



**RPS**  
SOLAR PUMPS

# Solar-Powered Surface Pumps for Irrigation



**+ 2023**  
**PRODUCT CATALOG**

RPSsolarpumps.com  
**888-637-4493**

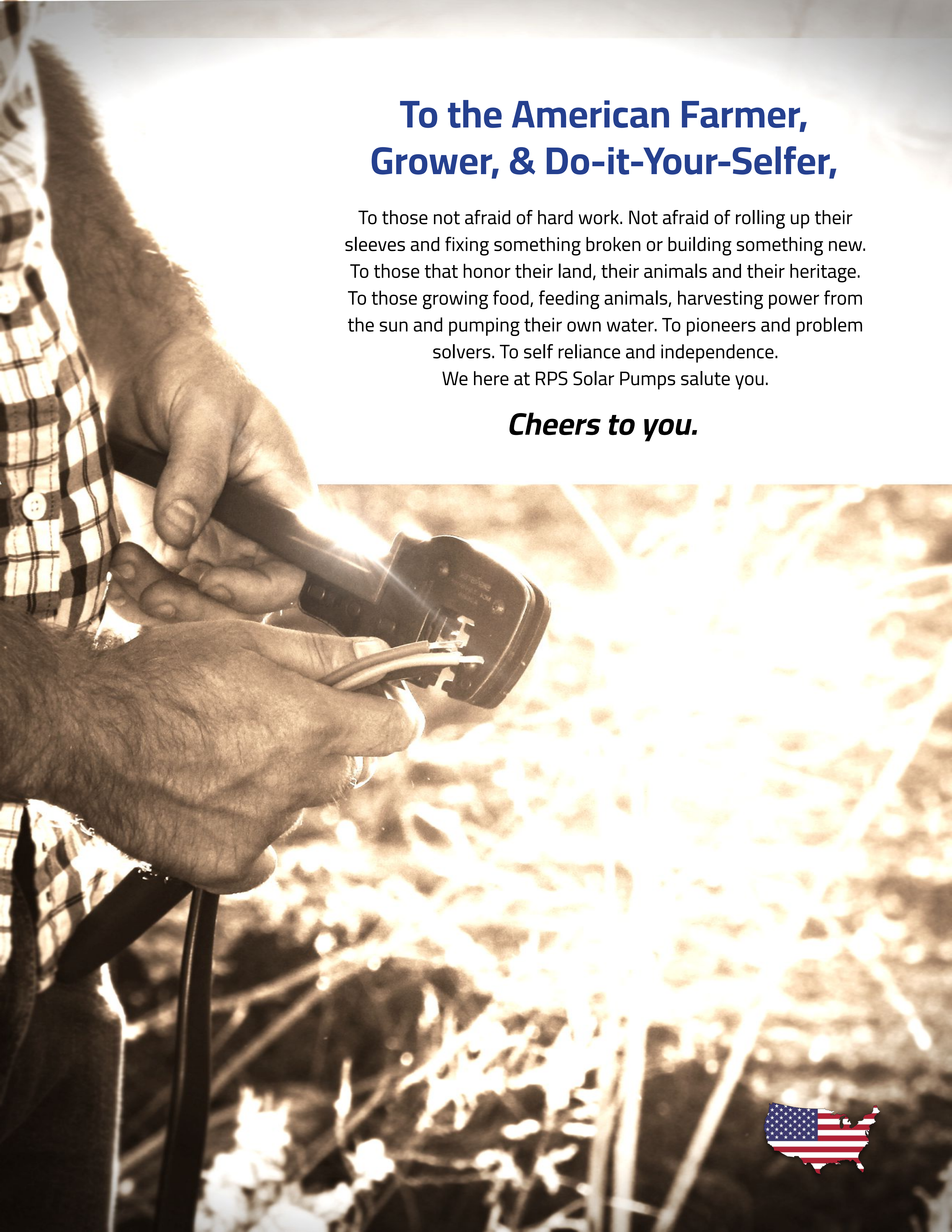


# To the American Farmer, Grower, & Do-it-Your-Selfer,

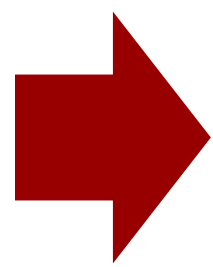
To those not afraid of hard work. Not afraid of rolling up their sleeves and fixing something broken or building something new. To those that honor their land, their animals and their heritage. To those growing food, feeding animals, harvesting power from the sun and pumping their own water. To pioneers and problem solvers. To self reliance and independence.

We here at RPS Solar Pumps salute you.

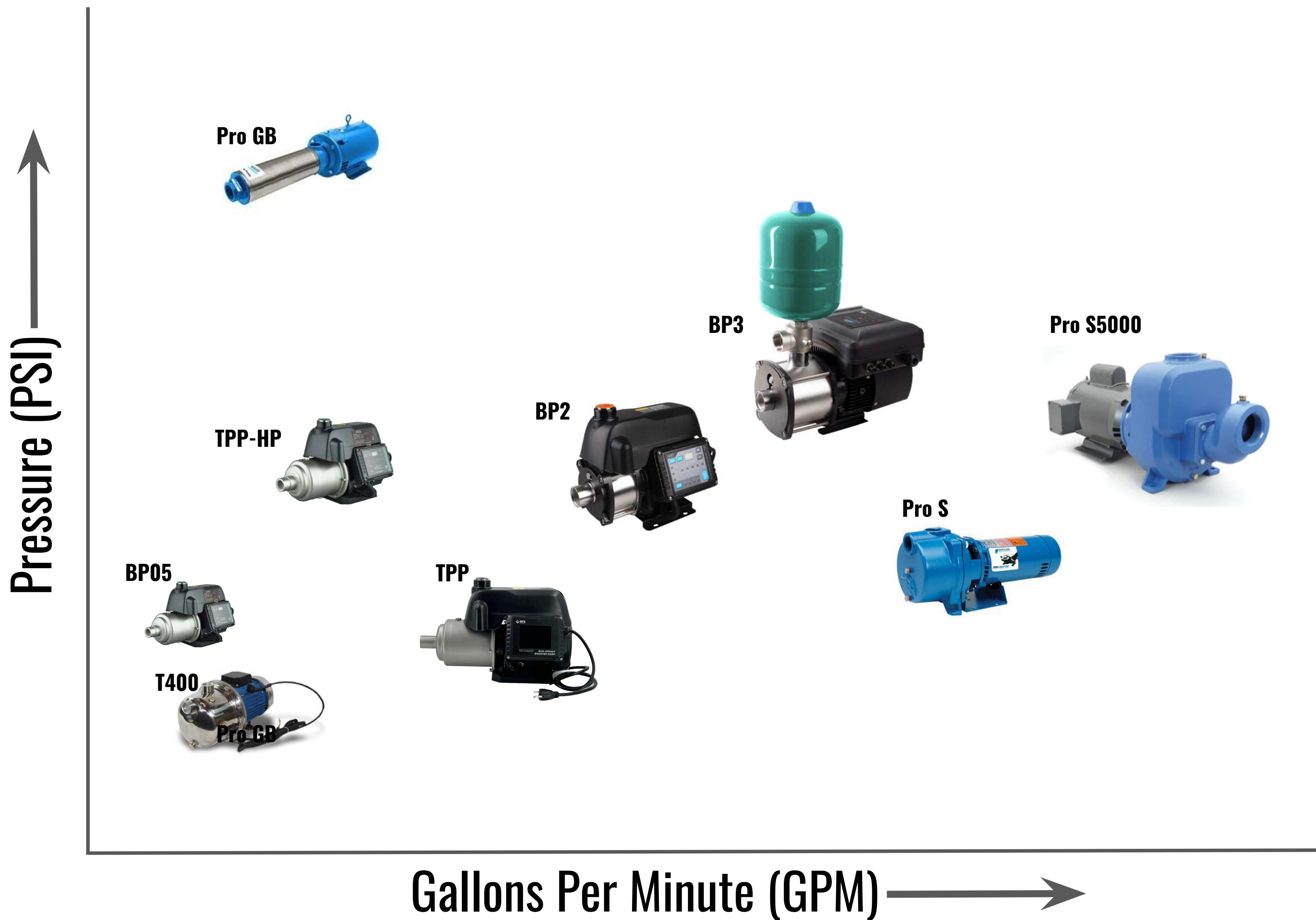
***Cheers to you.***







# START HERE- SOLAR SURFACE PUMP OPTIONS



↑ **Solar Array Size (# of Panels)** = ↑ **Runtime / Gallons Per Day**

The greater the solar array size, the longer you'll be able to run the pump, effectively increasing the gallons per day produced. Turn to

# Table of Contents

Consider this book your go-to reference guide on all things surface solar pumping. Not only will you find the most complete list of RPS Surface Pumps, but a crash course in Off-Grid Irrigation - everything from guidance on the type of emitters to use to creating water pressure with the Earth's gravity. It represents one small part of our steadfast commitment to help arm you with the tools and know-how to install a solar-powered water pump yourself!

## GUIDE TO SOLAR PUMP IRRIGATION

**Determine Daily Water Requirements.....** 5-8

**Irrigation Zones.....** 9

    Diagrams, Examples

**Determining Pressure (PSI) .....** 10

    Diagrams, Sizing

**Gravity Fed Irrigation .....** 13

    Diagrams, Calculations

**How to Order.....** 28

## BEST-SELLING PRODUCTS

**Overview of Daytime Direct Pumps.....** 17

RPS Solar Transfer Pump ..... 18

Pro GB Booster ..... 19

Pro Irrigation Surface Pump ..... 20

**Overview of Anytime Pumps.....** 21

½ HP Eco Steady ..... 22

High Pressure Tankless Pressure Pump.... 23

Original Tankless Pressure Pump..... 24

2 HP Eco-Steady Booster Pump..... 25

3 HP Eco-Steady Booster Pump..... 26

## World-Class Videos Available on YouTube

When you see this icon on a product page it means we've created a great in-depth video to better demonstrate the product and installation. Find hours of great material and training at [youtube.com/RPSSolarPumps](https://youtube.com/RPSSolarPumps)



## Want More?

There's plenty more we couldn't fit in here. For more insider knowledge, visit the industry's largest archive of solar pump related material at [RPSsolarpumps.com/LEARN](https://RPSsolarpumps.com/LEARN)

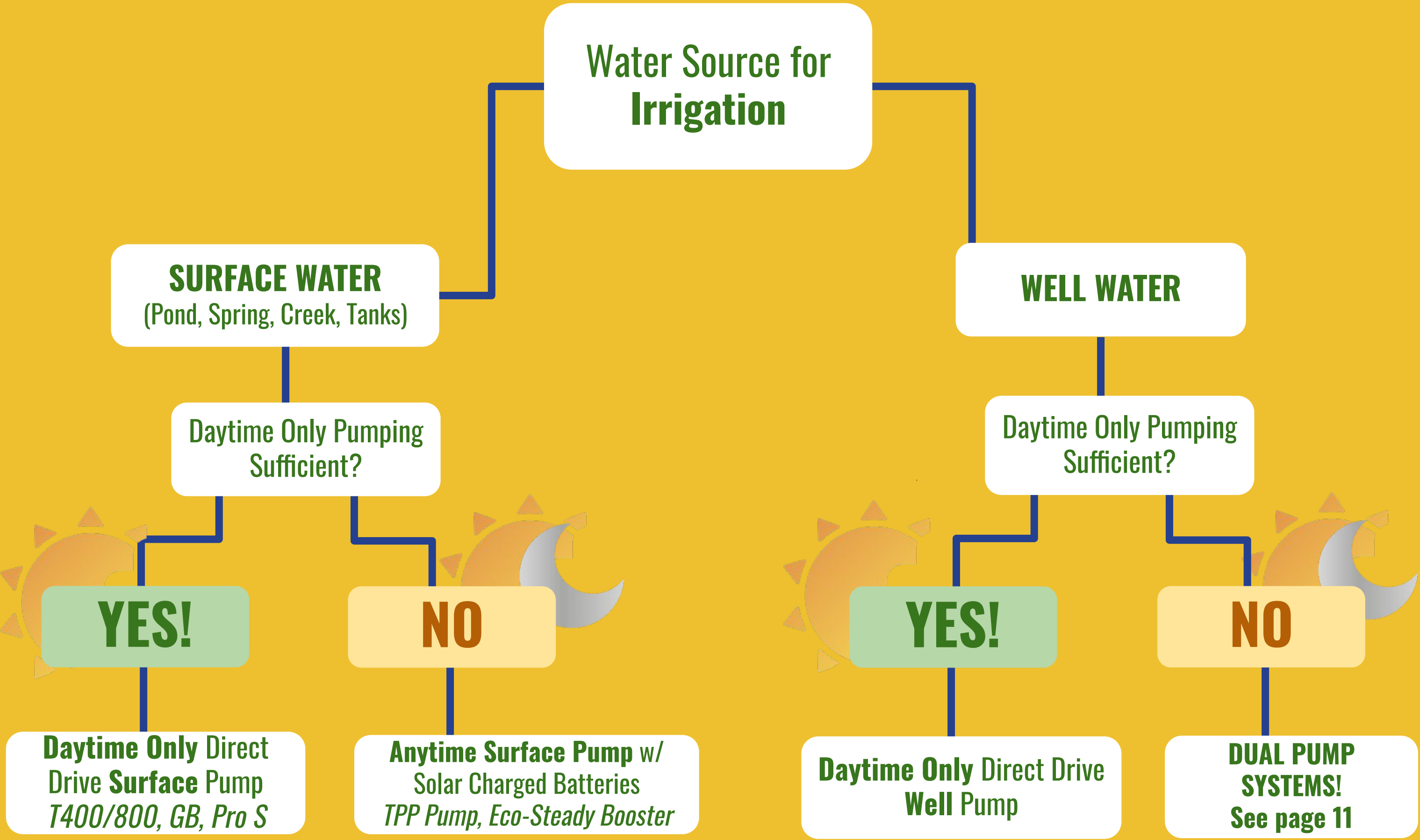
As seen on and used by...





# WHICH SOLAR PUMP SYSTEM IS RIGHT FOR YOU?

This catalog is designed to help you create a plan that works with the your unique water sources, property and available sun. Our goal is to be able to recommend not just a pump, but a full solar pump system with a properly sized solar array and/or battery bank to accommodate your needs. Options include **Daytime Only** pump systems that ‘direct drive’ on solar for irrigation during the solar day, **Anytime** pump systems incorporate batteries for flexible pump schedules and **Dual Pump** systems that incorporate both. All pump systems have some sort of AC backup power hookup as well!



