



# SOLAR PUMPTEC

SOLAR PUMPING SPECIALISTS

## **4HS** MultiPower

4HS MultiPower Solar Pump  
Custom Packaged Systems



Assembled in Australia    Manufactured in Italy

SOLAR

# 4HS MultiPower

4HS MultiPower pumps powered by renewable energy sources, is a new range from 4HS pumps with built-in inverter.

4HS MultiPower pumps can be powered by AC or DC with a wide range of operating voltage (90 - 265 VAC / 90 - 400 VDC). This means that 4HS MP pumps can be connected to solar panels, batteries, wind turbine and a diesel generator.

A special software algorithm allows for adjusting the hydraulic performance to each source and to the available power while maximising the amount of water pumped.

## Built-In Electronics

The built-in electronics inside the motor avoid the use of shielded cables and output filters, and it is the ideal solution for any application in remote locations without surveillance and climatically adverse.

In fact, in the traditional solutions, the solar inverter is placed above ground and, being exposed to the weather, could suffer of:

- Overheating
- Water infiltration
- Thermal shock
- Damage by animals or people

The built-in electronics are directly cooled by the water flow; the operating temperature of the electronic components is so low as to ensure considerably longer life than a surface inverter affected by high temperatures, humidity, dust and sunlight.

## Integrated On-Board Protection

Protection against overload, surges and dry running are integrated into the pump's electronic circuit. Electronic protection against dry running avoids the use of probes.

## Use of Auxiliary Genset

If solar energy is absent or insufficient, it is possible to power the pump with an auxiliary genset to achieve the desired pump performance. An AC/DC selector is used to change the power source.

## Permanent Magnet Motor

4HS MP pumps are equipped with a permanent magnet motor, where the rotor uses Neodymium magnets coated with thin layers of copper and nickel to ensure greater reliability and durability, in addition to superior magnetic performance.



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Manufactured in Italy



## Helical Rotor Pump

- Highest hydraulic efficiency
- Hard chromed rotor
- High quality EPDM stator

### Motor

- High efficiency permanent magnet motor
- Resined and encapsulated stator made of AISI 304 stainless steel
- Water-cooled rotor
- Kingsbury thrust bearing

4HS "H" pumps are equipped with a helical rotor that moves within a double-helix rubber stator. The rotor is made of AISI 304 stainless steel and coated with a hard chrome surface.

During operation, the rotor moves on the rubber surface and is lubricated by the pumped water. The flow rate is directly proportional to the pump speed while the pressure supplied is kept almost constant. In this way, unlike a centrifugal pump, the helical rotor pump provides high head even at low RPM, ensuring water on surface even with very low available power or low solar irradiation. In addition, the helical rotor pumps feature higher hydraulic efficiency than centrifugal pumps having the same flow. This saves in the number of solar panels necessary for the application.



## Centrifugal Pump

- Impellers and diffusers in AISI 304 stainless steel
- Built-in no return valve

### Motor

- High efficiency permanent magnet motor
- Resined and encapsulated stator made of AISI 304 stainless steel
- Water-cooled rotor
- Kingsbury thrust bearing

### Built-in Inverter Module

- Completely resin-filled
- Removable power cable



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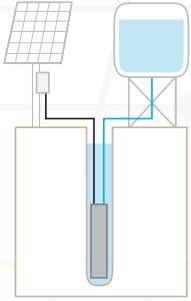


nastec.eu

# Package Control Options

## Option 1 - Manual on/off

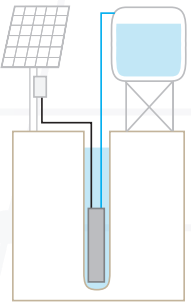
The most simple solution to turn the pump on and off by hand.



- 1000 Volt DC isolator
- Wieland Connector - Plug & Play
- 2 Metre MC4 leads - Genuine
- Earth cable to ground
- Earth cable for panels
- SS mounting bracket for post & clamp

## Option 2 - Pressure Switch Kit Post Mount or Bore Cap Mounting Option

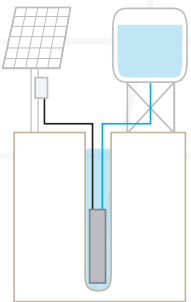
Suitable for tank filling in conjunction with a DUAL LEVEL float valve in the tank, once the tank is full the pump will automatically switch off until the water level in the tank is reduced to a level the pump will automatically turn back on and refill the tank.



- 1000 volt DC isolator
- Wieland Connector - Plug & Play
- XMP Pressure Switch
- 3LT Pressure Tank
- 5 Way Brass Tee
- Pressure Gauge
- 2 Metre MC4 leads - Genuine
- Earth cable to ground
- Earth cable for panels

## Option 3 - Float Switch Kit

Suitable for tank filling in conjunction with a FLOAT SWITCH in the tank, once the tank is full the pump will automatically switch off until the water level in the tank is reduced to a level the pump will automatically turn back on and refill the tank.



