



WKE WORLD KEY ENERGY

HIGH EFFICIENCY PUMP



FINANCED BY
THE EUROPEAN COMMUNITY



We supply high efficient and reliable solar powered water supply system and the best solution

Equipped with three-plunger positive displacement pump, the solar PV water supply system is a high efficient system based on solar energy. It comprises solar panel, controller and high performance PV water pump. To achieve the goal of self-balancing between flow and energy under different lifts, the system has been equipped with advanced functions such as the energy tracking control, automatic water shortage protection, overflow protection, frost protection and intelligent fault protection. This system improves the low efficiency and low energy utilization problem of the traditional pump's, it significantly reduces the solar battery's power at the same pumping capacity, and greatly reduces the user's purchasing cost at the same time, it plays down the threshold for consumer to buy.



Our new system could effectively solve the problem of water supply, ecological management, crop irrigation, human and livestock drinking. Compared with the traditional water supply system, it is much easier to apply because it does not need extra expense for setting up power grid or building power generating device, not mention to avoid polluting the environment.

The WKE DS and LD system make fully use of the energy, it is the best solution for energy-

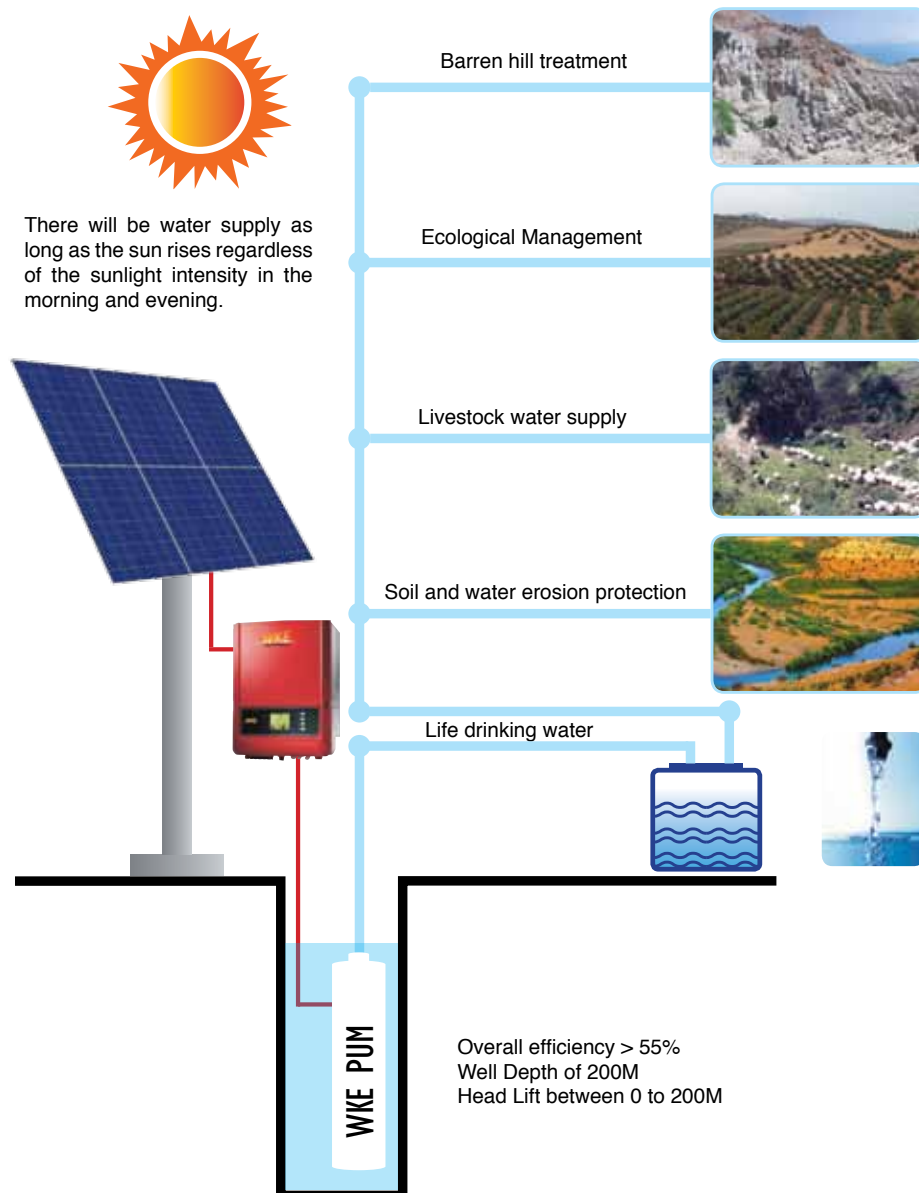
saving and mitigation at present. It could save more than 73% water than flood irrigation, what is more, it offers powerful guarantee for crop irrigation in the extremely dry areas.