## NEXT STEPS....

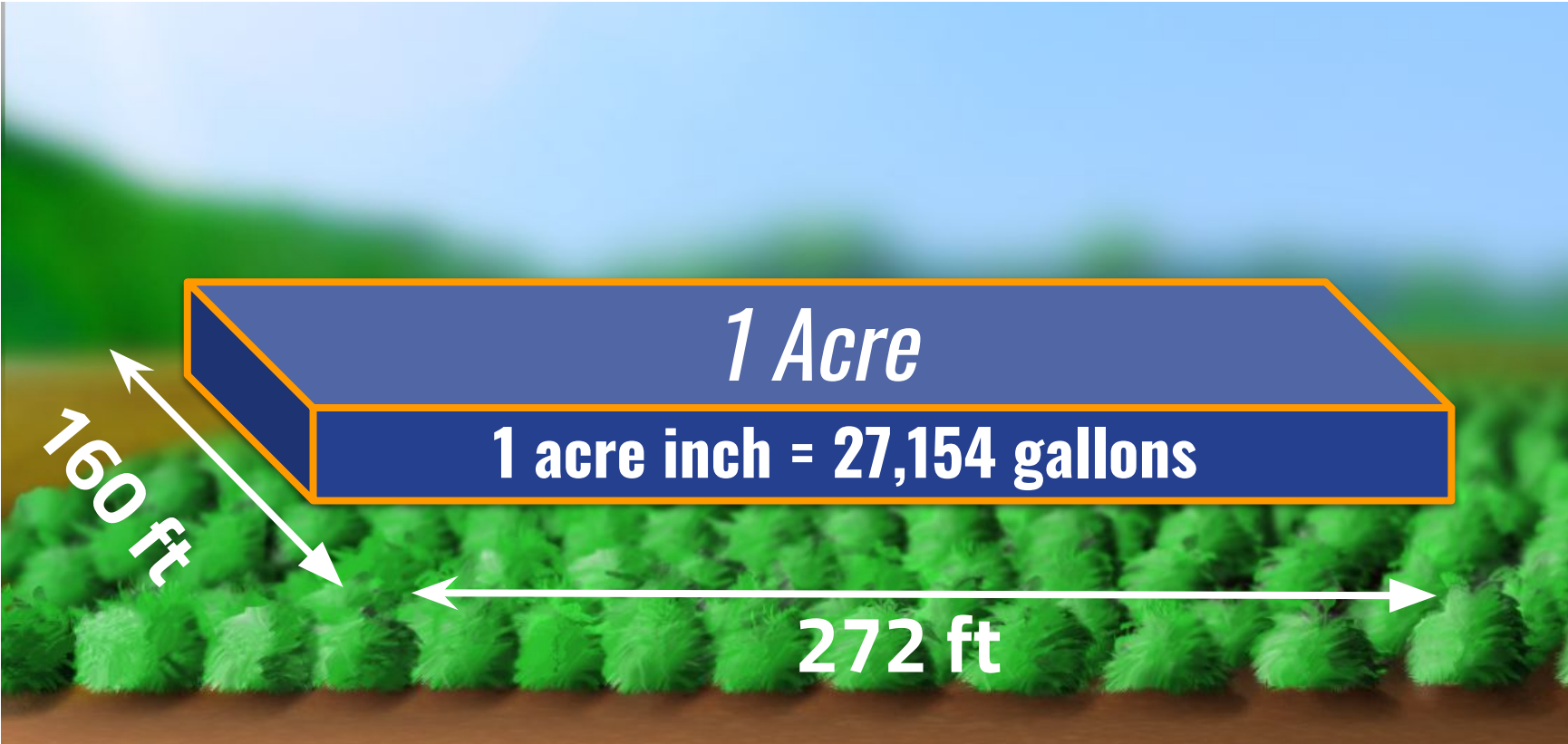
**Task 1:** Determine Gallons Per Day needed (GPD). If you have GPM, multiply that by Minutes of Runtime per Day. (see pages 3-5, labeled Task 1, for more details)

**Task 2:** Determine Pressure (psi) needed for your site and desired type of irrigation. Ex. drip, emitters, sprinklers. (see coming pages 7 & 8, labeled Task 2 for more details on pressure)



# TASK 1 DETERMINE GALLONS PER DAY NEEDED

The numbers below are just estimates, you'll have to determine what kind of watering schedule works for your land and goals. Estimate down if you're planning a low water use regime. We recommend starting with estimating for worst case scenario when you'll need the most water, usually a hot summer day.



Plant or Canopy Area to water	Square Feet (sqft)	Cool day Early spring Late fall	Warm day Spring or fall Some fog	Hot day Summer No fog
ETo ( Inches / day )		0.1	0.2	0.25
Trees				
1 year old Fruit / Nut tree (4 sqft)	4	0	1	1
2 year old Fruit / Nut tree (10 sqft)	10	1	2	2
3 year old Fruit / Nut tree (36 sqft)	36	3	5	7
10 Semi-Dwarf mature or 4 year old (1000 sqft)	1000	75	150	188
25 Grapevine Mature (2000 sqft)	2000	150	300	375
10 Large Mature Tree (3000 sqft)	3000	225	450	563
1/2 Acre Young Trees, 50% Cover	10890	817	1634	2042
Row Crops				
2 feet wide 100 feet row Raspberry (200 sq. feet)	200	15	30	38
4 feet wide 100 foot row Strawberry (400 sqft)	400	30	60	75
5 rows, 2 feet wide, 100 foot row Tomatoes (1000 sqft)	1000	75	150	188
30 rows, 2 feet wide, 100 foot row Tomatoes (6000 sqft)	6000	450	900	1125
1 acre Broccoli in Rows, 50% Cover	21780	1634	3267	4084
Larger Estimates				
1/2 acre Solid Cover (Canopy or Ground Cover)	21,780	1,634	3,267	4,084
1 acre Solid Cover (Canopy or Ground Cover)	43,560	3,267	6,534	8,168
2 acres Solid Cover (Canopy or Ground Cover)	87,120	6,534	13,068	16,335
5 acres Solid Cover (Canopy or Ground Cover)	217800	16,335	32,670	40,838

# TASK 1 DETERMINE GALLONS PER DAY NEEDED

If you need to add in any additional uses like drinking water or livestock, apply the estimates to the right. Add up all water needs and compare the final number to the below charts.

You'll notice that gallons per day decreases as pressure increases. Higher pressure and high gallon per minute flow rates typically require more power to operate the pump. Practically all of our pumps can be upgraded with more solar panels and /or batteries. If you plan on expanding operations in the future our pumps can grow with your ambitions! **ANYTIME PUMPS** can increase their run time, and therefore their gallons per day, by adding panels and batteries. **DAYTIME PUMPS** can increase runtime into the early morning and later afternoon by adding panels.

Primary Use	Estimated Water
Cabin / RV	20 Gallons Per Person Per Day
Normal Household Use	50-100 Gallons Person Per Day
20 Head Cattle	500 Gallons Per Day
Larger Irrigation Projects	(see page 10)

## Daytime Solar Pump Gallon Per Day Estimates (6 Hours)

	Transfer Pump T400	Transfer Pump T800	GB Booster ½ HP 05GB07	Pro Surface ¾ HP \$750	Pro Surface 1 HP \$1000	Pro Surface 1 ½ HP \$1500	Pro Surface 2 HP \$2000	Pro Surface 3 HP \$3000	Pro Surface 3 HP \$5000
Low-Pressure (0-30 PSI)	3,204	4,536		15,480	21,600	22,680	30,960	37,800	79,200
Mid-Pressure (30-45 PSI)		2,340	2,520	12,240	18,720	21,600	28,440	33,480	54,000
High-Pressure (45-60 PSI)			1200				14,400	16,200	25,200

## Anytime Pump Gallon Per Day Estimates (6 Hours)

	Eco-Steady ½ HP BP05 - 4	Eco-Steady ½ HP BP05 - 8	Eco-Steady ½ HP BP05 - 12	Eco-Steady 1 HP BP1 - 8	Eco-Steady 1 HP BP1 - 12
Low-Pressure	1,901	4,752	7,128	4,950	7,425
Mid-Pressure	1,056	2,534	3,802	2,851	4,277
High-Pressure				1,320	1,980

	TPP - 8	TPP - 12	Eco-Steady 2 HP BP2 - 12	Eco-Steady 2 HP BP2 - 24	Eco-Steady 3 HP BP3 - 36	Eco-Steady 3 HP BP3 - 24	Eco-Steady 3 HP BP3 - 36
Low-Pressure	5,940	8,910	7,128	14,256	21,384	19,800	29,700
Mid-Pressure	3,643	5,465	4,400	8,800	13,200	12,263	18,395
High-Pressure			2,970	5,940	8,910	6,789	10,183



# TASK 1.A DETERMINE GALLONS PER MINUTE

## Drip Line Zones

0.5 GPM per 100' Dripline \*

\* Example Manufacturer Specs

Zone 1:

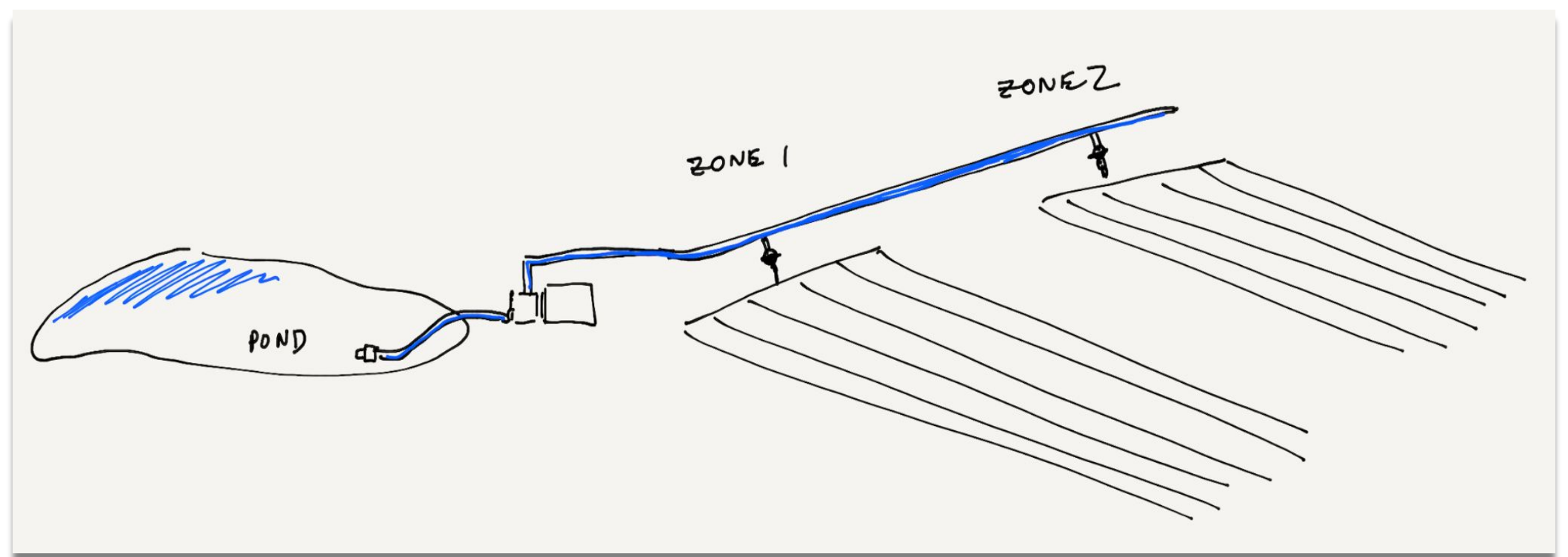
6 Rows of 500'  
= 3000' Drip Line

\* 0.5 GPM/100'

= 15 GPM

Zone 2:

