

## System Specification Sheet

Features		Model: Gamo-X	
<b>Primary Battery System</b>			
Rated Storage Capacity	32.4 kWh		
Nominal Operating Voltage	144 VDC (range: 120 – 168 VDC)		
Cell Chemistry	Lithium-Ion NMC		
Operating Temperature Range	-20 °C to 50 °C		
Battery Weight and Voltage	Pack A: 140 kg, 72 VDC	Pack B: 135 kg, 72 VDC	
	2 packs wired in series for a 144 VDC nominal voltage.		
Additional Features	Integrated BMS, integrated heating pad with thermostatic control for low temperature operation, CAN communication, fuse protection, IP65 weather-resistant enclosure		
<b>Secondary Battery System</b>			
Rated Storage Capacity	7.5 kWh		
Nominal Operating Voltage	13.8 VDC		
Max. Output Current (per battery pack)	Continuous: 300 A	Surge: 500 A (30s)	
Cell Chemistry	LiFePO4		
Estimated Life	3000 – 5000 cycles		
Operating Temperature Range	-20°C to 57°C		
Battery weight	72 kg (36 kg per pack)		
Additional Features	Built-in BMS, IP65 weather-resistant enclosure, automatic cell balancing, charging protection, temperature protection, voltage protection, short circuit protection		
Estimated Charge Time	60-90 minutes per battery pack		
<b>144 VDC Charging System</b>			
Charging available at home base or in the field			
Standard Interface	SAE J1772 socket		
Charger Output Power	6.6 kW		
Input Voltage	85 to 264 VAC		
Operating Temperature	-40°C to 85°C		
Charger Efficiency	>94%		
Charge Time on Level 2 (J1772)	Approx. 5 hours		
<b>Pneumatics</b>			
Target Usage Proven VMAC Oil Screw Compressor	Power all types of air tools: <ul style="list-style-type: none"> <li>- Impact wrenches ½, ¾, or 1"</li> <li>- Drills up to ¾" chuck.</li> <li>- Sanders and grinders</li> <li>- Stop sign pole driver and extractor</li> <li>- Air cleaning, paint guns, etc.</li> </ul>		
Nominal Operating Pressure	150 psi (10.3 bar)		
Maximum Output Flow	70 CFM		
Hose Reel: Industrial Air Reel w/ retractable hose	Heavy-duty reel and retractable ½" X 50' air hose and female ¾" coupler.		

Additional Features	<ul style="list-style-type: none"> <li>- Heavy duty 20-gallon Air Reservoir</li> <li>- Pneumatic Switch: automatic start at 90 PSI and stop at 150 PSI, usage adjustable.</li> <li>- FRL: Filter, Regulator, Oiler for the interchangeable tools.</li> <li>- Panel-mounted sockets for auxiliary air connection inside the cube area.</li> <li>- Additional ½"x50' air hose with male and female ¾" connectors capable of extending the airline on the air reel up to 100' from the service vehicle.</li> <li>- Overheat/overpressure protection to maintain the temperature of the screw compressor oil: <ul style="list-style-type: none"> <li>- Heat Exchanger</li> <li>- Cooler/Fan</li> </ul> </li> </ul>
<b>Hydraulics (single or twin circuits available)</b>	
<p><u>Target Usage</u></p> <p>The Gamo-X Intelligent Control manages twin hydraulic circuits that can be run simultaneously in the Auto mode.</p> <p>The system automatically shifts from <i>Standby</i> to <i>Running</i> mode and vice-versa when power is required at the tool. The system automatically detects when a tool is triggered and reacts accordingly without intervention from the user.</p>	<p>Power all types of hydraulic interchangeable tools such as:</p> <ul style="list-style-type: none"> <li>- Carbide Chainsaws</li> <li>- Circular/Abrasive saws</li> <li>- Trash pumps</li> <li>- Riveters</li> <li>- Rebar Cutters</li> <li>- Impact Wrench</li> <li>- Stop sign pole driver and extractor</li> </ul>
Nominal Flow (Circuit #1)	0 - 12 GPM, adjustable on control panel
Nominal Flow (Circuit #2) - <i>Optional</i>	0 - 8 GPM, adjustable on control panel
Maximum Operating Pressure	2000 psi (172 bar) with adjustable pressure switch.
Hose Reel: Industrial Hydraulic Reel w/ retractable hose	<p>Heavy duty reel of 1/2" X 50' w/double hose. Flat face male and female hydraulic connectors (Circuit 1) Additional ½"X50' double hose stand-alone can either:</p> <ul style="list-style-type: none"> <li>- Increase effective length of the retractable hose to 100'.</li> <li>- Be used on Circuit 2</li> </ul>
Additional Features	<p>Pressure, flow, and temperature meters available for each circuit, 50' hose on reel for circuit #1, additional panel-mounted connections for circuit #2 (as applicable) The Electro-Hydraulic Subsystem uses two pumps to manage the two automated and independent hydraulic circuits.</p>
MH-3 Hydraulic Oil Cooling Package	<p>Pre-engineered and super-efficient oil cooling system includes:</p> <ul style="list-style-type: none"> <li>- 4-gallon reservoir, filter, pressure release valve adjusted to 3000 psi</li> <li>- Hydraulic driven motor ventilator that adjusts motor speed by varying hydraulic pressure.</li> </ul>

