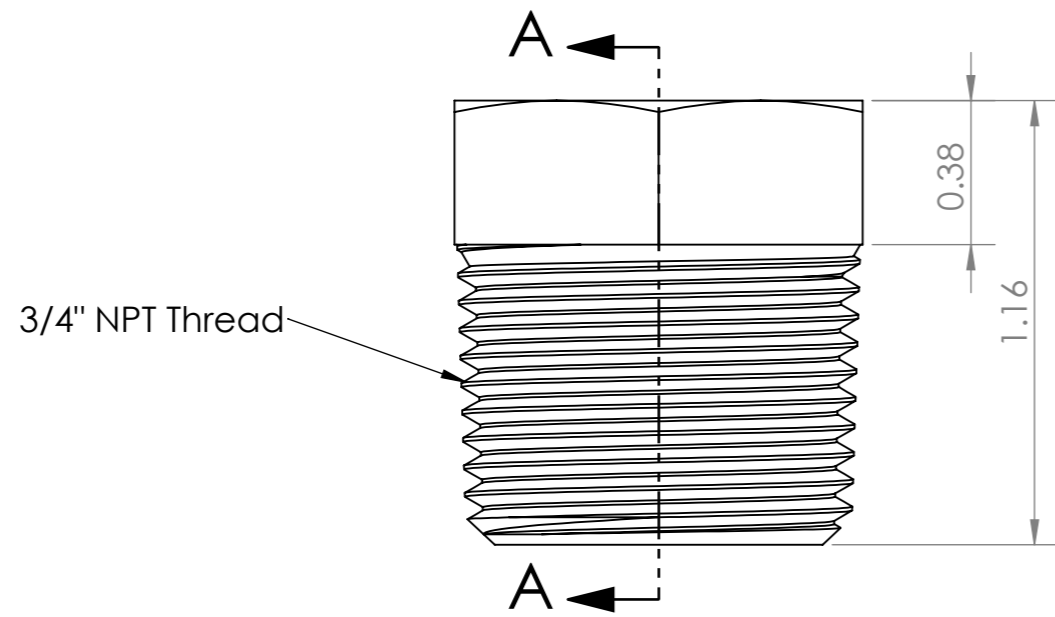


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| UNLESS OTHERWISE SPECIFIED:<br>DIMENSIONS ARE IN MILLIMETERS<br>SURFACE FINISH:<br>TOLERANCES:<br>LINEAR:<br>ANGULAR: |  |  |  | FINISH: |  | DEBURR AND<br>BREAK SHARP<br>EDGES |  | DO NOT SCALE DRAWING |  | REVISION                                  |  |
| DRAWN   |  |  |  | NAME    |  | SIGNATURE                          |  | DATE                 |  | TITLE:                                    |  |
| CHK'D   |  |  |  | RLD     |  |                                    |  | 12/1/23              |  | 0.75" NPT Plug With<br>Bottom Counterbore |  |
| APPV'D  |  |  |  |         |  |                                    |  |                      |  | DWG NO.                                   |  |
| MFG   |  |  |  |         |  |                                    |  |                      |  | A3  |  |
| Q.A   |  |  |  |         |  |                                    |  | MATERIAL:<br>Steel   |  | SHEET 1 OF 1                              |  |
|   |  |  |  |         |  |                                    |  | WEIGHT:              |  | SCALE:2:1                                 |  |

