

HERO Irrigation

Hydrogen Nano-bubble Irrigation System

TECHNICAL DATA SHEET



Overview

HERO Irrigation delivers hydrogen-rich water at commercial scale for controlled-environment agriculture and turf applications — dissolving molecular hydrogen into irrigation water via nano-bubble technology for delivery to the root zone.

Model: HERO Irrigation · **Also known as:** WZ-S

Technical Specifications

Water Yield	20 L/min
Dissolved Hydrogen Concentration	3,000–5,000 ppb *
Hydrogen Purity	99.99%
Output Pressure	0–0.2 MPa
Rated Voltage	100–240V ±15%, 50–60Hz
Rated Power	800W
Water Tank Volume	4.0L
Water Quality Requirement	<30 TDS (purified/soft water, resistivity >2MΩ·cm)
Dimensions (L × W × H)	550 × 350 × 970mm
Net Weight	36kg
Electrolysis Technology	SPE (Solid Polymer Electrolyte), zero-pole distance catalytic electrode

* Manufacturer factory specification. Note: this figure differs from the 2,000–4,000 ppb range currently published on hydrogenmachines.com.au and ybgglobal.com — needs reconciling with the live site copy before external distribution.

Performance & Field Evidence

Field and academic research on hydrogen-rich irrigation reports measurable outcomes across multiple crop programmes:

- Qingpu rice programme (Shanghai, China) — 6-year field programme recording an average 18.8% yield increase, with reduced lodging and disease incidence.
- South Korea cherry tomato trial — peer-reviewed, 2-year controlled trial reporting significantly higher yield and single-fruit weight versus conventional-fertiliser controls.

Results are crop-, cultivar-, concentration-, and site-dependent. Site-specific outcomes should be validated through staged trial deployment.

Quality Verification

- Lab-verified 99.991% H₂ gas purity — independent test report available on request
- Zero ozone / zero CO output — independently tested
- Every unit factory-tested prior to dispatch

Applications

HERO Irrigation is engineered for hydrogen-rich drip irrigation across controlled-environment and outdoor commercial growing operations, up to 10 hectares:

● Glasshouses & greenhouses ● Botanic gardens ● Vineyards	● Nurseries ● Hydroponic farms ● Golf courses & turf farms	● Growers / row crops ● Aquariums & aquaculture * ● Small pools, spas, plunge pools *
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** Secondary application.*

Commercial Information

List Price (USD)	US\$16,311
List Price (AUD)	A\$23,504.10
Shipping Terms	DDP (Delivered Duty Paid) to Australia, United States, Canada, New Zealand, Singapore, UAE, Hong Kong, South Korea, Thailand
Non-DDP Destinations	DAP — buyer responsible for import duties/taxes at destination
Warranty	24-month manufacturer warranty
Fulfilment	Manufactured and dispatched by Moneng Technology

Ordering

Available for direct purchase online at hydrogenmachines.com.au and ybgglobal.com. For enterprise deployments, staged validation programmes, or technical consultation, contact YBG Industrial.

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