DISASTER RELIEF DEVICE - CUSTOMIZATION OPTIONS & DETAILS

OPTIONS	DETAILED DESCRIPTION	TYPE	ITEM #	WEIGHT
	DRD System Core - The Disaster Relief Device (DRD) System Core is a rugged, all-in-one portable utility platform designed for reliable power generation and water purification in demanding environments. Housed in an IP66-rated waterproof enclosure, the core system integrates energy storage, power distribution, and advanced water treatment into a single field ready unit. The system includes a 5.4kW lithium iron phosphate battery, power inverters, a 60-amp charge controller, and external solar panel expansion capability. Thermostat-controlled cooling ensures stable operation under varying environmental conditions. A waterproof, UV-resistant control panel interface provides access to touchscreen monitoring and system controls, while Bluetooth connectivity enables real-time performance tracking and diagnostics via mobile device. The integrated 9-stage purification system with dual UV sterilization can produce up to 150–450 gallons of clean water per day, depending on configuration. Constructed from tig-welded aluminum chassis, CNC laser-cut aluminum plate with corrosion-resistant components, the enclosure is engineered for harsh environments, durability and long-term field service. Waterproof seals, stainless steel hardware, and removable side panels support maintenance, servicing, and future upgrades—enabling a multi-decade operational platform. Integrated transport handles allow the unit to be lifted, maneuvered, and relocated as needed. Includes a 2-year limited warranty.	System Core	DRD	255 lbs
Solar Panel Assembly Option	**Without Upper RSPD Assembly -** This configuration does not include the Upper Rapid Solar Panel Deployment (RSPD) Assembly and is ideal for applications where mobility, transportability, and reduced system weight are priorities. By eliminating the integrated solar array, the DRD becomes easier to maneuver into remote, confined, or difficult-to-access locations. To maintain solar charging capability, this option includes dual external solar panel expansion ports, allowing users to connect multiple portable external solar panels such as solar blankets, or briefcase-style arrays as needed. This option increases high mobility operations, remote access missions, and users who prioritize portability over integrated solar generation. **Without RSPD = lighter, higher mobility, needs external panels**	Base Model	DRD	
Solar Panel Assembly Option	**Upper RSPD Assembly -**The Upper Rapid Solar Panel Deployment (RSPD) Assembly provides a fully integrated solar charging solution mounted directly to the DRD. Designed for rapid deployment, the array transitions from a compact transport position to an operational configuration in seconds, minimizing setup time and eliminating the need for separate solar panel setups in the field. The assembly features four high-efficiency monocrystalline solar panels with a combined output of approximately 2.2–2.7 kW. A lift assisted tilt mechanism positions the array at an optimal angle for solar energy collection, helping maximize charging performance throughout the day. Built from corrosion-resistant materials and engineered for demanding environments, the RSPD Assembly is designed for long service life. The solar panels are impact-resistant, weather-resistant, and capable of providing reliable energy production for decades with proper care. This option offers an excellent balance of mobility and self-sufficiency. While the DRD remains fully transportable, the integrated solar array makes it particularly well-suited for extended deployments, emergency preparedness, off-grid operation, and situations where reliable power generation is needed with minimal setup effort. **With RSPD = self-contained, faster setup, increased effeciency, longer lifespan**	Upgrade Option 1	UA	+75 lbs
Water Filtration Option	**Fresh Water Reverse Osmosis Filtration System -** The Fresh Water Reverse Osmosis (RO) Filtration System is designed to process heavily contaminated surface water sources and convert them into safe, potable drinking water. The system uses a multi-stage purification process including sediment and chemical filtration, ultrafiltration, carbon filtration, dual UV sterilization, and a high-efficiency reverse osmosis membrane system capable of treating both freshwater and brackish water conditions. This allows the system to handle a wide range of compromised water sources including lakes, rivers, ponds, floodwater, and other surface water environments. A final remineralization stage helps restore balanced drinking water quality after purification. The system is engineered for stable performance in variable field conditions where water quality is inconsistent or heavily degraded. This configuration is highly energy efficient, using approximately one-third of the DRD's generated power, leaving surplus capacity available to operate other external devices simultaneously.	Base Model	FW	
Water Filtration Option	**Salt Water Desalination Filtration System -** Developed in collaboration with Seawater Pro Water Makers, the Salt Water Desalination System enables the DRD to convert seawater into potable drinking water, expanding its capability for coastal and offshore environments. The system uses a high-pressure pumping stage combined with dual seawater reverse osmosis membranes to remove dissolved salts and impurities, achieving approximately 99.4% salt rejection. Additional pre/post filtration stages help protect system components and ensure consistent water quality and membrane longevity. Because desalination requires higher operating pressure, this configuration consumes more energy than freshwater filtration, which may reduce available surplus power for other onboard systems depending on usage. To support this increased demand, the system includes an upgraded inverter designed to handle higher electrical loads. While optimized for seawater processing, this configuration can effectively treat freshwater and brackish water sources when required, providing added operational flexibility. This option is specifically designed for environments where seawater is the primary or most reliable water source, such as coastal regions, islands, maritime operations, and flood-affected saltwater zones.	Upgrade Option 2	SW	+8 lbs