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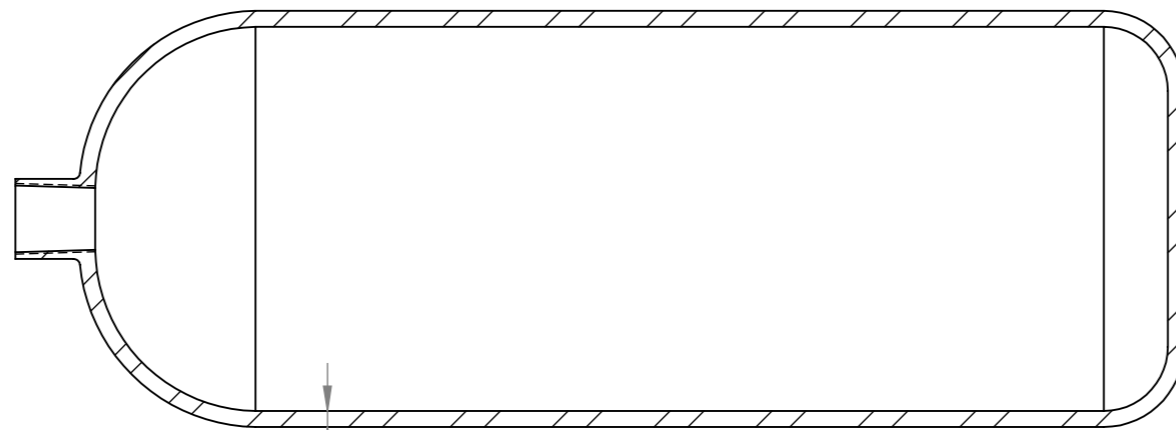
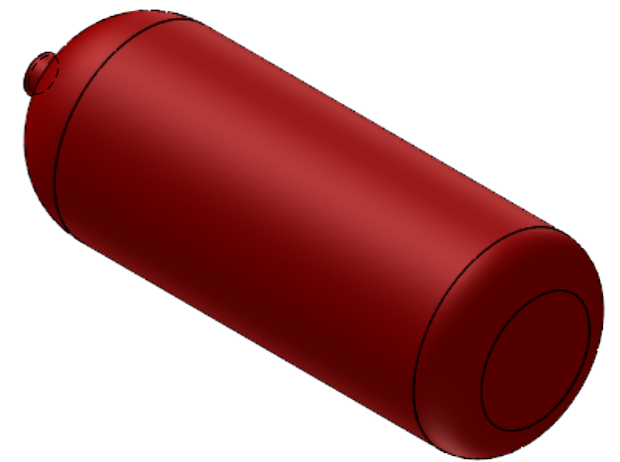
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