- 1000 volt DC isolator
- Wieland Connector - Plug & Play
- Float switch with 10m lead & weight
- 2 Metre MC4 leads - Genuine
- Earth cable to ground
- Earth cable for panels
- Mounted under the DC Isolator



**Clenergy  
Mounting System**  
Galvanised Components.  
Stainless Steel  
Hardware.  
10 Year  
Warranty.

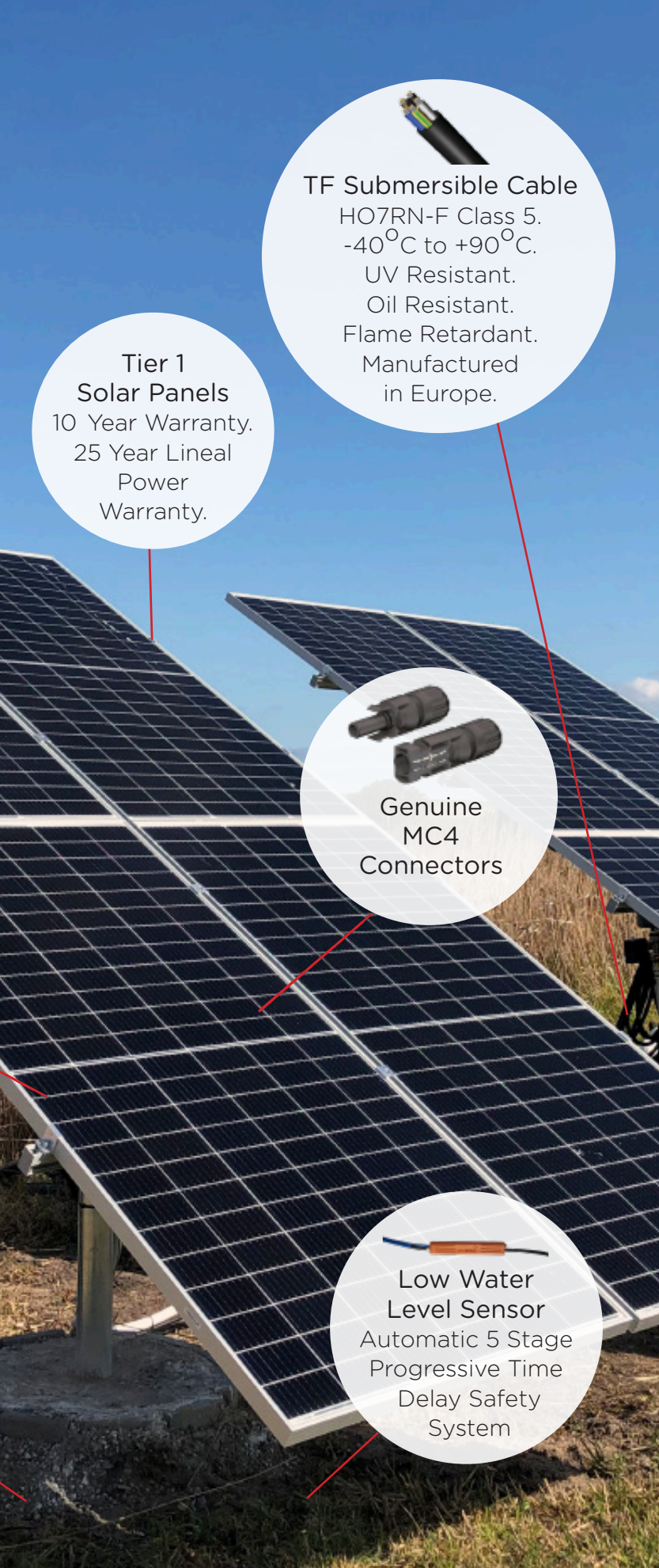


**Wieland  
Connectors**  
Plug and Play.  
Manufactured  
in Germany.



**Bore Cap**  
AISI 304 Stainless  
Steel bore cap.  
Manufactured  
in Australia.





**TF Submersible Cable**  
 HO7RN-F Class 5.  
 -40°C to +90°C.  
 UV Resistant.  
 Oil Resistant.  
 Flame Retardant.  
 Manufactured in Europe.