With the latest designed WKE DS and LD efficient photovoltaic water pumping system which could pump out water from 200 meters under ground, it can effectively solves the problems of drinking and irrigation caused by the shortage of electricity.



Application

Our products is mainly used in those items water diversion ing project, water supply for vegetation to prevent soil and water erosion in both sides of the river, irrigation for fruit-bearing forest, water supply for desertification control in the nature protected area. Supplying water for the power shortage remote areas, such as farms, schools, hospitals, factories, and signal-families. Water supply for livestock, farmlands and greenhouses irrigation (drip irrigation in the area where the electric power can not cover with system).

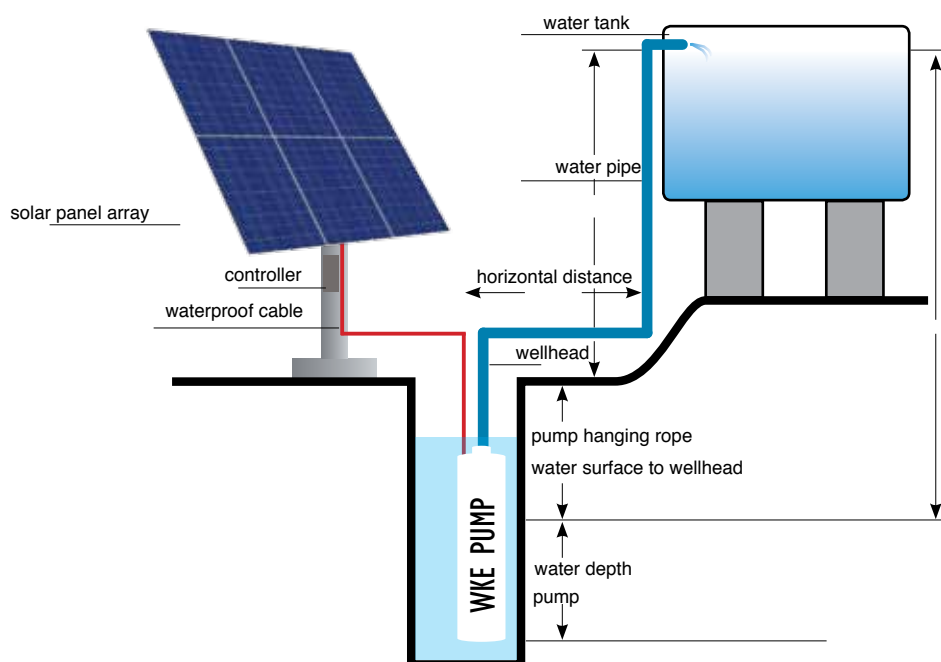


High efficient WKE DS and LD series of pv pump

With the efficiency of up to 85%, the WKE DS and LD Series of solar pump is a new type pump of high efficiency. At the same time, we use sand filtration structure so that the pump can not only be used in pump clean water but can also be used in the location where the water contains sand. Its range of lifts is between 5 to 200 meters, the users could choose different type according to their water consumption and depth.