Storage Tank Option	**Dual Slide-Out 5-Gallon Water Storage Tanks -** This option integrates dual slide-out 5-gallon water storage tanks into the DRD while maintaining a compact footprint. One tank stores untreated source water, and the second stores finished potable water, creating a continuous intake and output workflow. The system enables automated transfer from untreated to treated storage, allowing the DRD to process water and store clean drinking water without manual handling between stages. This makes it well suited for "fill-and-return" operation, where water is produced and ready when needed. The slide-out assembly uses anodized aluminum drawer hardware with a non-ferrous, powder-coated structure, designed for durability and corrosion resistance. Water storage tanks are constructed from food-grade LLDPE using FDA-approved resin for safe potable use. The untreated tank includes a funnel ring and filter sock system to reduce heavy sediment before processing. This option is ideal for users who want integrated water storage and automated operation, particularly in preparedness, residential backup, or minimal use deployment scenarios.	Base Model	SO	
Storage Tank Option	**MBBR (Moving Bed Bio-Reactor) w/ Flow-Through Tank -** The MBBR with the flow-through tank is a biological pre-treatment system designed to handle heavily contaminated water with high organic and biological content. It uses a bouyant moving bed media that beneficial bacteria and enzymes colonize to break down organic material before untreated water enters the main filtration system. This biological pre-treatment significantly reduces strain on downstream components, helping extend the service life of filters and reverse osmosis membranes by up to 300%, while improving overall system stability in unstable water conditions. By reducing organic load at the source, the MBBR improves efficiency and reliability in environments where water quality is highly variable or heavily compromised. The system is configured as a top-load tank integrated into the top section of the DRD housing for direct untreated water intake and easy access. This option is intended for extended field use where reducing maintenance frequency and minimizing supply dependency are critical.	Upgrade Option 4	BR	+7 lbs
Wheel Option	**Base Model Wheels & Footpad -** The Base Model mobility system is designed for stable, cost-effective transport and everyday stationary use. It uses 10.5" airless wheels with a composite rim and core design, ensuring a puncture-proof, low-maintenance setup that remains operational without concern for tire pressure or flats. A front-mounted resting footpad provides stable support when the unit is stationary, using a powder-coated tubular frame and reinforced baseplate mounted to the underside of the DRD with stainless steel hardware. This configuration allows the DRD to be lifted slightly and rolled in a wheelbarrow-style motion for short-distance repositioning, then set back down into a stable resting position. This option is intended for users who do not require frequent relocation and prioritize simplicity, durability, and low-maintenance operation.	Base Model	BW	
Wheel Option	**All Terrian Wheels -** The All-Terrain Wheel system is designed for frequent transport and operation across uneven, soft, or unpaved surfaces such as sand, gravel, grass, dirt, and loose soil. It enhances mobility and maneuverability in environments where standard wheels would be limited. The rear configuration features 16" inflatable rubber all-terrain tires mounted on lightweight polished aluminum rims for improved shock absorption and terrain adaptability. The front assembly uses dual swivel, non-ferrous slew bearings paired with 6" all-terrain wheels and integrated locking mechanisms for controlled positioning and directional stability. This setup is optimized for users who regularly reposition the DRD or operate in environments where ground conditions are unpredictable and higher mobility is required.	Upgrade Option 5	AT	+12 lbs
Power Option	**120V - 60 Hz North America Standard -** This configuration provides North American standard output power at 120V / 60Hz with Type B plug compatibility. It includes dual 20-amp in-use weatherproof GFCI outlets designed for safe operation in wet or storm-prone conditions. The corrosion-resistant outlets feature an integrated LED reset indicator and deep-recessed outlet enclosures, allowing multiple extension cords (up to four) to remain connected while the weatherproof cover is closed. This enables continuous power delivery to critical devices during harsh weather events while maintaining environmental protection. This option is intended for users operating within standard North American electrical infrastructure who require reliable outdoor-ready power distribution.	Base Model	1	
Power Option	**220V - 60 Hz European Standard -** This configuration provides 220–240V output at 50Hz with Type C plug compatibility for regions using international or European electrical standards. It includes dual in-use weatherproof outlets with integrated ground-fault and residual current protection (GFCI/RCD-equivalent safety protection), designed for safe operation in wet or storm-prone environments. The outlet system supports connected devices while maintaining a sealed, weather-resistant enclosure during operation, enabling protected power distribution during severe weather events or extended outdoor use. This option is intended for users operating within compatible international electrical systems who require reliable, weather-resistant power output. **Important Note:** Custom plug types may be accommodated upon special request through the Request-A-Quote form, include your request details in the comment section.	Upgrade Option 6	2	

We understand these customization options may feel complex. If you have any questions or need clarification on any of the available configurations, our team is here to help:

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