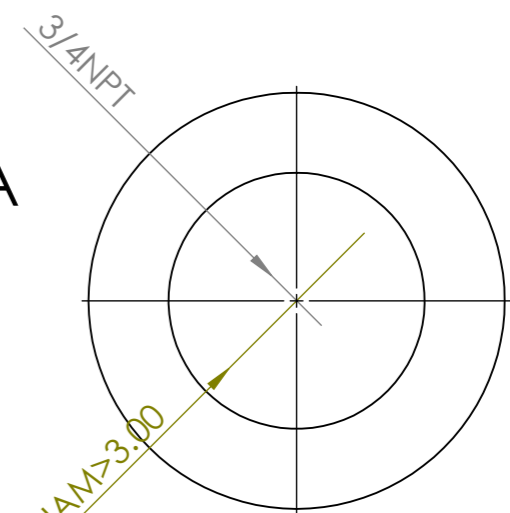
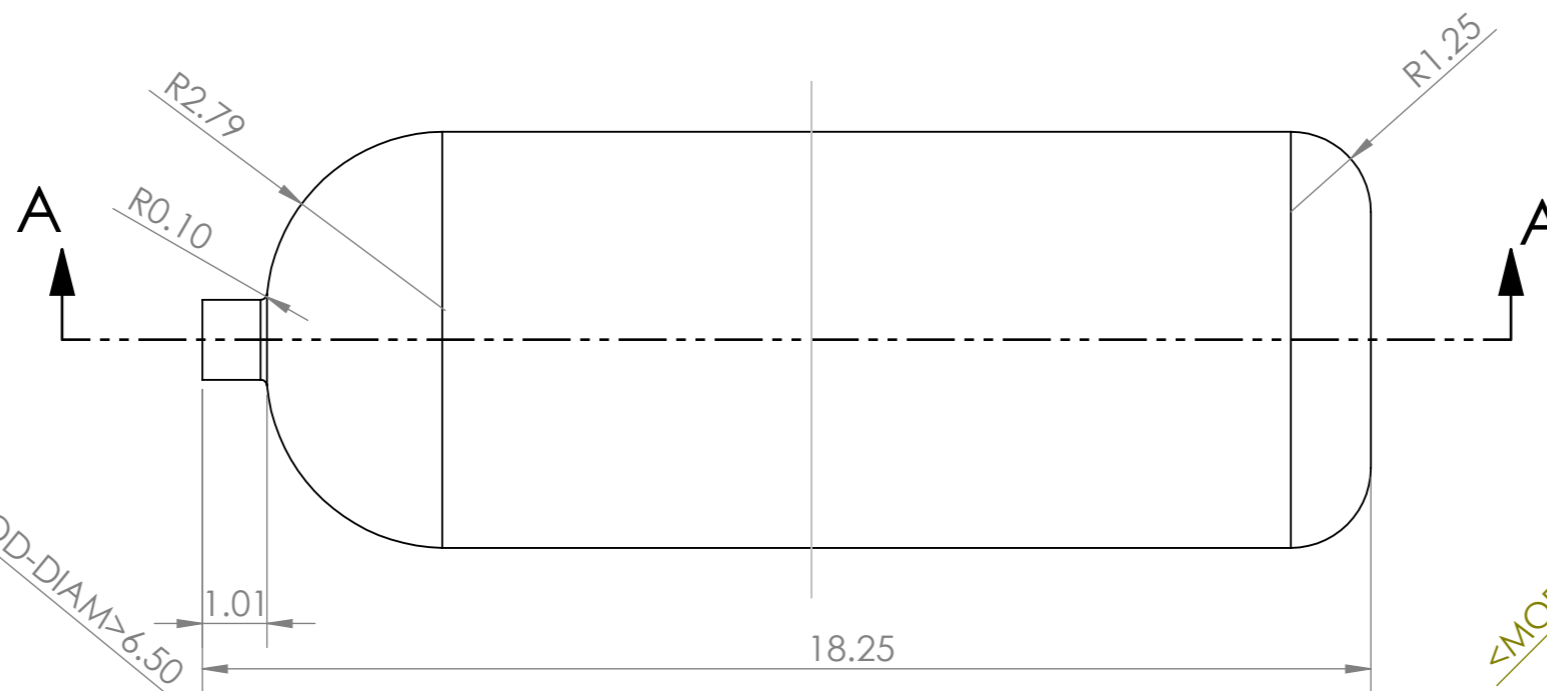
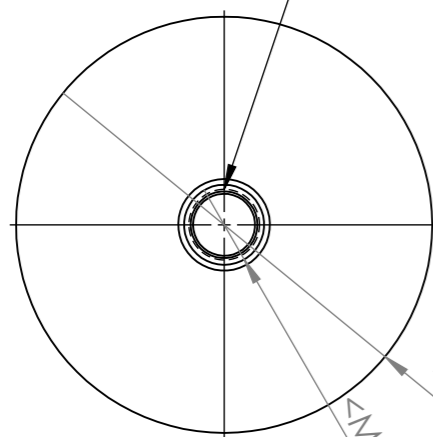
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SECTION A-A  
SCALE 1 : 3

