



THINK TO INNOVATE

Part of



WATERBOX

WHAT IS THE WATERBOX



The **WATERBOX** is the solution for the simplest installation of a water pumping system powered by solar: the smart solution to enable any user to build it anywhere this may be required. **It's all inside one box!**

PERFECT FOR EVERYBODY:

END USERS

The **WATERBOX** is optimal for all the people who needs a fast, easy and high quality water pumping system and has no time or experience to choose the right components.

BUSINESS USERS

The **WATERBOX** is the best choice for distributors and installers because, although it's composed by several products, studied to fit perfectly one with the other, it is purchasable by a single ordering code. It facilitates the purchasing process and the stock management.

WHY IS IT EASY?

All the parts are already pre-assembled and the **WATERBOX** contains all detailed and illustrated instructions to guide the installers through the process.

HIGH QUALITY COMPONENTS:

The pumping unit

The submersible pumping unit is multisource* and all-in-one. It includes the centrifugal or helical pump, the motor and the inverter.

Each component of the pumping unit has been developed to be easily used and to be free of maintenance**. Only stainless steel AISI 304 for maximum durability.

- Water rotor motor conceived with respect for the environment.
- Built in inverter for a maintenance free system even in situations of temperature fluctuations.
- High water flow performance ratio.
- Developed and made completely in Vicenza (Italy).

Photovoltaic modules

- Designed specifically for pumps. We apply solar modules with the right output voltage and current to work in perfect harmony with our multisource pumps.
- Strong alloy profiles for high mechanical resistance and tempered, shock resistant glass.
- Dimensions and weight designed for easy transport.



Mounting system*

Ground mount frames for solar installations which could be settled in with just an hammer. No need for any machinery, special tools or any special ballast against high winds.

The mounting systems can withstand wind speeds of up to 160 km/h and it can be fully assembled by two persons in less than 2 hours.

Needed accessories are all included

Inside the **WATERBOX** you will find all the tools and accessories necessary to assemble the system

Safe box

Pallet certified for exportation, and strong boxes, 1700 BFSV, suitable for sea freight.

SIZED MEASURES FOR STOCKING ON CONTAINERS:

WATERBOX SMALL

size 1.100 x 200 x 1.120 (h) mm

Can be packed alone, in 3 or in 6 units in a single pallet.

Max 108 in a 20 feet container

Max 228 in a 40 feet container

WATERBOX MEDIUM and LARGE

size 1.150 x 610 x 2000 (h) mm for sea freight

size 1.900 x 610 x 1.250 (h) mm for air freight

Max 18 in a 20 feet container

Max 38 in a 40 feet container

CONTAINER
20 FEET
18
WATERBOX M and L

CONTAINER
40 FEET
38
WATERBOX M and L



* only for M and L version

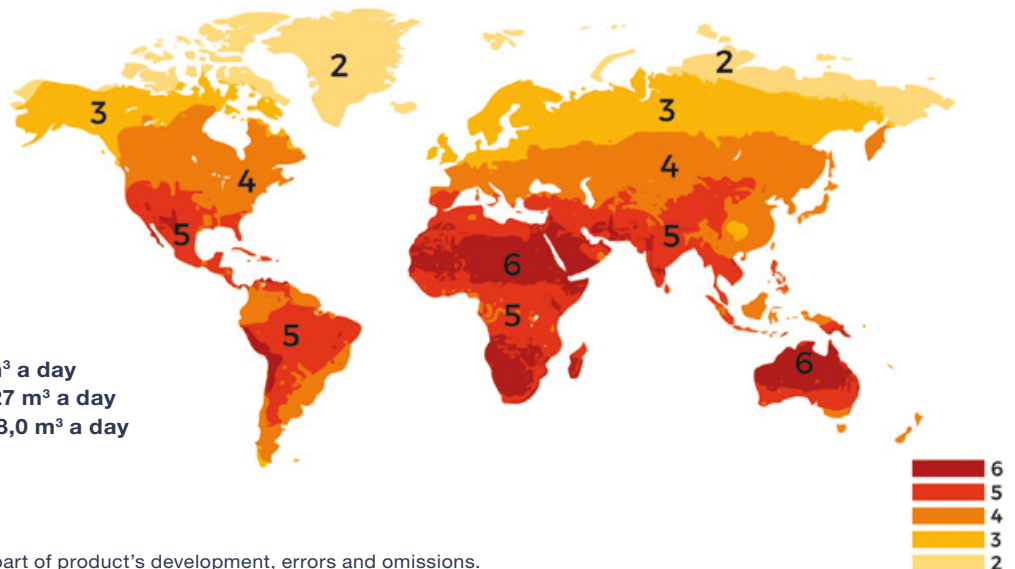
** out of the standard perishability

HOW MUCH WATER DO YOU NEED?

