

SIZES (SCALE 1:20)

Dimensions / Footprint (Area): 52 ft x 52 ft (2704 ft²)

Height of Structure: 20 ft

Arm Length: 19 ft (total), 15.5 ft (Actuator to RV), 3.5 ft (Actuator to Counterweight)

Counterweight on Arm (Base Side): Dependent on actuator stability (equilibrium is 3100 lbs)

Ride Vehicle Size: 7ft x 4ft (Seating Box: 2.6ft x 2.1ft)

Ride Vehicle Weight: 500-700 lbs

MOTION

Max Vertical Displacement (From bottom position being zero): 17 ft (204 in)

Avg. Velocity of Vertical Motion: 2.125 ft/s

Min Time of Base Rotation: 12 seconds

Min Time of Ride Vehicle Flip: 2 seconds (high), 4 seconds (low)

MATERIALS AND COMPONENTS

Actuator Type: Hydraulics (<http://arrowdevelopment.blogspot.com/2014/07/dumbo-under-hood.html>)

Actuator Material: Steel

Foundation Material: Concrete

Base Material: Steel Frame

Arm Material: Steel Beam / Bar / Round

Ride Vehicle (Shell) Material: Steel Frame w/ Fiberglass Shell & Seat Materials

Light Type (To be wrapped on structure and arms): Bulbs generally used are "T5.5 Turbo Light Bulb" (https://www.nationalsupplyonline.com/VSV_Cabochon.html)

ADDITIONAL INFO

Dumbo-type ride made by Zamperla: <https://www.zamperla.com/products/aero-top-jet/>

Maintenance Schedule and Some Material Info: <https://ridesdatabase.org/wp-content/uploads/2020/01/zamperla-2019-mj01-1804.pdf>