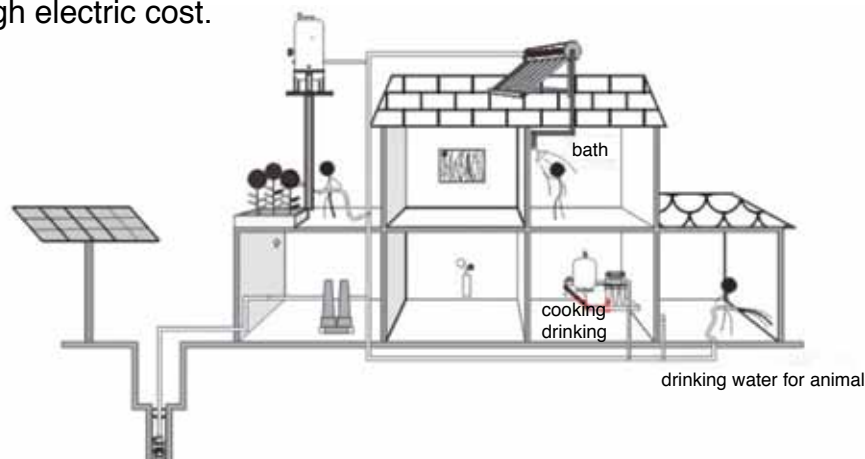
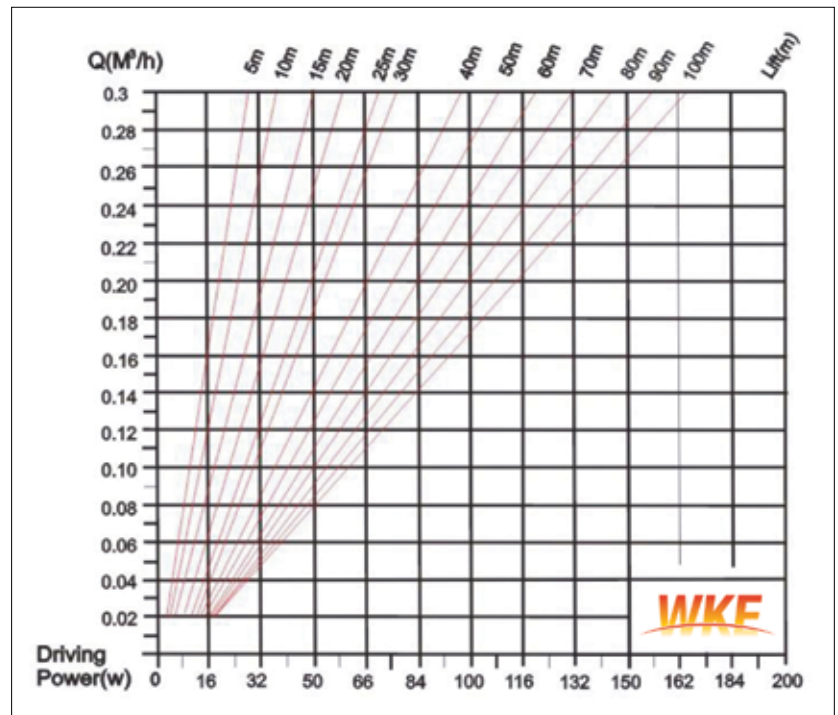
DIFFERENT WAY OF WATER SUPPLY IRRIGATION INDEX CONTRAST

Water Pumping	Pollutant emission (Acres/year)
Grid Power water pumping	Carbon dioxide 23 kg
Fuel Power water pumping	Carbon dioxide 31 kg
Traditional PV water pumping	Zero-carbon dioxide
WKE Water pumping	Zero-carbon dioxide & high efficiency



WKE DS4 parameter description (demo cart)

This model is special designed for the ordinary home water pumping usage, easily installation, and user-friendly man-machine interface. Low voltage is ensured our system's safety. 1000l to 2000l daily water pumping is enough for the ordinary home water consumption. Because of its high efficiency, these kinds of pump just need very little PV power to drive it. Comparing with the traditional AC pump, which is driven by the electric grid, one year electric cost can bear one set of this pumping system cost. It's suitable for water and electric shortage area, and it's also the best consideration for the ordinary family who are bearing high electric cost.