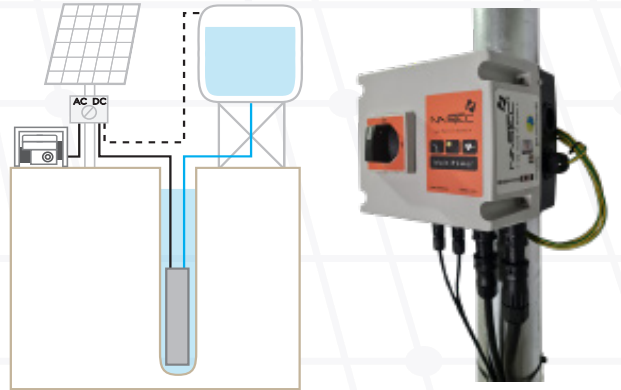
**Tier 1 Solar Panels**  
 10 Year Warranty.  
 25 Year Lineal Power Warranty.

**Genuine MC4 Connectors**

**Low Water Level Sensor**  
 Automatic 5 Stage Progressive Time Delay Safety System

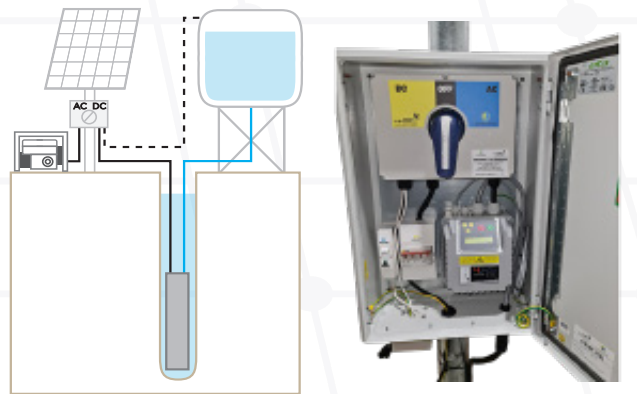
### Option 4 - AC/DC Changeover - Plastic Enclosure

Nastec AC/DC changeover switch is a simple answer which allows you to run your pump on a generator with a simple switch. AC/OFF/DC manual operation.



### Option 5 - CM-MP Control Module - Metal Powder Coated Enclosure

Nastec CM-MP Controller allows full communication with the pump below. You can visualise in real time how your pump is operating by viewing the available PV power from the sun, power consumption, speed of the motor and error reports such as "NO WATER" when the level becomes low.



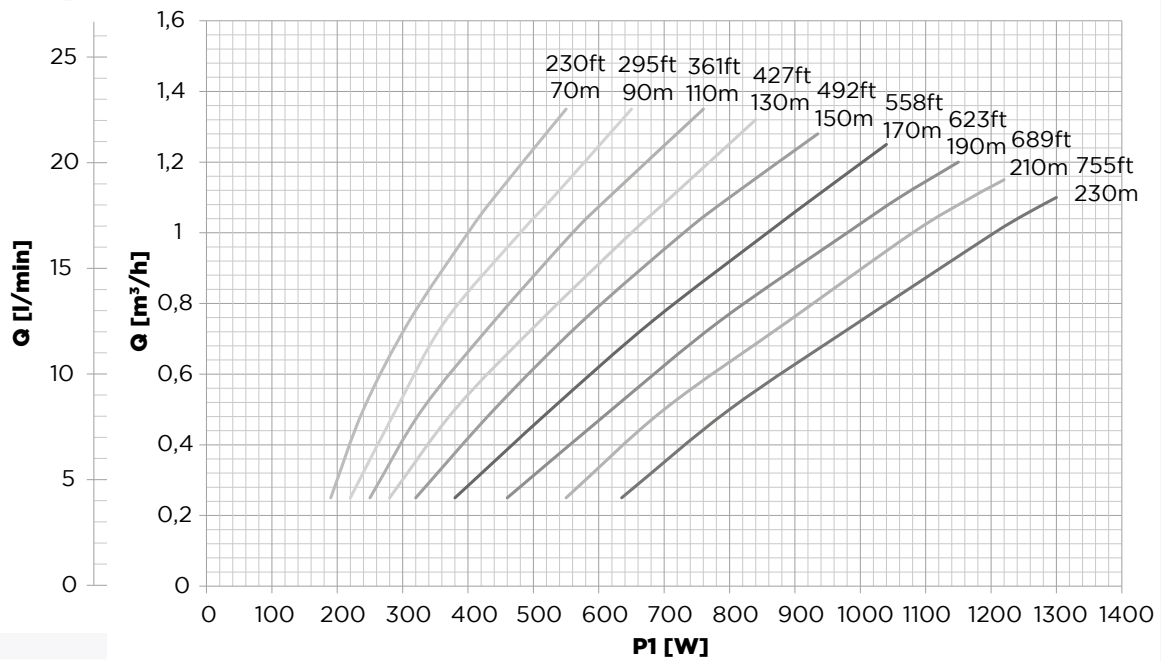
- 4 Digital inputs for pressure switch, float switch, etc
- 2 Analog inputs for pressure transducer, etc
- AC/DC changeover switching available in manual AC/OFF/DC operation or Automatic for generator applications.



