

# **Run Tank Stand User Manual**

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## 1 Scope

This document does not provide the engineering analysis behind the design, but instead just provides some insight into how to use the thing. If you are interested in a (somewhat outdated) analysis of that, search on the drive for my work term report that I wrote on the subject.

This document *does* discuss the water jacket and load cell.

## 2 Consumables/Replaceables

1. O Rings are -360 and -366 size. You need at least two of each.
2. All bolts that touch the vertical columns are 1/4-20, and should be between 1 and 1.5 inches long, inclusive. For your sanity they should be fully threaded. By my count around 50 are required. Accordingly, about 100 washers and 50 nuts are needed.
3. The bolts connecting the base plate to the legs are 3/8-16. They need to be at least 2 inches long, plus or minus 0.25 (longer is ok just makes it progressively more annoying) The partially threaded 2" bolts with 1" threaded are good for this.
4. Screws for the feet are #10-24, and at least 2" long

## 3 Full Bill of Materials

Work in progress

Item Name	Item Description	Suggested Source	Quantity
Columns	1.5"x1.5"x1/8" Steel Angle, 7.5 feet in length	E3	4
Top Plate	1'x1'x1/8" Steel Plate	E3	1
Base Plate	13"x24"x1/4" Steel Plate	E3	1
Legs	1"x1"x1/8" Square Tube	E3	2