6 Rows of 300' = 1,800' Drip Line \* 0.5 GPM/100' = 9 GPM



Select Surface Pump that can provide 15 GPM at 20psi  
Accommodates both Zones

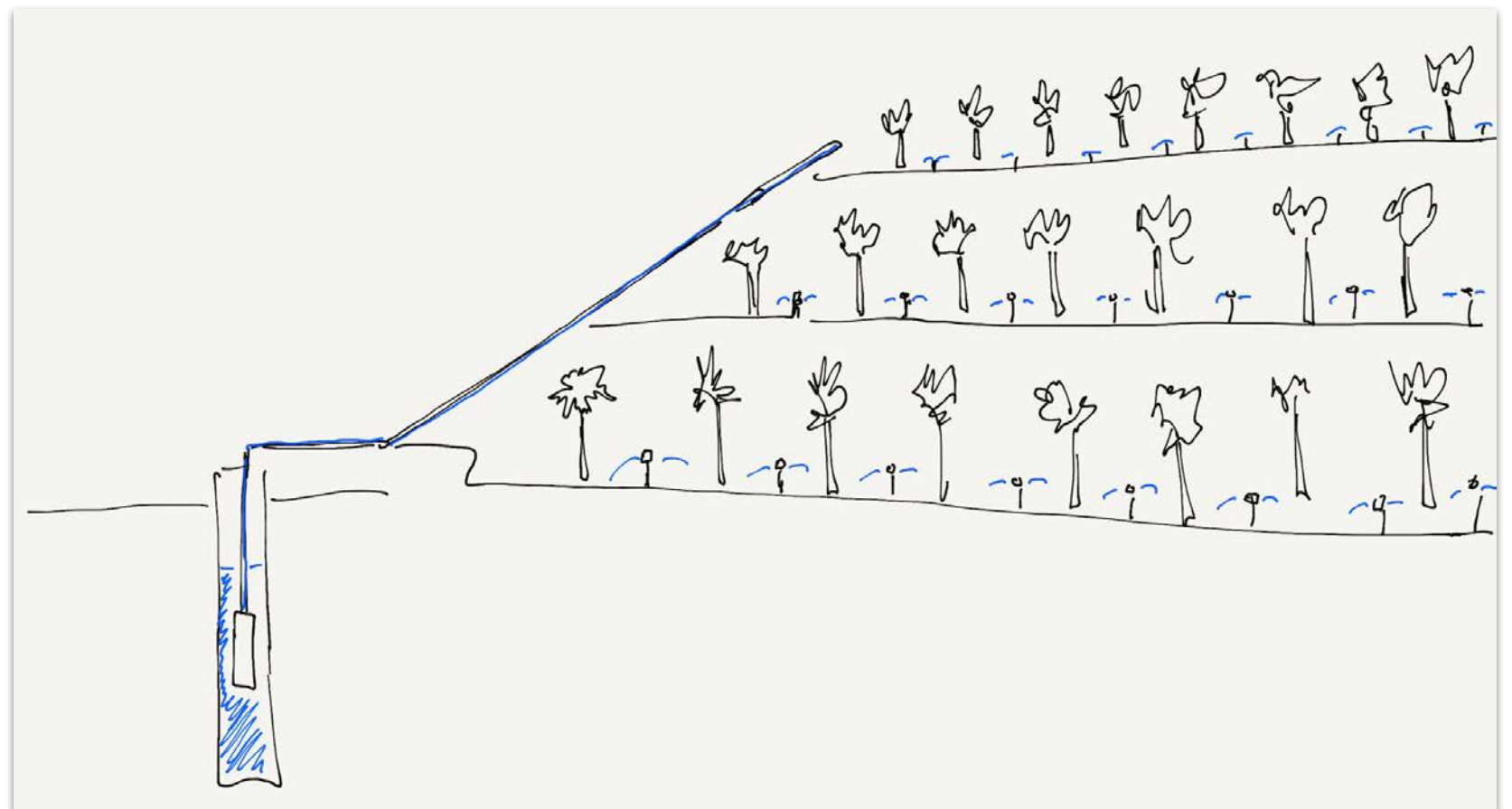
## Micro Sprinklers

0.5 GPM at 30 psi Per Emitter \*

\* Example Manufacturer Specs

1 Zone of 30 Emitters (3 rows of 10)  
= 15 GPM at 30 psi

Select Well Pump that can  
provide 15 GPM at 30psi



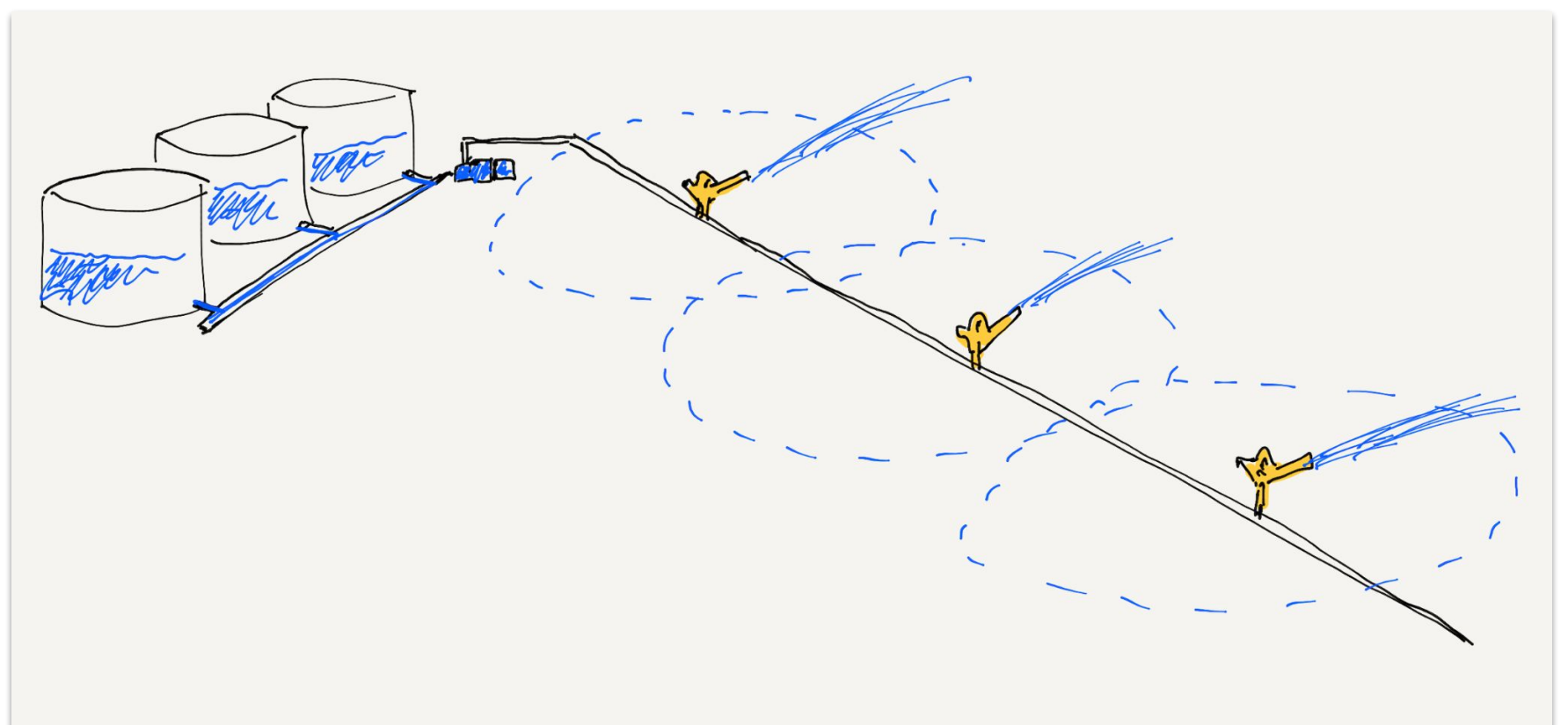
## Ratchet Sprinklers

10 GPM at 45 psi Per Head \*

\* Example Manufacturer Specs

1 Zone (3 Sprinklers) = 30 GPM  
at 45 psi

Select Surface Pump that can  
provide 30 GPM at 45psi





# THE MAGIC OF IRRIGATION ZONES

## The Sprint

Grid-Tied AC systems have been traditionally sized as ‘bigger is better’. The electrical grid will allow high Horsepower Pumps to operate for short periods of time - a 10HP pump producing 400 GPM for 10 minutes is no problem, but uses a lot of energy. While RPS does carry some solar pumps that pump 400 GPM, we typically recommend another option of a smaller pump and an irrigation schedule spread over the full solar day.

## The Solar Marathon

When designing a Solar Pump System we try to optimize for the entire length of a ‘Solar Day’ (ie. the daylight hours when the most solar power is being collected, 5-8 hours depending on location and season). To create systems that best take advantage of the FREE solar power all day long, the best bang for your buck is most commonly a smaller Horsepower pump. The solar pump operates over a longer period of time to better coincide with the Solar Day.

Type	GPM Needed
Small Emitters	0.5 to 0.9 GPH
100’ Drip Tape	0.5 GPM
25’ Soaker Hose	2 to 3 GPM
Small Sprinkler Heads	2 to 3 GPM
Lawn Sprinkler	4 to 6 GPM
Center Pivots / Guns	30 to 400 GPM

**Pair Irrigation Zones with the solar pump.** Zones usually involve automatic or manual valves separating off lengths of drip lines, sprinklers, or rows so they can each be watered one at a time for the optimal GPM and pressure needed for the crops in that area. Zones ensure proper GPM and pressure to hoses, drip lines, and sprinklers by creating ‘groups’ in your plumbing – choose a kit that has the right number of zones for you!

**Example:** An orchard watering system requires 100GPM for 1 Hour Per day. Breaking watering into 5 zones allows us to run 20 GPM to each zone for 1 hour delivering the same water over a longer period of time.





# TASK 2 DETERMINE PRESSURE (PSI) NEEDED

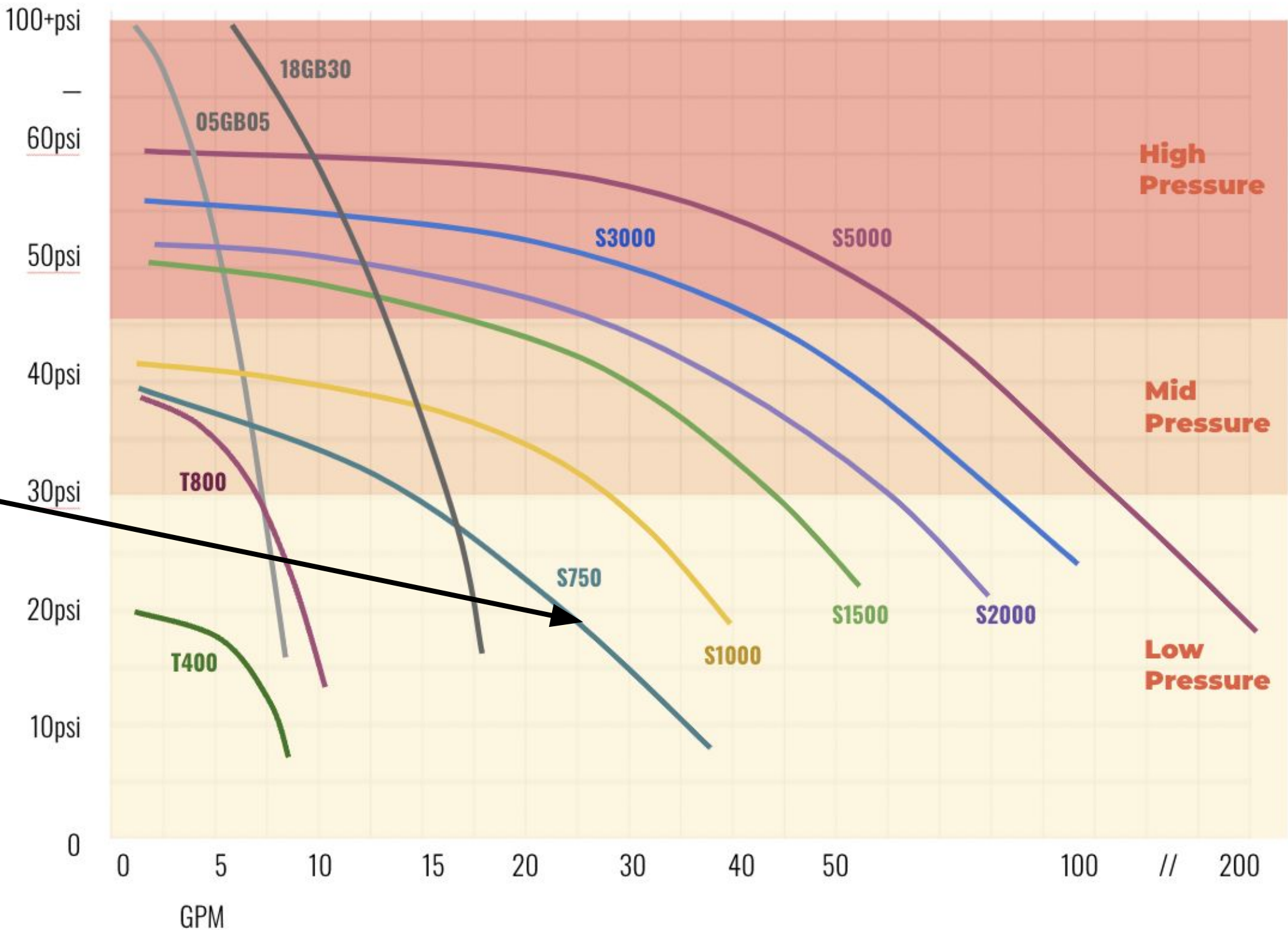
SELECT YOUR TYPE  
OF PRESSURE



Type	Pressure	Type	Pressure
Drip Lines / Cattle Waterers	20 psi	Soaker Hose	45 psi
Cabin / RV	30 psi	Sprinklers	45 psi
Small Sprinkler / Emitters	35 psi	Larger Sprinklers	60 psi
Household	40-60 psi		

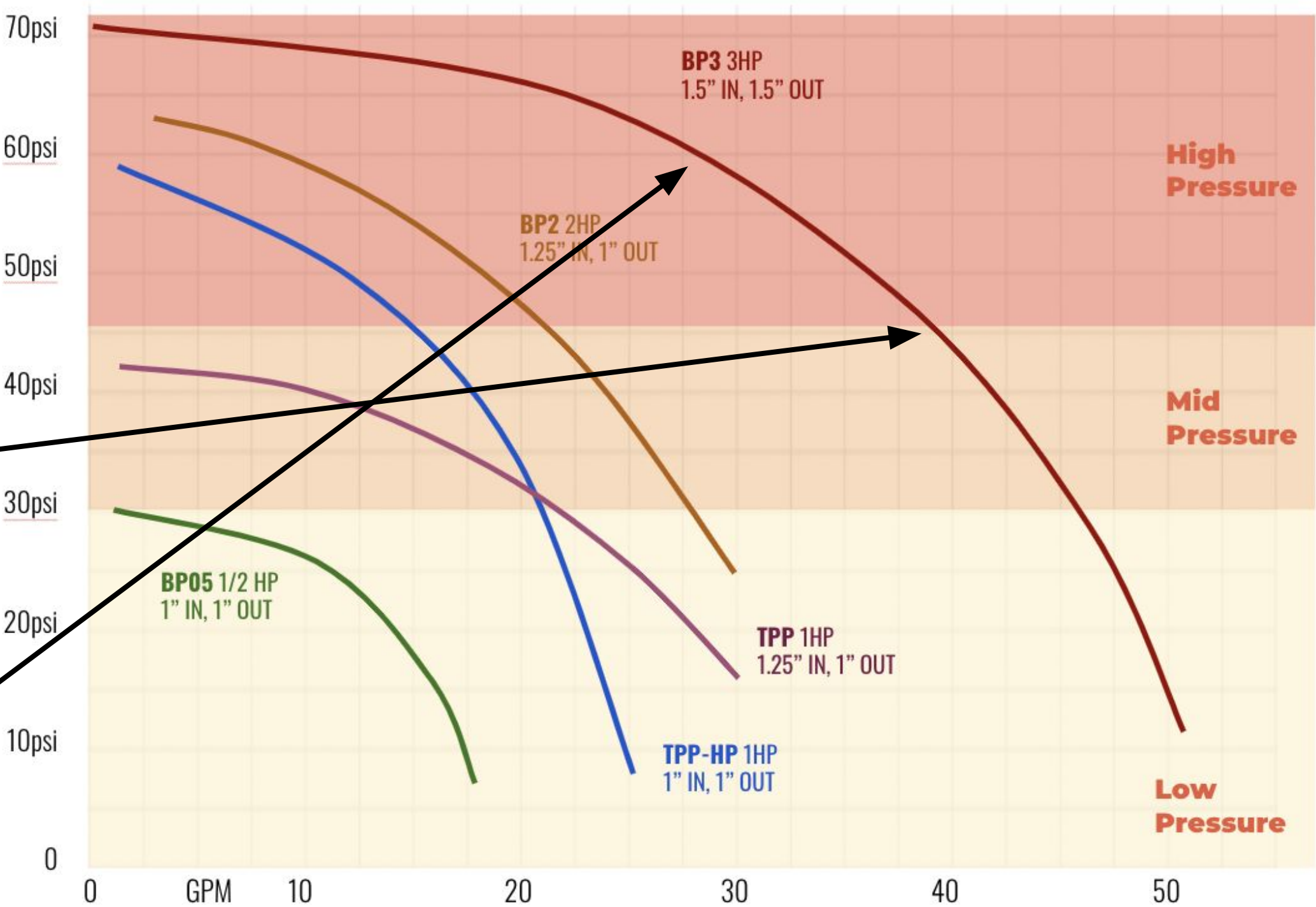
## DAYTIME SOLAR PUMPS

**Ex. 1** - For daytime pumping find the point on that graph that matches your gallons per minute to the type of pressure required for your system. For example- a 20 PSI, 25 GPM setup matches with at least a Pro S750.



## ANYTIME PUMPS w/ Batteries

**Ex. 2** - if you need a 45 PSI setup at 40 GPM after the sun sets, chose the Eco-Steady Boost 3 HP, BP3. The pump could also perform at higher PSI, but you would give up some GPM. At 60 PSI the 3 HP will provide about 29 GPM.





# MATCHING PSI & WATER ESTIMATES TO A SOLAR PUMP

Gardeners, food foresters, homesteaders, ranchers- they're all trying to get the best bang for their buck while also planning to expand operations in the future. You may only use drip lines now, but in the next two years plan on watering pastures with 60 PSI sprinklers. RPS recommends sizing up to the next most powerful model if you know that you'll need a bit more power in the future. If the High Pressure TPP fits current needs but is insufficient for future irrigation, choose the BP2 Eco-Steady Booster 2 HP.

## DAYTIME Solar Pumps

	1/8 acre	1/4 acre	1/2 acre	3/4 acre	1 acre	1.5 acre	2 acres	3 acres	4 acres	5 acres	5+ acres
Drip 20psi	T400	T800	T800	Pro S750	Pro S1000	Pro S1000	Pro S1500	Pro S1500	Pro S2000	Pro S3000	Pro S5000
Micro Sprinklers 30psi	T800	T800	Pro S750	Pro S750	Pro S1000	Pro S1500	Pro S2000	Pro S2000	Pro S3000	Pro S3000	Pro S5000
Sprinklers 45psi	Pro 05GB05	Pro 07GB05	Pro 10GB07	Pro S1500	Pro S1500	Pro S2000	Pro S2000	Pro S3000	Pro S3000	Pro S5000	Pro S5000
Big Gun Sprinklers 60psi	Pro 05GB05	Pro 07GB05	Pro 10GB07	Pro 18GB20	Pro 18GB20	Pro 25GB30	Pro 33GB30	Pro S5000	Pro S5000		

1/4" Water Per Day = 6,789 gal/acre

## ANYTIME SOLAR PUMP w/ Batteries

	1/8 acre	1/4 acre	1/2 acre	3/4 acre	1 acre	1.5 acre	2 acres	3 acres	3+ acres
Drip 20psi	BP05 - 4	BP05 - 8	BP05 - 12	TPP - 8	TPP - 12	TPP - 12	BP2 - 36	BP3 - 36	BP3 - 36
Micro Sprinklers 30psi	BP05 - 8	BP05 - 8	TPP - 8	TPP - 12	TPP - 12	BP2 - 24	BP2 - 36	BP3 - 36	
Sprinklers 45psi	TPP-HP - 8	TPP-HP - 12	TPP-HP - 12	BP2 - 24	BP2 - 24	BP3 - 24	BP3 - 36		
Big Gun Sprinklers 60psi	BP2 - 24	BP2 - 24	BP3 - 24	BP3 - 24	BP3 - 24	BP3 - 36			

1/4" Water Per Day = 6,789 gal/acre



# Over 10 acres of irrigated crops?

## Need more than 400 GPM?

There still may be ways to get creative with **multiple pumps** or a line of **BIG AG PUMPS** so don't be bashful in calling our pump specialists but most RPS customers are under these thresholds.

