

Maldova Engineering Corporation (MEC)

Document Ref: MEC-R-DOC-001 Rev. B
Date Issued: 22 BBY
Primary Market Focus: Extreme Environment Infrastructure and Specialized Logistical Containment.
Slogan: "Where others break, we build."

I. Corporate Mission and Distinction

Maldova Engineering Corp. is a high-grade, mid-sized engineering firm specializing in structural integrity and environmental autonomy. Our expertise, honed on the geologically hostile planet of Naldova, is focused on **self-sealing, pressurized, and thermally stable components**.

The corporation was founded on **Naldova** (formerly Maldova) in the Mid Rim, a planet notorious for its constant, unpredictable seismic activity, corrosive atmospheric toxicity, and sub-zero surface temperatures. This environment served as the ultimate crucible for MEC's engineering teams, forcing them to pioneer solutions for total environmental isolation and structural resilience from the ground up. This background distinguishes MEC as a **Tier-2 Logistical Specialist**—a firm that provides solutions for circumstances where standard-issue equipment from Tier-1 suppliers (like CEC) is insufficient or prone to failure due to environmental strain. Our products prioritize fail-safe redundancy and molecular bonding over sheer volume production, guaranteeing operational function in *extremis*.

While the Corellian Engineering Corporation (CEC) serves as the primary mass-producer of the Republic Standard Unit (RSU) system, MEC operates as the **certified specialist** for cargo requiring guaranteed containment against thermal, corrosive, and biological threats.

II. Key Logistical Contributions to the GAR

MEC is the exclusive manufacturer for two crucial Republic Standard Unit (RSU) Crate Types, mandated for use under the RLS-H (Hazard) and RLS-C (Consumable) protocols. MEC's exclusive contract exists due to the high-stakes nature of the payload these containers carry.

RSU Crate Type	MEC Product Name	RSU Rating	Primary Role	Critical RLS Markers
Type-3	Liquid Containment Unit (LCU-3)	1 RSU	Pressurized storage and transport of liquid fuel, corrosive	RLS-H3 (Corrosive), RLS-C4 (Fuel/Power)

			reactor coolants , and high-grade industrial solvents.	
Type-10	Standardized Cryogenic Unit (SCU-10)	1 RSU	Transport of cryo-sensitive materials, vaccines, and perishable provisions . Must maintain strict thermal containment for up to 200 standard hours.	RLS-H2 (Biohazard/Sealed), RLS-C3 (Consumables)

Tactical Implications of MEC Containment:

- **LCU-3 (Type-3) - RLS-H3/C4 Mitigation:** The LCU-3 utilizes a triple-layer molecularly bonded shell to mitigate the extreme risk denoted by **RLS-H3 (Corrosive)**. This redundancy is vital for handling reactor-grade plasma coolants and corrosive lubricants used in heavy Republic armor. Failure of a Type-3 LCU would result not just in lost fuel, but catastrophic structural damage to adjacent cargo and transport vessel decking.
- **SCU-10 (Type-10) - RLS-H2 Reliability:** The SCU-10, marked **RLS-H2 (Biohazard/Sealed)**, incorporates a non-stop passive chilling system based on a layered vacuum chamber design. This prevents power-cell drain and ensures that life-saving vaccines or critical biological research samples remain at a stable, non-fluctuating cryogenic state for the mandated 200 hours of deep-space or deep-field transport, even if primary refrigeration systems fail.

Note on SWIK Integration: MEC's LCU-3 (Type-3) Tank-Crate, marked **RLS-C4 (Fuel/Power)**, is the required carrier for the Reactor-Grade Tibanna Gas fueling the **Concussive Shield Generator** of the **SW-HB/R Heavy Barrier Citadel Kit (SWIK-HB)**. Its stability is non-negotiable for Citadel defense and is tracked as a mission-critical asset.

III. Maldova Engineering Design Doctrine

MEC utilizes the **Sealed, Insulated, and Layered** design aesthetic, a direct response to the hazardous conditions of our homeworld Naldova. This doctrine ensures all products meet the

GAR's own 'Robust' and 'Interconnected' design pillars.

