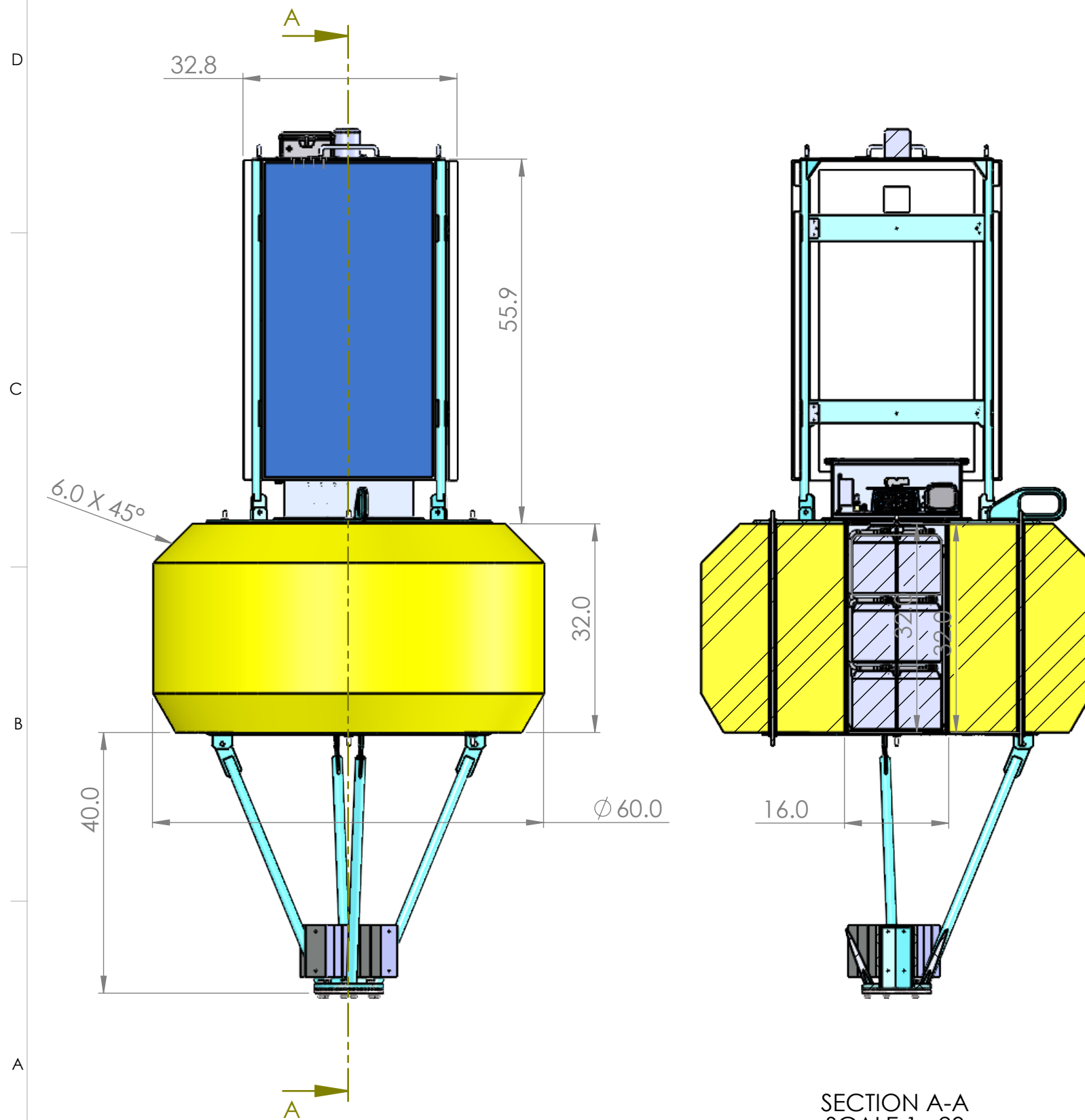


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AUV docking buoy characteristics

Mass: 1040 lbs, including 12 lead bricks and 6 batteries

Center of mass: 23.7" below deck

Waterline: 21.7" below deck

Moments of inertia: (lb * in²)

Taken at the center of mass and aligned with the output coordinate system. (X axis pointing up)

$$L_{xx} = 1344979 \quad L_{xy} = -548 \quad L_{xz} = -23.3$$
$$L_{yx} = -548 \quad L_{yy} = 150484 \quad L_{yz} = 2834$$

Lzx = -23.3 Lzy = 2834 Lzz = 1343206

Volume of hardware below float: 1152 in3

Equivalent cylinder: 40" long, 6" diameter

Projected area of hardware below float: 500 in².

Total displacement below deck: 49.8 CF (3187 lb flotation)

Updated 10/20/2022

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:				APPROVALS		DATE		Monterey Bay Aquarium Research Institute			
1 PLACE DIM ±1/16	2 PLACE DIM ±.02	3 PLACE DIM ±.005	ANGLES ±1°	DRAWN Francois Cazenave		 MBARI 7700 Sandholdt RD. Moss Landing, CA 95039 PH: (831) 775-1700					
1. DIMENSIONS ARE IN INCHES				ENGINEER Francois Cazenave							
2. DIMENSION LIMITS HELD AFTER PLATING.				CHECKED							
3. REMOVE BURRS AND SHARP EDGES .015 MAX.				PROJECT NO.		Docking Buoy 2					
4. MACHINED FILLET RADII .0150-.030.				PROJECT							
5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005											
6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH. MAX .012 INCHES FOR SINGLE SURFACE.						SIZE B		DWG. NO.		REV.	
DO NOT SCALE DRAWING				WEIGHT lb.		SCALE 1:50				SHEET 1 OF 1	