Size of Irrigated Area	GRAVITY or Daytime Direct-Drive or Surface Pumps <i>Under 150' Head**</i>	DUAL PUMP SYSTEM Anytime Pumps with Batteries <i>Under 300' Head**</i>
100' x 100'	1/2 - 3/4 HP	1/4 HP & 1/2 HP
1/2 acre	1/2 - 3/4 HP (Pro Series)	1/4 HP & 1/2 HP
1 acre	1 HP (Pro Series)	1/2 HP & 1/2 HP
2 acres	2 HP (Pro Series)	1 HP & 1 HP
3 acres	3 HP (Pro Series)	1 HP & 2 HP
5 acres	5 HP (Pro Series)	2 HP & 3 HP
10 acres	2x 5 HP (Pro Series)	<i>Getting too Large for Batteries</i>

*Irrigating a larger property? We've helped with water projects on farms of all sizes.. There still may be ways to get creative with multiple pumps for larger properties so don't be bashful in calling our pump specialists.*

Gallons Per Minute (GPM)	Daytime Direct-Drive Well Pumps <i>No Head and Max</i>	Daytime Surface Pumps <i>Under 15' Suction</i>
5-10 GPM	1½ HP (Pro 500D) and up	3/4 HP (Pro S750)
20 GPM	1½ HP (Pro 500V) and up	1 HP Surface (Pro S1000)
50 GPM	1.5 HP (Pro 1500V) and up	2 HP Surface (Pro S2000)
100 GPM	3 HP (Pro 3000V) and up	3 HP Surface (Pro S3000)
200 GPM	5 HP (Pro 5000V) and up	5 HP Surface (Pro S5000)
400 GPM	2x Pro 5000V <i>Assuming Large Casing Diameter</i>	2x 5 HP Surface <i>Plumbed in Parallel</i>

*Need higher Gallons Per Minute? Your sizing specialist will normally talk through breaking your watering into zones with higher GPM irrigation requests. If you can do zones, with 6 hours+ of solar pumping time, you can run 6 different zones for an hour each and accomplish the same water coverage as a larger pump with no zones.*



# GRAVITY if you GOT IT!

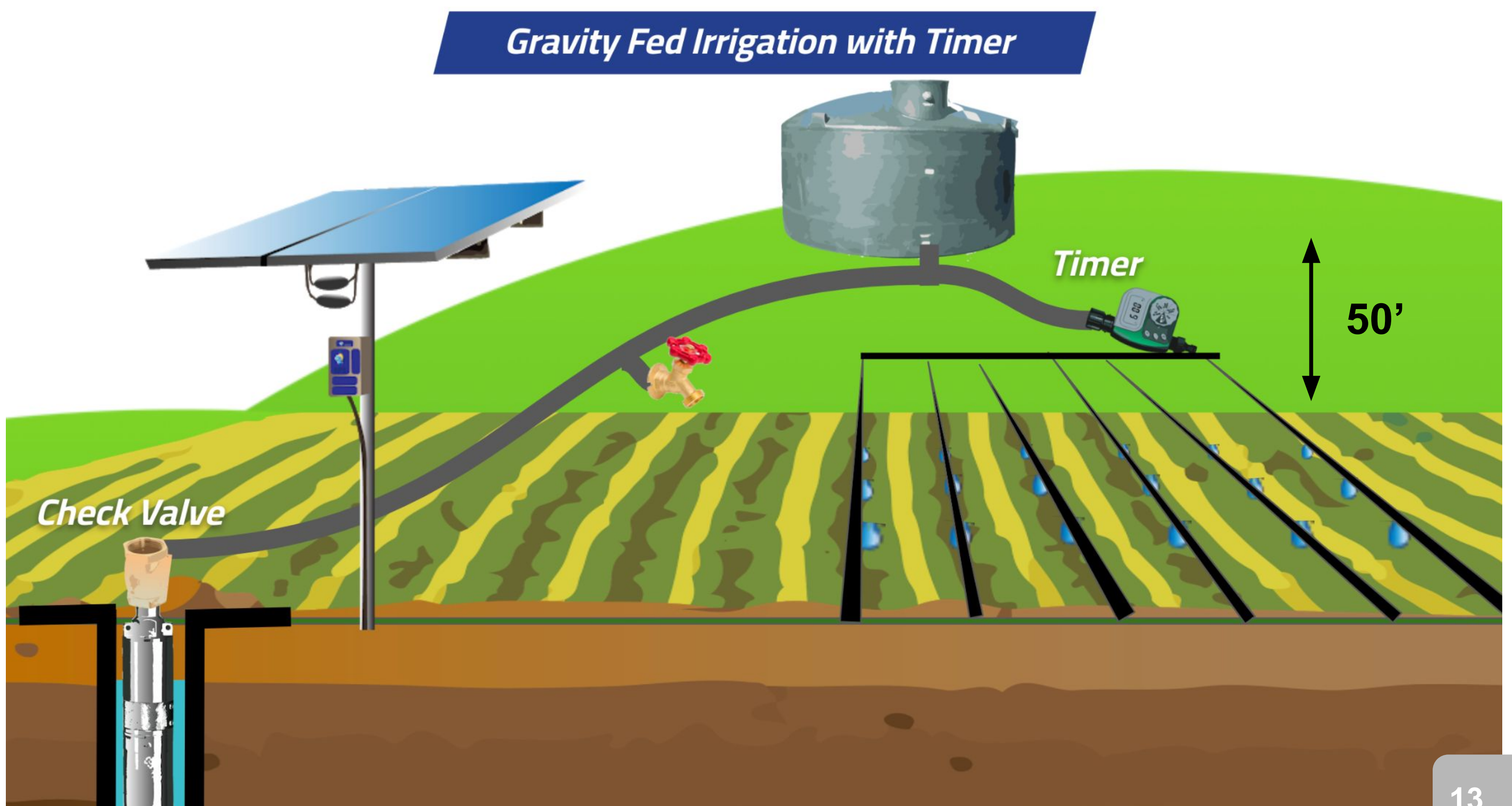
Solar & Gravity are perfect teammates! Your solar pump moves water up to the tank during daylight hours where the water will wait, 24 hours a day, until whenever you need to irrigate.

50' elevation is enough for 20 PSI drip lines! Place a check valve at the well-head and plumb to the lower outlet of the storage tank. Locate the tank 50' to 100' above the irrigation area and you'll have pressurized water between the check valve and the tank, 1 psi for each 2.31' of elevation whether or not the pump is on (20 psi = 46 feet of elevation needed).

Under 50' of elevation on your property? You'll have 2 options for irrigation water.

- **Daytime Watering** - Irrigate direct from water source during the day when the sun is shining! The simplest and most affordable technique - no batteries and no tanks

- **Dual Pump System** - With your Source-to-Tank pump as much water as possible from water source to a tank when you have sun. With your Tank-to-Pressure pump, you'll solar charge batteries during the day, then use that power whenever you need to irrigate.

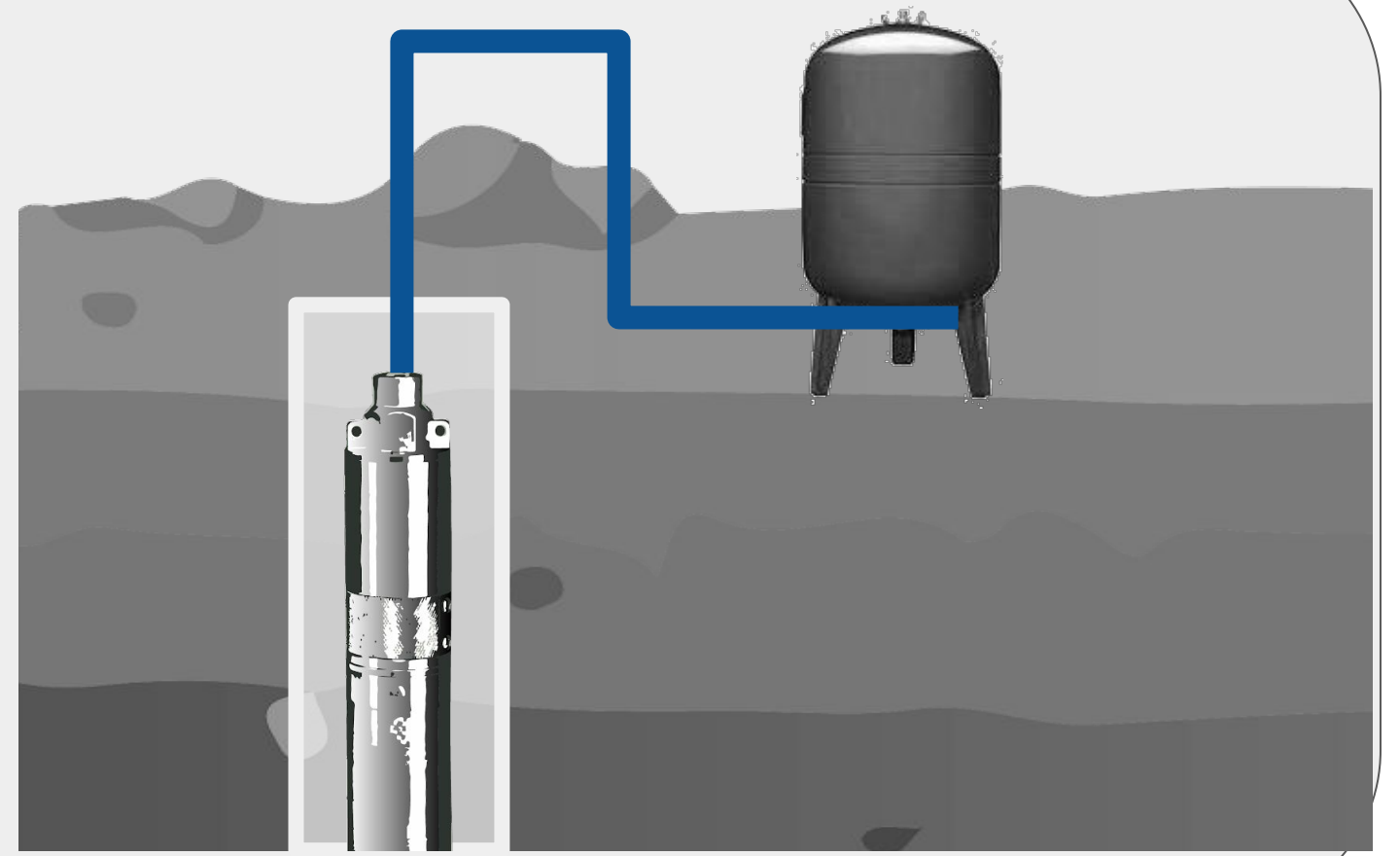




## THE OLD WAY

Older systems with grid power have a single, larger pump that fights both battles - fighting gravity to get water up and out of the well, and then pressurizing it (inflating the bladder inside the pressure tank). This means the pump works twice as hard and uses more energy. The size of the pump can be thought of as half for the 'lift' out of the well, and half for generating the 'pressure' needed for the irrigation. It relies on grid power being available at all times. *Example:*

**Old 2HP = Half for lift, Half for pressure**

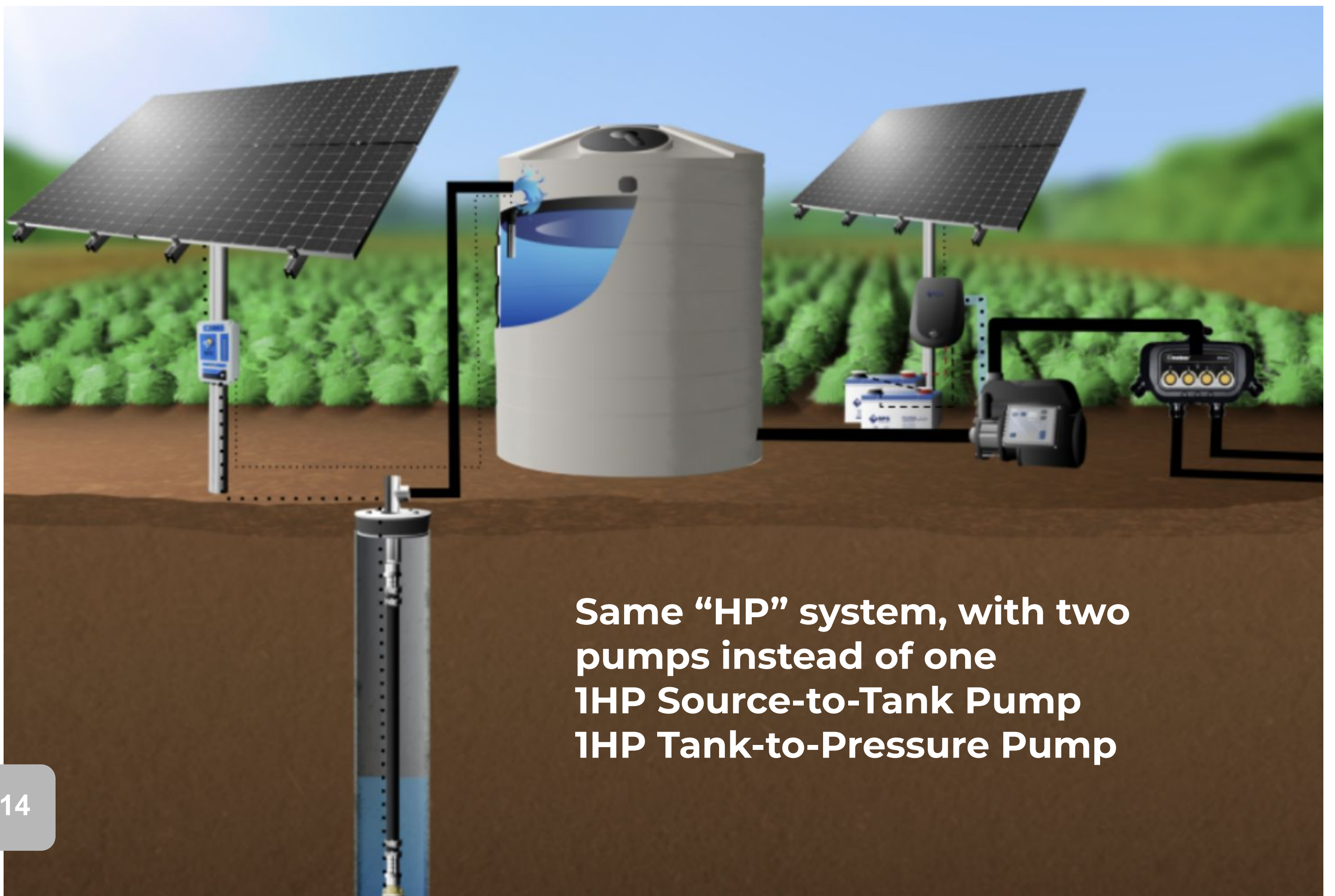


## POPULAR

### DUAL PUMP SYSTEMS

#### MOST COMMON OFF-GRID IRRIGATION TECHNIQUE

With increased efficiency and reliability, having 2 pumps on your property gains great independence and resilience. With your Source-to-Tank pump as much water as possible from water source to a tank when you have sun. A sensor keeps the tank from overflowing. With your Tank-to-Pressure pump, you'll solar charge batteries during the day, then use that power efficiently whenever you need to irrigate for fine tuned GPM and pressure whether or not the sun is shining at that moment.

