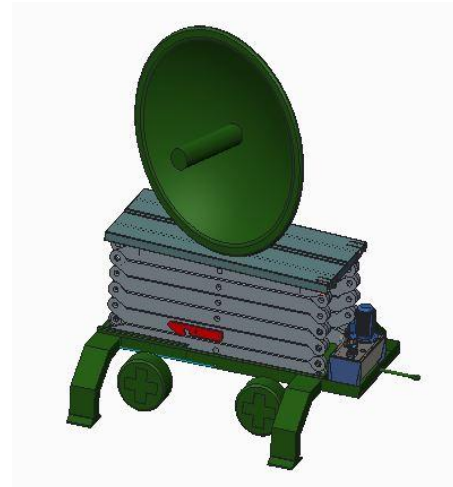
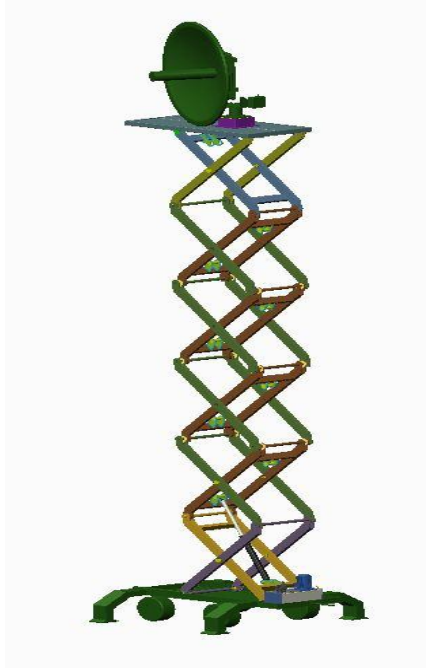


# ANTENNA LIFTING PLATFORM

## Trolley-mounted Scissor Lift GS-489-E

### DESIGN DATA

1. Total height on extension (for dish platform): 35 ft above trolley base
2. Total height on retraction (for dish platform): 3 ft above trolley base
3. Expected weight of dish and its platform: 300 Kg
4. Maximum expected weight on trolley: 1.5 ton
5. Maximum expected wind loading: 1002.5N



### Proposed Technical Approach:

1. 6 stages, each raising the dish platform 5.9 feet above the trolley base
2. 24 Mild Steel (MS) links, 8.3 feet long
3. Mechanical locks for the mechanism to be fixed in position at 3 different locations roughly 12 feet apart
4. Manual lifting of the platform using a manual hydraulic pump linked to the circuit of the electric-motor driven hydraulic pump
5. A towing mechanism using a universal bearing linked with the axle for controlling the direction of the trolley
6. Platform height and link-angle indicators using mechanical needle and dial arrangements
7. A detachable waterproof covering for the dish platform mounted on a metal frame
8. Manual ratchet jacks for leveling the trolley
9. Guy wires for additional support against excessive wind loading and balancing issues

### Tentative Equipment Sizing:

MS (C-Channel, Sheet, Chequered Plate): Mass 1185 Kg  
 Hydraulic Pump: Flow rate 0.02m<sup>3</sup>/min (5.5 gpm)  
 Electric Motor: Power 3KW (4hp)  
 3 Hydraulic Cylinders: Bore 70 mm, Stroke 585mm, Capacity 2.25 Liter (each)  
 Manual hydraulic pump: 68,948kPa (10,000psi)  
 Hydraulic Lining: Length 27.4m (90'), Diameter 9.52mm (3/8")  
 Oil Reservoir: Capacity 10 Liter  
 4 Manual Leveling Jacks: Capacity 10 Ton (each)  
 Top platform Area: 2.7m x 1.5m (9' x 5')  
 4 Tyres: Diameter 495mm (19.5")  
 Stainless Steel Guy Wires: Length 48.7m (160'), Diameter 10mm  
 Maximum Weight of Assembly: 2.5 Ton

Important note: The design and equipment sizing are based on conservative estimates and expected to change along with maturing design.

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