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Product Specification Sheet

DRD - Disaster Relief Device

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DRD - Disaster Relief Device

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Section 1 - Intellectual Property & Confidentiality

Patent Pending Status

The Hydronamis Disaster Relief Device (DRD) is PATENT PENDING, with patent applications filed in the United States and in multiple international jurisdictions. These applications collectively cover more than twenty-five + claims covering all aspects and embodiments of the DRD. The DRD and all related innovations are currently under formal accelerated patent examination, and all rights associated with these pending applications are fully reserved. Any unauthorized use, reproduction, reverse engineering, or derivative development may constitute patent infringement under U.S. and international law and will be pursued aggressively.

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Section 2 - Next-Gen Approach

At Hydronamis, we design, engineer, and manufacture innovative disaster relief and emergency response equipment. Our flagship solution, the Hydronamis Disaster Relief Device (DRD), was developed to close a critical gap in global disaster relief operations.

Traditional relief equipment is often built into or deployed using large shipping containers, trailers, or other heavy and bulky platforms. These containerized systems, although robust, are not typically suitable for rapid deployment via air transport due to their size, weight, and handling requirements. Consequently, they must be transported by sea or overland routes, causing delays in deployment and reducing their effectiveness during the critical early hours, days or weeks following a disaster.

The inability to airlift water and power support equipment into remote or isolated disaster zones, especially when road access is blocked or seaports are damaged, remains one of the most significant limitations in current relief logistics. As a result, life-sustaining resources such as clean water and electricity are often delayed when they are needed most.

Our team listened to what many disaster victims repeatedly expressed, “we don't need help in four or five weeks; we need help the next day”. There is a clear necessity for modern relief systems that are compact, lightweight, and modular - enabling rapid air transport and immediate setup in austere, high-risk environments.

While some portable systems exist, they typically provide either water or power, not both. Many also require complex installation, specialized tools, or qualified technicians to operate. Precious time is lost assembling hoses, wiring components, or troubleshooting. In many cases, these systems are too complicated for disaster victims or untrained responders to use. Consequently, a qualified technician is required to monitor daily operation of the equipment, limiting distribution flexibility.

The DRD was developed to overcome these limitations by providing a turnkey, technician free, rapid-response solution. Delivering critical water and power resources to disaster victims over a vast area. The DRD's are intended to be utilized as decentralized community support nodes, this is all part of our next-gen victim first approach. The compact, rugged design allows each unit to be transported by airplane, helicopter, pickup truck, boat, drone, wheeled transport, or even hand-carried across rugged terrain.

Once onsite, the system transitions from the compact mode to fully deployed and operational in seconds. Its easy-to-use features make this an ideal solution for disaster victims and first responders alike. Each DRD provides up to 5 kW of solar-generated electricity while providing between 150-700 gallons of purified water per day (depending on membrane/pump configuration), sufficient to support approximately 100-500 people for extended periods.

Engineered for long-term sustainability in harsh environments, each unit bridges the gap between rapid response in the early golden hours and the multi-year recovery process. In times of crisis, access to power and clean water can mean the difference between survival and suffering. The DRD was developed for this exact purpose: to restore hope, empower communities, and aid in recovery.

Hypothetical Application in a Real-World Disaster Situation

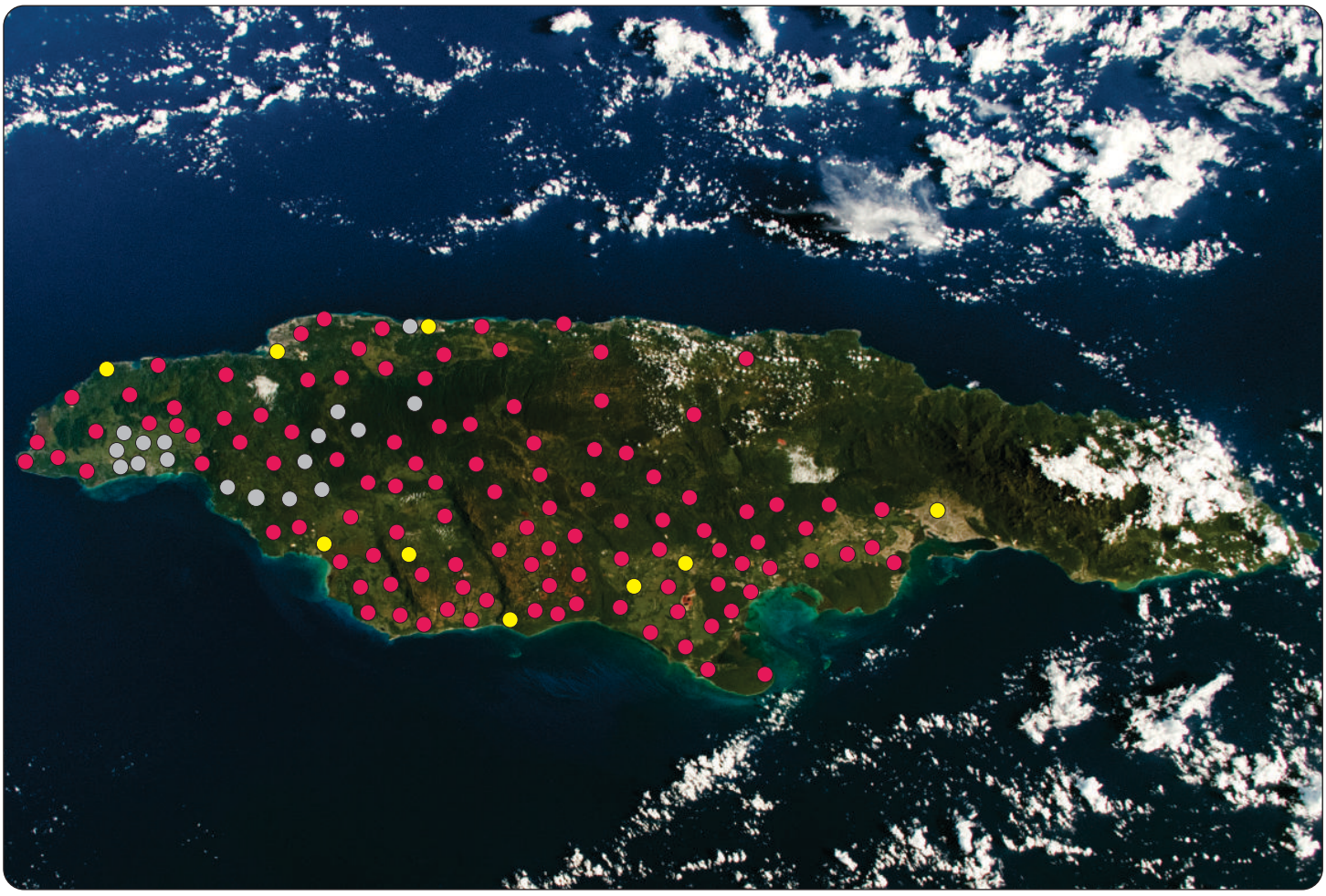
In the aftermath of Hurricane Melissa, the nation of Jamaica remains deeply impacted. Fifteen weeks after landfall, approximately 700,000 people are still without electricity or access to safe drinking water. Critical infrastructure suffered extensive damage, and full restoration may take years or even a decade, with some areas unlikely to ever return to pre-storm conditions. In circumstances like these, the Hydronamis DRD units could be strategically deployed across the affected regions, stabilizing parishes, neighborhoods, and entire communities.