Model: WKEDS330			
Power (w)	100	Peak Flow (M³/H)	0,3
Inverter	420	Lift (M)	30
Photovoltaic modules: 2 x 50Wp Poly in series			

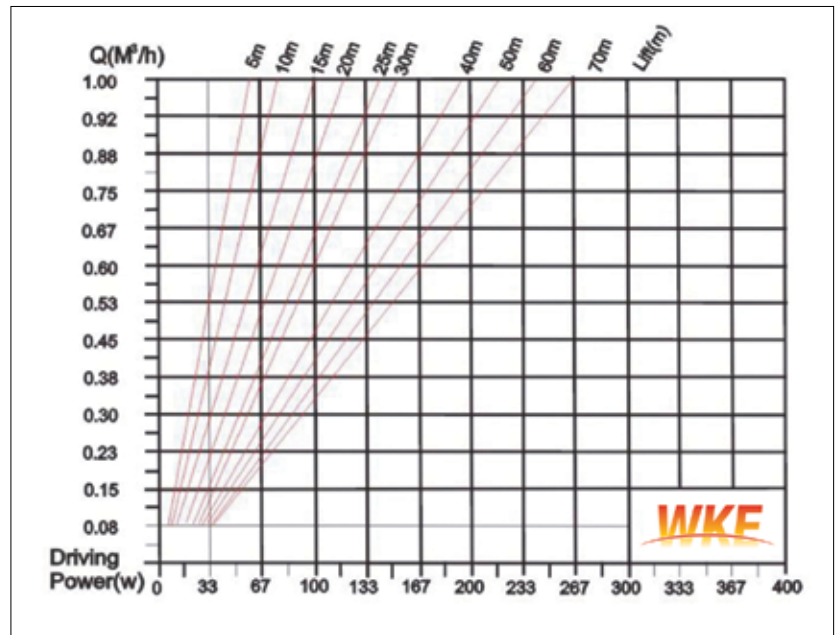
In the kit

Photovoltaic modules - Water pump - controller
 Inverter - cabinet - electrical tape - water-proof
 electrical tape - air switch - water level sensor
 hanging rope - rope buckle - cables - MC4 Connector

WKE DS6 parameter description

It's for human and livestock water supply and small area agricultural irrigation.

Stable & correct running system, automatic maintenance, convenient usage, unnecessary supervised after installation, no more extra charge.



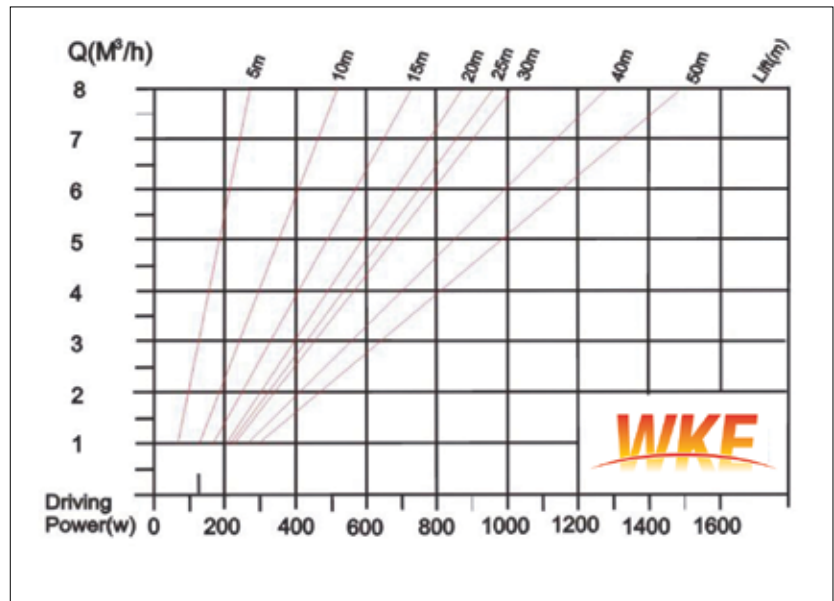
Model: WKEDS1425			
Power (w)	280	Peak Flow (M ³ /H)	1
Inverter	600	Lift (M)	40
Photovoltaic modules: 4 x 70Wp Poly in series			

