

## What Is SOURCE?

SOURCE is a solar-powered and infrastructure-free drinking water solution. As a non-extractive water resource, SOURCE Hydropanels represent a first in transparency, resiliency, security, and quality. Whether at homes, schools, hospitals, or other institutions, SOURCE advances drinking water ownership, bypassing the need for other drinking water alternatives.

SOURCE is powered by an integral combination of solar photovoltaics and high-efficiency solar thermal. The electrical and thermal power is used to efficiently produce water in a modified psychrometric cycle even in some of the driest deserts in the world.

## How Does SOURCE Work?

- 1 Using solar PV, SOURCE takes in ambient air via fans and adsorbs water vapour from that air onto a hygroscopic material
- 2 Heat generated from solar thermal drives a process of condensation, converting the adsorbed water into liquid water, made pure
- 3 The pure water flows into the integrated 30-litre reservoir where it is mineralised with magnesium and calcium
- 4 Deterministic and ML algorithms optimise the quality of stored water, ensuring the taste and health of water dispensed from the reservoir

Hydropanel Front View

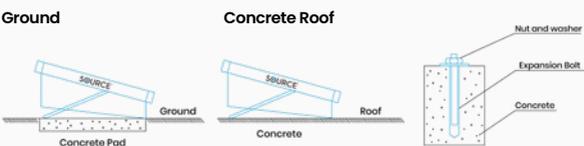
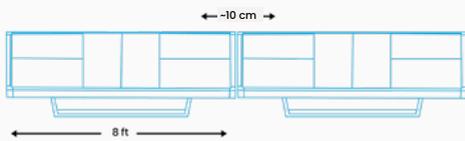
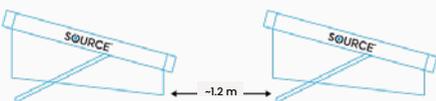


Hydropanel Side View



## Installation

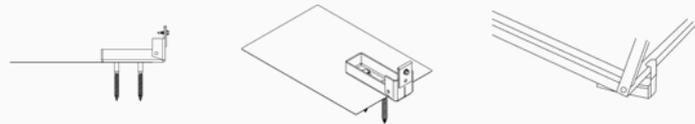
### BASIC ARRAY DIMENSIONS



Weight: 154 kg.

### HYDROPANEL MOUNTING

Mounting brackets are provided to be used for all installations including ground and roof applications. Additional mounting options are available for tile roofs. To optimise water production performance, the SOURCE frame angle would be set to match local latitude.



### WIND LOAD CONSIDERATIONS

When considering wind loads alone (w/o snow or seismic load combinations), the following correlates to max tilt angles.

No limitations from 0-150km/hr  
 35° @ 180km/hr  
 25° @ 285km/hr

### HYDROPANEL DECIBEL RATINGS

Operating Mode	Distance from Unit	Total Unit Sound Rating (dBA)	Max Unit Sound Rating (dBA)
Normal	1 metre	73.5	76
	5 metres	67.3	69
	10 metres	65	65
Low Noise	1 metre	71	73
	5 metres	66.5	68
	10 metres	64	64

## World-Class Reliability

All components of the Hydropanel are tested to IEC 61215 equivalency beyond Hydropanel lifetime:

- Solar-Thermal Assembly
- Lower Housing Assembly
- Internal Components
- Reservoir Base Assembly
- The body and frame of the Hydropanel are powder-coated steel.
- The Hydropanel passes EPA air quality testing to EPA methods 8260, 8270C\_SIM, 8015D

## Network Operations Centre

- Each SOURCE Hydropanel connects to the Zero Mass Water Network Operations Centre (NOC)
- Data returns from each Hydropanel to the NOC and stores in the cloud with redundancy
- Hydropanel performance remotely optimises using machine learning
- The NOC resolves any alerts remotely or deploys the field service team as needed
- Cellular Module is FCC, ANATEL, and IC certified
- Hydropanel optimises to hibernate in freezing temperatures to protect pump and returns to full operation when safe to do so

## Required Maintenance

### Annual

- Air Filter
- Water Filter (3650 litres)