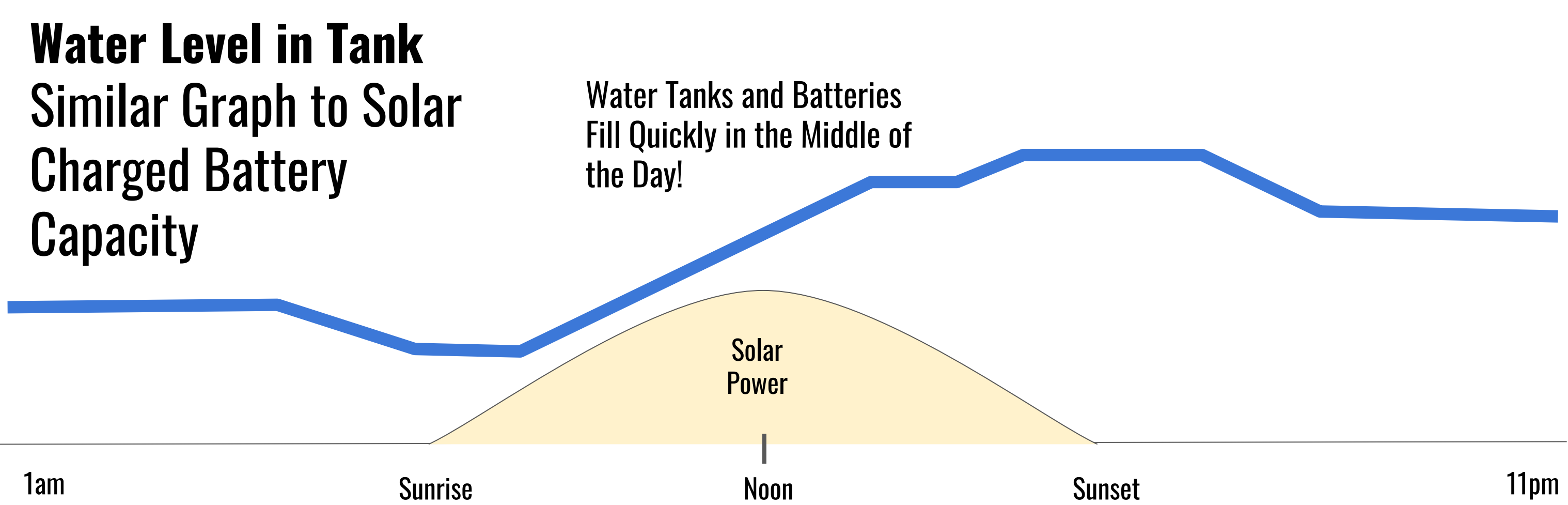
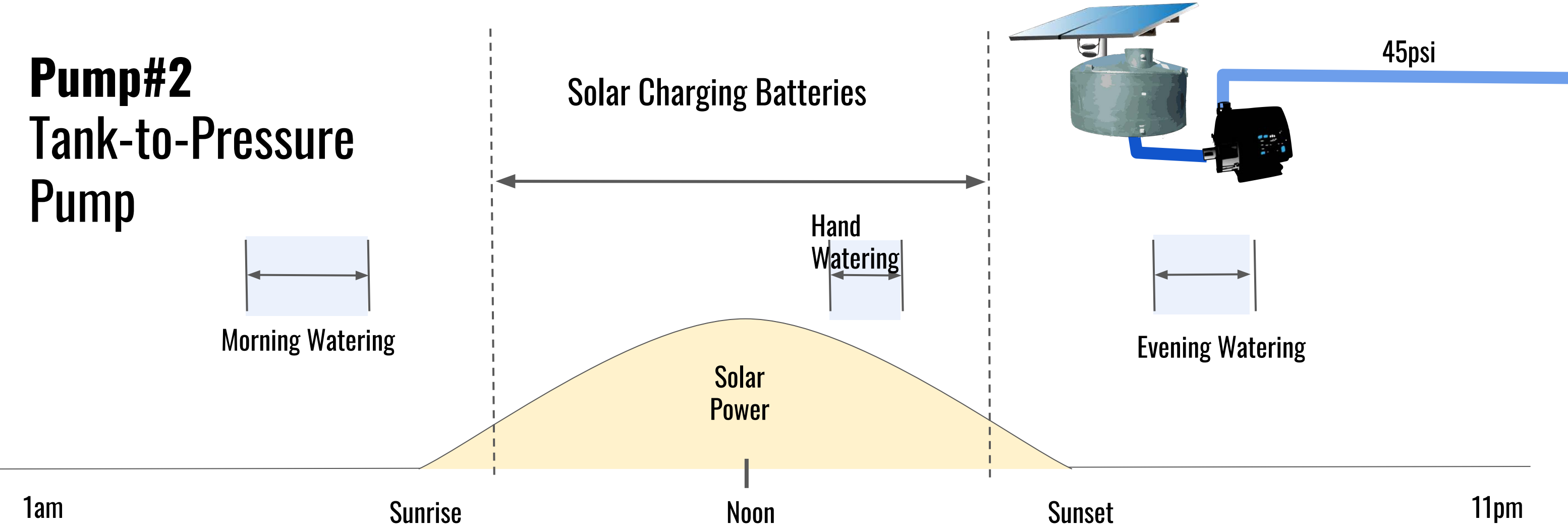
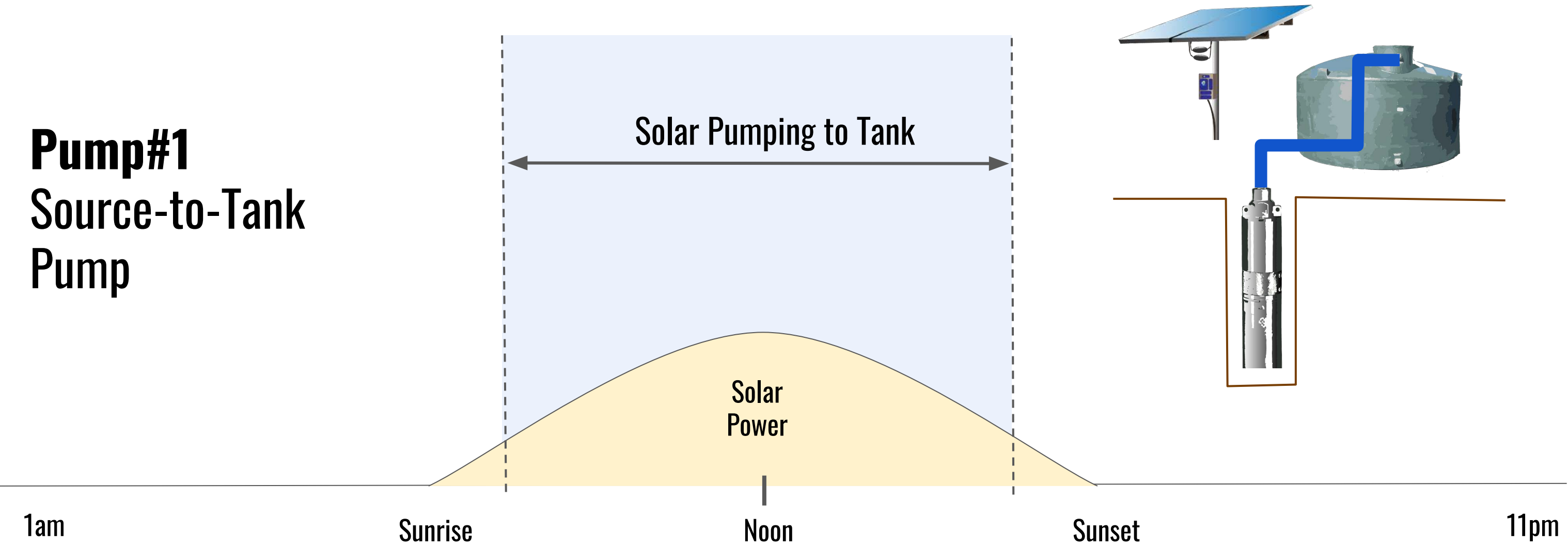


**Same “HP” system, with two  
pumps instead of one  
1HP Source-to-Tank Pump  
1HP Tank-to-Pressure Pump**



# DUAL PUMP SYSTEM

MOST COMMON OFF-GRID IRRIGATION TECHNIQUE





# Field Support, Whenever You Need it.

RPS Solar Pump Kits are for people that believe in getting the job done themselves, and getting it done right. Our goal is to arm you with the equipment and knowledge to take control of your water, and save a fistful of money doing it.

Whether you've just cracked open your solar pump kit, gotten your first solar water flowing, or have questions in the years to come, our team of expert engineers are standing by with one job: to help you.

And if that's not enough to get you excited, our full-color step-by-step RPS user manual with troubleshooting flowchart is massively popular with customers.

AS SEEN ON

**WORKING  
RANCH  
MAGAZINE**

&

**Cattlemen**<sup>®</sup>  
American



# Daytime Direct-Drive Solar Pumps

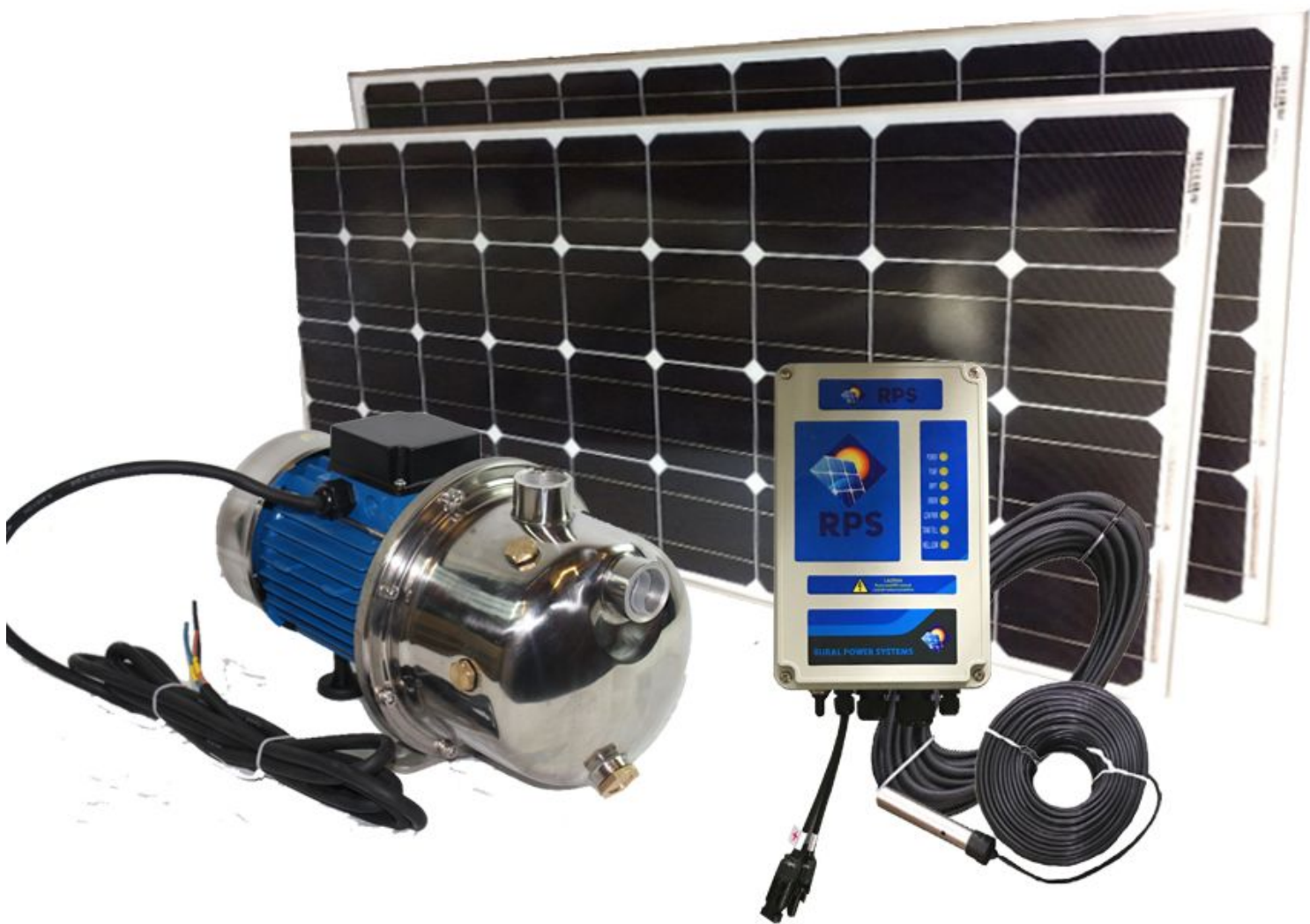
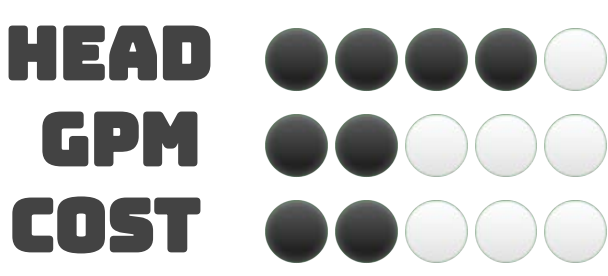
No Batteries but optional backup with Generator or AC

	Transfer Pump T400, T800	Pro GB Booster Pro GB	Pro Irrigation Pro S
Solar Power	400w - 800w	800w-3200w	800w - 7500w
Generator/ AC Backup	110V Generator with Converter	220V Generator	220V Generator
Plumbing	1" Outlet	1.25" Outlet	1.5"-3" Outlet
Horse- power (HP)	1/2 to 1 HP	1 HP	3/4 to 5 HP
Common Uses	Tank Transfer, Irrigation	High Head Tank Transfer, High Pressure	Larger Irrigation, Farms, Center Pivots

PSI	Gallon Per Day / Gallon Per Minute												
	1,800 GPD 5 GPM	2,520 7	3,600 10	5,400 15	7,200 20	9,000 25	10,800 30	14,400 40	18,000 50	27,000 75	36,000 100	54,000 150	72,000 200
10	T400	T400	T800	Pro S750	Pro S750	Pro S750	Pro S750	Pro S750	Pro S1500	Pro S2000	Pro S3000	Pro S5000	Pro S5000
15	T400	T800	T800	Pro S750	Pro S750	Pro S750	Pro S750	Pro S1000	Pro S1500	Pro S2000	Pro S3000	Pro S5000	Pro S5000
20	T400	T800	T800	Pro S750	Pro S750	Pro S750	Pro S1000	Pro S1500	Pro S2000	Pro S2000	Pro S3000	Pro S5000	Pro S5000
25	T800	T800	Pro S750	Pro S750	Pro S750	Pro S1000	Pro S1000	Pro S1500	Pro S2000	Pro S3000	Pro S3000	Pro S5000	Pro S5000
30	T800	T800	Pro S750	Pro S750	Pro S1000	Pro S1000	Pro S1000	Pro S2000	Pro S2000	Pro S3000	Pro S5000	Pro S5000	Pro S5000
35	T800	Pro 07GB05	Pro S750	Pro S750	Pro S1000	Pro S1000	Pro S1500	Pro S2000	Pro S3000	Pro S3000	Pro S5000	Pro S5000	
40	T800	Pro 07GB05	Pro S750	Pro S1000	Pro S1000	Pro S1500	Pro S1500	Pro S3000	Pro S3000	Pro S3000	Pro S5000	Pro S5000	
45	Pro 05GB05	Pro 07GB05	Pro 10GB07	Pro S1500	Pro S1500	Pro S1500	Pro S2000	Pro S3000	Pro S3000	Pro S5000	Pro S5000		
50	Pro 05GB05	Pro 07GB05	Pro 10GB07	Pro S1500	Pro S1500	Pro S2000	Pro S2000	Pro S3000	Pro S3000	Pro S5000			
55	Pro 05GB05	Pro 07GB05	Pro 10GB07	Pro S3000	Pro S3000	Pro S3000	Pro S3000	Pro S5000	Pro S5000	Pro S5000			
60	Pro 05GB05	Pro 07GB05	Pro 10GB07	Pro 18GB20	Pro 18GB20	Pro 25GB30	Pro 33GB30	Pro S5000	Pro S5000				
100	Pro 05GB05	Pro 07GB05	Pro 10GB10	Pro 18GB20	Pro 18GB20	Pro 25GB30	Pro 33GB30						
200	Pro 05GB10	Pro 05GB10	Pro 10GB20	Pro 18GB30									
Double Barrel Pumps in Parallel for More GPM or GPD													



# RPS Solar Transfer Pump



With our same best-selling RPS pump controller and a brushless motor, this pump offers small to medium scale surface/transfer/booster pumping with ease. Stainless steel impeller housing and impeller means it won't wear out. This solar direct-drive system can attach to the outlet of any storage tank or suctions up to 15' , drawing water up from ponds, springs, creeks and shallow wells. Pressurize water systems for irrigation or cattle waterers, but compare with Tankless Pressure Pump if 24 hours water pressure is needed as that system uses batteries and can pump outside the 'solar day'. Will pressurize to about 40psi during full sun. Choose between a four panel (T400) or an eight panel (T800) system.

