

# ADJUSTABLE METAL PATTRESS

## Universal Fixing Compatibility & Tested Pull-Out Performance

### 1. Product Overview

The **Adjustable Metal Pattress** is a concealed steel backing component installed within **non-loadbearing plasterboard partition walls**, providing secure fixing support for wall-mounted fixtures.

The system incorporates a **perforated / mesh-type steel interface**, enabling direct screw engagement without the need for pre-drilling or specialist fixings.

Typical applications include:

- Kitchen wall units
- Radiators
- Sanitaryware
- Cabinets, shelving, and similar loads

### 2. Fastener Compatibility

The Adjustable Metal Pattress is designed to support a wide range of standard construction fixings:

- **Compatible screw diameters:** 3 mm to 6 mm
- **Screw length:** No restriction (subject to wall build-up and application)

The system is compatible with:

- Drywall screws
- Wood screws
- General-purpose construction screws

**No self-tapping screws required**

### 3. Mesh Interface Design

The engineered steel mesh interface allows:

- Direct fixing **through plasterboard into the pattress**
- **Thread engagement without pre-drilling or tapping**
- Use of **standard site fixings** without proprietary systems
- **Flexible fixing positions** (not limited to pre-formed holes)

### 4. Pull-Out Test Performance

Pull-out testing was undertaken to validate fixing performance under typical internal partition conditions.

#### Test Configuration

- Substrate:
  - **15 mm British Gypsum plasterboard (single layer)**
  - Installed on **metal stud partition system**
- Fixing method:
  - Screws fixed through plasterboard into the pattress
- Test type:
  - Direct axial pull-out






#### Test Results

Screw Size (Diameter × Length)	Pull-Out Capacity*
3 mm × 40 mm	30 kg
4 mm × 40 mm	40 kg
5 mm × 40 mm	42 kg
6 mm × 40 mm	42 kg

#### Performance Summary

- Reliable pull-out performance achieved across all tested screw sizes
- **Optimum performance observed at 4–5 mm diameter screws**
- Increasing screw size beyond 5 mm provides **minimal additional benefit**
- Mesh interface enables **consistent engagement without specialist fixings**

## 5. Installation Advantages

-  No pre-drilling or tapping required
-  Eliminates need for self-tapping or proprietary screws
-  Faster installation and reduced labour time
-  Greater tolerance for on-site alignment
-  Simplified specification and procurement

## 6. Specification Note

The Adjustable Metal Pattress enables universal fixing compatibility through its mesh steel interface, removing reliance on pre-drilled or self-tapping fixings while maintaining consistent pull-out performance across standard screw sizes.

### Important Notice

*Pull-out values are based on testing in a 15 mm single-layer plasterboard system fixed to metal studs under controlled conditions. Actual performance may vary depending on wall construction, fixing method, load type, and installation quality. Final fixing selection and load verification remain the responsibility of the project designer.*

## 7. Summary

The Adjustable Metal Pattress delivers:

- **Universal screw compatibility (3–6 mm range)**
- **Tested, reliable pull-out performance**
- **Elimination of specialist fixing requirements**
- **Fast, flexible, and robust installation solution**