	<ul style="list-style-type: none"> <li>- As pressure increases, ventilator turning speed also increases, which makes for more efficient oil cooling.</li> </ul>	
<b>Power Inverter from 12 VDC to 120/240 VAC @ 60Hz – 4.0 kWh</b>		
Target Usage	<p>120 VAC powers:</p> <ul style="list-style-type: none"> <li>- Electric appliances</li> <li>- Water pumps</li> <li>- General tools (drills, impacts, saws, etc.)</li> <li>- Lighting (120V)</li> <li>- Electric pole driver, extractor, and more.</li> </ul> <p>240 VAC powers:</p> <ul style="list-style-type: none"> <li>- Welder</li> <li>- Plasma Cutter</li> <li>- J-1772 level 2 charger inside the service vehicle, which charges the 144VDC battery bank.</li> </ul>	
Continuous Power Rating	4000 W	
Surge Power Rating	12 000 W (20s)	
Output Voltages	120 and 240 VAC, split phase	
Inverter Efficiency Rating	>88% (Peak)	
Additional Features	<ul style="list-style-type: none"> <li>- Electric reel with retractable 50' cord for 120VAC power</li> <li>- Extra 50' cord and panel-mounted socket available for 120VAC @ 20 amps extension cord.</li> </ul>	
Charger output current	120A @ 14.6 VDC charge when plugged into the grid.	
<b>Low Voltage Export Power</b>		
Target Usage	<ul style="list-style-type: none"> <li>- Engine boosting (12 or 24 VDC)</li> <li>- Field Stick Welding</li> </ul>	
Selectable output voltages	12 VDC	24 VDC
Max. Continuous Current	600 A	300 A
Max. Surge Current	1000 A	500 A
Additional Features	<ul style="list-style-type: none"> <li>- DINSE 70-95 type sockets for easy cable connections, panel-mounted voltage selector</li> <li>- Anderson connector switches from 12-24 VDC.</li> </ul> <p>*After boosting 24 VDC equipment, make sure to switch the battery system back to 12 VDC. The two batteries receive charge in parallel.</p>	
<b>Water Distribution</b>		
Target Usage	Tool cooling and dust abatement when cutting concrete or other materials	
Hose Reel	50' X 3/8" with retractable hose, an on/off valve, and quick coupler at hose end.	
Nominal Water Pressure	Standard 15-30 psi pressure at the hose end – <i>options available</i>	
Nominal Water Flow	1 – 6 L/min, adjustable by a valve at the end of the tool.	
Water Tank Capacity	20 gallons (75 L) and 4x5 gallon transportable cans – 40 gallons total water reserve.	
Additional Features	Automatic 12VDC pump Start/Stop function	