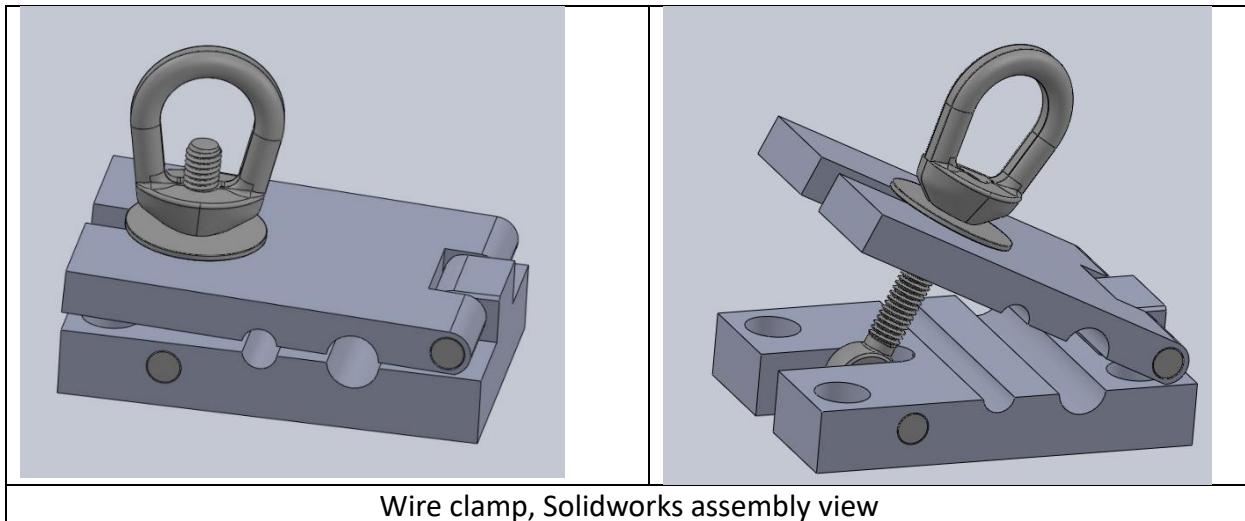


Wire_clamp

Two wire clamps are used to attach the frame to the hydro wire for deployment. The book clamp design consists of an upper and lower plate that are hinged using a stainless-steel dowel. Clamping force is applied by rotating the eye nut onto the threaded rod end bolt. The design includes grooves for two wire sizes (1/4 and 3/8 inch). The dimensions of the clamp body are 3 x 4.5 x 1.25 inches. The clamps are attached to the wire clamp mounts on the frame with four 3/8"-16 stainless steel socket head screws and hex nuts.



Wire clamp, Solidworks assembly view

| Bill of Materials (BOM) | | | | | |
|-------------------------|---|-----------|-----|---------------|---------------|
| # | Description | Unit Cost | Qty | Extended Cost | Supplier |
| 1 | Wire clamp body, lower plate | \$25.50 | 1 | \$102.00 | Xometry |
| 2 | Wire clamp body, upper plate | \$8.51 | 1 | \$51.60 | Xometry |
| 3 | Threaded rod end bolt, 3/8"-16 thread size, 1-15/16" center length, stainless steel | \$12.88 | 1 | \$12.88 | McMaster Carr |
| 4 | Eye nut, 3/8"-16 thread size, galvanized | \$8.21 | 1 | \$8.21 | McMaster Carr |
| 5 | Dowel pin, 3/8: diameter, 3-inch long, stainless steel | \$4.51 | 2 | \$9.02 | McMaster Carr |
| 6 | Steel oversized washer, for 3/8-inch screw size, 1.5-inch O.D., galvanized | \$1.12 | 1 | \$1.12 | McMaster Carr |
| 7 | Socket head screw, 3/8"-16 thread size, 1-1/8 inch long, stainless steel | \$2.21 | 4 | \$8.84 | McMaster Carr |
| 8 | Hex nut, 3/8"-16 thread size, stainless steel | \$0.10 | 4 | \$0.40 | McMaster Carr |
| 9 | Split lock washer, for 3/8" screw size, stainless steel | \$0.075 | 4 | \$0.30 | McMaster Carr |
| Total | | | | \$278.09 | |

Assembly (approximate time: 10 minutes):

1. Attach the lower plate to the frame wire clamp mounts using four socket head screws, hex nuts, and split lock washers.
2. Attach the upper plate to the lower plate using a stainless-steel dowel.
3. Attach the threaded rod end bolt to the lower plate using a stainless-steel dowel.
4. Place the oversized steel washer and eye bolt onto the threaded rod end bolt.

CAD drawings (dimensions in inches):