3/4 NPT Tapped Hole



<MOD-DIAM>1.25  
<MOD-DIAM>6.50

<MOD-DIAM>3.00

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|---|--|--|-----------|--|------------------------------------|--|--|--|--------------|--|
| UNLESS OTHERWISE SPECIFIED:<br>DIMENSIONS ARE IN MILLIMETERS<br>SURFACE FINISH:<br>TOLERANCES:<br>LINEAR:<br>ANGULAR: |  |  | FINISH:   |  | DEBURR AND<br>BREAK SHARP<br>EDGES |  | DO NOT SCALE DRAWING   |  | REVISION     |  |
| DRAWN<br>RLD  |  |  | SIGNATURE |  | DATE<br>12/1/23                    |  | TITLE:<br>Pressure Vessel is<br>conducting must<br>be able to<br>withstand high<br>pressures |  | A3           |  |
| CHK'D   |  |  |           |  |                                    |  | DWG NO.  |  | SHEET 1 OF 1 |  |
| APPV'D  |  |  |           |  |                                    |  | SCALE: 1:3   |  |              |  |
| MFG   |  |  |           |  | MATERIAL:                          |  |  |  |              |  |
| Q.A   |  |  |           |  | WEIGHT:                            |  |  |  |              |  |

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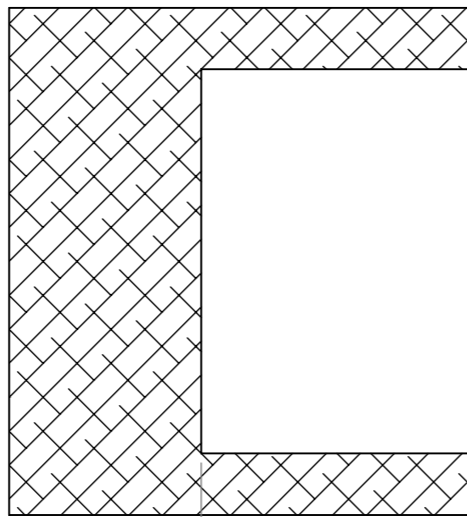
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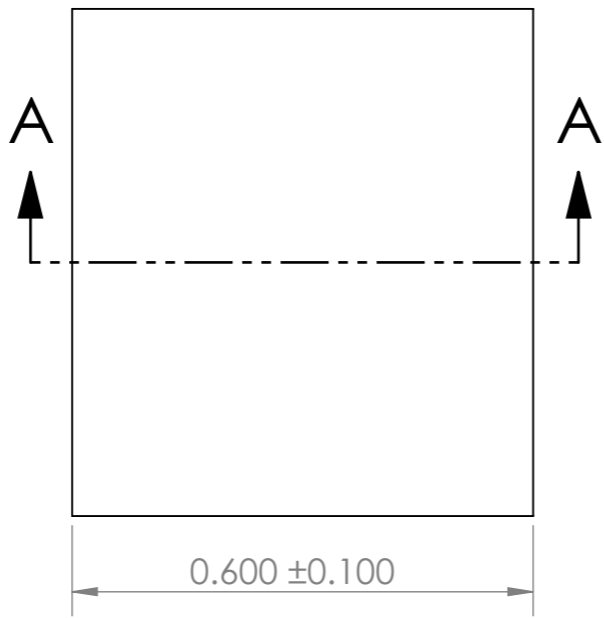
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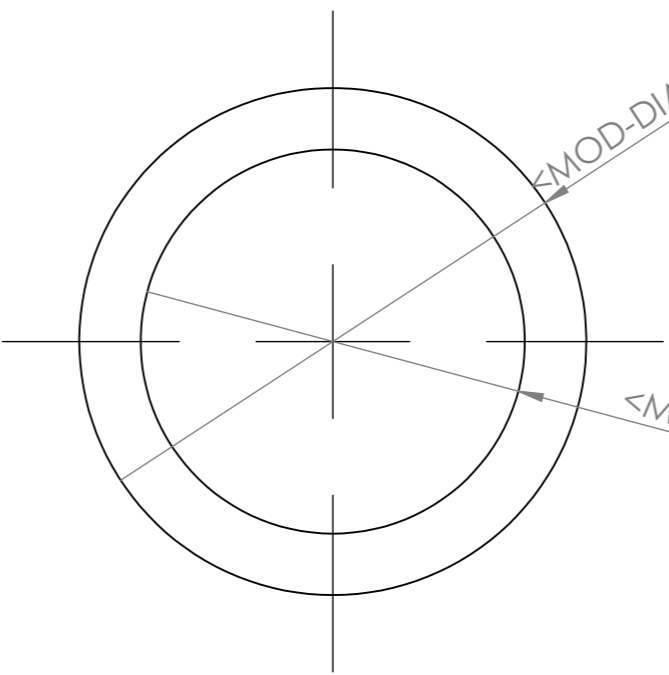