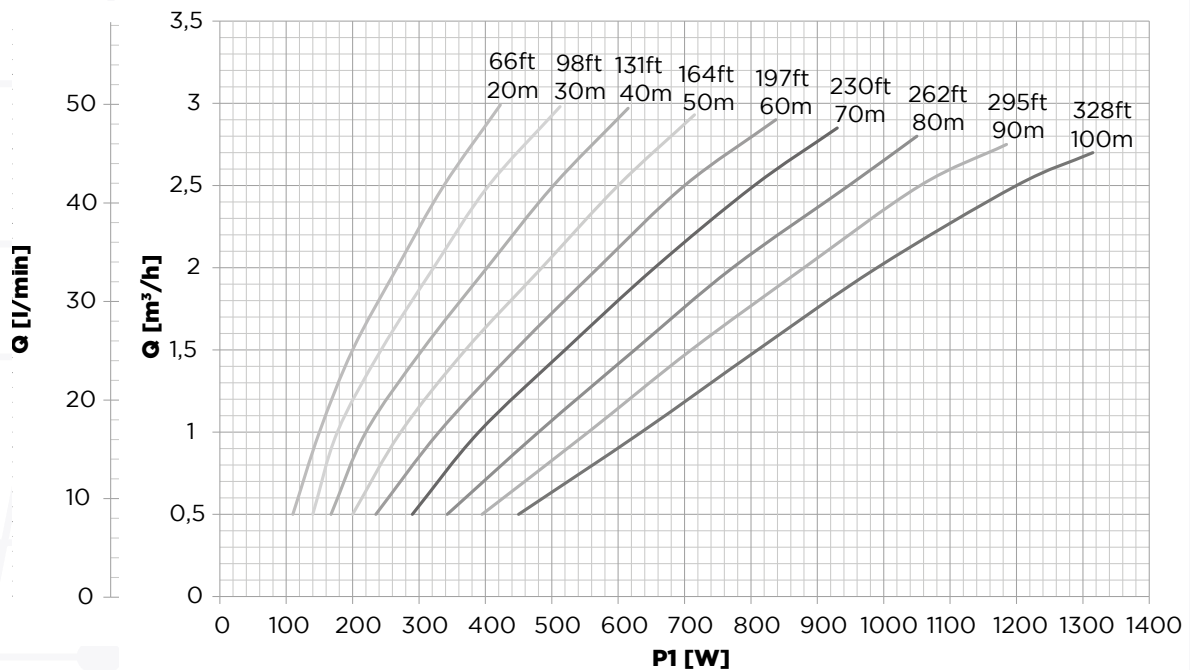
# 4HS MultiPower

Performance - Helical

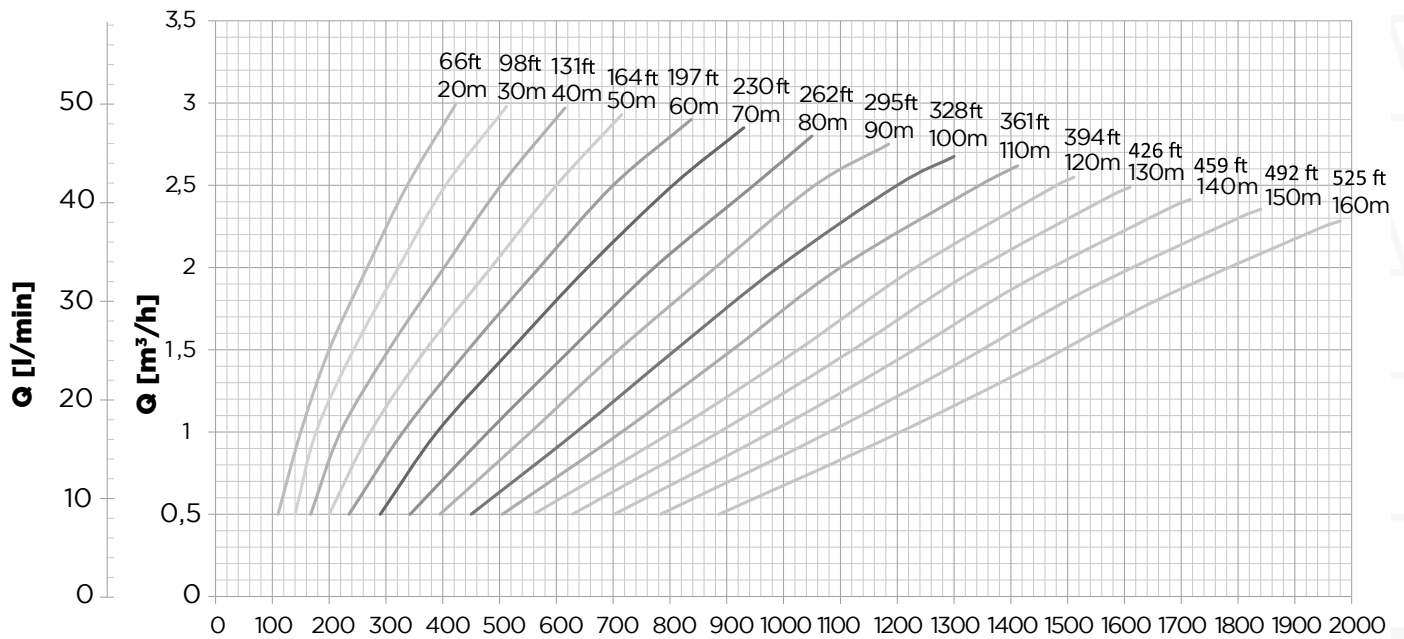
4HS 01/03H MP



4HS 02/02H MP



# 4HS 02/02H R MP



## P1 [W]

4HS MODEL	VOLTAGE	MAX CURRENT[A]	MAX POWER P1[W]	LENGTH [mm]	DISCHARGE	PUMP WEIGHT	MAX DIAMETER	PACKAGING DIMENSIONS[cm]	TOTAL WEIGHT
01/03H MP	90-400 VDC	13 (100 VDC)	1300	1385	1 1/4"	21kg	99mm*	120 x 20 x 29	22kg
	90-265 VAC	13 (100 VAC)							
02/02H MP	90-400 VDC	13 (100 VDC)	1300	1350	1 1/4"	19.5kg	99mm*	120 x 20 x 29	20.5kg
	90-265 VAC	13 (100 VAC)							
02/02HR MP	90-400 VDC	16 (125 VDC)	2000	1400	1 1/4"	20.5kg	99mm*	120 x 20 x 29	21.5kg