The DRD delivers a sustainable, long-term supply of clean water and electricity, reducing the burden on linemen, field engineers, and infrastructure teams while providing the time and stability needed to restore critical systems properly. More than a rapid-response solution, the DRD is a resilient recovery asset, ensuring communities, families, and disaster victims have uninterrupted access to life-sustaining resources from the earliest moments of crisis all the way through a full recovery.

The map below represents a real-world scenario in which the DRD solution could have been effectively utilized to support the 700,000 disaster victims. Our next-gen approach could have significantly altered the devastating situation in Jamaica that remains ongoing.

Below is an example map illustrating how the DRD units could be distributed acting as a network of community support nodes in addition to humanitarian aid base camps and mini outposts:

● Hydronamis DRD Support Node ● Humanitarian Aid Base Camps ● JDF Mini Outpost



Satellite Image of Jamaica provided by NASA

Section 3 - Power Specifications

Electrical Output	Output Voltage	Plug Type
	120 Volts - 50/60 Hertz	Type A/B - North America, Central America & Japan
	220-240 Volts - 50 Hertz *(available fall 2026)*	Type C - Europe, South America & Asia *(available fall 2026)*

Connectivity	Receptacles	Expansion Port	Bluetooth
	(2) Dual 20-Amp Ground Fault Circuit Interrupter (GFCI) Outlets In-Use Waterproof Receptacle Covers	2-Pin Waterproof Expansion Plug Integrated Within Each DRD Housing Allows For Additional External Solar Panel Voltage Input	Integrated Bluetooth Sensor Allows Phone Connectivity Through Mobile App Overseeing Electrical Voltage Details

Battery	Type	Capacity	Cycle Life
	(2) 12-36V 200Ah Lithium Iron Phosphate (LiFePo4) Deep Cycle Battery w/ Bluetooth Connectivity	5,480 Watt Hours, 400 Amp Hours Total	5000 Cycles (80% Depth of Discharge, 80% EOL)
	Voltage Range	Operating Temperature	Lifespan/Warranty
	10V to 14.8V	32 - 125 Degrees F 10-95% Humidity, IP-65	Estimated Life 10 - 15 Years, 5-Year Warranty

Rapid Solar Panel Deployment Array	Type	Module Efficiency	Operating Voltage
	(4) 100 Watt, N-Type Monocrystalline Panels	20% A+ Grade N-Type, 0.4% Degrade Annually	12 or 33 Volts, Generates 2.2-2.5kW Per Day
	Materials	Environmental	Lifespan/Warranty
	Anodized Aluminum Frame, Reinforced Tempered Glass, EVA Film, TPT Backsheet	Wind, Snow, Rain, Hail Resistant 2400Pa Wind, 5400Pa Snow Loads. Impact Resistant, IP65	Estimated Life 25-40 Years, 10-Year Warranty

Charge Controller	Type/Effeciency	System/Input Voltage	Rated Charge Current
	MPPT, 99% Tracking, 97% Conversion	(Auto Recognition) 12-48VDC, 9VDC-64VDC	60 Amp, 900W@(12V), 2000W@(36V)

Inverter	Type	Efficiency	Additional
	Pure Sine Wave (Freshwater - 2000 Watt) (Saltwater - 3000 Watt)	92% - 3000W Continuous Rating, 6000W Peak Surge Rating	Built in Bluetooth, THD Less Than 3%, GFCI, 18W Consumption
	Output Voltage	Battery Input Voltage	Certifications
	120Volts - 50/60 Hertz	12VDC	FCC, ETL, Listed to UL

Solar Generated Power & Discharge Potential	Solar Generation Power	Discharge Potential
	Main RSPD Array Generates Appx. 2.2-2.5kWh Per Day, Plus (400) Watt Portable Add-On Expansion Solar Panel Generates Appx. 2.2-2.5kWh Per Day. Total Solar Generated Power = 4.4 - 5kWh Per Day (Both Array + Ext SP)	Solar Generated Power Appx. 4.8kWh Plus LiFePo4 Battery Depth Of Discharge 90% (90% Of 5,480W) = 9.7kWh Max Discharge In 24 Hour Span

Interface	User Interface (UI)
	The DRD Housing Contains A UV-Resistant & Waterproof Control Panel. Inside The Control Panel Houses The Following: Main Battery/System On/Off Switch, 4” Digital Touch Screen Display, Water Pump On/Off Switch, UV Sterilizer On/Off Switch.

Protection	Heat & Humidity	Harsh Environments
	Integrated Within The IP-66 Rated Non-Ferrous Powder Coated Housing Is A Push/Pull Air Circulation System, Controlled By A Digital Thermostat To Ensure Safe Operating Temperatures & Humidity Levels For All Electronics.	The IP-66 Rated Non-Ferrous Powder Coated Housing, EPDM Rubber Gaskets, Welded Framework, Chemical & Mechanical Proprietary Waterproof Sealing Methods Ensure Protection Agaisnt Harsh Environments.

Safety	Flame Resistant Battery Enclosure	Protections
	Special Upgrade - Fire Resistant Battery Enclosure, Multi-Layer Approach: Glass Mat/CPVC/Aluminum Alloy Proprietary Configuration, 1200 Deg C Rating, Decreases Air Transit Hazard Level	GFCI, (3) 60 Amp Thermal Circuit Breakers, (1) 250 Amp Thermal Circuit Breaker, (4) Inline Solar Panel Fuses, Provides Protection For User & Electronics. UL Standards.

Special Requests	Batteries, Charge Controllers, Solar Panel Expansion Ports
	Upon Special Request Our Engineering & Fabrication Team Can Easily Accommodate Increased Power Requirements Such As Upgraded (2) 300Ah LiFePO4 Batteries (7,680W), 100-Amp Charge Controller Supports (3) 400Watt Solar Panel Arrays, Additional Solar Panel Expansion Ports. 7.5 kW System

Section 4 - Water Specifications

Filtration System Overview	Basic Overview	
	The Filtration System Is Designed To Purify Nearby Contaminated Surface Water From Sources Such As: Rivers, Ponds, Oceans, Lakes, Puddles Etc...    One Key Advantage Of The Hydronamis DRD Is The Ease Of Use, A Child Could Use The Device. The User Simply Pours The Contaminated Surface Water Into The Dirty Water Storage Tank. The Autonomous Purification System Will Start The Filtration Process Automatically. **The Purification System Is Broken Down Into 9-Stages:**	
	Stage 1	Heavy Sediment Pre Filter - 25 Micron Polypropylene Felt Filter Bag - Integrated Within The Dirty Water Storage Tank, Catches The Initial Heavy Sediment & Loose Debris (Leaves, Dirt)
	Stage 2	Heavy Sediment Pre Filter - 2 Micron 304L SS Cylindrical Filter Cartridge, Catches Heavy Sediment (Clay, Rust Etc...) Easily Cleaned & Reusable, 10 + Year Lifespan
	Stage 3	KDF-55 Media Cartridge, Copper-Zinc Redox Effectively Eliminates Heavy Metals & Microorganisms. (Anti-Biofouling)
	Stage 4	Ultrafiltration .1 Micron Barrier Removes Solids, Bacteria, Viruses & Large Organic Molecules. (Anti-Biofouling)
	Stage 5	1 Gallon Per Minute, 254nm (UVC) Ultraviolet Sterilizer, Stainless Steel Housing, UV Lamp, Quartz Sleeve, Inactivates Harmful Viruses & Bacteria. (Anti-Biofouling)
	Stage 6	Dual (2) Parallel FilmTec Reverse Osmosis Membranes (TFC), 225 Gallons Per Day Max Output, 99% Rejection Rate.
	Stage 7	Post RO, 1 Gallon Per Minute, 254nm (UVC) Ultraviolet Sterilizer, Stainless Steel Housing, UV Lamp, Quartz Sleeve, Inactivates Harmful Viruses & Bacteria.
	Stage 8	5 Micron Activated Carbon Block Filter Cartridge, Removes Organic Compounds, Pesticides & Microplastics. Post Polish.
	Stage 9	Post Polish, Calcium Carbonate Remineralization Filter Cartridge Adds Minerals Back To The Water Removed By The RO Membrane, PH Plus/Enhancer.

