G-AUTOMATION

Dual-Bracket Magnetic Laptop Holder Set — Operational & Safety Instruction Manual

Document Revision: v3.0 | Target Audience: Field Engineers, BMS & Chiller Technicians | Material: PETG

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1. Overview & Intended Use

The **G-AUTOMATION Dual-Bracket Magnetic Laptop Holder Set** is specifically designed for industrial field engineers, BMS (Building Management Systems) specialists, and HVAC/Chiller technicians working on-site near control cabinets, electrical enclosures, and heavy machinery panels [cite: 1, 2].

The system utilizes ultra-strong neodymium magnetic bases to transform any flat, ferrous metallic surface (such as Rittal panels, control panel doors, and chiller casings) into an instant ergonomic workstation [cite: 1, 2].

2. Mechanical Limits & Load Capacity

Metric / Parameter	Specification / Rating
Tested Maximum Shear Load	**8.0 kg – 10.0 kg (17.6 lbs – 22.0 lbs)** (Tested under ideal flat steel conditions)
Average Laptop Weight	2.0 kg – 3.0 kg (4.4 lbs – 6.6 lbs)
Safety Factor Margin	**> 3x Safety Factor** when attached to full-thickness ferrous metal
Locking Angles	0° (Flat/Storage), 60° (Ergonomic Work Angle), 90° (Vertical Display/Stand) [cite: 1, 2]

3. Critical Precautions, Hazards & User Responsibility

⚠️ **CRITICAL USER RESPONSIBILITY DISCLAIMER:**

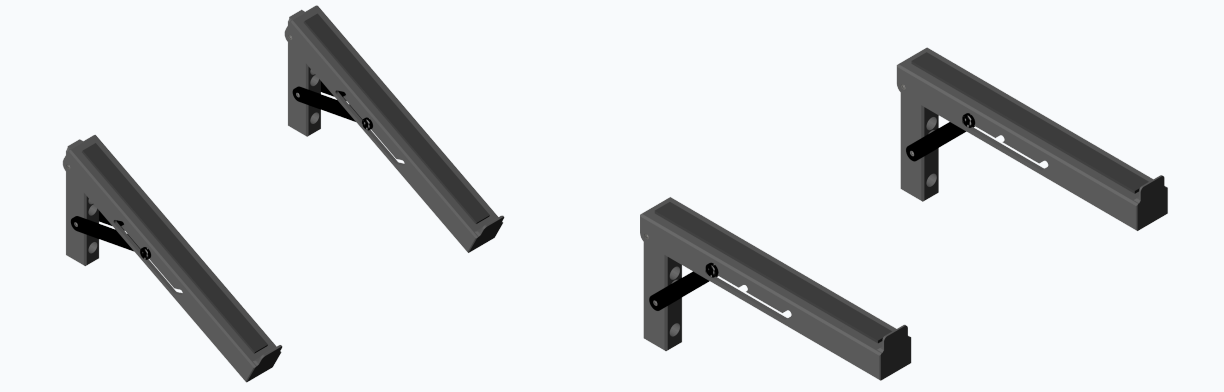
The structural integrity and holding power of this product rely entirely on the quality, thickness, and material composition of the mounting surface. **The risk and responsibility for ensuring a secure grip rest solely with the user prior to placing any electronic equipment on the brackets.**

- **Ferrous Material Requirement:** Full holding strength is only achieved on clean, solid, unpainted or light powder-coated **ferrous steel**. Mounting onto non-ferrous metals (aluminum, stainless steel 304/316, copper, brass) or plastic panels will result in a **drastic loss of magnetic grip strength (up to 90% reduction)**, risking equipment failure.
- **Surface Cleanliness & Texture:** Oil, grease, dust, moisture, or heavy rust on the panel will significantly reduce friction, allowing the brackets to slide downwards. Always clean the contact area thoroughly.
- **Leveling & Gravity Alignment:** Mounting the brackets on severe slopes or unlevel surfaces creates uneven torque. Common sense must be applied: if the surface is noticeably tilted or flexes under load, do not mount your laptop.
- **Strong Magnetic Fields (Pacemakers & Electronics Warning):**
    - **Medical Devices:** Maintain a minimum distance of **30 cm (12 inches)** between the magnetic bases and cardiac pacemakers, ICDs, or implanted medical devices.
    - **Magnetic Media:** Keep credit cards, unshielded mechanical hard drives, magnetic keycards, and sensitive field calibration instruments away from the base magnets.
- **Pinch Hazard:** Neodymium magnets exert high attractive forces. Keep fingers clear of the contact zone when snapping the brackets onto metal panels to avoid pinch injuries.
- **Thermal Limits (PETG Material):** PETG maintains high structural stability up to **75°C (167°F)** [cite: 1, 2]. Do not attach brackets directly to hot exhaust pipes, boiler bodies, or surfaces exceeding this temperature threshold.

4. Step-by-Step Setup & Operating Procedure

1. **Inspect & Clean Surface:** Select a clean, flat, vertical or horizontal ferrous steel panel [cite: 1, 2]. Wipe away dust, condensation, or oil residue.
2. **Mount Magnetic Bases Parallel:** Attach the left and right brackets parallel to each other [cite: 1, 2]. Space them apart at roughly 60%–80% of your laptop's width.
3. **Set Operating Angle (60° or 90°):** Pivot the support arm into either the 60° position (for active typing/diagnostics) or 90° position (for vertical monitor mode) until the positive detent locks into place [cite: 1, 2]. Ensure both brackets are set to the identical angle [cite: 1, 2].
4. **Position the Laptop:** Seat the laptop gently onto the brackets, ensuring the bottom edge rests firmly inside the front retention hooks and against the non-slip rubber strips [cite: 1, 2].
5. **Perform the Security Pressure Test:** Apply a firm downward and forward manual pressure test on the laptop keyboard area with both hands [cite: 1, 2]. If any slippage or movement is detected, remove the laptop immediately and relocate the brackets to a cleaner or thicker steel section.

5. Corrected Visual Orientation Diagram



60° Incline Mode: Optimized for active field diagnostics, parameter monitoring, and comfortable standing-height typing.

90° Vertical Mode: Provides maximum structural leverage and grip against flat metallic panels, ideal for heavier rugged laptops or tight workspaces