	90-265 VAC	16 (125 VAC)							

\*Max external diameter including cable and cable cover.

MODEL	PANELS	AVERAGE LPD	BASED ON HEAD	MAX FLOW	MAX HEAD
4HS 01/03H MP	4 X 400W	10,000	120M	25 LPM	230M
4HS 01/03H MP	6 X 400W	14,000	200M	25 LPM	230M
4HS 02/02H MP	4 X 400W	20,000	50M	50 LPM	100M
4HS 02/02H MP	6 X 400W	25,000	80M	50 LPM	100M
4HS 02/02H MP	8 X 400W	30,000	80M	50 LPM	100M
4HS 02/02HR MP	6 X 400W	20,000	100M	50 LPM	160M
4HS 02/02HR MP	8 X 400W	25,000	150M	50 LPM	160M



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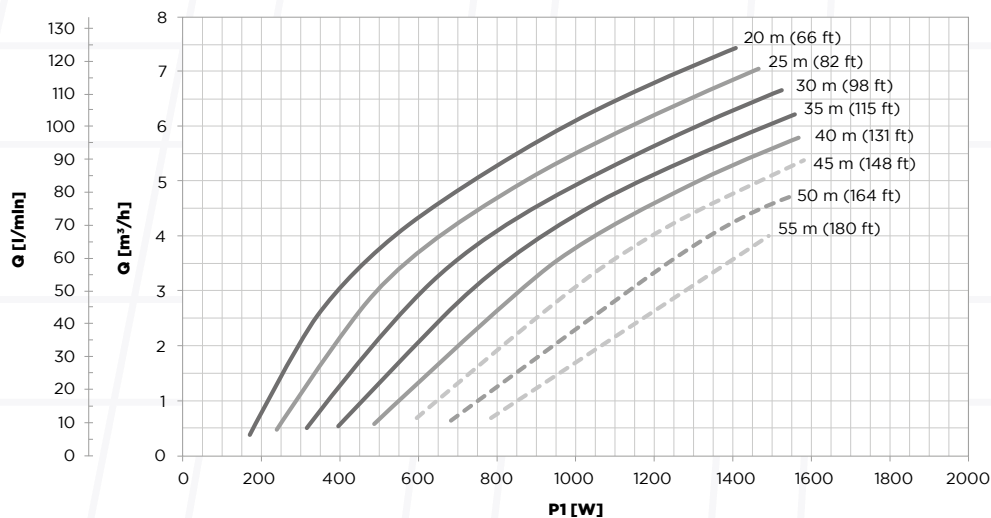
> we move it faster >