Contaminants Rejection Percentages

FilmTec TFC Reverse Osmosis Membrane Effectively Removes Or Significantly Reduces The Following Contaminants:

Inorganic Contaminants

Aluminum: 93–99%
Arsenic^{3+}: 70-80%
Barium: 93–99%
Cadmium: 93–99%
Chloride: 90–98%
Copper: 93–99%
Iron: 93–99%
Magnesium: 93–99%
Mercury: 93–99%
Nitrate: 85–95%
Radium: 93–99%
Selenium: 93–99%
Sodium: 90–98%
Ammonium: 80–90%
Arsenic^{5+}: 93-99%
Bicarbonate: 90–98%
Calcium: 93–99%
Chromium: 93–99%
Fluoride: 90–98%
Lead: 93–99%
Manganese: 93–99%
Nickel: 93–99%
Potassium: 90–98%
Salt: 99.4%
Silver: 93–99%
Sulfate: 93–99%

Total Dissolved Solids (TDS): up to 99%
Zinc: 93–99%

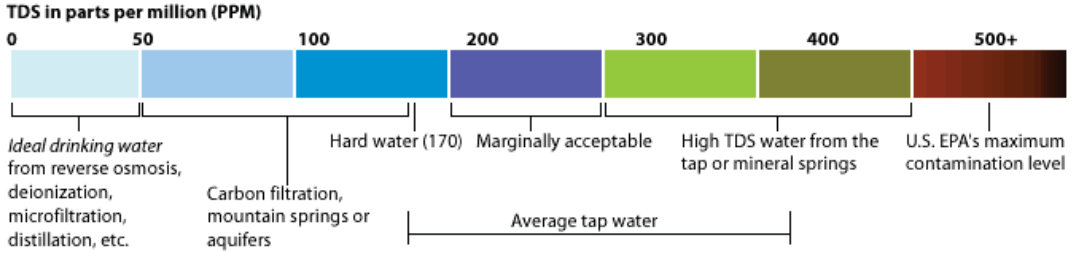
Organic Contaminants

Bacteria: 99.9% effective
Chlorine: GAC Removes
Cysts (e.g., Cryptosporidium, Giardia): removal 99.9% effective
Herbicides: 97–99%
Pesticides: 97–99%
PFOA (Perfluorooctanoic Acid): Up to 99% or more
PFOS (Perfluorooctane Sulfonic Acid): Up to 99% or more
Short-chain PFAS (GenX): 94-99%
Long-chain PFAS: 88-100%
Overall PFAS Compounds: 90–99%
Turbidity: Removed
Viruses: 99.9% effective

Total Dissolved Solids (TDS)

Water Source	Before	After Purification
Ocean	30,000 to 40,000 PPM	175 to 250 PPM
Brackish	1,000 to 10,000 PPM	10 to 75 PPM
Rivers	50 to 6,000 PPM	10 to 180 PPM
Ponds	50 to 1,000 PPM	10 to 50 PPM
Puddles	50 to 1,000 PPM	10 to 50 PPM

Recommended Total Dissolved Solids In Drinking Water



	Pathogens Inactivated	Specs	Lamp Life
UV Sterilization	Bacteria & Viruses (Examples): Bacillus E. Coli Hepatitis A Polio Salmonella Vibrio Cholerae Legionella Pneumophila Cryptosporidium Giardia Shingella Streptococcus	Secondary Precaution In Addition To RO Membrane Rejection, UVC 254nm Electromagnetic Wavelength Damages Microorganism DNA, Rendering The Pathogens Inactive, NSF/ANSI 55 10 Watts, 120V - 60Hz 304 Polished Stainless Steel Housing, 254nm	UVC Lamp, Max 1 Gallon Per Minute Flow Rate 254nm UVC Lamp, Rated At 9000 Hours, Audible Alarm When Lamp Blows - Safety Feature

	Component	Materials	Certification
Potable Water Material Certifications	Filter Housings	Polypropylene & 304L Stainless Steel	NSF/ANSI 42/FDA
	Filter Cartridges	Polypropylene & 304L Stainless Steel, Granular Activated Carbon, Calcium Carbonate	NSF/ANSI 42/FDA
	RO Membrane	Thin Film Composite	NSF/ANSI 58/FDA
	UV Sterilizer	304L Stainless Steel, Quartz, EPDM	NSF/ANSI 55
	Water Storage Tanks	UV Stabilized LLDPE - Linear Low-Density Polyethylene	Meets FDA Standards, Potable Water Safe, FDA Approved UV Resin
	Water Storage Tank Lids & Funnel Ring Filter Bag Holder	Polyethylene	Does Not Meet FDA Standards
	Water Pumps	Polypropylene, Nylon, PTFE, EPDM, Acetal, 316L Stainless Steel, Ceramic	NSF/ANSI 58 (Freshwater) FDA Standards (Desalination)
	Hoses & Connectors	LLDPE, Acetal, EPDM	NSF/ANSI 61

Pumps & Motors		Freshwater System	Desalination System
	Motor	24VAC, 160 PSI Max Out, Anti-Corrosive Motor	.85 HP,120VAC Aluminum Cased Electric Motor
	Pump	Three-Chamber Diaphragm Pump Head, Composite, NSF Cert	Stainless Steel 800 PSI Two Stage Plunger Boost Pump, Plungers Ceramic
	Power Consumption	75 Watts	650 Watts
	Max Water Output	9.37 Gallons Per Hour, 225 Gallons Per Day Max Water Output @ 1,800Wh w/ UV Sterilizer (Note: Only Used 37% Of Solar Generated Electricity, Full Battery Capacity Remaining @225 GPD)	12 Gallons Per Hour, 168 Gallons Per Day Max Water Output @ 9,240Wh w/ UV Sterilizer (Note: Depletes All Of The Solar Generated Electricity + Full Battery Capacity @168 GPD)
Water Storage Tanks	Material	Capacity	Details
	UV Stabilized Natural LLDPE (Linear Low-Density Polyethylene) FDA Approved	5 - Gallons (Dirty Water Storage Tank) 5 - Gallons (Clean Water Storage Tank)	Sealed Tank Lids (Not FDA Approval), 1 - Gallon Increments On Tank Face
Brine/Reject Water	Ratio	Explanation	Water Scarcity
	RO Reject To Clean Water Ratio Is 3:1 3 Parts Brine - 1 Part Clean Water, Discharge Port Is Located Under DRD Housing	In Order to Maintain A High Purity Rate The Accumulated Contaminants Are Flushed Out	In Life Threatening Water Shortage Situations, The DRD Integrates A Waste Valve That Can Redirect Brine Back Into The Dirty Water Storage Tank