SECTION A-A

0.350 ± 0.050

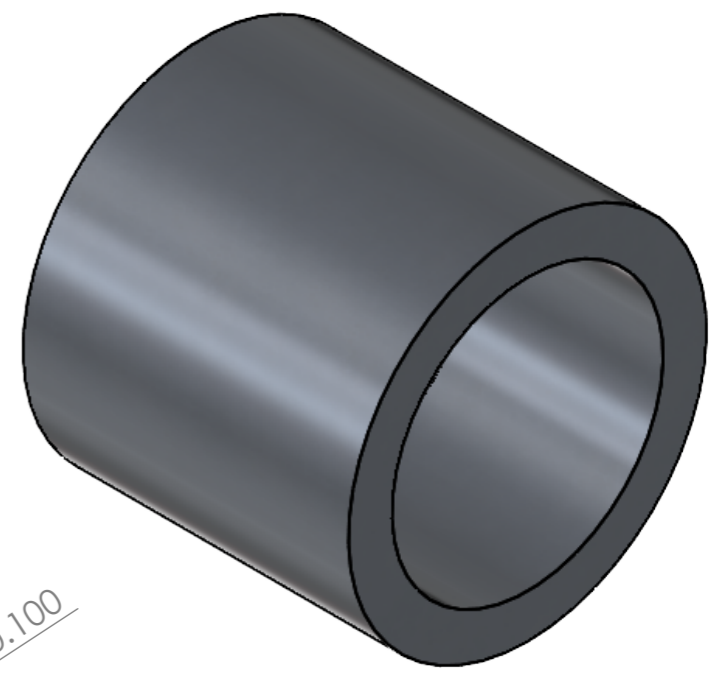


0.600 ± 0.100



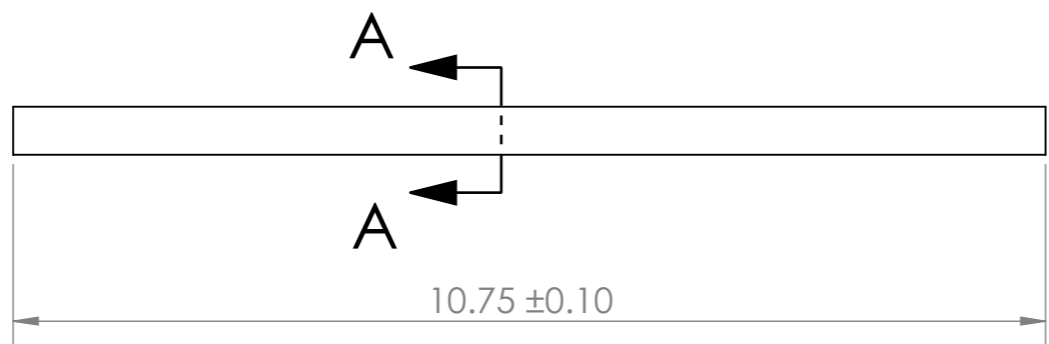
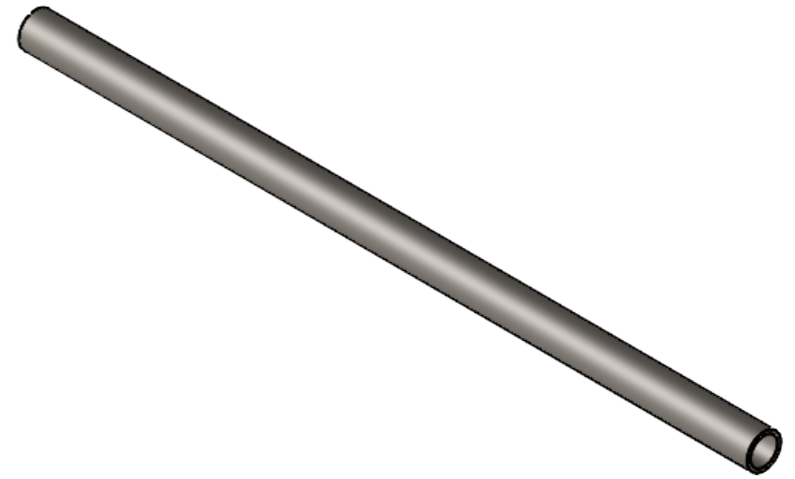
<MOD-DIAM>0.660 ± 0.100

