



MESA USA NATIONAL ENGINEERING DESIGN COMPETITION

2012-2013 Prosthetic Arm Challenge

ADDENDUM

Clarification / Revision of Test Equipment and Scoring for Dexterity Task

Testing Device

Standard Lumber

Nominal	Actual	Actual – Metric
1" x 6"	3/4" x 5-1/2"	19 x 140 mm

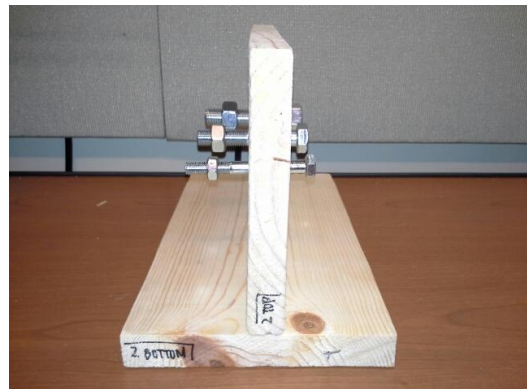
Linear (Actual) Length is 1 foot (12 inches)

1" x 6" Board is available from Home Depot *Model # 144703* or equivalent.

Hole "A" = US Drill Bit **23/64"** (0.359375 in or 9.128125 mm) – Home Depot *Model 48-89-2729 / Store SKU # 767398* or equivalent

Hole "B" = US Drill Bit or Paddle Bit **1/2"** (0.5 in or 12.7 mm) – Home Depot *Model 48-89-2738 / Store SKU # 771919, Model # 88824 / Store SKU # 959154*, or equivalent

Hole "C" = US Drill Bit or Paddle Bit **11/16"** (0.6875 in or 17.4625 mm) – Home Depot *Model # 48-89-2744 / Store SKU # 774206, Model # 1768419 / Store SKU # 958190*, or equivalent



Dexterity Materials

Bolts and nuts are available from www.boltdepot.com. Specifications for each are as follows:

- Metric hex bolt, Zinc plated class 8.8 steel, 8mm x 1.25mm x 70mm (*Product # 6230*)
- Metric hex nut, Zinc plated class 8.8 steel, 8mm x 1.25mm (*Product # 4788*)
- Metric hex bolt, Zinc plated class 8.8 steel, 12mm x 1.5mm x 70mm (*Product # 6341*)
- Metric hex nut, Zinc plated class 8.8 steel, 12mm x 1.5mm (*Product # 6877*)
- Metric hex bolt, Zinc plated class 8.8 steel, 16mm x 2.0mm x 70mm (*Product # 6292*)
- Metric hex nut, Zinc plated class 8.8 steel, 16mm x 2.0mm (*Product # 7360*)

Wrenches are available from www.sears.com. Specifications for each are as follows:

- Craftsman 13mm Wrench, 6 pt. Combination (*Item # 00942870000* or equivalent)
- Craftsman 19mm Wrench, 6 pt. Combination (*Item # 00942876000* or equivalent)
- Craftsman 24mm Wrench, 12 pt. Combination (*Item # 00942923000* or equivalent)

Assigning Points to Performance – Dexterity Task

Bolt A and Bolt B

Revised Score for Scoring Zones

- a. 50 for nut placed on bolt
- b. 55 for nut placed past the 0.5 cm mark
- c. 60 for nut placed past the 1.0 cm mark
- d. 65 for nut placed past the 1.5 cm mark
- e. 75 for nut placed past the 2.0 cm mark

Bolt C

Score for Scoring Zones remain as stated in rules (i.e. no changes).