Pump Weight: 18 lbs

Pump Dims: 20x14x12"

Inlet / Outlet Size: 1"

Solar Panels

Approx. 40x20x1.18" 15 lbs



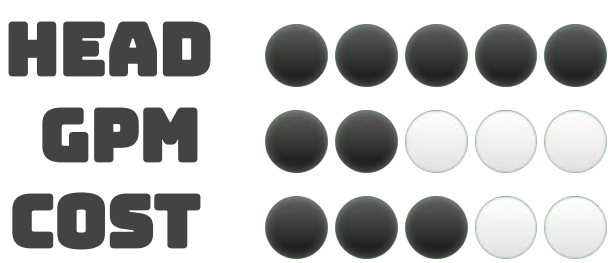
Kit includes:

- 100w Mono-crystalline Solar Panels
- RPS Surface Centrifugal Transfer Pump
- RPS Universal Pump Controller
- 1x Low-water Well Level sensor with 100ft wire attached
- 1x Tank Shut-off sensor with 100ft wire attached
- Solar Panel cable connectors
- Waterproof heat shrink wire splice kit with pre-crimped pump wires

		T400		T800	
Head (ft)	PSI	GPD	GPM	GPD	GPM
0	0	4752	13.2	4860	13.5
10	4	4356	12.1	4536	12.6
25	11	3204	8.9	3672	10.2
50	22	1152	3.2	3528	9.8
75	32			2340	6.5
100	43			684	1.9



# Pro GB Booster



Our Pro GB Pumps are for super high head, non-submersible applications where suction/self priming is not necessary (usually plumbed to tanks). Systems use hearty 3-Phase Motors and Multistage Centrifugal Pump Ends. Our controllers are the best in the world and allow customization and optimization based on sun and season, sensor input, 220v backup and more. There is no other kit like this on the market.

**Kit includes:**

- Solar Array of Monocrystalline Aluminum-framed Panels (number of panels varies with model)
- Properly Rated Solar Controller (takes DC Voltage from Solar Panel array +Auto-Switch to run with 220v Grid or Generator when not enough solar)
- **Pro GB05 to GB50 (1/2HP to 5HP)** Goulds GB Booster Pump
- Large Float Switch for use as high water tank sensor
- All connector cables from solar panels to controller
- DC cut-off disconnect switch rated for your array, plug and play with MC4s
- Phone & Email support before and during installation

**Pump Dims:** Model Dependent

Inlet / Outlet Size	1"
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**Solar Panels**

Small	40x20x1.18"	15 lbs
Large	66x40x1.4"	40 lbs



**100% WATER ASSURANCE GUARANTEE**

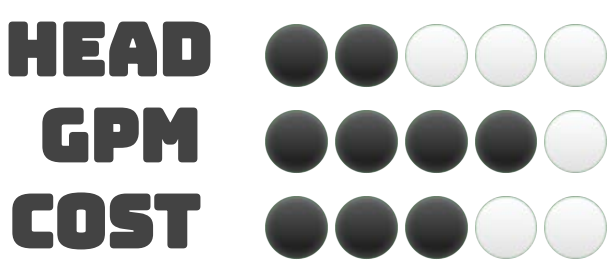


**WATCH ON YOUTUBE**

Head (ft)	Example 05GB10 GPM / Gallons Per Day (6 hrs)	Example 25GB30 GPM / Gallons Per Day (6 hrs)
100	9 / 3,240	36 / 12,960
200	8 / 2,880	32 / 11,520
300	7 / 2,520	25 / 9,000
400	5.5 / 1,980	13 / 4,680
500	3.5 / 1,260	



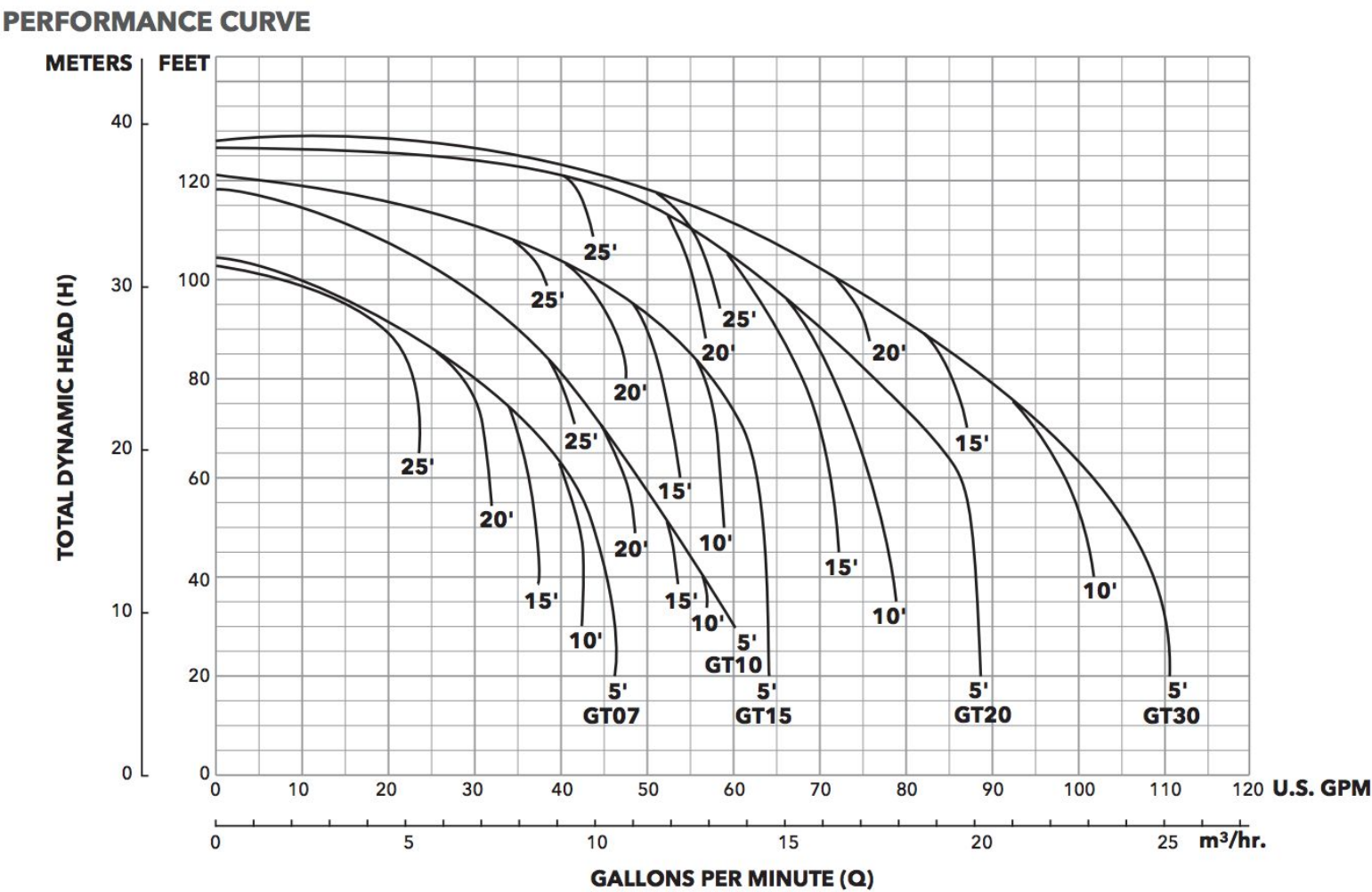
# Pro Irrigation Surface Pump



Our Pro Irrigation Pumps are high volume, mid-head, non-submersible applications where suction still may be necessary. Great for sprinklers up to 45 psi, but can also supply drip lines without overpressurizing. Self priming suction up to 25' but the less priming, the better GPM production at lower head. The systems use best-of-the-best USA 3-Phase Pumps. Pump from sun up to sun down or program an irrigation timer for a custom watering schedule. Cast iron construction sealed with corrosion resistant Electrocoat paint.

Kit includes:

- Solar Array of Monocrystalline Aluminum-framed Panels (number of panels varies with model)
  - 2.2 kW Rated Solar Controller (takes DC Voltage from Solar Panel array +Auto-Switch to run with 220v Grid or Generator when not enough solar)
  - Up to 5hp Goulds Irrigation Pump (see curves above)
  - Large Float Switch for use as high water tank sensor
  - All connector cables from solar panels to controller
  - DC cut-off disconnect switch rated for your array, plug and play with MC4s
- Phone & Email support before and during installation



Head (ft)	Pro S750 ¾ HP	Pro S1000 1 HP	Pro S1000 1.5 HP	Pro S2000 2 HP	Pro S3000 3 HP	Pro XL S5000 5 HP
25	16,560 GPD (46 GPM)	21,600 (60 GPM)	23,400 (65 GPM)	31,680 (88 GPM)	39,600 (110 GPM)	86,400 (240 GPM)
50	15,480 (43 GPM)	18,720 (50 GPM)	23,400 (65 GPM)	31,680 (88 GPM)	37,800 (105 GPM)	79,200 (220 GPM)
75	12,240 (34 GPM)	15,120 (42 GPM)	21,600 (60 GPM)	28,800 (80 GPM)	34,200 (95 GPM)	66,600 (185 GPM)
100	3,600 (10 GPM)	9,720 (27 GPM)	15,120 (42 GPM)	23,400 (65 GPM)	27,000 (75 GPM)	54,000 (150 GPM)
120	-	-		14,400 (40 GPM)	16,200 (45 GPM)	43,200 (120 GPM) 25,200 at 140' (70 GPM)

Pump Dims: Model Dependent  
Inlet /Outlet Size: 1.5" NPT /1.5" NPT

Solar Panels  
Small 40x20x1.18" 15 lbs  
Large 66x40x1.4" 40 lbs

Online Reviews: ★★★★★





# Anytime Solar Pumps w/ Batteries

Systems include batteries and backup charging with Generator or AC

	Eco-Steady BP05	High Pressure Tankless Pressure Pump™	Original Tankless Pressure Pump™	Eco-Steady BP2	Eco-Steady BP3
Solar Power	400W - 1200W	800W - 1200W	800W - 1200W	1200W - 3600W	2400W - 3600W
Batteries	24V	24V	24V	48V	48V
Generator/ AC Operation	110V	110V or 220V	110V or 220V	220V	220V
Plumbing	1" Inlet 1" Outlet	1" Inlet 1" Outlet	1.25" Inlet 1" Outlet	1.25" Inlet 1" Outlet	1.5" Inlet 1.5" Outlet
Horse-power (HP)	0.5 HP	1 HP	1 HP	2 HP	3 HP

GPM and Pressure	30psi 5-15 GPM	55psi 5-25 GPM	40psi 10-25 GPM	60psi 5-30 GPM	70psi 5-50 GPM
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Gallon Per Minute

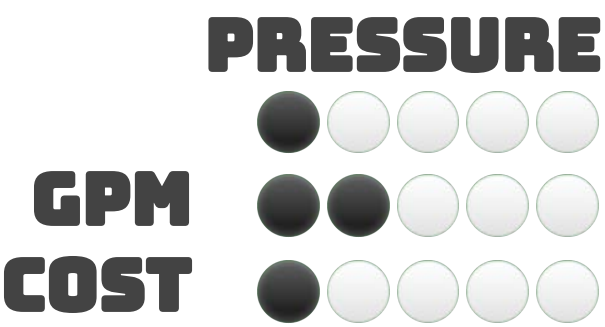
PSI	5	7	10	15	20	25	30	40	50	Pressure Rating
10	BP05	BP05	BP05	BP05	TPP	TPP	TPP	BP3	BP3	Low
15	BP05	BP05	BP05	TPP	TPP	TPP	TPP	BP3	BP3	
20	BP05	BP05	BP05	TPP	TPP	TPP	BP2	BP3		
25	BP05	BP05	TPP	TPP	TPP	TPP	BP2	BP3		
30	BP05	BP05	TPP	TPP	TPP	BP2	BP3	BP3		Mid
35	TPP- HP	TPP- HP	TPP- HP	TPP- HP	BP2	BP2	BP3	BP3		
40	TPP- HP	TPP- HP	TPP- HP	TPP- HP	BP2	BP3	BP3	BP3		
45	TPP- HP	TPP- HP	TPP- HP	BP2	BP2	BP3	BP3			
50	TPP- HP	TPP- HP	TPP- HP	BP2	BP3	BP3	BP3			High
55	TPP- HP	BP2	BP2	BP3	BP3	BP3				
60	BP2	BP2	BP3	BP3	BP3	BP3				
65	BP3	BP3	BP3	BP3	BP3					



# Eco-Steady™ 1/2 HP

BP05

NEW!



**Choose a model based on your water needs.** Flow rates from 5 to 25 GPM are supported. Adjustable up to 30psi. The higher PSI and/or higher flow rate used, more power is pulled from the batteries-resulting in a range of time available to pump.

	4 BATTERY + 4 SOLAR PANEL	8 BATTERY + 8 SOLAR PANEL	12 BATTERY + 12 SOLAR PANEL
Hours Runtime at Different Pressures	BP05 - 4	BP05 - 8	BP05 - 12
Low	2.6	6.6	9.9
Mid	2.2	5.3	7.9
High	N/A	N/A	N/A
Gallons Per Day at Different Pressures	BP05 - 4	BP05 - 8	BP05 - 12
Low	1,901	4,752	7,128
Mid	1,056	2,534	3,802
High	N/A	N/A	N/A

With the RPS Eco-Steady Booster Pump™ System you'll get smooth, continuous, steady reliable water pressure without the need for a pressure tank or AC power! The solar charged battery bank powers a centrifugal booster pump that varies its speed and power based on your demand for water at the exact pressure you select up to 30psi. Expandable battery bank and solar panel array provide longer runtimes as your property grows. 15' suction from a pond or shallow well with foot valve.