In the kit

Photovoltaic modules - Water pump - controller
 Inverter - cabinet - electrical tape - water-proof
 electrical tape - air switch - water level sensor
 hanging rope - rope buckle - cables - MC4 Connector

WKE DS10 parameter description (demo cart)

It's good for large area agricultural irrigation. Applying drip irrigation and sprinkling irrigation methods, one set of this pump can irrigate 33.000 to 66.600 m². Stable & correct running system, automatic maintenance, convenient usage, unnecessary supervised after installation, no more extra charge.



In the kit

Photovoltaic modules - Water pump - controller
 Inverter - cabinet - electrical tape - water-proof
 electrical tape - air switch - water level sensor
 hanging rope - rope buckle - cables - MC4 Connector

Other power on request

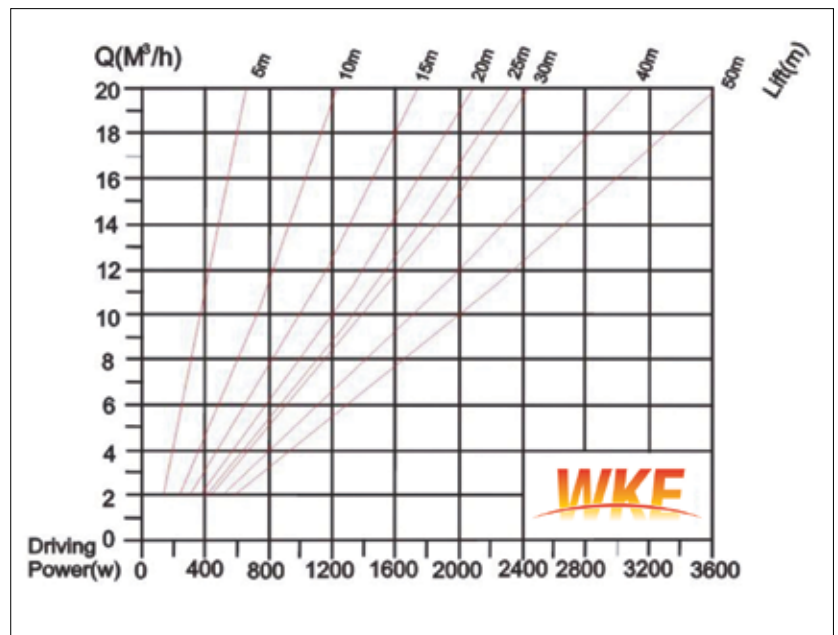
Model: WKEDS1050			
Power (w)	1960	Peak Flow (M ³ /H)	8
Inverter	2000	Lift (M)	50
Photovoltaic modules: 8 x 250Wp Poly in series			

Model: WKEDS1080			
Power (w)	1700	Peak Flow (M ³ /H)	4
Inverter	2000	Lift (M)	80
Photovoltaic modules: 7 x 250Wp Poly in series			

Model: WKEDS10100			
Power (w)	1960	Peak Flow (M ³ /H)	4
Inverter	2000	Lift (M)	100
Photovoltaic modules: 8 x 250Wp Poly in series			

WKE DS14 parameter description

This model pump is suitable for large area agricultural irrigation. Applying drip irrigation and sprinkling irrigation methods, one set of this pump can irrigate 133.200 m². Stable & correct running system, automatic maintenance, convenient usage, unnecessary supervised after installation, no more extra charge.