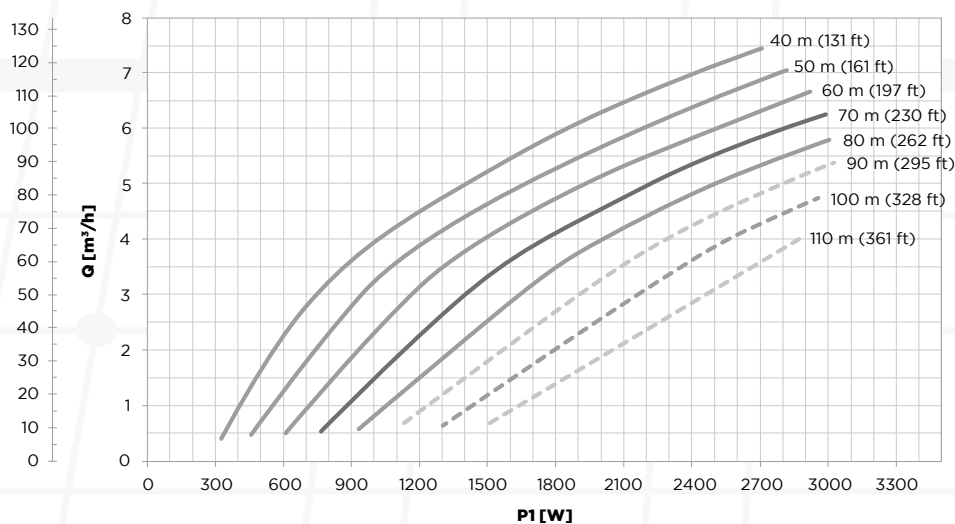
# 4HS MultiPower

Performance - Centrifugal

## 4HS 05/04 MP



## 4HS 05/08 MP



4HS MODEL	VOLTAGE	MAX CURRENT[A]	MAX POWER P1[W]	LENGTH [mm]	DISCHARGE	PUMP WEIGHT	MAX DIAMETER	PACKAGING DIMENSIONS[cm]	TOTAL WEIGHT
05/04 MP	90-400 VDC	16 (100 VDC)	1600	879	1 1/2"	19.5kg	99mm*	120 x 20 x 29	20.5kg
	90-265 VAC	16 (100 VAC)							
05/08 MP	90-400 VDC	16 (187 VDC)	3000	1013	1 1/2"	22kg	99mm*	120 x 20 x 29	23kg
	90-265 VAC	16 (187 VAC)							

\*Max external diameter including cable and cable cover.

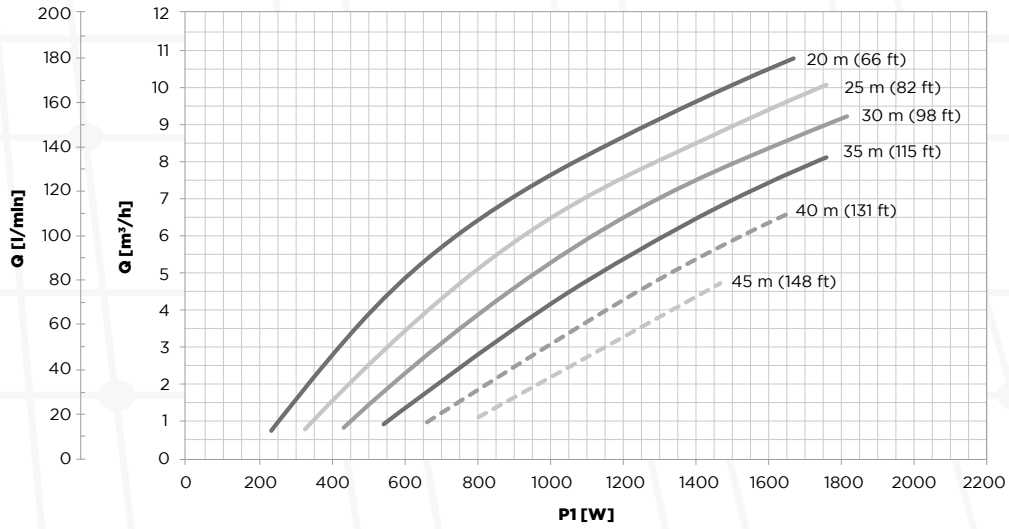
MODEL	PANELS	AVERAGE LPD	BASED ON HEAD	MAX FLOW	MAX HEAD
4HS 05/04 MP	4 X 400W	35,000	30M	125LPM	65M
4HS 05/04 MP	6 X 400W	45,000	40M	125LPM	65M
4HS 05/08 MP	6 X 400W	55,000	60M	125LPM	130M
4HS 05/08 MP	8 X 400W	50,000	70M	125LPM	130M
4HS 05/08 MP	12 X 400W	60,000	80M	125LPM	130M

CM MultiPower installation is recommended for points of operation on the dashed lines.