A **WATERBOX** for every need.
Based on the depth of the well and the water flow in cubic meters.

HEAD	MODEL	FLOW	MODEL	FLOW	MODEL	FLOW
- 10 mt	WATERBOX S 06/04	4,5 m³/h	WATERBOX M 08/03	11 m³/h	WATERBOX L 08/05	15 m³/h
- 20 mt		2 m³/h		10 m³/h		13 m³/h
- 30 mt	WATERBOX S 01/02	1,3 m³/h	WATERBOX M 05/04	8 m³/h		11 m³/h
- 40 mt		1,2 m³/h		5,5 m³/h		9,5 m³/h
- 50 mt		1 m³/h		4,5 m³/h		8 m³/h
- 60 mt		0,9 m³/h	WATERBOX M 02/02	2,8 m³/h	7 m³/h	
- 70 mt		0,7 m³/h		2,8 m³/h	5,5 m³/h	
- 80 mt		0,6 m³/h		2,7 m³/h	WATERBOX L 05/08	5 m³/h
- 90 mt	✘	2,4 m³/h		4,5 m³/h		
- 100 mt	✘	✘	2 m³/h	4 m³/h		
- 110 mt	✘	✘	WATERBOX M 01/03	1,4 m³/h	WATERBOX L 02/02R	2,7 m³/h
- 120 mt	✘	✘		1,3 m³/h		2,6 m³/h
- 140 mt	✘	✘		1,3 m³/h		2,4 m³/h
- 160 mt	✘	✘		1,2 m³/h		2,3 m³/h
- 180 mt	✘	✘		1,2 m³/h	✘	
- 200 mt	✘	✘		1,1 m³/h	✘	
- 230 mt	✘	✘	1,1 m³/h	✘		

CALCULATE MEDIUM DAILY EXTRACTION OF WATER.



EXAMPLE

Country: Sudan

Borehole head 50 mt

Average daily solar: 6 hours


- **WATERBOX S:** 1 m³/h x 6 = 6 m³ a day

- **WATERBOX M:** 4,5 m³/h x 6 = 27 m³ a day


- **WATERBOX L:** 8,0 m³/h x 6 = 48,0 m³ a day

Subject to technical modifications as part of product's development, errors and omissions.

WATERBOX	SMALL		MEDIUM				LARGE		
Model	01/02	06/04	01/03	02/02	05/04	08/03	02/02 R	05/08	08/05
Warranty Complete System 2 Years	✓	✓	✓	✓	✓	✓	✓	✓	✓

PUMP - MADE IN ITALY 									
Pump Model	NERA 01/02H	NERA 06/04	4 HS 01/03H MP	4 HS 02/02H MP	4 HS 05/04 MP	4 HS 08/03 MP	4 HS 02/02 HR MP	4 HS 05/08 MP	4 HS 08/05 MP
Voltage	70-190 VDC	70-190 VDC	90 - 400 VDC 90 - 265 VAC				90 - 400 VDC 90 - 265 VAC		
P1 (W)	800		1300	1300	1600	1800	2000	3000	
Pump Size 4"	4"		4"				4"		
Pump Delivery	1 1/4"	1 1/2"	1 1/4"	1 1/4"	1 1/2"	1 1/2"	1 1/4"	1 1/2"	
Weight Kg	11	9	21	19,5	19,5	20	20,5	22	21
Centrifugal Pump	✗	✓	✗	✗	✓	✓	✗	✓	✓
Helical Pump	✓	✗	✓	✓	✗	✗	✓	✗	✗
Permanents Magnets Motor	✓	✓	✓	✓	✓	✓	✓	✓	✓
TDH m/max	120	30	230	100	55	45	160	110	75
Max flow m³/h	1,3	8,2	1,4	3	7,5	10,5	3	7,5	10,5
Body	AISI 304		AISI 304				AISI 304		
Helical Stator and Impellers material	AISI 304		AISI 304				AISI 304		
Built-in no return valve	✓	✓	✓	✓	✓	✓	✓	✓	✓
Multisourcing AC/DC	only DC		✓	✓	✓	✓	✓	✓	✓
Inverter on Board	✓	✓	✓	✓	✓	✓	✓	✓	✓
Over current protection	✓	✓	✓	✓	✓	✓	✓	✓	✓
Over temperature protection	✓	✓	✓	✓	✓	✓	✓	✓	✓
Lack of water protection	✓	✓	✓	✓	✓	✓	✓	✓	✓
Max water temperature	35°C (92°F)		35°C (92°F)				35°C (92°F)		
Max sand content in the water	50 gr/m³		50 gr/m³				50 gr/m³		