<MOD-DIAM>0.500 +0.005 / 0.000



|  |      |           |         |           |  |                                    |  |  |  |          |  |
|--|------|-----------|---------|-----------|--|------------------------------------|--|--|--|----------|--|
| UNLESS OTHERWISE SPECIFIED:<br>DIMENSIONS ARE IN MILLIMETERS |      |           |         | FINISH:   |  | DEBURR AND<br>BREAK SHARP<br>EDGES |  | DO NOT SCALE DRAWING   |  | REVISION |  |
| SURFACE FINISH:  |      |           |         |           |  |                                    |  | TITLE:<br><h1 style="text-align: center;">Strand Landing Platform</h1>             |  |          |  |
| TOLERANCES:  |      |           |         |           |  |                                    |  |  |  |          |  |
| LINEAR:  |      |           |         |           |  |                                    |  |  |  |          |  |
| ANGULAR:   |      |           |         |           |  |                                    |  |  |  |          |  |
|  |      |           |         |           |  |                                    |  |  |  |          |  |
|  | NAME | SIGNATURE | DATE    |           |  | TITLE:                             |  | DWG NO. <div style="float: right; border: 1px solid black; padding: 2px;">A3</div> |  |          |  |
| DRAWN  | RLD  |           | 12/1/23 |           |  |                                    |  |  |  |          |  |
| CHK'D  |      |           |         |           |  |                                    |  |  |  |          |  |
| APPV'D   |      |           |         |           |  |                                    |  |  |  |          |  |
| MFG  |      |           |         |           |  |                                    |  |  |  |          |  |
| Q.A  |      |           |         | MATERIAL: |  |                                    |  |  |  |          |  |
|  |      |           |         |           |  |                                    |  |  |  |          |  |
|  |      |           |         | WEIGHT:   |  | SCALE:4:1                          |  | SHEET 1 OF 1   |  |          |  |

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SECTION A-A

|   |  |  |  |         |  |                                    |  |                      |  |                     |  |
|---|--|--|--|---------|--|------------------------------------|--|----------------------|--|---------------------|--|
| UNLESS OTHERWISE SPECIFIED:<br>DIMENSIONS ARE IN MILLIMETERS<br>SURFACE FINISH:<br>TOLERANCES:<br>LINEAR:<br>ANGULAR: |  |  |  | FINISH: |  | DEBURR AND<br>BREAK SHARP<br>EDGES |  | DO NOT SCALE DRAWING |  | REVISION            |  |
| DRAWN   |  |  |  | NAME    |  | SIGNATURE                          |  | DATE                 |  | TITLE:              |  |
| CHK'D   |  |  |  | RLD     |  |                                    |  | 12/1/23              |  | Strand Support Wire |  |
| APPV'D  |  |  |  |         |  |                                    |  |                      |  | DWG NO.             |  |
| MFG   |  |  |  |         |  |                                    |  |                      |  | A3                  |  |
| Q.A   |  |  |  |         |  |                                    |  | MATERIAL:            |  | SHEET 1 OF 1        |  |
|   |  |  |  |         |  |                                    |  | WEIGHT:              |  | SCALE:1:2           |  |