Section 5 - Advanced Features & Special Upgrades

	Hidden DRD Features & Special Upgrades Upon Request	
Advanced Features & Special Upgrades	GPS Tracking System	Upon Special Request - Our Team Can Integrate GPS Tracking Modules Within The DRD Housing. This Helps Relief Organizations Locate DRD Assets Post Disaster Recovery & Anti-Theft Protection
	EMP & CME Shielding	The DRD Housing By Natural Is A Natural Faraday Cage. The Non-Ferrous Aluminum Alloy Encases Sensitive Electronics, To An Extent. Upon Special Request - Our Team Can Expand The Shielding Features For Maximum Protection.
	Flame Resistant Battery Enclosure	Upon Special Request - Our Team Can Integrate Advanced Flame/Fire Protection Features. Using A Multi-Layer Approach: Glass Mat/CPVC/Aluminum Alloy (Proprietary); We Can Encase The Lithium Batteries Decreasing Hazard Levels For Air Transport, Withstanding Temperatures of 1200 Deg Celsius For Long Durations With No Flame Penetration.
	Increased Water Output	Upon Special Request - We Can Adjust The Gallons Per Day Output Of Our Freshwater System Based On The Membrane/Pump Configuration. At 200 Gallons Per Day The DRD Only Uses 1/3 Of Its Generated Power. The Reserve Power Allows Increased Water Output For Freshwater System Only. 225 - 700 GDP
	Increased Power Output	Upon Special Request Our Engineering & Fabrication Team Can Easily Accommodate Increased Power Requirements Such As Upgraded (2) 300Ah LiFePO4 Batteries (7,680W), 100-Amp Charge Controller Supports (3) 400Watt Solar Panel Arrays, Additional Solar Panel Expansion Ports. 7.5 kW System
	Integrated Humidity & Cooling System	Hidden Feature - Integrated Within The IP-66 Rated Non-Ferrous Powder Coated Housing Is A Push/Pull Air Circulation System, Controlled By A Digital Thermostat To Ensure Safe Operating Temperatures & Humidity Levels For All Electronics.
	Bluetooth Sensor & Mobil App	Hidden Feature - Integrated Within The DRD Housing Is A Bluetooth Sensor & Mobile Phone App That Provides Real-Time Monitoring of System Data: Voltage, Temp, Battery Status, Adjust Settings Etc..
	Highly Reflective Graphic Logo	Hidden Feature - Applied To Both Sides Of The DRD Housing Is The Hydronamis Logo. This 3M Graphic Applique (Vinyl/Polycarbonate Lam) Is Highly Reflective Allowing Victims & First Responders To Easily Locate The DRD At Night From Hundreds Of Yards Away. Same 3M Material On Police Cars.

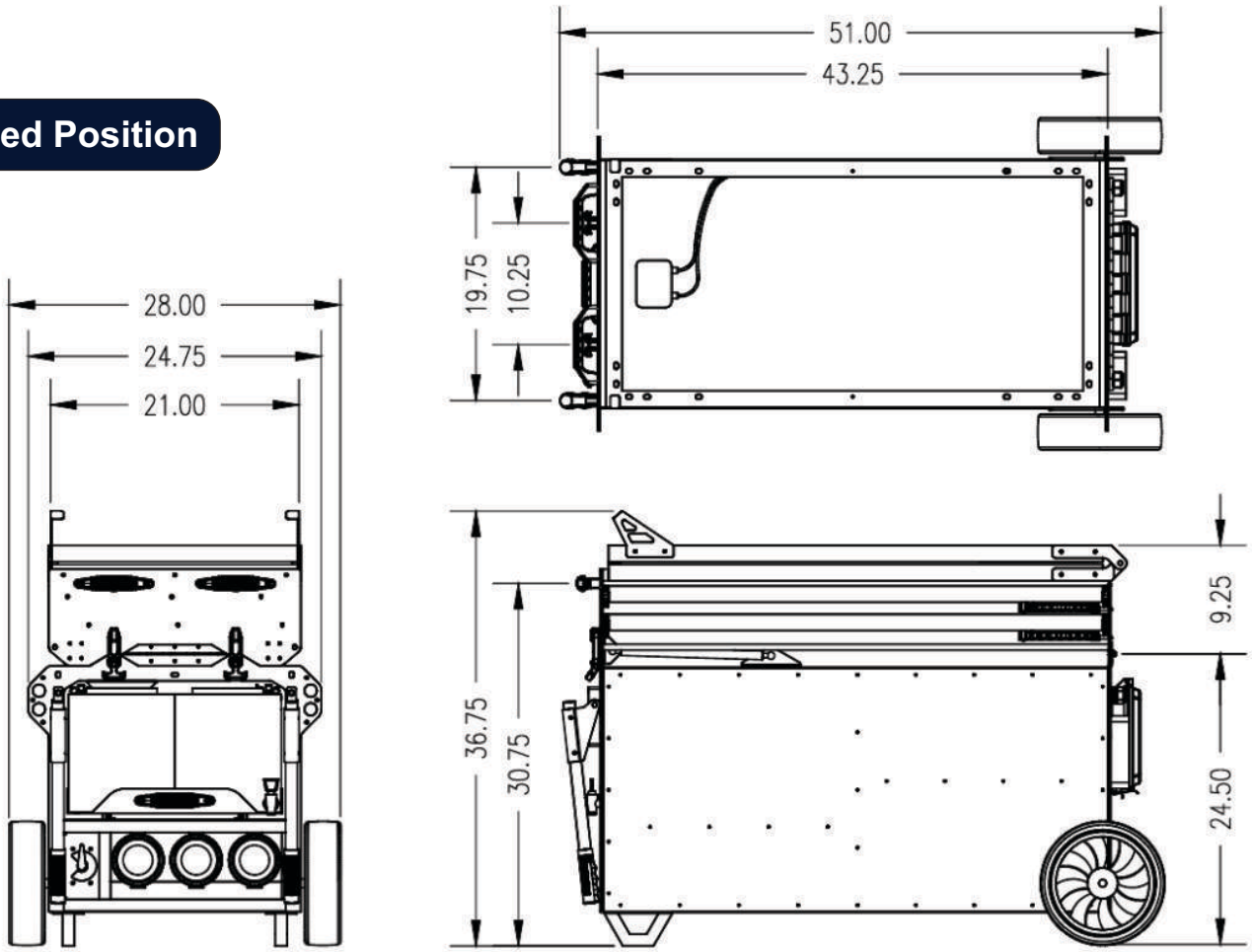
Section 6 - DRD Customization Options, Variations & Weight

Each Disaster Relief Device (DRD) is made to order (MTO) based on the customers preferred options/upgrades. Below is a comprehensive chart showing an assortment of variations, main component descriptions, item numbers and the approximate weights of each configuration.

