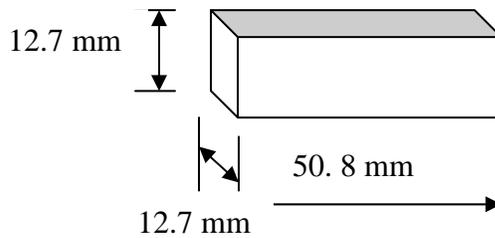


NAVAL POSTGRADUATE SCHOOL SETUP

The following table shows variables used to fabricate samples using 3-D printer.

Variables	Description	Remark
Printer Tip Size	Determine the diameter of the tip	T12 = 0.178 mm T16 = 0.254 mm
Raster Angle	Determine the direction the printer tip runs	R = 0 to 90
Build Angle	Determine the direction the sample is oriented for fabrication	B = 0 to 90
Baking Time after Fabrication (BTAF)	Determine how long the sample stayed in the printer oven	0 to 12 hours in oven

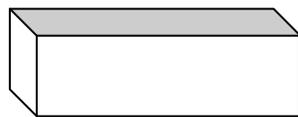
Compression test specimen geometry: square prism of nominal dimension of 12.7 mm x 12.7 mm x 50.8 mm



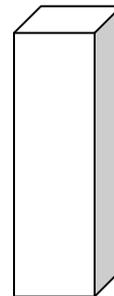
Definitions of Raster Angle and Build Angle:

Raster Angle is measured on the plane parallel to the printer oven floor. (Let's say xy-plane) Then, the Raster Angle is measured from the x-axis. 0 degree means the printer trip moves along the x-axis for each run of fabrication while 90 degree denotes the tip moves along the y-axis.

Build Angle is the angle measured between the oven floor and the longitudinal axis of the sample.



0 degree Build Angle



90 degree Build Angle