In the kit

Photovoltaic modules - Water pump - controller
 Inverter - cabinet - electrical tape - water-proof
 electrical tape - air switch - water level sensor
 hanging rope - rope buckle - cables - MC4
 Connector

Model: WKEDS1420			
Power (w)	2500	Peak Flow (M ³ /H)	20
Inverter	5000	Lift (M)	20
Photovoltaic modules: 10 x 250Wp Poly in series			

Model: WKEDS1425			
Power (w)	2700	Peak Flow (M ³ /H)	20
Inverter	5000	Lift (M)	25
Photovoltaic modules: 11 x 250Wp Poly in series			

Other power on request

WKE LD parameter description



Model: WKELD10240

Power (w)	3800	Peak Flow (M ³ /H)	20
Inverter	5500	Lift (M)	40

Photovoltaic modules: 16 x 250Wp Poly in series

Model: WKELD10260

Power (w)	5300	Peak Flow (M ³ /H)	20
Inverter	5500	Lift (M)	60

Photovoltaic modules: 21 x 250Wp Poly in series

In the kit

Photovoltaic modules - Water pump - controller
Inverter - cabinet - electrical tape - water-proof
electrical tape - air switch - water level sensor
hanging rope - rope buckle - cables - MC4 Connector

Other power on request

WKE LD / DS

Model: WKEDS

Power (w)	100/4600	Peak Flow (M ³ /H)	0,30/20
Inverter	420/5000	Lift (M)	20/100

Photovoltaic modules: in funzione alla potenza

In the kit

Photovoltaic modules - Water pump - controller
Inverter - cabinet - electrical tape - water-proof
electrical tape - air switch - water level sensor
hanging rope - rope buckle - cables - MC4 Connector

Model: WKELD

Power (w)	2700/28000	Peak Flow (M ³ /H)	10/160
Inverter	5500/30000	Lift (M)	5/180

Photovoltaic modules: in funzione alla potenza

In the kit

Photovoltaic modules - Water pump - controller
Inverter - cabinet - electrical tape - water-proof
electrical tape - air switch - water level sensor
hanging rope - rope buckle - cables - MC4 Connector

System Performance and Technical Advantages

Photovoltaic pumping system only comprises solar panel array, high efficiency PV pump (direct current pump) and controller. The main technical features as following.

1. Our own research of connecting rod bearing cross shaft joint structure transforms the traditional swing rod into linear motion link. This technical application removes the stress from the small head of link to the piston lateral, and then forms a light viscosity water film.
2. Apply new type of three-layer sand filtration structure.
3. Controller applies to direct current inverter software control technical, gently start, smaller current.
4. Optimal controller algorithm's application improves the equipment efficiency 10% to 15% higher, base on the same current and voltage of the controller.
5. Improved controller. System can self-control flow rate and lift under different sunlight condition without battery.
6. High efficient system, big power, high reliability, low cost.
7. The average power utilization is higher than 92%. The average efficiency is higher than 65%. Total efficiency is higher than 55%. Total efficiency is three times higher than already existing system. Cost saving 60%, highest lift is more than 200m.

Science and Technology, Responsibility, Mission

We've been committing in PV water pump and PV water pumping system research for years, and finally these technical results being transformed into the products and broad applied in agricultural irrigation, barren hill treatment, livestock drinking, environmental protecting area treatment and many other supply fields. It efficient converts sunshine power to be power energy, and makes great contribution in the field of drought and ecological environment treatment. People fully enjoy great benefits technology innovation.

This is our responsibility, but also a mission. This power will keep our steps moving forward in the field of innovation and making progress, by taking use of solar power to resist drought and environmental degradation.

More Applications





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PHOTOVOLTAIC SOLUTIONS IN ROMANIA

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