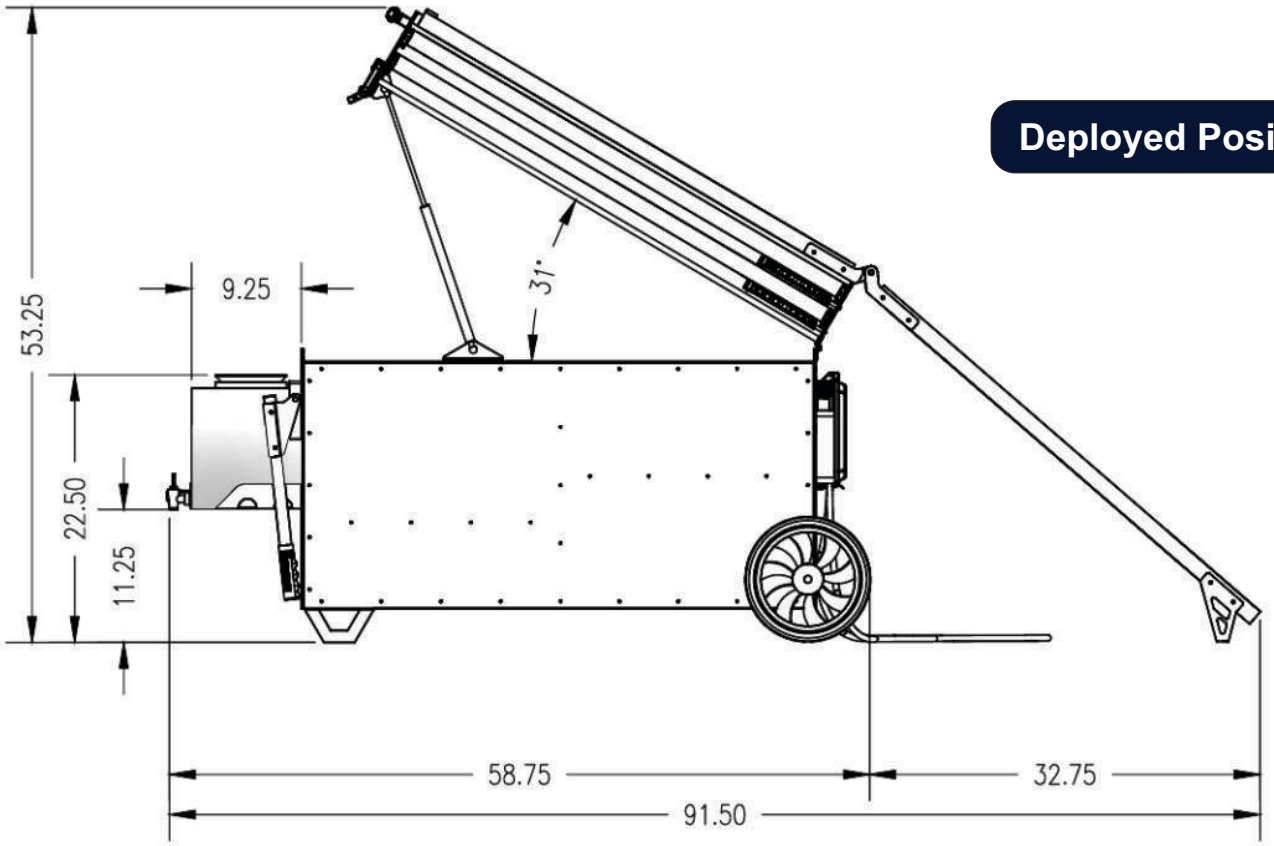
DESCRIPTION OF PRODUCT	TYPE	ITEM #	WEIGHT
Disaster Relief Device - Main Housing	Base Model	DRD	255 lbs
Disaster Relief Device - Upper RSPD Assembly (Rapid Solar Panel Deployment)	Upgrade Option 1	UA	+75 lbs
Disaster Relief Device - Fresh Water Reverse Osmosis Filtration System	Base Model	FW	
Disaster Relief Device - Salt Water Desalination Filtration System	Upgrade Option 2	SW	+8 lbs
Disaster Relief Device - Base Model Wheels + Footpad	Base Model	BM	
Disaster Relief Device - (4) All Terrian Wheels (Alum. Rims + 16" Pneumatic Rubber Tires)	Upgrade Option 3	AT	+12 lbs
Disaster Relief Device - Power - 120V - 60 Hz North America Standard	Option 4	1	
Disaster Relief Device - Power - 220V - 50 Hz European Standard	Option 5	2	
DRD Housing - Upper RSPD - Fresh Water Filtration - Base Model Wheels - 120V	Variation A	DRD-UA-FW-BM-1	330 lbs
DRD Housing - Fresh Water Filtration - Base Model Wheels - 120V	Variation B	DRD-FW-BM-1	255 lbs
DRD Housing - Upper RSPD - Salt Water Filtration - Base Model Wheels - 120V	Variation C	DRD-UA-SW-BM-1	338 lbs
DRD Housing - Salt Water Filtration - Base Model Wheels - 120V	Variation D	DRD-SW-BM-1	263 lbs
DRD Housing - Upper RSPD - Fresh Water Filtration - All Terrian Wheels - 120V	Variation E	DRD-UA-FW-AT-1	342 lbs
DRD Housing - Fresh Water Filtration - All Terrian Wheels - 120V	Variation F	DRD-FW-AT-1	267 lbs
DRD Housing - Upper RSPD Assembly - Salt Water Filtration - All Terrian Wheels - 120V	Variation G	DRD-UA-SW-AT-1	350 lbs
DRD Housing - Salt Water Filtration - All Terrian Wheels - 120V	Variation H	DRD-SW-AT-1	275 lbs
DRD Housing - Upper RSPD Assembly - Fresh Water Filtration - Base Model Wheels - 220V	Variation I	DRD-UA-FW-BM-2	330 lbs
DRD Housing - Fresh Water Filtration - Base Model Wheels - 220V	Variation J	DRD-FW-BM-2	255 lbs
DRD Housing - Upper RSPD Assembly - Salt Water Filtration - Base Model Wheels - 220V	Variation K	DRD-UA-SW-BM-2	338 lbs
DRD Housing - Salt Water Filtration - Base Model Wheels - 220V-50Hz	Variation L	DRD-SW-BM-2	263 lbs
DRD Housing - Upper RSPD Assembly - Fresh Water Filtration - All Terrian Wheels - 220V	Variation M	DRD-UA-FW-AT-2	342 lbs
DRD Housing - Fresh Water Filtration - All Terrian Wheels - 220V	Variation N	DRD-FW-AT-2	267 lbs
DRD Housing - Upper RSPD Assembly - Salt Water Filtration - All Terrian Wheels - 220V	Variation O	DRD-UA-SW-AT-2	350 lbs
DRD Housing - Salt Water Filtration - All Terrian - 220V	Variation P	DRD-SW-AT-2	275 lbs

Section 7 - Product Dimensions

Stowed Position



Deployed Position



Section 8 - Engineering & Manufacturing Expertise

Each Hydronamis Disaster Relief Device (DRD) is manufactured to order by a multi disciplinary team of senior engineers, prototype specialists, and precision fabricators. Our employees are hand-selected professionals with decades of experience from a wide range of innovation-driven industries such as: theme-park ride design & engineering, marine electrical systems & manufacturing, advanced composites, biological wastewater filtration, renewable energy technologies, Department of Defense simulation training systems, cutting-edge product development and industrial prototyping.

This expertise is supported by deep technical capabilities across advanced fabrication techniques and multi-medium manufacturing knowledge (precision machining & turning, CNC cutting, advanced welding techniques, structural & mechanical design, complex system integration etc.). Most team members bring 20+ years of hands-on expertise, ensuring every DRD is built with exceptional precision, reliability, and craftsmanship.

The result is a product engineered and fabricated to standards that exceed typical commercial manufacturing practices. Customers can be confident that each DRD is produced by expert fabricators and engineers accustomed to delivering highly advanced systems, providing unmatched performance, durability, and long-term operational confidence.

