



Gravity Adjustable Heavy-Duty Phone Desk Stand



bodyaodin

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Summary

Professional gravity-locking phone stand for large devices. Features adjustable height, tilt, and zero-slip gear joints.

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Tired of phone stands that sag under the weight of an Ultra or Pro Max smartphone?

This **Gravity Desk Station** is a heavy-duty, professional-grade solution designed for maximum stability and precision. It uses a smart mechanical linkage to secure your phone and a ratchet-style locking system to ensure it never slips.

Smart Gravity Locking System

- **Automatic Grip:** Simply place your phone on the base, and its weight triggers the side clamps via a 4-bar linkage system.
- **Parallel Precision:** Dual arc links on each side ensure the clamps stay perfectly vertical, preventing any phone tilt.
- **Elastic Return:** Uses a simple rubber band to automatically open the clamps when you lift your phone.
- **Safety First:** Built-in safety pins prevent the moving parts from over-extending.

⚙️ Zero-Slip Adjustability

- **Ratchet Tilt Joint:** Instead of relying on friction, the tilt mechanism uses radial teeth (Hirth-style joint) for a rock-solid lock at any angle.
- **Step-Lock Height:** The telescopic arm features internal serrations and an M10 bolt, ensuring your desired height stays fixed even under heavy load.
- **Dovetail Compression:** The V-base connects via a precision dovetail joint for a wobble-free experience.

Technical Specifications

Feature	Value
Clamping Range	70 mm – 118 mm (Fits 99% of phones)
Max Device Thickness	13 mm (Compatible with bulky cases)
Height Adjustment	+50 mm extension
Base Footprint	136 mm (W) x 128 mm (D)
Hardware Required	1x Rubber band, 3D printed M10 bolts

Printing & Assembly Tips

- **Material:** PLA for everyday use; PETG or ABS for enhanced durability.
- **Strength:** Print the **Legs** and **Pins** horizontally to maximize load-bearing capacity.
- **Assembly:** Modular design using C-clips for easy maintenance. No glue or metal screws required!

Model files



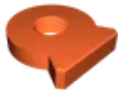
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