**Popular Applications include...**

- Low pressure irrigation (drip lines, soaker hoses, garden hose)
- 24/7 livestock tanks with float valves
- Moving water between tank locations and out of springs

**Kit includes:**

- 100w Mono-crystalline Solar Panels
- 1/2 HP Eco-Steady Booster Pump™
- Solar Power Train Controller to regulate power transfer between pump, panels and batteries + 110V AC Backup Plug
- Solar Wires to connect solar panels to controller
- Wires to connect to battery bank (55Ah 12V Deep Cycle AGM batteries optional)
- 2 Year Warranty

Pump Weight: 22 lbs

Pump Dims: 17x9x11"

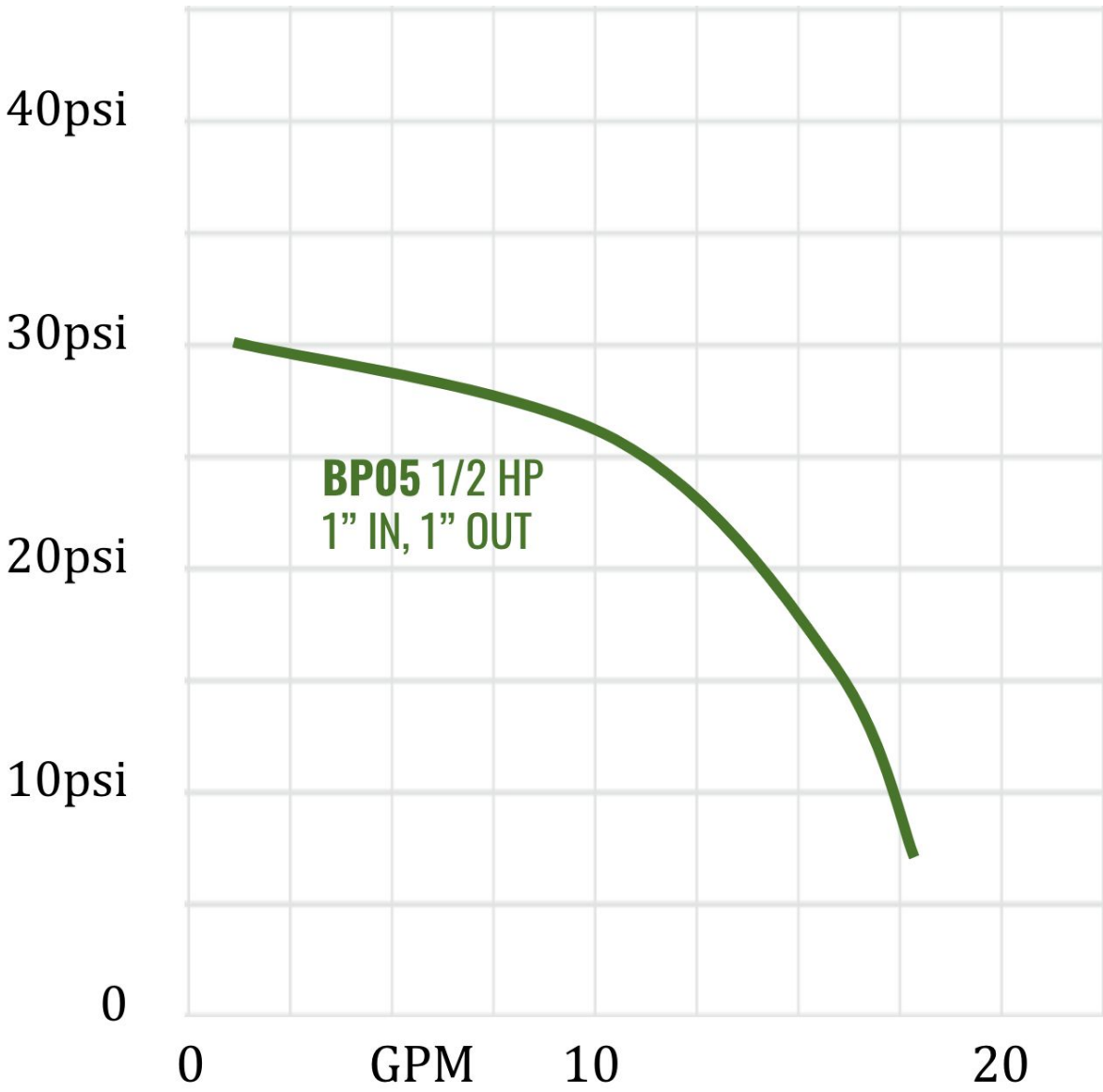
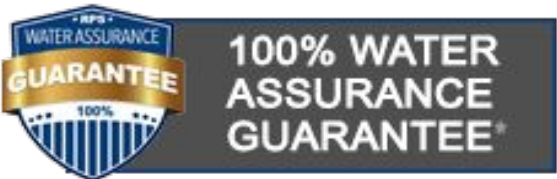
Inlet / Outlet: 1" / 1"

Battery Bank Voltage: 24V

**Solar Panels**

100w 38x21x1.18" 15lbs

Online Reviews: ★ ★ ★ ★ ★

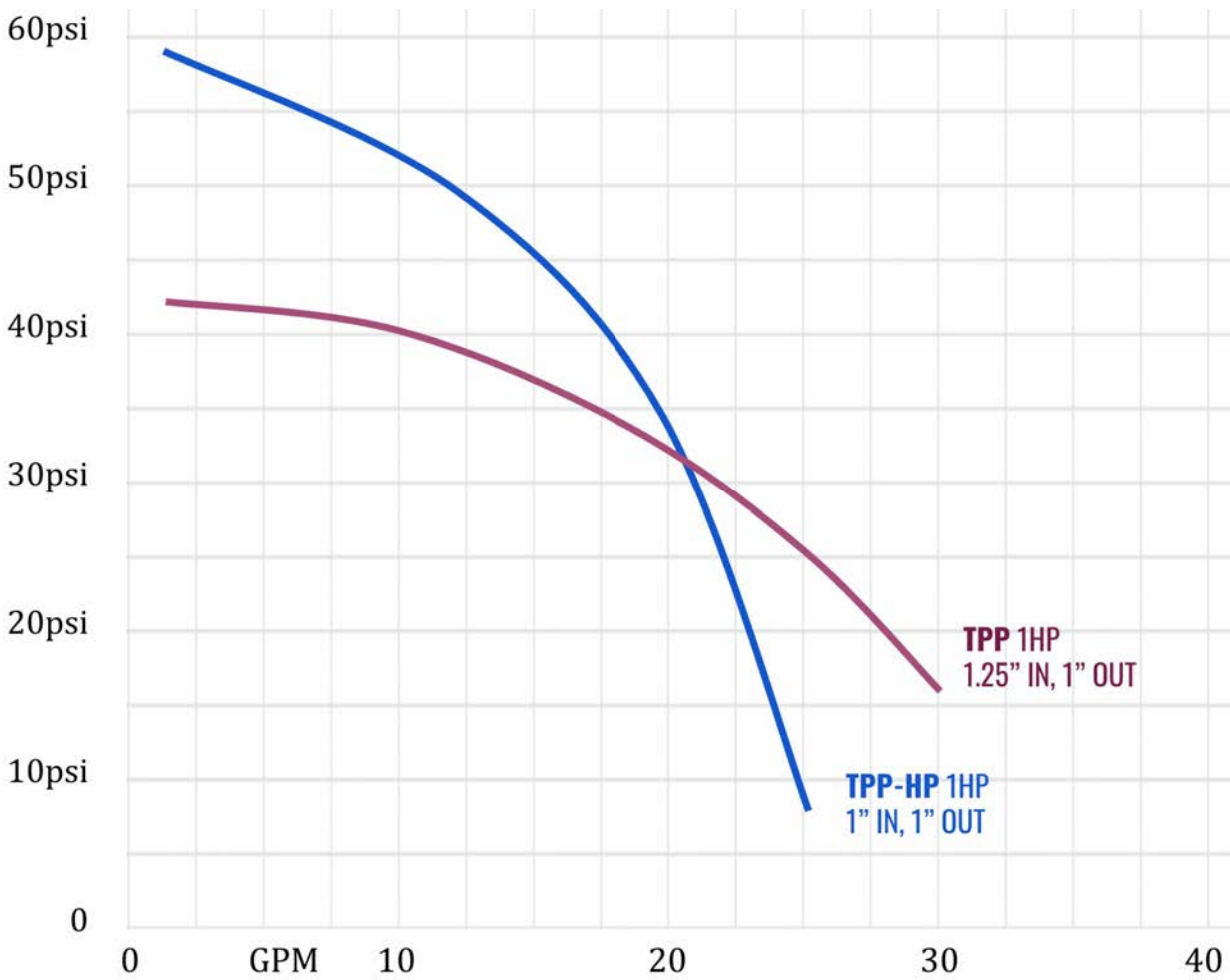
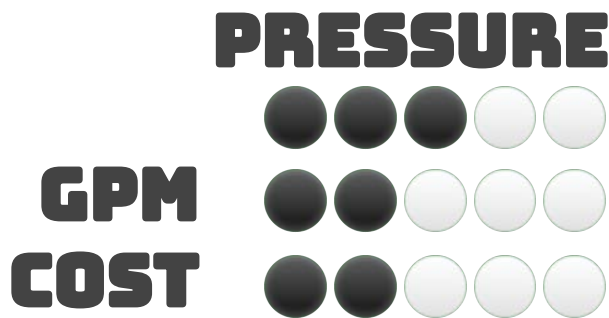


Call 888-637-4493 for help with sizing



# High Pressure Tankless Pressure Pump™

## TPP-HP, 1 HP



Finally an off-grid option that delivers 55 psi! With the RPS High Pressure TPP™ System you'll get smooth, continuous, steady reliable water pressure without the need for a pressure tank or AC power! The solar charged battery bank powers a centrifugal booster pump that varies its speed and power based on your demand for water at the exact pressure you select from 10 to 55 psi. Need reliable drip irrigation? Set system to 20 or 30 psi. Need household water pressure or sprinklers? Set system to 45-55psi. 15' suction from a pond or shallow well with foot valve.

**Kit includes:**

- 100w Mono-crystalline Solar Panels
- 1 HP Tankless Pressure Pump™
- TPP Controller to regulate power transfer between pump, panels and batteries
- Solar Wires to connect solar panels to controller
- Wires to connect to battery bank (55Ah 12V Deep Cycle AGM batteries optional)
- 2 Year Warranty

Pump Weight: 22 lbs  
Pump Dims: 14x11x9"  
Inlet / Outlet: 1.25" / 1"  
Battery Bank Voltage: 24V

**Solar Panels**  
100w 38x21x1.18" 15lbs

Online Reviews: ★★★★★



**Choose a model based on your water needs.** Flow rates from 5 to 25 GPM are supported. Adjustable from 20 to 55psi. The higher PSI and/or higher flow rate used, more power is pulled from the batteries-resulting in a range of time available to pump.

Hours Runtime at Different Pressures	TPP HP - 8	TPP HP - 12
Low	3.3	5.0
Med	2.6	4.0
High	2.2	3.3

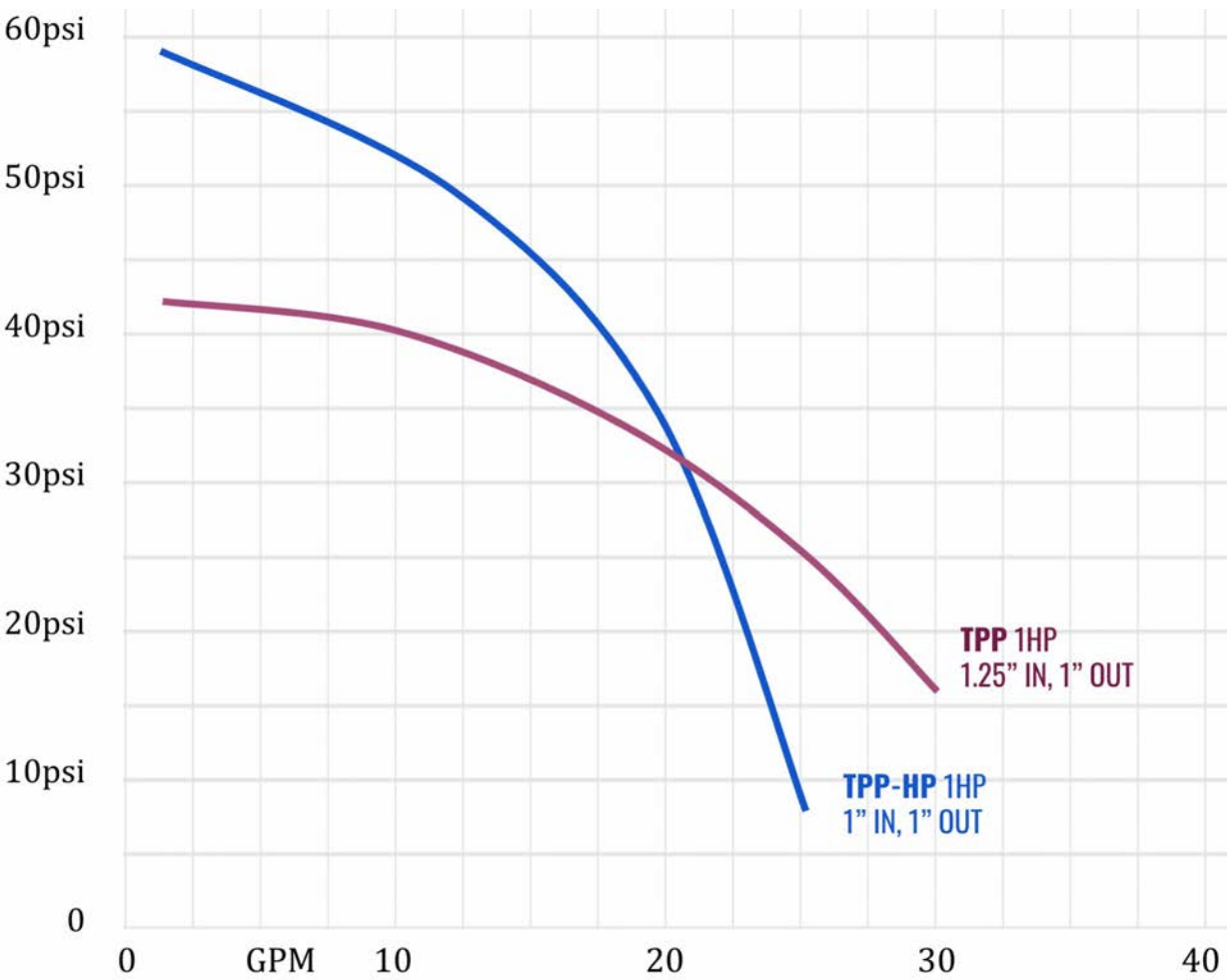
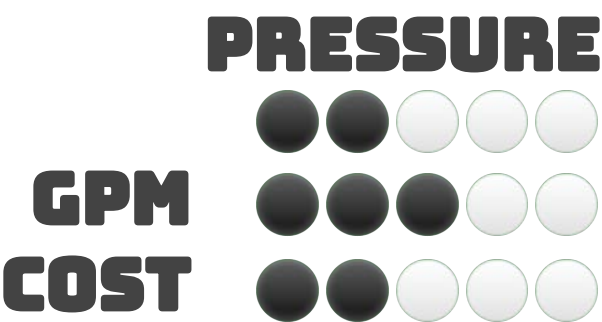
Gallons Per Day at Different Pressures	TPP HP - 8	TPP HP - 12
Low	4,950	7,425
Med	2,851	4,277
High	1,320	1,980



# Original Tankless Pressure Pump™

TPP, 1 HP

POPULAR



With the RPS Tankless Pressure™ System you'll get smooth, continuous, steady reliable water pressure without the need for a pressure tank or AC power! The solar charged battery bank powers a centrifugal booster pump that varies its speed and power based on your demand for water at the exact pressure you select from 20 to 45 psi. Need reliable drip irrigation? Set system to 20 or 30 psi. Need household water pressure or sprinklers? Set system to 45psi. 15' suction from a pond or shallow well with foot valve. RPS carries two versions of the original TPP, one that can connect to 110V backup power or another that connects to a 220V backup power source, just in case the battery bank is drained and the sun doesn't shine.

**Kit includes:**

- 100w Mono-crystalline Solar Panels
- 1 HP Tankless Pressure Pump™
- TPP Controller to regulate power transfer between pump, panels and batteries
- Solar Wires to connect solar panels to controller
- Wires to connect to battery bank (55Ah 12V Deep Cycle AGM batteries optional)
- 2 Year Warranty



Pump Weight: 22 lbs  
Pump Dims: 16x13x10"  
Inlet / Outlet: 1.25" / 1"  
Battery Bank Voltage: 24V

**Solar Panels**  
100w 38x21x1.18" 15lbs

Online Reviews: ★★★★★



**Choose a model based on your water needs.** Flow rates from 5 to 25 GPM are supported. Adjustable from 20 to 45 psi. The higher PSI and/or higher flow rate used, more power is pulled from the batteries-resulting in a range of time available to pump.