Section 9 - Manufacturing Techniques & Materials

Product Materials	Each DRD Is Manufactured From High Quality Materials	
	DRD Main Housing	Aluminum Alloys 5052, 6061, 7075 Stainless Steel Alloys 304, 316, 18-8 EPDM, Buna, Reinforced Nylon, PTFE, UHMW, Closed-Cell Acrylic Foam, TPR Rubber, PVC
	Water Related Components	Polypropylene, 304L Stainless, Coconut Shell Granular Activated Carbon, Calcium Carbonate, Thin Film Composite, Quartz, EPDM, UV Stabilized LLDPE - Linear Low-Density Polyethylene, Nylon, PTFE, EPDM, Acetal, 316L Stainless Steel, Ceramic, Aluminum Alloys 5052, 6061 & Stainless Steel 18-8
	Power Related Components	Lithium Iron Phosphate, Carbon, PC/ABS, Copper, EPDM, Buna, 304, 316, 18-8 Stainless Steel, 5052, 6061 Aluminum Alloys, Reinforced Nylon, PVC, Silicon, FR-4, Brass, Bronze, Polycarbonate
	Base Model Wheels & Axle	Reinforced Nylon, Solid Rubber Tread, Aluminum Alloy 7075, 5056, Brass, PTFE
	Advanced Coatings	Micro Sanded, Acid Etched, High Grade Powder Coat, Electroplating, Anodized Aluminum, Passivation
Manufacturing Techniques	Main DRD Housing & Related Components	3D Modeling, Material Stress & Component Performance Testing, CNC Laser & Waterjet, Milling Turning & Forming, 5-Axis Machining, Tig Welding, Armatures & Jigs, Injection Molding, Casting, Thermoforming, Drilling & Tapping, Saw Cutting, Sanding, Acid Etching, Powder Coating, Anodizing, Passivation, Final Assembly & Product Testing.

Section 10 - Operating Conditions & Product Lifespan

Environmental Conditions	Recommendations & Limitations Based On Environmental Conditions	
	Normal Operating Temperature Range	Recommended Ambient Air Temperature Range **35 - 125 Degrees Fahrenheit**. Below Freezing, Water In the Storage Tanks & Housings May Freeze Causing Expansion Cracks Or Failure. In Addition, Freezing Temperatures May Shorten The Lithium Batteries Lifespan.
	Snow or Freezing Conditions	**Not Recommended** Special Note: The Main DRD Housing May Be Placed Indoors While The Expansion Solar Panels Could Be Placed Outdoors In Freezing Conditions Successfully.
	Wind, Rain, Hail & Thunderstorms	**Acceptable** The (RSPD) Solar Panels Array Are Impact Resistant And Can Withstand Small Hail Showers. The IP-66 Rated Panels & DRD Housing Will Have No Issues With Torrential Downpour Rain Or Normal Thunderstorms Conditions. We Recommend Keeping Lowering The RSPD Array In The Stowed Position For Wind Guest Over 50+ MPH, The DRD Can Also Be Anchored With Mini Helical Earth Anchors & Straps.
	Heat & Humidity	**Acceptable** The Smart Thermostat & Integrated Cooling System Manages Heat & Humidity With Ease.
	Coastal Saltwater Area	**Acceptable** The Non-Ferrous Components & High Grade Coatings Can Withstand The Harsh Environmental Conditions Near Coastal Saltwater Areas.
Product Lifespan	Relief Organizations	**20 - 30 Years Or More** Heavy Use - Frequent Deployments, Harsh Environments, Supporting Basecamps & Relief Operations Globally.
	Homesteader Or Off-Grid Living	**25 - 35 Years Or More** Moderate Use - Frequent Use, Moderate Loads.
	Hurricane Prep Or Camping	**30 - 50 Years Or More** Minimal Use - Homeowners That Use The Device For Camping, Preparedness Or Around The House.
	Coastal Saltwater Areas	**15 - 25 Years Or More** Moderate Use - Frequent Use Near Saltwater Areas, Unit Remaining Outdoors Permanently.

Section 11 - Ease Of Use

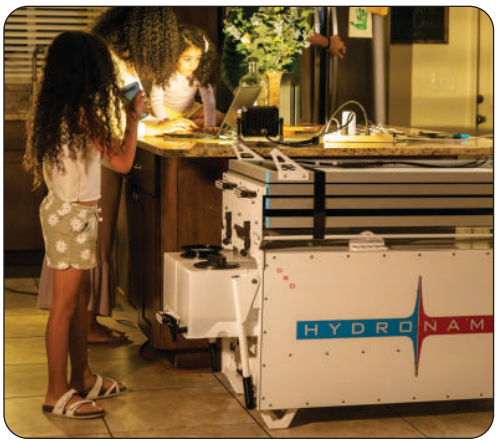
One of our primary engineering objectives when developing the Hydronamis Disaster Relief Device (DRD) was an easy to use, user friendly device. We understood the DRD would be distributed throughout disaster areas used by victims and first responders who more than likely are seeing/using the DRD for the first time. The unit is incredibly easy to use, even an 10 year old child could use the device with ease. The control panel is very simplistic, basic touch screen with multiple on/off switches. The user simply turns on a few switches and the device is ready to use immediately. Simply plug in your electrical device or pour the contaminated water into the dirty water storage tank and the DRD will take care of the rest.

The mobility of the DRD over rough terrain can be challenging depending on the model/weight selected. An athletic individual may not have any trouble at all, but a senior or elder may require assistance. Once the device is set, typically the DRD stays in that location for a long duration.

The rapid solar panel deployment assembly integrates lifting assisted gas shocks and stainless steel slides making the solar panel deployment a breeze, charging the internal batteries. Below are a few pictures showing the user-friendly feature in action:









Section 12 - Periodic Maintenance & Cost

Power System

- The lithium iron phosphate batteries have an excellent life cycle, often lasting 10-15 years or more. The iron phosphate provides high thermal stability helping extend life cycle. The cost to replace both batteries is appx. $1,450 USD. We offer a (5) year warranty on the battery.
- If the charge controller or inverter needed to be replaced for any reason, the cost for either device is less than $500.00 USD.
- The removable DRD housing side panels allows for easy component replacement, upgrade or maintenance.

Water System

Most of the periodic maintenance and related costs are associated with the water purification system. It all depends on two questions:

1) How often is the water purification system used?

2) What is the TDS level of the contaminated water source?

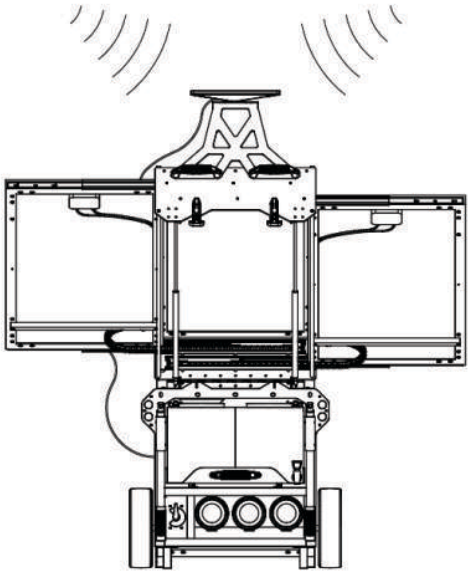
The DRD was engineered to keep the replacement costs relatively low since most of these devices will be dispersed in remote parts of the world (Africa, South America etc..). If the water source has a high TDS rating such as saltwater, brackish, heavily polluted river, it would consequently have a higher maintenance cost and schedule. Please refer to the chart below:

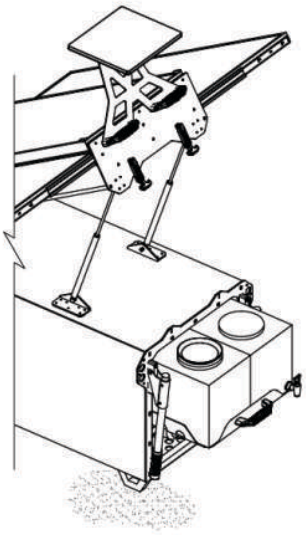
Over 25 year lifespan the DRD device could have provided 1,350,000 million gallons of clean water output, and 42 megawatt-hours of electricity (MWh). For calculations purposes, split the total cost between power/water output. (cents per gallon + USD per MWh).