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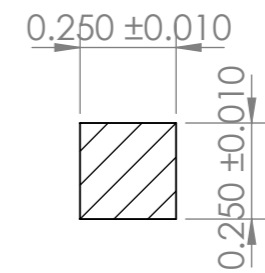
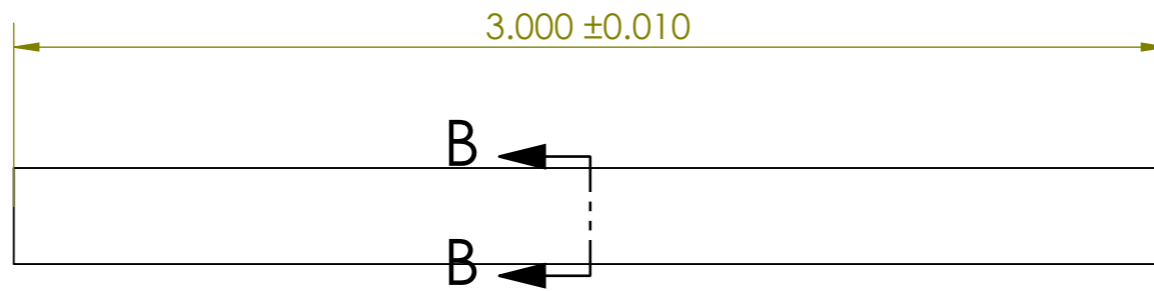
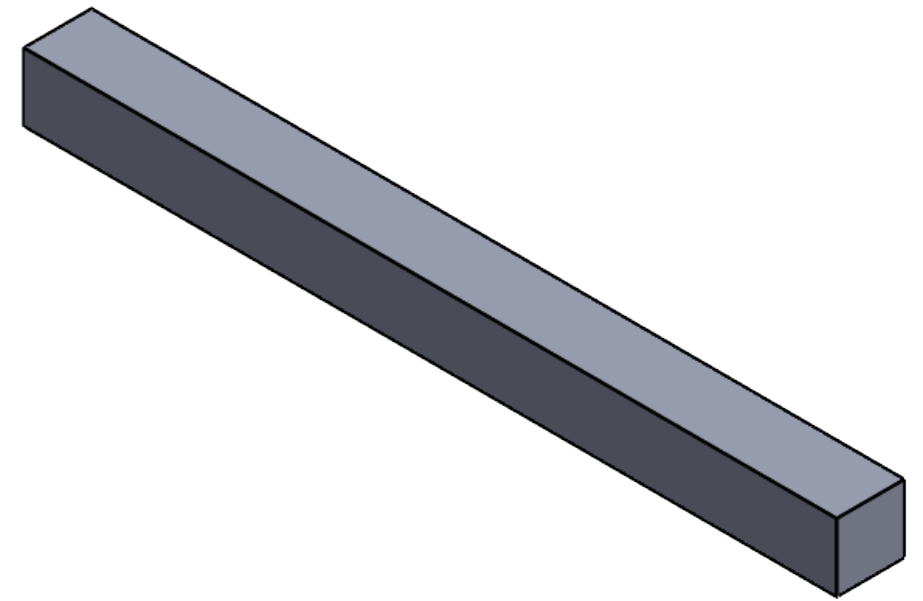
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SECTION B-B

|   |  |     |  |           |  |                                    |  |  |  |          |  |         |  |
|---|--|-----|--|-----------|--|------------------------------------|--|--|--|----------|--|---------|--|
| UNLESS OTHERWISE SPECIFIED:<br>DIMENSIONS ARE IN MILLIMETERS<br>SURFACE FINISH:<br>TOLERANCES:<br>LINEAR:<br>ANGULAR: |  |     |  | FINISH:   |  | DEBURR AND<br>BREAK SHARP<br>EDGES |  | DO NOT SCALE DRAWING   |  | REVISION |  |         |  |
|   |  |     |  |           |  |                                    |  | TITLE:<br><br><h1 style="text-align: center;">Test Strand</h1> |  |          |  |         |  |
| DRAWN   |  | RLD |  | SIGNATURE |  | DATE                               |  |  |  |          |  | 12/1/23 |  |
| CHK'D   |  |     |  |           |  |                                    |  |  |  |          |  |         |  |
| APPV'D  |  |     |  |           |  |                                    |  |  |  |          |  |         |  |
| MFG   |  |     |  |           |  |                                    |  |  |  |          |  |         |  |
| Q.A   |  |     |  | MATERIAL: |  |                                    |  | DWG NO.  |  |          |  |         |  |
|   |  |     |  |           |  |                                    |  | A3   |  |          |  |         |  |
|   |  |     |  | WEIGHT:   |  |                                    |  | SCALE:2:1  |  |          |  |         |  |
|   |  |     |  |           |  |                                    |  | SHEET 1 OF 1   |  |          |  |         |  |

8 7 6 5 4 3 2 1