PV MODULES - TIER 1									
Number of modules	4		6	4	6	6	10		
Pmax (W) each module	100		275				275		
Total Pmax (W)	400		1650	1100	1650	1650	2750		

ACCESSORIES - MADE IN ITALY 									
Cabinet AC/DC IP65	only DC		✓	✓	✓	✓	✓	✓	✓
Solar Modules ground mounting system	✗	✗	✓	✓	✓	✓	✓	✓	✓
Waterproof Connection	✓	✓	✓	✓	✓	✓	✓	✓	✓
Solar Cable 4 mm Red	15 m		15 m				15 m		
Solar Cable 4 mm Black	15 m		15 m				15 m		
Clean Cable m	90	40	240	110	70	60	170	120	80
Polyester Rope m	90	40	240	110	70	60	170	120	80
Solar Connector MCIV	3 m + 3 f		3 m + 3 f				3 m + 3 f		
Joint for pump/pipe	1" 1/4 ø 40 mm	1" 1/2 ø 50 mm	1" 1/4 ø 40 mm	1" 1/4 ø 40 mm	1" 1/2 ø 50 mm	1" 1/2 ø 50 mm	1" 1/4 ø 40 mm	1" 1/2 ø 50 mm	
Tools Kit	✗	✗	✓	✓	✓	✓	✓	✓	✓
Instruction Manual	✓	✓	✓	✓	✓	✓	✓	✓	✓

BATTERIES									
BATTERIES ARE NOT NECESSARY									

PACKAGING									
Box dimensions for sea freight (mm)	1100x200x1120 (h)		1150x610x2000 (h)				1150x610x2000 (h)		
Box dimensions for air freight (mm)	1100x200x1120 (h)		1900x610x1250 (h)				1900x610x1250 (h)		
Net Weight kg	67	57	254	160	204	204	320	316	310
Gross Weight kg	71	61	292	198	242	242	360	354	348

WHAT IS UNHRD LAB?



UNHRD Humanitarian Response Depot

United Nations Humanitarian Response Depot, the UN Agency which takes care of the first aid in case of emergency, has established a research and development unit called the **UNHRD LAB** to review, test and develop innovative products for humanitarian response, as well as having a strong support function advising its Partners on the most appropriate specs for their activities.

A team of field experts and engineers based in Brindisi are partnering with leading research centres, suppliers and governments to identify more appropriate and cost-effective items, incorporating green technologies, user-friendly units and integrated kits for its Partners.

The first version of the WATERBOX was tested by UNHRD LAB in June 2014, with positive result.



WATERBOX EASY TO INSTALL



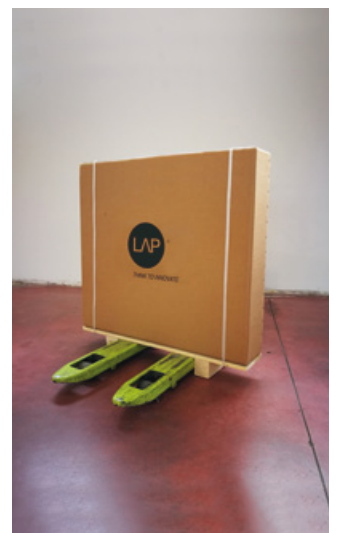
EASY TO TRANSPORT WATERBOX



WATERBOX MEDIUM and LARGE



WATERBOX MEDIUM and LARGE



WATERBOX SMALL




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 info@lapsrl.it

 www.lapsrl.it



 energy@giertsen.no

 www.giertsenenergy.com

Italy, Vicenza
Norway, Bergen
Germany, Frankfurt
Kenya, Nairobi
Uganda, Kampala