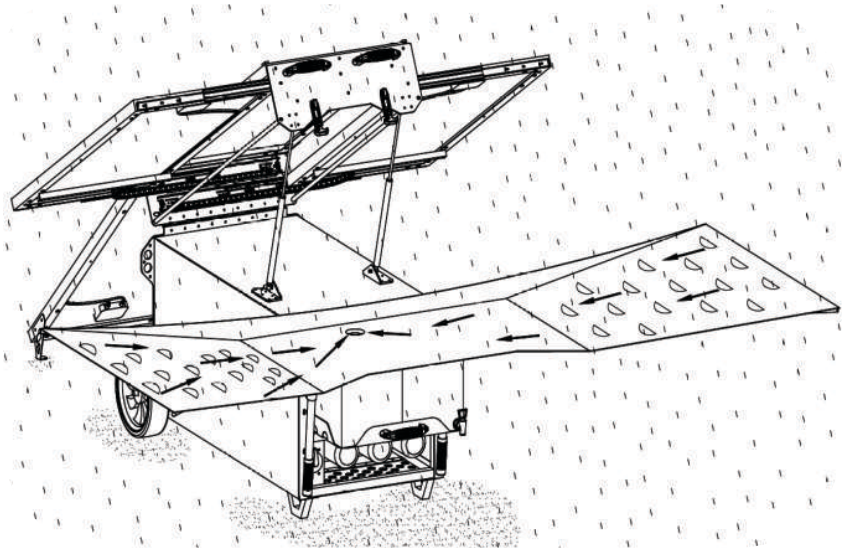
Periodic Maintenance & Related Cost	Type	Multiply The Cents Per Gallon (x) The Estimated Water/Conditons Output
	Freshwater & Saltwater System	High TDS Levels - .0182 Cents Per Gallon
		Moderate TDS Levels - .0118 Cents Per Gallon
		Low TDS Levels - .0063 Cents Per Gallon
	Maintenance Frequency & Estimated Cost	Filters - Clean/Replace Filters As Needed, 1x Per Week or 4x Per Year Depending On Use & TDS
		Lithium Iron Phosphate Batteries - Replace Every 10 - 15 Years Average, $1,450.00 USD
		Misc Maintenance Or Faulty Component Failure, 3x Per Decade (Charge Controller, Sensor etc.) Estimate $535.00 Per Decade Of Contingency Value
	The Data Listed Above Is Based On Current Test Data, Average Scenarios & Product Usage. Please Use This Data For ROM Estimates Only.	

Section 13 - Accessories

Starlink Mounting Bracket - Powder coated aluminum, formed bracket, designed to fit starlink mini, includes all mounting hardware. Expand upon the all-in-one capabilities by adding low orbit satellite communication directly to your DRD.

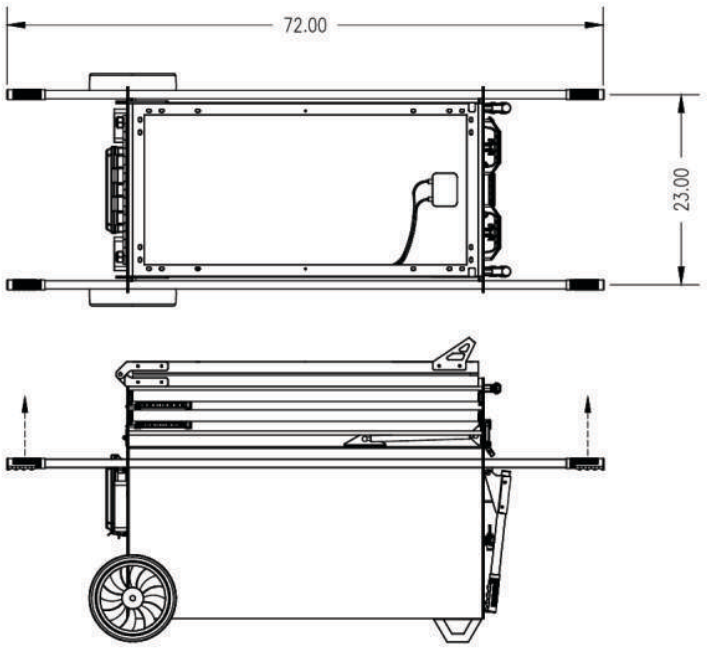






Rain Collection Kit - Innovative rain water collection kit, powder coated aluminum outrigger poles, UV resistant dyneema fabric, machined mounting block & hardware, dyneema fabric has wind relief flaps, appx. 17 sq. ft. - average collection is 5 gallons per storm event.

Lifting Bars - (2) 72" length powder coated aluminum tube lifting bars. Includes machined grip handles & mounting hardware. Carry the DRD over rocky terrain, or lift into the back of a pickup truck or helicopter. Lifting bars increase mobility/loading in difficult situations.



Special Note - See additional accessory options listed within the consumable chart.