### 5 Years

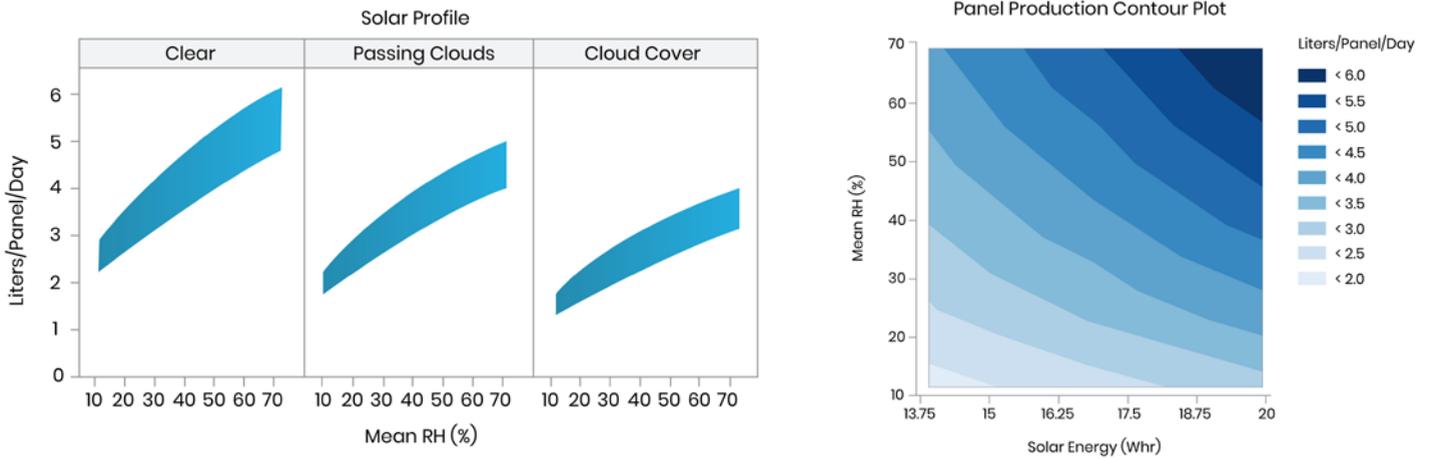
- Mineral Cartridge (9125 litres)

- Standard Warranty – 1 year
- Extended Warranty – 5 years
- Hydropanel Lifetime – 15 years

## Water Production

Production of water by SOURCE Hydropanels is dependent on local measures of relative humidity (RH) and solar energy (kWh).

SOURCE Hydropanels produce 360–600, 500 mL standard water bottles each month, on average.



## The Highest Commitment to Water Quality

By design and as tested, SOURCE water quality is not impacted by air quality.

	Parameter	US EPA Limit	SOURCE Standard of Excellence	SOURCE Test Result
Microbial Parameters	Escherichia coli - MPN/100mL	0	0	Not Detected
	Coliform, Total - MPN/100mL	0	0	Not Detected
	2 Others	-	-	Not Detected
Inorganic/Chemical Parameters	Alkalinity	Not Established	10-250	10-94
	Bicarbonate Alkalinity	Not Established	10-250	10-94
	Calcium	Not Established	0-30	2.4-23
	Total Dissolved Solids	500**	20-250	20-240
	Hardness as Calcium carbonate	Not Established	< 200	6.0-100
	Magnesium	Not Established	0-30	Not Detected-11*
	Silica	Not Established	Not Established	Not Detected-2.0*
	Turbidity - NTU	1.0**	0-2.5	0.29-1.7
	Nitrate as N	10	10 (Nitrate-N)	0.16-7.2
	Silver	0.1**	0.01	Not Detected-0.086*
	Barium	2	0.7	0.0027 - 0.017
	Nickel	Not Established	0.02	Not Detected-0.0060*
	pH - SU	6.5-8.5	6.5-9.0	>7
	Sodium	None	150	Not Detected-5.2*
	Copper	1.0**	1.0	Not Detected-0.0027*
	Uranium	0.03	0.017	Not Detected-0.0016*
	Aluminum	0.05-0.2**	0.2	Not Detected-0.11*
	Zinc	5.0**	3	Not Detected-0.017*
	Nitrite as N	1	1 (Nitrite-N)	Not Detected-0.63*
	31 Others	-	-	Not Detected
Volatile/Semi-Volatile Parameters	Benzene	0.005	0.001	Not Detected
	Toluene	1	0.7	Not Detected
	138 Others	-	-	Not Detected
Radiocemical Parameters	Gross Alpha	15	13.5	Not Detected
	Radium 226 - pCi/L	5	5	Not Detected
	Radium 228 - pCi/L	5	2.7	Not Detected
	Gross Beta	4	4	Not Detected
Miscellaneous Parameters	Asbestos - MFL	7	7	Not Detected
	1613B - Dioxin	3x10 <sup>-8</sup>	3x10 <sup>-8</sup>	Not Detected
	8 Others	-	-	Not Detected

\* Range represents min and max test result of ZMW's routine water monitoring and testing

\*\* Secondary standard - non-mandatory water quality standards set by the US EPA