Design Pillar	Implementation	Rationale
Sealed	Prominent, high-contrast blast seals (safety yellow/orange) around all joints, ports, and access panels. All seals are capable of autonomously adjusting to micro-pressure differentials.	Guarantees internal pressure and atmospheric integrity against external contaminants (e.g., toxic gas, vacuum). Ensures modular components form an unbroken environmental envelope when connected.
Insulated	Thick, ribbed, and segmented exterior thermal blanketing in a matte tactical black/dark grey finish. Includes an internal liquid-metal heat sink liner.	Minimizes thermal signature (reducing detection) and maintains stable internal temperatures regardless of external environment (from ice world to desert), preventing system shock.
Layered	Structural construction favors interlocking hexagonal module stacking and deliberately overlapping armor plates. Hexagonal plates are fixed using six-point bolt arrays.	Hexagonal geometry provides superior stress distribution and kinetic energy deflection against seismic activity, concussive blasts, and heavy kinetic impacts, making MEC components highly resistant to structural failure.

IV. Infrastructure (The "Aegis" Line)

MEC is currently contracted to provide specialized modular sections and stand-alone assets designed for longevity and resilience in high-wear environments, ensuring Republic assets survive where standard equipment would degrade.

IV.A. Standardized Wall Augmentation

- **SW-MB/R (MEC Variant):** This modification focuses on hardening the **Medium Barrier**

against thermal failure. It features MEC's proprietary **Thermal Conduit System**—an internal network of micro-radiator fins and heat-exchange loops designed to draw excess thermal buildup away from the Integrated Ray Shield Emitter. This stabilization is critical for ensuring the **10-minute active life** of the shield emitter is reliable under temperature extremes (e.g., intense sun or close-proximity thermal weapon use).

IV.B. Specialized Modules

These MEC-designed products are stand-alone defensive and life-support modules used across the GAR for total environmental isolation and autonomous operation:

- **A-7 'Aegis' Field Bunker:** Our proprietary, highly-insulated, self-sealing habitat module designed for single-trooper deployment in chemically hazardous or vacuum-adjacent zones. It is transportable as a **Type-11 Bunker Deployment** RSU (2 RSU Rating). The A-7 features a proprietary atmospheric reclamation system and a two-stage airlock, allowing it to serve as a rapid-deployment decontamination unit for personnel exposed to biological agents before entering a main base perimeter. Its **HAK-1** interfaces allow it to anchor instantly to hostile terrain upon deployment.
- **M-Pulse Fusion Cell (MEC-P1):** A high-output, miniaturized fusion reactor designed for distributed power generation. Its hexagonal casing uses the same molecular bonding as the LCU-3, making it exceptionally stable against physical or thermal shock. The MEC-P1 serves as the primary power source for deep-field communication arrays and geological survey outposts, providing autonomous power for up to 90 days without external refueling.
- **Thermal Vent Array (TVA-9):** A heavy-duty passive-active cooling system used to draw excess thermal energy from Republic command centers and power junctions. The TVA-9 utilizes internal cryo-circulation pumps powered by a small internal M-Pulse cell to actively cool critical systems, mitigating the risk of sensor burnout and maintaining the operational integrity of heat-sensitive electronics in tropical or volcanic combat zones.
- **MEC-T4 Geo-Thermal Power Tap:** A heavy, auger-equipped module designed to physically drill into planetary surfaces to access and safely channel geothermal energy. This tap is the foundational piece of MEC's 'All-Weather' doctrine, feeding external M-Pulse Fusion Cells and large-scale shield generators with continuous power, essential for long-term forward operations on geologically active worlds.

IV.C. Logistical Hardware

MEC produces non-structural hardware critical for the maintenance and repair of GAR assets, adhering to the RLS-C6 (Tools/Field Spares) protocol.

- **Self-Sealing Repair Patch (SSR-P):** A rapid-curing, molecularly-bonded sealant supplied in Type-2 Half-Standard RSU crates. The SSR-P is capable of repairing micro-fractures in starship hulls or the structural plating of the SW-HB/R, instantly creating an airtight, structural seal that is resilient to further kinetic shock. It is a mandatory, non-replaceable component of all SWIK repair kits.
- **Hydraulic Anchor Kit (HAK-1):** A field-deployable, high-force hydraulic anchoring

system supplied in Type-4 Pallet-Flats. It is used to secure fixed assets (like turrets or wall segments) to unstable terrain, driving reinforced spikes deep into the ground. This prevents displacement from seismic activity, heavy artillery, or the concussive force of friendly AT-TE fire. It is particularly valued in frontier outposts and construction on unstable planetary bodies.