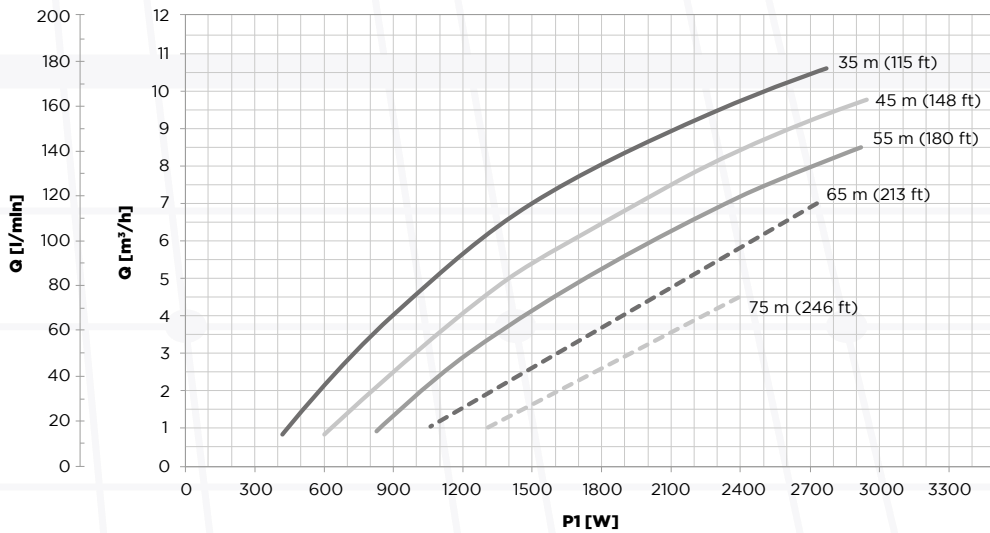




## 4HS 08/03 MP



## 4HS 08/05 MP



4HS MODEL	VOLTAGE	MAX CURRENT[A]	MAX POWER PI[W]	LENGTH [mm]	DISCHARGE	PUMP WEIGHT	MAX DIAMETER	PACKAGING DIMENSIONS[cm]	TOTAL WEIGHT
08/03 MP	90-400 VDC	16 (113 VDC)	1800	858	1 1/2"	19.4kg	99mm*	120 x 20 x 29	20kg
	90-265 VAC	16 (113 VAC)							
08/05 MP	90-400 VDC	16 (187 VDC)	3000	950	1 1/2"	21kg	99mm*	120 x 20 x 29	22kg
	90-265 VAC	16 (187 VAC)							

\*Max external diameter including cable and cable cover.

MODEL	PANELS	AVERAGE LPD	BASED ON HEAD	MAX FLOW	MAX HEAD
4HS 08/03 MP	4 X 400W	50,000	20M	175LPM	50M
4HS 08/03 MP	6 X 400W	60,000	25M	175LPM	50M
4HS 08/05 MP	6 X 400W	50,000	40M	175LPM	85M
4HS 08/05 MP	8 X 400W	60,000	50M	175LPM	85M
4HS 08/05 MP	12 X 400W	70,000	60M	175LPM	85M

CM MultiPower installation is recommended for points of operation on the dashed lines.



# Solar Panels

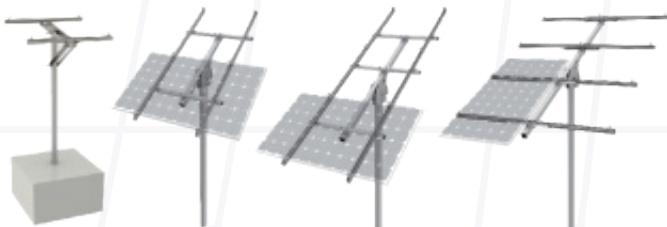
To ensure you achieve the best results from your new NERA pumping system, we only offer high quality, Tier One solar panels.

Employing split cell technology, these high performance panels from either Trina Solar or JA Solar will reliably and consistently power your operation for the long term. Backed up by our ten year warranty, you can be confident knowing the panels we supply are ideal for your system.



# Mounting System

Clenergy's PV-ezRack PostMount-A delivers flexible and durable designs to mount from one to four panels per post. It's ideal for remote off-grid applications such as water pumps or small residential and commercial systems. The panel tilt is easily adjustable between 0° and 60° throughout the year and comes with hassle-free mounting thanks to patented components such as the PV-ezRack rails and clamps. The combination of high quality aluminium, stainless steel and galvanised steel components make this a robust, reliable system with excellent corrosion resistance.



# Floating Pontoon

Our range of quality built NERA systems are not only exclusively to be used with bores, but also work for dams, rivers and multiple other natural water sources. We have developed a specialised floating pontoon which enables you to utilise that water and pump to your header tank, dam or another location.