Hours Runtime at Different Pressures	TPP - 8	TPP - 12
	3.3	5.0
	2.6	4.0
	N/A	N/A
Gallons Per Day at Different Pressures	TPP - 8	TPP - 12
	5,940	8,910
	3,643	5,465
	N/A	N/A

Call 888-637-4493 for help with sizing



# Eco-Steady™ Booster Pump 2 HP BP2

NEW!



The 2 HP Eco-Steady Booster Pump is the perfect blend of slightly higher PSI performance and GPM production. Ideal for farms and gardens that plan on growing into a larger operation in the future. The 2 HP will handle hundreds of feet of drip lines and any emitters that require solid 45-60 psi. You'll get smooth, continuous, steady reliable water pressure without the need for a pressure tank or AC power! The solar charged battery bank powers a centrifugal booster pump that varies its speed and power based on your demand for water at the exact pressure. Expandable battery bank and solar panel array provide longer runtimes as your property grows. Plug into any 220V backup power source just in case the battery bank is drained and the sun doesn't shine. 15' suction from a pond or shallow well with foot valve.

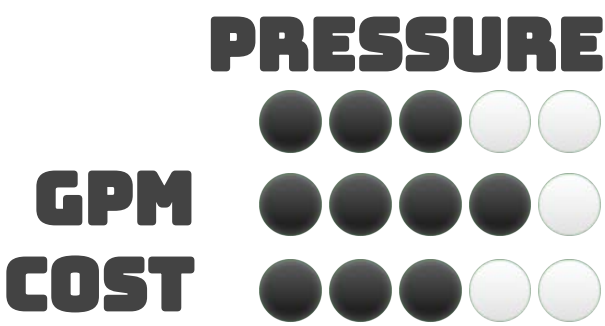
**Kit includes:**

- 100w Mono-crystalline Solar Panels
- 2 HP Eco-Steady Booster Pump™
- Solar Power Train Controller to regulate power transfer between pump, panels and batteries
- Solar Wires to connect solar panels to controller
- Wires to connect to battery bank (55Ah 12V Deep Cycle AGM batteries optional)
- 2 Year Warranty

Pump Weight: 25 lbs  
Pump Dims: 17x12x9"  
Inlet / Outlet: 1.25" / 1"  
Battery Bank Voltage: 48V

**Solar Panels**  
100w 438x21x1.18" 15lbs

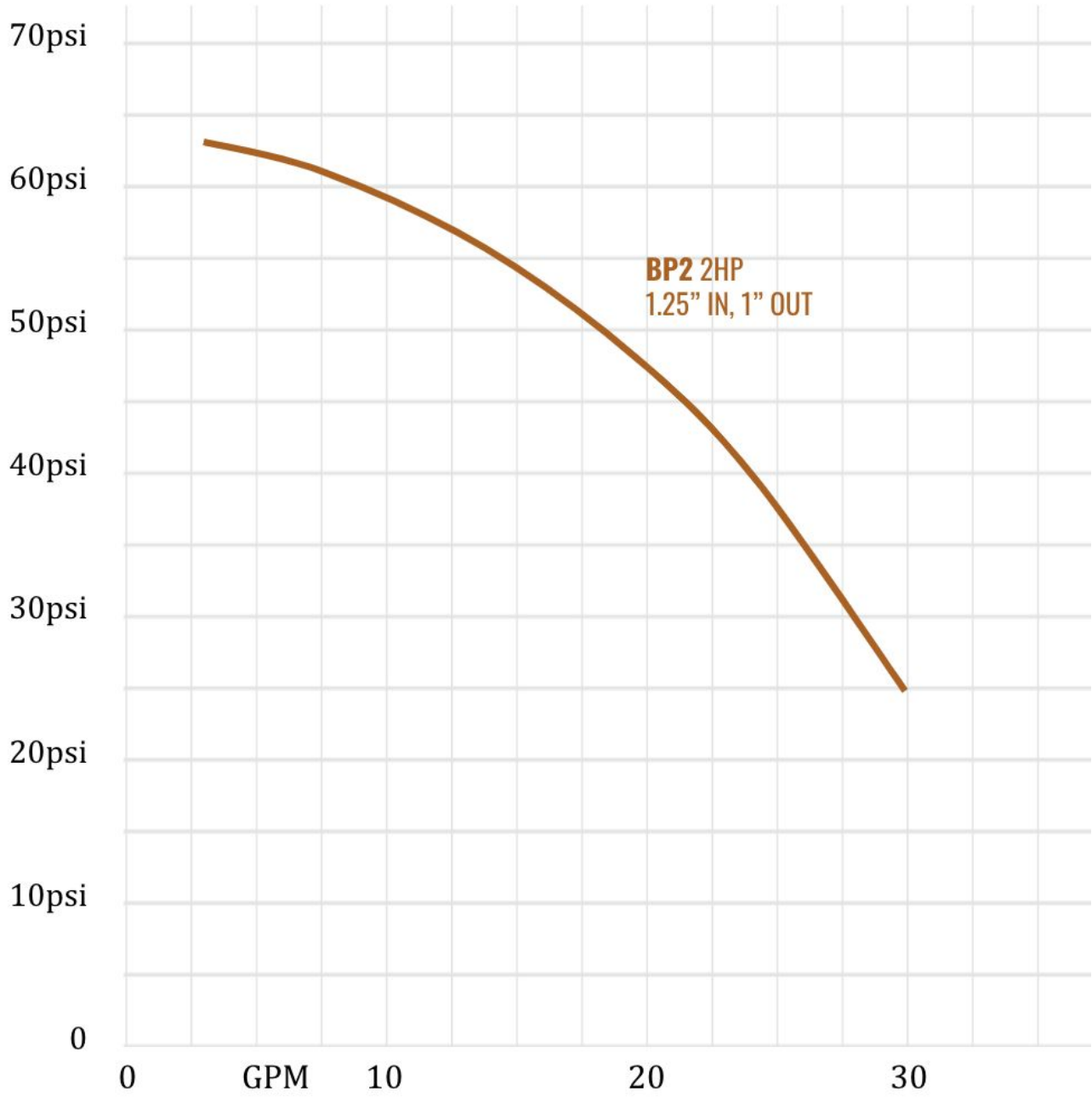
Online Reviews: ★★★★★



**Choose a model based on your water needs.** Flow rates from 5 to 25 GPM are supported. Adjustable from 20 to 60psi. The higher PSI and/or higher flow rate used, more power is pulled from the batteries-resulting in a range of time available to pump.

	12 BATTERY + 12 SOLAR PANEL	24 BATTERY + 24 SOLAR PANEL	36 BATTERY + 36 SOLAR PANEL
Hours Runtime at Different Pressures	BP2 - 12	BP2 - 24	BP2 - 36
Low	4.0	7.9	11.9
Mid	2.9	5.9	8.8
High	2.5	5.0	7.4

Gallons Per Day at Different Pressures	BP2 - 12	BP2 - 24	BP2 - 36
Low	7,128	14,256	21,384
Mid	4,400	8,800	13,200
High	2,970	5,940	8,910





# Eco-Steady™

## Booster Pump 3 HP

### BP3

NEW!



The ONLY 3 HP solar pump kit that can pair with batteries for 24/7 anytime operation. Ideal for large homesteads with a variety of applications like drinking water, livestock troughs, orchards and pasture irrigation. The solar charged battery bank powers a centrifugal booster pump that varies its speed and power based on your demand for water at the exact pressure you select from 10 to 70 psi. Expandable battery bank and solar panel array provide longer runtimes as your property grows. Plug into any 220V backup power source just in case the battery bank is drained and the sun doesn't shine. 15' suction from a pond or shallow well with foot valve.

**Kit includes:**

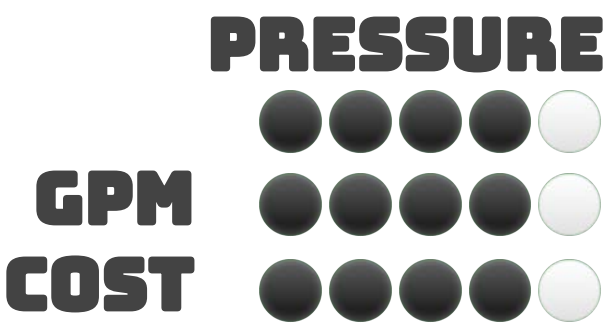
- 100w Mono-crystalline Solar Panels
- 3 HP Eco-Steady Booster Pump™
- Solar Power Train Controller to regulate power transfer between pump, panels and batteries
- Solar Wires to connect solar panels to controller
- Wires to connect to battery bank (55Ah 12V Deep Cycle AGM batteries optional)
- 2 Year Warranty

Pump Weight: 52 lbs  
Pump Dims: 25x18x9.5"  
Inlet / Outlet: 1.5" / 1.5"  
Battery Bank Voltage: 48V

**Solar Panels**  
100w 38x21x1.18" 15lbs

Online Reviews: ★ ★ ★ ★ ★

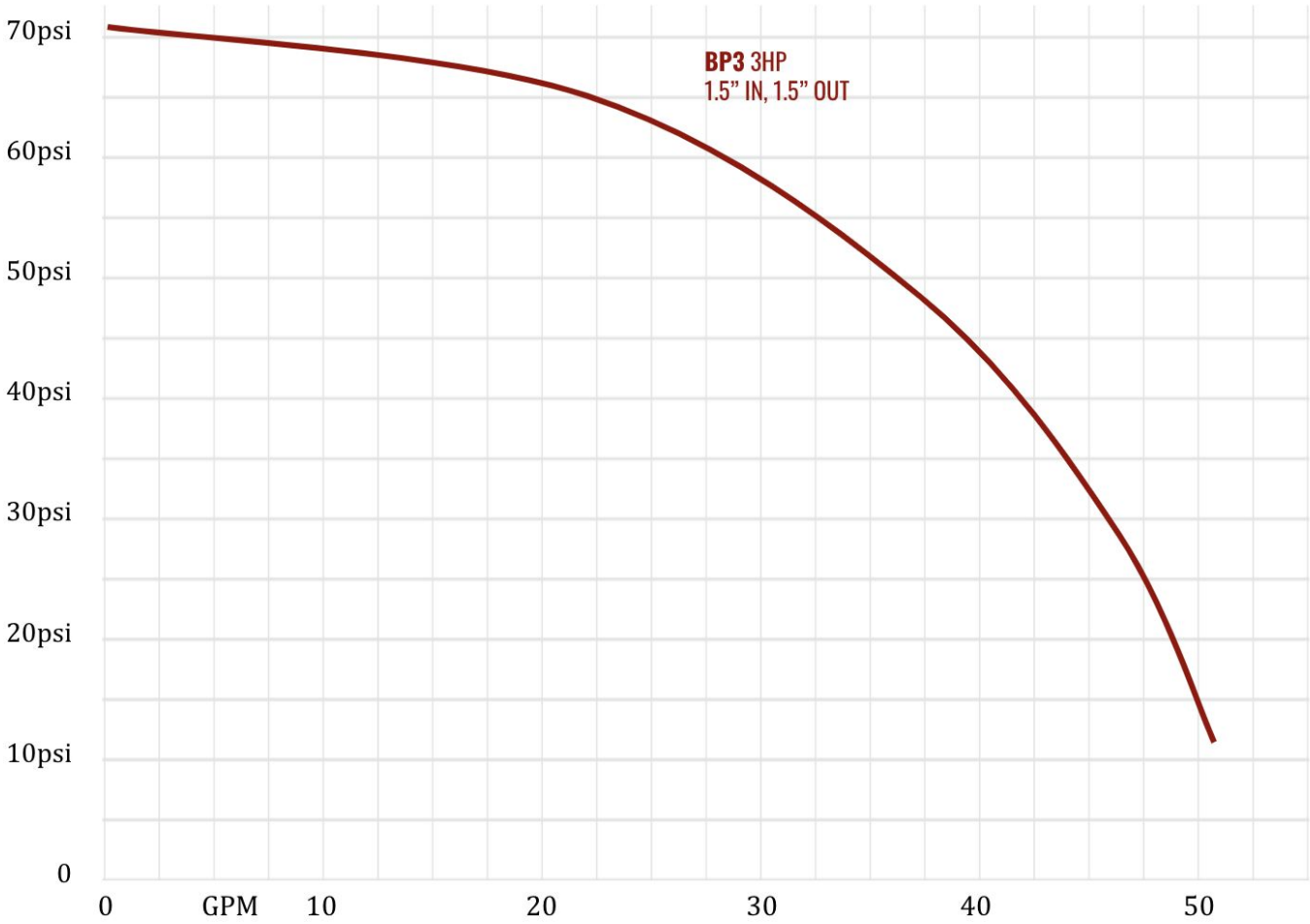
100% WATER ASSURANCE GUARANTEE



**Choose a model based on your water needs.** Flow rates from 5 to 50 GPM are supported. Adjustable from 10 to 70psi. The higher PSI and/or higher flow rate used, more power is pulled from the batteries-resulting in a range of time available to pump.

	24 BATTERY + 24 SOLAR PANEL	36 BATTERY + 36 SOLAR PANEL
Hours Runtime at Different Pressures	BP3 - 24	BP3 - 36
Low	6.6	9.9
Mid	5.1	7.7
High	3.8	5.7

Gallons Per Day at Different Pressures	BP3 - 24	BP3 - 36
Low	19,800	29,700
Mid	12,263	18,395
High	6,789	10,183





# Our Pledges to You

1. **Be a company our Grandfathers would have trusted.** The trend of 'outsourcing' customer support after the sale is a trend we wholeheartedly oppose. We are an American, family run company and our USA engineers support you before and after the sale.
2. **No sales pressure.** Ever. Nobody in the company is paid on commission. We think this is important. Their role is to make sure they find the right pump for you and your well. If we don't have a pump that will suit your needs, we will help you find a solution elsewhere. Our job is to help get you water.
3. **Reliable Water.** All manufactured products have occasional issues and we can't claim to be perfect. However, we are proud of a near perfect track record in getting our customers water. This starts with selling a pump sized for your usage with our Water Assurance Plan and promptly addressing warranty issues to get you up and pumping again quickly.
4. **Give you the power!** When you control your ability to pump water out of the ground, whether in the field or at home, it makes you more resilient and independent. We are here to help educate you about solar water pumping and our systems over the phone, with our manual, and our great videos online, so you can install yourself. Take control of your water supply today.
5. **Fight for the American rancher.** RPS is a David & Goliath story of a small American company fighting against a big European pump corporation that cares more about profits than the longevity of their pumps and the sky-high price for ranchers. Thanks to all our customers for the support of small business vs. foreign corporations trying to profit off some of the hardest working people in our great nation.

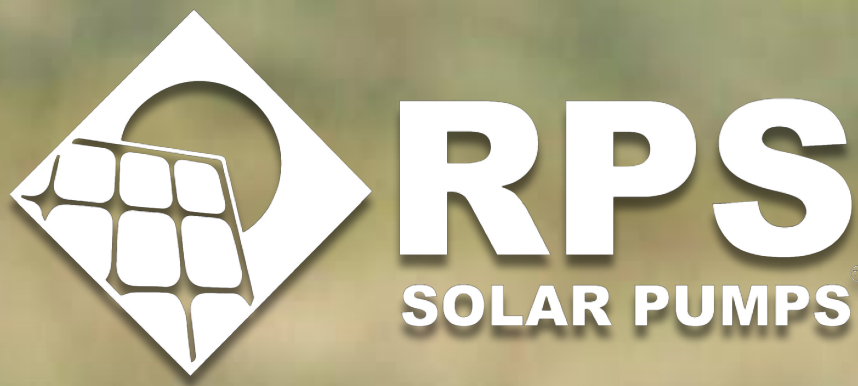


- The RPS Team



Complete the steps of the WATER ASSURANCE PLAN™ with any RPS Team Member on the phone and RPS Guarantees water from your pump after proper installation or your money back. **888-637-4493**





1262157820  
GALLONS PUMPED IN USA



# TO ORDER

<https://shop.RPSsolarpumps.com>



## 888-637-4493

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Pump system when you mention code  
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