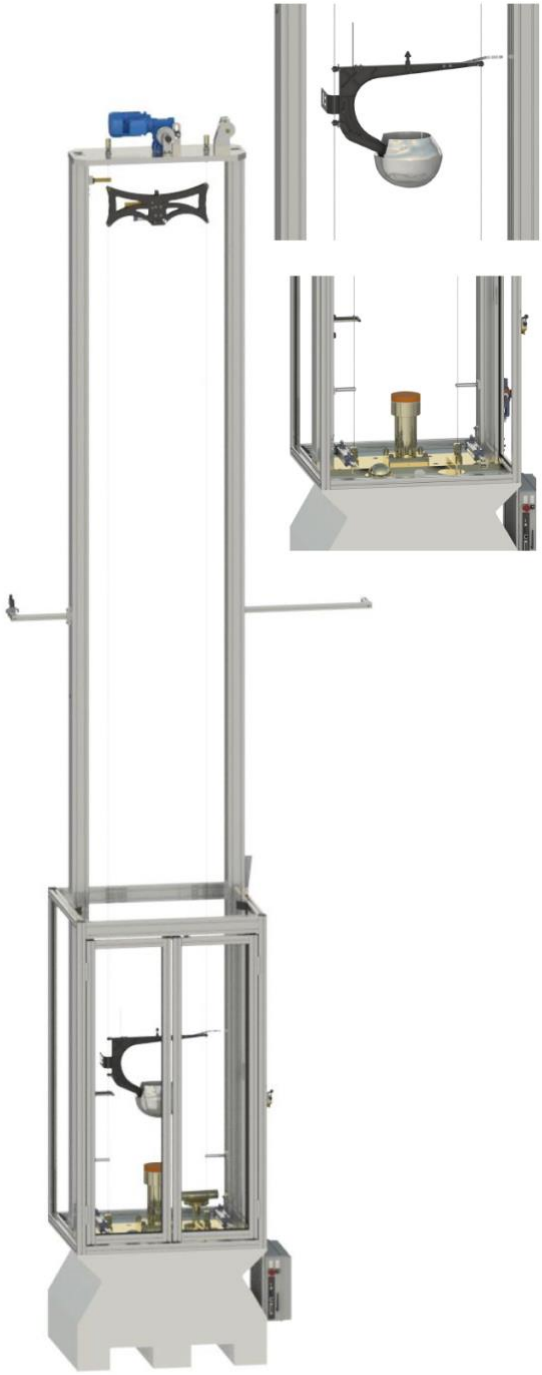
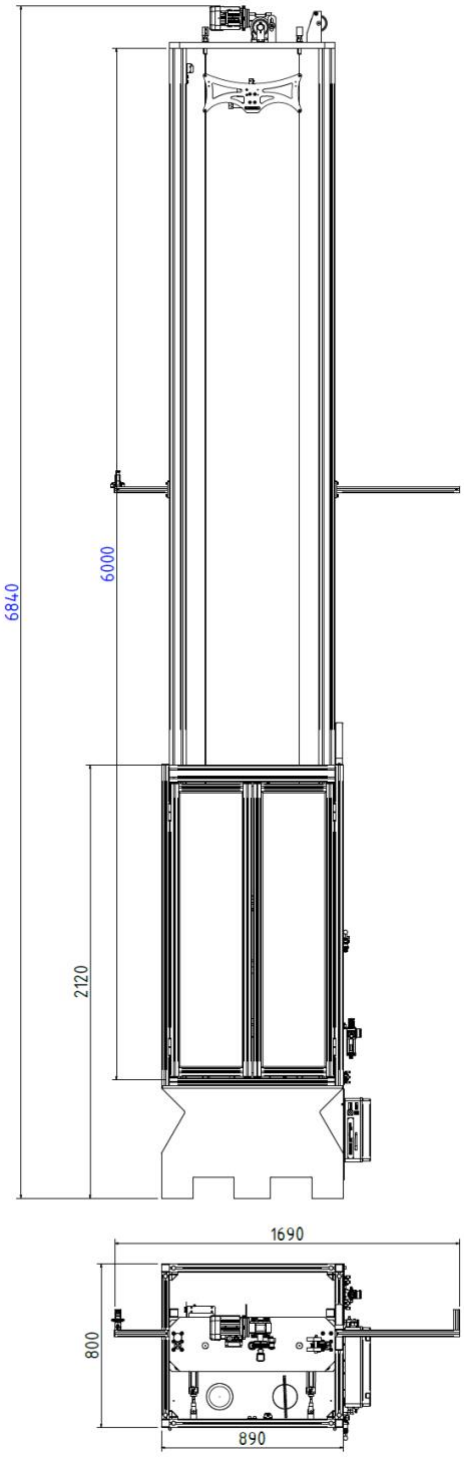
1007 B	**MAU 1002/2W/ALU/7M/FIA**	**Twin-wire shock absorption testing system utilizing the guided-drop headform method, optimized for FIA, Snell, and AS compliance. This extended 5-meter drop version is built with a single-frame cantilever drop carriage and a double-sided 120×80 mm aluminium column frame. Included in the configuration are the base, electrical system, 4 anvils, and a full safety cage equipped with automatic doors**