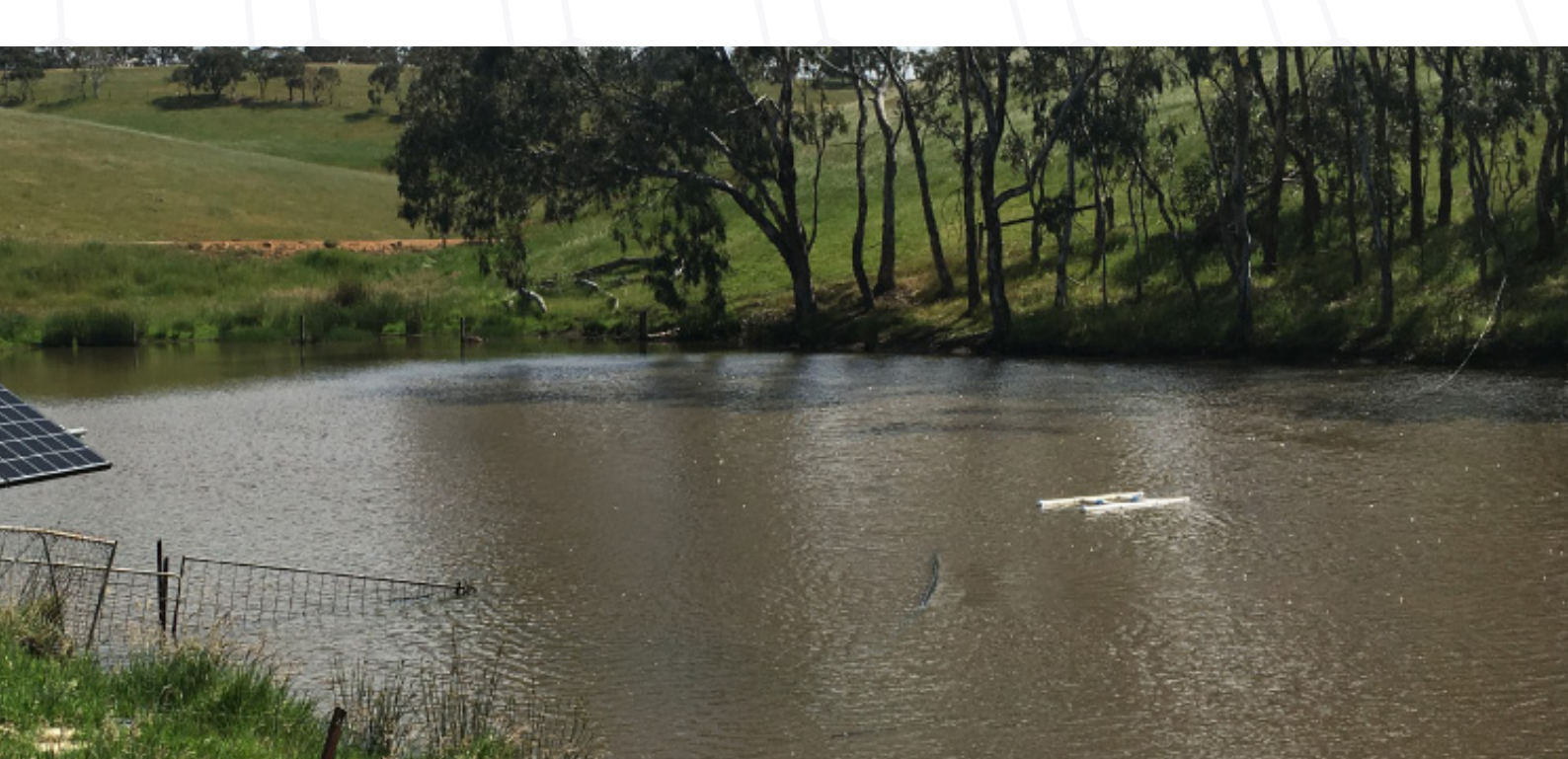


FSP-SLED pictured.



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## Why Nastec?

Solar Pumptec pride ourselves on providing our customers with quality products for maximum impact and reliability. That's why we only align ourselves with the best, proudly offering and highly recommending a range of either 100% European or Australian made pumps and accessories.

Our major partnership is with the highly respected Italian company Nastec. Nastec was established in 2007 with the purpose of achieving a range of pumps and accessories which combined the knowledge of electronics and hydraulics. This resulted in a new generation of products with higher

reliability, simplicity, flexibility and ease of use together with lower energy consumption. This allows us to proudly offer a 2 year warranty on all of our Nastec range, demonstrating our confidence in supplying a highly efficient, high quality, reliable solar pump.

## Our Stamps



All of our units are plug and play, reducing costly set up fees and ensuring you can begin using your new system straight away.



We provide peace of mind by testing each and every pump in South Australia before distribution, to help provide a smooth and hassle free installation and start up.



Genuine 2 Year warranty on all Nastec products, with a 10 year warranty on solar panels and arrays. We also give a 25 year linear power warranty.



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# **4HS** MultiPower

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Sold By

