



Power your life with LAVO™

Introducing the next generation of energy storage.

The self-refueling hydrogen system features a unique metal hydride storage solution, providing backup power generation. It seamlessly integrates with renewable energy sources to deliver sustainable, reliable, and long-duration energy storage anywhere. www.lavo.com.au



Renewable

Stores green energy from your source



Durable

Operational in conditions 2° to 50°C



Australian

Owned Company specialized in Clean tech

Technical Specifications

Dimensions (HxWxD)	1785 x 1333 x 563 mm	Recommended Temperature	2° - 50° C
Weight (excl. Vessels)	< 800 kg	Environmental Humidity Range	0 to 95% RH
Hydride Vessels (separate module)	> 5 Vessels	Maximum Elevation	2000 m
Max System Pressure	30 bar ¹	Noise Level	≤ 75 dbA @ 1 m distance
Vessel Weight	55 kg per Vessel	Enclosure Protection Rating	IP54
Mounting ¹	Floor Mount/Outdoors ²	Storage Capacity	1.69 kg per 5 vessels
Nominal Voltage	51.2 V	Water Supply	Standard Residential Portable Water

The LAVO | HESS Energy Storage System

LAVO | HESS is a groundbreaking, fully integrated energy solution that combines hydrogen production, storage, and power generation – all within a single, sleek cabinet. This revolutionary system is a **game-changer** in the global push for decarbonization.

Powered by cutting-edge technology, our advanced alloy-filled containers seamlessly integrate with electrolyzers and fuel cells, storing hydrogen at low pressure – **no compressors required**. Experience the future of energy today with LAVO.

Delivering **clean, cost-effective, and sustainable energy**, LAVO | HESS ensures safe and reliable distributed power, making it the perfect fit for homes, businesses, and communities.



The Hydrogen Hydride

LAVO uses innovative, patented metal hydride to produce and store that last three times longer than lithium batteries. This unique hydride is energy efficient, carbon neutral, safe, non-flammable, and designed for all components to be recycled.

¹ Per Australian Building Code regulations.

² For indoor use, please consult with LAVO



The LAVO | HESS System Specifications

LAVO | HESS acts as a solar sponge, integrating with solar to capture and store renewable energy for use when needed.

Creates Hydrogen from water	Safety Controls safety controls integrated within the system for over-pressure or fire event
Stores Hydrogen into LAVO™'s patented metal hydride	Integrates with fuel cells and electrolyzers without the need of compressors
Generates Electricity by converting hydrogen into power	

General	System Type	LAVO HESS - 5 kW Genset System (GS-510)
	Dimensions	1333 mm X 563 mm X 1758 mm [L X W X H]
	Weight	~ 800 kg
Single Vessel Details	Vessel Type	Metal hydride vessel
	Gross Max Weight	55 kg per vessel
	Energy Storage capacity	0.338 kg H ₂
	Dimensions (L x W x H)	1.1 m * DN150
	Max. Vessel Pressure	30 bar-g
	Vessel compatible gas	Hydrogen gas (99.999% purity)
Electrolyser Details	Electrolyser type	PEM water electrolyser
	Rated hydrogen production	0.178 Kg/hr [2.0Nm ³ /hr]
	Supply pressure	30 bar Max.
	Power consumption	4.75 kWhr /Nm ³ H ₂
Fuel-cell Details	Rated Power	5 kWe / 10 kWe
	Efficiency	η≈54.4% @ 25% - 100% Rated Power [1.32 kW/kWe] η≈58.6% @ 50%Power[0.70 kW/kWe]
	Operating Temperature	70°C Inlet typical, Coolant and Gas Inlets
Battery System	Capacity and Energy	5.12 kWhr,100 Ahr
	Nominal Voltage	51.2 V DC
	Max. Current	Charge/ Discharge: 100 A
Control System	Data Logging	Onboard datalogging storage retains data and alarm condition data for a period of 6 months
	Standard User-interface	JAVA-Based software
Facility Requirements	Installation	Fit for outdoor installation
	Intended Climate	Suitable for most climates (consult LAVO for your climate conditions)
	Placement	To be placed on a flat concrete surface or a hardstand area
	Ingress Protection	IP54 [IEC 60529]
	Power requirements	DC Bus Interface
	Water quality requirements	Standard residential potable water
	Max Water flow requirements	4 L/h
	Water pressure requirements	275 To 550 kPa-g ; Optimal 413 kPa-g
	Ventilation requirements	Location must facilitate the installation of H ₂ and O ₂ vents



LAVO | HESS Warranty Details

LAVO | HESS comes with standard warranty terms and conditions as stated below:

For further details of LAVO T&Cs, please reach out to LAVO Team for further information.

Warranty	System Warranty	1 year standard LAVO equipment warranty policy
	Coverage	Product is covered under a limited warranty of 1 year from the date of shipment. The warranty includes coverage for manufacturing defects, material failures and software malfunctions under normal conditions of use.
	Exclusions	The warranty does not cover: <ul style="list-style-type: none">• Damage caused by improper use, installation or maintenance.• Normal wear and tear, cosmetic damage or consumable parts such as filter elements.• Damage due to unauthorized modifications, repair or tampering.• Environmental factors such as extreme conditions or accidents.• The warranty does not cover damages resulting from natural disasters (Acts of GOD) or military conflicts (Acts of WAR).
	Warranty Service	<ul style="list-style-type: none">• During the warranty period, repair or replacement of defective components will be provided at no additional cost.• The decision to repair or replace the product lies solely with the manufacturer.
	Claim Process	<ul style="list-style-type: none">• The customer must notify the manufacturer within 3 days of detection of any defects.• The customer is responsible or shipping cots to the service center unless otherwise stated.
	Limitations of Liability	<ul style="list-style-type: none">• The warranty is the sole and exclusive remedy for defects and is in lieu of any other express or implied warranties including fitness for a particular purpose.• The manufacturing liability is limited to the repair and replacement of the product.