Section 14 - Replacement Filters & Consumables

DESCRIPTION OF PRODUCT	TYPE	ITEM #	WEIGHT
Accessory - Rain Collection Kit, Aluminum Outrigger Poles, Dyneema Fabric, Mounting Hardware	Accessory	A-RAINCK	10.5 lbs
Accessory - Starlink Mounting Bracket, Formed Aluminum Plate, Mounting Hardware	Accessory	A-STARMB	4 lbs
Accessory - Lifting Bars, (2) 72" Length, Aluminum Tube, Machined Handles, Mounting Hardware	Accessory	A-LIFT-BAR	5.5 lbs
Accessory - 400 Watt External Solar Panel - Flexible Blanket, 12 ft Cable, Waterproof DRD Plug	Accessory	A-EXSP-FLXB	16.5 lbs
Accessory - 400 Watt External Solar Panel - Rigid Briefcase, 12 ft Cable, Waterproof DRD Plug	Accessory	A-EXSP-RIGB	31.5 lbs
Accessory - Extension Cable For External Solar Panels, 50 ft Cable, Waterproof DRD Plug (12/2)	Accessory	A-EXCB-50FT	4.85 lbs
Accessory - Extension Cable For External Solar Panels, 25 ft Cable, Waterproof DRD Plug (12/2)	Accessory	A-EXCB-25FT	2.60 lbs
Consumable - Seamless Sock Filter Bag, 50 Micron, PP-OSS Positve Seal Flange (5 Pack)	Consumable	RF-SOCK-50M	0.45 lbs
Consumable - Seamless Sock Filter Bag, 25 Micron, PP-OSS Positve Seal Flange (5 Pack)	Consumable	RF-SOCK-25M	0.45 lbs
Consumable - Seamless Sock Filter Bag, 10 Micron, PP-OSS Positve Seal Flange (5 Pack)	Consumable	RF-SOCK-10M	0.45 lbs
Consumable - Complete RO Set (Pre/Post Filters): QTY(20) Polypropylene Sock Filter Bag - 25 micron, QTY (12) MB Polypropylene 1 Micron Filter Cartridges, QTY (2) Filmetec 75 GPD RO Membranes, QTY (4) Coconut Shell Carbon Block Filter Cartridges, QTY (1) PH Plus Calcium Carbonate Re-Mineralization, (1) UV Germicidal Lamp.	Consumable	RF-CMPLT-SET	10.25 lbs
Consumable - Pre Filter Set: Melt Blown Polypropylene, 1,10 Micron, Carbon Block Filter (3 Pack)	Consumable	RF-PREFLT-SET	1.35 lbs
Consumable - 304L SS Filter Cartridge, 9.75" x 2.5" O.D., 10 Micron, Cylindrical, DOE, Buna	Consumable	RF-SS-CYL-10M	0.75 lbs
Consumable - 304L SS Filter Cartridge, 9.75" x 2.5" O.D., 5 Micron, Cylindrical, DOE, Buna	Consumable	RF-SS-CYL-5M	0.75 lbs
Consumable - 304L SS Filter Cartridge, 9.75" x 2.5" O.D., 2 Micron, Cylindrical, DOE, Buna	Consumable	RF-SS-CYL-2M	0.75 lbs
Consumable - Polypropylene Melt Blown Filter Cartridge, 10 Micron, 9.875" x 2.5" O.D., DOE	Consumable	RF-MB-PP-10M	0.25 lbs
Consumable - Polypropylene Melt Blown Filter Cartridge, 5 Micron, 9.875" x 2.5" O.D., DOE	Consumable	RF-MB-PP-5M	0.25 lbs
Consumable - Polypropylene Melt Blown Filter Cartridge, 1 Micron, 9.875" x 2.5" O.D., DOE	Consumable	RF-MB-PP-1M	0.25 lbs
Consumable - Pleated Polyester High Efficiency Filter Cartridge, 20 Micron, 9.75" x 2.5" O.D. (Blue)	Consumable	RF-PLETD-20M	0.25 lbs
Consumable - Pleated Polyester High Efficiency Filter Cartridge, 10 Micron, 9.75" x 2.5" O.D. (Red)	Consumable	RF-PLETD-10M	0.25 lbs
Consumable - Pleated Polyester High Efficiency Filter Cartridge, 5 Micron, 9.75" x 2.5" O.D. (White)	Consumable	RF-PLETD-5M	0.25 lbs
Consumable - Pleated Polyester High Efficiency Filter Cartridge, 1 Micron, 9.75" x 2.5" O.D. (Tan)	Consumable	RF-PLETD-1M	0.25 lbs
Consumable - Ultra-Violet Germicidal Sterilizer Lamp (254nm, 10 Watt)	Consumable	RF-UV-LAMP	0.15 lbs
Consumable - Ultra-Violet Quartz Lamp Sleeve, EPDM O-Ring	Consumable	RF-UV-SLEEV	0.15 lbs
Consumable - Coconut Shell Carbon Block Filter Cartridge, 5 Micron (Pre/Post)	Consumable	RF-CSACBFC	0.75 lbs
Consumable - PH Plus Calcium Carbonate Re-Mineralization Cartridge	Consumable	RF-PH-PLUS	1.40 lbs
Consumable - Filmtec 75 GPD Freshwater Reverse Osmosis Membrane (BW60-1812-75) (2 Pack)	Consumable	RF-RO-MEM	0.90 lbs
Consumable - Filmtec 150 GPD Seawater Reverse Osmosis Membrane (2.5" x 14") (SW30-2514)	Consumable	RF-SW-RO-MEM	1.25 lbs
Consumable - SeaWater Pro Liquid Pickling, Blue, Organic, 2 Year Anti-Bacterial RO Conditioner	Consumable	RF-SW-RO-PICKL	2.35 lbs

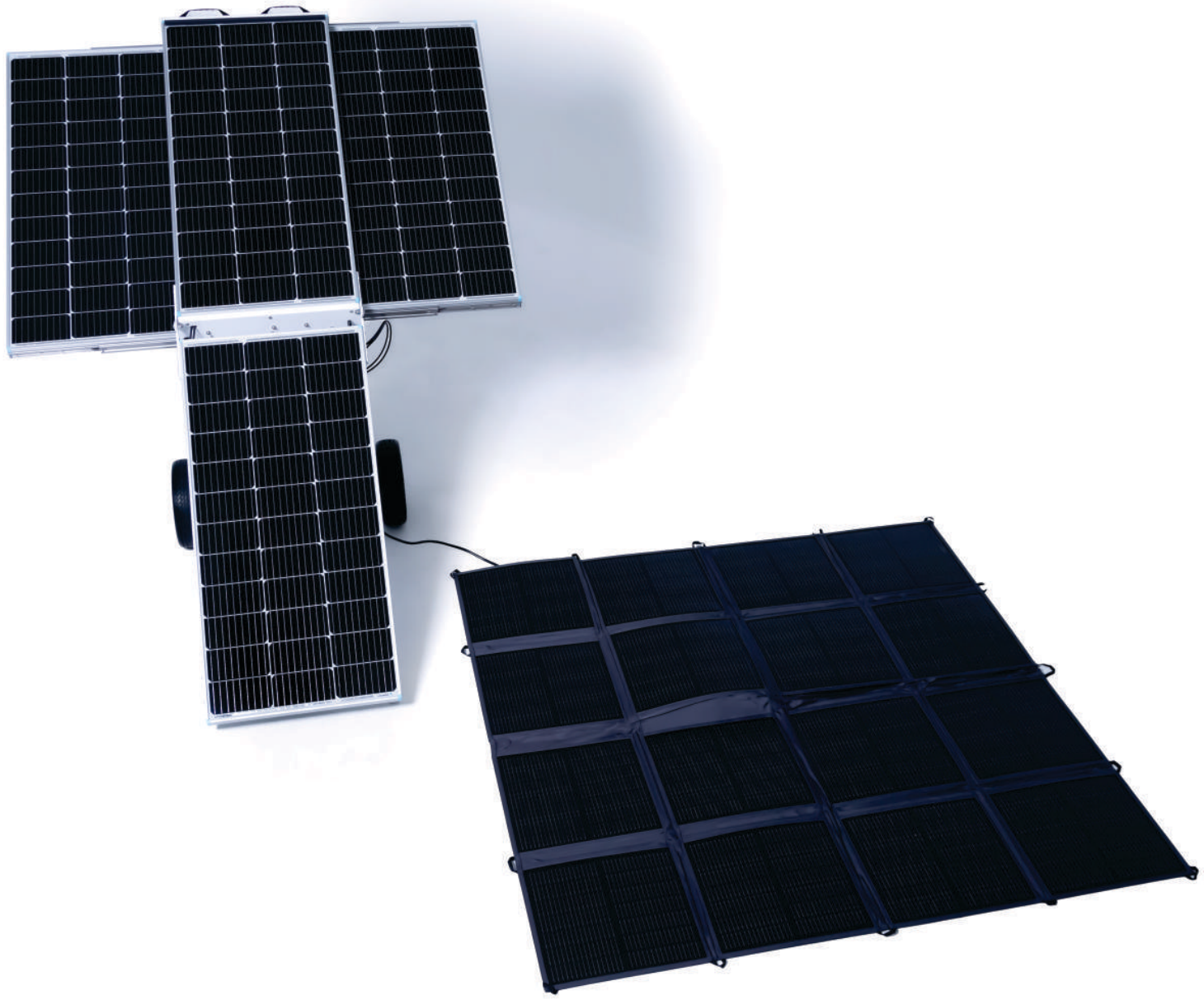
Section 15 - Product Photos

Section 15 - Product Photos Continued


HYDRONAMIS

Next-Gen Rapid Response Solutions

Water - Power - Anytime - Anywhere



Have a question, ask us: 1-833-HYDRO-HQ (493-7647)
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