GTM & Systems S.A. Via Sottomurata 1 6934 Bioggio (Lugano) TI Switzerland
E-mail: info@gtmsa.ch Web site: www.gtmsa.ch

Technical Specification Datasheet

System Overview

- **Model / Reference:** 1007 B MAU 1002/2W/ALU/7M/FIA (Optimized for Snell and FIM compliance)
- **Application:** Twin-wire shock absorption testing system utilizing the guided-drop headform method
- **Compliance:** Fully optimized for FIA, Snell, AS, ECE 22/06, and FIM compliance standards (
- **Configuration:** Extended 5-meter drop version featuring a single-frame cantilever drop carriage and a double-sided 120×80 mm aluminium column frame Included in the configuration are the base, electrical system, **3 anvils**, and a full safety cage equipped with automatic doors

Technical Features

- **Chassis Frame:** Heavy-duty construction from aluminium ITEM profiles (120×80 mm, 80×40 mm, and 40×40 mm)
- **Sub-Base Plate:** 30 mm thickness zinc-plated steel plate, secured to the main frame via 12 high-tensile screws
- **Main Ballast Base:** Steel enclosure filled with concrete; total ballast mass: 700 kg
- **Drop Parameters:** Maximum vertical drop height up to approx. 5 m, yielding an impact velocity of 10 m/s
- **Guidance System:** Twin-wire system utilizing Ø 3 mm C70 high-tensile steel cables equipped with an integrated tensioning mechanism.
- **Frame Anchoring:** Secured to the structural base via 8 bolts (Ø 16 mm thread)
- **Enclosure Safety Door:** Automated protective door driven by twin pneumatic cylinders . Features a transparent polycarbonate front viewing panel and 3 mm polycarbonate lateral shielding . Integrated safety interlock switch prevents drop execution when doors are open .
- **Lift Carriage:** Precision water-jet cut Ergal 75 (aluminium alloy) plates . Equipped with a pneumatic automatic release system, complete with dedicated solenoid valve, limit switches, and photoelectric sensors
- **Catch Mechanism:** Automatic drop carriage latching/hooking system operational during descent phases .
- **Drop Carriage:** Monobloc Ergal 75 drop carriage, fully CNC-machined for standardized helmet testing . Features a central ball joint with clamp and dedicated mounting interface for a single-axis accelerometer . Sliding guides manufactured from low-friction nylon/carbon composite . Wire centerline spacing: 460 mm Total drop carriage mass: 1.3 kg , frame only 790 grams
- **Impact Anvils: Three standard anvils supplied**: Flat, Hemispherical (R48 or R50), and Edge (6.3 mm × 180 mm) Custom anvil geometries available upon request
- **Anvil /Impact point Alignment:** Anvil holder features an integrated laser alignment module to indicate exact impact point coordinates
- **Hoist System:** Electric motor assembly with pulley and encoder for precise positioning of carriages to preselected drop height.
- **Electrical Integration:** Complete electrical distribution system fully concealed and routed inside the structural aluminium profiles (GTM MAU 10... p. 2).
- **Pneumatics:** Complete pneumatic control circuit equipped with an integrated analog pressure gauge
- **Velocity Measurement:** High-frequency, large-aperture infrared photoelectric barrier device for precise speed monitoring
- **Calibration:** MEP pad supplied for impact data and calibration verification
- **Surface Treatment:** Anodized and triple zinc-plated finishes for enhanced corrosion resistance

Technical Data & Installation Requirements

- **Power Supply:** Single-phase 220–240 V, 50/60 Hz
- **Power Consumption:** 0.8 kW
- **System Weight:** 190 kg (net weight, excluding the 700 kg concrete ballast base)
- **Overall Dimensions (L × W × H):** 840 × 1690 × 6840 mm